

Report to the Secretary of State for Energy and Climate Change

by A D Poulter BArch RIBA

an Inspector appointed by the Secretary of State for Energy and Climate Change

Date 08/12/2014

ELECTRICITY ACT 1989 (SECTIONS 36, 37, 62(3) AND SCHEDULE 8)

and

TOWN AND COUNTRY PLANNING ACT 1990 (SECTION 90)

Application by Vattenfall dated 30 November 2007 for consent to construct and operate a 59.5MW Wind Turbine Generating Station in Powys, Mid-Wales ("Llanbadarn Fynydd")

Application by Fferm Wynt Llaithddu Cyf dated 7 May 2008 for consent to construct and operate a 66.7MW Wind Turbine Generating Station in Powys, Mid- Wales ("Llaithddu")

Application by Celtpower Limited dated 9 May 2008 for consent to construct and operate a 126MW Wind Turbine Generating Station in Powys, Mid-Wales ("Llandinam Repowering")

Application by RES UK & Ireland Limited dated 27 March 2009 for consent to construct and operate a 100 MW Wind Turbine Generating Station in Powys, Mid-Wales ("Llanbrynmair")

Application by RWE Npower Renewables Limited dated 11 December 2008 for consent to construct and operate a 130-150MW Wind Turbine Generating Station in Powys, Mid-Wales ("Carnedd Wen")

Application by SP Manweb plc dated 2 December 2009 to install and keep installed a 132kV overhead electric line connection from Llandinam Wind Farm to Welshpool Substation in Powys, Mid-Wales. ("Llandinam 132kV Line")

Inquiry held on 4 June 2013 – 30 May 2014

File Ref: 515731

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List of Abbreviations

Abnormal Indivisible Load	AIL
Above Ordnance Datum	AOD
Area of Outstanding Natural Beauty	AONB
Assessment of the Significance of Development on Historic Landscape	ASIDHOL
Breeding Birds Protection Plan	BBPP
British Horse Society	BHS
Celt Power Limited	CPL
Clwyd Powys Archaeological Trust	CPAT
Countryside Council for Wales	CCW
Department for Energy and Climate Change	DECC
Distribution Network Operator	DNO
Environmental Impact Assessment	EIA
Electro Magnetic Field	EMF
Overarching National Policy Statement for Energy	EN-1
National Policy Statement for Renewable Energy Infrastructure	EN-3
National Policy Statement for Electricity Networks Infrastructure	EN-5
European Protected Species	EPS
Environmental Statement	ES
Environmental Health Officer	EHO
European Union	EU
Excessive Amplitude Modulation	EAM
Ferm Wint Llaithddu Cyf	FWLC
Full Time Equivalent	FTE
General Permitted Development Order	GPDO
Guidelines for Visual and Landscape Impact Assessment	GVLIA
Heavy Duty Wood Pole	HDWP
Historic Landscape Character Assessment	HLCA
Habitats Regulations Assessment	HRA
Habitats Management Plan	HMP
International Commission on Non-Ionizing Radiation Protection	ICNIRP
Llanbadarn Fynydd	LBF
Landscape Character Assessment	LCA
Landscape and Visual Impact Assessment	LVIA
Mid Wales Connection Project	MWCP
National Policy Statement	NPS
Natural Resources Wales	NRW
Nationally Significant Infrastructure Project	NSIP
Overhead Line	OHL
Penrhyddlan & Llidiartywaun	P&L
Powys County Council	PCC

Powys Landscape Character Area	PLCA
Planning Policy Wales	PPW
Pre Inquiry Meeting	PIM
Private Water Supply	PWS
Public Right of Way	PRoW
Remote Earthing Station	RES
RES UK & Ireland Limited	RES
Rise of Earth Potential	ROEP
RWE Npower Renewables Limited	RWE
Special Area of Conservation	SAC
Scheduled Ancient Monument	SAM
Supplementary Environmental Information	SEI
Scottish Natural Heritage	SNH
Statement of Common Ground	SOCG
Special Protection Area	SPA
SP Manweb plc	SPM
Strategic Search Area	SSA
Site of Special Scientific Interest	SSSI
Strategic Traffic Management Plan	STMP
Severn Valley and Caersws Basin Registered Historic Landscape	SV&CBRHL
Technical Advice Note 5: Nature Conservation and Planning	TAN 5
Technical Advice Note 8: Planning for Renewable Energy	TAN 8
Powys Unitary Development Plan	UDP
Vale of Montgomery Registered Historic Landscape	VMRHL
Visual and Sensory Aspect Area	VSAA
Viewpoint	VP
Welsh Government	WG
Zone of Theoretical Visibility	ZTV

File Ref: 515731

Conjoined Public Inquiry – Applications for proposed developments including 5 No wind turbine generating stations and an overhead electric line connection.

- The applications are for consent under sections 36 and 37 of the Electricity Act 1989 (the 1989 Act) and deemed planning permission under section 90(2) of the Town and Country Planning Act 1990.
- **Application A** is made by Vattenfall, and is for consent to construct and operate a 59.5MW Wind Turbine Generating Station in Powys, Mid-Wales (“Llanbadarn Fynydd”)
- **Application B** is made by Fferm Wynt Llaithddu Cyf, and is for consent to construct and operate a 66.7MW Wind Turbine Generating Station in Powys, Mid-Wales (“Llaithddu”)
- **Application C** is made by Celtpower Limited, and is for consent to construct and operate a 126MW Wind Turbine Generating Station in Powys, Mid-Wales (“Llandinam Repowering”)
- **Application D** is made by RES UK & Ireland Limited and is for consent to construct and operate a 100 MW Wind Turbine Generating Station in Powys, Mid- Wales (“Llanbrynmair”)
- **Application E** is made by RWE Npower Renewables Limited and is for consent to construct and operate a 130-150MW Wind Turbine Generating Station in Powys, Mid-Wales (“Carnedd Wen”)
- **Application F** is made by SP Manweb plc and is for consent to install and keep installed a 132kV overhead electric line connection from Llandinam Wind Farm to Welshpool Substation in Powys, Mid-Wales. (“Llandinam 132kV Line”)

Summaries of Recommendations:

Application A (Llanbadarn Fynydd): That section 36 consent and deemed planning permission should be refused.

Application B (Llaithddu): That section 36 consent and deemed planning permission should be refused.

Application C (Llandinam Repowering): That section 36 consent and deemed planning permission be granted subject to conditions.

Application D (Llanbrynmair): If it is decided to grant section 36 consent and deemed planning permission in whole or in part for application E (Carnedd Wen), that section 36 consent and deemed planning permission be granted in part, and subject to conditions. If it is decided not to grant section 36 consent and deemed planning permission for application E, that additional SEI be sought.

Application E (Carnedd Wen): That section 36 consent and deemed planning permission be granted in part, and subject to conditions.

Application F (Llandinam 132kV Line): That if it is decided that section 36 and deemed planning permission be granted for application C (Llandinam Repowering) section 37 consent and deemed planning permission be granted in part, and subject to conditions. If it is decided to grant section 36 consents which would not take the installed capacity in SSA C beyond 160MW I recommend that further SEI be sought with a view to informing a decision as to whether consent should be conditional upon the line being

upgraded to a higher capacity.

Procedure

1. I held a conjoined public inquiry into the five section 36 applications and the section 37 application, commencing on 4 June 2013 and concluding on 30 May 2014. An Introductory Meeting was held on 28 November 2012 and a pre-Inquiry meeting (PIM) was held on 18 and 25 February 2013. The Inquiry was conducted in accordance with the *Electricity Generating Stations and Overhead Lines (Inquiries Procedure) (England and Wales) Rules 2007*.
2. During the inquiry I was assisted by Inspector Emyr Jones BSc(Hons) CEng MICE MCMI in matters pertaining to Application F: the Llandinam 132kV Line.
3. In accordance with preferences expressed at the PIM the inquiry was conducted on a topic basis to a rolling programme, to a timetable approved by the Secretary of State under Rule 12.
4. The opening session of the inquiry sat from 4 – 7 June 2013 and dealt with opening statements and the application and interpretation of relevant policy.
5. Inquiry Session 1 sat from 3 September – 11 October 2013 and dealt with matters pertaining to SSA C. Site inspections were carried out on 13 and 14 October.
6. Inquiry Session 2 sat from 5 November – 5 December 2013 and dealt with matters pertaining to SSA B. Site inspections were carried out on 9 and 10 December.
7. Inquiry Session 3 sat from 21 January – 21 February 2014 and dealt with matters relating to the section 37 (Llandinam 132kV line) application. Site Inspections were carried out on 25 and 26 February.
8. Inquiry Session 4 sat from 18 March – 3 April 2014. It dealt with matters in common to all the applications and cumulative effects. A site inspection was carried out on 4 April 2014
9. The closing inquiry session sat from 20 May – 30 May 2014 and dealt with the planning balance, conditions, and closing statements.
10. With the agreement of the parties, the inquiry considered certain topics in a 'hearing' format through structured discussions led by the Inspector rather than through formal presentation and cross examination of evidence.
11. Following the introductory meeting held in November 2012, a substantial number of opposition groups joined together to form an Alliance of groups and individuals opposed to the proposed developments, known simply as the Alliance. At its request, I exercised my discretion under the rules to permit the Alliance to participate much as a 'Rule 6' party. In addition to presenting evidence, the Alliance was therefore allowed the first opportunity of putting questions to the applicant's witnesses, following cross examination by the advocates for the Council and/or NRW.

Relevant Matters

12. On the information available at the time of the issue of the Notice of the conjoined public inquiry, and as outlined in the notification of his decision to hold the inquiry¹, the Secretary of State's view was that the following matters, which appeared to him likely to be relevant to his consideration of the proposed wind farm developments, were the matters be considered at the inquiry in relation to the section 36 applications:

¹ CD/COM/011

- a) The extent to which the proposed developments are consistent with the objectives of the Government Policy on the energy mix and maintaining a secure and reliable supply of electricity as the UK makes the transition to a low carbon economy, and achieving climate change goals;
- b) The extent to which the proposed developments are consistent with the policies relating to generation of renewable energy contained within the relevant National Policy Statements for Energy Infrastructure: Overarching National Policy Statement for Energy (EN-1) July 2011 and National Policy Statement for Renewable Energy Infrastructure (EN-3) July 2011;
- c) The extent to which the proposed developments are consistent with Welsh Government and local policies: including Planning Policy Wales, Edition 4 (2011)(PPW)²; Technical Advice Note 8: Planning for Renewable Energy (2005)(TAN 8)³; and Energy Wales: A Low Carbon Transition (2012)⁴; and the Powys Unitary Development Plan (adopted 2010)(UDP)⁵.
- d) The individual and combined landscape and visual impact of the proposed developments taking into account the proximity to Snowdonia National Park (Strategic Search Area B); and cumulative impact with other wind farms in the Powys Area which have already been granted planning permission or where planning permission has been applied for;
- e) The individual and combined impact of construction traffic on the surrounding locality, including transportation access routes and traffic management, taking into account the cumulative impact with other wind farms in the area which have already been granted planning permission or where planning permission has been applied for;
- f) The individual and combined impact of noise generated during construction and from the operation of the proposed developments, taking into account the cumulative impact with other wind farms in the Powys area which have already been granted planning permission or where planning permission has been applied for;
- g) The individual and cumulative impact of the proposed developments on biodiversity, including the ecological functioning of European Protected Sites (e.g. the River Wye Special Area for Conservation (SAC), Berwyn Special Protection Area (SPA) and South Clwyd Mountains SAC); impacts on European Protected Species under the Conservation of Habitats and Species Regulations 2010 (as amended)('the Habitats Regulations'); and the likely effectiveness of proposed mitigation measures;
- h) The individual and combined social and economic impact of the proposed developments, including on tourism;
- i) The potential impact of the proposed developments on human health;
- j) The impact of the proposed developments on cultural heritage;
- k) The individual and combined impact of the proposed developments on aviation;
- l) The impact of the proposed developments on hydrology and hydrogeology, to include impacts on sensitive water features (streams, ponds, wetlands); impacts on private water supplies; fisheries and watercourses; and impact on groundwater; and the likely effectiveness of proposed mitigation measures;
- m) The impact of the proposed developments on peat;
- n) The potential for the proposed developments to be connected to the electricity grid network (DECC document 'The Consenting Process for Onshore Generating Stations above 50MW in England and Wales: a Guidance Note on Section 36 of the Electricity Act 1989' refers); and
- o) Any other matters that the Inspector considers relevant.

² PPW4 Edition 4 is now superseded by Edition 7.

³ CD/COM/016

⁴ CD/COM/033

⁵ CD/COM/006

13. The Secretary of State's view on the matters to be considered at the inquiry in relation to the section 37 application, as outlined in the notification of his decision to hold the inquiry⁶, are:
- a) The extent to which SP Manweb's proposal including the alternatives considered are consistent with Welsh Government and local policies: including Planning Policy Wales, Edition 4 (2011)⁷; Technical Advice Note 8: Planning for Renewable Energy (2005)⁸; and Energy Wales: A Low Carbon Transition (2012)⁹; and Powys Unitary Development Plan¹⁰ (adopted March 2010);
 - b) The extent to which the proposed development is consistent with the objectives of the Government's policy on the energy mix and maintaining a secure and reliable supply of electricity as the UK makes the transition to a low carbon economy, and achieving climate change goals;
 - c) The extent to which the proposed development is consistent with the policies relating to electricity networks infrastructure and also the generation of renewable energy contained within the relevant National Policy Statements for Energy Infrastructure, Overarching National Policy Statement for Energy (EN-1) July 2011¹¹, National Policy Statement for Electricity Networks Infrastructure (EN-5) July 2011¹² and National Policy Statement for Renewable Energy Infrastructure (EN-3) July 2011¹³;
 - d) The relative merits of the proposed development and any alternatives considered in addressing the requirement to maintain security of supply (the need);
 - e) The potential impact of the proposed development on human health;
 - f) The social and economic impact of the proposed development, including on tourism;
 - g) The relative merits of the proposed development, any alternatives considered and likely effectiveness of mitigation measures to address:
 - i. The landscape and visual impact of the proposed development, both individually and cumulatively with existing energy infrastructure and any energy infrastructure which has already been granted planning permission or where planning permission has been applied for, including impact on the Vale of Montgomery Landscape of Outstanding Historic Interest in Wales, Areas of Special Landscape Character and Kerry Ridgeway Regional Path, Severn Way Regional Path and the National Cycle Route near Welshpool Substation;
 - ii. The impact of the proposed development during construction and operation on biodiversity, including trees and hedgerows and the ecological functioning of protected sites (e.g. River Wye Special Area of Conservation and Leighton Bats Site of Special Scientific Interest); impacts on European Protected Species under the *Conservation of Habitats and Species Regulations 2010* (as amended) ("the Habitats Regulations");
 - iii. The impact of the proposed development on the use and enjoyment of land in the vicinity, including farming activities and on users of Rights of Way, including the Kerry Ridgeway Regional Path, Severn Way Regional Path and the National Cycle Route near Welshpool; and
 - iv. The impact of the proposed development on cultural heritage; and
 - h) Any other matters that the Inspector considers relevant.

⁶ CD/COM/011

⁷ PPW4 now superseded by Edition 7

⁸ CD/COM/016

⁹ CD/COM/033

¹⁰ CD/COM/006

¹¹ CD/COM/001

¹² CD/COM/003

¹³ CD/COM/002

Statements of Common Ground

The parties have agreed the following Statements of Common Ground (SOCGs)

Policy

14. Final SOCG on Policy July 3013 (submitted 8 October 2013) between NRW, PCC and the Snowdonia National Park Authority¹⁴.

Llaithddu

15. SOCG on Landscape and Visual Impact Matters between FWLC and PCC¹⁵; SOCG on Highways and Access between FWLC and PCC (in its capacity as County Highway Authority)¹⁶; SOCG on Historic Environment, between FWLC, Cadw and Clwyd Powys Archaeological Trust (CPAT)¹⁷; SOCG on Noise between FWLC and PCC¹⁸; SOCG on Hydrology between FWLC and NRW¹⁹; SOCG on Peat Resource between FWLC and NRW²⁰; SOCG on Ecology and Ornithology between FWLC and NRW²¹; and SOCG on Landscape and Visual Assessment Matters (Session 4) between FWLC and PCC²²;

Llandinam Repowering

16. SOCG on Landscape and Visual matters between CPL and PCC²³; SOCG on Cultural Heritage between CPL and PPC²⁴; SOGC on Noise between CPL and PCC²⁵; SOCG on Peatland between CPL and NRW²⁶; SOCG on Bats between CPL and NRW²⁷; SOCG on Birds between CPL and NRW²⁸; SOCG on Assessments of Effects on the River Wye SAC between CPL and NRW²⁹; and SOCG on Cumulative Landscape and Visual matters between CPL and PCC³⁰.

Llanbadarn Fynydd

17. SOCG on Landscape and Visual Matters between Vattenfall and PPC³¹; SOCG on Local Transport Issues by Vattenfall, PCC and WGT³²; SOCGs on the Historic Environment between Vattenfall, Cadw and CPAT, and between Vattenfall and PCC³³; SOCG on Noise and Health between Vattenfall and PCC³⁴; SOCG on Hydrology and Hydrogeology between Vattenfall and NRW³⁵; SOCGs on Ecology and Nature Conservation and Ornithology between Vattenfall and NRW³⁶; and SOCG on Session 4 Landscape and Visual Issues between Vattenfall and PCC³⁷.

¹⁴ SOCG-Policy-002

¹⁵ FWLC-SOCG-006

¹⁶ FWLC-Highways-SOCG-SSA-C

¹⁷ FWLC-SOCG-007 (Hist Env)

¹⁸ FWLC-SOCG-002 (Noise)

¹⁹ FWLC-SOCG-005 (Hydrology Final)

²⁰ FWLC-SOCG-004 (Peat Resource)

²¹ FWLC-SOCG-003

²² FWLC-OBJ-002-SOCG-LAND-S4

²³ CPL-SOCG-009a (Final Signed Landscape and Visual)

²⁴ CPL-SOCG-008 (Cultural Heritage)

²⁵ CPL-SOCG-004A (Noise)

²⁶ CPL-SOGG 010 (Peat)

²⁷ CPL-SOCG-001A (Bats)

²⁸ CPL-SOCG-002B (Ornithology)

²⁹ CPL-SOCG-HYDRO-CON-003-S4

³⁰ CPL-OBJ-002-SOCG-LAND-S4

³¹ VATT-SOCG-LAND-SSA-C

³² VATT-TRANS-SOCG-SSA-C

³³ VATT-HISTENV-SOCG-SSA-C & VATT-HISTENV-SOCG-SSA-C

³⁴ VATT-NOISE-SOCG-SSA-C

³⁵ VATT-HYDRO-SOGG-SSA-C

³⁶ VATT-ECOLOGY-SOCG-SSA-C & VATT-ORINTHOLOGY-SOCG-SSA-C

³⁷ VATT-OBJ-002-SOCG-LAND-S4

Carnedd Wen

18. SOGG on Landscape and Visual Matters between RWE and PCC³⁸; SOCG on Local Transport Issues between RWE, PCC and WGT³⁹; and SOCG on Noise and Health between RWE and PCC⁴⁰.

Llanbrynmair

19. SOCGs on Cultural Heritage between RES and CPAT, and RES and Cadw⁴¹; SOCG on Noise between RES and PCC⁴².

Llandinam 132kV Line

20. SOCG between SPM and the Snowdonia National Park Authority⁴³ confirming that the Authority has no objection to the proposed overhead line; SOCG between SPM and the WGT on Transport⁴⁴.

Joint SOCG

21. SOCG between the five wind farm developers and PCC on matters of Landscape and Visual Impact, relating to in-combination cumulative landscape effects⁴⁵

Environmental Statements and Supplementary Environmental Information

Llandinam Repowering

22. The application (May 2008) was accompanied by an Environmental Statement (the 2008 ES). Supplementary Environmental Information (SEI) was produced in December 2011 and April 2013 in response to design changes - primarily the reduction of the number of proposed turbines from 42 to 39 (December 2011) and then to 34 turbines (April 2013).

Llaithddu

23. The application (May 2008) was accompanied by an ES (the April 2008 ES). A Transport Management Plan was submitted as SEI in August 2012. Further SEI was produced in June 2013 incorporating updates and layout and design changes, and presenting 3 options. Option 0 was the original application (29 turbines). Option 1 was a revised proposal for 29 turbines with minor design changes, including amendments made in response to comments on the application. Option 2 is a proposal for 27 turbines, including deletion of turbines 1 and 2, and relocation of turbines 3 and 5. A letter from FWLC to DECC, dated 24 June 2013⁴⁶, confirms that the applicant wishes the scheme to be determined on the basis of option 2, i.e. the 27 turbine scheme. I have considered the application on that basis.

Llanbadarn Ffynydd

24. The application (November 2007) was accompanied by an ES (the November 2007 ES). Four subsequent SEI reports were submitted. SEI dated July 2008 introduced amendments to the alignment of internal access tracks and relocation of certain access points. It also provided an outline Habitat Management Plan and Traffic Management Plan. SEI dated September 2012 contained further information relating to noise, passing places, highways works, habitats regulations Assessment and AILs. The February 2013 SEI updated the

³⁸ RWE-PCC-SOCG-LAND-SSA-C

³⁹ RWE-PCC-SOCG-TRANS-SSA-B

⁴⁰ RWE-PCC-SOCG-NOISE-SSA-C

⁴¹ RES-SOCG-CULTHER-SSA-B-CPAT & RES-SOCG-CULTHER-SSA-B-CADW

⁴² RES-PCC-SOCG-NOISE-SSA-B

⁴³ SPM-SOCG-OBJ-621-OHL

⁴⁴ SPM-SOCG-CON-TRANS-OHL

⁴⁵ SOCG-LAND-S4

⁴⁶ FWLC-006

environmental baseline and provided additional information on cumulative effects. Further SEI was provided in June 2013, consisting of background information relating to newt surveys, wintering bird surveys, and an environmental assessment relating to amendments to site accesses. SEI presented in December 2013 presented and assessed works set out within the Strategic Transport Management Plan to provide access for AILs via the Mochdre Industrial Estate. It also reports assessments jointly undertaken with regard to the potential cumulative effects between SSAs B and C, and the potential for other cumulative effects.

Llanbrynmair

25. The application (March 2009), originally for a development of up to 43 turbines, was accompanied by an ES prepared in 2008 (the 2008 ES). Five sets of SEI were submitted between 2010 and 2012 in response to requests for further information and design changes – primarily the reduction of the proposal to 30 turbines. In order to update and consolidate the changes all relevant environmental information was combined into a single SEI package in August 2013 (the August 2013 SEI), which supersedes all earlier documents. Updated survey results and a reassessment of the potential effect on bats were provided in SEI dated October 2013. In December 2013 further SEI was submitted to present the findings of additional survey, assessment and design work, together with information prepared in relation to cumulative effects with other wind farms. SEI dated February 2014 presents environmental information relating to an alternative shared access arrangement with the adjacent Carnedd Wen scheme.

Carnedd Wen

26. The application (December 2008) was accompanied by an ES of the same date. SEI was submitted in August 2009 addressing likely significant cumulative effects with other wind farm projects. Design changes – principally the reduction of turbine numbers from 65 to 50 and the reduction of the maximum generating capacity applied for from 250MW to 150MW – culminated in a further SEI submission in September 2011. SEI produced in July 2013 provides additional information relating to baseline conditions of the site and revised environmental statement chapters.

The Llandinam Line

27. The section 37 application as originally submitted on 2 December 2009⁴⁷ was accompanied by an ES (the 2009 ES)⁴⁸. SEI was produced in December 2010 (the 2010 SEI)⁴⁹ responding to post application feedback and moving the proposed line outside the original 100m wide corridor at two locations. An updated ES (the 2013 ES)⁵⁰ was submitted on 29 October 2013. Errata thereto were submitted to the Inquiry⁵¹. I have considered the section 37 application on the basis of the October 2013 update.

28. SEI relating to grid connection options and grid scenarios was jointly prepared by RES, RWE, Vattenfall and FWLC for session 4 of the inquiry⁵². This includes a technical assessment of the various options for connecting the proposed wind farms to the grid and the infrastructure that this may require, known as the 'Mott MacDonald Report' (December 2013), and a high-level, desk-based assessment of the associated environmental effects.

29. I am satisfied that all the ES and SEI documents referred to above were published and publicised in accordance with the regulations and meet the requirements of the regulations in all other respects. All have been taken into account, together with all other

⁴⁷ AD-SPM-002

⁴⁸ CD/SPM/ES/02

⁴⁹ CD/SPM/ES/03

⁵⁰ CD/SPM/ES/01

⁵¹ AD/SPM/038 & 038a

⁵² AD-RWE-031, 032, 032a, 032b

environmental information submitted in evidence to the inquiry, in the preparation of this report.

The Sites and their Surroundings

SSA C Generally

30. SSA C is essentially a high upland plateau, which is bounded to the west and north by deep river valleys. To the east a series of ridges and hills continues into Shropshire, where the landscape is designated as an AONB. The river Ithon rises in the northern part of SSAC and flows south. The A487 winds up the steep valley side from Newtown, before following the Ithon Valley to the south. The western and eastern parts of SSA C are linked by a narrow 'neck' of high ground at the head of Ithon Valley.

Llandinam

31. The proposed wind farm would be located adjacent to the Llandinam ridge, which is a strong north-south landscape feature between the Severn and Ithon valleys. Its western face is steep and scarp-like. Its eastern slope is more gently inclined and rolling. The Llandinam ridge is characterised by upland moorland vegetation and the existing Penrhyddlan & Llidiartywaun (P&L) wind farm.

Llaihddu

32. The proposed wind farm would be divided into two distinct groups or arrays. The northern group would be located to the south and east of the existing P&L wind farm, largely on a secondary ridge known as the Waun Ddubarthog ridge. Like the Llandinam site, the area is characterised by upland moorland vegetation and the existing wind farm development. The proposed northern array would effectively be a continuation of the Llandinam scheme, or if that does not proceed, of the existing P&L wind farm. To the south the Llandinam ridge divides west and east, thus framing the upper Marteg Valley. The southern array of the Llaihddu scheme would be situated on the eastern ridge, known as the Brondre Fawr, which runs north-south towards the settlement of Bwlch-y-Sarnau. The site of the southern array is characterised by upland moorland vegetation and forestry plantations, some of which have been recently clear felled. The existing P&L turbines are visible to the north and there is an existing relatively small single wind turbine to the south, close to Bwlch-y-Sarnau. The site itself is, however, not characterised by wind farm development.

Llanbadarn Ffynydd

33. The site lies to the east of the Ithon Valley and the A487, in an area of undulating plateau incised by a number of steep narrow upland valleys. The site includes areas of upland moorland and grazing, much of which is improved grassland enclosed by fencing. It straddles the upper Gwenlas Valley which contains areas of woodland and small fields bounded by hedges. The site is traversed by two minor county roads, and there are a number of farmsteads and residential dwellings in the vicinity. To the north the land rises to the open grazed landscape and distinctive landform of the Glog hill. To the north-east the Kerry Hill forms a broad ridge running broadly east-west in England. The undulating and incised plateau landscape extends to the east and south-east. This includes a number of hills which are characterised by open moorland vegetation.

SSA B Generally

34. SSA B is a very large strategic search area, located to the north west of SSA C. The boundaries shown on the relevant TAN 8 map⁵³ define a single large area including several river valleys. The TAN 8 boundaries thus encompass areas of very different landscape character and quality. However, a refinement study by Arup for the Council divides the SSA

⁵³ Map 3, page 17.

into 5 separate upland areas, excluding the valleys. The Llanbrynmair and Carnedd Wen sites would be within the central and largest section, and would be some 25km from SSA C. There are existing wind farms within SSA B, known as Carno (A & B), Cemmaes, and Mynydd Clogau.

Carnedd Wen and Llanbrynmair

35. The sites would be adjacent to each other in a large area of upland plateau. Both sites are characterised by large areas of conifer plantation, moorland, and rough grazing. They would be read as one very large site, stretching for some 8km in a roughly north-south orientation, and up to 4.5km wide in places. The sites lie between the A470 near Talerddig to the south east, the A458 near Foel / Llangadfan to the north east, and the Nant yr Eira Valley to the south east. To the west there are deeply incised river valleys, surmounted by forestry plantations on higher ground.
36. The sites themselves are sparsely populated and largely undeveloped, though there is a scattering of farmsteads and isolated dwellings within the Nant yr Eira Valley.

*The Llandinam Line (CD/SPM/ES/001)*⁵⁴

37. The 35km route starts at Bryn Dadlau on the Waun Ddubarthog Ridge, an upland plateau lying above 400m AOD, and heads in a broad east to north easterly direction, crossing the A483 Llandrindod Wells to Newtown Road and skirting the base of the Glog before crossing the B3455 and traversing the open slope of Kerry Hill below the Kerry Ridgeway Regional Trail. Just north of Block Wood, it swings to a more northerly alignment, passing to the east of Pentre and Sawmills and crossing the A489 and Mule Valley just to the west of Glanmule.
38. The route then continues northwards through the undulating farmland dropping down to cross the Mule Valley for a second time near Upper Maenllwyd, before rising up again to cross the undulating elevated farmland (around 200m AOD) between Abermule and the Llandyssil Valley. From here it descends to the edge of the Severn Valley, where it converges on the B4385 and the Machynlleth to Shrewsbury rail line near Court Calmore.
39. It continues to run close to and parallel the railway, crossing the low-lying fields of the Camlad Valley before rising up again and traversing the lower slopes of the eastern side of the Severn Valley around 100m AOD. Passing to the west of Forden and Leighton Hall, the route terminates just south of the B4381 Leighton Road and the Welshpool Grid Substation, approximately 1km east of Welshpool.

Legal Framework, Energy and Planning Policy

40. The applications are made under the Electricity Act 1989 (Sections 36, 37, 62(3) and Schedule 8), and the Town and Country Planning Act 1990 (section 90).
41. The Scottish Courts have recently held that the licensing of a party to generate electricity for the purpose set out in sections 4 and 6 of the Electricity Act and the granting of consent for the construction or expansion of a generating station under section 36 are two separate regimes. The holding of a licence is not a condition precedent to the granting of consent⁵⁵.
42. Schedule 9, subsection 1(1) of the 1989 Act requires a licence holder or a person authorised by exemption to generate, transmit, distribute or supply electricity to: (a) have regard to the desirability of preserving natural beauty, conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest, and (b) to do what he reasonably can to mitigate any effect which proposals would have on the natural beauty of the countryside or

⁵⁴ Vol.6, Figure 1.2 as well as a fuller description of the route in SPM/LANDSCAPE/POE/GIBSON/006A, paras. 6.21-6.27).

⁵⁵ Trump International Golf Club Scotland Ltd v The Scottish Ministers (2014) SLT 406 & Sustainable Shetland v The Scottish Ministers and Viking Energy Partnership (2014) CSIH 60 P698/12

on any such flora, fauna, features, sites, buildings or objects. Sub-paragraph (2) requires that, in considering any relevant proposals for which his consent is required under section 36 or 37 of the Act, the Secretary of State shall (a) have regard to the desirability of the matters mentioned in paragraph (a) of sub-paragraph (1), and (b) to the extent to which the person by whom the proposals were formulated has complied with his duty under paragraph (b) of that sub-paragraph.

43. Under s90(2) of the Town and Country Planning Act 1990⁵⁶, on granting a consent under sections 36 or 37 of the Electricity Act 1989⁵⁷, the Secretary of State may direct that planning permission for the development and any ancillary development shall be deemed to be granted subject to such conditions (if any) as may be specified in the direction.
44. Section 37 of the 1989 Act sets out the requirement that an electric line shall not be installed or kept installed above ground except in accordance with a consent granted by the Secretary of State.
45. Section 16 of the 1989 Act provides that an electricity distributor is under a duty to make a connection between a distribution system of his and any premises when required to do so by the owner or occupier of the premises or an authorised supplier acting with the consent of the owner or occupier of the premises.
46. The statutory duties under which SPM operates are supplemented by a number of standards and conditions which attach to an Electricity Distribution Licence made under the 1989 Act.⁵⁸ These conditions include condition 12, which provides that on receiving a request for connection, the Licensee will enter into an agreement outlining the works required to provide that connection.
47. Condition 21 requires compliance with the Distribution Code which is designed so as to permit the development, maintenance and operation of an efficient, co-ordinated and economical system for the distribution of electricity.

International Commitments

48. The UK is a leading signatory to various international commitments, and targets for incentivising greenhouse gas emissions reductions and promoting the use of renewable energy have been agreed for the UK and other EU member states. Relevant agreements and obligations include those arising from the 1992 United Nations Framework Convention on Climate Change, the 1997 Kyoto Protocol on Climate Change, the 2009 Copenhagen Accord, and the United Nations Climate Change Conferences Durban 2011 and Doha 2012. European Obligations include the EU Emissions Trading Scheme, EU Directive 2009/28/EC on the promotion of the use of energy from renewable sources, and Decision No 406/2009/EC of the European Parliament and of the Council of 23 April 2009, which establishes annual binding greenhouse gas emission targets for EU member states for the period 2013-2020.

Applicable Policy - UK

49. Had the applications been made after the coming into force of the relevant section in the *Planning Act 2008*⁵⁹ (the 2008 Act) (1 March 2010), they would have been classified as 'Nationally Significant Infrastructure Projects' (NSIPs). Whilst the 2008 Act does not apply in the circumstances of the present applications, the *Overarching National Policy Statement for Energy* (EN-1)(July 2011)⁶⁰, the *National Policy Statement for Renewable Energy Infrastructure* (EN-3)(July 2011), and the *National Policy Statement for Electricity Networks*

⁵⁶ OBJ-002-LEG-003

⁵⁷ CD/COM/023

⁵⁸ See SPM/NETWORK/POE/BEDDOES/001B, App.2.

⁵⁹ CD/COM/025

⁶⁰ CD/COM/001

Infrastructure (EN-5)(July 2011)⁶¹ carry substantial weight as they form the primary and most up-to-date expression of UK policy with respect to generation infrastructure in excess of 50 MW capacity and electricity lines of at least 132kV.

50. EN-1 reaffirms the essential role of renewable energy development in securing greenhouse gas reductions. It includes provisions relating to the commitment to meet legally binding targets to cut such emissions and to decarbonise in a way which reinforces security of supply, whilst retaining efficiency and competitiveness. It sets out the strategic framework for decision making. It highlights the commitment to increasing dramatically the amount of renewable generation capacity and emphasises the urgent need for new and particularly low carbon NSIPs. It also set out how generic impacts should be considered in decision making.
51. EN-3 provides technology-specific guidance for renewable energy infrastructure including onshore wind developments in excess of 50MW. EN-5 provides similar guidance on electricity networks infrastructure.

Wales

52. The Welsh Government's energy and climate change policy sets carbon reduction and renewable energy targets for Wales and helps to define how these should be met. Welsh national planning policy is set out in *Planning Policy Wales* (PPW)(Currently Edition 7, July 2014) and is supplemented by government circulars, ministerial letters and a series of Technical Advice Notes (TANs), including TAN 8: *Planning for Renewable Energy*. PPW recognises that the Welsh Government is required to make a contribution to the International, EU and UK targets for greenhouse gas reduction, and that tackling climate change is a fundamental part of delivering sustainable development. It identifies Strategic Search Areas (SSAs) as areas in Wales which, on the basis of substantial empirical research, are considered to be the most appropriate locations for large scale wind farm development in Wales. TAN 8 provides technical advice to supplement the policy set out in PPW. SSAs are identified by 'broad brush' boundaries. For each of the SSAs there are indicative targets of installed capacity, intended to ensure that proposals for a total of 800MW come forward by 2010.
53. A Welsh Government letter of July 2011⁶² provides further clarity on the issue of maximum installation capacities for onshore wind within the SSAs. It confirms that the Welsh Government remains committed to achieving the potential estimated in the Low Carbon Revolution energy policy statement⁶³, which was based on the maximum capacities assessed by independent consultants Garrad Hassan. The maximum capacities for SSA C and SSA B identified by Garrad Hassan were 98MW and 430MW respectively. The letter also confirms the Welsh Government's view, set out in TAN 8, that connections from individual turbines to a substation should be via underground cables, and that any connection from a substation to the nearest part of the distribution network should be achieved by a standard 3 wire system on wooden poles. TAN 8 acknowledges that laying high voltage cables underground is usually 6-20 times more expensive than a pole mounted system and would be likely to be justified for only limited lengths and/or in special circumstances.

Local Planning Policy

54. Although the applicants seek directions from the Secretary of State under section 90 of the *Town and Country Planning Act 1990*, section 38(6) of the *Planning and Compulsory Purchase Act 2004* is not engaged⁶⁴. Nevertheless, it is clear that development plans may

⁶¹ CD/COM/003

⁶² CD/COM/020

⁶³ CD/COM/009

⁶⁴ OBJ-002-LEG-003 & CD/SPM/LEG/07. In January 2012 the High Court considered this issue in *R (on the application of Samuel Smith Old Brewery (Tadcaster) v Secretary of State for Energy & Climate Change*⁶⁴. It ruled that the provisions, requiring determinations to be made in accordance with the development plan unless material considerations indicate otherwise, do not apply

be a material consideration in determining an application under sections 36 and 37 of the Electricity Act.

55. The development plan for the area is the *Powys Unitary Development Plan (UDP)* (March 2010)⁶⁵.
56. UDP Policy E3 relates to wind power. It provides that applications for wind farms including extensions to existing sites and individual wind turbine generators will be approved subject to 8 listed criteria. These include that the proposed schemes would not unacceptably adversely affect: the environmental and landscape quality of Powys; wildlife habitats or species of international, national or local importance; the occupants or users of sensitive properties by reason of noise, vibration, shadow flicker or reflected light; buildings or features of conservation or archaeological interest; or the enjoyment or safe use of highways and the public right of way network. It requires that proposals would be capable of being served by an acceptable means of highway access and that any new or improved roads and accesses required would not have unacceptable environmental impacts, and that applicants should be able to demonstrate through land management schemes that there would be adequate mitigation or compensation for any adverse impact on environmental quality, wildlife habitats or heritage features. Any ancillary structures or buildings are required to be so sited and designed (including the use of locally appropriate construction materials) so as to adequately blend into their setting.
57. UDP Policy E4 relates to removal of redundant wind turbines and proposes that planning conditions should be used to this effect.
58. The accompanying text to UDP Policy E3⁶⁶ notes that experience to date shows that a criteria-based policy on its own does not represent a particularly good basis for future decision making. It says that it would be more desirable for the Council to be more proactive in steering developments to areas where they would be more acceptable. However, whilst TAN 8 refinement studies were commissioned and carried out, no related Supplementary Planning Guidance (SPG) has been adopted.
59. With regard to the Llandinam 132kV connection scheme, UDP Policy DC12 requires that all lines and pipelines be placed underground unless there are overriding reasons for them not to be. It also notes that lines should be routed to minimise their impact on the landscape and natural and built environment of Powys, particularly in important landscapes and areas of conservation or archaeological interest. Where overhead lines are unavoidable in rural areas, the policy states that they should follow hedgerows, woodland margins, low lying folds in the landscape wherever feasible. Paragraph 12.12, amongst other matters, states that electricity power lines could be and should be buried wherever practically, technically and economically feasible.

The Proposals

Llandinam

60. On 9 May 2008 CeltPower Limited (CeltPower) applied under section 36 of the Electricity Act 1989 for consent to decommission the P&L wind farm, and to install a new wind farm. CeltPower also seeks a direction for deemed planning permission under section 90 of the Town and Country Planning Act 1990. The existing P&L wind farm comprises 102 turbines with a generation capacity of about 30MW. They are relatively closely spaced and arranged in roughly parallel straight lines. The initial application was for a 42 turbine scheme with an installed generation capacity of up to 126MW (3MW / turbine). The scheme has undergone significant evolution since that time. In 2011 the scheme was reduced to 39 turbines. In 2013 a further 5 turbines were removed from the scheme. The parties are agreed that the

in respect of deemed planning permission associated with a section 37 consent. It was decided that a 'direction' that planning permission be deemed to be granted was not a 'determination' under the Planning Acts.

⁶⁵ CD/COM/006

⁶⁶ Para 12.9.1

proposal should be determined on the basis of the amended scheme with a total of 34 turbines and a maximum generation capacity of 102MW, and it has been assessed on this basis.

61. The existing P&L turbines are 45m in height (to blade tip). The proposed turbines would mainly have a height to blade tip of 121.2m (hub height 80m). However, 3 turbines (T29, T3 and T43) would have a reduced height of 111.2m to blade tip.

Llathddu

62. The application was made and registered in May 2008, and was for the erection of 29 x 2.3MW wind turbines and associated infrastructure. It was subsequently amended in response to consultations.
63. As described in the subsequent June 2013 SEI the amended scheme (option 2) would comprise 27 turbines in two distinct groups. The northern group would include 12 turbines with a hub height of 80m (115.5m to blade tip). The southern group would include 15 turbines with a hub height of 64m (99.5m to blade tip). Associated infrastructure development would include access tracks, a control building and electricity sub station within a fenced compound, a temporary constructor's compound, borrow pits, underground cables, two anemometry masts and the provision of passing places to existing roads.
64. The proposed turbines would be Enercon E70 machines, each with a rated output of 2.3MW. These machines do not have a conventional gearbox. They have been selected for various reasons including the ability to transport components via Builth Wells and Cross Gates without major highways works, and the scheme has been assessed on this basis.

Llanbadarn Ffynydd

65. The application (November 2007) was made by Nuon Renewables, but in 2011 all its projects were integrated into the Vattenfall business in the UK. The application is for the development of 17 turbines, each rated at 3.5MW, giving a maximum installed capacity of 59.5MW. The turbines would have a maximum height to blade tip of 126m with an approximate hub height of 69m. Associated infrastructure would include an on-site met mast, underground cabling, a substation and a construction compound. Provision has been made for on-site borrow pits.
66. Minor amendments, principally to access arrangements and the alignment of on-site tracks were submitted in 2008 and 2010, and were described in the SEIs of those dates. However, the height, number and location of the turbines proposed have not been changed.

Carnedd Wen

67. The application submitted in 2008 proposed the construction and operation of a wind farm of up to 250MW, comprising 65 wind turbines and ancillary development. The application included proposals for the felling of 1,742 ha of coniferous forest and the re-establishment of managed natural habitats.
68. On 5 March 2013 RWE notified DECC of an amendment to the application so as to propose a maximum installed capacity of 150MW. The proposed development, as amended, would comprise 50 wind turbines, each with a maximum installed capacity of 3MW. The maximum blade and hub heights would be 137m and 80m respectively. The amended scheme proposes 1,409 ha of forest clearance. The amended habitat management and improvement programme would include 459ha of peatland restoration, the restoration of an SSI through tree clearance and ditch blocking, the restoration of raised bog, and actions to facilitate the re-establishment of heathland within the site.

Llanbrynmair

69. The application (March 2009) was for a wind energy development of up to 43 turbines on land between the villages of Llanbrynmair and Llanerfyl. In addition to the wind turbines

the proposal would provide for the associated infrastructure including on-site tracks, underground cabling, crane hardstandings, a communications mast, a permanent free standing 80m high lattice wind monitoring mast, electrical transformers, electrical connection works, a substation, and a control building. Subsequent to the application the proposal has been amended to comprise 30 turbines. Associated amendments have been made to the proposed infrastructure.

70. The proposed turbines would be of the conventional 3-bladed design with a tapered tubular tower. The maximum height to blade tip would be 126m. The hub height would be about 80m. The installed capacity of each turbine would be within the range of 2 – 3 MW. The maximum installed capacity would therefore be 90MW.
71. In August 2012 the site boundary was amended to incorporate land required in connection with access route improvement works along the Llanerfyl to Talerddig. In February 2014 the site boundary was further amended to address the Council's suggested shared access route.

Llandinam 132kV Line

72. The proposed Llandinam repowering scheme would require a new connection to the local distribution network to cater for the increased amount of electricity that would be exported. The proposal before the Inquiry seeks to provide that connection.
73. The proposed connection would comprise approximately 35 km of new 132 kV overhead line within a 100m corridor⁶⁷ providing a 3-phase single circuit with 124 MW rated capacity. The three 24mm diameter phase conductors and underslung 14mm diameter earth wire incorporating a fibre optic cable would be supported by 382 wood pole structures, ranging in height between 12m and 16m above surrounding ground level. This design is known as the Single Circuit Heavy Duty Flat Formation Overhead Line Design on Wood Poles or OHL-03-132 for short. For convenience it was referred to as the Heavy Duty Wood Pole (HDWP) method of construction during the inquiry. It is a design which has been developed and is being used by SPM to provide connections at high altitude and exposed locations. The span between poles is dependent on a number of factors, but would vary between 50m and 130m and average at about 90m. The final 50m or so of the connection would comprise buried cable under the B4381 into the Welshpool substation.
74. A minimum of two, but more likely three temporary construction compounds would be required, subject to local access needs and the tension system to be agreed. The final locations of these are not yet agreed but they would be spaced to give efficient coverage across the central and southern sections and to minimise travel times. Each temporary storage area would be approximately 2,500m² in size. These would be in addition to a main contractor's compound where the steelwork, conductors and other equipment, secured stores and offices would be sited.
75. The proposed overhead line would require the installation of additional switchgear and protection equipment at the existing 132kV Welshpool Grid Substation. This would involve an extension to the existing substation within the curtilage of SPM's operational land, which is covered by General Permitted Development rights.

The Cases for the Parties

⁶⁷ The Llandinam Scheme includes a 50m tolerance either side of a notional centreline and the EIA process has assessed the environmental effects of the line anywhere within this 100m corridor. The proposed line will run within that corridor, with micro siting to be undertaken prior to construction. It is standard practice in applications for overhead lines to use a corridor to represent a tolerance for development (sometimes known as a limit of deviation). This enables some flexibility with which to implement a consented scheme as matters of precise detail are finalised post-consent.

76. The cases for the main parties, including the Alliance and NRW, were set out in comprehensive written submissions that were presented during the closing session of the inquiry. These are reported in full in the following Annexes to this Report:-

Llandinam Repowering Scheme (Celt Power Limited) – Annex 1 (A1)

Llaihddu (Ferm Wynt Llaihddu Cyf) – Annex 2 (A2)

Llanbadarn Fynydd (Vattenfall) – Annex 3 (A3)

Carnedd Wen (RWE NPower Renewables Limited) – Annex 4 (A4)

Llanbrynmair (RES UK & Ireland) – Annex 5 (A5)

Llandinam 132kV Line (SP Manweb PLC) – Annex 6 (A6)

The Alliance – Annex 7 (A8)

Natural Resources Wales – Annex 8 (A8)

Powys County Council – Annex 9 (A9)

The Case for the North Montgomeryshire Local Council Forum

77. The North Montgomeryshire Local Council Forum also presented a written statement during the closing session. The key submissions are summarised as follows:

78. The applicants have underestimated the feeling of the inhabitants of Mid Wales, the strength of which has been demonstrated clearly by the Alliance and others at demonstrations in Cardiff, a meeting at the Livestock Market in Welshpool, through surveys carried out amongst local communities, and at the meeting at Welshpool Town Hall on 3 April 2014.

79. TAN 8 is out of date. It was not understood by those who approved it and the approval process was flawed. It should be reviewed before any further progress is made with regard to wind farm development in Mid Wales.

80. Any power supplies should be on wood poles in accordance with Welsh Government statements, as many people are opposed to the proposed 400kV line.

81. The effect on the economy and local tourism should be given particular consideration as the north Powys visitor economy is more at risk from wind farm developments than many other parts of Wales, and many small businesses depend almost solely on the quality of the landscape. Transport issues have been underestimated.

82. The Forum urges that all six applications are refused as there would be demonstrable harm to the communities, economy and environment of Montgomeryshire and harm from the traffic involved in the developments. Proper consultation is needed with elected representatives of Town and Community Councils and TAN 8 needs to be reviewed to find an acceptable way forward. The communities of mid Wales will pay the price of the proposed developments, but the developers will reap the benefits.

Summary of the Cases for other Community Councils, Action Groups, other representative organisations and individuals

83. Many hundreds of other groups and individual local residents presented evidence to the inquiry in writing, orally during inquiry sessions at the main venue, or at other venues in local communities during evening sessions. The vast majority of persons who spoke at, or made written representations to the inquiry were opposed to the proposed developments, though some support was also expressed. It is impractical to summarise their statements individually, and in any event the majority of matters that they raised are covered in detail in the cases for the Alliance, NRW and the Council. In the following paragraphs I therefore

summarise the material points that are not covered in those cases and identify common themes amongst objectors:

Supporters -

84. The Powys Windfarm Supporters Group supports wind turbine development generally, as it would bring economic investment into mid Wales and would provide a means of diversifying rural enterprises. It points to wind power providing energy independence and security, being robust and safe against natural disasters in contrast to nuclear power, consuming no water, and leaving no toxic legacy or debt for future generations. It believes the cost of wind energy will continue to fall and will reach parity with other means of generation. It notes that community funds can be applied to benefit local communities in a number of ways including support for local schools, doctors' surgeries and other public facilities. It does not consider that onshore wind is the answer to all energy needs but that it has an increasing part to play. Powys can play its part, whilst benefitting from the proposed developments.
85. A number of persons who spoke were concerned about the effects of global warming both nationally and globally, and supported the applications as they considered that they would make a significant contribution to the national commitment to reducing carbon emissions.
86. Several local young people were concerned about the lack of good quality long-term employment opportunities in the area, and that this was driving young people away from their home communities. They supported the proposals as they would secure existing maintenance jobs and would create opportunities for others.

Objectors -

General Themes

87. The cases for the Alliance, NRW and the North Montgomeryshire Local Council Forum reflect a common theme, expressed in the petition of over 7,000 signatures presented at the opening of the inquiry and many of the individual representations that have been made, to the effect that communities in Powys would experience economic and environmental harm but the benefits would be experienced elsewhere. Another common theme, expressed by many local residents and reflected in the Alliance's submissions is concern that the proposed developments would be dependant on subsidies. Many local residents have doubts about the cost and economics of wind development generally. Many drew attention to the reliance of wind farms on wind, and the consequent inability to make a reliable contribution towards electricity demand at all times. Some considered that wind farm development is diverting attention and investment from other more reliable and more economic forms of energy infrastructure.

Specific Concerns

88. My attention was drawn to an area of woodland immediately below and to the west of the existing P&L wind farm, which is used for therapy courses for disadvantage children. The operator of those courses is concerned that visual disturbance and noise would make the area unsuitable for that use.
89. Attention was drawn to turbine fires that have occurred elsewhere, and the risk that such fires could cause personal injury to workers or members of the public or could result in the release of toxic gases from the combustion of materials such as lubricants.
90. Some local residents referred to the relatively low levels of light pollution that exist in rural Powys, and were concerned that the proposed developments would cause harm to the 'dark skies', and to the enjoyment of stars and astronomy.
91. One resident spoke about noise and disturbance that she had experienced at her home in Scotland as a consequence of wind farm development, and harm she had experienced to

her health and well-being which she attributed to the wind farm. In relation to the Llanbadarn Fynydd scheme, several local residents expressed concern about construction noise, including effects of noise echoing between hills in the area. Others are concerned that construction traffic would cause delays, disruption and damage to the minor roads serving the area.

92. Many local residents are concerned about the effect of the proposed developments and ancillary infrastructure and property values. Some had tried to sell properties without success, and had been advised by Agents that the threat of wind farm developments was a factor in the difficulties experienced. Many local residents expressed concern that the proposed developments would have a long-term effect on the value of their properties if they go ahead. Some noted that the effect on property values has affected their ability to raise collateral to support reinvestment in businesses. One business reported moving jobs away from the area as a consequence.
93. A number of local residents are concerned that wind turbines cause harm to wildlife through bird strikes and barotrauma effects on bats, and that works to local access roads would cause harm to habitats.
94. Several local residents are concerned about air safety, particularly in relation to a military Tactical Training Area in SSAC. Evidence was presented to the inquiry in this regard⁶⁸.

Local Residents' Objections Specific to the Proposed Llandinam 132kV Connection

95. Kerry Community Council drew attention to the high proportion of local residents opposed to the line and concerns about its visual impact. It considers that decisions about the Llandinam connection should await the outcome of proposals for the Mid Wales Connection Project and hub, in the interest of having a strategically planned network. It also considers that any lines should be underground, irrespective of cost, and that the needs and interests of the community should be put before those of the developers. The Llandyssil with Abermule Community Council also drew attention to the high proportion of local residents that are opposed to the line. In recent years it has established a number of scenic circular walks in the area, and it is concerned about the visual effect of the proposed line on these and other recreational and visitor attractions. It is also concerned that consultation events have provided limited information and caused confusion.
96. A Council member has drawn attention to local farms turning to alternative energy schemes in the form of single turbines and solar panels, and is concerned that if SPM's proposals are approved there would be no spare capacity to take the electricity generated by farm diversification schemes.
97. A local farmers' representative reported that some farmers along the route have been threatened with compulsory purchase or offered financial inducements. He considers that it is inappropriate for SPM to act in this way whilst the inquiry is in progress. He also reported that many farmers are not aware of the design changes that have taken place since 2008. He is concerned that much of the land that would be affected by the line is used for crops requiring large machinery. The proposed line would therefore restrict the future use of the farmland, reduce its value, and thus the security held by banks and lending institutions.
98. Several local residents spoke as individuals about the visual impact of the line and consequent effects on tourism and associated businesses, loss of trees and hedgerows, effects on heritage assets, effects on wildlife, additional traffic during construction of the line, and misleading consultation documents. Their concerns are reflected in the cases for the Alliance, the Council and NRW. One local resident raised additional concerns about the effect of electromagnetic fields associated with power lines on human health, particularly for those with metal implants in the body.

⁶⁸ OBJ822-AIRSAFETY-POE-BREBNER-SSA_C & CPL-AIRSAFETY-REBUTTAL-HALE-SSA-C

Inspector's Conclusions

99. In these conclusions the numbers in square brackets [] refer to earlier paragraphs in this report, or where prefixed by A1 – A9, to paragraphs in the cases for the parties contained in Annexes 1 – 9.

SSA C: Site-Specific Issues

100. The following discussion relates to matters specific to the individual wind farm proposals in SSA C. I shall address matters raised in relation to these proposals but which are more properly considered as area-wide or general effects in subsequent sections of this report.

Llandinam Repowering Scheme

101. The Council has confirmed that, subject to the applicant resolving any issues with NRW, it is now satisfied that there is no reason why the wind farm proposal (as amended) should not be consented subject to conditions [A9, 987]. There are no outstanding issues with NRW [A8. 2.2]. The main considerations therefore arise from the Alliance's case and local residents' concerns. They relate mainly to the landscape and visual impact of the proposed development, and site-specific transportation issues.

Landscape and Visual Effects

102. The Alliance's concerns arise from the height of the proposed turbines, which at up to 121.2m to blade tip would be much taller than the existing 45.5m turbines, and from the much greater swept area of the turbine rotors [A7, 11.20 & 11.24]. From many viewpoints the proposed turbines would undoubtedly be more conspicuous due to their much greater size.

103. The existing P & L wind farm is a key characteristic of the Llandinam Ridge [A9, 149]. It is the dominant landscape feature, thus creating a 'wind farm landscape'. This does not extend over the whole of the high land to the west of the Ithon valley, but it does extend over the area of the wind farm itself and for a distance around the existing development. Outside this area there is a zone where the existing turbines are prominent but not dominant – a 'landscape with wind turbines'.

104. The proposed scheme would replace the existing P & L Wind farm which has been in place since 1992, and for which there is no decommissioning scheme. Although the existing turbines are old they are likely to be retained for many years, and could be retained indefinitely. It is therefore appropriate to take the presence of the existing wind farm into account as a realistic 'fall-back' position [A1, 5; A7, 11.12].

105. In the Council's view because of the additional height and partially extended footprint of the proposed scheme, the proposed development would increase the extent of the wind farm landscape. To the north and north east it would be increase to about 1km beyond the extended footprint. However, to the west and south east its extent would be limited by the topography and forestry [A9, 150].

106. As the proposed turbines would be on a plateau overlooking lower ground to the west, the Council considers that the 'landscape with wind farms' area where the proposed turbines would be prominent but not dominant would extend up to 5km to the west, but much less to the north and south. I agree with that assessment, and with the Council's view that within this area there would be a moderate-substantial effect on landscape character [A9, 151].

107. It is the Council's view that the density of the existing turbines, together with their rapid rotation (due to small rotor diameter) and regular arrangement is such that they give rise to a very busy and cluttered appearance which catches the eye. As the proposed turbines would be more widely and less regularly spaced and would rotate more slowly it considers that from viewpoints within about 4km the proposed development would visually enhance

the appearance of the wind farm and that the landscape change would, in this respect, be an enhancement. I agree with that view [A9, 124, 144 & 151].

108. Beyond about 4km the existing P & L turbines are noticeable, but not prominent. The visual benefits of the proposed turbines would therefore be reduced beyond about 4km. As they would be more conspicuous, at such distances the proposed turbines would on balance have a harmful visual impact. However, beyond about 5km they would not be prominent and the harm would not be significant. The Council therefore considers that there would be a progressive change from beneficial visual effects at close range, shifting towards adverse visual effects at about 4-5km, before the adverse effects again begin to diminish with further distance. I agreed with that analysis [A9, 144].
109. This pattern of effects would not exist as clearly to the east of the site because of the topography, the presence of large areas of afforestation, and other intervening vegetation [A9, 145]. ZTV diagrams indicate that because of the topography little would be seen of the proposed turbines from most of the Ithon Valley close to the river or A483. Nevertheless, there are large areas within about 4km of the east of the site where the existing turbines are seen, and where views would be enhanced by the proposed development. These areas include the open high ground at the upper end of the Ithon valley. Views from the A483 would be enhanced at this location. In more distant views from the east beyond the Ithon Valley an adverse effect would be apparent, but the degree of harm would diminish with distance.
110. The proposed turbines would be seen from some key viewpoints to the east of the Ithon valley including the Kerry Ridgeway, which is a promoted regional walking route with commanding panoramic views, and in particular from the 'Two Tumps' viewpoint. I saw from the Two Tumps viewpoint that in most conditions the existing P & L turbines are noticeable features on the horizon, but they do not detract substantially from the impressive panorama. I accept that the proposed turbines would be more conspicuous. Nevertheless, they would be about 7km away. At that distance I do not consider that they would significantly detract from the panorama, or would have a serious adverse effect on the view. I shall return to the matter of the cumulative visual effects with other developments in due course [A7, 11.15 & 11.22].
111. The proposed turbines would also be seen from parts of Glyndŵr's Way to the east of the Ithon Valley, and more closely from sections to the west of the Llandinam ridge. However, from the east they would be too distant for there to be a significant adverse visual effect. To the west, where Glyndŵr's Way meanders through rolling countryside between the Llandinam ridge and Llanidloes, much of the route would be within the roughly 4km zone where there would be visual benefits. ZTV diagrams indicate that due to the topography the proposed turbines would not be seen from parts of the route just outside the 4km zone. The section beyond that, from which the proposed turbines could be seen, is relatively short in comparison to the section within about 4km within which there would be visual benefits. For these reasons I conclude that the balance of adverse and beneficial effects on views from Glyndŵr's Way would be broadly neutral [A7, 11.16].
112. My site inspections included a visit to an area of about 54 acres of woodland immediately below and to the west of the P & L turbines, which is used for therapy courses for disadvantaged children [88]. Some of the existing P & L turbines can be seen from a close distance within and around this area, and ZTV diagrams indicate that several of the proposed turbines would also be seen. However, I am satisfied that as the proposed turbine blades would rotate more slowly the proposed development would not create a greater visual disturbance to the tranquillity of the area. Mechanical noise from the existing turbines can be clearly heard in this area. I have no indication that the proposed turbines would be noisier. Rather, as advised in TAN 8 there has been a significant reduction in mechanical noise since the early 1990s (TAN 8, Annex C, para 2.14). I consider for these reasons that the suitability of the area for its use in connection with therapy courses would not be materially harmed.

113. The existing P & L wind farm would be extended by about 0.25km to the north-east, towards the settlements of Pentre and Mochdre. Wire frame diagrams and photomontages have not been provided for viewpoints in this area, but ZTV diagrams indicate that the proposed turbines would be seen from some properties which do not have views of the existing P & L turbines [A7,11.18]. There would therefore be some additional adverse visual effects in these areas. However, relatively few of the proposed turbines would be seen, and the additional adverse effects would be localised. The limited angle of view and separation distances between dwellings and turbines would be sufficient to avoid significant adverse effects on residential amenity.
114. The existing wind farm would be extended towards to the Severn Valley and the Caersws Basin Registered Historic Landscape (SV&CBRHL)[A7,11.19]. Several of the northernmost turbines would break the skyline and would occasionally be glimpsed by persons travelling along the A470, or by persons in the northern part of the basin. However, because of the topography most of the proposed turbines would not be seen from the SV&CBRHL. Because of the distance the turbines that would be seen would be noticeable but not prominent. The amended scheme would have a considerably reduced impact compared to the original or 2011 proposals. For these reasons I agree with the Council that the effects of the proposed development have been moderated by the changes that have been made and the residual effects would 'faint adverse' [A9, 142 & 143]. They would therefore not amount to substantial harm.
115. The Council's outstanding landscape concern that a group of trees adjacent to the local access route should be retained is a matter that can be dealt with at the detailed design stage, and it is agreed that it can be controlled by conditions [A9, 982]. The Council now considers that, subject to agreed conditions, the Llandinam repowering scheme is acceptable in landscape and visual impact terms [A9, 153]. For the reasons given above I agree with that view.

Site-Specific Transport Matters

116. The components of the proposed Llandinam turbines would be transported from the south, via Newport docks and the A470 / A483. The proposed maximum loaded vehicle length and height makes it impossible for Llandinam AILs to pass through Builth Wells or under a railway bridge at Cross Gates without intervention. It is therefore proposed to construct a temporary 'bailey bridge' crossing of the River Wye to by-pass Builth Wells, and to lower the carriageway under the Cross Gates bridge to enable AILs to pass. Both schemes will require additional consents.
117. The River Wye is a Special Area of Conservation (SAC). However, NRW considers that there is no reason to believe that there will be a likely significant effect on the SAC as result of the construction and use of the bailey bridge (SOCG, CPL para 67). The WG Transport Division as highway authority is only concerned with the tie-in points where the private temporary haul road would meet the trunk road, the details of which would be matter for separate approval as part of the detailed design of the scheme for those works. I see no reason why acceptable details would not be forthcoming. The WG is also confident that an engineering solution can be found for the lowering of the carriageway beneath the Cross Gates bridge. NRW and the WG Transport Division therefore have no objection in principle to the works necessary to enable the Llandinam AILs to use the southern route [a1, 52; A9, 985; A7, 131 & 132]. I am therefore satisfied that there are no obvious reasons why the transport of AILs to the Llandinam site would not be acceptable.
118. There is no dispute between the Council and Celtpower that, subject to upgrading and traffic management in line with submitted proposals, the proposed local access route from the A483 to the Llandinam site would be acceptable in highways terms. The necessary upgrading and traffic management plan could be secured by conditions relating to the submission and approval of final details [A7, 11.27; A9, 984].

119. I conclude for these reasons that there are no site-specific highway safety or practicability matters that should carry weight against the proposal. The effects of construction traffic in terms of general disruption or associated economic or social damage remain a concern for the Alliance and some local residents, but I shall return to this as a matter best considered as a cumulative or combined effect with other schemes.

Other Relevant Matters:

Noise

120. Assessment of noise impacts has been carried out in accordance with the guidance in ETSU-R-97. It is common ground between the Council and Celtpower Ltd that compliance with derived noise levels can be achieved at all relevant locations, and that noise limits specified in tables attached to the draft conditions represent an adequate and appropriate way of controlling operational noise levels from the final turbine model to be installed⁶⁹. It is also common ground between the Council and Celtpower that there is no evidence to suggest that low frequency noise or ground-borne vibration would be adverse factors present on this site [A9, 986]. I shall return to local residents' general concerns about the health effects of noise from wind turbines under the section on matters in common with other applications.

121. Subsequent to the signing of the SoCG, further evidence was heard at the inquiry in relation to Excessive Amplitude Modulation (EAM). For reasons that I shall address later I consider that a condition should be imposed in relation to EAM [A1, 61-63]. Subject to this, however, I am satisfied that EAM would give rise to no unacceptable adverse effect. It is common ground between the main parties that noise during decommissioning of the existing turbines, construction or eventual decommissioning of the project is not likely to cause significant impacts.

Biodiversity

122. NRW has concluded and agreed that there would be no likely significant effects on bats, and no likely detriment to the favourable conservation of bat species. There is some disagreement between CPL and NRW with regard to whether curlews will be displaced by the proposed scheme, but it is common ground that any possibility of displacement can be reduced to an acceptable minimum by a suitable Breeding Birds Protection Plan (BBPP) and any residual effects can be mitigated by a suitable Habitat Management Plan (HMP). Draft plans have been agreed as suitable models for the final versions, which can be required by conditions. NRW has therefore withdrawn its objection on the grounds of impact on breeding curlew, subject to the imposition of conditions. NRW has not raised any concerns about the impact of the proposed development on any other ornithological interest, subject to the BBPP and a post-construction monitoring programme⁷⁰.

123. The Alliance and local residents have expressed concern about the impact of the proposed development on bats and ornithological interests, particularly as a consequence of collisions with blades and barotrauma effects on bats [A7, 10.15-10.17; 93]. However, no substantial evidence has been provided to support such concerns that would lead me to differ from NRW's expert opinion on these matters.

124. Concern has also been expressed by local residents about the effect of upgrading the local access route on plant species and biodiversity [93]. However, the proposed upgrading scheme includes measures to mitigate effects on habitats such as the use of 'soft' surfacing of over-run areas and retention of verges and hedgerows where possible. The necessary works have been environmentally assessed and NRW has no objection on this basis, subject to conditions. I have no firm evidence that would lead me to disagree.

⁶⁹ CPL-SOCG-004A

⁷⁰ CPL-SOCG-001A & 002B

125. I conclude that the proposed development would be unlikely to have any significant adverse effect on biodiversity.

Social and Economic Effects, including Tourism

126. The proposed development would not inhibit the use of the bridleways and footpaths that give public access to the Llandinam ridge. Some riders and walkers may have avoided these routes in the past because of the presence of the existing P & L wind farm, and some may be put off during the construction period [A7, 11.40]. However, I have found that the proposed development would visually enhance the appearance of the wind farm. I therefore do not consider it likely that the proposed development would have a negative effect on the use of these routes or organised events such as cross-Wales charity walks or rides. Rather, as the appearance of the wind farm would be improved it is likely that there may be a small positive effect in the medium to long term. I have also concluded that there would be no significant adverse effect on views from Glyndŵr's Way or the SV&CBRHL. I consider for these reasons that it is unlikely that the proposed development would have an adverse effect on tourism, or the contribution made by tourism to the local economy.
127. On the other hand, the proposed development would represent a large investment, much of it on local construction works. Significant opportunities would exist for local businesses, and jobs would be created during the construction and operation phases [A9, 980]. It was clear from representations made in support of the proposed developments at the first evening inquiry session in Dolfor that long term, good quality skilled maintenance jobs have been created at the existing P & L wind farm, and that local young people are employed there. The proposed repowering scheme would help to safeguard such opportunities for the life of the proposed development [126].
128. On balance, I consider for these reasons that the proposed Llandinam repowering scheme would have positive social and economic effects.

Cultural Heritage

129. It is common ground between the Council and Celtpower that the removal of the five most prominent turbines from the north-western edge of the development has resolved PCC's objections on cultural heritage grounds, subject to a condition relating to the securing of a programme of archaeological work. NRW, CPAT and Cadw have no objection on cultural heritage grounds⁷¹.
130. In its evidence on cultural heritage matters for SSA C, the Alliance expressed concern that the Environmental Statement (ES) for the Llandinam scheme was flawed as no formal Assessment of the Significance of Development on Historic Landscape (ASIDOHL) was undertaken in relation to the relevant Historic Landscape Character Areas (HLCAs)⁷². The ASIDHOL process was, however, designed specifically for the assessment of effects on the registered Historic Landscapes of Wales, not HLCAs. I am aware of no policy guidance to the effect that it ought to be used to assess impacts on HLCAs. I therefore do not consider that the ES is flawed in this respect.
131. The Alliance and some local residents have also expressed concern that there are many Scheduled Ancient Monuments (SAMs) of prehistoric date in SSA C, which may have been positioned for their visual relationships [A7, 9.22 & 10.18 – 10.21]. The clear visibility between them, implying a group setting, is recognised in the Llandinam ES. However, as the proposed Llandinam turbines would be more widely spaced than the existing P & L turbines the proposed development would not have an adverse effect on inter-visibility. There would be no direct adverse effects on SAMs, and I do not consider that the proposed

⁷¹ CPL-SOCG-008

⁷² ALL-SSAC-POE-05

development would have a significant adverse effect on the setting of the SAMs in the vicinity.

132. Whilst the Alliance's closing statement refers to the effect of the Llandinam scheme on Broneirion, which is a Grade II listed house with conference facilities, the concerns raised relate to tourism and economic effects, rather than effects on its setting [A7, 10.37]. On the evidence before me the proposed Llandinam scheme would have no effect on the setting of any listed building that would be harmful to its significance or special historic interest.
133. I consider for these reasons that there would be no unacceptable effect on cultural heritage assets.

Peat

134. It is common ground between Celtpower Limited and NRW that subject to conditions relating to micro-siting and a Habitat Management Plan, the proposed development would not have an unacceptable impact upon peat⁷³. I have no firm evidence to the contrary.

Hydrology / Hydrogeology

135. According to the applicant's evidence, which is not disputed, bedrock is at or near the surface across the site and is relatively impermeable, meaning that much of the rainfall across the site discharges quickly. Disturbance of small pockets of deeper peat, which do provide some capacity to store water, would be avoided by micro-siting. Additional hard surfaces and impermeable features associated with the proposed development, including access tracks, would therefore have no significant adverse effect on hydrology or hydrogeology, or flood risk. Neither the Council nor NRW object to the proposal on this basis. The Alliance's evidence on hydrology does not relate directly to the Llandinam proposal. On the evidence before me there would therefore be no unacceptable effect on hydrology or hydrogeology.

Health

136. The separation distance between the proposed turbines and the nearest residential properties would exceed ten times the rotor diameter. There is therefore very little potential for shadow flicker to occur, and the risk of this affecting health is negligible. As noted above, I shall return to the Alliance's concerns about the health effects of wind farm noise and vibration in general as they are common to all five wind farm applications. I consider for these reasons that there are no site-specific health effects that would warrant refusal of the application.

Aviation

137. A number of local residents have concerns about the safety of low flying jets flying at high speed in areas with wind turbines. Particular concerns have been expressed with regard to a Military Tactical Training Area in Mid Wales known as TTA7. The Llandinam site lies within TTA7. In response to the evidence submitted by local residents, evidence was put before the inquiry by a former fast-jet pilot of great experience, and formerly the Officer Commanding the Low Flying Operations Squadron, to the effect that military authorities take very great care to ensure that low flying operations are carried out safely and that pilots do not infringe low flying regulations [94].
138. I note concerns that pilots may lose control of their aircraft due to excessive G forces. Clearly, low flying in connection with tactical training is not entirely without risk as occasional tragic accidents are a matter of record. However, I found the evidence of the former fast-jet pilot, together with the lack of objection from any relevant aviation authority, to be convincing evidence that the proposed development would not add

⁷³ CPL-SOCG-010

materially to the prevailing risk. I conclude that the proposed development would not have any significant impact on aviation.

Potential for Connection to the Grid

139. The Llandinam scheme is alone amongst the wind farm applications before the inquiry in that the merits of the application for its grid connection also fall to be considered. I shall consider those merits separately. However, there is no obvious reason why a grid connection would not be possible.

Llaithddu

140. Subject to the Llandinam scheme being consented the Council considers that the northern group of the proposed Llaithddu scheme (12 turbines) would be acceptable in landscape and visual terms [A9, 181]. However, it considers that the southern array (15 turbines) would have significant adverse landscape and visual impacts. In particular it considers that there would be unacceptable harm to the landscape of the Marteg Valley and the setting of the settlement of Bwlch y Sarnau [A9, 183]. The main consideration is therefore the landscape and visual impact of the proposed development, with particular regard to the Marteg Valley and the setting of Bwlch y Sarnau.

141. Other site-specific matters of concern to the Alliance and local residents include: hydrology / hydrogeology, including peat; wildlife; cultural heritage; the recreational use of public rights of way and national trails; transport; residential amenity, and the necessary grid connection.

Landscape and Visual Impacts

142. The Alliance's expert landscape witness acknowledges that the landscape character of the high land to the west of the Ithon valley is influenced by the existing P & L wind farm⁷⁴. The area as a whole has not been fundamentally changed. However, as the northern group would lie within a distance of about 1km from the Llandinam site it would be within an area already characterised as a 'wind farm landscape' [A9, 173]. The extent of the additional wind farm landscape created by the proposed Llandinam northern group would be truncated to the east and south by forestry, and by the Llandinam site to the north and west [A9, 174]. When the northern group is assessed against the criteria of the relevant LANDMAP Visual and Sensory, Cultural Landscape, Historic Aspect, and Geological Aspect Layers using the appropriate GLVIA methodology, the effect would be no greater than slight adverse and not significant, largely due to the presence of the existing P & L turbines [A9, 177].

143. As the northern group would be set back from the Llandinam ridge and would be seen in the context of either the existing P & L turbines, or (if they are consented and built) the proposed Llandinam Repowering scheme, the extent and degree of its visual impact would be greatly reduced [A9, 158]. Although the proposed Llaithddu turbines would be of a different height and type, they would appear as an extension of the either the existing P&L or the proposed Llandinam wind farms [A9, 154]. As the site is on high ground and would not be overlooked the access tracks and other infrastructure associated with the proposed turbines would add little to the visual impact of the proposed development [A7, 10.29]. Some stacking would occur in combination with the turbines on the Llandinam site, but although it is good design practice to try to avoid such effects they are inevitable to some degree in larger arrangements. On balance, and in the prevailing circumstances, I consider that the benefits of concentrating turbines within as compact an area as reasonably possible, and thus minimising the extent of the wind farm landscape, would outweigh the additional stacking that would arise [A7, 10.30].

⁷⁴ ALL-SSAC-POE4, para 44.

144. I consider for these reasons that the proposed northern section of the proposed Llaithddu scheme would be acceptable in landscape and visual terms.
145. Turning to the southern group, this would be separated from the northern group by a distinct gap of about 1.5km, left primarily for reasons relating to aviation. They would be laid out roughly in a north-south line extending for about 4km along a ridge overlooking the upper Marteg Valley known as Brondre Fawr. The southernmost turbine would be a little over 1km from Bwlch y Sarnau. There would be clear views of the southern group from the county road leading north-east from Bwlch y Sarnau to David's Well and Llaithddu. At its closest, the distance of the nearest turbine from the road would be about 300m.
146. The landscape of the Brondre Fawr ridge is characterised by extensive open upland grazing. There are large areas of coniferous forestry in the vicinity but a forested area on the ridge itself has recently been clear felled. Unlike the site of the northern group the Brondre Fawr ridge is not of itself characterised by wind farm development. It does, however, conform to the pattern of high ground with open moorland vegetation which is found at several other wind farm sites in mid-Wales, and many of the P & L turbines can be clearly seen from the ridge.
147. The site of the southern group is predominantly within the northern part of LANDMAP Visual and Sensory Aspect Area (VSAA) 115⁷⁵, which comprises three extensive separate parcels of land. It is part of a wild, open and exposed upland plateau. The ridge has a smooth rounded profile. Vegetation is primarily semi-natural rough moorland cover, plus areas of fields. Its character therefore generally accords with the LANDMAP summary description for VSAA 115. Its scenic quality is evaluated as moderate as it is generally attractive but not special. It has a moderate overall evaluation as it is not particularly distinctive.
148. The site crosses from Powys Landscape Character Assessment Area R17 (Bwlch y Sarnau Uplands) in the south, into area M32 (Waun Ddubarthog) to the north. R17 is assessed as having medium sensitivity to the type of development proposed, and M32 is assessed as having medium to low sensitivity because of the presence of the P & L turbines [A2, 131-134].
149. Refinement studies were undertaken for SSA C by Arup Associates on behalf of PCC in 2006 and 2008, in accordance with guidance set out in TAN 8. Whilst both groups of turbines would lie outside the TAN 8 'broad brush' boundaries, they would be within the refined area identified by Arup. Although the results of the Arup studies were not formally adopted, there is no dispute that they contain evidence which is useful and relevant to the assessment of the acceptability of proposals in the area. The 2008 report ranked the relative suitability of various parts of SSA C for wind farm development, taking landscape and visual impacts into account. The site of the proposed southern group performed highly in the ranking exercise [A2, 111-117; A9, 179]. I do not find this surprising, given that the landscape character of the site is high ground with open moorland vegetation, and thus typical of the sites of other wind farms in mid Wales. On the other hand, as acknowledged by FWLC, the Arup ranking assessments do not amount to a definitive or absolute answer as to whether a particular scheme would be acceptable at a particular location [A2, 111].
150. PPC do not object to the effect of the proposal on the landscape character of the appeal site itself. As it is part of an area of high open moorland with large scale forestry and is of medium to low sensitivity to landscape change I consider that in principle, the site could be suitable for wind farm development. However, it is necessary to take into account the

⁷⁵ The closing statement for FWLC describes the southern part of the site as broadly corresponding with VSAA 125 [A2, 137]. However, the landscape evidence (FWLC/LAND/APP 1-2/ GOODWIN/SSA) indicates that the proposed turbines would be within VSAA 115, on a ridge overlooking VSAA 125 (Drg. 3532-Figure-20).

specific design and layout of the proposed development, and the landscape and visual impacts that would arise in areas away from the site itself.

151. FWLC accept that significant effects on landscape character may arise within about 1km of a wind farm, and that turbines may become the dominant characteristic of the landscape in these areas [A2, 130]. The slopes of Brondre Fawr and much of the upper Marteg Valley would be within such a zone. An area of forestry on the slopes of Brondre Fawr would limit the influence of the proposed turbines along the central section of the ridge, but elsewhere there are no features that would contain those effects to a lesser distance. In areas to the north and south of the forestry, as the proposed turbines would be on the highest part of the ridge, their dominating effect would in my view be extend to about 1.5km, as advanced in the Council's case [A9, 174]. There would therefore be a high degree of change to the landscape of much of the upper Marteg Valley, which would become dominated by the presence of the proposed southern group.
152. The upper Marteg Valley lies within LANDMAP VSAA 125 (Bwlch y Sarnau Forest Slopes and Fields), which comprises a large area and two smaller nearby areas west of the Ithon Valley. The LANDMAP summary description characterises it as an area of upland hills, plateau and ridges which have been more than 50% covered with larger-scale conifer plantations. Regular straight boundaries form harsh lines in the undulating landscape and dark, conifer-clad hillsides create a somewhat uniform and oppressive landscape in parts. The overall scenic quality of the area is therefore evaluated as being moderate.
153. However, the upper Marteg Valley does not conform to the generality of the LANDMAP description of VSAA 125. Much of the valley floor is open and given over semi-natural land cover and to agriculture. The majority of the eastern valley slopes leading up to the Brondre Fawr ridge have semi-natural land cover. A large area of forestry on the western side of the valley close to Bwlch y Sarnau has been recently felled and is reverting to more natural and diverse woodland. The valley therefore has qualities which make it some of the some of the most attractive land within VSAA 125.
154. In accordance with LANDMAP, the underlying intrinsic upland hill character is one of the key qualities of VSAA 125 that should be conserved. The presence of the proposed turbines on the ridge would introduce large-scale man-made elements into the landscape and would therefore be harmful to its underlying intrinsic upland hill character. I conclude that the high degree of landscape change identified above would be significantly harmful to the character of the upper Marteg valley, and thus harmful to the character of the VSAA as a whole.
155. Turning to the visual impact of the proposed southern group, FWLC's landscape evidence allocates a 'high' magnitude of visual effect at several viewpoints up to 2.2km distance from the nearest turbine⁷⁶. FWLC's closing statement of case also recognises that visual changes of high magnitude can arise at distances of up to approximately 1km in all directions, except where commercial forestry provides a buffer [A2, 132]. For highly sensitive observers, such as persons out enjoying the countryside, the overall significance of the effect at such locations would be major and adverse. A major effect is recognised by FWLC's landscape witness at a section of Glyndwr's Way within the upper Marteg Valley close to Bwlch y Sarnau, which would be about 1.8km from the closest turbine [A2 table at p45, VP34].
156. Visual effects from viewpoints elsewhere in the upper Marteg Valley have not been formally assessed using the GLVIA methodology. However, the cumulative ZTV Study prepared for FWLC⁷⁷ indicates that, save for localised features such as small copses and hedgerows, the proposed Llaithddu South turbines would be seen from much of the valley floor north of Bwlch y Sarnau, at distance of about 1km or less. I therefore consider it likely

⁷⁶ A summary table is set out in FWLC's closing submissions at pages 44-45 of Annex A2.

⁷⁷ FWLC/LAND/APP1-2/GOODRUM/SSAC Drg. No. 3532 Fig 18]

that there would be major adverse visual effects on much of the local footpath network. At the northern end of the valley, where the turbines would be spread out along the ridge across a wide angle of view, I consider it likely that many users of the footpath network would see the proposed turbines as looming over the valley and dominating the view.

157. ZTV diagrams indicate that as Bwlch y Sarnau is nestled into fold in the landscape there would be no views of the proposed southern group from much of the settlement itself. However VP 34, at the section of Glyndwr's Way close to Bwlch y Sarnau, gives a good impression of the view of the proposed turbines that would be seen from the environs of Bwlch y Sarnau, and which would therefore be experienced by local residents on a daily basis. As noted in FWLC's assessment the visual effect would be major. I consider that the furthest turbines would be conspicuous and the nearest would be prominent. However, I do not consider that they would be so close, or that they would occupy such an angle of the view that they would dominate the view. Nor do I consider that they would appear to march out along the ridge in a manner that would appear threatening. Nevertheless, the experience for local residents would be of living close to the edge of a windfarm landscape. This experience would be heightened by the proximity of the turbines to the Bwlch y Sarnau to Davids Well / Llaithddu road, along which many residents would pass daily [A7, 10.27]. Whilst I do not consider that the degree of effect would approach that necessary to make living at any dwelling unacceptably unpleasant, there would be a major adverse visual effect on the setting of the settlement.
158. Whilst I have concluded above that the proposed northern group would be acceptable in landscape and visual terms, I have also concluded that the proposed southern group would cause a high degree of landscape change to the landscape character of the upper Marteg Valley, and that this would be significantly harmful. This area lies well outside the broad-brush boundaries of SSA C identified in TAN 8, and outside the refined SSA C boundaries identified in the Arup reports. It is an area that is little influenced by existing wind farm development. I have also identified major adverse visual effects on views from the footpath network within the upper Marteg Valley, and a section of Glyndwr's way close to Bwlch y Sarnau. I have also concluded that there would be adverse visual effects on the setting of Bwlch y Sarnau. Although the design and layout of the proposed southern group is a natural and logical response to the terrain and the desirability of taking maximum advantage of prevailing westerly winds [A2, 153], these effects would arise primarily as consequence of the decision to place the turbines in a line on the highest ground on the ridge. They are therefore a consequence of the layout and design of the southern group. I shall return to the matter of whether these effects should be considered to be acceptable in my overall conclusions, in the light of relevant policy and other material considerations.

Hydrology, Hydrogeology and Peat

159. The Alliance has provided an expert witness's review (Dr Rhodda) of the content of the hydrology sections of the Llaithddu ES and SEI in evidence to session 1 of the inquiry. Dr Rhodda considers that the information lacks detail and is not sufficient to provide an adequate understanding of impacts and measures necessary to mitigate them. His concerns relate to the mapping and description of baseline conditions, the modelling and assessment of potential impacts, and the level of detail and design of proposed mitigation measures [A7, 10.9 – 10.12].
160. The hydrology content of the Llaithddu SEI was developed to address specific issues raised by CCW (now NRW). Additional details were provided of the relationship of construction works to watercourses and more detailed assessments of impacts, which informed proposed mitigation measures. It is common ground between NRW and the applicant that it should now be possible to conclude that there would be no adverse effect on the integrity of the site and the River Wye Special Area of Conservation (SAC), subject to suitable conditions, which have been agreed. Subject to these conditions it is common

ground that there would be sufficient measures in place to monitor and safeguard the water quality in the River Wye catchment during construction⁷⁸.

161. FWLC has provided a note in response to Dr Rhodda's specific concerns, written by the author of the hydrology SEI⁷⁹. His case is that the key information has been presented in the environmental information. I am satisfied that, whilst more maps and diagrams might have aided understanding, this is primarily a matter of preference with regard to presentation. All key matters including the presence of peat deposits appear to have been taken into account in assessing the baseline and effects. It is acknowledged that more detail needs to be provided with regard to the design of measures to mitigate and monitor effects, but it is normal to provide such detail at a later stage and appropriate conditions have been put forward and agreed. The Alliance does not identify any likely residual significant adverse effect. NRW is now satisfied that there is sufficient information to provide an adequate understanding of impacts and mitigation. On the basis of FWLC's note and as NRW have reviewed the environmental information and found it to be satisfactory, I have no reason to disagree.

Biodiversity

162. It is common ground between FWLC and NRW that parts of the site and its surroundings are home to breeding pairs of curlew, which is a conservation priority species protected under Section 42 of the Natural Environment and Rural Communities (NERC) Act 2006⁸⁰. During the course of the inquiry the application was formally amended in accordance with Option 2 set out in the Llaithddu SEI, to implement mitigation measures requested by NRW. It is now agreed with NRW that the proposed amendments, alongside the draft Habitat Management Plan (HMP) and the draft Breeding Birds Protection Plan (BBPP) would provide specific mitigation to reduce the effect of the Llaithddu proposal to an acceptable level when considered with the effect of other schemes on the curlew population. It is also agreed in the SoCG that there would be no significant effect on any other species identified in the ES or SEI.
163. Since the SoCG was signed, an updated protected species report based on surveys carried out in 2013 / 2014 has confirmed that bird assemblage and usage of the site by wildlife is very similar to that recorded when the last survey took place in 2006. In the light of this additional information NRW has asked for some additional conditions and these have been agreed. Subject to these and other conditions NRW has no outstanding concerns with regard to the effect of the proposal on wildlife [A8, 2.2].
164. As with the Llandinam scheme, the Alliance and several local residents have expressed concern about the impact of the proposed development on bats and general ornithological interests, and about the effect of necessary improvements to local access route on plant species and biodiversity [93]. However, no substantial technical evidence has been provided to support such concerns. The additional conditions requested by NRW take specific account of the risk of bird strikes, particularly to raptors such as red kites and hen harriers. They would require the micro-siting of turbines to avoid proximity to trees and hedges, to reduce the risk to bats. Though there is no evidence of a significant risk to the conservation status of any bat species, they would also put in place a system of monitoring and, if necessary, would require remedial measures to be taken. The recently updated protected species report concludes that habitats along the proposed off-site access routes are not suitable to support any European Protected Species or nationally protected mammal species. NRW has noted this conclusion and has not disagreed with it. I consider for these reasons that the proposed development would be unlikely to have any significant adverse effect on biodiversity.

⁷⁸ FWLC-SOGC-004 & 005

⁷⁹ FWLC-17

⁸⁰ FWLC-SOCG-003

Cultural Heritage

165. The ES and SEI identify a number of relevant heritage assets, a number of which had not been identified previously. The only designated monument within the site is a scheduled stone circle and cairn known as Fowlers Armchair, which lies within the southern range of turbines. Two scheduled probable or possible bronze-age cairns, MG086 and MG290, known as the Polin-y-Groes cairns, lie some 100m from the northern boundary of the site at Waun Dubarthog. It is common ground between FWLC, Cadw and CPAT that no known archaeological or historic asset would be directly affected by the proposals⁸¹.
166. A detailed analysis of indirect impacts on heritage assets concluded that the settings of Fowlers Armchair and the Polin-y-Groes cairns would be significantly affected by the proposals⁸². Lesser effects have been identified on a variety of other designated assets. These have also been identified in the ES and SEI, but have been assessed as slight and therefore not significant. An assessment was also carried out using the ASIDHOL methodology, even though it was not requested and the site is not part of a Registered Historic Landscape [A2, 157].
167. A number of turbines were repositioned at an early stage in the design process to achieve a buffer zone of around 200m from any designated heritage asset. Notwithstanding these changes, Cadw and CPAT raised concerns and a meeting was held on site to discuss potential further mitigation. It was agreed to move one turbine further north and to provide public access to Fowlers Armchair by a stile with an adjacent information panel. Cadw subsequently confirmed that on this basis they have no further objection to the proposals [A2, 158 & 160].
168. It is now common ground between FWLC, Cadw and CPAT that the proposal would not have any direct impacts on any known sites of historical or archaeological significance, including Fowlers Armchair and the Polin-y-Groes cairns; that mitigation measures in the form of peat sampling, an archaeological watching brief, and marking and fencing off any identified archaeological sites found during construction would acceptably mitigate any unforeseen direct impacts; and that following the changes outlined above, the indirect effects of the proposal would be acceptable.
169. Nevertheless, the Alliance and some local residents remain concerned that the proposed turbines would have an overwhelming effect on the setting of Fowlers Armchair [A7, 10.25]. I consider that two of the proposed turbines would be so close that they would loom over the monument. However, whilst the monument is clearly indicated on ordnance survey maps, public access is not currently permitted to the site itself. I saw that the monument is very indistinct and difficult to interpret correctly amongst a jumble of stones on the site. Whilst some potential visitors might be put off by the proposed turbines, on balance I consider that the agreed provision of public access by a stile with an adjacent information panel would improve public access and understanding, and outweigh the off-putting effect of the turbines [A2, 161].
170. The Alliance and some local residents consider Fowlers Armchair to be at the centre of a prehistoric arrangement of cairns and other monuments that acted as a calendar or other ritual device [A7, 10.18-10.21]. However, there is no evidence that the proposed Llaithddu turbines would interfere with the ability to see and appreciate the relationship of Fowlers' Armchair to other ancient monuments.
171. I consider for these reason that there would be no significant harm to the significance of the setting of Fowlers Armchair, or to any other relevant historic heritage asset. I conclude that the degree of harm to historic heritage assets would be less than substantial, and that subject to the agreed conditions, there would be no unacceptable effects.

⁸¹ FWLC-SOCG-007

⁸² SOCG at para 3.6

Recreational Use of Public Rights of Way and National Trails

172. A main concern for the Alliance, the local British Horse Society (BHS) group and some local residents is the effect of the proposed southern group on the Prince Llewellyn Way, which is an equestrian route, about 130km in length, running across mid Wales between Shropshire and the Welsh Coast. It is promoted by the BHS as part of the national bridleway network and is used during organised Cross Wales Rides. The bridleway passes very close to many of the turbines in the proposed southern group – in one instance, even within the radius of the rotor [A7, 10.33-10.41].
173. The 2013 SEI indicates a package of mitigation measures agreed with PPC's Countryside Services Officers [A2, 145-147]. It has been confirmed that the land necessary to provide an alternative permissive route at a distance of more than 200m from the proposed turbines falls within the ownership of participating landowners⁸³. An alternative permissive route could therefore be secured by condition. A corral and additional linkage to the bridleway network could also be secured. During construction any bridleways used as an access route could be widened to allow vehicles to be fenced off and other measures could be secure to ensure safety. However, no completed S106 undertaking has come forward with regard to a financial contribution towards the improvement of the PRow network which is referred to in the SEI. Although the terms of an access fund were agreed with PPC, in my view this is therefore not a material consideration to which significant weight should be given.
174. Use of the bridleway was monitored for the applicants for a period of about 5 weeks in 2013 [A2, 144]. Riders were noted on only 3 days. However, it is not clear whether this was a representative period, and it does not take account of use during organised rides. On the other hand, there is no firm evidence to support the contention that the bridleway is well used, particularly by younger and inexperienced riders. On balance, the existing level of use by riders appears to be slight to moderate, with occasional busy days associated with organised rides.
175. A video made for the British Horse Society which was played at the inquiry shows that the access tracks associated with a Scottish wind farm have been use safely and successfully by horses and riders that have become accustomed to turbines. However, oral evidence before the inquiry indicates that, depending on their temperament, horses can react very differently to wind turbines. It may be therefore dangerous to ride some horses in the vicinity of the proposed turbines. Facilities to enable horses to become accustomed to the turbines would be of little benefit to occasional users. Participation in organised rides may therefore decrease for safety reasons. Even on the proposed permissive route, the experience for riders would be of passing along the length of the proposed southern group through landscape dominated by wind turbines. It is likely that a proportion of riders seeking to enjoy the countryside would find this off-putting.
176. I consider for these reasons that there would be harm to the recreational use of the bridleway in the vicinity of the proposed southern group. This may affect individual riders and organised rides. However, in the context of the use of the wider PRow network and national bridleways as a whole the degree of harm would be small.
177. I have noted above that there would be a major adverse visual impact on a section of Glyndwr's way some 1.8km from the closest turbine. However, this degree of effect would be confined to a short section between Bwlch y Sarnau and an area of forestry. Within the forestry views of the turbines would be largely obscured by a mix of deciduous and coniferous trees. The future of the forestry is unclear, but even if it were to be clear-felled during the life of the proposed wind farm the length of the section of Glyndwr's Way within which major effects would be experienced would be limited to about 1-2km. I shall return to whether the effect on Glyndwrs Way and the footpath network as a whole would be

⁸³ FWLC-011

significant in the context of the wider PRoW network in considering cumulative effects on tourism.

Local Transport

178. With regard to the local access routes from the A483, it is now common ground between the Council and the applicant that the works set out within the SEIs of February and June 2013 meet the requirements of PCC as local highway authority⁸⁴. Subject to conditions relating to details of necessary modifications neither the Council nor NRW have any remaining objections on biodiversity or character and appearance grounds relating to the local access route [A8, 2.2].
179. The necessary works to create lay-bys and increased hard surfaces, and the associated loss of banks and hedgerows would be similar in nature to those required to provide access to the Llandinam site, though somewhat less extensive. Lay-bys and overrun areas along the access roads would be surfaced with 'grasscrete' or similar reinforcement. Relatively few trees, verges, banks and hedgerows would be affected and their reinstatement would be secured by agreed conditions. As vegetation would re-grow there would be no significant medium or long-term harm to the visual integrity of the local access routes or to wildlife habitat. Whilst I note the concerns raised by the Alliance [A7, 10.44], I consider for these reasons that the local access proposals would be acceptable in highways, appearance and ecological terms.
180. Turning to site-specific aspects of the proposed delivery route for AILs, the Alliance has also drawn attention to what it believes to be discrepancies between different versions of the Llaithddu Traffic Management Plan and measured surveys of the Cross Gates railway bridge, which lead it to doubt that FWLC will be able to transport its turbine components without bridge or associated highway works [A7, 10.42 & 10.43]. The analyses and trial runs that have taken place indicate that the existing minimum clearance under the Cross Gates bridge would be about 150mm. There would therefore be little room for error. However, given the experience and expertise of the applicant's consultants such an error is unlikely. In the unlikely event that it is found that components are unable to pass under the bridge when the actual components are first moved, the worst case is that construction would be delayed whilst additional consents are obtained and there would be some disruption whilst works are carried out. I find no obvious reason why the transport of AILs to the Llaithddu site would not be possible using the proposed route.

Residential Amenity / Health

181. The Alliance is concerned that 7 residential properties would lie within about 1km of the proposed Llaithddu turbines [A7, 10.46]. Some of these are financially involved, but in the long-term public interest I consider that all should be protected from proximity to proposed turbines that would make living conditions within those properties so unpleasant that they would be undesirable places to live. No concern has been raised by the Council in this respect and so no wireframes or montages have been prepared for any individual property or group of properties. However, I am able to assess likely effect from the plans and other details contained in the ES and SEI. In my view the separation distance would be such that no unacceptable visual effects would be likely to occur at any residential property.

Potential for Connection to the Grid

182. A proposal known as the Mid Wales Connection Project (MWCP) is being developed, which would enable the proposed Llaithddu scheme to be connected to the grid via a 132kV line which would take a route to the west before turning north to a 132kV / 400kV transformer hub on upland moorland near Cefn Coch. Connections to a number of proposed wind farms

⁸⁴ FWLC-HIGHWAYS-SOCG-SSA-C

would be brought together at this location. A new 400kV line would then run roughly north-west into Shropshire.

183. A technically feasible alternative identified during the course of the inquiry would be to connect at 132kV at a new local substation that would be shared with the Llandinam repowering scheme. A shared 'Heavy Duty Wood Pole' (HDWP) 132kV line could then run to the Welshpool substation and on to Oswestry. The proposed Llandinam line would have to be upgraded, additional equipment would be needed at Welshpool, and the existing Welshpool to Oswestry line would have to be rebuilt. If any other SSA C scheme were to be built a single 132kV HDWP line would not have sufficient capacity, and other potentially more intrusive solutions would be necessary [A2, 21-24].
184. Whilst PCC has indicated that it would have strong objections to the proposed hub and 400kV line [A9, 890-895], its position is that an upgraded 132kV line to Oswestry via Welshpool, with a maximum capacity of about 160MW, could in principle be acceptable [A9, 854]. Such a line would have the capacity to serve the Llandinam scheme and either the Llaithddu or the Llanbadarn Fynydd proposal, but not both.
185. I conclude that there are no obvious reasons why the necessary approvals for a grid connection could not be obtained in one form or another. I shall return to consider the likely indirect, secondary and cumulative effects of the necessary grid connection in a later section of this report.

Tourism and the Economy

186. I have identified adverse effects on the recreational use of PRowS. Walkers and riders undoubtedly contribute to tourism in the area and therefore to the local economy. However, tourists will generally visit a wide area and several attractions during their stay in an area. I shall therefore consider the effects on tourism in combination with those of other proposals in a later section of this report.
187. The Llaithddu scheme is different to the other proposals before the inquiry in that it has been developed and promoted via cooperation between several local hill farmers, rather than by a major energy company. By doing so they aim to bring about a significant community benefit, and to revert over half of the project value to the local economy [A2, 4]. It is proposed to create a community fund, and some non-participating local landowners, including a person living in a house with no mains electricity, would benefit. However, in the absence of a guarantee that the proposed community fund would be used to mitigate the direct or indirect effects of the proposed scheme, and thus fairly and reasonably relate to it, PPC's position is that it cannot take the fund into account. FWLC accepts that financial benefits to the community in the form of a trust fund are not benefits which the decision maker may lawfully take into account.
188. I do not consider the Llaithddu scheme, or indeed any of the other schemes before the inquiry, to be akin to 'robbing the poor and giving to the rich via subsidies', as maintained in the closing submissions for the North Montgomery Local Government Forum [82]. However, I agree with PCC and FWLC that the proposed community fund is not a material consideration that should be taken into account.
189. There is policy support for the idea that wind farm schemes should engage with, support and have a good relationship with their local community. However, in terms of environmental effects there is no difference in policy between community schemes and other proposals. Any adverse environmental effects of the proposed Llaithddu scheme should therefore be weighed in the balance in the same way as other schemes.

Llanbadarn Ffynydd

190. The Council objects to the proposed scheme principally on landscape and visual impact grounds. The main consideration is therefore the landscape and visual impact of the proposed development.

191. The Alliance and local residents are additionally concerned about other matters including: cultural heritage; effects on private water supplies and water courses; effects relating to the local access proposals; noise; and socio-economic effects and tourism.

Landscape and Visual Effects

192. The Council considers that the landscape context of the site is more varied, richer, and of a smaller scale than the higher moorland to the west of the Ithon Valley, and that it thus has qualities that make it more sensitive to change [A9, 196 & 197]. It therefore considers the Llanbardarn Fynydd proposal would cause considerable landscape harm. Furthermore, it is concerned that the Llanbardarn Ffynydd scheme would be located in an area of landscape currently largely unaffected by wind farms. It therefore also considers that the proposed development would make the landscape less sensitive to further wind farm development. It is concerned that, in much the same way that Llandinam and the Llaithddu northern group 'benefit' from the presence of the P & L turbines, the proposed development would make further wind farm development in the eastern part of SSA C almost inevitable [A9, 216-237].
193. The applicant's contention is that the scheme has been carefully designed to concentrate the high magnitudes of landscape change that would arise in an area of comparatively low landscape sensitivity, and thus complies with criteria set out in TAN 8 [A3, 3.23].
194. The Llanbadarn Fynydd site lies in an area over 300m AOD in elevation, and which is predominantly plateau. The land cover is predominantly improved and semi-improved grassland which is divided into medium to large-sized regular fields, generally enclosed by post and wire fences. It has a smoother and more verdant appearance than moorland to the south and east and the higher ground to the west of the Ithon Valley [A3, 3.28]. However, the distinction between semi-improved grassland and moorland is somewhat blurred, and the northern part of the site has transitional characteristics. The site is dissected by a steep-sided narrow valley known as the Cwm Nant Ddu, and traversed by two county roads which serve a scattered community of local residents.
195. It is agreed between PCC's and LBF's landscape witnesses that analysis of the effect of the proposed development on Powys Landscape Character Areas (PLCAs) would not add to assessments based on LANDMAP as the PLCAs are derived from that data. I have no reason to disagree, and shall therefore refer only to assessments against LANDMAP [A3, 3.77].
196. The site straddles several LANDMAP Visual and Sensory Aspect Areas (VSAAs). The northern part falls within RDNRVS111 – *Upland Moor, Kerry Hills*. This is generally characterised as upland moor but as I have noted above the portion of RDNRVS111 within the site has been subject to agricultural improvement and has transitional characteristics with area RDNRVS122. Four of the proposed turbines would be located in this area.
197. The majority of the proposed turbines would be located within RDNRVS122 - *Improved Grassland to the South of the Kerry Hills*. LANDMAP describes the effect of the improved grassland and fencing as unnatural and visually unattractive. It is therefore described as being of low scenic quality with moderate to low value. It is somewhat similar to the transitional part of RDNRVS111 to the north, though more verdant.
198. The remainder of the site falls within RDNRVS128 – *Upland Valleys to the South of Kerry Hills*. As it follows the river valleys this VSAA is an extensive but somewhat linear, meandering area. It extends into the Cwm Nant Ddu and includes the Gwenlas Valley, which borders the site to the south. The Cwm Nant Ddu has steeply-sided wooded slopes. Two of the proposed turbines would lie within the boundaries defining RDNRVS128, but there is no 'hard line' distinction on the ground between the two areas and the proposed turbines would be located on high ground - just back from the break of the slope, rather than in the valley itself.
199. The Arup reports I have referred to in relation to the Llaithddu scheme also cover the Llanbadarn Ffynydd site area [A3, 3.14]. The site falls within zones which are identified as

having medium to low landscape sensitivity to this type of development and the site was included within the recommended refined SSA C boundaries. Ranked against impacts on AONBs, settlements, PRowS and National Trails these zones scored highly [A3, 3.16]. However, as I have noted in respect of the Llaithddu scheme, the Arup ranking assessments do not amount to a definitive or absolute answer as to whether a particular scheme would be acceptable at a particular location.

200. The applicant accepts that high magnitudes of landscape change, creating a 'wind farm' landscape in which turbines would be a dominant feature and a key characteristic, could arise at locations within about 1.5km of the proposed turbines [A3, 3.40]. In the particular circumstances of this proposal the Council considers that to the west this would be limited to about 1km by the steep wooded slopes of the Ithon valley. It considers that to the south and south east it would extend to about 1.5km, taking in much of the Gwenlas Valley. To the east it considers that it would extend somewhat further, to about to about 2km, and that to the north it would be limited to about 1km by topography [A9, 199 & 200].
201. The transition point from a 'wind farm' landscape to a 'landscape with wind farms' will always be a matter of judgement, and as I have noted above there is some disagreement between PCC and the applicant in this respect. My own view is that the Council's assessment of 1km to the north may be a little low as there is reasonably strong visual connection between the northern part of the site and the area to the north, and the change between the landscape characters of these areas is gradual. I see no particular circumstances that would extend the high degree of effect much beyond about 1.5km to the east. I agree, however, that the area that would become a 'wind farm landscape' would be terminated by the Ithon Valley to the west, and would extend to about 1.5km to the south and south east. It would therefore include much of the Gwenlas valley, as well as the Cwm Nant Ddu.
202. The extent to which the proposed development would create a 'landscape with wind farms' is also a matter of judgement and is not agreed. However, I consider that this would include much of the plateau area. This would be bounded to the west and south west by the Ithon valley, to the east by the Teme Valley, to the south east by Moel Wilym and Warren Hill, and to the north by the Glog. To the north-west, at the head of the Ithon valley the effect would be extended west of the A483.
203. Irrespective of judgements about the precise extent of the landscapes thus affected, there is no dispute that the designated landscape of the Shropshire Hills AONB would not be directly affected by the proposed Llanbadrn Fynydd development alone [A9, 200]. However, the proposed development would create a substantial area of 'wind farm' landscape, and an even more substantial area of 'landscape with wind farms' in a locality where wind farms can be seen in the distance, but which is not presently characterised by wind farm development.
204. LANDMAP describes the RDNRVS122 landscape as 'discordant', as the existing management is generally too intensive. The transitional part of RDNRVS111 has similar characteristics. The presence of field boundaries, improved grassland, farmsteads and cottages, farm tracks and the like make much of the site less memorable and distinctive than the wilder, rugged and more dramatic surroundings [A3, 3.30 & 3.31; A9, 197]. In the context of surrounding upland moorland, it is therefore understandable that RDNRVS122 is assessed in LANDMAP as being of low scenic quality with moderate to low value, and that the site is within an area identified within the Arup reports as having medium to low landscape sensitivity to this type of development.
205. However, the landscape within the site and its immediate vicinity has its own qualities. It is an attractive farmed landscape with dispersed residential development, interspersed with modest forestry blocks and cut through by the narrow wooded Cwm Nant Ddu. Its fields, fences and hedges, the wooded valley sides, country roads, and farmsteads and cottages give it a relatively fine grain, human scale, and settled character. I consider that wind turbines of the proposed size and scale would not fit in with the fine grain of this landscape.

Rather, their size and scale would be emphasised by the contrast with the fine grain and human scale of the existing man-made and natural features, thus increasing the dominance and landscape impact of the turbines. Although the landscape has experienced landscape change through agricultural intensification this does not mean that it is suitable for further man-made elements of the proposed scale. Rather, the proposed turbines would be very large structures, alien to the farmed, settled landscape. Whilst I note the Arup reports, I consider for these reasons that the site is within an area that is of high sensitivity to turbines of the scale proposed, and that the proposed development would have a substantial harmful effect on those aspects of its character that make it distinctive and attractive. For these reasons, I do not agree with the applicant's contention that the proposal would be acceptable as it would concentrate the high magnitudes of landscape change that would arise in an area of comparatively low landscape sensitivity. I shall return to the matter of whether the proposal would comply with relevant planning policy in my overall conclusions.

206. If built, the proposed development would alter the baseline for the assessment of the landscape effects of proposals in surrounding areas. Each application must be considered on its own merits, in accordance with planning policy and other material considerations, at the appropriate time. However, as the balance between harm and need would be altered by the change to the baseline for landscape assessments, the presence of the proposed wind-farm would make other applications harder to resist. In my view this is a material consideration, particularly in relation to WG policies and the environmental capacity of SSA C as a whole, to which I shall return.
207. With regard to visual impacts on individual properties, the difference between private interest and what should be protected in the public interest has been the subject of focus in a number of wind farm decisions made by Inspectors and the Secretary of State. It has become the norm to regard instances where visual intrusion is of such magnitude as to render a property an unattractive place to live as being unacceptable. It is not considered that simply being able to see a turbines or turbines from a particular window or part of a garden is sufficient reason to find the visual impact unacceptable (even though a particular occupier might find it objectionable). However, when turbines are present in such number, size or proximity that they represent an unpleasantly overwhelming and unavoidable presence in main views from a house or garden there is every likelihood that the property concerned would come to be widely regarded as an unattractive (rather than simply less attractive, but not necessarily uninhabitable) place in which to live [A3, 3.117]. These 'tests' have become widely accepted and I adopt them in my consideration of the visual effects of the proposed development on individual properties, of which in my view Lower Foel and Esgairdraenllwyn would be most affected.
208. Lower Foel is a former farmhouse with outbuildings. It is approached via a long track across rough pasture and moorland and is remote and isolated in character. The remoteness of the property, and the tranquillity thus afforded, contributes considerably to its appeal. It is located less than 1km from the position of the closest of the proposed turbines, and the access route would pass closer. Topography, buildings, and vegetation would largely screen views of the proposed turbines from the house itself, but they would be close enough to dominate views along the access route and parts of the residential curtilage. I consider that the effect of the proposed development would be to spoil the sense of isolation and tranquillity at the property, and thus to cause considerable harm to its appeal. Nevertheless, the degree of harm would not be so great that it would be widely regarded as an unattractive place to live.
209. Esgairdraenllwyn is oriented towards the proposed wind farm, and is clearly designed and laid out to take advantage of views from its elevated position. 17 turbines would be visible within an arc of about 85° of the main view. The nearest turbine would be at a distance of about 880m. The turbines would be seen across the Ithon Valley, but it is shallow at this point. The A483 would lie between the house and the turbines but would be largely concealed by roadside vegetation. For these reasons I do not consider that the

valley or the A483 would create a clear sense of separation [A3, 3.119]. In my view the visual impact of the proposed development would be high, and very harmful to an otherwise attractive rural outlook. Even so, whilst the proposed turbines would be unavoidably present in main views from Esgairdraenllwyn and would be of considerable number and size, they would not be so close that they would be overwhelming.

210. I consider for these reasons that at both properties the threshold at which visual effects would change from a matter of private to public interest would be closely approached, but not crossed. I therefore do not find that the visual intrusion would be of such magnitude that either property would become an unattractive place to live. Nevertheless, I consider that the harm to residential amenity at both properties would be considerable.
211. The visual effects at other residential properties would be somewhat less than at either Lower Foel or Esgairdraenllwyn, but are accepted to be significant in EIA terms at 13 properties [A3, 3.114]. Larger numbers of properties would be affected if use of their full curtilage is taken into account. The residents of other local properties would experience the turbines in close proximity when passing to and from their houses along the county roads that traverse the site. For many local residents their experience would therefore be of living within or on the edge of a wind farm landscape dominated by large-scale turbines. There would thus be a significant adverse effect on the general residential amenity and visual environment of the area.
212. Although residential development in the vicinity of the proposed wind farm is dispersed there would be some 36 residential properties or small groups of properties within 1.5km of any turbine⁸⁵, and some 69 properties within about 2.5km. Some of these are derelict or uninhabited. Others would be financially involved in the proposed development, or would be in areas from which limited views of the proposed turbines would be obtainable. Even so, the number of properties that would be affected equates to that of a small settlement. Whilst the planning system does not exist to protect the private interests of one person against the activities of another, it is intended to help to protect the amenity and environment of towns, cities and the countryside⁸⁶. I consider that the adverse visual effect on the general residential amenity of the area is therefore a material consideration that should be taken into account in the overall planning balance.
213. With regard to visual effects that would be experienced by recreational visitors to the locality, a section of Glyndwr's way about 4.5-5km long would skirt the Llanbadarn Fynydd wind farm at distance of between 1-2.5km. The proposed turbines would be a prominent feature in views from much of this section of the route. The most open and elevated views would be from Fron Top, at a little under 2km from the nearest turbine, giving rise to high magnitudes of visual change and significant visual effects at this viewpoint. The proposed wind farm would also be seen from other sections of Glyndwr's Way, but at a greater distance and consequently with reduced visual effects [A7, 9.12-9.15; A3, 3.130-3.132].
214. The Council does not contend that the individual visual effects of the Llanbadarn Fynydd scheme would be unacceptable when seen from any part of Glyndwr's Way, and does not contend that the use of other PRowS would be unacceptably affected. The Alliance is concerned about the visual impact of the Llanbadarn Fynydd proposal on the use of Glyndwr's Way and other PRowS in combination with other schemes, but I shall return to this at a later stage.

Cultural Heritage

215. It is common ground between the applicant, Cadw and CPAT that, subject to measures identified in the ES and subsequent SEI, the development of the Llanbadarn Fynydd wind farm alone would not result in a significant effect on any known archaeological remains or

⁸⁵ VATT/LAND/POE/GATES/SSA-C para 6.3.4

⁸⁶ PPW 3.1.1 & 3.1.7

any SAM⁸⁷. A separate SoGG has been agreed with the Council⁸⁸. Significant effects are not predicted in regard to physical changes to known archaeological remains within the site. The SoGCs record the 2007 ES conclusion that, whilst the development of the Llanbadarn Ffynydd wind farm would affect the setting of designated historic assets, on its own the proposal would not result in significant impacts. The Council's closing submissions confirm that it considers the effect of the proposed development alone would amount to 'less than substantial harm' to the setting of the historic assets in the vicinity, though it considers the degree of effect would be closer to 'substantial harm' than no harm [A9,270].

216. The closest scheduled ancient monument to the Llanbadarn Fynydd site would be a group of barrows at Fiddlers Green, about 0.8km from the position of the closest turbine [A7, 9.23(i)]. There would be no direct effect on this monument. Its relationship to other barrows and ancient monuments is a part of its special interest, but there is no evidence that any of the proposed turbines would interfere with any direct line of sight. The proposed turbines would be a dominant feature in the landscape in the vicinity of this monument, but I do not consider that they would be so close that they would loom over it or otherwise deter public appreciation of its presence or significance.
217. The 'Two Tumps' SAM, comprising two round barrows, lies at the end of the Kerry Ridgeway, some 3.3km north-east of the closest proposed turbine. The Alliance's concern here is that the proposed wind farm would disturb the quality of remoteness of the location to an extent that would harm the quiet contemplation of the SAM's significance [A7, 9.23(iii)]. However, because of the separating distance I do not consider that the Llanbadarn Fynydd wind farm alone would have that effect. Again, I have no evidence that the proposed wind farm would interfere with direct lines of sight to an extent that would significantly affect the ability to appreciate the relationship of the Two Tumps SAM to any other ancient monument.
218. On the evidence before me the proposed Llanbadarn Fynydd scheme would cause no direct interference with lines of sight between other SAMs in the vicinity. I do not consider that it would dominate the setting of any monument to the extent that would seriously affect public appreciation of its significance.
219. Blaen Nant Ddu is a Grade II listed former farmhouse. It is located within the application site, amongst trees and outbuildings at the head of the Cwm Nant Ddu. The closest turbines would be about 0.6km – 0.8km away, on higher more open ground. As a farmhouse, its relationship to the land is in my view a part of its special interest. However, the building is tucked away within the steep-sided valley. The proposed development would not affect the pattern of small irregular fields around the building, which probably served the original farm. Whilst the proposed turbines would affect the rural character of the higher ground, the existing field pattern would remain. The historic significance of the relationship of the building to the surrounding farmland would therefore not be significantly affected. Whilst I am mindful of the special regard to be given to such matters, in this instance I am satisfied that there would be no significant effect on the special historic interest of the listed building or its setting. I am also satisfied that the effect on the setting of Blaen Nant Ddu would be 'less than substantial', in terms applied to policy set out in EN-1 [A7, 9.23(ii); A9, 279; A3, 4.98-4.103]. Although there are a further 18 listed buildings within 5km of the proposed turbines there is no evidence that the proposed development would have any significant effect on their settings.
220. The landscape within and around the site contains many historic features, accumulated over a very long timescale from the Bronze Age to relatively modern times. In the context of this landscape the proposed Llanbadarn Fynydd windfarm would be a large and prominent modern landscape feature, and would thus detract from its historic character.

⁸⁷ VATT-HISTENV-SOCG-SSA-C

⁸⁸ VATT-HISTENV-SOCG- 1-SSA-C

There would be harm in this respect, albeit falling within the category of 'less than substantial' harm. The impact of the Llanbadarn Ffynydd scheme on the historic character of the landscape is not considered by the Council to be sufficient to be a discrete ground for objection [A9, 279]. I have no reason to disagree. Nevertheless, it is a material consideration that I consider should be weighed in the overall planning balance.

Hydrology / hydrogeology (including private water supplies)

221. It is common ground between the applicant and NRW that potential effects on 'receptors' (including two private water supplies at Fiddlers Green, and receiving watercourses) would be minimised or avoided by environmental mitigation measures that have been incorporated into the proposal, or which can be implemented via the inclusion of planning conditions⁸⁹. Subject to these, NRW do not object to the scheme with respect to hydrological receptors within the site boundary or adjoining private water supplies.
222. During questioning of the applicant's expert witness on these matters, it became apparent that the ES (as updated by SEIs) incorrectly assumes that a spring-fed pond close to the C1057 county road was a source of, or contributor to the private water supply (PWS) to a property at Fiddlers Green [A7, 9.19]. The error arose because details of private water supplies are not registered, though efforts were made to obtain accurate information to inform the assessment by examination of EHO records, canvassing of residents, and interpretation of baseline water environment data.
223. It was confirmed at the inquiry that the source of the Fiddlers Green supply is in fact a spring and borehole lower down the slope, and thus further away from the proposed development and the C1057. It is therefore less likely to be affected by construction traffic or run-off from the proposed development. On the evidence before me there is nothing in EHO records or baseline water environment data that would indicate the PWS might be harmed, and it is unlikely that there would be any significant adverse effect on the Fiddlers Green PWS. In any event, the agreed conditions include a requirement for a further report addressing the potential effect of the development on any private drinking water resources in the area and any measures required to minimise the impact on drinking water quality during construction and operation to be submitted to and approved by the local planning authority. That report could include measures to monitor, and if necessary undertake remedial works to the Fiddlers Green PWS. Notwithstanding the error in the assessment I am therefore satisfied that it would be adequately safeguarded [A3, 7.8-7.11].
224. The risk assessment for the Lower Foel PWS concludes that the spring catchment does not include areas where construction would take place, and that run-off from the site would infiltrate into the ground or into a watercourse that is hydrologically unrelated to the supply before reaching it. The risk is therefore assessed as 'none'. No error has been identified in this assessment. Although the occupier of Lower Foel remains concerned, those concerns are not substantiated by firm evidence. He has suggested that 'hold harmless' agreements or guarantees should be offered, but as the supply could in any event be safeguarded by the agreed condition, such an arrangement would not be necessary. Nor would it be normal practice [A3, 7.4-7.7].
225. The owner of Lower Foel is also concerned that the proposed development could cause an increased risk of flooding of the watercourse close to his property. However, like NRW, I am satisfied that appropriate mitigation and attenuation measures can be secured by conditions.
226. I conclude that subject to conditions, there would be no likely significant adverse effect on hydrology, hydrogeology, or private water supplies.

Other Matters

⁸⁹ VATT-HYDRO-SOCG-SSA-C

Local Transport and Access

227. It is common ground between the applicant and the Council that the proposed works set out in the SEIs of February and June 2013 would meet the requirements of PCC as the Local Highway Authority. The information contained in the February 2013 SEI relating to the site access from the A483 also meets the Welsh Government's requirements as the trunk road authority. Neither PCC nor NRW has any other outstanding objection with regard to local transport issues⁹⁰.
228. Local residents have expressed concern about disruption, delays and damage to the minor roads leading to the site [91]. Given the nature of the construction traffic, some harm is almost inevitable in these respects. However, conditions have been agreed relating to pre- and post-construction surveys, and a Transport Management Plan. Subject to these conditions, I consider that any delays and disruption on local access roads would be reduced to the minimum and would be acceptable. Any damage caused by heavy construction traffic, for which the county roads serving the site are not designed or suitable, would be repaired by the developer without cost to the public purse [A3, 5.2-5.5].

Noise

229. It is common ground between the applicant and PCC that construction noise can be dealt with by an appropriately worded planning condition, and that operational noise levels would be below the relevant acceptable noise limits at all times and at all residential dwellings⁹¹. Conditions have been put forward and agreed. The agreed noise limits would leave 'headroom' for other developments.
230. The applicant's position is that a condition relating to EAM is not warranted due to the low likelihood of the phenomenon at this site, and difficulties with drafting of an appropriate condition [A3, 6.38]. As I have previously noted this is a matter to which I shall return.
231. The occupant of Lower Foel is concerned that background noise data for his property might not have been correctly established, and had not been provided directly to him before the inquiry. However, it was confirmed that monitoring locations had been agreed with PCC's Environmental Health Officer (EHO) [A3, 6.7 & 6.8]. The background noise data has been examined by the EHO, and no concerns have been raised. I have no reason to doubt its accuracy.
232. Some local residents have expressed concern that operational and construction noise might echo around hills in this area. However, the applicant's expert witness on noise matters considered that the local topography is unlikely to cause such effects [91; A3, 6.11]. This is not a matter of concern for the Council, and from my observations I am satisfied that surrounding hills are sufficiently rounded and distant to make any such effect most unlikely.
233. Some construction noise is inevitable but the agreed conditions would cover hours of working, as well as general construction noise levels. It would therefore be minimised and limited in duration. Operational noise would be experienced on some PRoWs at higher levels than at residential properties. However, on the evidence before me the noise would not be at a level likely to significantly affect the enjoyment of the countryside.
234. No compelling justification has been provided to support the Alliance's suggestion of lower noise limits than those agreed with PCC. The application is not made for a specific turbine make, model or operating mode. However, the evidence provided in respect of the 'candidate' turbine demonstrates that compliance with the agreed noise limits can be achieved, even at the most critical properties. Whilst for the candidate turbine this may at

⁹⁰ VATT-TRANS-SOCG-SSA-C

⁹¹ VATT-NOISE-SOCG-SSA-C

times mean switching to a quiet mode of operation, it is not necessary or appropriate to require a particular turbine type or operational noise profile by condition [A3, 6.13-6.19].

235. Taking all relevant matters that have been raised in account, I have no evidence that would lead me to the conclusion that construction or operational noise associated with the proposed development would be unacceptable.

Biodiversity

236. It is common ground between the applicant and NRW that, subject to proposed mitigation measures, significant effects on biodiversity are unlikely to occur. A separate SoGG on ornithology between the applicant and NRW concludes that subject to suitable planning conditions there would be no significant impacts on ornithological receptors. I have no evidence that would lead me to different conclusions⁹².

Socio-economic Effects and Tourism

237. I have concluded that there would be some significant adverse visual effects from viewpoints along the section of Glyndwr's Way within about 4.5-5km of the site. As I have noted with regard to the proposed Llaithddu scheme, walkers and other tourists contribute to the local economy. I shall consider the likely consequent effect on tourism and the economy in combination with other proposals later in this report.
238. The applicant estimates that the proposed development would create or retain about 41 full time equivalent (FTE) jobs over 2 years during the construction period and 2 FTE jobs in the operational phase. There would be other indirect employment opportunities, primarily in the supply chain [A9, 996; A7, 10.51 & 10.52]. No firm evidence has been provided to the contrary. It can be expected that a proportion of the jobs would go to local people, and that some local firms would benefit from supply chain opportunities. In addition to supporting national economic growth, employment creation and policy objectives, the proposed development would contribute in this respect to the local economy. In addition a community fund would be established, though it is accepted that this cannot be taken into account as a material consideration.

Health

239. I have no evidence that any site-specific adverse health effects would occur.

Peat

240. There is no evidence that significant peat deposits would be affected.

Potential for Connection to the Grid

241. The Mid Wales Connection Project envisages the proposed Llanbardarn Fynydd scheme being connected to the grid via a 132KV line which would take a route to the west across the A483 and the Waun Dubarthog Ridge, and on northward to the proposed 132KV / 400KV transformer hub at Cefn Coch. As I have noted with regard to the Llandinam repowering scheme, connections to a number of proposed wind farms would be brought together at this location. A new 400KV line would then run roughly north-west into Shropshire.
242. A technically feasible alternative identified during the course of the inquiry would be to connect at 132KV to the line proposed for the Landinam repowering scheme. The connection would be made from the Llanbadarn Fynydd sub-station across an as yet unidentified route across the land to the south of the Glog [A3, 3.189-3.200]. As with the Llaithddu scheme, the Landinam 132KV line would have to be upgraded to carry heavier cables. It would also be necessary to add additional equipment at the Welshpool

⁹² VATT-ECOLOGY-SOCG-SSA-C & VATT -ORNITHOLOGY-SOCG-SSA-C

substation, and to replace the Welshpool to Oswestry 132KV line. As I have noted the Council has indicated that this alternative could be acceptable in principle, though it would have concerns about the visual impact of an OHL across the land to the south of the Glog. As the capacity would be limited to about 160MW the upgraded line would have sufficient capacity for either the Llaithddu scheme or the Llanbadarn Fynydd scheme, but not both.

243. I shall return to further consider the likely indirect, secondary and cumulative effects of the necessary grid connection in a later section of this report. At this stage, however, I conclude that there are no obvious reasons why the necessary approvals for a grid connection for the Llanbadarn Ffynydd wind farm could not be obtained in one form or another.

SSA C: Cumulative and In-Combination Effects

244. The following discussion relates to relevant issues arising from the combined effects of the three proposed wind farm developments in SSA C before the inquiry, and cumulative effects with other relevant wind farms in the area where planning permission has been applied for.

245. The Council's concerns with regard to cumulative effects within SSA C relate to landscape and visual effects and cultural heritage. These are therefore the main considerations under this heading. Its previous objections to the local access proposals have been resolved by revisions, further information, and agreement on conditions.

Cumulative Landscape and Visual Effects

246. Given the number of possible permutations, numerous potential scenarios could have been assessed. For practical reasons attention has focussed on six scenarios. These include various combinations of the applications before the inquiry, including separate consideration of Llaithddu's northern and southern groups (scenarios 1-5), and the scenario of all of the SSA C schemes currently in the planning system coming forward (scenario 6)[A9, 218].

247. With regard to scenarios 1-5, it is the Council's view that the Llandinam repowering scheme would be acceptable in landscape or visual terms, and that Llaithddu's northern group would have very limited additional or in-combination effect against that baseline [A9, 222]. I have no reason to disagree.

248. The Council's in-combination assessment of the scenario of Llaithddu (north and south) with the Llandinam repowering scheme, identifies a spread of effects to the south west of SSA C into the upper Marteg Valley [A9, 225]. Its assessment of Llandinam in combination with Llanbadarn Ffynydd identifies an additional spread of effects into the eastern part of SSA C. It considers that the in-combination effects of Llandinam with Llaithddu and Llanbadarn Fynydd would cause significant landscape harm across eight LANDMAP VSAs, and impacts which go beyond the boundaries of the SSA [A9, 226].

249. If all three of the schemes before the inquiry were to come forward there would, as I have identified in relation to the individual schemes, be significant harm to the landscape character of the upper Marteg Valley, and major adverse visual effect in the vicinity of Bwlch y Sarnau. There would be substantial harm to aspects of the landscape character of the Llanbadarn Fynydd site which make it distinctive and attractive, and considerable harm to general residential amenity and the visual environment for residents of the community in the vicinity of the Llanbadarn Fynydd site. Harmful visual effects would also be experienced by users of Glyndwr's Way and other public rights of way. The harmful impacts would, however, amount to little more than those of the southern group of the Llaithddu scheme, and those of the Llanbadarn Fynydd proposal. Because of their separation distance and the intervening Ithon Valley, I do not consider that the southern group of the Llaithddu scheme would interact with the Llanbadarn Fynydd scheme to cause additional harm, over and above their individual impacts. I conclude for these reasons that, in determining the

acceptability of the three wind farm applications in SSA C, little weight should be given to their combined landscape and visual impacts, over and above their individual effects.

250. With regard to Scenario 6, should all the proposals currently in the planning system come forward, wind farm development would create an almost continuous wind farm landscape roughly 10km long and several km wide in the western part of SSA C. As I have noted earlier in respect of the proposed Llaithddu southern array, the wind farm landscape would spill over into the upper Marteg Valley and closely approach the settlement of Bwlch y Sarnau.
251. In the eastern part of SSA C the wind farm landscape would spread north and north-east of the Llanbardarn Fynydd site farm over a substantial area towards the Glog, and across the B 4335 into the Gorddwr Bank area overlooking the upper reaches of the River Teme. To the east of the Llanbadarn Fynydd site it would extend over an area measuring about 4km north-south, and about 5km east-west, to within about 2km of the Shropshire Hills AONB. As I have noted in respect of the Llanbadarn Fynydd scheme, there is a substantial community of local residents in the eastern part of SSA C. The area to the east of the Llanbadarn Fynydd site includes a long stretch of Glyndwr's Way. It is generally accepted that users of such routes should be regarded as being highly sensitive to such landscape change.
252. There would be a gap of at least 4km between turbines in the western and eastern parts of SSA C and the topography would be such that there would be limited inter-visibility within much of the Ithon Valley. However, cumulative photomontages and wireframe figures show that from some key viewpoints on high ground outside SSA C, particularly at 'Two Tumps' (LR5, on the Kerry Ridgeway), and Fron Top (LR7, on Glyndwr's Way), the existing and proposed wind farms would read together as one vast wind farm landscape, stretching across the Ithon valley into the distance and covering a wide arc of view.
253. For these reasons I consider that if all the proposed wind farms that are currently in the planning system were to come forward the SSA C plateau area would be dominated by turbines. There would be severe landscape and visual effects across the SSA. Effects would extend significantly beyond its boundaries, including into the Shropshire Hills AONB [A9, 223].
254. However, the severity of the effect and the spilling over of effects into the AONB would be primarily the consequence of the applications that are not before the inquiry. Whilst the Llanbadarn Fynydd proposal would desensitise the area to the east of the Ithon Valley to further wind farm development [A9, 224], the point at which harm would 'tip over' into severe and unacceptable harm as a consequence of cumulative effects would be a matter for future decision makers.
255. I conclude for these reasons that the cumulative landscape and visual impact of the proposed Llandinam, Llaithddu and Llanbadarn Fynydd wind farms in combination with each other, or in combination with other proposed wind farms in SSA C, should not be a determining factor for any of these three applications. However, as I have noted, if all three applications were to be approved there would be implications for associated infrastructure. As there would be an interaction in this respect with the SSA B schemes I shall return to this as a matter in common with all other applications.

Cumulative Cultural Heritage Effects

256. The Council makes a distinction between the western and eastern parts of SSA C, in that heritage assets in the western area are located in a higher and more remote upland setting, and that the baseline in the west is materially different because of the presence of the existing P & L wind farm. It therefore does not consider that there would be unacceptable in-combination or cumulative effects on cultural heritage in the western area [A9, 261]. I have no reason to disagree.

257. There are some 26 prehistoric monuments of acknowledged national importance within 5km of the Llanbadarn Fynydd site. Most are Bronze Age barrows, but there is also evidence of a likely prehistoric henge (which is not currently designated as a SAM) in the vicinity of Black Gate. There are also nationally important Iron Age and mediaeval sites, and some more recent listed buildings. There is therefore evidence of continuous occupation and utilisation of the landscape of the eastern part of SSA C since at least the Bronze Age, and the concentration of ancient monuments in the eastern part of SSA C is notable. Despite erosion over time, once the ancient monuments are pointed out most can be seen and their relationship to the landscape and each other becomes apparent. Notwithstanding recent agricultural change and settlement, the landscape of the eastern part of SSA C therefore has a strong historic character that can be readily appreciated. Part of the area is evaluated within LANDMAP layers as being of 'outstanding' value in terms of its Historic Aspect, as it is a prehistoric landscape of key importance containing significant numbers of burial monuments and ritual sites.
258. There is a considerable difference between the applicants and the Council about the significance of the likely combined effect on the setting of these monuments, should all the proposed development in the eastern part of SSA C proceed. The applicants' expert witness found significant cumulative effects on the settings of only two scheduled monuments, in each case amounting to less than substantial harm. The Council's expert witness found that the development of all four proposals in the eastern part of SSAC would degrade the setting of a large number of designated and non-designated assets, and that there would be substantial harm in over a dozen instances [A9, 262-277; A3, 410-429].
259. The difference between these parties appears to arise partly from interpretation of how the presence of turbines could affect the significance of the setting of heritage assets, and partly from different interpretations of how high a bar is set in the 'substantial harm' policy test referred to at paragraph 5.8.24 of EN-1. There are clear sightlines between the bronze-age barrows in and around SSA C which are important to understanding their relationship and significance, even though the separation distance may be very large [A9, 274; A7, 10.19]. I therefore I agree with the Council that the applicants' written evidence tends to unduly focus on immediate setting. On the other hand, I agree with other Inspectors' findings that the EN-1 policy test of 'substantial harm' represents a high bar, and that on a fair reading of the policy it must involve a degree of harm towards the upper end of the spectrum, approaching total loss of significance. The Council's witness appears to me to move too readily from a finding of degradation of setting to a finding of substantial harm, and does not appear to adequately take into account the limited life of the proposed wind farms [A3, 4.13].
260. As I have noted above, if all of the wind farms that are proposed within the eastern side of SSAC were to come forward, that side of the plateau would become dominated by wind turbines. The prehistoric and historic elements of the landscape could still be discerned and interpreted, but they would be less prominent. From some key points, such as the observation point at Two Tumps, views of distant barrows would be obtainable only between narrow gaps between distant turbines. At other viewpoints an observer may need to change his or her position to obtain a clear view. For many people their ability to appreciate and experience the cultural heritage aspects of the landscape would therefore be diminished. Although the landscape would be restored after the lifetime of the wind farms the harm would persist for the equivalent of a generation, which is a considerable length of time. I consider for these reasons that all four proposals together would seriously degrade the setting of a substantial number of cultural heritage assets, including scheduled monuments and listed buildings. Even though I do not consider that the harm would approach total loss of significance for any asset, and therefore would not be 'substantial harm' for the purposes of EN-1, in view of the importance of such assets this is a consideration which should in my view carry considerable weight in an overall planning balance.

261. However, the serious degradation that I have identified would arise only in the eastern part of SSA C, and only as a consequence of the addition of some or all of the Neuadd Goch, Garreg Llywd and Bryngydfa schemes to a baseline of the Llanbadarn Fynydd scheme. Whilst a tipping point could come at which the combined harm to the setting of heritage assets in the eastern part of SSA C could become a determining factor, that tipping point would not be reached by the proposed Llanbardarn Fynydd wind farm alone or in any combination with the proposed Llandinam and Llaithddu proposals. As with landscape and visual effects, the point at which harm would 'tip over' into severe and unacceptable harm as a consequence of cumulative effects would be a matter for future decision makers.
262. I conclude for these reasons that the cumulative effect on cultural heritage of the proposed developments within SSA C that are before the inquiry is not a matter that should be a determining factor for any of them.

SSA B: Site-Specific Issues

263. The following discussion relates to issues specific to the individual wind farm proposals in SSA B. I shall address issues raised in relation to these proposals, but which are more properly considered as general or area-wide effects, in subsequent sections of this report.

Llanbrynmair

264. The Council's outstanding objections in relation to the Llanbrynmair scheme relate solely to the proposal to utilise the northern section of the Llanerfyl to Talerddig road to provide access for AILs. It considers that this would cause considerable disruption and a range of unacceptable landscape and visual effects. It also considers that environmental information submitted in relation to the AIL access proposal is deficient in a number of respects, and does not provide sufficient information to enable ecological effects to be properly assessed [A9, 56-58].
265. NRW shares the Council's concerns with regard to the proposed local access route for Llanbrynmair AILs [A8, 4.3]. NRW was also concerned that the indicative proposals for the Llanbrynmair sub-station would not reduce its visual impact to an acceptable level, but now accepts that this is a matter that can be dealt with by conditions [A8, 4.1]. Another outstanding objections relate to the visual impact of several of the proposed turbines on Glyndwr's Way [A8, 4.2]. The Alliance has similar concerns [A7, 13.42-13.48]. NRW also objects to landscape and visual effects on the Snowdonia National Park. NRW's objections relate primarily to the effect of the proposed Carnedd Wen Turbines [A8, 3.1 & 3.3-3.7]. However, from many viewpoints including those within the National Park, the proposed Llanbrynmair and Carnedd Wen turbines would read together as one very large wind farm, and would be seen in the context of other existing and proposed wind farms in SSA B. I shall therefore consider the visual impact of the proposed development on views from within the National Park with other schemes, under the heading of SSA B in-combination and combined effects. For similar reasons I shall also consider the landscape and visual effects on the Llanbrynmair / Carnedd Wen Uplands and the Nant yr Eira Valley under the same heading.
266. The main considerations are therefore the landscape and environmental effects of the proposed local access route for Llanbrynmair AILs, and the visual effect of the proposed turbines when seen from Glyndwr's Way.

Access for AILs – Landscape and Visual Effects

267. The details of the works necessary to provide access for AILs are described in the RES August 2013 SEI⁹³. AILs would leave the A458 at Llanerfyl, and follow the existing C2031

⁹³ AD/RES/030 - 036

and U2319 county/unclassified roads through about 12km of the Nant Yr Eira Valley, before turning onto one of several proposed new access tracks into the proposed wind farm. Other construction traffic would travel north, from the A470 near Talerddig.

268. The Nant yr Eira Valley lies within the Llanerfyl Mosaic Farmlands LANDMAP area, VSAA 422 [A9, 394]. LANDMAP describes it as having an intimate scale, and enclosed, harmonious and tranquil characteristics.
269. The southern part of the valley, which would be used by general construction traffic but not AILs, is relatively open and elevated and has the character of a broad vale, with relatively gently sloping sides rising to upland moorland and forestry. Vegetation is characterised by rough grazing. As there are few hedges or other field enclosures it has an open upland appearance [A9, 397]. The works required to accommodate general construction traffic in the southern part of the valley would have a limited effect on the character of the area, and the Council has no objection in this respect. I have no reason to disagree.
270. The majority of the proposed access route for AILs would be through the northern, lower part of the valley. In contrast to the southern section, this is more deeply enclosed by the landform, and has grass pastures and richer vegetation including trees and hedgerows. The road through this section is narrow, winding and undulating, and for much of its length is closely bounded by hedges and trees [A9, 396].
271. The works required to accommodate AILs would require approximately 7km of road widening, mostly achieved through the extension and reinforcement of verges on one side of the road [A9, 399(c)]. The verges would be surfaced and reinforced with a product similar to 'grasscrete', to allow AILs over-run the existing tarmac surfaced area. Some 14 bridges and culverts would have to be widened, and others would be strengthened or protected [A9, 399(i)]. The works proposed are therefore substantial.
272. The exact amount of hedgerow that would be removed and replaced is not agreed, though the Council's approximation of 1.5km is not disputed [A9, 399(e)]. There also no agreement about the precise number of trees that would be lost, partly because in some areas the SEI treats them as groups of trees which have not been enumerated [A9, 399(f)]. On the evidence before me it would appear that about 50 mature trees with individual merit would be lost, together with several hundred trees in various groups. Many of these would be more appropriately described as saplings, or would otherwise be of little individual merit. However, in the Gosen Bridge area some of the trees assessed as part of a group are oaks or coppiced trees on river banks, which although relatively small in diameter may be of considerable age. They also make a major contribution to the character of the area.
273. During construction and until hedges, trees, verges and hedgerows re-grow there would be a substantial general adverse effect on the pleasant rural character of the road. Estimates of the length of time necessary for hedges to re-grow to their current condition vary. The applicant's landscape witness considers that they would re-establish within 5 years, but bearing in mind slow growth rates in upland areas this may be optimistic. On the other hand hedges and verges could be expected to be re-established within 10 years, and replacement trees would re-grow to a substantial size within about 20 years. Grasses and other soft vegetation could be left to grow at the side of the road, thus softening the visual effects of widening and levelling of verges. I am therefore satisfied that the appearance of most of the route would be largely restored within 5-10 years, and fully restored within about 20 years of the development taking place. Nevertheless, there would be significant short to medium-term harm to the character of much of the length of the AIL route.
274. At Gosen Bridge the road turns sharply and descends through a wooded area, before crossing a narrow stone bridge and rising on the other side. The works at Gosen Bridge would entail substantial widening of the bridge deck and the road surface on the approaches to it. Wide reinforced grassed verges would be formed on the Llanerfyl side of the bridge. An existing densely vegetated river embankment adjacent to the bridge would be lost and

replaced with a narrower area which would sustain less vegetation. Replacements for lost oaks and trees on the river banks would take a considerable length of time to grow. On the Talerddig side of the bridge a new 350m length of haul road would be constructed to avoid excessive changes of gradient on the existing road. This would involve the cutting of embankments and result in unnatural land forms. I consider that taken together, these works would have a very harmful effect on the character of the locality. The visual effects of the bridge widening and haul road would be permanent [A9, 409-420; A5, 112 & 113].

275. The existing road also passes close to a small plantation of conifers on an embankment near the Dolwen Isaf Bridge. Although the conifer plantation is described in the applicant's case as being in poor condition it is edged at the roadside with native trees and shrubs. The works required to enable AILs to negotiate the turn onto the bridge would involve the cutting back of the existing bank and increasing its angle. The roadside vegetation and a substantial part of the plantation would therefore be lost. The plans for the replanting of the embankment are not detailed, but it is likely that it would take 5-10 years before planting would establish to an extent that would soften the altered landform and compensate visually for the loss of existing vegetation [A9, 408; A5, 111].
276. At Neintherion the road passes between buildings and cannot be widened to accommodate AILs. It is therefore proposed to construct a private haul road or 'by-pass' around this area. It would be about 1km long and between about 5.5 and 12.7m wide. It would have a base of crushed stone surfaced with grass reinforcement, similar to the material that would be used elsewhere in road widening. It would pass through poorly-drained fields and stone walls forming field boundaries, and would entail earthworks including embankments to create a level surface. Grass would be allowed to re-grow through the reinforced surface. However, changes in drainage and soil conditions make it unlikely that the appearance of the haul road would closely match the adjacent fields, and the altered land form would not be disguised. The by-pass would therefore remain as a visibly man-made feature in the landscape. As the character of the locality owes much to settlement and farming I do not consider that its effect would be seriously harmful in the medium to long term. However, as its purpose would not be obvious it would be somewhat incongruous. There would also be significant short-term adverse visual impacts during construction, and until the grassed surface establishes [A9, 406 & 407; A5, 109 & 110].
277. The corridor of the proposed AIL route is a small part of the relevant LANDMAP VSAA and Powys Landscape Character Areas. I do not consider that the landscape or visual impact of proposed works would be significant in the context of the wider landscape of the Llanbrymair and Carnedd Wen uplands and the Nant yr Eira Valley [A5, 97 & 100]. However, for the reasons above I conclude that there would be locally significant adverse landscape and visual effects. Some of these would be medium to long term, and others would be permanent.

Disruption and Inconvenience

278. In addition to landscape and visual impacts, the Council and local residents are concerned that the works required would create extensive disruption and inconvenience [A9, 423; A7, 15.52].
279. As road widening would be largely carried out in confined areas it would be necessary to use small plant and equipment, and much of the work would have to be carried out by hand. Evidence was also given by the applicant's transport witness to the effect that work would be carried out at only a few locations at any one time, and that excavations would be backfilled at the end of each day and re-opened each morning to enable traffic controls to be removed at night. I consider for these reasons that it is likely that progress would be relatively slow and could take more than the period of 9 months envisioned by the applicants. In any event there would be disruption to traffic for a substantial period.
280. There is no dispute that some road closures would be necessary, largely to facilitate works at Gosen Bridge [A5, 174-176]. It would not be appropriate for works in this area to

be carried out at night, not least because there are residential properties in the vicinity [A7, 13.54]. In view of the extent and nature of the work the applicant's estimate that road closures would be necessary on only 9-15 days appears to me to be optimistic. In any event, diversions would be lengthy, with some journeys being extended by as much as about 30km. The road is not heavily used, but even if road closures were to be limited to 9 days on a conservative estimate the total additional distance that would have to be driven by motorists would amount to several thousand kilometres. In addition to great inconvenience, there would therefore also be financial and environmental costs.

Adequacy of the ES and SEI / Effects on Wildlife and Ecology

281. The relevant regulations require an ES to include such information as is reasonably required to assess the likely significant environmental effects of the development. As a matter of law it is for the decision-making authority to decide on the adequacy of an ES, and he or she is not deprived of jurisdiction merely because an ES is deficient, provided that the ES is not so deficient that it could not reasonably be described as an environmental statement [A5, 207]. As a matter of policy, paragraph 4.3.4 of TAN 5 recognises that the information submitted with a planning application should be proportional to the likelihood of effects on nature conservation interests and to their potential significance.
282. The main environmental information submitted in respect of the AIL access route from Llanerfyl to the site is contained in the RES August 2013 SEI. During the inquiry PPC identified a number of errors and omissions, but the identification of such deficiencies is part of the purpose of the consultation process, and does not itself make the ES inadequate [A5, 212]. In response, RES submitted further SEI in October 2013 (the Bat SEI) and in February 2014. The February 2014 SEI also contains environmental information relating to an alternative access arrangement suggested by the Council. The further SEI was submitted and publicised in accordance with statutory requirements and there is no dispute that it forms part of the environmental information for the purposes of this inquiry.
283. The remaining areas of dispute between the Council, NRW and the applicant concern trees and hedges, dormice, bats, otters, grassland habitats, and peat. PPC maintains that there are a number of trees which will not be able to be retained in practice as they would be at risk of root disturbance during construction [A9, 553]. It also considers that replanting of hedgerows would not provide adequate mitigation for hedgerow loss in ecological terms, as reinstating their ecological function can take decades [A9, 554]. With regard to dormice, the concern is that the survey work undertaken falls short of best practice. PCC is also concerned about the level of survey work undertaken with regard to bats at Gosen and other bridges, and that some of the trees which they consider could not be retained in practice have apparent potential for roosting bats. Concerns about otters relate to whether a proposed temporary working platform or 'crash deck' to be constructed over the river at Gosen Bridge would interfere with their movement. PCC also considers that some grassland habitats have been misidentified, and that in some instances the ES and SEIs underestimate the amount of peat that would be impacted.
284. The ES and subsequent SEIs are substantial and detailed. They identify and assess the main effects which the development is likely to have on the environment, including effects on trees and hedgerows, dormice, bats, otters, grassland habitats and peat, and describe the likely significant effects of the development. Surveys of dormice and bats have been undertaken to inform the assessments. There is disagreement about the adequacy of those surveys, and more survey work could have been done to further refine knowledge about the baseline conditions. However, for reasons that I shall amplify later, I consider that the surveys that have been undertaken are proportionate to the likelihood of effects on nature conservation interests and to their potential significance.
285. I am satisfied for these reasons that the ES and subsequent SEIs include such information as is reasonably required to assess the likely significant environmental effects of the development. Whilst there were some deficiencies in the original ES, and some deficiencies remain in subsequent SEIs, the documents submitted are not so deficient that

they could not reasonably be described as an environmental statement. Some of those deficiencies give rise, as a matter of judgement, to differences between the parties about environmental effects, which I shall address. However, I do not consider that as a matter of law, the Secretary of State is precluded from granting consent for the proposed development, including the proposal to provide access for AILs using the Llanerfyl to Talerddig route [A9, 514-515; A5, 213-215].

Trees and Hedgerows

286. Turning then to the remaining issues between the Council, NRW and the applicant, there is agreement between PPC and RES that it is technically feasible for the proposed highway works to be carried out within the amended 'red line' boundaries defined for the purposes of the ES and subsequent SEIs [A5, 295]. In places the working area would be close to trees outside the boundary. Excavations may therefore sever some tree roots, or the ground around them may be compacted. However, it would be normal in such cases for protective measures to be taken, such as physical protection of the base of the tree, avoidance of excavations where possible, or reduction of the canopy to compensate for root damage. Subject to such measures, which could be required by agreed conditions relating to a construction management plan, there would be little loss of, or long-term damage to trees outside the boundary. Effects on trees or groups of trees inside the boundary have been assessed, and mitigation is proposed in the form of replacement. In time replacement trees would be of equivalent ecological benefit to the trees that would be lost. However, in the short to medium term (circa 20 years) there would be some harm in ecological terms [A9, 532-533].

287. Whilst hedgerows are a priority habitat under section 42 of the NERC Act and can generate a particular flora over time, there is no evidence that the hedgerows that would be affected in this instance contain or support rare or unusual species or habitats. Replaced or relocated hedgerows would eventually recover their ecological, as well as visual value. I have concluded above that because of the relatively harsh upland environment it is likely that it would take more than 5 years for replacement hedgerows to recover their full appearance. Recovery of their full ecological value could take longer still, but on balance it is reasonable to expect that this would happen after about 5-10 years of careful management, rather than several decades. Nevertheless, in the short to medium term there would harm to the ecological value of about 1.5km of affected hedgerows [A9, 534].

Dormice

288. There is no record of the presence of dormice in the vicinity of the proposed AIL route. Records of their presence less than three kilometres from Llanerfyl are from a different area. Whilst it has become apparent in recent years that dormice may occasionally be found in places that have not traditionally been considered to provide a suitable habitat [A9, 535], the hedges along the proposed access route are generally regularly flailed and there no extensive areas of deciduous woodland containing fruiting hazel, which would be a habitat of particular value to dormice. Nevertheless, surveys were undertaken along the route in an effort to detect actual presence or demonstrate likely absence.

289. The *Dormouse Handbook*, which provides accepted 'best practice' guidance, notes that the best way to establish presence is to search for gnawed hazelnuts. The systematic approach of searching 10m x 10m blocks of heavily fruiting hazel was not possible due to the absence of such areas in the vicinity. However, over 100 gnawed nuts were found, none of which had been eaten by dormice. A relatively high proportion had been gnawed by squirrels, which in accordance with the guidance may result in false negatives. Nevertheless, the Guide advises that such methods can indicate with a high degree of probability that dormice are not present.

290. An Interim Advice Note from Natural England advises that there is a significant risk of false negatives from nut searches alone, particularly where low densities of dormice occur. NRW and PCC consider that nest tubes should have been used to ensure that the nut survey

was not giving a false negative. However, whilst surveys can demonstrate the presence of a species in an area, they can rarely, if ever, prove that a species is not present. The use of nest tube methods would increase the likelihood of detecting dormice if they are present in the area, but could not prove their absence.

291. I acknowledge NRW's desire for additional searches that would increase the possibility of finding evidence of any dormice present, or indicate with a higher degree of probability that dormice are not present. However, the effort made in undertaking such surveys should be proportionate to the risk. In this instance, the proposed works would affect mainly hedgerows that are regularly flailed. In general, the works would only affect the hedgerow on one side of any particular stretch of road. The hedgerow on the other side would therefore remain as a potential refuge for dormice. The risk of harmful effects on nature conservation interests relating to dormice, and the potential significance of this risk is therefore low. It is agreed that as circumstances may change, further searches should be undertaken closer to the time that the works would be undertaken. However, whilst that would be a valuable and necessary precautionary measure given that it would be several years before development could take place it is not an indication that the work undertaken to date is inadequate. I do not accept as RES maintain that there would be no risk of killing or disturbing dormice, as it has not been proven that they are absent. However, in these circumstances I am satisfied that the surveys that have been undertaken are proportionate and satisfactory, and that the SEI's conclusion of no likely significant adverse effect on dormice can be relied on for the purpose of decision making [A9 535-537; A8, 4.10; A5, 257-278].

Bats

292. Surveys have shown that small numbers of bats roost in small shallow crevices in the stone structure of Gosen Bridge. However, NRW accept that the impact of the proposed works would not have a significant effect on bat populations, and that the effect at Gosen Bridge can be mitigated by appropriate timing of the works and providing roosting features in the proposed structure.

293. Other bridges and structures have been surveyed, and trees that might provide roosting opportunities for bats have been assessed. The presence of roosting bats was not confirmed at any such location. As I have noted above the negative finding does not prove that bats are not present. However, the structures that were surveyed were found to provide limited opportunities for roosting, and relatively few potentially suitable trees would be affected.

294. The *Bat Surveys Good Practice Handbook* advises that methods other than those employed by RES should be used when surveying for proposed road widening schemes or on large sites. However, in this instance road widening would not generally affect both sides of the road and the hedgerows that would be affected would be a small proportion of those available to commuting or foraging bats in the vicinity. The works proposed do not therefore have the character of general large-scale road widening schemes or works on large sites. Furthermore, the risks of harmful effects on nature conservation interests relating to bat, and the potential significance of such risks are low. I consider for these reasons that the bat surveys that have been undertaken are proportionate and satisfactory, and in general accordance with best practice guidance. The need for and scope of appropriate mitigation measures has been identified in the ES and subsequent SEIs. Some details, for example of roosting opportunities to be incorporated into the design of Gosen Bridge, would need to be agreed before works could commence, but that is normal in these circumstances [A9, 538-543; A8, 4.6-4.8; A5, 279-294].

295. I am satisfied for these reasons that subject to mitigation measures that have been identified and which can be secured by agreed conditions, there would be no likely significant adverse effects on bats.

Otters

296. It is not disputed that otters are present in the Nant yr Eira Valley and are likely to pass along streams and rivers crossed by the proposed route. Surveys have not, however, identified holts or resting places for otters in close proximity to any of the proposed works.
297. The proposed working platform at Gosen Bridge would be raised well above the water level on temporary foundation posts set on the river bed. It would therefore physically allow otters to use the river to pass through the site. There is no evidence to show that otters may nevertheless be deterred from using the rivers at this point. Even if they were to be deterred there is no evidence that this would significantly affect their range.
298. I am satisfied on this basis that the otter surveys that have been undertaken are proportionate, and that there would be no likely significant adverse effects on otters [A9, 544, A5, 241-256].

Grassland Habitats

299. There are differences between expert witnesses about the classification of grassland habitats that would be affected by the proposed development. However, the classification of such habitats is a matter of professional judgement. On the evidence before me it is made difficult where, as in this instance, habitats have been modified by land use and contain plant species characteristic of several classifications. The differences between witnesses are therefore not surprising. The applicant's surveys were carried out by a suitably qualified and experienced ecologist, and in accordance with a recognised methodology. The errors or omissions that have been noted by the Council's expert ecology witness are relatively minor in nature and do not in my view fundamentally undermine the robustness of the surveys, or the conclusions drawn from them. I do not consider that the ES is so deficient that it could not reasonably be described as an environmental statement. NRW does not dispute that the ES, together with subsequent SEIs, provides such information as is reasonably required to assess the environmental effects of the development with regard to grassland habitats. No likely significant harm to matters of particular conservation interest has been identified with regard to grassland habitats [A5, 218-222].

Peat

300. There have been differing assessments of the amount of peat that would be affected by the construction of the proposed private haul road at Neintherion. This is understandable as the peat deposits are patchy and vary in thickness, and there have been differences in the places and spacing at which probing has been undertaken. Assessments can at best be an estimate. Although the margin of error reduces as the number of probes increases the amount of survey work undertaken by the applicant was in my view sufficient to establish the order of peat loss at Neintherion with reasonable reliability. It would be a small percentage of the project's overall effect on peat resources, and well within the margin of error for the assessment of the effects of the proposed development as a whole on peat.
301. I consider for these reasons that sufficient work has been done in relation to the impact of the local access proposals on peat, and that the environmental information is not defective to the extent that it cannot form the basis for a lawful permission. In the context of the project as a whole peat loss at the Neintherion private haul road would be insignificant [A9, 546 & 547; A5, 224-240].

Summary of Conclusions on the Environmental Effects of the Local Access Proposal for AIL Deliveries

302. I have concluded that there would be locally significant adverse landscape and visual effects, some of which would be medium to long term, and some of which would be permanent. Road works would cause inconvenience and disruption over a substantial period, and road closures would have financial and environmental costs. In the short to medium term (circa 10-20 years) there would be some harm to the ecological value of affected trees and hedgerows. However, subject to appropriate mitigation it is unlikely that there

would be significant adverse effects on dormice, bats or otters. The effect on peat deposits would not be significant in the context of the project as a whole.

Highway Safety

303. I saw that forward visibility at the junction of the A470 with the proposed route for general construction traffic near Talerddig is limited because of the vertical alignment of the main road. However, the Council (as Highway Authority) and the Welsh Government in its capacity as the trunk road agency are satisfied that, given the average traffic speeds measured on that stretch of road, the proposed improvements at the junction would make its use by general construction traffic acceptably safe. The Alliance, whilst nevertheless concerned about the safety of the junction, has provided no firm evidence that would lead me to disagree with the relevant highways authorities [A7, 13.51].
304. The roads in the Nant yr Eira Valley are narrow and have poor forward visibility in places. The proposed works would provide for two-way traffic at Gosen Bridge and some off-road parking spaces at a local beauty spot. Permanent additional passing places would be provided, and this would make it more convenient for vehicles to pass oncoming traffic [A5, 184]. However, there is no evidence of any particular existing safety risk on the existing roads. Nor is there any evidence of a particular need for additional off-road parking. There is therefore no evidence that the proposed works would be of significant benefit in safety terms [A9, 424].
305. The proposed improvements to the junction at the A470 near Talerddig would be permanent. The Council accepts that there would be some long-term community and safety benefit in this respect, and I have reason to disagree. However, like the Council I consider the benefit to be minor.

Alternative Means of Access for AILs

306. PCC made the case early on in the inquiry, to the effect that shared use of the proposed Carnedd Wen AIL local access route should be considered as an alternative to the proposed route for AIL deliveries to the Llanbrynmair site, as it would potentially be feasible, less harmful and more environmentally acceptable.
307. Access to the Carnedd Wen site would be via an existing forestry track that climbs the southern slopes of the Afon Dugoed valley from the A458. Widening of sections would be required to facilitate the passage of AILs. This would entail cutting back some slopes and thus exposing areas of bare rock. However, it is now proposed to retain areas of conifer plantation below the access track. I examined these at my inspection and am satisfied that views of the track and any newly exposed bare rock would be largely screened by the retained trees. The Council, though initially concerned about the visual impact of works to the access track, no longer objects on this basis [A9, 326]. I am satisfied that there would be no significant visual impact from viewpoints in the valley or from the opposite side of the valley within the Snowdonia National Park.
308. The Council suggested that two sections of access track could be constructed to provide interconnections between the Carnedd Wen and Llanbrynmair schemes. These would replace two proposed access tracks into the site from the Llanerfyl to Talerddig Road. The need for works to accommodate AILs on the Llanerfyl to Talerddig road would therefore be avoided completely. It accepted that access for general construction traffic could still be from the Talerddig direction. One associated access track and the proposed improvements to the junction with the A470 near Talerddig would therefore still be necessary. However, the Council's case is that the overall environmental impact would be greatly reduced [A9, 470].
309. Given the Council's position, RES provided further information in the February 2014 SEI relating to the suggested alternative shared access arrangement with the adjacent Carnedd Wen scheme. However, RES's proposal remains to use the Llanerfyl to Talerddig route [A5, 199].

310. The February 2014 SEI concludes that the landscape and visual effects of the alternative access arrangement would not be greater than those of the local access scheme presented in the August 2013 SEI. Little vegetation of conservation interest would be lost, and no protected species would be affected. No historic assets would be affected, and effects on any currently unrecorded archaeology could be mitigated through conditions. The minor alterations to the infrastructure layout would have no significant impact on geology, hydrology or hydrogeology. There would be no transport-related reasons for AIL deliveries not to utilise the shared access. The overall net effect of the layout changes necessary to facilitate a joint access arrangement would be to decrease carbon losses, mainly by a reduction in losses of organic matter from excavated peat. These conclusions are not disputed by the Council.
311. The landscape and visual effects of the suggested shared access arrangement, over and above those of the Carnedd Wen scheme alone, would be limited to the necessary connection tracks between the Carnedd Wen and Llanbrynmair schemes. These would be very small in the context of the combined wind farm development, and considerably less than the local landscape and visual effects of RES's proposed AIL local access route. The inconvenience and disruption that would be caused by works to accommodate AILs along that route would be avoided, along with the associated financial and environmental costs. The harm to the ecological value of the trees and hedgerows that I have identified would also be avoided. Other ecological benefits would include avoidance of disturbance of wet grassland habitats at Neintherion and two access tracks, and of the elimination of any risk of disturbance of protected species (albeit that significant effects are unlikely). Although the reduction in estimated carbon losses would be small in the context of the scheme as a whole, and would have little effect on the carbon pay-back period of the project they would nevertheless be desirable.
312. I conclude that in environmental terms, the alternative of sharing access for AILs with the Carnedd Wen scheme would be strongly preferable to the proposed route using the Llanerfyl to Talerddig road, and would therefore be preferable in the public interest.
313. A note by RES on the viability of sole access to the Llanbrynmair wind farm via the A458 confirms that a shared access via the Carnedd Wen site would be viable from a financial and operational point of view if costs are shared⁹⁴.
314. The Council is content that the RES February 2014 SEI, together with the Carnedd Wen ES and SEI, provides adequate information and is compliant with the relevant EIA Regulations [A9, 569]. I have no reason to disagree. There is therefore sufficient environmental information to enable a proper assessment of the environmental effects of the suggested shared access scheme. However, if the Carnedd Wen scheme does not go ahead it does not follow that Llanbrynmair would implement the internal access track layout that has been proposed and assessed by RWE. The RES February SEI therefore does not describe the works that would be necessary to gain access for AILs from the A458 should the Carnedd Wen scheme not go ahead, or what measures would be provided by RES to mitigate the environmental effects of such works in these circumstances. It therefore does not provide sufficient information to enable a proper assessment of the environmental effects of gaining access for AILs from the A458 for the Llanbrynmair scheme alone.
315. I shall consider the implications of these conclusions and the practical options available to the Secretary of State a later stage in this report.

Visual Impact of the Proposed Turbines on Glyndwr's Way

316. A section of Glyndwr's way passes through the proposed Llanbrynmair scheme. NRW's objection relates specifically to turbine numbers R14, R15, R16 and R24, which would be within the range of 70m to 300m from the national trail. The Alliance is concerned more

⁹⁴ RES-013

generally about the effect of the proposed development on the use of the trail [A8, 4.2; A7, 13.48 & 13.66 (iv) & (v)].

317. There is no dispute that reactions to wind farm development and wind farms vary. In close proximity some people would experience the scale of large wind turbines and the movement of the blades as an overwhelming effect that they would wish to avoid. I therefore accept that some users of the national trail would be put off using the section through the Llanbrynmair wind farm, even though forestry clearance associated with the proposed development would open up and thus improve some views from the trail. The off-putting effect would be reduced by proposed additional permissive routes further from the turbines than the existing trail, but not avoided [A5, 55-59]. However, I do not consider that such effects would necessarily be unacceptable. Rather, the impact of the Llanbrynmair development should be considered in the context of Glyndwr's Way as a whole, in combination with the effect of the other schemes before the inquiry and other existing and proposed wind farm developments. I shall therefore return to this matter later.

Other Matters

Noise / Health

318. It is common ground between RES and PCC that the August 2013 SEI demonstrates that operational and construction noise would not cause harm to residential amenity, and can be adequately controlled through planning conditions⁹⁵. Conditions have been agreed which would ensure that the proposed Llanbrynmair scheme, either alone or in combination with the Carnedd Wen scheme, would operate within the derived ETSU-R-97 day-time noise limits. At the request of PCC the same limits would also apply at night.

319. The SoCG refers to 'Excess' or 'Other' Amplitude Modulation being a subject about which knowledge and evidence is still developing. As this is a matter in common with the other applications I deal with it elsewhere.

320. The Alliance has raised no specific issues relating to noise in association with the Llanbrynmair scheme. Local residents' concerns about general health effects of wind farm development are dealt with elsewhere.

321. I am satisfied that, subject to the agreed conditions, operational noise would remain within accepted guidelines and that construction noise would be effectively controlled and limited by conditions relating to compliance with a Construction Management Plan.

Biodiversity

322. Other than issues in connection with the proposed AIL delivery route, the Council and NRW do not object to the proposed development for reasons relating to biodiversity. Comprehensive conditions have been agreed that would secure measures identified in the ES and SEI. There is now no dispute that the measures that would be secured by conditions would adequately protect curlew and black grouse.

323. The Alliance remains concerned that the proposed development would affect large areas of blanket bog and species rich acid grassland. In its view expectations that the proposed mitigation and peat restoration will work within the lifetime of the management plan are unrealistic [A7, 13.9-13.16]. The regeneration of peat habitats land undoubtedly takes time, but the proposed Habitat Management Plan and Peat Management Plan include long-term habitat restoration and management measures designed to enhance the site. The Council does not dispute that they would be effective, and I have no convincing evidence that would lead me to disagree.

⁹⁵ RES-PCC-SOCG-NOISE-SSA-B

324. The Alliance recognises that the Llanbrynmair moors have been damaged by forestry [A7, 13.12]. The proposed development would bring about roughly 200ha of blanket bog and mire restoration, and the removal of about 149ha of forest on previous peat habitats. The area of land that would be improved in terms of its conservation value and biodiversity would therefore be considerably more than the area that would be affected by access tracks, turbine bases and other infrastructure. I am satisfied for these reasons that the proposed development would provide a net long-term gain in terms of habitats and biodiversity.

Social and Economic Effects, Including Tourism

325. A temporary workforce of up to 40 posts would be created during a construction period of about 24 months. It anticipated that about 80% of posts would be available for people living locally. There would also be a permanent post in operation and maintenance. About £13 million would be spent on works undertaken by local contractors, and a substantial sum would be generated in business rates each year. Rental income paid to host farms and estates would help to support rural enterprises [A5, 319]. I consider for these reasons that there would be significant economic benefits to the local economy. A community fund would be established, but it is accepted that this is not a material consideration that can be taken into account.

326. I am not aware of any nearby tourist enterprise that might be directly affected by the proposed development. I shall consider wider effects on tourism elsewhere in this report

Cultural Heritage

327. At about 1km from the nearest Llanbrynmair turbine the Fridd Cwm y Fynnon Barrow Cemetery (SAM MG314) would be the closest ancient monument to the site. At this distance there would be a notable visual effect on its setting. The Llanbrynmair turbines would also have a notable visual effect on the setting of the Moel Ddolwen Hillfort (SAM MG149), at a distance of about 2.2km. However, there is no evidence that this would harm the special interest or historic significance of these assets [A5, 334; A7, 13.33–13.58].

328. Abercannon is a traditional stone longhouse, and is listed as a well preserved farmhouse which is typical of this area. It would be about 1km from the closest turbine. However it sits in a river valley and is oriented to face the river, rather than the hills on which the proposed turbines would be situated. Its special interest derives largely from its architecture rather than its setting. I am therefore satisfied that the proposed development would not have a significant effect on the significance of its setting or special historic interest. I am also satisfied that the setting of no other listed building would be significantly affected [A7, 13.37].

329. Proposals for a programme of archaeological works are set out in the August 2013 ES. The scheme has been modified by the removal of several turbines from the original scheme. This has reduced the effect on the setting of several heritage assets, including the MG314 barrow, and listed buildings in and around the village of Llanbrynmair. Subject to normal conditions relating to archaeology there are no objections to the proposal from CPAT, Cadw or PCC. I have no reason to disagree.

Aviation

330. There are no objections in this respect.

Hydrology / Hydrogeology

331. The thoroughness of the August 2013 SEI in respect of these matters is not disputed by NRW or PCC. This includes consideration of water quality and private water supplies.

332. The assessment contained in the SEI identified potential effects on hydrology and hydrogeology, particularly during construction. However, it shows that best practice

techniques, appropriate construction methods, and environmental management during construction can reduce such effects to a negligible or at worst a minor / moderate level in EIA terms [A5, 338 & 339]. These measures can be secured by agreed conditions. Although the Alliance remains concerned about the effect on agricultural water supplies that are currently fed from the plateau [A7, 13.17] there is no evidence of defects or omissions in the assessment, which has been thoroughly examined by NRW. The proposed Felling, Vegetation Clearance and Peat Management Plan (FVCPMP), Construction Environmental Management Plan (CEMP) and Habitat Management Plan (HMP) all contain measures to protect the water environment and they can be secured by conditions. Subject to such conditions I am satisfied that there would be no significant short or long-term adverse effect on hydrology or hydrogeology.

Peat

333. There is considerable overlap in this respect with matters relating to biodiversity and hydrology / hydrogeology, which I have addressed above. A draft Peat Management Plan has been developed alongside a Habitat Management Plan. These provide measures to limit and mitigate impacts on peat.
334. There is no dispute that much of the proposed infrastructure would be located on peat deposits, some of which would be disturbed or lost as a result of excavations and dewatering adjacent to excavations. However, the area has been well surveyed, and the scheme has been designed to minimise losses. The Management Plans make provision for all excavated peat to be re-used. Whilst the Alliance is concerned that strict conditions must be adhered to for it not release its carbon, NRW has not questioned the ability of excavated peat to be managed in a way that a significant proportion of its carbon value can be retained, or the ability to ensure that strict conditions are adhered to. The Plans also include measures to raise the water table and thus create new active peat through measures such as ditch, furrow and gully blocking. These are simple measures, and whilst the Alliance is concerned that they may not succeed, experience of similar projects elsewhere and a recent Natural England note⁹⁶ indicate that, along with other land management measures, they can help to restore moorland habitats and peat formation. NRW does not object to the effect of the proposed development on peat resources and I have no reason to disagree [A7, 13.20-13.26; A5, 341-352].
335. I consider for these reasons that the proposal development would minimise loss of peat. Impact on the better areas of peat would be avoided. In the medium to long term habitat management for peat restoration would more than compensate for any short-term losses caused by excavation and dewatering.

Potential for Connection to the Grid

336. RES's connection agreement with SP Manweb envisages that connection would be via the proposed Cefn Coch hub sub-station. As I have noted previously, the indications are that this, and the associated 400kV line from Cefn Coch would be strongly opposed by the Council and would not be supported by the Welsh Government. However, the evidence before the inquiry is that there is no technical reason why the Llanbrynmair scheme, either alone or in conjunction with the Carnedd Wen scheme, could not be connected at 132kV to National Grid near Oswestry. PPC accepts in principle that a connection at 132kV could be acceptable. There is therefore no obvious reason why the proposed development could not be connected to the grid.

Carnedd Wen

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337. The Council's outstanding objections in relation to the proposed Carnedd Wen wind farm relate solely to the landscape and visual effects of proposed turbines R23, R26, R28, R29 and R30 [A9, 303]. These would be situated on the north-eastern edge of the proposed development on high ground above the Banwy Valley, and have been referred to extensively as the 'Carnedd Wen five'. For convenience I shall refer to them as such.
338. NRW's outstanding objections relate to the effect of the Carnedd Wen scheme on the landscape and amenity of the National Park and on its special qualities, in combination with the proposed Llanbrynmair scheme and other existing wind farms within SSAB [A8, 3.1]. NRW's objections have been specifically endorsed by the Snowdonia National Park Authority, and are largely shared by the Alliance. As these concerns relate to combined and in-combination effects in SSA B I shall deal with them under that heading.
339. The main consideration with regard to the individual impact of the Carnedd Wen scheme is therefore the landscape and visual effect of the proposed development, with particular regard to turbines R23, R26, R28, R29 and R30 (the 'Carnedd Wen five').
340. The Alliance and local residents are additionally concerned about other matters which I shall also address.

Landscape and Visual Effects – turbines R23, R26, R28, R29 and R30

341. These turbines would be seen from a roughly 6km long section of the Banwy Valley floor, including the settlement of Foel, between viewpoints CW U and CW W as shown in the RWE September 2013 SEI. There are no material differences between the Council and the applicant about the landscape character of the Banwy Valley. Its sides are incised by numerous streams. This has produced a complex topography of rounded hills, surmounted to the south by the Carnedd Wen / Llanbrynmair plateau. The valley floor is farmed and settled, and has several small villages. The A458 follows the river along the valley floor. Notwithstanding the A458 the landscape of the farmed valley, rolling topography, attractive villages and upland horizons is of high scenic quality and considerable amenity value [A9, 337-339; A4, 77].
342. The majority of the proposed Carnedd Wen turbines would be above the break of the slope on the flatter land of the plateau. Their effects on the landscape of the Banwy Valley would therefore be limited. There would be a clear distinction between the 'wind farm landscape' created by the proposed development on the plateau and the Banwy Valley, the character of which would be little affected.
343. The Carnedd Wen five would, however, be situated just below the break of the slope of the southern side of the valley. They would thus extend the wind farm landscape off the plateau and onto the valley sides, and would dominate and contrast with the small scale and settled character of the valley floor to a greater extent than the other turbines within the Carnedd Wen scheme [A9, 364; A4, 80]. I therefore consider that they would have a locally significant harmful landscape character effect.
344. They would adversely affect the landscape character of only a small portion of the valley. Nevertheless, they would be seen from a substantial section of the valley floor including a substantial settlement, and from a considerable extent of high ground on the opposite side of the valley. Whilst the visual effect would diminish with distance they would be seen as a prominent landscape features from a considerable area [A9, 364].
345. Three of the Carnedd Wen five would be situated in an area of moorland. Two would be within an area which is currently forested, but which would be returned to moorland as part of the habitat restoration project. In terms of vegetation, they would therefore ultimately be seen as being within moorland, rather than the farmland of the valley bottom [A4, 81]. Nevertheless, as shown in wireframe diagrams and photomontages prepared for Viewpoint V (some 5.1km from the nearest turbine on the opposite side of the Banwy Valley) the perception would be of the Carnedd Wen five 'stepping off the plateau' and into the valley [A9, 360].

346. The complex topography would reduce that perception from some viewpoints. For example, at viewpoint Z, just above Foel Village, the relevant wireframe diagram shows that a hill would partly conceal all but one of the Carnedd Wen five. However, though wireframes and photomontages have not been produced for viewpoints between CW U and CW W on the A458, from reference to plans at my inspection I consider that the perception of the Carnedd Wen five stepping of the plateau would be quite marked in this area. For motorists this stretch would represent a journey time of only a few minutes [A4, 79]. Nevertheless, the effect would be significant as it would be experienced by many people, including local residents for whom the experience would not be fleeting. From some viewpoints the Carnedd Wen five would also be major contributors to stacking effects and visual clutter caused by one turbine being seen behind another [A9, 359; A4, 81].
347. I conclude for these reasons that the 'Carnedd Wen five' turbines would have significantly harmful landscape and visual effects. Their omission from the proposed scheme would therefore protect the Banwy Valley from the locally harmful landscape character effect of extending the wind farm landscape off the plateau and onto the valley sides, and would avoid harmful visual effects over a considerable populated and well traversed area. It would also be consistent with the approach taken elsewhere in Powys of containing wind farm development back from the edges of plateaus [A9, 357].
348. The benefits of omitting these five turbines must of course be balanced against the need for and benefits of the power they would generate [A4, 82]. At up to 15 MW, the Carnedd Wen five would have a substantial generating capacity. For comparison purposes, this is equivalent to a small modern wind farm of large turbines, and about half the installed capacity of the existing P & L wind farm. However, the necessary planning balance should be assessed in the light of other material considerations and planning policy. I shall therefore return to it later.

Other Matters

Peat, Hydrology and Hydrogeology, and Habitats

349. The proposal includes the clearance of about 1,200 Ha of conifer plantation over a period of about 5 years, with a peak of about 515 Ha in one year [A7, 14.10]. Alongside the construction of the wind farm and its infrastructure, many kilometres of drainage ditches would be blocked up to raise the water table, thus providing better conditions for moorland vegetation and peat formation. Excavated peat would be reused within the site. The land would then be managed to encourage the re-establishment of moorland vegetation and habitats.
350. The forestry clearance and habitat restoration programme is undoubtedly complex and of very large scale. The Alliance has concerns about its viability, and the ecological risk and carbon balance effects should it not succeed [A7, 14.7-14.24].
351. RWE has engaged the services of a team with considerable expertise and experience of such programmes, including construction managers with extensive experience of similar schemes in Scotland, to develop a comprehensive and integrated suite of environmental management plans. These include a Habitat Restoration Management Plan (HMRP) incorporating a Peat Management Plan (PMP), a Forest Management Plan (FMP), a Drainage Management Plan (DMP), and a Construction Environmental Management Plan (CEMP)[A4, 123]. Compliance with these Plans can be required by agreed conditions. It is also agreed that provision should be made for an Ecological Clerk of Works with overall responsibility for the coordination and implementation of these plans, and that this can be required by condition [A4, 135].
352. Whilst the proposed rate of forestry clearance would be faster than that of many commercial forestry sites it has taken into account the need to avoid environmental effects such as acidification of local lakes. I have no evidence that would indicate that the rate of clearance would have other adverse environmental effects.

353. The proposed scheme has been developed in the light of extensive surveys of existing peat [A4, 128-130]. The quantity that would be disturbed, though still large, has been much reduced by design changes, and the most sensitive areas of peat resource would be avoided [A7, 14.20; A4, 132]. Virtually all excavated peat would be reused on site to block drainage ditches and restore areas such as old borrow pits and quarries [A4, 135]. Measures would be taken to avoid the drying out of excavated peat. Whilst some peat may degrade or be lost through dewatering next to excavations, in the medium to long term habitat management for peat restoration would more than compensate for losses. As with the Llanbrynmair scheme, I consider for these reasons that the proposed development would minimise the loss of peat.
354. A Natural England Evidence Review of the restoration of degraded blanket bog referred to by the Alliance⁹⁷ found that drain blocking alone does not create consistent effects on hydrology or water quality, and that an holistic approach to the restoration of peat habitats is necessary. It notes, however, that most studies show that blocking drains raises water tables and encourages wetland plants over relatively short timescales, and can also help to reduce flash flooding. It also notes that improvements in function may not be rapid and the timescale to full recovery may be long. However, it found no evidence that blanket peat cannot be restored.
355. The environmental management plans proposed by RWE adopt an integrated approach and would facilitate best practice in the holistic management of the restoration of the site. They are also long term.
356. Evidence was given to the inquiry of similar habitat restoration schemes in Wales and elsewhere which, though of smaller scale, are proving to be successful in raising ground water levels and promoting the re-establishment of moorland vegetation [A4, 129]. I saw on site that a small area that had been cleared to facilitate a metrological mast just a few years ago is already well on the way to returning to a moorland habitat. I see no reason in principle why such habitat restoration cannot be successfully 'scaled up' to that of the proposed development. The proposed environmental management plans, which include measures for the management of 'brash' and commercially unusable timber within the site, would have to be applied rigorously in order for restoration to be successful. However, the agreed conditions would enable enforcement measures to be taken, if necessary.
357. As noted above the blocking of drains can help to reduce flash flooding. Restoration of peat-producing vegetation can also be expected to improve the function of the moorland habitat as a store for rainwater, evening out flows in streams, rivers and any dependant private water supplies during times of drought or heavy rain. Although the Alliance and some local residents are concerned about the effect on private water supplies that are dependant on the moors as a source, I consider that in practice the completion of the proposed habitat restoration works would be likely to make them more reliable [A7, 14.51; A4, 148, 151 & 153].
358. There is no dispute that the proposed forestry clearance would release CO₂ to the atmosphere. The storing of CO₂ in regenerated peat deposits would not be rapid and the full recovery of the amount released to the atmosphere may never be achieved. Nevertheless, when electricity generation is taken into account calculations show that the project as whole would have a rapid pay-back period in carbon terms [A7, 14.27].
359. I saw on my site visit that the forestry that would be cleared comprises dense monoculture of coniferous trees. In many places little light reaches the ground and there is little or no undergrowth. It therefore represents a very poor habitat for wildlife.

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360. As noted in the Natural England review⁹⁸ the recovery of peat habitats takes time, and there can be no guarantee that full recovery would be achieved in this instance. However, subject to the agreed conditions I consider that there is a high degree of probability that the environmental measures set out in the various proposed management plans would eventually approximate to full restoration. Even partial restoration, which could be expected in the short to medium term, would in my view be a considerable improvement in habitat terms to the existing forestry.
361. In its evidence to the inquiry the Alliance has advocated continuation of the current management of the land for forestry for the time being, as current UK Forestry Standards would ultimately require more sympathetic replanting. However, in the absence of the proposed wind farm it is likely that the existing conifer plantations would remain for many years. There can be no certainty about the forestry standards that would apply at the end of the life of the existing forestry. The opportunity to secure the restoration of scarce moorland habitat through a comprehensive scheme of habitat restoration would be lost, and poor habitats would remain for many years. I consider for these reasons that the approach advocated by the Alliance would not be desirable in the interests of ecology.
362. NRW raises no objection to the effect of the proposed development on peat, hydrology and hydrogeology, or habitats. For the reasons above I am satisfied that there would be no unacceptable effects in these respects, and that there would be significant benefits in the medium to long term.

Biodiversity

363. Local populations of bird species such as dunnock, song thrush, redpoll and bullfinch can be expected to change as a consequence of the proposed development. However, the benefits of the project in terms of restored moorland habitats can be expected to bring about general improvements in terms of biodiversity, and in particular to benefit rarer species such as black grouse and hen harrier which are dependant on scarce moorland habitats [A7, 14.31; A4, 164-166].
364. NRW has not objected to the proposal on the basis of the effect of run-off from the site on water quality, or associated effects on the otter population [A7, 14.28]. Subject to the agreed management measures I consider that significant effects on water quality, or on the species that depend on it, are unlikely.

Socio-Economic Effects, Including Tourism

365. A 2012 report by Regeneris⁹⁹ found that around £76m of the £200m construction cost could be sourced through suppliers across Wales [A4, 207]. About £31m of this could be channelled through suppliers in North and Mid Wales. Across Wales, the development would directly and indirectly support around 1050 person/years of employment. A total of 40 full time equivalent jobs (16 direct and local) would be supported on an on-going basis across Wales during the operational life of the development. RWE is not obliged to develop local supply chains, but I have no reason to doubt the sincerity of its stated commitment to do so.
366. These estimates are not disputed by the Council [A9, 1003]. They are not accepted by the Alliance, and are necessarily approximations. It may be that local supply chains may not be capable of taking full advantage of opportunities available and that a higher proportion of expenditure may have to be made abroad due to limits in UK manufacturing capacity. However, the Regeneris report is based on extensive experience of UK wind farms. Even if the estimates prove to be somewhat optimistic they amount to a substantial economic benefit at national and local levels [A7 14.58 & 14.59].

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⁹⁹ CD-RWE-ENCON-03

367. A community fund would be established, though it is accepted that it cannot be a material consideration.
368. Agreed planning conditions provide for the submission, approval and implementation of a strategy which would secure improved public access, including permissive paths and bridleways, through much of the site. The habitat restoration proposals would have the effect of replacing large areas of forestry of little amenity value with open moorland permitting panoramic views. The Carnedd Wen scheme would enhance the value of the site to visitors in these respects.
369. A section of Glyndwr's Way roughly 2km long would pass between a group of about 10 Carnedd Wen turbines. A 'stand-off' distance of about 200m would be maintained, and public access would be retained during construction. As I have noted elsewhere, some walkers and riders would be likely to be put off by the proximity of these turbines, though the stand-off distance would be sufficient to avoid seriously overbearing and intimidating effects. Construction work would also be off-putting to many users of the trail, and it would take a long time for brash and tree stumps to be absorbed into regenerated moorland vegetation. Although views along this section would be opened up and ultimately it would become more attractive, in the short to medium term there would therefore be adverse effects on amenity [A7, 14.43-14.57]. I shall consider the likely implications for tourism generally, and the amenity and interest of Glyndwr's Way as a whole, later in this report.

Cultural Heritage

370. The ES and SEIs identify 14 historic heritage assets within 5km of the site. The closest would be the Fridd Cwm y Ffynon Barrow Cemetery (SAM MG314) that I have referred to in the context of the Llanbrynmair proposal. This would be slightly closer to the nearest Carnedd Wen turbine (0.7km) than the nearest Llanbrynmair turbine (1.0km). The visual effect on its setting would therefore be slightly greater. The Alliance lists 5 other assets that it considers would be affected by the Carnedd Wen scheme, including the Listed Building known as Abercannon which I have also referred to in the context of the Llanbrynmair scheme. Nevertheless, there is no firm evidence that there would be harm to the special interest or historic significance of any of these assets or their settings, either alone or in combination with the Llanbrynmair scheme [A7, 14.35-14.39; A4, 180-189].

Residential Effects – Noise / Health

371. It is common ground between RWE and PCC that both construction and operational noise can be dealt with by appropriately worded planning conditions. A proposed set of conditions have been agreed [A4, 108 & 116]. Operational noise would be below the relevant acceptable noise limits at all times and at all residential dwellings. The proposed operational limits have been defined to appropriately account for the potential cumulative effects of noise arising from other wind farms in the region, both existing and proposed.
372. The SoCG refers to 'Excess' or 'Other' Amplitude Modulation being a subject about which knowledge and evidence is still developing. As this is a matter in common with the other applications I deal with it elsewhere.
373. I am satisfied that the visual effects of the proposed development would not be so great at any residential property that it would become an unattractive place to live.
374. Many local residents are concerned about the effects of the Carnedd Wen proposal on property values and tourism, but as these are matters in common with other applications I shall deal with them on that basis.

Local Construction Traffic

375. The route from the A 458 to the site would be across private land. There is no dispute that the junction with the A458 would be acceptably safe. Safety on the local access track

and within the site would be primarily a matter for the developer and his contractors. No concerns have been raised in this respect.

Aviation

376. No concerns have been raised with regard to the effect of the proposed Carnedd Wen scheme on aviation.

Potential to Connect to the Grid

377. RWE's connection agreement with SP Manweb envisages that connection would be via the proposed Cefn Coch hub sub-station. As with the other schemes before the inquiry the indications are that this, and the associated 400kV line from Cefn Coch, would be strongly opposed by the Council and would not be supported by the Welsh Government. However, the evidence before the inquiry is that there is no technical reason why Carnedd Wen, either alone or in conjunction with the Llanbrynmair scheme, could not be connected at 132kV. PPC accepts in principle that a connection at 132kV could be acceptable. There is therefore no obvious reason why the proposed development could not be connected to the grid.

SSA B: Cumulative and In-Combination Effects

378. The following discussion relates to relevant issues arising from the combined effects of the two proposed wind farm developments in SSA B before the inquiry. It also relates to the cumulative effects of the two schemes together with other relevant operational wind farms, schemes for which planning permission has been granted but which have not commenced, and schemes which applications have been made.

379. The Council does not consider that the effect of the two schemes before the inquiry would be unacceptable in combination with the baseline of the other operational or consented schemes in the area [A9, 858]. It does consider that a scenario of the two schemes, plus the operational and consented proposals and all the in-planning schemes would have an overall in-combination effect that would be unacceptable [A9,859]. However, the 'tipping point' at which an unacceptable cumulative effect would be reached would be a matter for future decision makers.

380. NRW and the Alliance, however, object to the Llanbrynmair and Carnedd Wen proposals for reasons including their individual and combined landscape and visual impact irrespective of other schemes, including their effect on the Nant yr Eira Valley and the Snowdonia National Park. NRW's objections are endorsed by the Snowdonia National Park Authority. These are therefore the main considerations under this heading.

Landscape and Visual Effects on the Llanbrynmair / Carnedd Wen Uplands and the Nant yr Eira Valley.

381. The Alliance has referred in evidence to the sites being within the northern part of the wider Cambrian Mountains Regional Landscape Character Area¹⁰⁰. This includes land that has in the past been considered for formal designation as a reserve area for a possible national park, or as part of a national park. It was also once considered for designation as a conservation area. This wider area, as with much of Powys and Mid-Wales, undoubtedly includes areas of high landscape quality and value. However, proposals for designation were rejected. Whilst paragraph 5.3.2 of PPW recognises the value of all the landscapes of Wales, it requires regard to be given to their relative significance and for care to be taken to avoid placing unnecessary constraints on development. I therefore consider that the proposed developments should be considered on the basis of their effect on the character and appearance of the sites and their surroundings, as informed by the relevant LANDMAP

¹⁰⁰ ALL-SSAB-POE-3

and Powys Landscape Character Assessment (PLCA) data. The applicants, the Council and NRW have assessed the schemes on this basis.

382. The Llanbrynmair and Carnedd Wen proposals would be located in a landscape area identified in the PLCA as an undulating plateau dominated by large blocks of forestry plantations, interspersed with open areas of rough grazing and moorland. It is sparsely settled, and free from large-scale built development. It has no formal landscape designation in policy terms, and because of its large blocks of forestry it is evaluated as being of low scenic quality in the LANDMAP data that underpins the PLCA.
383. The Llanbrynmair and Carnedd Wen proposals would together create a wind farm landscape in which turbines would be the dominant feature, stretching for about 8.5km from north to south, and in places for about 4km from east to west. There is no dispute that these developments would bring about substantial landscape change and would have significant visual effects. The visual effects would be experienced most strongly from the rights of way across the uplands, including Glyndwr's way, from the road through the Nant yr Eira Valley, and from residential properties in the vicinity.
384. As noted by the Council, the Carnedd Wen / Llanbrynmair plateau is a large-scale 'simple' landscape with a broad landform. Land cover is dominated by large coniferous plantation blocks and moorland. Its substantial scale is its overwhelmingly dominant characteristic. Because of its substantial simplicity the Council considers that the host landscape is able to accept the proposed turbines [A9, 321]. As it is a landscape of a type which is well suited to accommodating landscape change of the scale proposed I agree with that view.
385. The Nant yr Eira Valley is familiar to and used by many local residents, and several local residents spoke at the inquiry objecting to the landscape and visual effects of the proposed development. Many similar objections were received in writing. The Nant yr Eira Valley and the Llanbrynmair / Carnedd Wen uplands are clearly valued by many local residents and visitors for qualities including natural beauty, rugged rural character and a sense of remoteness and tranquillity [A7, 13.56 & 13.57]. As the proposed turbines would be very large and moving man-made features their presence would be harmful to these qualities. However, the harm would be limited to the life of the wind farms. The proposed developments would both include the replacement of large swathes of conifer plantation with more attractive and diverse moorland which in the long term would be of benefit in terms natural beauty, ruggedness, remoteness and tranquillity. On balance, and in the long term, I consider that both schemes would involve the restoration of a large enough area of moorland to have an overall benefit sufficient to offset the presence of the turbines for their operational life. Together, they would be of considerable benefit in this respect, and the landscape character of the area would ultimately be substantially improved.
386. Although the Nant yr Eira valley is sparsely populated the proposed Llanbrynmair and Carnedd Wen turbines would be seen from a number of residential properties [A7, 13.58]. From some they would occupy a wide arc of view, and in some instances the closest turbines would be at a distance of about 1km. The visual impact at these properties would therefore be substantial. However, although a large number of turbines would be seen, the separation distances would be such that the visual impact of the proposed developments would not be so unpleasant or overwhelming that the property concerned would come to be widely regarded as an unattractive place in which to live.
387. As I have noted in respect of the Llanbadarn Fynydd scheme, simply being able to see the turbines from a particular window or part of a garden is not sufficient reason to find the visual impact unacceptable (even though a particular occupier might find it objectionable). Although the proposed wind farms would be very extensive, as the area is very sparsely populated substantial adverse visual impacts would be experienced at relatively few residential properties. The overall visual impact on residential amenity would therefore be small in relation to the benefits of the proposed development.

Effects on the Landscape, Visual Amenity and Special Qualities of the National Park

388. The National Park would be separated from the Carnedd Wen wind farm by the narrow steep-sided Afon Dugood valley. At its closest point the nearest of proposed Carnedd Wen turbines would be just less than 3km from the boundary of the National Park. Parts of the proposed access from the A458 would be about 2km from the Park boundary. Foel Dugood and Fridd Braich Llwyd would be the nearest areas of high ground within the park. The proposed Llanbrynmair wind farm would be more distant than the Carnedd Wen scheme. Although they would be read as one large scheme, the Carnedd Wen development would therefore make the greatest contribution to any landscape or visual effects relevant to the National Park.
389. As the proposed developments would be outside the Park there would be no direct physical effect on it. There is no dispute that from within the Park the perception of the landscape would be changed by the proposed habitat restoration and wind turbines. NRW considers that this would be an indirect landscape effect, but other parties disagree. However, irrespective of whether the effect is direct or indirect, the main consideration is its nature and degree
390. From within the Park, the existing perception of the landscape is of an area with some wind farms outside the Park boundary. The proposed Carnedd Wen and Llanbrynmair schemes would add a substantial number of turbines to the wider landscape, but from the Park the perception would be of changes beyond the Dugood valley, within a distinct and separate area. The degree of the effect on the landscape character of the Park would therefore be slight and not significant.
391. There is no dispute that the proposed developments would have significant visual effects when seen from viewpoints on high ground in parts of the south-eastern section of the Park, or that the change in appearance brought about by the proposed turbines should be regarded as adverse. The proposed turbines would be man-made features that would be seen from the Park and would thus affect the natural beauty of outward views. However, the large, dark, uniform and hard-edged blocks of forestry which exist on the Carnedd Wen Plateau are considered by the Council's and the applicants' expert witnesses to be unattractive and to have adverse landscape and visual effects. I agree with their view. The Carnedd Wen proposal includes the replacement of large areas of such forestry with more diverse, rounded and natural vegetation which would remain for many years after the lifetime of the wind farm. Whilst forestry can sometimes enhance the beauty of a landscape that might otherwise be excessively bare [A8, 3.4], I consider that in this instance there would therefore be long term benefits to the appearance and natural beauty of the Carnedd Wen Plateau and views from the Park, which should be taken into the balance.
392. For reasons given in relation to the Llanbrynmair proposal [307] I am satisfied that the necessary works associated with providing access for construction from the A458 would have no significant adverse medium to long-term visual impact on the setting of the National Park.
393. Nine special qualities of the National Park are set out in the Snowdonia National Park Management Plan. Of these, the most relevant is Special Quality 5, which is the opportunity for people to understand the National Park actively, whilst maintaining areas of tranquillity and solitude, thus promoting aspects of health, well-being and personal reflection [A8, 3.5]. I accept that the experience of tranquillity and solitude in the south-eastern part of the National Park would be affected by views of the moving blades of the proposed wind turbines, particularly on the high ground of Foel Dugood and Ffridd Braich Llwyd. However, this is only a very small portion of the National Park as a whole, and I have no evidence that it is especially noted for its remoteness, tranquillity, or attractiveness to visitors.
394. From viewpoints on high ground in the more remote and central areas of the National Park the Llanbrynmair and Carnedd Wen Wind farms would be seen in the far distance amongst other existing wind farms. Other proposed wind farms, if approved, would add to the number of such developments that would be seen. In some lights the pale coloured

turbines would catch the eye and movement would be noticeable. The proposed Llanbrynmair and Carnedd Wen wind farms would be read together as a single development and one of the largest contributors to the views of wind farms in the panorama. However, the magnitude of the visual effect on the perception of natural beauty, tranquillity and solitude would be greatly diminished by distance.

395. I consider for these reasons that there would be no significant direct or indirect effect on the landscape character of the National Park itself. Significant adverse effects on the views from within the Park would be limited to the south-eastern section and would be limited in duration to the life of the wind farms. In the long term there would be beneficial effects on views out from the Park. The effect of the proposed developments on the special qualities of the National Park would be small, whether individually or in combination with other existing or proposed wind farm developments.

Llandinam 132 kV Line

Procedural Matters

396. There have been a number of criticisms of the consultation process, including the depiction of a lower voltage line on the cover of a consultation document [A7, 12.23 & 12.27]. This is clearly not good practice. Furthermore, the reasons in offering PCC members a Trident line when that was not practicable, on the higher ground at least, must be queried. Nonetheless, I am satisfied that the necessary statutory procedures in respect of the application, ESs and SEI, and the inquiry have been followed [A6, 4].

397. The Alliance highlights the relationship between the proposed Llandinam repowering scheme and its proposed connection to the Welshpool substation [A7, 12.5]. Reference has been made to the relationship between SP Manweb and CeltPower, with Scottish Power Renewables UK Limited having a 50% interest in CeltPower [A7, 12.53]. Nevertheless, Celtpower's application was received before those of any of the other applicants for wind farms in SSA C, and SP Manweb is obliged to respond to a connection request within 90 days. There is therefore nothing unusual about CeltPower being offered the connection to Welshpool [A6, 63].

398. Whilst the Secretary of State refers to Areas of Special Landscape Character, Special Landscape Areas designated under the superseded County Structure Plan were not carried forward into the UDP

Main Considerations

399. Having regard to the matters listed by the Secretary of State and the evidence submitted it seems to me that the main considerations in this case are:

- a) The operational need for the development;
- b) The impact that the proposal would have on the character and appearance of the area;
- c) The impact that the proposal would have on biodiversity;
- d) The social and economic impact of the proposal and its impact on the enjoyment and use of land; and ,
- e) The impact that the proposal would have on cultural heritage.

The Operational Need for the Development

400. Following CeltPower's request for a connection, an agreement has been entered into and SPM must use reasonable endeavours to provide a connection by the target date. If the Secretary of State grants section 36 consent for the wind farm repowering, there would clearly be an operational need to connect the wind farm to the grid so that the electricity generated can be exported. The proposed overhead line would address that need, as would

some of the alternatives considered below. Whether the need should be met by the scheme applied for will be covered in my Overall Conclusions [A6, 60-63].

401. The UK is on target to beat the electricity share of the 15% Target for 2020 by some margin. By itself the repowered Llandinam wind farm would only contribute a small proportion of that share [A7, 12.8 & 12.10]. Nonetheless, the NPSs refer to an urgent need for the delivery of renewably generated electricity and the Government wants swifter delivery of grid connections for renewable generation. Furthermore, Welsh Government policies require a significant reduction in greenhouse gas emissions and promote a low carbon economy, and focus on new renewable energy infrastructure (both generation and grid infrastructure). As a result, notwithstanding the position on the 15% target, policy still supports the operational need to connect the wind farm (if permitted) to the grid as soon as possible.

The Impact Of the Proposal on the Character and Appearance of the Area

Landscape Effects

402. The route has been divided into eight sections on the basis of field based landscape and visual sensitivity assessment. This approach is supported by PCC. Insofar as Sections A, C, D, E (apart from Llandyssil Valley) & G are concerned, the 2013 ES only identifies minor landscape effects. It identifies landscape effects of moderate significance on Section B and minor-moderate (borderline significant) effects on Sections E (Llandyssil Valley), F and H. All three landscape professionals who gave evidence at the inquiry agree that the effect on the landscape would not be significant insofar as Sections A, C, D & E (apart from Llandyssil Valley) are concerned [A6, 221 & 222, 229; A9, 623 & 626].

403. The areas where the 2013 ES identifies significant or borderline significant effects and those where at least one of the landscape professionals identifies such an effect will be examined in more detail. Although the Alliance and other objectors are also concerned about other sections of the route (A, C, D & E (apart from Llandyssil Valley)) [A7. 12.63], the evidence submitted leads me to the view that the landscape effects on those sections would be minor.

Section B – Area South of the Glog / North of the Western End of the Kerry Ridgeway

404. Insofar as Section B is concerned, there is agreement that the landscape sensitivity is high, and both PCC and NRW consider that the effect would be of major significance on the basis that the magnitude of change would also be high, rather than medium as per the 2013 ES [A6, 234; A9, 624]. A high effect is defined as the total loss of or a major alteration to key elements / features / characteristics of the baseline landscape and/or the introduction of elements considered to be totally uncharacteristic when set within the attributes of the receiving landscape.
405. The extract from the 2008 routeing study in the 2009 ES describes the area as an open highly rural landscape with few trees, where there is less potential to assimilate an overhead line. It cites the potential effect on the attractive rural landscape of Kerry Hill and views from the road leading up to the Ridgeway as the main dis-benefit of the application route. The area does, however, contain a number of shelter belts formed by planted coniferous and deciduous trees [A6, 235; A9, 438].
406. Although there are man made elements in this area it is largely uncluttered by modern features. The existing P & L wind farm is too far away to have a characterising effect. Individual turbines are few in number and perceived as objects in the landscape rather than characterising elements. There are very few OHLs. Those that are present are of a much smaller scale [A6, 235]. The area therefore has a strong and distinctive the sense of tranquillity, remoteness, and the feeling of being an ancient landscape [A9, 634; A7, 12.66].

407. The proposed HDWP OHL would be an uncharacteristic feature when set within the context of the landscape of this area. Furthermore, it would cut across the line of the Crugyn Bank Dyke which is of particular importance in reading and interpreting the way the landscape was used in pre-historic and early mediaeval times [A9, 634]. I consider for these reasons that there would be major detrimental changes to the attributes of the receiving landscape in this section of the route.
408. PCC is concerned about the effect of felling associated with the OHL on deciduous trees [A9, 639]. The great majority of the Black Gate Plantation would be unaffected and the breaks created in the other two groups would not result in an overall change to the landscape character. Nevertheless, as SPM recognises, the proposed OHL would fragment and visually divide a number of small woodlands and linear tree belts [A6, 239 & 241]. This would disrupt the distinctive character of the parallel tree belts near the Glog and would have a moderate and significant, albeit localised, landscape effect. Whilst felling of coniferous trees is a normal part of forestry, such felling does not normally leave small clumps. The presence of small clumps and gaps in the tree belts would draw attention to the presence of the proposed OHL and thus heighten its landscape and visual effects [A9, 641].
409. SPM notes that the effect of the OHL would be reversible. It should be decommissioned and removed if no longer needed, and as its sole purpose would be to export electricity from wind farm development its life would also be limited to about 25 years [A6, 245]. However, 25 years is a long time and many people alive at the time of the OHL's erection would not live to see its removal.
410. For the above reasons, I conclude that the effect on the landscape of Section B would be of major, rather than moderate significance, and adverse, thereby raising serious concerns [A6, 157].

Section E within the Llandyssil Valley

411. The 2013 ES has identified a localised minor-moderate (borderline significant) effect in the part of Section E within the Llandyssil Valley. The OHL would run directly across the valley and against the grain of the open landscape, but I agree that it would not be a particularly uncharacteristic feature and that the effect would be borderline significant. I also note that the route was selected to minimise visual effects on properties in Llandyssil and Lower Bryntalch.

Section F

412. Although not supported by PCC, NRW considers that the effect on Section F, which includes part of the VMRHL, would be moderate and significant. This is based on a high sensitivity and a medium magnitude of change, rather than the medium-high sensitivity and low magnitude of change in the 2013 ES [A8, 5.1 & 5.2]. The impacts of the scheme on the VMRHL have been assessed using the ASIDOHL2 methodology [A6, 353]. The overall level of significance of effect was calculated to be fairly severe for one of the 19 HLCAs which make up the VMRHL, moderate for four HLCAs and slight for a further three HLCAs [A6, 354]. The significance of the effect on the VMRHL as a whole was assessed as moderate. NRW does not seek to challenge the ASIDOHL2 assessment [A6, 355].
413. The sensitivity indicated in the ES recognises the VMRHL and was increased to medium-high as a direct result of a consultation response from NRW. This raised no concerns as to the boundaries between sections. Furthermore, the field based landscape and visual sensitivity assessment took account of LANDMAP's outstanding overall evaluation for the historic landscape aspect [A6, 232 & 233; A8, 5.2-5.6]. I consider that the larger scale of the farmland, existing manmade features and scope for back-dropping in the area would result in only a low magnitude of change. I agree with the 2013 ES that the landscape effects would be minor-moderate (borderline significant).

Section G

414. NRW also considers that the effect on Section G, which also includes part of the VMRHL, would be moderate and significant. This is based on a high sensitivity and a medium magnitude of change, rather than the medium sensitivity and low magnitude of change in the 2013 ES [A6, 232 & 233; A8, 5.2-5.6. I have already referred to the ASIDOHL2 assessment under Section F above.
415. Whilst this section also encompasses part of the VMRHL, it has more overt man-made influences and greater scope for sensitive routing due to the rolling landform and prevalence of hedges and trees than Section F. A lower sensitivity is therefore warranted. Although there would be some localised effects, for much of its length the OHL would blend into the background of landform and vegetation such that the magnitude of change would be low. Again, I agree with the 2013 ES that the landscape effects would be minor.

Section H

416. The minor-moderate (borderline significant) effect on Section H identified in the 2013 ES is based on medium-high landscape sensitivity and a low magnitude of change. NRW considers that the landscape sensitivity is high whilst PCC is of the view that it is low. NRW refers to the landscape being characterised by the presence of the Powis Castle and Leighton Hall estates whilst PCC draws attention to the low-lying valley topography and the presence of a number of similar installations, including an existing 132kV OHL [A6, 10 & 229(c); A9, 623'H'; A8 5.5 & 5.6]. However, the medium-high rating from the 2013 ES is higher than might be inferred from scenic quality alone because of the influences of the two estates and, in my view, is appropriate. Whilst this leads to an effect of borderline significance, the OHL would not be an uncharacteristic feature and it would not fundamentally affect the character of the Leighton Hall or Powis Castle Estates, or the wider landscape.

Visual Effects

417. Insofar as visual receptors are concerned, the 2013 ES indicates that there would be moderate visual effects which would be significant from the settlements of Forden, Fron Bank/Cilcewydd and Sawmills. Similar effects were identified in respect of individual properties at Castle View, Castle Court, Gwyn's Barn, a group of properties on the approach road to Edderton Lodge in Fron, Rhydwhiman Crossing Cottage, Caerhowel Smithy and Borfa-Wen. Very localised moderate visual effects which would be significant were also noted in respect of certain locations on the Kerry Ridgeway Regional Trail, VMRHL, local rights of way, open access areas, A483, A489, A490, B4355, B4368, B4386, B4385, and minor roads [A6, 221].
418. Apart from in relation to Section B, PCC broadly agrees with the above [A6, 246, A9, 632]. There are however, differences between SPM and NRW in respect of the VMRHL and National Cycle Route 81 [A8, 5.7].
419. In a limited number of instances, the effects would reduce to minor after mitigation in the form of new tree and hedgerow planting had become established. The Severn Way Regional Path would be at least 1km from the OHL and the magnitude of change to any views would be negligible given the intervening distance, landform and vegetation [A6, 263].

Residential Properties

420. I was able to inspect the route of the proposed OHL from within one of the individual properties on the approach road to Edderton Hall [A7, 12.68]. Views from the living areas of this property would be focussed towards the proposed OHL, and the occupants of this property clearly value the existing rural outlook over fields towards trees. The proposed OHL would be an obvious man-made feature in the view. However, it would be set against trees and the separation distance would moderate its impact. I therefore consider that the effect on amenity would be moderate, and acceptable. The degree of the effect on residential amenity at the other properties referred to by the Alliance [A7, 12.67] would in

my view be similar, or somewhat less. Insofar as residential receptors are concerned, I therefore accept the 2013 ES conclusion that none would become unattractive and thus unsatisfactory places in which to live [A6, 266].

Section B

421. SPM acknowledges that parts of Section B, including around 500m at the western end of the Kerry Ridgeway Regional Path (which is the first part of the trail from the western end) would experience moderate visual effects which would be significant and these would potentially be experienced over a wider area [A6, 261]. PCC consider that the effect would be dominant, which is equivalent to high in the 2013 ES, at locations up to 200m from the route at the western end of the regional path, the A483 and B4355, the bridleway between these roads, and a part of a bridleway near Cae-Betin wood, with significant effects being experienced up to 630m away [A6, 227, A9, 660].
422. PCC's 'dominant' description stems from guidance which may not be directly relevant to an overhead line [A6, 247]. However, the SPM approach where a combination of high sensitivity and high magnitude of change can lead to a moderate visual effect, which can also be obtained from a combination of a high and a medium as well as two medium's is not helpful in establishing which impacts would be of particular significance [A6, 250; A9, 647-652].
423. Although not designated or valued as Outstanding in LANDMAP terms, I agree that the scenic quality of the Glog and Kerry Hill and their immediate surroundings is particularly high [A6, 234; A9, 634]. Furthermore, the Kerry Hills are contiguous with and appear comparable in quality to an area over the border in Shropshire which is designated as an AONB. The HDWP OHL would represent a dominant linear feature stretching out into the distance when viewed from close by [A9, 647; A7, 12.62]. Although it would be possible to see beyond it, such that it could be described as permeable [A6, 242], it would draw the eye and detract from the long and dramatic rural views and the scenic quality. From certain viewpoints, the supports would be seen in a stacking arrangement. In traversing the bridleway between the A483 and Black Gate, a substantial part of the way would effectively be under and following the OHL. As a result, I consider that the visual impact of the OHL in Section B would be major adverse, including when viewed from the western end of the much valued Kerry Ridgeway Regional Path, thereby raising serious concerns.

VMRHL

424. Insofar as visual impacts are concerned, I agree that the magnitude of change experienced would vary considerably depending on the distance and direction of view, ranging from no or negligible effect to a moderate effect in closer views [A6, 255 & 256]. Given the distance involved and the screening provided by topography and vegetation, there would be no significant visual effects from important viewpoints on the Offa's Dyke National Trail (A6, 358 & 359).

National Cycle Route 81

425. NRW suggests that there would be a negative impact on the visual amenities of users of the cycle route where views of the OHL by cyclists would not be screened by hedgerows. However, only a short section of the cycle route on the B4381 adjacent to the Welshpool substation would in be affected any meaningful way. Furthermore, cyclists' views of the OHL would be limited, partly screened, and already degraded by existing electrical equipment. The effect on cyclists would be further limited as they would need to focus on the stretch of road in front of them for safety reasons. I therefore consider that the overall effect on the National Cycle Route would be minor (A8, 5.7; A6, 264 & 265).

Impact on Biodiversity

Trees and Hedgerows

426. An OHL of the proposed length will almost inevitably result in some loss of trees and hedgerows. However, due regard has been paid in the routing process to minimising such losses. I have no reason to believe that alternative overhead routes would result in a materially lesser number of trees being lost. A rare Black Poplar close to the line and one other veteran tree could be retained through micro-siting. Some mature trees would be lost, and I accept that 'two for one' replanting can never fully mitigate for this. Landowner agreement would be necessary for any such arrangements and may not be forthcoming. However, along with other measures such as hedgerow reinforcement replanting would provide some mitigation. Given the emphasis on environmental aspects in agricultural support schemes, many landowners would be likely to take a positive approach to replacement planting on their land [A7, 12.30-12.32, 12.35 & 12.37-12.39; A6, 308 & 309].

Ecological Functioning of Protected Sites

427. The 2013 ES concludes that there would be no significant effects on any protected sites. Insofar as the River Wye SAC is concerned it is accepted by NRW that distance and the ability to avoid causing pollution would provide suitable mitigation. Because of the ability to provide temporary flight lines until replanting matures I am also satisfied that there would be no significant effects on the Leighton Bat Roosts SSSI [A6, 305 & 306]

Impacts on European Protected Species

428. NRW's concerns in relation to protected species are limited to bats and dormice [A8, 6.3]. Whilst NRW raised its concerns at a late stage, that does not diminish the need to comply with relevant legislation [A6, 283 & 286].

429. Although the Bats Conservation Trust guidelines and Dormouse Conservation Handbook represent best practice, they only provide guidance. The information submitted should be reasonable and proportionate to the nature of the proposal [275; A6, 293, A8, 6.1]. In this instance the proposed OHL would have a small footprint, a short construction period, and there would be the ability to micro-site support poles. I therefore do not consider that this proposal requires the same level of survey information as, for example, a new road following the same route. I consider that the level of survey undertaken by SPM is proportionate, reasonable and sufficient in the circumstances to demonstrate whether or not there is likely to be detriment to the maintenance of the favourable conservation status of these species and to establish a mitigation strategy [A6, 294 & 304; A7, 12.37- 12.39].

430. Extensive suitable foraging and roosting habitat for bats exists outside the route corridor. Within the corridor loss of vegetation would be limited and localised. Whilst there is the potential for the loss of mature trees that may support roosting species, the loss of a limited number of such trees would be unlikely to have an effect on local populations and work would be carried out at appropriate times and under licence. Surveys provided no evidence of rare bat species, the conservation status of which might be affected by the loss of just a few key trees. Mitigation would also provide continuity of flight lines where sections of hedgerow would be removed. There would not, therefore, be a likely significant effect on bats [A6, 301-303; A7, 12.34 & 12.35].

431. The hedgerows within the northern section of the Llandinam Scheme route are heavily managed, reducing their suitability for dormice. Dormice are unrecorded in this area. The southern end is generally devoid of suitable habitat and again there are no records of dormice having been recorded as present. On this basis, it is appropriate to focus attention on the areas to the north of the Kerry Hill area in proximity to Newtown where a survey for the Newtown bypass recorded the presence of dormice in hedges [A6, 292].

432. A desk study was carried out as part of the original EIA work [A6, 288]. The 2013 ES takes a worst case approach and assumes the presence of dormice in the areas to the north of the Kerry Hill and in proximity to Newtown – recognising the limitations of surveys for this species and that it is often not possible to prove the absence of dormice in suitable

habitat [A6, 293; A8, 5.8]. The mitigation strategy is also based on this worst case approach and restricts any tree and hedge clearance to specific months [A6, 294].

433. Whether protected species licences would ultimately be required would depend on the results of pre-construction surveys. However, in view of the nature of the proposal, the mitigation proposed and the low density of the species where it has been found, the likelihood of impacting directly on a nest or resting place is very remote and there is no reason to believe at this stage that a licence would be required [A6, 296].

434. Notwithstanding the fact that objectors refer to a number of other protected species, on the basis of the evidence submitted I accept the 2013 ES's conclusion that appropriate mitigation should provide adequate protection to these other species and their habitats.

Social and Economic Impact / Impact on the Enjoyment and Use of Land

435. The concerns raised by objectors in relation to socio-economic matters generally focus on the potential visual impacts on the rural landscape of the area and the implications this could have for both residents and visitors [A7, 12.69- 12.73]. Whilst the quality of the landscape and the tourist economy are clearly linked, the assessment of socio-economic impacts needs to focus on any change in people's behaviour.

436. The 2013 ES concludes that 11 out of 13 tourist attractions are anticipated to experience negligible impacts, with the VMRHL experiencing a low magnitude of change. The remaining one (the Kerry Ridgeway Regional Trail) would experience a low-medium magnitude of change resulting in an effect of moderate adverse significance. This magnitude of change is ascribed because the OHL would form a noticeable new manmade feature for only a localised section of the route. As this section would be at the start of the route, it could potentially discourage users to a greater degree than would otherwise be the case. However, there is no quantitative evidence either way [A6, 315; A9, 665, 666].

437. Insofar as the Severn Way Regional Path and the National Cycle Route near Welshpool are concerned, I have already concluded that the magnitude of change to any views from the former would be negligible and the overall visual effect on the latter would only be minor. The proposal would not, therefore, materially discourage use of these routes. The OHL would also impact on various other public rights of way, but this would be highly localised and I accept that it would be unlikely to deter users to any great degree [A6, 213 & 314].

438. The only tourist accommodation resource where significant adverse impacts are envisaged by the 2013 ES is the Tavern Caravan Park, but subject to agreement with the owner, screen planting could reduce this to a level that would not be significant [A6, 214]. The Alliance refers to a further two caravan sites, but insofar as Goetre is concerned it would appear that there would be no or limited views of the OHL. Fron Fraith was not assessed as it did not feature on any of the databases used. Although it promotes walks in the Cefn Coed Hills, the HDWP OHL is unlikely to dissuade a significant number of people from staying at Fron Fraith [A7, 12.71].

439. No significant effects would arise from the construction and decommissioning phases, but both would create some employment [A6, 210; A7, 12.75].

440. Impacts on agricultural use of land could be minimised by micro-siting, and the implications on the ability to farm the land would be comparable to those routinely experienced by farmers across the UK. Given that compensation would be paid, I am satisfied that there would be no significant effect on the use and enjoyment of land from an agricultural perspective [A6, 212 & 218].

Cultural Heritage

441. The 2013 ES identifies residual significant effects relating to indirect visual effects upon the site and/or setting of a number of cultural heritage assets, comprising SAMs, listed

buildings, a registered historic park and garden, a registered historic landscape, conservation areas, and other assets, although SPM now consider that a number of these judgements are too conservative [A6, 318 & 319]. In the light of EN-1 guidance it is important to establish which, if any, of the above effects would result in substantial harm. This is a very high level of harm and I accept that it must lie at the upper end of the spectrum of major adverse effects [A6, 323].

442. PCC considers that substantial harm would occur in respect of the SAMs at Bryn Cwmyrhiwdre Round Barrow, Crugyn Bank Dyke and Two Tumps Dyke, as well as the non-designated asset of national importance at Black Gate Enclosure, all of which are in Section B of the field based landscape and visual sensitivity assessment. It also assessed the impact on the Henfron Moated Site as being borderline - less than substantial with the woodland and substantial without the woodland, but I have no reason to believe that the asset's wooded nature is likely to change in the foreseeable future. SPM agrees that there would be substantial harm to the Bryn Cwmyrhiwdre Round Barrow and I have no evidence that would lead me to a contrary view [A6, 328; A9, 679-681].
443. The Crugyn Bank Dyke and Two Tumps Dyke are parts of an early mediaeval cross dyke. A further recently discovered section lies between them. Because of their physical form and their historic function (which was dependant on their relationship with local landforms, visibility and ability to appreciate being on a particular side), these SAMs have a large setting which contributes to their significance. The OHL would cut across this boundary feature, alter the open rural setting of the asset and affect the visual relationship between the two scheduled parts [A6, 336-339; A9, 700-703].
444. Whilst SPM consider that any effects would be localised, this should not necessarily result in any devaluation. The Council's point that the significance of effects should depend on the importance of the particular view to the setting of the asset, and its reference to Hadrian's Wall as an example, is well made [A6, 340; A9, 706]. I do not accept that harm caused to the setting of an asset by the over-sailing of a long linear feature could never amount to substantial harm because it would only affect a part of its length. SPM have agreed that a HDWP OHL could cause substantial harm to setting of another monument (the Bryn Cwmyrhiwdre Barrow). The line would not be back dropped in many viewpoints of or from the cross dyke. Whilst there are other items of infrastructure in the area, there is nothing that would compete with the views of or from the dyke in the manner that the much more visually intrusive HDWP OHL would [A6, 339 & 340; A9, 709].
445. I consider for these reasons that there would be substantial harm to the setting of The Crugyn Bank and Two Tumps Dykes.
446. SPM cite a Cadw letter of 3 June 2013, but a more recent letter (6 December 2013) endorsed the 2013 ES's conclusions and noted that there would inevitably be indirect impacts on settings at close quarters which would be likely to be large/very large (significant) [A6, 317, 319 & 320; A9, 684].
447. The evidence strongly suggests that the Black Gate Enclosure is a henge of potentially national significance, which according to EN-1 should be subject to the same policy considerations as a designated asset. The relationship with local landforms and ability to appreciate it in an open rural context are important aspects of its setting [A6, 342; A9, 697-700]. The proposed route would run very close by, and a HDWP OHL would be visually dominant in such close proximity. Notwithstanding the presence of plantations/windbreaks it would fundamentally change the visual relationship with the surrounding area and the openness of its context. I therefore consider that it would cause substantial harm to the asset's setting. The effect would be very similar to the effect on the Bryn Cwmyrhiwdre Round Barrow, which SPM accepts would amount to substantial harm.

Listed Buildings and Conservation Areas

448. SPM and PCC consider that sections 66 and 72 of the *Planning (Listed Buildings and Conservation Areas) Act 1990* do not apply to an application under section 37 of the *Electricity Act 1989* [A6, 364]. Nevertheless, the cautious approach adopted by CeltPower, who state 'Whether or not such statutory provisions duties are strictly engaged here, the duties they enshrine apply equally as material considerations; and the result is little different', has much to commend it¹⁰¹. I have therefore given special regard to the desirability of preserving listed buildings or their settings, and paid special attention to the desirability of preserving conservation areas.
449. The 2013 ES predicts indirect effects of large/very large significance on seven listed buildings, these being Caerhowel Smithy, Upper Maenllwyd farmhouse, Cilthriew and two adjoining buildings, the Former Retort House at Leighton, and Rhydwhiman Crossing Cottage, largely because of the proximity of the proposed OHL. It also predicts indirect effects of moderate/large significance on a further 28 listed buildings and 3 conservation areas. The Alliance highlights a number of other locations where the 2013 ES has identified significant impacts on assets and/or their settings [A7, 12.83 – 12.88]. Nonetheless, on the basis of the evidence presented, none of these effects would be so great as to constitute substantial harm in EN-1 terms.
450. At the inquiry I expressed concern that the 2013 ES does not provide list descriptions, and that the assessments of effect appear to derive from brief general descriptions of the buildings and their proximity to the OHL, rather than the special architectural or historic interest of the buildings and the contribution of the setting to their special interest. The relevant list descriptions were subsequently provided, and updates to the assessments for a number of key listed buildings were provided in a note to the inquiry¹⁰².
451. Eddington Hall is one of the listed buildings brought to my attention by the Alliance [A7, 12.68]. It is listed as a fine example of a Regency style house exploiting a commanding position. It is built on a rise in the ground facing Powis Castle across the River Severn. It is clearly designed and laid out to take advantage of the landscape, and to see (and be seen from) Powis Castle. Its setting therefore makes an important contribution to its special historic interest. The proposed OHL would pass between it and Powis Castle. On the basis of the evidence before me and my observations on my site visits, it is the building most at risk of harm to its special interest as a consequence of the proposed OHL. However, I saw at my inspection that the OHL would be some distance from the building, would be at a lower level, and would be back-dropped against trees. It would not intervene in sightlines between the Hall and the Castle, and its effect on the historic character of the landscape would be largely absorbed amongst other late 19th and 20th century changes to the setting of the Hall. I therefore do not consider that the proposed OHL would have a significant effect on the special historic interest of Eddington Hall or its setting;
452. With regard to Caerhowel Smithy, Upper Maenllwyd farmhouse, Cilthriew and two adjoining buildings, the Former Retort House at Leighton, and Rhydwhiman Crossing Cottage, although the 2013 ES predicts indirect effects of large/very large significance this is because of the proximity of the proposed OHL, rather than any effect on the special historic interest of the buildings or the contribution made to that interest by their setting. The list descriptions give no indication that their settings make an important contribution to their special historic interest and I have no other evidence to that effect. I therefore consider that there would be no significant effect on their special historic interest. Similarly, I find no significant effect on the special historic interest of any other listed building.
453. The proposed OHL would pass close to the Kerry Saw Mills Conservation Area. However, it would have little effect on its special interest, which largely derives from being a specialised community established in the 19th century, and several listed buildings within it,

¹⁰¹ CPL-017, para 90

¹⁰² SPM/027

rather than the character or appearance of its setting. Other conservation areas would be too distant for significant effects on their setting to occur.

454. I consider for these reasons that the proposed OHL would preserve the special historic interest of the relevant listed buildings and conservation areas, and the contribution made to their significance by their setting. There would be no substantial harm in this respect [A6, 367].

Consideration of Alternatives

General Approach

455. SPM accepts that alternatives are material where a proposal would cause significant adverse effects and need is put forward as a reason justifying the development, as is the case here, but highlight a series of principles from EN-1. EN-1 does not contain any general requirements to consider alternatives or to establish whether the proposed project represents the best option. However, it makes it clear that the relevance or otherwise to the decision-making process of the existence (or alleged existence) of alternatives to the proposed development is in the first instance a matter of law, detailed guidance on which falls outside its scope [A6, 58 & 59; A9, 779].

456. PCC highlights the obligation in Schedule 9 to 'do what SPM reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects' and notes that picking a route that has greater environmental effects cannot be consistent with this duty. The law on consideration of alternatives is well established. I have identified clear planning objections to the proposed development (in respect of the character and appearance, and cultural heritage main issues), and only one permission can be granted, such that it is entirely appropriate to consider whether alternatives would not have the same adverse effects or not have them to the same extent [A9, 775-778; A6, 95].

Connection at 33kV

457. The connection of a wind farm of the size of the Llandinam Repowering scheme would be typically achieved at 132kV rather than 33kV. Furthermore, in this particular case accommodating the additional generation on the 33kV network would require a further five new circuits running in parallel through the Severn Valley to connect into the nearest 132kV network at Newtown. The substations at Llandinam and Newtown would need to be increased in size and the existing 132kV circuit from Newtown to Oswestry would also need to be rebuilt. Given the estimated cost of £52.6m (an additional £30.5m), I agree that this would be an inefficient and overly expensive option [A6, 65].

OHL 132kV Connections Following Alternative Routes

458. These would fall into 3 categories: connections to alternative locations on the existing network; alternative routes to reach Welshpool; and connecting to the proposed hub at Cefn Coch.

459. The nearest alternative 132kV connection points are at Newtown and Carno. Connecting into Newtown would require a 12km connection from the repowered wind farm, a rebuild of the 46km Newtown to Oswestry line and an extension to the Newtown Substation at a cost of almost £10m more than the scheme applied for. It might well also require a generation constraint system which would be complex, inefficient and undesirable. Connecting into Carno would require a new line from the repowered windfarm to Carno, rebuilding the Carno connection with the Newtown to Oswestry line and rebuilding that line at a cost of £22.4m more than the scheme applied for. For these reasons, I accept that neither would comprise an efficient or economic solution nor comply with the statutory duty to maintain an efficient, co-ordinated and economical system of electricity distribution [A6, 66-69].

460. I conclude for these reasons that if the repowered wind farm is to be connected into the existing network, this should be at 132kV into the Welshpool substation where it could be accommodated without any reinforcement or rebuilding [A6, 70-72].

461. The main alternative OHL routes to reach Welshpool that would meet the operational need considered by SPM are known as routes C and D, both of which would have similar or slightly lower costs as compared to the application proposal. Both would be technically feasible [A6, 100; A9, 587 & 606].

Route C

462. In the 2008 public consultation, Route C was identified as having apparent landscape and visual benefits over other alignments, occupying a corridor already affected by a 132kV overhead line and being generally less obtrusive [A9, 594 & 595]. In the 2013 review, it was considered to perform better than the application scheme in landscape terms [A6, 103; A9, 599]. It was discounted due to the likely effects on views and visual amenity caused by a greater concentration of residential properties and the environmental effects on the Mochdre Dingles SSSI [A6, 101; A9, 600].

463. There would also be technical difficulties, in particular, where the line would descend the steep slopes from the repowered wind farm. However, I do not consider them to be unsurmountable. It would also be partly located in the floodplain [A6, 101 & 110; A9, 599].

Route D

464. The extract from the 2008 routeing study in the 2009 ES states that Route D is generally sympathetic to the character of the landscape, passing through small scale, undulating terrain in which an overhead line could be relatively easily assimilated and, based on the current landscape character of the area, was the preferred choice. In the 2013 review, it was acknowledged that there would be fewer landscape effects than for the application route [A9, 601].

465. SPM states that Route D would affect more properties and have likely greater effects on trees and woodlands, indicating that it would be difficult to find a route between the Mochdre Dingles SSSI, the steeply wooded terrain and residential properties, and that numerous angle poles would be required [A6, 102].

466. Insofar as residential properties are concerned, the extract from the 2008 routeing study in the 2009 ES only refers to a few isolated examples. Furthermore, there is no substantive evidence that the number of properties affected would be significantly greater than for the scheme applied for. SPM's evidence is that the overall ecological impacts all of the routes considered traverse a similar range of habitats and thus ecological impacts are likely to be of a similar magnitude for each corridor. Given that it would be set down in the valley enclosed with trees, the impacts of the extra equipment at angle poles could be largely concealed [A9, 602-604 & 607].

467. In cultural heritage terms, Route D would avoid any impacts on the Crugyn Bank Dyke and other monuments in the vicinity of the Glog and Kerry Hill, as would Route C. Although it would have the same adverse effects as the application proposal on the VMRHL and other designated assets around its northern extent, Route D would cause substantially less harm in cultural heritage terms. I have no evidence to suggest that either route C or route D would have a significant effect on the use and enjoyment of land from an agricultural perspective [A9, 608-611].

468. SPM criticises PCC for not producing any analysis of the technical feasibility of these alternative routes. However, they are the main alternatives put forward and considered by SPM, not ones suggested by PCC. The onus is therefore on SPM to support its conclusions. SPM's decision to decline to produce its 2008 Routeing Study Report somewhat weakens those conclusions [A6, 110; A9, 588; A7, 12.18].

469. Clearly the selection of an OHL route requires consideration of a wide range of factors beyond landscape and visual matters [A6, 110]. However, on the evidence available it would appear that Route D could result in significantly less harm overall and thereby achieve a greater degree of compliance with Welsh Government and UDP policies. As a result, there has been a failure to minimise adverse landscape and visual effects, to reasonably mitigate environmental effects and to comply with SPM's obligations under Schedule 9 of the *Electricity Act 1989* [A6,113; A9, 615].

Connection via Cefn Coch

470. A number of objectors suggest that the repowered wind farm could be connected to the proposed hub at Cefn Coch as part of the Mid Wales Connection Project (MWCP), and there are various ways that this could be achieved [A6, 115-118; A7, 12.43 & 12.44]. The current network design for the MWCP is predicated upon the SPM Llandinam 132kV connection scheme being developed independently. It would have to be redesigned, and further consultation would be necessary, if the Llandinam repowering scheme were to be connected to it. There would therefore be considerable delays to the connection of the repowered wind farm and the Mid Wales Connection Project, and a greater degree of planning and commercial risk [A6, 120-125].

471. The Mid Wales Connection Project is being promoted on the basis that a number of wind farms in the area would need connecting into the hub, with the five proposals before the inquiry amounting to only some 65% of the contracted generation [A6, 128]. There is no certainty that all or part of the other 35% will be approved and the consenting process for individual schemes not before the inquiry cannot be prejudged. However, it is important to note that, in accordance with the Mott Macdonald report, if the Llandinam repowering scheme were to be connected at Cefn Coch, and all five wind farms before the inquiry were to be consented, a 132/400kV solution would be preferable. Even if all five are not consented, connection at Cefn Coch would reduce the ability of all or part of the other 35% to be connected without triggering a 132/400kV solution. The Cefn Coch route options could therefore potentially trigger the need for major substation infrastructure at Cefn Coch and a long 400kV line, or stifle all or part of the other 35% of contracted generation in SSA B.

472. If the overall generation capacity in SSA C were to be limited to about 176MW, a single 132kV HDWP line connection via Cefn Coch would be technically compliant and feasible. However, when the possibility of triggering the step change to a 132/400kV solution for SSA B, delay to the connection of the repowered wind farm, delays to the MWCP, and the introduction of significant planning and commercial risk are all taken into account, it is not obvious that there would be significant cost savings or environmental benefits.

473. I consider for these reasons that connection of the Llandinam repowering scheme via Welshpool would be preferable to a connection via the MWCP / Cefn Coch substation.

Alternative supports for route as proposed

474. The highly resistive ground at the Llandinam wind farm substation site dictates a need for an earth wire to address public safety concerns, and a Trident design cannot carry an earth wire. I have no information to suggest that relocating the substation to a nearby position would result in more favourable ground conditions [A7, 12.51]. Furthermore, unlike Trident, the HDWP was designed specifically to serve renewable generating stations in remote high altitude areas. If the section of the connection on ground higher than 250m above sea level is to be an OHL, then I am satisfied that it should be of a HDWP design [A6, 73-87].

475. Nevertheless, during the inquiry SPM were asked as to whether it would be possible that less resistive ground part way along the route would enable a switch from HDWP to Trident to take place. SPM confirms that such a solution, incorporating a RES, would be technically feasible at a broadly comparable cost. Given that a Trident line is much less intrusive than

a HDWP, and a RES could be unobtrusively sited and screened, I am of the opinion that this would result in a much more environmentally acceptable solution on ground lower than 250m above sea level. This view is supported by the briefing note sent to PCC members. The probability that no other Distribution Network Operator (DNO) has used such a solution is of no particular significance, other than possibly justifying why the option was not considered earlier [A6, 88 & 89; A7, 12.16, 12.40 & 12.49].

476. Nonetheless, as the HDWP design would be retained for Section B, the major adverse landscape and visual impacts and the substantial harm to cultural heritage assets in that area would remain, as well as the consequential conflict with Welsh Government and UDP policies. Impacts on ecology and the use and enjoyment of land would be broadly comparable. Furthermore, it is important to consider that implementing a partial Trident solution would result in considerable delay whilst land is acquired and planning permission sought, as well as potential uncertainty [A6, 89-93, A7, 12.50].

The PCC Suggested Upgrade

477. PCC would like the proposal to be upgraded to enable the line to take up to 175MW, so as to obviate the need for the 35km SSA C part of the MWCP, which it considers to be unacceptable in landscape and visual terms [A6, 133 & 134; A9, 799 & 805]. Although this option would not meet all the generation capacity SPM is obligated to connect in the SSA C, that generation capacity is far in excess of the maximum capacity for SSA C determined by the Welsh Government and there is no guarantee that all of the necessary consents will be forthcoming.

478. Upgrading the proposed OHL to a capacity of 175MW would require the use of larger conductors and a greater number of thicker poles, the quantity and position of which have not been detailed [A6, 135; A9, 800]. Before such changes could be required by conditions, the Secretary of State would have to be satisfied that he had sufficient environmental information and that such conditions would not be unfair to the parties in the *Wheatcroft* sense [A6, 138 & 139]. The interests of landowners could be prejudiced by changes in the number and position of poles and there could be some environmental effects, albeit that these would probably be minor and no greater than envisaged within micro-siting allowances. Notwithstanding the probability that the increase in visual impacts would be slight, I consider that further supplementary environmental information would be required, and that it should be subject to public consultation in accordance with the relevant regulations. I therefore do not consider that upgrading of the line could be required by condition at this stage.

479. The Welshpool to Oswestry line would have to be rebuilt to take advantage of the additional installed capacity. This is not something that could be required by the Secretary of State at this stage. Notwithstanding the general view that the landscape and visual effects would not be significant, it cannot be assumed that express consent would not be needed [A6, 138 & 139; A9, 800-804]. However, obtaining express consent for and rebuilding the Welshpool to Oswestry OHL should not itself delay connection of the Llandinam repowering scheme.

480. If the generating capacity in SSA C were to be less than about 160MW this option has significant merit, as it would enable more energy to be exported from SSA C with little or no additional environmental impact (subject of course to eventual rebuilding of the Welshpool to Oswestry line). The cost difference, if any, does not seem to be excessive [A6, 136; A9, 809-813]. However, because of the need for further SEI there could be some delay to the timescale for the delivery of additional renewable energy, which should be taken into account.

Approach to Undergrounding

481. I have already referred to the general approach to alternatives, which also applies to undergrounding alternatives. Specifically in respect of undergrounding, it is not open to the

Secretary of State to require undergrounding in whole or in part: all he can do is refuse the application or approve it in part with gaps. Were he to adopt the latter approach, which it appears has not been previously done, it would be open to SPM to underground beyond any gap if there were operational or other reasons for so doing. Any undergrounding could be done using permitted development rights, unless it was EIA development in which case planning permission would be required [A6, 145-147; A9, 783 & 784].

Undergrounding Entire Length

482. Full undergrounding of the route along local roads is in theory a technically viable option. It would serve the contracted generation, could in principle accommodate a further 10MW of future generation onto the local system, not have the major adverse landscape and visual impacts and the substantial harm to cultural heritage assets identified for the application proposal, and satisfy UDP policy DC12. However, the cost would be at least three times that of an OHL. This option would therefore not provide an economic and cost effective solution. Given that EN-5 sets a high threshold for refusing overhead lines in favour of undergrounding and TAN 8 explicitly states that undergrounding is likely to be justified for only limited lengths of a connection and / or in special circumstances, a fully underground option would not be an appropriate means of providing the connection to the repowered wind farm [A6, 114, 163 & 165; A7, 12.17].

Undergrounding Section B

483. Four variations to this option, all of which would meet the necessary capacity, were discussed at the inquiry. I have no evidence to suggest that any of them would have a significant effect on ecology or the use and enjoyment of land within section B. The option assessed by SPM (the longest of the four at 9.3km) would result in an additional cost of approximately £14.8m [A9, 727 & 728]¹⁰³. This would eliminate the identified effect of major significance on the landscape and the major adverse visual impact in Section B as well as the substantial harm to the three SAMs and the non designated asset. As a result, it would comply with the UDP and Welsh Government policy.

484. PCC suggested shortening this route at both ends and using parts of a bridleway and a public footpath to reduce its sinuous nature, giving a reduced length of 6km and a cost of around £9.55m [A9, 729, 730]. This would largely mitigate the landscape and visual impacts in Section B and avoid substantial harm to two SAMs and the non-designated asset. However, it would not mitigate for all of the landscape and visual effects north of Kerry Hill and the substantial harm to the Bryn Cwmyrhiwdre Barrow would remain. Nonetheless, the conflict with the UDP and Welsh Government policy would not be as great as for the application scheme. SPM accept that this is technically feasible, subject to overcoming concerns in relation to the bridleway and footpath sections [A6, 175]. These concerns relate largely to the steepness of the ground, but the option initially assessed, for which SPM raises no such concerns, includes steeper sections and other infrastructure projects are proposing to or have placed apparatus underground in such terrain.

485. Another variation submitted by PCC included the same shortening as above at the western end, and at the eastern end heading roughly east from the B4355 before turning north of northwest to rejoin the application line at a point 0.6km east of Black Gate to give a total length of 4.2km and a cost in the region of £6.65m [A9, 731 & 732]. Whilst SPM noted technical difficulties in laying a cable across the landform below the Kerry Ridgeway, they accept that these are not insurmountable and I agree [A6, 179]. This would mitigate much of the landscape and visual impacts in Section B and avoid substantial harm to two SAMs and the non-designated asset. However, again it would not mitigate for all of the landscape and visual effects north of Kerry Hill and the substantial harm to the Bryn Cwmyrhiwdre Barrow would remain. The terminal pole would be seen from some viewpoints including the B4355, but it would be down in the valley and some distance from

¹⁰³ SPM's figure is £13.6m, but as note by PCC this is a mathematical error

key features. Again, the conflict with the UDP and Welsh Government policy would not be as great as for the application scheme.

486. A further variation of the above, which is slightly shorter and therefore cheaper, initially follows the B4355 to the north east before turning east down the slope, then a north easterly turn followed by a south easterly turn to rejoin the application line slightly further from Black Gate than the above [A9, 741]. SPM consider that this is better from a technical point of view [A6, 182]. The landscape, visual and cultural heritage impacts as well as UDP and Welsh Government policy compliance would be generally as above.
487. Undergrounding has the potential to disturb unrecorded archaeology, but for the lengths which follow roads and tracks any adverse effects would be unlikely due to the already disturbed nature of the ground. Where sections would pass through undisturbed ground, the narrow footprint together with standard mitigation techniques would generally limit the possibility of disturbing archaeological remains. Furthermore, apart from the cross dyke, there is no evidence that further archaeological remains would be encountered. The 4.2km PCC option would cross the projected line of the cross dyke between the two scheduled parts where the possibility of further physical remains exists. Nonetheless, any direct effects could be avoided by thrust boring underneath any such remains. Although this might require a licence from Cadw, I see no reason as to why one would not be granted. The further variation would see the line of the dyke crossed at the B4355 where it has already been disturbed [A6, 176 & 180; A9, 7.47-7.52].
488. The costs cited in respect of the four variations include estimated lifetime costs, with repair costs being much higher than for OHLs. These are based on SPM's own experience and network, although for some reason they are higher than national averages. Be that as it may, either set of statistics are likely to be highly skewed towards urban locations where there is a much greater possibility of roads and footways being dug up. SPM's point about cable expansion is not convincing and in an intensely rural location such as this much lower fault rates and lifetime costs can be anticipated. It should also be remembered that any faults that would occur would not leave any consumer without a supply [A6, 167; A9, 759-764].
489. I have no reason to believe that any of the above variations would constitute EIA development or cause timing disadvantages as compared to the application proposal [A9, 765-768]1`.

Undergrounding at Northern End (Sections E, F and G)

490. Although this option was suggested by NRW, it has not submitted any substantive supporting evidence. The option would be achievable and likely to have limited or no significant impacts in socio-economic, ecological, cultural heritage and landscape terms. However, it would not obviate the major adverse landscape and visual impacts and the substantial harm to cultural heritage assets identified for the application proposal, or the consequential conflict with Welsh Government and UDP policies. Furthermore, the £18.4m or so additional cost would be substantial and the benefits limited such that the option would not comply with SPM's statutory duties [A6, 141(e) & 184].

Other Matters

Human Health

491. Whilst public concerns about the impact of EMFs on health are understandable, overhead power lines up to and including 132kV are on the list of classes of equipment that are inherently compliant with ICNIRP guidelines. Although there is no requirement to calculate field strengths in such instances, further comfort can be taken from the fact that the calculated maximum levels of an electric field of 900V/m and a magnetic field of 3.3µT are considerably less than the relevant exposure limits of 9000V/m and 360µT respectively. Single-circuit lines, such as proposed in this case, are automatically compliant with the policy on phasing. As to indirect effects such as microshocks, the maximum field produced

by the Scheme would be 900V/m whereas a field of 5000V/m can be taken as a level where further assessment may be needed. Because EMFs produced by such a source fall rapidly with distance, they tend to act only as localised sources and there is negligible interaction between different sources such that there would be no cumulative effects [98; A6, 193-201].

492. For the above reasons, the evidence clearly demonstrates that the proposal is in accordance with ICNIRP guidelines, as required by EN-5, and compliant with Government policy.

Traffic and Transport

493. Although traffic and transport was not one of the matters about which the Secretary of State specifically requested to be informed and there are no objections from the relevant highway authorities, it is a matter which is of concern to local residents [A6, 377 & 371; A9, 12.57].

494. Certain sections of the route would pose difficulties due to physical constraints, geometry and topography [A7, 12.58]. However, this would not be the first time that SPM has erected an OHL on wood poles in such locations and there would be no need to construct stone haul roads. The contractor would have access to a range of specialised 4x4 and tracked vehicles and tractors and, although SPM does not consider it likely in this case, helicopters have been used in other cases. Although there may be a need to improve individual farm accesses, larger improvements that could result in significant environmental and landscape effects would not appear to be required [A6, 373, 378, 383; A7, 12.59].

495. Whilst there would inevitably be some impact on local traffic during the construction phase, no road closures would be required and the number of daily movements would be limited. I am satisfied that measures would be put in place to minimise any disruption and give local inhabitants advance warning. There would therefore be no significant effects from a traffic and transport perspective [A6, 374-382, A7, 12.60].

Accommodation for Small Individual Renewable Generation Projects

496. It is my understanding that the majority of these are connected at a lower voltage directly into the local distribution network. Nevertheless, the Scheme would provide accommodation for up to 100MW of generation on the existing distribution network without any additional reinforcement. The connection agreement for the wind farm repowering is for 90MW which would leave capacity for an additional 10MW of generation. This should be sufficient to accommodate anticipated volumes of individual renewable generation projects [96; A6, 140].

Wayleaves

497. Seeking section 37 consent and necessary wayleaves (where voluntary wayleaves have not been secured) are done under separate provisions of the *Electricity Act 1989*. However, there is nothing to prevent DNOs from negotiating voluntary wayleaves or making application for necessary wayleaves before section 37 consent has been obtained [97; A6, 389].

Cumulative and Combined Effects of All Schemes

498. The following discussion relates to relevant issues arising from the cumulative and combined effects of the five wind farms applications before the inquiry, and those that exist, have been consented or are in the planning system, together with the necessary infrastructure to support them (including the Llandinam 132 kV OHL proposal).

499. The study area assessed includes the landscape context for SSAs B and C, the Meifod Valley to the east to the border with Shropshire, the Severn Valley to Welshpool and the Landscape between Oswestry and north to Wrexham [A9, 838].
500. Whilst the inquiry schemes and their effects in combination with existing development can be fully assessed, consideration of consented (but not built) and in-planning proposals inevitably introduces uncertainty. This is particularly so with regard to the MWCP, the proposals for which are at consultation stage. Assessment has therefore been made at a high level, taking into account the best information available in the public domain (there being no obligation on the applicants to go further).

Combined Landscape and Visual Effects

501. The proposed wind farms would all be seen from high ground between SSAs B and C. However, the applicants and PCC are in agreement that the distance would be too great for significant cumulative landscape and visual effects to arise as a consequence [A9, 869]. I have no reason to disagree. SSAs B and C are so far apart that the proposed developments in each would be rarely experienced one after the other as part of a journey. I therefore do not consider that there would be significant sequential cumulative visual impacts, over and above the effects from static viewpoints.

Grid Connections

502. The Mott MacDonald report¹⁰⁴ confirms the Welsh Ministers' belief that provided development is limited to the maximum capacities identified by Garrad Hassan (SSA B = 430MW, SSA C = 98MW), there would be no need for large, visually intrusive high voltage network infrastructure and an associated 132 / 400kV sub station¹⁰⁵. Connections could be made to the distribution network by a standard system with any OHLs on Trident or HDWP wood poles, though there would be higher transmission losses at this voltage than if connection were to be made at 400kV.
503. Up to about 160MW could be exported from SSA C via a single 132kV line to Welshpool and on to Oswestry. This would require the upgrading of the proposed Llandinam connection using heavier conductors, and the existing Welshpool to Oswestry line would have to be rebuilt. The Llandinam repowering scheme and either the Llaithddu or the Llanbadarn Fynydd scheme (but not both) could therefore proceed without the need for additional intrusive infrastructure.
504. If all three SSA C schemes before the inquiry were to be approved there would be a need for an additional 132kV line serving SSA C. There would be several alternative routes, including two identified routes connecting at Cefn Coch via the MWCP. The parties do not agree about the degree of likely landscape and visual effects, the effect on cultural heritage assets and their settings, or whether such effects would be acceptable in policy terms. Ultimately that could be a matter for future decision makers. However, there is no dispute that there would be adverse landscape and visual effects and adverse effects on the setting of some cultural heritage assets, all of which could be avoided in their entirety by restricting development in SSA C to about 160MW.
505. Up to about 320MW could be exported from SSA B via twin 132kV lines, with overhead sections on wooden poles. This would be more than sufficient to meet the needs of the Llanbrynmair and Carnedd Wen schemes. The high-level assessments of landscape and visual impacts that have been carried out indicate that such a solution could potentially be environmentally acceptable.
506. If all the schemes currently in planning were to be approved, technically all could still be connected at 132kV. However, the likely consequence would be an extensive and intrusive

¹⁰⁴ December 2013 SEI

¹⁰⁵ CD/COM/20

'wirescape' of many lines, and transmission losses would mount. In practice, as identified by Mott MacDonald, the 'trigger' for a 400kV line would be about 600MW of generating capacity connected at Cefn Coch. Proposed wind farm schemes in mid Wales that are envisaged to connect at Cefn Coch far exceed this threshold. However, contrary to fears expressed by local residents at the inquiry, the advanced stage reached in the consultation process for the MWCP does not mean that it is inevitable that it will proceed. The SSA B schemes before the inquiry would not, of themselves, trigger a need for a 400kV solution. However, if all three SSA C schemes were to proceed and the necessary additional line were to be routed to Cefn Coch, either development in SSA B would be restricted, or the likelihood of a need for large, visually intrusive high voltage network infrastructure and associated sub station would be substantially increased.

Strategic Transport Routes

507. A considerable amount of work has taken place leading up to, and during the inquiry, to develop draft Strategic Transport Management Plans (STMPs) for all five wind farm applications. The design of necessary off-site works has been developed and their likely environmental effects have been assessed. There is no indication that permission will not be forthcoming for any necessary off-site works. The draft STMPs now contain a great deal of detail, and where appropriate have taken trial runs into account. They provide for the management of general construction and ancillary traffic as well as AIL delivery convoys [A7, 5.3].
508. Each wind farm would generate a large number of AIL delivery convoys which would pass through local communities. There would be almost daily disruption over periods of several months as convoys for each development pass through [A7, 5.1]. However, the convoys would be escorted by Police, and their movement would be well rehearsed. The duration of disruption for any particular community would be limited, and the convoy escorts would ensure safety and minimise any inconvenience. As convoys for three schemes would be routed from the north, and the other two would be routed from the south, the cumulative effects on communities would be minimised. Similarly, convoy escorts would ensure safety and minimise disruption and delays to traffic.
509. Police would not be diverted from front line duties, and the cost would be met by the developers.
510. General construction and ancillary traffic would at times cause a considerable percentage increase in the amount of HGV and other traffic on the local road network. The construction of the proposed Llandinam 132kV line would add to the amount of general construction traffic generated by the proposed wind farms. However, it is common ground between SPM and the Welsh Government (as trunk road highway authority) that construction traffic associated with the Llandinam 132kV line would not give rise to any likely significant effects on trunk road traffic or transport, either on its own or cumulatively with other development. PPC have no objection in this respect. The combined effect of all construction traffic associated with all six proposals is therefore acceptable to the relevant highway authorities. The balance of evidence leads me to conclude that the road network has the capacity to accept the likely increase in traffic without unacceptable delays, disruption, or increase in the prevailing risk to highway safety. The concerns of local residents that construction traffic would use 'rat runs' and short cuts through local communities rather than agreed routes on major roads would be overcome by management measures that can be secured by conditions [A7, 5.2 & 5.4].
511. The Welsh Government has no objection in principle to either the proposed northern or southern routes. It is confident that an engineering solution can be found for the lowering of the trunk road carriageway beneath the Crossgates railway bridge to accommodate Llandinam AIL convoys. Though the full effect of these works on traffic flow cannot be established at this stage, the necessary works would not be unusual, and I have no reason to suppose that an acceptable traffic management solution could not be found.

512. The submission of additional information during the course of the inquiry has enabled PCC to withdraw its overall objections in relation to the individual and cumulative effects of the applications on strategic transport routes, subject to imposition of suitable conditions [A9, 899-902].
513. I consider it appropriate that the STMPs are not finalised at this stage, as the lead-in periods to development are long and they may need to be updated to take into account changes in circumstances and developments such as the possible construction of a by-pass around Welshpool. I am satisfied, however, that they provide a sound basis for reliable, deliverable and acceptable solutions to the difficulties of providing access for AILs and general construction traffic, given the limitations of the existing transport infrastructure in mid-Wales. I do not consider that economic or social damage would be a major risk for mid-Wales and its inhabitants, or that the level of disruption would be unacceptable [A7, 5.4].
514. Necessary alterations to the road infrastructure would remain after the completion of development. These would improve the capability of the main road network to cater for large vehicles and would therefore be of some long term benefit to matters of public interest.

Tourism and the Economy

Glyndwr's Way

515. Glyndwr's Way meanders through much of Mid Wales, from Knighton in the south, to Welshpool in the north. In doing so it passes through many areas of different landscape character of varying quality, including sections through settlements and along rural roads. Although named after Owain Glyndwr the route does not of itself have any historic significance. Rather, its attraction is largely in assisting walkers' understanding and enjoyment of the varied landscape of this part of Mid Wales. Wind farm development is already a feature of the landscape in Mid Wales, and the route does not avoid existing wind farms. Some users may chose to walk the route 'end-to-end', in which case the existing and proposed wind farms would be experienced sequentially. Others may chose to walk only specific sections, in which case the proposed wind farms may not be experienced at all.
516. There is no dispute that there is a spectrum of responses to wind farm development. The evidence before the inquiry generally indicated that roughly 20% of people indicate an adverse response sufficient to modify their choice of whether to visit an area. Some walkers may therefore chose to avoid passing close to or through the proposed wind farms. Nevertheless, large sections of the route would be unaffected by the proposed wind farms and would remain attractive to all walkers. Some walkers, more favourably disposed to wind farms, may welcome the ability to closely approach and experience wind farms developments as part of their journey, and take advantage of improved views from locations where associated tree felling has taken place. On balance I do not consider that the proposed developments would be likely to have a significant adverse effect on the overall integrity of Glyndwr's Way or its use [A7, 4.19 & 4.23].

Ramblers, Cyclists, Horse Riders, Motorists and Passengers

517. The effects of the proposed developments on the recreational use of the footpath network, national and local cycle routes and bridleways would be similar to the effects on Glyndwr's Way, in that users could choose to avoid or enjoy sections affected by wind farm development according to their preference. Again, on balance I do not consider that the proposed developments would be likely to have a significant overall effect on the recreational use of such rights of way. Motorists and their passengers are less likely to be sensitive to the visual effects of wind farm development. There is no evidence that motorists would be likely to modify journeys because of views of wind farms along their routes, or that such views would affect their choice of tourist destination.

Tourism Generally

518. Tourism provides about 12% of employment in Powys, brings about £615 million into the economy annually, and is identified as a potential area of growth [A7, 4.8]. There are about 5,000 holiday park homes in the area, many of high standard, and many other providers of holiday accommodation [A7, 4.11]. Tourism is therefore clearly a successful and important part of the local economy.
519. Although about 20% of people indicate an adverse response sufficient to modify their choice of whether to visit an area there is no evidence to show a similar level of decline in tourism in any area as a result of wind farm development and associated infrastructure. On the contrary, a series of reports and reviews have shown no significant adverse effect on tourism as a consequence of wind farm development.
520. The *Study into the Potential Economic Impact of Wind Farms and Associated Grid Infrastructure on the Welsh Tourism Sector*, undertaken for the Welsh Government by Regeneris Consulting and The Tourism Company (February 2014)¹⁰⁶ identifies particular circumstances and risks in the northern part of Powys. However, other than some anecdotal evidence of visitors staying away due to wind farms, case studies (including studies undertaken in Powys) have not found any evidence of significant impacts on tourism in Wales to date.
521. The area that would be directly affected by the proposed wind farms would amount to a small proportion of the land area in Mid Wales, and would be away from most key natural assets and tourism locations. I have concluded earlier in this report that there would be no significant direct or indirect effect on the landscape character of the National Park, limited effects on views from it, and only a small effect on its special qualities [395]. Most holiday park homes are located in valleys well away from the proposed wind farms, and are well positioned to take advantage of key natural assets and visitor attractions that would not be affected.
522. The 2014 Regeneris study referred to above identifies the more remote parts of Powys as being more sensitive to wind farm development. It concludes that the potential negative effect on visitor numbers may nevertheless be low overall, but could be moderate in some circumstances. It therefore advises careful consideration of applications in this area through the planning system. The applications before the inquiry have been subject to very careful consideration. I have identified no likely significant adverse effect on the overall integrity or use of Glyndwr's Way, the use of other recreational rights of way, or any other tourist attraction or resource. I therefore do not consider that particular circumstances have been identified that would indicate that the proposed developments would have other than a low overall effect on tourism. The study has not found any evidence to suggest that a tipping point, beyond which the value judgements made by some visitors would change as a consequence of increased rates of development, could occur in practice [A7, 4.29-4.32 & 4.44]. The study has not identified any evidence that wind farms on tourist routes deter tourists. It advises that it is vital that any negative impacts during construction should be minimised and mitigated, but this can be secured by the agreed conditions.
523. I visited one holiday park that has reported a recent drop in business which is attributed to proximity to the route of the proposed 400kV line. However, there may be other factors at play, and the proposed wind farms before the inquiry could be served by much less intrusive 132kV infrastructure [A7, 4.15].
524. The evidence does not in my view support the widespread fear, expressed by the Alliance and many local residents, that the proposed wind farms before the inquiry would cause significant harm to the local tourism industry as a whole, either during the construction phase or during their operational life.

Socio-Economic Effects

¹⁰⁶ ALL-SOCIOECO-POE-S4-04-ADDENDUM

525. It is not disputed that communities with wind farms are not generally better off than those without, or that Carno and Llandinam (which have wind farms in the vicinity) have experienced above average declines in young people, and increases in elderly residents [A7, 2.5]. However, factors other than wind farm development are likely to be at play, and no link between wind farm development and the age profiles of local communities has been demonstrated. In recent years Carno has experienced a very large rise in unemployment, but this is likely to be due to the closure of a factory which provided a large proportion of local jobs. Wind farm development alone cannot fully compensate for the loss of such employment opportunities or address imbalance in community age profiles. Nevertheless, I consider that the benefits of the proposed schemes in terms of job creation, supply chain opportunities and generation of business rates would amount to a substantial benefit to the local economy.

526. The Council has concluded that, given the proposals would be within SSAs, and that they are for nationally important infrastructure projects, there is insufficient evidence to support refusal of some or all of the proposed projects on the grounds of socio-economic impacts. I agree with that view, but would add that the socio-economic benefits that have been identified should be taken into account in the overall planning balance, notwithstanding that Powys has relatively full employment and a stable economy [A7, 4.2].

In-Combination Effects on Biodiversity

European Designated Sites

527. PCC and NRW have raised no concerns in relation to the water quality of the Montgomery Canal SAC, and I have no evidence to substantiate the Montgomery Wildlife Trust's concerns in this respect [A7, 6.8]. However, the applications before the inquiry have the potential to affect four European Designated Sites, as listed in the SoS's statement of matters for the inquiry.

The Berwyn and South Clwyd SAC

528. This is located north of SSA B, and at its closest points would be about 0.5km from the Carnedd Wen site, and about 4.5km from Llanbrynmair. It is designated for a number of habitat features that would not be affected by the proposed development. NRW advise that the proposed developments would not be likely to have a significant effect on this European site, either alone or in combination with other plans or projects¹⁰⁷.

The Berwyn SPA

529. The Berwyn SPA is classified for breeding peregrine, hen harrier, merlin and red kite. The Carnedd Wen and Llanbrynmair wind farms would be 0.5km and 4.5km respectively from the SPA at its nearest point.

530. NRW has, advised that, subject to mitigation measures proposed in RWE's 2011 SEI being implemented, it should be possible to conclude that the Carnedd Wen scheme would have no adverse effect on the integrity of the Berwyn SPA. Mitigation measures have been embedded in the proposals and planning conditions. Subsequent to NRW's Briefing Note on the HRA requirements, draft conditions relating to a suite of management plans and the engagement of a suitably qualified and experienced ecological clerk of works have been put forward by NRW and RWE.

531. With regard to Llanbrynmair, RES's SEI Appendix 6.2 contains the relevant information to inform an HRA for the Berwyn SPA. NRW's advice is that subject to mitigation measures within the ES/SEI being secured by appropriate conditions, it should be possible to conclude no significant effect on the Berwyn SPA alone or in combination with other plans or projects.

¹⁰⁷ See NRW: Briefing Note on the Habitats Regulations Assessments Required

Pen Llŷn a'r Sarnau SAC

532. This is a marine site on the coast of Mid Wales, which includes the Dyfi Estuary. Part of the Carnedd Wen scheme is within the relevant catchment, but only this project is relevant to this site. Potential effects could arise from contaminants entering watercourses draining into the SAC during felling, construction and restoration phases.
533. Subject to the implementation of mitigation measures embedded in the scheme and draft conditions, NRW does not consider that the proposal would be likely to have any significant effect on the Pen Llŷn a'r Sarnau SAC, alone or in combination with other plans and projects. I am satisfied that the relevant draft conditions would be suitable, and would ensure the implementation of suitably designed measures contained in final plans.

The River Wye SAC

534. The Llandinam 132kV line and the proposed Llandinam, Llaithddu and Llanbadarn Fynydd wind farms would be wholly or partially located within the catchment of tributaries to the River Wye. The relevant applicants have submitted a joint hydrological statement and a number of draft conditions have been agreed between NRW and the relevant applicants. Taking into account the mitigation measures embedded in the proposal and the agreed conditions, NRW is of the view that the proposals would not have a likely significant effect on the River Wye SAC alone or in combination with other plans or projects. I am satisfied that the relevant draft conditions that have been agreed would be suitable, and would ensure the implementation of suitably designed measures contained in final plans.
535. A temporary Bailey bridge is proposed for the Llandinam wind farm across the River Wye near Builth Wells. Consent is not sought for this bridge as part of this application. It is common ground between NRW and CPL (CPL-SOCG-HYDRO-CON-003-S4) that the proposed bridge design, with abutments set back from the river banks and crossing the river in a single span, means that no part of the construction would be in the river or in a wetted area. A separate draft Environmental Management and Pollution Prevention Plan (EMPPP) has been submitted (CPL-SOCG-CON-003-Hydro-ANNEX4-S4), setting out measures to minimise erosion and release of sediments into the watercourse. CPL and NRW agree that the draft EMPPP conforms to good practice. Consent for the temporary bridge can be made conditional upon the approval and implementation of the finalised EMPPP. CPL has proposed that construction should be timed to avoid the spawning season. Some other conditions and European Protected Species Licences may be required.
536. NRW considers that, subject to appropriate mitigation measures and conditions (which have been identified), there is no reason to believe at this stage that there would be a likely significant effect on designated features of the SAC as a consequence of the construction and use of the Bailey bridge, either alone or in combination with other plans and projects. CPL and NRW further agree that it should be possible through appropriate mitigation, secured by conditions attached to any planning permission that is granted for the bridge, to conclude that the proposal for the bridge would not adversely affect the integrity of the SAC. I have no reason to differ.

Appropriate Assessment - General

537. NRW has advised that Appropriate Assessment is required, and that it will be important for the Secretary of State to satisfy himself as part of the Appropriate Assessment (for all sites) that:
- (a) the mitigation measures proposed in the ES and SEI will be delivered as part of suitable conditions;
 - (b) the general principles and measures in the draft plans will be translated into suitably designed and site-specific measures in final plans;

- (c) that measures are in place to ensure that final plans are assessed and approved by appropriate bodies; and
- (d) that measures would be in place to ensure that there is compliance with, and if necessary enforcement of all measures in the final plans.

538. I am satisfied that the draft conditions I have included as Annexes are suitable and would deliver the mitigation measures set out in the ES and SEI. I have no reason to doubt that the general principles and measures in the draft plans will be translated into suitably designed and site specific measures in final plans to be submitted for approval. The LPA would be the appropriate body to assess and approve the final plans, and the draft conditions include a requirement to seek and obtain its approval. The draft conditions would empower the LPA to ensure compliance with, and if necessary enforce all measures in the final plans.

539. Whilst NRW advise that Appropriate Assessment is required, I consider for the above reasons that for all four relevant European sites, it should be possible to conclude that there would be no significant effect from any of the proposed developments alone, or in combination with other plans or projects.

Matters in Common

540. The following are matters that concern some or all of the applications before the inquiry, and so were dealt with as matters in common.

Ecology and Wildlife

541. The Alliance referred during the inquiry to a Diagram produced by DECC, comparing the land take required for a nuclear power station, and an onshore wind farm with a similar generating capacity¹⁰⁸ [A7, 6.2]. Clearly, a wind farm would require many more times the land area. However, as the environmental implications of these forms of electricity generation are very different I do not consider that the comparison usefully informs the inquiry.

542. The Alliance considers the approach taken by the applicants to ecology and wildlife to have been piecemeal, and advocates an ecosystems approach [A7, 6.1]. However, PPC and NRW have no objection to the approach taken and it is in accordance with accepted good practice for projects such as these.

Noise and Health

543. Evidence of direct experience of wind farm noise causing disturbance and stress requiring medication was presented to the inquiry by Mrs Siddle, a resident of South Ayrshire. Her complaints about noise have not been resolved, despite investigations. Her sincerity is not doubted. However, from answers to my questions it would appear that some of the turbines in question are unusually close to her property. Whilst I have sympathy for her situation, each case must be considered on the basis of the individual circumstances that apply. Little meaningful comparison can therefore be drawn with any of the proposals before the inquiry.

544. General concerns about the health effects of wind farm noise and vibration were also expressed by a witness for the Alliance who is a medical practitioner with experience in such matters [A7, 7.1-7.2]. Concerns about noise have been reviewed by other NHS professionals, and in 2013 a further review was carried out behalf of the Scottish Government, led by researchers from Salford University. Annoyance and sleep disturbance are identified as the two main potential effects of wind farm noise. It is not disputed that some persons have experienced annoyance and stress from audible wind farm noise, or that

¹⁰⁸ ALL-ECOLOGY-POE-S4-06

stress and sleep disturbance can cause health effects. Wind turbine noise includes a component of rhythmic amplitude modulated noise, often referred to as blade swish, which is not typical of other forms of noise from other forms of development and which could be more annoying. I therefore do not accept the proposition, put for the applicants, that there is no reason to treat the impact of noise from wind farm development differently to noise from any other form of development [A1, 64]. However, ETSU-R-97 takes normal amplitude modulation into account. It gives indicative noise levels calculated to offer a reasonable degree of protection to wind farm neighbours, without placing unreasonable restrictions on wind farm development, and is endorsed by Government. On the evidence before me I am satisfied that compliance with ETSU-R-97 would provide appropriate protection from the potentially harmful effects of normal wind farm noise.

545. TAN 8 refers to a comprehensive study of vibration in the vicinity of a modern wind farm, which was undertaken in 1997. Further investigations were carried out in 2004 / 2005 by researchers from Keele University. Tan 8 finds no evidence that ground transmitted noise from wind farms is at a sufficient level to be harmful to human health. The latter study found that levels are so small that they are almost impossible to detect, and pose absolutely no risk to human health. I am aware of no substantive evidence that supports fears that such vibrations cause adverse health effects.
546. The Alliance considers that consent should only be granted subject to conditions similar to those applied in the 'Den Brook' appeal decision, which limit the peak to trough modulation of wind turbine noise over specified time periods [A7, 7.1(14)]. However, subsequent investigations have shown that the methodology is open to interpretation, and that the condition would be breached for much of the time in rural environments - even in the absence of wind farm development. It is not now normally applied. The standard provisions for tonal noise contained in the ETSU-R-97 methodology were developed after extensive research. In my view the noise conditions agreed between the applicants and PCC, which are based on ETSU-R-97 and are now widely applied, would provide an appropriate degree of protection from annoyance and sleep deprivation that might otherwise be caused by 'normal' amplitude modulation.
547. It has been known for some time that an unexpected form and degree of amplitude modulation can occur at some times, at some wind farms, but until recently the phenomenon has been poorly understood. Various terms for this phenomenon have been used. I shall refer to it as Excess Amplitude Modulation (EAM).
548. Research into EAM was published in December 2013 by RenewableUK (ReUK). The cause and effects of EAM are now known with greater certainty. The research supports the claim that EAM can cause increased annoyance. It is difficult to predict where and when EAM may occur, but an objective technique for identifying and quantifying EAM, and an objective EAM test and regulation methodology have been developed by the industry. A rating methodology similar to that used to account for the tonal quality of wind noise in ETSU-R-97 is proposed. The Institute of Acoustics has welcomed the publication of the ReUK research but has noted that the proposed objective test and rating methodology needs a period of testing and validation before it can be considered to be good practice. Measures to mitigate EAM where it is found are also developing. It may be some time before methods for controlling and mitigating the effects of EAM are tested and validated, and longer still before they find their way into guidance endorsed by government.
549. The risks of annoyance or sleep deprivation being caused by EAM will depend on factors such as topography, layout and proximity to dwellings. They will be different each of the wind farms before the inquiry. However, they cannot be ruled out at any of the application sites. The applicants disagree about the need for a condition relating to EAM, some accepting that a condition should be imposed, and others considering that it is a matter that can be left to be dealt with under other legislation. Some SoS and Appeal decisions since the publication of the ReUK report have imposed a broad 'scheme to be agreed' condition. Others have not imposed any [A4, 109. 110; A9, 917].

550. I consider that as the possibility of annoyance being caused by EAM cannot be ruled out at any of the proposed wind farm sites there should be some mechanism for controlling it, should it occur. There would be a considerable difference between a level of effect likely to cause annoyance and harm to amenity, and a level of effect likely to cause a statutory nuisance. I therefore do not consider that control should be left to other legislation. The tests and rating methodology put forward by ReUK are not yet accepted as best practice and should therefore not form the basis for conditions at this stage. However, the lead-in period to construction of the proposed wind farms is long, and it is likely that good-practice guidance and improved methods for mitigating EAM will be developed in the intervening period. A condition simply requiring a scheme to be submitted, agreed and implemented has been found to be acceptable by the SoS in the past. Nevertheless, the degree of precision of such a condition would be improved by a requirement, in the first instance, for the scheme to be in accordance with good practice guidance endorsed by Government at the time of submission. In the absence of such guidance the requirement could cascade down to guidance endorsed by a recognised independent body such as the Institute of Acoustics. Failing that, it would be for the applicant to submit a scheme, which could be along the lines advanced by ReUK. It would be for the local planning authority to consider whether such a scheme would be acceptable. However, I do not consider that a condition should specifically endorse a scheme along those lines, as such a scheme has not yet been independently validated.

Fire Hazard

551. Wind turbines have occasionally caught fire, but operators have rigorous inspection and safety procedures. I have no evidence that such fires have caused any personal injury or have resulted in the release of significant amounts of toxic substances [89].

PPW and TAN 8

552. The Alliance does not consider that there are any valid Welsh energy targets to be met. It therefore considers that no weight should be given to any element of PPW or TAN 8 which is referable back to the emergence of TAN8 as a delivery mechanism for delivering enumerated onshore wind energy policy targets, including the maximum capacities indicated in the Minister's letter of July 2011. It does not accept that 'within (and immediately adjacent) to the SSAs, the implicit objective is to accept landscape change i.e. a significant change in landscape character from wind turbine development'¹⁰⁹ [A7, 1.11-1.35]. However, the Welsh Government's policy and guidance set out in PPW, TAN 8 and subsequent Ministerial Statements and letters has not been legally challenged, and in my view should therefore carry full weight.

Energy Need and Balance

553. The Alliance refers to evidence that the UK is on target to produce more than 15% of its energy needs from renewable sources by 2020, by some margin. It therefore considers that the measure of urgency and any need for the contribution that would be made by the application schemes is very substantially diminished, or now even removed, and that it would be irrational to give further contributions to the 2020 target any significant weight [A7, 1.37-1.45]. However, the policy remains that to hit the target, and to largely decarbonise the power sector by 2030, it is necessary to bring forward new renewable electricity generating projects as soon as possible. The need for new renewable electricity generation projects is therefore urgent¹¹⁰. I therefore consider that the contribution that the proposed schemes would make towards the supply of renewable energy in the UK should carry substantial weight.

Public Opinion / Community Surveys

¹⁰⁹ TAN 8, Annex D para 8.4

¹¹⁰ EN-1, 3.4.4

554. Some people who have submitted written representations to the inquiry or who were present at the Dolfor session have supported the proposed development as they would create good quality employment opportunities. Others see wind turbines as a means of diversification of rural enterprises. There is some support from persons concerned about the effects of global warming. However, the vast majority of local residents who spoke during the inquiry were opposed to the applications. The petition, consultations and surveys organised by the Alliance and Community Councils, together with the many individual representations made by local residents in writing, also leave me in no doubt that a very high proportion of local residents object to the proposals [A7, 2.8-2.13].
555. Nevertheless, whilst the substance of local views must be considered, the duty is to decide each application on its planning merits. As a general principle, local opposition or support for a proposal is not on its own a reasonable ground for refusing or approving an application, and the Alliance recognises that planning inquiries are not decided on the balance of opposition and support [A7, 2.7].

Other Matters Raised by Local Residents

556. Some local residents are concerned that the proposals would have an effect on their ability to appreciate Powys' 'dark skies', but as the turbines and associated infrastructure would not be illuminated (other than by red or infra-red navigation lights) at night I do not consider such concerns to be well-founded [90; A7, 2.10].
557. Many local residents have raised concerns about subsidies, the cost and economics of wind farms generally, and doubt their efficiency and ability to make a reliable contribution towards electricity demand. Many see the proposals as benefitting others, at the cost of their enjoyment of the environment. However, Welsh and UK planning policy and guidance recognises that onshore wind power offers the greatest potential for an increase in the generation of renewable energy in the short to medium term¹¹¹ and that onshore wind farms will continue to play an important role in meeting renewable energy targets¹¹². In the light of these policies I consider that these concerns should carry little weight, not withstanding the extent and strength to which they are felt.
558. The Alliance and many local residents have expressed concerns about the effect of the proposed development on property values. Research produced by Oxford University in March 2007 provides evidence that there are many variables driving fluctuations in property values in areas where wind farms are sited, some of which are not related to the wind farms themselves. Some local residents have, however, referred to a recent RICS letter to the Secretary of State advising that the Oxford University research should be taken into context and treated with caution as further research is now needed¹¹³. Some local residents who have had their property on the market recently have also been advised by their estate agents that the proposed developments have had a negative effect on house prices. However, in recent years wider economic factors have had significant effects on house prices generally, and other variables may be at play. It is far from clear that there is a direct causal link between wind farms and associated infrastructure proposals, and a general negative effect on house prices in the area. In the circumstance I do not consider that there is substantial evidence that the proposed developments would have a widespread negative effect on local property values.
559. A number of local residents have expressed concern about the publicity given to the applications and the inquiry. However, I am satisfied that all the statutory requirements have been met. In addition to the basic requirements, information has been made available via a dedicated web site and directly contacting interested persons about updates to the programme by e-mail. These and other measures have made the inquiry as open as

¹¹¹ TAN 8 para 2.2

¹¹² EN-3 para 2.7.1

¹¹³ ALL-SSAB-POE-01/26

reasonably possible. Evening sessions have been held in locations convenient to local communities, which were attended by many hundreds of local residents. Many other local residents participated at the main inquiry venue. I consider that there has been highly effective involvement by the local community, and this has considerably benefited the rigor of the inquiry.

Overall Conclusions

Llandinam Repowering

Consistency with the objectives of the Government Policy on the energy mix and maintaining a secure and reliable supply of electricity as the UK makes the transition to a low carbon economy, and achieving climate change goals (Relevant Matter (a))

560. The UK Government's and the Welsh Government's energy policy and targets for renewable energy are reflective of the UK's international obligations. They support onshore wind as it continues to offer the greatest potential for delivering renewable energy. The Llandinam repowering scheme would be consistent with the objectives of the Government Policy on the energy mix and maintaining a secure and reliable supply of electricity as the UK makes the transition to a low carbon economy, and achieving climate change goals.

Consistency with the Policies Relating to Generation of Renewable Energy Contained Within the Relevant National Policy Statements for Energy Infrastructure: Overarching National Policy Statement for Energy (EN-1) July 2011 and National Policy Statement for Renewable Energy Infrastructure (EN-3) July 2011 (Relevant Matter (b))

561. EN-1 includes a presumption in favour of granting consent to applications for energy NSIPs, given the urgency for this type of infrastructure. The scheme and the application for the associated grid connection have been submitted in tandem, with both being considered at the inquiry in accordance with EN-1 and EN-3 aspirations.

562. EN-1 recognises that virtually all energy NSIPs will have effects on the landscape. However, projects need to be designed carefully, taking account of the potential impact. Having regard to siting, operational and other constraints the aim should be to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate. In this instance the scheme has been modified to mitigate harm to the SV&CBRHL, and the local access proposals can be further modified at the detailed design stage to overcome PCC's outstanding objection with regard to the effect of loss of trees along the local access route. Reasonable mitigation would therefore be provided. I have concluded that the individual and combined landscape and visual impact of the proposed development, taking into account cumulative impact with other wind farms in the Powys area which have already been granted planning permission or where planning permission has been applied for, would be acceptable.

563. EN-1 also recognises that all proposed energy infrastructure is likely to have visual effects. In this instance I have identified no effects on sensitive receptors such as local residents or visitors of a magnitude that would outweigh the benefits of the project.

564. I am satisfied that the proposal would avoid significant adverse impacts on health and quality of life from noise. Indeed, some improvements are likely in the vicinity of the proposed wind farm in this respect, as a consequence of replacing old, noisy turbines (EN-5.11.9).

565. I have found that on balance, the proposed development would have positive socio-economic effects (EN-1 5.12.6).

566. EN1 recognises that new energy NSIPs may have substantial impacts on the surrounding transport infrastructure. However the applicant has sought to mitigate these impacts during all phases of the proposed development, especially the construction phase. I have found that

off site works and other mitigation measures would be sufficient to reduce the impact on the transport infrastructure to an acceptable level. I am satisfied that abnormal loads can be safely transported in a way that minimises inconvenience to other road users and local communities and that the environmental effects of this and other construction traffic, after mitigation, would be acceptable (EN-5 2.7.78).

567. The effects on water quality and resources have been assessed, and subject to conditions found to be acceptable (EN-1 5.15).

568. With regard to the assessment principles set out in paragraphs 2.5.31 – 2.5.36 of EN-3, the proposed development would not compromise the objectives of any sites with nationally recognised designations. No significant impacts have been demonstrated on the historic environment as a consequence of the proposed repowering scheme. Subject to partial undergrounding indirect impacts as a consequence of the associated grid connection would be acceptable. The proposal is not situated within a Green Belt.

569. The generic biodiversity and geological conservation impacts covered in Section 5.3 of EN-1 have been considered and found to be acceptable, subject to mitigation that can be secured by agreed conditions. Whilst there remains a need to carry out an Appropriate Assessment in respect of European Designated Sites it should be possible to conclude that there would be no significant effect on any site from the proposed development alone or in combination with other projects. I am satisfied that the proposed wind farm layout and construction methods have been designed to minimise soil disturbance and that there would be minimal disruption to ecology, the release of CO₂, and that the carbon balance savings would be maximised.

570. The risk of shadow flicker affecting health is negligible (EN-5 2.7.63 – 2.7.72).

571. Although EN-5 advises that repowering schemes should be determined on their individual merits (EN-5 2.7.28) the proposed development is unusual in that the existing P&L wind farm does not have to be decommissioned. I have concluded that there is therefore a realistic fall back position and that it would be appropriate to take this into account. In any event I consider that the proposed scheme would be well designed, would take account of the potential impacts, would minimise harm to the landscape, and would provide reasonable mitigation where possible.

572. I conclude for the above reasons that the proposed development would be consistent with the policies relating to generation of renewable energy contained within EN-1 and EN-3.

The extent to which the proposed developments are consistent with Welsh Government and local policies: including Planning Policy Wales, Edition 7 (July 2014)(PPW); Technical Advice Note 8: Planning for renewable Energy (2005)(TAN 8); and Energy Wales: A Low Carbon Transition (2012); and the Powys Unitary Development Plan (adopted 2010)(UDP)(Relevant matter (c))

573. The Welsh Government's aim, as set out in PPW (12.8.6), is to secure an appropriate mix of energy provision which maximises benefits to the economy and communities, whilst minimising environmental and social effects. I consider for the reasons above that the proposed development would be consistent with that aim.

574. The application site is located outside the 'broad brush' boundaries of SSA C as mapped in TAN 8. However, it is almost entirely within the refined boundary identified by Arup in a study for PCC using the potential methodology set out in Annex D of TAN 8. Although the results of the Arup study were not adopted there is no dispute that the application site is suitably unconstrained, and therefore the possibility of large scale wind farm development can be considered within that area.

575. The Minister's letter of July 2012 clarifies the matter of maximum installation capacities for onshore wind within the SSAs. It confirms that the potential estimated in *A Low Carbon Revolution: the Welsh Assembly Government Energy Policy Statement* (March 2010) was based on the maximum capacities considered appropriate for the SSAs in TAN 8, and that

the Welsh Government remains committed to achieving this potential. The maximum capacity for SSA C identified in the July 2011 letter is 98MW. The proposed development (as amended) would make a net contribution of about 72 MW towards the Welsh Government's onshore wind energy aspiration for 2GW in total capacity by 2015/17.

576. The matter of whether the application site should be considered to be within SSA C for the purposes of TAN 8 is not agreed between the parties. However, the Welsh Government's position, as set out in its letter of 21st January 2013 to the inquiry (CON 001-002) is that it is just outside SSA C. As it is a repowering scheme its position is that it should be encouraged provided that the environmental impacts are acceptable. I have concluded that they would be acceptable. I therefore conclude that the proposed development would be consistent with Welsh Government Policies set out in PPW and TAN 8. It would also be consistent with the Welsh Government's ambition to create a low carbon economy that delivers jobs and long-term wealth and benefits to support communities, as set out in *Energy Wales – A low Carbon Transition (2012)*.
577. I consider the most relevant of the policies set out in the Powys UDP to be Policy E3, which relates specifically to wind power. Under this policy, applications for wind farms including extensions to existing sites will be approved, provided that a number of criteria are met. I have concluded that the proposed development would not unacceptably adversely affect the environmental and landscape quality of Powys, either alone or in combination with other proposed or existing similar developments. It would not unacceptably affect wildlife habitats or species that are of international, national or local importance, or unacceptably adversely affect the occupants or users of sensitive properties or their amenities by reason of noise, vibration, shadow flicker or reflected light. It would not unacceptably impact on any buildings or features of conservation or archaeological interest, or unacceptably adversely affect the enjoyment and safe use of highways and the public rights of way network, especially bridleways.
578. I consider for these reasons that the proposed development would be consistent with UDP Policy E3. I find nothing in any other UDP policy that would lead me to conclude that it would conflict with the UDP as a whole.

Conditions

579. The majority of the conditions that would be appropriate should consent be granted are broadly agreed between the parties. I have considered the suggested conditions in the light of the discussion at the inquiry, and the advice in Department of the Environment Circular 11/95 and Welsh Office Circular 16/2014.
580. A condition is necessary setting out the approved plans and documents, in the interests of clarity and to facilitate possible appeals relating to non-material amendments.
581. The project is envisaged and assessed as a sequential programme of decommissioning and repowering in stages over about 3 years. The normal duration of 25 years from first export would therefore not be appropriate in this instance. The applicant acknowledges the Council's legitimate concern that, if decommissioning is required 25 years after final commissioning, the permission could be extended indefinitely by failing to commission the last turbine. A definition of final commissioning which includes a backstop of three years after the commencement of development has therefore been proposed. However, this mechanism is cumbersome. I consider that a condition setting the duration of the consent at 25 years from the date of final commissioning, or 28 years from the date of commencement, whichever is the earlier, would be clearer and therefore preferable.
582. As there is sufficient evidence of the current condition of the land in the ES it is not necessary for a photographic record to be made of areas that would be disturbed by the proposed development before commencement. It is also likely that required habitat management plans would bring about improvements over the lifetime of the proposed development, and in that event it would be undesirable to restore the land to its current

condition on decommissioning. The photographic record would then be of little value. I therefore consider that the condition suggested by the Council in this regard is unnecessary.

583. I find no justification for excluding signs relating to directions, the condition of the environment, and arrangements for the operation of the site from the range of signs covered by the Council's suggested signage condition. The Council's draft condition would therefore not be overly prescriptive in this respect. Approval for any signs could be obtained from the LPA either through an application under the suggested condition or, for some types of sign, via an application made under the Town and Country Planning (Control of Advertisement) Regulations 1992. There would be no need for both. I therefore do not consider that the draft condition suggested by the Council would lead to unnecessary duplication of control. The Council's draft is therefore to be preferred.
584. The Council has suggested a condition requiring a Training and Employment Management Plan, with a view to the promotion of training and employment opportunities for local people. I have identified that significant opportunities would exist for local businesses and jobs would be created during the construction and operation phases, and this would be a benefit of the proposal. However, such benefits are likely to arise whether or not such a plan is in place, and in any event the acceptability of the scheme does not turn on this consideration. The proposed condition would therefore be unnecessary, and unreasonably restrictive.
585. The applicant does not consider that an EAM condition is necessary, but for reasons set out at paragraph 551 above I consider that an EAM condition should be imposed.
586. There are minor differences between the parties about the wording of some other conditions, arising from the timing and sequence of decommissioning works. Similarly, there is minor disagreement about the wording of other conditions where the principles are not in dispute. I have sought to resolve such differences in the interests of precision and clarity.
587. A Schedule of recommended conditions that comply with Circular advice, to be imposed if the Secretary of State grants section 36 consent and deemed planning permission as per my recommendation, together with reasons insofar as those relating to any deemed planning permission is concerned, is set out in Annex A to this report.

Planning Balance and Overall Conclusions (including Relevant Matters (d) to (n))

588. Subject to the recommended conditions I consider the proposal (as amended) to be consistent with National, Welsh and local planning policy. It would also be consistent with the statutory duties under section 9 of the Act. Appropriate regard has been given in the proposals to all the relevant matters before the inquiry, and reasonable mitigation is available and can be secured by conditions.
589. The proposed scheme would remove an existing wind farm for which there is no decommissioning scheme. It would generate up to 102MW of renewable energy, representing an increase of about 72MW. Jobs would be created during the decommissioning, construction and operational phases. Up to £40million of the development cost is estimated to go to local procurement of goods and services. Income for landowners would provide long-term security for farming operations. As noted by the Council, these are considerable benefits.
590. There would be some significant adverse landscape and visual effects but these would be limited and localised. In the context of the existing P & L wind farm there would be visual enhancement in some areas. Other adverse effects would be mitigated, and the residual effects would not be unacceptable.
591. I consider that the benefits of the proposal would clearly outweigh any residual adverse effects. The Council has concluded that the overall balance in the public interest now justifies the grant of an appropriately conditioned consent, and I have no reason to

disagree. I conclude that section 36 consent and deemed planning permission should be granted subject to the conditions set out in the attached Annex A.

RECOMMENDATION

592. I recommend that section 36 consent and deemed planning permission be granted, subject to the conditions set out in the attached Annex A

Llaithddu

Consistency with the objectives of the Government Policy on the energy mix and maintaining a secure and reliable supply of electricity as the UK makes the transition to a low carbon economy, and achieving climate change goals (Relevant Matter (a))

593. There is no dispute that the proposal would be consistent with these objectives, and it would also make a significant contribution to binding goals introduced by legislation including the Climate Change Act 2008. The importance of these binding goals should be recalled in assessing a proposal. However, this high-level policy does not identify the means or location of the infrastructure required to meet those objectives, and consistency with such policy does not itself mean that the proposal is acceptable.

Consistency with the Policies Relating to Generation of Renewable Energy Contained Within the Relevant National Policy Statements for Energy Infrastructure: Overarching National Policy Statement for Energy (EN-1) July 2011 and National Policy Statement for Renewable Energy Infrastructure (EN-3) July 2011 (Relevant Matter (b))

594. Whilst EN-1 includes a presumption in favour of granting consent to applications for energy NSIPs, it recognises that projects need to be designed carefully, taking account of the potential impact and with the aim of minimising harm to the landscape. There is therefore a balance to be struck.

595. In this instance the proposed scheme would effectively be in two parts. The Council does not dispute that the northern part would be well designed and located. It would be consistent with EN-1 and EN3 in this respect. The Council considers it to be acceptable in landscape and visual impact terms, and I have no reason to disagree.

596. Modern wind turbines are large structures and there will always be significant landscape and visual effects for a number of kilometres around a site. However, their arrangement should be carefully designed to minimise those effects. I have concluded that the southern group would cause a high degree of harmful landscape change within the upper Marteg Valley, and major adverse visual effects in that area and within the setting of Bwlch y Sarnau. Those effects would arise as a consequence of the linear layout and design of the group, and the decision to place the proposed turbines on the highest ground on a ridge. Whilst the design is a logical response to the terrain and the desirability of taking maximum advantage of the prevailing wind, these are not technical, siting, operational or other constraints that would require the turbines to be placed on the ridge. I conclude that the southern group would not be well designed or suitably laid out in accordance with the aim of minimising or mitigating effects on the landscape or visual amenity. There would be conflict in this respect with the generic landscape considerations set out at paragraph 5.9.8 of EN-1, and with considerations specific to onshore wind farm impacts at paragraphs 2.7.48 / 49 of EN-3. I shall return to the matter of whether consent could be granted for the northern group of turbines alone, following my overall conclusions with regard to this application.

597. With regard to the scheme as a whole (including the southern group of turbines) I have concluded that the proposed development would be acceptable in all other respects. There would therefore be no conflict with other parts of EN-1 or EN- 3. Nevertheless I conclude that the proposal would not be consistent with the policies relating to generation of

renewable energy contained within the relevant national policy statements for energy infrastructure as a whole.

The extent to which the proposed developments are consistent with Welsh Government and local policies: including Planning Policy Wales, Edition 7 (July 2014)(PPW); Technical Advice Note 8: Planning for Renewable Energy (2005)(TAN 8); Energy Wales: A Low Carbon Transition (2012); and the Powys Unitary Development Plan (adopted 2010)(UDP)(Relevant matter (c))

598. PPW recognises that the need for wind energy is a key part of meeting the Welsh Government's onshore wind aspiration set out in *Energy Wales: A Low Carbon Transition (2012)*. However, it also recognises that the introduction of new, often very large structures for onshore wind needs careful consideration to avoid and where possible minimise their impact (PPW, para 12.8.12).
599. The entire Llaithddu scheme would be located just outside the broad brush boundaries mapped in TAN 8, but all parts of the site have most of the characteristics of SSAs described at paragraph 2.9 of TAN 8. Almost all of the proposed turbines would be within the refined boundaries defined by the Arup refinement report. However, as noted previously, the Arup study is not a reliable guide to the acceptability of a particular proposal.
600. As I have noted there will always be significant landscape and visual effects for a number of kilometres around a site containing large modern wind turbines. Annex D of TAN 8 therefore recognises that the implicit objective to accept landscape change from wind farm development within SSAs applies to areas immediately adjacent to them. However, the upper Marteg Valley is not immediately adjacent to the TAN 8 SSA C boundary. It is therefore in an area within which the implicit objective of TAN 8 is to maintain the landscape character (TAN 8, Annex D, paragraph 8.4). Because of these competing considerations, and in order to minimise landscape and visual effects beyond them, particular care is required in the design of wind farms on the boundaries of SSAs. The setting back of turbines from the break of a slope has become a well established practice in Powys and elsewhere in Wales as one means of achieving such aims. As I have noted, the layout of the proposed scheme in relation to the upper Marteg Valley would not follow that practice.
601. I have also concluded that there would be a major adverse visual effect on the setting of Bwlch y Sarnau. Whilst no individual residential property would be made an unacceptable place to live, there would therefore be a significant adverse effect on the general amenity and visual environment of the settlement. There would be conflict in this respect with paragraph 3.1.1 of PPW, which seeks to protect the amenity and environment of towns, cities and the countryside through the planning system.
602. PPW recognises that good design can protect and enhance environmental quality (paragraph 4.11). As the design of the proposed development would not minimise its environmental impact I conclude that there would be conflict with Welsh Government and local policies set out in PPW and TAN 8.
603. The Powys UDP also recognises the careful balance to be struck between the pressing need to combat climate change and the need to protect a valued and attractive landscape. Criterion 1 of UDP Policy E3 resists proposals for wind farms that would unacceptably affect the environmental and landscape qualities of Powys. As noted in the accompanying text, the Council itself does not consider that a criteria based policy on its own represents a particularly good basis for future decision making, and the up-to date evidence-based supplementary planning guidance has not yet come forward to adoption. The meaning of 'acceptable' in the context of criterion 1 is therefore unclear. Nevertheless, I consider that harm arising unnecessarily as a consequence of the design and layout of a scheme would be unacceptable in the context of UDP Policy S3. I conclude that the proposal would also conflict with UDP Policy S3, and thus with the development plan for the area.

Conditions

604. A condition suggested by the Council in relation to the junction of the local access road with the A483 is necessary as some works, though minor, are proposed in the Draft TMP, but are not yet fully detailed. A requirement to keep visibility splays free of obstructions at junctions along the local access road is necessary and reasonable in the interests of safety, but the Council's draft condition would benefit from amendments making it clearer that this applies only to junctions along the county road where works are required.
605. It is not clear what 'capacity' means in the context of the Council's draft condition 30 relating to AILs. The applicant's draft is clearer in this respect and covers the necessary matters.
606. There are some differences between the parties relating to the details to be included within the required traffic plan for AILs. The Council's draft would benefit from greater clarity regarding events such as the Royal Welsh Agricultural Show, as suggested by the applicant. The applicant's draft would also ensure that detailed proposals for works along the route would be compatible with Llandinam's requirements and therefore avoid unnecessary works. The detailed design of those works would be subject to other conditions. The applicant's draft is therefore to be preferred.
607. With regard to the suggested AIL management strategy condition, coordination of AIL deliveries with other schemes is properly a matter to be approved by the Council as the highway authority, though in practice the availability of police escorts may dictate the schedule. However, in other respects the applicant's draft is to be preferred, as other provisions suggested by the Council are over-prescriptive or redundant.
608. A means of monitoring construction vehicle traffic movements away from the site is necessary to avoid contractors using routes that are not envisaged or assessed. This could include the use of liveried vehicles, but other measures may be available. I do not consider that it would be unlawful to control general construction traffic during special events, but I have no evidence that it would be necessary to do so. The objectives of the proposed Construction Traffic Management Plan would be secured by the applicant's draft which is more flexible and therefore to be preferred.
609. The applicant is agreeable to a condition requiring remediation of any damage to highway infrastructure that is directly attributable to the development. However, the condition suggested by the Council would be unreasonable as it would require condition surveys of enormous scope – effectively of all highways from Newport Docks to the site, before, during and after the development. With minor modification, the applicant's suggested condition would allow for more reasonable means of assessing any attributable damage and providing for remediation.
610. Conditions relating to television interference should be time limited. Otherwise the need for such a condition is accepted by the applicant. As I have noted in relation to the Llandinam scheme, a condition relating to a Training and Employment Management Plan is not necessary.
611. The applicant accepts the need for noise conditions, including an EAM condition in the form I have indicated would be appropriate earlier in this report.
612. A Schedule of recommended conditions that comply with Circular advice, to be imposed if the Secretary of State grants section 36 consent and deemed planning permission as per my recommendation, together with reasons insofar as those relating to any deemed planning permission is concerned, is set out in Annex B to this report.

Planning Balance, and Overall Conclusions (Including Relevant Matters (d) to (n))

613. The proposed development (including the northern and southern turbine groups) would provide about 62MW of installed generation capacity from renewable sources. The scheme would also bring forward a programme of land management to enhance habitats for breeding birds and wildlife. In common with other schemes, there would be a considerable

investment and opportunities for local firms to participate in the supply chain. Local jobs would be created during the construction and operational phases. I have noted that the Llaithddu scheme is different to others, in that it has been developed by, and in co-operation with local hill farmers. There is therefore potential for significant community benefit through support for local farming enterprises and the retention of a high proportion of the project value in the local economy. These would amount to substantial benefits that should be afforded considerable weight.

614. Subject to conditions, impacts on hydrology, hydrogeology, peat, biodiversity cultural heritage and the transport network would be mitigated and residual effects would be acceptable. No unacceptable visual effects would be likely to occur at any individual residential property, and there would be no harm to health from noise, vibration or shadow flicker. The proposal would be broadly neutral in these respects.
615. I have identified that there would be some harm to the recreational use of the bridleway in the vicinity of the southern group, but in the context of the wider PRow the degree of harm is likely to be slight, and it would be far outweighed by the benefits of the proposal. In terms of tourism and the economy generally, the proposed development is unlikely to have a significant adverse effect alone, or in combination with other schemes before the inquiry.
616. However, there would be significant harm and conflict with national, Welsh and local planning policy in terms of the landscape and visual impact of the southern group of turbines, resulting from the design and layout of the proposed scheme. The conditions put forward do not overcome these objections. As NPSs and Welsh planning policy require projects to be designed carefully, taking account of the potential impact and with the aim of minimising harm to the landscape, I consider that the benefits of the proposed scheme do not outweigh the harm and conflict with planning policy that I have identified. I conclude that the proposed scheme as a whole is not acceptable, and should be rejected.
617. There is no dispute that it is not possible to remove the southern group of turbines from the proposed scheme by condition, as under the Electricity Act 1989 the Secretary of State would have no power to consent the construction of a generating station with a capacity of less than 50 MW.

RECOMMENDATION

618. I recommend that section 36 consent and deemed planning permission should be refused.
619. If it is decided to grant section 36 consent and deemed planning permission, I recommend that it should be subject to the conditions set out in the attached Annex B.

Llanbadarn Fynydd

Consistency with the objectives of the Government Policy on the energy mix and maintaining a secure and reliable supply of electricity as the UK makes the transition to a low carbon economy, and achieving climate change goals (Relevant Matter (a))

620. The proposal would be consistent with these objectives, and the Council does not dispute that the power that it would generate would be a significant public benefit. However, as with all the applications before the inquiry, consistency with these objectives does not itself mean that the proposal is acceptable

Consistency with the Policies Relating to Generation of Renewable Energy Contained Within the Relevant National Policy Statements for Energy Infrastructure: Overarching National Policy

Statement for Energy (EN-1) July 2011 and National Policy Statement for Renewable Energy Infrastructure (EN-3) July 2011 (Relevant Matter (b))

621. As advised at paragraph 2.5.36 of EN-1 renewable energy can only be developed where the resources exist, and therefore a sequential approach should not be used for site selection. That does not, however, mean that all sites with a good wind resource would be suitable for large-scale wind turbines of the type proposed for this scheme. As advised at paragraph 5.9.8 of EN-1, landscape effects depend on the character of the local landscape and the aim should be to minimise harm. As advised at paragraph 2.7.6 of EN-3, proximity to dwellings is a factor that should influence site selection, for reasons including visual amenity.
622. With regard to landscape and visual effects, for reasons relating to the scale of the proposed turbines I have concluded that the proposed development would have a substantial harmful effect on those aspects of the character and appearance of the landscape that make it distinctive and attractive.
623. With regard to residential amenity, I have concluded that for many local residents the experience would be of living within or on the edge of a wind farm landscape dominated by large-scale turbines. There would therefore be a significant adverse effect on the general residential amenity and visual environment of the area.
624. I have also concluded that the proposed development would detract from the historic character of the landscape, and would de-sensitise the surrounding areas to further wind farm development. These are not of themselves sufficient to warrant dismissal of the proposed scheme. They are, however, considerations that should be weighed in the overall planning balance.
625. I have taken into account the siting, operational and other relevant constraints. However, I consider for the above reasons that the proposed development would conflict with EN-1 and EN-3 policy requirements to minimise harm to the landscape and residential amenity.

The extent to which the proposed development is consistent with Welsh Government and local policies: including Planning Policy Wales, Edition 7 (July 2014)(PPW); Technical Advice Note 8: Planning for Renewable Energy (2005)(TAN 8); and Energy Wales: A Low Carbon Transition (2012); and the Powys Unitary Development Plan (adopted 2010)(UDP)(Relevant matter (c))

626. TAN 8 identifies areas in Wales which, on the basis of substantial empirical research, are considered to be the most appropriate locations for large-scale wind farm development. However, TAN 8 recognises that not all of the land within the SSAs may be environmentally suitable for major wind power proposals. For the above reasons relating to landscape and visual effects, and general residential amenity, I do not consider that the application site is well suited to wind farm development of the type and scale proposed.
627. Development of a limited number of large-scale wind energy developments within SSA C will be necessary to contribute to the Welsh Government's onshore wind energy aspiration for 2 GW in total capacity by 2015/17, towards UK and European renewable energy targets, to mitigate climate change, and to provide energy security. The Welsh Government seeks up to an additional 98 MW of installed capacity within SSA C to support its strategic approach. However the evidence before the inquiry is that a total of about 100 MW of additional installed generation capacity could be obtained from a combination of the Llandinam repowering scheme and the northern array of the Llaithddu scheme¹¹⁴. The Council also takes the view that some further development in the area of the Llandinam ridge would be acceptable in landscape terms and could provide a significant contribution to

¹¹⁴ Calculated as the capacity of the Llandinam repowering scheme (102MW) and the northern group of Llaithddu turbines (27.6MW), less the existing capacity of the P&L wind farm (30MW)

the capacity in TAN 8. The Welsh Government's policy aspirations are therefore not dependant on the proposed scheme.

628. I conclude for these reasons that the proposed development would not be consistent with Welsh Government and local policies: including Planning Policy Wales, Edition 7 (July 2014)(PPW); Technical Advice Note 8: Planning for Renewable Energy (2005)(TAN 8); and Energy Wales: A Low Carbon Transition (2012).

629. As I have noted previously, criterion 1 of UDP Policy E3 resists proposals for wind farms that would unacceptably affect the environmental and landscape qualities of Powys. I consider that harm arising as a consequence of a site's unsuitability for the type and scale of development proposed would be unacceptable in the context of that policy. I conclude that the proposed development would also conflict with UDP Policy S3, and thus with the development plan for the area.

Conditions

630. A condition is necessary requiring the development to be carried out with specified details. The applicant favours listing specified drawings. However, many of these are of typical details. It would not, for example, be correct to require development to be carried out in accordance with a typical wind turbine detail, when the scheme assessed is based on a candidate turbine with final details of the selected make and model to be submitted at a later stage. The ES and subsequent EIAs also contain method statements and plans which have informed the application, and which should therefore form part of the requirements. I therefore prefer the Council's approach, which is to list the Layout drawing, together with the ES and subsequent SEIs.

631. The requirement should also refer to compliance with section 6 of the revised draft STMP, which contains details of the amended strategic access proposal. It is much more than a route description and contains many details that have been assessed and found to be acceptable. It is subject to finalisation of details, but in principle the route is acceptable. It would therefore not be appropriate to require a separate traffic management plan or further habitat and species surveys to be submitted, though a TMP would be necessary as an addendum. I consider for these reasons that the applicant's approach to this condition is more reasonable.

632. The parties agree that a condition is necessary relating to the remediation of any damage to the highway attributable to the development, but disagree about the extent of pre-construction surveys. It would be unreasonable to require all the roads that would be used by all construction traffic to be surveyed. In my view surveys should be limited to the C1057 and U1298, which are envisaged to provide the local access routes, and any other agreed roads should the STMP be materially changed at any time, as suggested by the applicant.

633. The applicant considers some minor provisions relating to otherwise generally agreed Rights of Way Management and Ecological Monitoring plans to be unnecessary, and I agree with that view. Similarly, I agree that a provision within the proposed Archaeology condition is superfluous, and it that it could conflict with other plans and provisions.

634. The applicant agrees that an EAM condition should be included. However, for reasons that I have given earlier I do not consider that it should cascade down to the methodology published by ReUK in December 2013.

635. A schedule of recommended conditions that comply with Circular advice, to be imposed if the Secretary of State grants section 36 consent and deemed planning permission as per my recommendation, together with reasons insofar as those relating to any deemed planning permission is concerned, is set out in Annex C to this report.

Planning Balance and Overall Conclusions (Including Relevant Matters (d) to (n))

636. The proposed scheme would generate up to 59.5 MW of electricity from renewable resources. It would also create jobs and other economic benefits. The Council acknowledges that these are significant benefits in the public interest and it is my view that they should carry considerable weight.
637. Subject to conditions, impacts on hydrology, hydrogeology, peat, biodiversity and the transport network would be mitigated and residual effects would be acceptable. There would be no harm to health from noise, vibration or shadow flicker. The proposal would be broadly neutral in these respects.
638. On the other hand the proposal would cause substantial harmful landscape and visual landscape effects, and harm to general residential amenity of a scattered, but nevertheless substantial community of local residents. The proposal would not be consistent with national or local planning policy in these respects. These are considerations that I consider should weigh heavily against the proposal, and on balance I consider them to outweigh its benefits. I have also concluded that the proposed development would detract from the historic character of the landscape, and would de-sensitise the surrounding areas to further wind farm development. Whilst these are not considerations of sufficient weight to warrant refusal of the application by themselves I consider that they add further weight against the proposal.
639. The conditions that have been put forward would not overcome the harm and conflict with planning policy that I have identified.
640. I conclude that the proposed scheme as a whole is not acceptable, and should be rejected.

RECOMMENDATION

641. I recommend that section 36 consent and deemed planning permission should be refused.
642. If it is decided to grant section 36 consent and deemed planning permission, I recommend that it be subject to the conditions set out in the attached Annex C.

SSA C – Policy Considerations Relating to Cumulative and In-combination Impacts

643. Although the Llandinam Repowering and Llaithddu schemes would not lie within the broad-brush SSA C boundaries defined in TAN 8, their sites would be contiguous with that area. There would be little difference in landscape character between the sites and some other western parts of SSA C, and there is no clear difference in the character of the landscape between areas just within, and just outside the relevant parts of the TAN 8 boundary. As reflected in the Arup studies, they are in effect part of the same upland plateau landscape unit. The access arrangements, and the implications of grid connections, would be the same whether or not the sites are considered to be within the TAN 8 boundary. I consider for these reasons that the Llandinam and Llaithddu sites should be considered as being within SSA C for the purposes of consideration of the environmental capacity of the area.
644. The Welsh Minister's letter of July 2011 expects decision makers in Wales to recognise the Welsh spatially-specific policy outlined in TAN 8, to respect the fact that Strategic Search Areas have a finite environmental capacity, and that output should not exceed the maximum levels assessed by Garrad Hassan.
645. Of the applications in SSA C I have recommended that only the Llandinam proposal should be approved. If the Secretary of State is minded to approve either the Llaithddu (62MW) or the Llandbadarn Ffynydd proposal (59.5MW) in addition to the Llandinam scheme (net increase c 72MW), it should be taken into account that the increase in

generation capacity within SSA C would exceed the indicative maximum capacity of 98 MW identified by Garrad Hassan.

646. If were to be decided to approve both schemes in addition to the Llandinam scheme, that capacity would be far exceeded. Furthermore, there would be a need for an additional 132kV transmission line. If that were to be routed to Cefn Coch there would be an increased likelihood of a need for the type of large, visually intrusive high voltage grid network infrastructure which the Welsh Government does not see as being necessary in Mid Wales.
647. I consider for these reasons that approval of two or more of the proposed schemes in SSA C would conflict with Welsh Government Policy.
648. The conflict with Welsh Government policy that I have identified above is in my view a material consideration that adds further weight to my conclusion that the Llaithddu scheme should not be consented in its entirety, and my conclusion that consent should not be granted for the Llanbardarn Ffynydd scheme.

Llanbrynmair

Consistency with the objectives of the Government Policy on the energy mix and maintaining a secure and reliable supply of electricity as the UK makes the transition to a low carbon economy, and achieving climate change goals (Relevant Matter (a))

649. The proposal would be consistent with these objectives. The Council does not dispute that the power that it would generate (up to 90 MW) would be of significant public benefit. However, as with all the applications before the inquiry, consistency such with these objectives does not itself mean that the proposal is acceptable.

Consistency with the Policies Relating to Generation of Renewable Energy Contained Within the Relevant National Policy Statements for Energy Infrastructure: Overarching National Policy Statement for Energy (EN-1) July 2011 and National Policy Statement for Renewable Energy Infrastructure (EN-3) July 2011 (Relevant Matter (b))

650. The Council considers that the proposed Llanbrynmair wind farm can be accommodated within the upland landscape of the Carnedd Wen / Llanbrynmair plateau, and that whilst there would be some significant landscape and visual impacts, particularly upon the Nant Yr Eira Valley, they would be acceptable. I agree with the Council in this respect. I have also concluded that the proposed wind farm itself would be acceptable in all other respects. However, the scheme includes the use of part of the Llanerfyl to Talerddig road to provide access for AILs. I have concluded that this would cause locally significant adverse landscape and visual effects, inconvenience, disruption and associated financial and environmental effects, and some harm to ecology. The alternative of sharing access for AILs with the Carnedd Wen scheme would be strongly preferable in environmental terms.
651. Having regard to siting, operational and other constraints, EN-1 requires that harm to the landscape should be minimised and reasonable mitigation provided where possible and appropriate. EN-3 seeks to ensure that the effects of transporting abnormal loads are mitigated. As it has been shown that the alternative of sharing access for AILs with the Carnedd Wen scheme would be strongly preferable in environmental terms, and it has not been shown that there are siting, operational or other constraints that would make the alternative impracticable, I consider that the proposed scheme would not be consistent with policies set out in EN-1 and EN-3.

The extent to which the proposed development is consistent with Welsh Government and local policies: including Planning Policy Wales, Edition 7 (July 2014)(PPW); Technical Advice Note 8: Planning for Renewable Energy (2005)(TAN 8); and Energy Wales: A Low Carbon Transition (2012); and the Powys Unitary Development Plan (adopted 2010)(UDP)(Relevant matter (c))

652. PPW requires mitigation measures for all potential detrimental effects on local communities. Subject to costs being shared, the applicant accepts that economic viability would not be threatened by the proposed alternative access route (PPW 12.8.10). TAN 8 identifies access considerations, including the acceptability of new and existing roads for access and construction, as a matter that should be addressed in order to ensure the best outcomes for schemes (TAN 8 2.10). As the potential detrimental effects of the proposed local access scheme for AILs could be mitigated by adoption of an identified and clearly preferable alternative I consider that the proposed development would not be consistent with PPW or TAN 8 in this respect.
653. As the harm to the environmental and landscape qualities of Powys could be largely avoided by use of the alternative route, I consider that there would be unacceptable harm, and therefore conflict with UDP Policy E3. I conclude that the proposal would also conflict with the development plan.

Conditions

654. The Council has suggested conditions that would be appropriate should the Secretary of State determine that the proposed access is not acceptable and that the scheme can be approved subject to the access for AILs being shared with Carnedd Wen. RES's position is that the proposed access is acceptable, but it is willing to accept amendments to the proposed plans if the Secretary of State finds to the contrary. I shall return to this matter in considering the overall planning balance.
655. RES shares the concerns of other applicants about the Council's suggested decommissioning and restoration condition. I consider that the condition should require compliance with current industry standard best practice: i.e. removal of bases to 1m below ground level, rather than some possible future standard of best practice.
656. The Council has suggested a condition requiring the colour of the proposed turbines to be approved. RES maintains that it has no control over the colour specification as manufacturers use a standard colour which is recognised and tested as being the least visually intrusive. The Llanbrynmair scheme would, however, be read as a single large wind farm with the Carnedd Wen scheme. It is therefore important that a consistent approach is taken with regard to the colour and finish of the turbines in both developments. RWE / Carnedd Wen would welcome a condition leaving the colour to be approved later, to allow alternatives to be investigated with a view to further reducing visual impact. In view of the long lead-in time to these schemes I find this to be a reasonable and constructive approach, as although the proposed colour would be acceptable it is possible that further research might identify an alternative that would provide further mitigation, without compromising viability. I therefore prefer the Council's suggested draft.
657. The applicant considers that the suggested conditions requiring details of improvements to the A470 Talerddig junction to be approved and implemented before any development takes place should be amended to allow tree felling and site clearance. However, whilst the existing junction is used for limited forestry works, the proposed development would require tree felling and clearance over a large area. As the general layout and design of the alterations to the junction are agreed and are not extensive, approval and carrying out of the necessary improvements should be a swift process. Safety is a paramount concern. I therefore prefer the Council's position on this matter. However, the draft put forward by the Council only requires the scheme to be approved before the development commences; it does not specify at which point the works must be implemented. As site clearance would generate significant additional HGV traffic I consider that it should be amended to require implementation before tree felling and site clearance.
658. The necessary works to the A470 Junction would be localised and relatively minor, and there is no evidence that protected species might be affected. The contractor would be required to exercise care not to disturb any protected species under other legislation. I

therefore do not consider that there should be a requirement for updated habitat and species surveys.

659. The management of AIL deliveries is comprehensively covered within the draft STMP considered at the inquiry, and further details will be under the control of the necessary police escorts. Compliance with the draft STMP can be required by conditions. I therefore do not consider that further details need to be submitted for approval.
660. Conditions with regard to remediation of any damage to the highway should be consistent with those applied to other schemes. For reasons given in respect of those, I consider that it would be appropriate to require any directly attributable damage to be remediated. However, it would be unreasonable to require the applicant to survey all highway routes. In this instance surveys should be limited to those sections of the Llanerfyl to Talerddig road that would be used by construction traffic.
661. If it is decided to grant consent subject to the condition that AIL deliveries should utilise the same route from the A458 as the Carnedd Wen scheme, AIL traffic would pass through Welshpool, where there is the potential for impact on the condition and structure of some properties. In that event it would be appropriate to impose the same condition relating to survey and inspection of these properties as on the Carnedd Wen consent. Although this condition has not been suggested in the draft conditions put forward by the parties to this application the reasons for it were discussed in an open session at the inquiry at which Llanbrynmair was represented. There would therefore be no need to revert to the parties with respect to this condition.
662. The ES / SEI indicate to my satisfaction that there would be no adverse effect on any private water supply. I therefore do not consider that any further report is necessary.
663. RES does not agree with the form of EAM condition put forward by the Council, but for reasons I have given elsewhere I consider that the Council's draft would be appropriate.
664. A Schedule of recommended conditions that comply with Circular advice, to be imposed if the Secretary of State grants section 36 consent and deemed planning permission as per my recommendation, together with reasons insofar as those relating to any deemed planning permission is concerned, is set out in Annex D to this report.

Planning Balance, and Overall Conclusions (Including Relevant Matters (d) to (n))

665. The proposed scheme would generate some 90MW of renewable electricity. It would also create jobs and other economic benefits. The Council acknowledges that these are significant benefits in the public interest. I have also identified that the proposed development would provide a net long-term gain in terms of habitats and biodiversity. It is my view that these benefits should carry considerable weight.
666. I have concluded that the proposed turbines would be harmful to valued landscape and visual qualities of the Nant yr Eira Valley. However, the harm would be limited to the operational life of the proposed development, which ultimately would bring about improvements to the landscape through forestry clearance and moorland restoration. The proposed turbines would have a substantial visual impact when seen from a number of residential properties in the valley, but not to an extent that would be unacceptable. I have concluded that there would be no significant direct or indirect effect on the landscape character of the Snowdonia National Park. Significant adverse effects on the views from within the Park would be limited to the south-eastern section and would be limited in duration to the life of the wind farms. In the long term there would be beneficial effects on views out from the Park. The effect of the proposed developments on the special qualities of the National Park would be small, whether individually or in combination with other existing or proposed wind farm developments.
667. I have accepted that that some users of Glyndwr's Way would be put off from using the section through the proposed wind farm, but do not consider that the proposed scheme

would be likely to have an overall adverse effect on the integrity of the route or its use, either individually or in combination with other proposals. I have identified no significant adverse effect on the enjoyment of other recreational routes or tourism. Subject to conditions, impacts on hydrology, hydrogeology, peat, and the wider transport network would be mitigated and residual effects would be acceptable. Plans to raise the water table should also help to reduce flood risk in the valleys. There would be no harm to health from noise, vibration or shadow flicker. The proposal would be broadly neutral in these respects.

668. On balance I consider that the benefits of the proposed wind farm would clearly outweigh its adverse effects.

669. However, the proposal would include the use of part of the Llanerfyl to Talerddig road to provide access for AILs. I have concluded that this would cause significant adverse environmental effects, and that the alternative of sharing access for AILs with the Carnedd Wen scheme would be strongly preferable in environmental terms. I have found that the proposed development would not be consistent with national, Welsh or local planning policy in this respect. In these circumstances I consider that the benefits of the proposal as a whole would not outweigh the harm, and that the scheme including access from AILs from the Nant yr Eira Valley should be rejected.

Practical Options for the Secretary of State

670. I have identified no firm legal or policy requirement to consider alternatives in the circumstances that arise. However, the Llanbrynmair and Carnedd Wen plateau has been identified in TAN 8 as an area where a significant contribution can be made towards renewable energy generation. Special circumstances therefore exist, in that this is an area of strategic search where the question of access should be considered in the context of strategic planning. An alternative access would be available, which has been assessed as part of the EIA process and found to be environmentally acceptable. Subject to matters about which agreement would have to be reached with the developers of Carnedd Wen, including timing and sharing of costs, RES now considers that it would not compromise the viability of its scheme. In this context it would be plainly wrong, and contrary to the public interest to disregard the alternative that has been put forward at the inquiry. As acknowledged by RES, the use of conditions to require comprehensive development is nothing new and such conditions serve a proper planning purpose.

671. If it is decided to grant consent for Carnedd Wen a practical option would therefore be to grant a consent encompassing the February 2014 SEI, and on the condition that the Nant yr Eira access is not used. RES has accepted that the alternative access from the A458 would be viable if the costs are shared. Viability should present no difficulties if Carnedd Wen proceeds, as the bulk of the works required to provide AIL access to the Llanbrynmair site would be required for the Carnedd Wen scheme in any event.

672. However, in order for this alternative to be satisfactory and practicable there must be some means of ensuring that access for Llanbrynmair AILs would be possible through the Carnedd Wen site. I therefore accept that it would be necessary to have provisions in place that would require RWE to take the provision of a shared access into account in the development of its STMP and detailed construction and environmental management plans. I shall examine the means of doing so in connection with conditions suggested with respect to the Carnedd Wen scheme. The necessary conditions have been canvassed and there would be no need to revert to the parties with respect to this application.

673. If it is decided not to grant consent for Carnedd Wen the alternative of taking access for Llanbrynmair AILs from the A485 would still exist. Although RES has stated that this would not be financially viable unless costs are shared no evidence has been provided to substantiate its concern. However, as RES would not necessarily follow the route proposed by RWE, the February 2014 SEI does not provide sufficient information for this alternative to be properly environmentally assessed. A grant of consent subject to the condition that the Nant yr Eira AIL access works shall not be implemented would in effect require a new

application to be submitted for an alternative access. Refusal of the application would require a resubmission with a new access proposal. Both options would frustrate and delay development that ought reasonably to be permitted subject to access for AILs being from the A458. I consider for these reasons that the preferable option would be to seek further SEI, with a view to informing a decision as to whether consent should be conditional upon access for AILs being directly from the A458.

674. I have considered all other matters raised but find nothing sufficient to disturb my overall conclusions. I find that the balance of considerations indicates that, if the Secretary of State decides to grant section 36 consent and deemed planning permission for the proposed Carnedd Wen scheme, section 36 consent and deemed planning permission should be granted for that part of the Llanbrynmair proposal relating to the erection of the wind turbines and associated infrastructure, but not insofar as it relates to the creation of a route for AILs via the road from Llanerfyl to Talerddig, subject to the conditions set out in the attached Annex D.

RECOMMENDATION

675. If the Secretary of State decides to grant section 36 consent and deemed planning permission for the proposed Carnedd Wen scheme, I recommend that section 36 consent and deemed planning permission should be granted for that part of the Llanbrynmair proposal relating to the erection of the wind turbines and associated infrastructure, but not insofar as it relates to the creation of a route for AILs via the road from Llanerfyl to Talerddig, subject to the conditions set out in the attached Annex D.

676. If it is decided not to grant consent for the Carnedd Wen scheme, I recommend that additional SEI should be sought with a view to informing a decision as to whether consent should be conditional upon access for AILs being directly from the A458.

Carnedd Wen

Consistency with the objectives of the Government Policy on the energy mix and maintaining a secure and reliable supply of electricity as the UK makes the transition to a low carbon economy, and achieving climate change goals (Relevant Matter (a))

677. The proposal would generate up to 150 MW of electricity from renewable sources and would thus be consistent with these objectives. However, as with all the applications before the inquiry, consistency with these objectives does not of itself mean that the proposal is acceptable.

Consistency with the Policies Relating to Generation of Renewable Energy Contained Within the Relevant National Policy Statements for Energy Infrastructure: Overarching National Policy Statement for Energy (EN-1) July 2011 and National Policy Statement for Renewable Energy Infrastructure (EN-3) July 2011 (Relevant Matter (b))

678. I have concluded that the 'Carnedd Wen five' turbines would have locally significant harmful landscape effects, and significant adverse visual effects. These would arise as the turbines in question would be positioned just below the break of the slope on the southern side of the Banwy Valley. As the harm would thus arise from the design and layout of the proposed scheme I consider that the proposal would conflict with the need to design proposals carefully, with the aim of minimising harm to the landscape, and thus with paragraph 5.9.8 of EN-1. It would also conflict with paragraph 2.7.49 of EN-1, in that the arrangement of turbines has not been designed to minimise effects on the landscape and amenity, and there are no overriding technical, operational, siting or other constraints.

The extent to which the proposed development is consistent with Welsh Government and local policies: including Planning Policy Wales, Edition 7 (July 2014)(PPW); Technical Advice Note 8:

Planning for Renewable Energy (2005)(TAN 8); and Energy Wales: A Low Carbon Transition (2012); and the Powys Unitary Development Plan (adopted 2010)(UDP)(Relevant matter (c))

679. The proposed turbines would be located within the broad brush TAN 8 boundaries, but as I have indicated previously that does not mean that all the land is suitable. The Welsh Government's aim of securing an appropriate mix of energy provision which maximises benefits to the economy and communities is qualified by the need to minimise environmental effects. PPW recognises that the introduction of new, often very large structures for onshore wind needs careful consideration to avoid and where possible minimise their impact (PPW, para 12.8.12). As I have noted in relation to the Llaithddu proposal, in order to minimise landscape and visual effects, particular care is required in the design of wind farms in locations next to valleys. The setting back of turbines from the break of a slope has become a well established practice in Powys and elsewhere in Wales as one means of achieving such aims. As I have noted, the layout of the proposed scheme would not follow that practice in relation to the Banwy Valley. As the design of the proposed development would not minimise its environmental impact I conclude that there would be conflict with Welsh Government and local policies, including Planning Policy Wales, Edition 7 (July 2014)(PPW) and Technical Advice Note 8: Planning for Renewable Energy (2005)(TAN 8).
680. As the harm that I have identified would arise as a consequence of the design and layout of a scheme I consider that it would be unacceptable in the context of UDP Policy E3. I further conclude that the proposed development would conflict with the development plan.

Conditions

681. RWE does not agree that the exclusion of the 'Carnedd Wen five' turbines from the scheme is necessary for the proposal to be acceptable, and therefore disagrees with the suggested draft conditions to that effect. However, there is no dispute that conditions along those lines could be imposed if the Secretary of State determines that consent should be granted subject to the exclusion of those turbines from the scheme. Nor is it disputed that the draft conditions suggested by the Council would be appropriate in those circumstances.
682. The Council has suggested a condition requiring any details required by other conditions to be in writing. This requirement should be incorporated into the original conditions. Part (b) of the suggested condition would appear to prevent the local planning authority approving any subsequent amendment that would have a materially different environmental effect, even if that effect would be beneficial or if circumstances change. I do not consider that such a condition is necessary or relevant to any planning purpose. If the intent is to require an application to be made for any amendment that would have a materially different environmental effect, then the draft condition is unnecessary and imprecise.
683. The project is envisaged and assessed as one that would include the commissioning of turbines over a period of about 4 years. The normal duration of consent of 25 years from first export would therefore not be appropriate. Similar considerations apply to the Llandinam repowering scheme, and I consider that a similar condition but for 25 years from the date of final commissioning, or 29 years from the date of commencement, whichever is the earlier, would be appropriate in this instance.
684. The conditions suggested by the Council include a requirement for a community liaison scheme to be submitted and approved prior to decommissioning. In many circumstances there is clearly a important planning purpose behind public consultation. However, as the site is remote from any substantial settlement the amenity of local residents is unlikely to be affected by decommissioning works. The requirement would be unnecessary and unreasonably burdensome.
685. There is no dispute that micrositing should be permitted to allow flexibility in the interests of minimising impacts on the natural environment. The draft condition suggested by RWE would simply require the precise location of all parts of the development to be agreed in writing before they are implemented. However, such a condition would give no prior

indication of the extent of micrositings that would be allowed, or the criteria against which applications would be assessed. It could also result in very many applications being necessary as the project progresses. I consider that the Council's draft condition, which would permit micrositings within 50m but would require a protocol to be submitted and approved, would provide reasonable flexibility and would be less burdensome to both parties over the duration of the project. It would therefore be preferable.

686. RWE has suggested a condition relating to approval of the colour and finish of the proposed turbines which I have referred to in the context of the proposed Llanbrynmair scheme. It would be possible to specify colours at this stage. However, for the reasons I have given earlier, and in the interests of a consistent approach with the Llanbrynmair scheme, I consider that there is merit in exploring the possibilities of non-standard colours and prefer the draft suggested by RWE.
687. The condition suggested by the applicant in relation to AIL deliveries and a scheme for the inspection and structural survey of properties in Welshpool would not achieve the desired result of preventing or remediating any damage that might be caused by the passage of AILs. The Council's draft is therefore preferred.
688. As with the Llanbrynmair scheme, the management of AIL deliveries is comprehensively covered within the draft STMP considered at the inquiry, and further details will be under the control of the necessary police escorts. Compliance with the draft STMP can be required by conditions. Whilst the route should be secured by conditions I therefore do not consider that the majority of the further details suggested by the Council need to be submitted for approval.
689. It is RWE's case that it could not and would not stand in the way of Llanbrynmair securing the necessary land rights to share access from the A458, or the allocation of delivery slots through the STMP. It therefore does not consider that any condition is necessary to achieve the objectives sought by the Council. However, bringing both developments forward in a comprehensive and satisfactory way would require more than simply not standing in Llanbrynmair's way – not least because such an approach could result in disruption to the timing of RWE's complex programme. In practice, co-operation on the provision of a shared joint access should not be an obstacle. I have concluded in relation to the Llanbrynmair conditions that in order for the shared access alternative to be satisfactory and practicable there must be some means of ensuring that access for Llanbrynmair AILs would be possible through the Carnedd Wen site.
690. The Council's suggested conditions would require details of Carnedd Wen's TMP and AIL management Strategy to include details of how use of the access road into the site could accommodate AILs for both the Carnedd Wen and Llanbrynmair schemes. I consider that these would be necessary and reasonable provisions. Similarly, it would be necessary and reasonable to require the CTMP and CMP (or combined CMP/CEMP) to show how use of internal links within the site can accommodate construction traffic for both schemes.
691. AIL deliveries during the operational phase of the development would be likely to be infrequent, and subject in any event to general traffic controls, including a likely requirement for escorts. I consider that a condition requiring submission and approval of a TMP for any AIL replacement components during the life of the development would be an unnecessary and unreasonably burdensome requirement.
692. As I have noted in relation to other proposals, conditions with regard to remediation of any damage to the highway should be consistent with those applied to other schemes. For reasons given in respect of those, I consider that it would be appropriate to require any directly attributable damage to be remediated. However, it would be unreasonable to require the applicant to survey all highway routes. In this instance, as minor roads would not be used for Carnedd Wen construction or AIL traffic there would be no need for surveys.

693. RWE's preference would be to integrate its CMP with a CEMP. This would have advantages in reducing the number of conditions requiring further approvals. The wording of the provisions suggested by the Council and NRW can be condensed without loss of clarity or compromising the objectives.
694. As measures to protect the water environment would be included in other Plans secured by conditions, a separate condition relating to private water supplies is unnecessary.
695. The condition suggested by the Council in relation to archaeology is in line with Welsh Circular guidance. It leaves the content of the required written scheme of investigation to the developer in the first instance, and is more flexible and responsive to the information available at the time of submission. It is therefore to be preferred.
696. It is agreed that a community liaison scheme should be developed to cover the construction period. However, the Council's draft condition in this regard is in my view over-prescriptive in its requirements, and RWE's draft would secure the desirable objectives.
697. RWE is one of the developers that do not consider an EAM condition to be necessary or appropriate. I disagree, for reasons that I have given earlier.
698. A Schedule of recommended conditions that comply with Circular advice, to be imposed if the Secretary of State grants section 36 consent and deemed planning permission as per my recommendation, together with reasons insofar as those relating to any deemed planning permission is concerned, is set out in Annex E to this report.

Planning Balance, and Overall Conclusions (Including Relevant Matters (d) to (n))

699. As accepted by the Council, this would be a substantial scheme, generating (including the 'Carnedd Wen five') up to 150Mw of renewable energy. It would represent a major economic investment creating business opportunities for the local and Welsh supply chain through the construction, operation and maintenance of the wind farm and the habitat management scheme. I have also found that the habitat restoration and management aspects of the proposal would be of significant benefit in terms of peat, hydrology, hydrogeology, and habitats in the medium to long term. There would be general improvements in terms of biodiversity, and particular benefit to rarer bird species. These are very substantial benefits.
700. As with the Llanbrynmair scheme, I have concluded that the proposed turbines would be harmful to the valued landscape and the visual qualities of the Nant yr Eira Valley. However, the harm would be limited to the operational life of the proposed development, which ultimately would bring about improvements to the landscape through forestry clearance and moorland restoration. The proposed turbines would have a substantial visual impact when seen from a number of residential properties in the valley, but not to an extent that would be unacceptable. I have concluded that there would be no significant effect on the landscape character of the Snowdonia National Park. Significant adverse effects on the views from within the Park would be limited to the south-eastern section and would be limited in duration to the life of the wind farms. In the long term there would be beneficial effects on views out from the Park. The effect of the proposed developments on the special qualities of the National Park would be small, whether individually or in combination with other existing or proposed wind farm developments.
701. I do not consider that the proposed scheme would be likely to have an overall adverse effect on the integrity of Glyndwr's Way or its use, either individually or in combination with other proposals. I have identified no significant adverse effect on the enjoyment of other recreational routes or tourism. Subject to conditions, impacts on the wider transport network would be mitigated and residual effects would be acceptable. There would be no harm to health from noise, vibration or shadow flicker. The proposal would be broadly neutral in these respects.

702. On the other hand, as a consequence of the design and layout of the proposed scheme the 'Carnedd Wen five' turbines would cause significant harmful landscape and visual effects within the Banwy Valley. As the harm to the landscape would not be minimised the proposed development would not be consistent with national, Welsh or local planning policy. On balance, the benefits of the 15MW of generating capacity that would be obtained from the 'Carnedd Wen five' turbines would not outweigh their harm in terms of landscape and visual impact and the associated conflict with national and local planning policy. In these circumstances I consider that the benefits of the proposal would not outweigh the harm, and that the scheme including the 'Carnedd Wen five' should be rejected. However, the omission of these five turbines would minimise landscape and visual effects within the Banwy Valley and would overcome the conflict with national and local planning policy.
703. In this instance there is no dispute that the Carnedd Wen five can be omitted from the scheme by condition.
704. I have considered all other matters raised but find nothing sufficient to disturb my overall conclusions. I find that the balance of considerations indicates that section 36 consent and deemed planning permission should be granted in part, omitting turbines R23, R26, R28, R29 and R30, and subject to the conditions set out in the attached Annex E.

RECOMMENDATION

705. I recommend that section 36 consent and deemed planning permission should be granted in part, omitting turbines R23, R26, R28, R29 and R30, and subject to the conditions set out in the attached Annex E.

Landinam 132kV Connection

The extent to which SP Manweb's proposal including the alternatives considered are consistent with Welsh Government and local policies: including Planning Policy Wales, Edition 4 (2011)¹¹⁵; Technical Advice Note 8: Planning for Renewable Energy (2005)¹¹⁶; and Energy Wales: A Low Carbon Transition (2012)¹¹⁷; and Powys Unitary Development Plan¹¹⁸ (adopted March 2010) (Relevant Matter (a))

706. It is clear from PPW and *Energy Wales: A Low Carbon Transition* that the Welsh Government is committed to achieving a substantial reduction in greenhouse gas emissions and a significant rise in renewable energy generation. This requires investment, reinforcement and upgrading of energy infrastructure and TAN 8 specifically refers to the need for new 132kV distribution and transmission lines in Mid Wales. Nonetheless, as expressed in PPW, whilst the Welsh Government aims to secure an appropriate mix of energy provision for Wales which maximises benefits to the economy and communities, it also requires that potential environmental and social impacts should be minimised. Clearly, a balance has to be struck. Given that an OHL along Route D would not have the same adverse effects, or not have them to the same extent as compared to the application scheme, I do not consider that the proposal strikes an appropriate balance. The proposal therefore conflicts with Welsh Government policy.
707. UDP policy C12 recognises that there could be overriding reasons for lines not to be undergrounded and further guidance is given at paragraph 12.12. In this case there are no overriding practical or technical reasons not to underground, but it would not be economically feasible to do so for the whole length of the route. Nevertheless, for the same reasons as above in respect of Welsh Government policy, the line has not been routed to

¹¹⁵ PPW4 now superseded by Edition 7

¹¹⁶ CD/COM/016

¹¹⁷ CD/COM/033

¹¹⁸ CD/COM/006

minimise its impact on the landscape and natural and built environment of Powys. As a result, the proposal conflicts with the UDP when read as a whole.

The extent to which the proposed development is consistent with the objectives of the Government's policy on the energy mix and maintaining a secure and reliable supply of electricity as the UK makes the transition to a low carbon economy, and achieving climate change goals (Relevant matter (b))

708. The Scheme is not one for an energy generator and it would have no direct impact on generation of the energy mix aspired to in Government energy policy. However, the connection of renewable generation is crucial to the Government achieving its desired energy mix and security of supply. Accordingly, I consider that the Scheme is compliant with the objectives of the Government's policy on the energy mix to be delivered and regarding achieving and maintaining a secure and reliable supply of electricity.

The extent to which the proposed development is consistent with the policies relating to electricity networks infrastructure and also the generation of renewable energy contained within the relevant National Policy Statements for Energy Infrastructure, Overarching National Policy Statement for Energy (EN-1) July 2011¹¹⁹, National Policy Statement for Electricity Networks Infrastructure (EN-5) July 2011¹²⁰ and National Policy Statement for Renewable Energy Infrastructure (EN-3) July 2011¹²¹(Relevant matter (c))

709. EN-1 includes a presumption in favour of granting consent to applications for energy NSIPs, given the urgency of the need for this type of infrastructure. It has been demonstrated that the proposal would provide an efficient and economical means of connecting a new generating station to the transmission or distribution network such that the need for it has been demonstrated in accordance with EN-1 and EN-5. The scheme and the windfarm repowering have been submitted in tandem and prepared in an integrated way with both being considered at the inquiry in accordance with EN-1 and EN-5 aspirations.

710. EN-1 recognises that virtually all energy NSIPs will have effects on the landscape. However, having regard to siting, operational and other constraints, it also requires that harm to the landscape should be minimised and reasonable mitigation provided where possible. Because an OHL to Welshpool along an alternative route would not have the same adverse effects or not have them to the same extent, I am of the view that the selected route does not minimise harm to the landscape and its benefits do not outweigh the visual effects of the project.

711. EN-1 also states that substantial harm to SAMs should be wholly exceptional and consent should be refused unless it can be demonstrated that this is necessary in order to deliver substantial public benefits that outweigh that harm. I have identified such harm to 3 SAMs as well as 1 non-designated asset which, as previously noted, should be subject to the same policy considerations as a designated asset. Whilst the proposal would have public benefits in connecting a source of renewable energy to the grid, I am not satisfied that this is sufficient to outweigh the identified substantial harm.

712. The proposal would provide what EN-3 recognises is critical infrastructure to the delivery of renewable energy, which itself is key to the Government's legal and policy obligations and objectives in relation to energy and climate change.

713. Although OHLs are not generally incompatible with DNOs section 9 statutory duties, EN-5 notes that at particularly sensitive locations, the potential adverse landscape and visual impacts may make an OHL unacceptable in planning terms. The evidence submitted leads me to conclude that the area south of the Glog and north of Kerry Hill is a particularly

¹¹⁹ CD/COM/001

¹²⁰ CD/COM/003

¹²¹ CD/COM/002

sensitive location. The landscape and visual impact of a HDWP OHL across that area would be unacceptable in planning terms and raises serious concerns. Through failing to avoid altogether this major area of highest amenity value, the route does not comply with the Holford Rules, which are specifically referred to in EN-5.

714. I consider for the above reasons that the proposed development is not consistent with policies relating to electricity networks infrastructure within the relevant NPSs.

Conditions

715. I have considered the suggested conditions in the light of the discussion at the inquiry, and the advice in the relevant Circulars. Insofar as the period for commencement of development is concerned, 5 years is the default period in Wales. The fact that there would be a pressing need for the scheme should the Secretary of State grant section 36 consent for the proposed Llandinam repowering scheme is not sufficient justification to impose a shorter period.

716. If there is no longer a need for the overhead line, it should clearly be decommissioned. The case in support of the application is based on the proposed Llandinam repowering scheme, which has an anticipated operational life of 25 years. SPM emphasises the reversible nature of the landscape and visual, as well as cultural heritage, impacts [A6, 245 & 339]. In these circumstances, the expiration of the 25 year period should be the trigger for decommissioning. Whilst I note SPM's submissions that the life of the scheme should be tied to its utility as a network asset [A6, 390], there is nothing to prevent SPM from applying for a variation of the condition if a new generation asset in the area were to come forward at some time in the future. That would enable the arguments for and against retention to be properly considered at the time and be subject to public scrutiny [A9, 616 & 617; A7, 12.7].

717. SPM indicated that in some locations micro-siting would contribute to the mitigation provided [A6, 280, 308 & 395]. This is something that the local planning authority legitimately has an interest in. I also note that it has not suggested restricting the 100m corridor width at any particularly sensitive locations. On the other hand, I recognise that requiring the local planning authority's prior approval of pole locations could cut across discussions with landowners as to where within the 100m corridor the poles would be placed. There is, therefore, a need to strike a balance between the potentially conflicting public and private interests. I have no reason to believe that PCC would withhold approval unless there were genuine planning reasons for doing so and I am of the view that requiring prior approval of pole locations would be justified.

718. A Schedule of recommended conditions that comply with Circular advice, to be imposed if the Secretary of State grants section 37 consent and deemed planning permission as per my recommendation, together with reasons insofar as those relating to any deemed planning permission is concerned, is set out in Annex F to this report. If the Secretary of State grants consent for the entire route, contrary to my recommendation, that will need to be reflected in the definition of "development" by removing the reference to points A and B.

Planning Balance and Overall Conclusions (Including Relevant Matters (d) to (h))

719. If the Secretary of State grants section 36 consent for the proposed Llandinam wind farm repowering scheme, there would be a need for a 132kV connection from the associated substation. The proposed overhead line would address that need and contribute to fulfilling SPM's duty to develop and maintain an efficient, co-ordinated and economical system of electricity distribution. Nonetheless, there is also a duty to have regard to the desirability of preserving, conserving and protecting the environment and to provide reasonable mitigation.

720. I have identified that the proposal would have an effect of major significance on the landscape of Section B, and a major adverse visual impact in that area, which is a particularly sensitive location. Notwithstanding that other forms of energy infrastructure

could have worse effects this would be unacceptable in planning terms and raises serious concerns. I have also noted that there would be substantial harm to the setting of four cultural heritage assets. In such circumstances, the proposal conflicts with the Development Plan and Welsh Government policy, and it is not consistent with policies relating to electricity networks infrastructure within the relevant NPSs.

721. As I have identified clear planning objections, and only one permission can be granted, it is entirely appropriate for the Secretary of State to consider whether alternatives would not have the same adverse effects or not have them to the same extent. However, for reasons already given, connection at 33kV, a 132kV connection to Newtown or Carno, connecting to the proposed hub at Cefn Coch, a part Trident solution employing a RES, full undergrounding, or undergrounding at the northern end do not warrant further consideration.
722. Upgrading the application scheme only warrants further consideration if the consented generation capacity in SSA C is less than about 160MW (the approximate maximum amount of generation capacity that the line could support if upgraded). In this event consideration should be given as to whether the benefit of enabling more energy to be exported from SSA C with little or no additional environmental impact would outweigh delays inherent in producing, advertising, consulting and reporting on further SEI relating necessary design changes. In my view the benefits would be substantial and the delay would not be considerable. If the consented generation capacity in SSA C were to exceed about 160 MW an additional line would be necessary in any event, and there would be no merit in upgrading the Llandinam line.
723. I have concluded that an alternative OHL route to Welshpool could result in significantly less harm overall, thereby achieving a greater degree of compliance with Welsh Government and UDP policies, and that SPM have not complied with their Schedule 9 duties. Nonetheless, implementing this solution would require a new application including an ES and result in considerable delay, as recognised by PCC [A9, 780]. In that regard, EN-1 states that whether or not an alternative can realistically deliver the same infrastructure capacity in the same timescale as the proposed development is an important consideration.
724. Whilst I have identified serious concerns about the potential adverse landscape and visual effects in Section B, EN-5 notes that consent for overhead line proposals should only be refused in favour of an underground line if the benefits from the non-overhead line alternative would clearly outweigh any extra economic, social and environmental impacts and the technical difficulties are surmountable. However, it is also important to note that EN-5 does not seek to repeat the material set out in EN-1, which applies to all applications covered by EN-5 unless stated otherwise, and they should be read together. EN-1 states that substantial harm to a scheduled ancient monument should be 'wholly exceptional'.
725. Undergrounding in Section B would result in significantly less harm overall and thereby achieve a greater degree of compliance with Welsh Government and UDP policies, with no material timing disadvantages. The level of reduction and compliance varies somewhat between the options. PCC accepts that the additional cost is a disbenefit that carries weight [. The indicated additional cost ranges from slightly less than £6.65m to £14.8m, but in view of the intensely rural location the lifetime cost element within the above is likely to be overstated.
726. All but the most expensive of the four options would not avoid the substantial harm to the Bryn Cwmyrhiwdre Barrow. However, there has already been some degradation to its setting and the proposal would have no major landscape impacts in its vicinity. In such circumstances and in recognition of the costs from extensive undergrounding, PCC considers that exceptional circumstances exist. I agree that such a pragmatic approach is appropriate. I also accept that the additional cost of undergrounding the last 0.8km at the eastern end would be disproportionate in relation to the resulting landscape and visual benefits, given that this section of OHL would sit low down in the valley and would not be seen from the Kerry Ridgeway.

727. That leaves three options of between roughly 4km and 6km in length, one of which would have additional costs of under £9.55m, with the other two having additional costs of under £6.65m. They would all provide substantial landscape and visual benefits over the OHL, retaining a valuable landscape resource unharmed, and avoid substantial harm to two SAMs and a non-designated asset. In my view, these environmental benefits are sufficient to justify additional costs of the order cited above. I therefore conclude that an undergrounding option exists, the benefits of which would clearly outweigh any extra economic, social and environmental impacts, and the technical difficulties are surmountable.
728. Section B is not in a designated landscape. Nonetheless, its scenic qualities are particularly high and it is contiguous with and appears comparable in quality to an existing AONB. Furthermore, EN-1 is clear that substantial harm to SAMs should be wholly exceptional. In the particular circumstances of this case, I am of the view that effectively requiring partial undergrounding through approving an OHL with a gap in it would not lower the high bar for undergrounding set by national policy.
729. The gap in the OHL for the three options has the same westernmost commencement. There is agreement between SPM and PCC that, if the Secretary of State decides to grant consent for an OHL with a gap in it, the easternmost extent should be as far west as possible to provide the greatest flexibility. Of the three options, the PCC 4.2km one has the most westerly termination to its eastern end and is the one that should be specified in any consent and deemed planning permission. This would leave SPM free to extend the gap if there were sound reasons for doing so after further investigation, including discussions with Cadw as to how to cross the line of the cross dyke.
730. I have considered all other matters raised but find nothing sufficient to disturb my overall conclusions. I find that the balance of considerations indicates that, if the Secretary of State grants a section 36 consent for the proposed Llandinam wind farm repowering scheme, then section 37 consent for the overhead line should be granted in part, omitting the section between points A and B on the Plan A attached to the definition of development in Annex F, and subject to the conditions set out in Annex F. However, if the Secretary of State does not grant a section 36 consent for the proposed Llandinam windfarm repowering, then section 37 consent for the overhead line should also be refused. If the Secretary of State grants section 36 consents which would not take the installed capacity in SSA C beyond 160MW additional SEI should be sought with a view to informing a decision as to whether consent should be conditional upon the line being upgraded to a higher capacity.

RECOMMENDATION

731. Subject to the Secretary of State granting a section 36 consent for the proposed Llandinam windfarm repowering scheme, I recommend that consent under section 37 of the *Electricity Act 1989* and deemed planning permission should be granted in part, omitting the section between points A and B on the Plan A attached to the definition of development in Annex F, and subject to the conditions set out in the attached Annex F. If the Secretary of State decides to grant consent and deemed planning permission for the entire scheme, the reference to points A and B in the definition of "development" in the Annex, and Plan A should be removed.
732. If the Secretary of State grants section 36 consents which would not take the installed capacity in SSA C beyond 160MW, I recommend that additional SEI should be sought with a view to informing a decision as to whether consent should be conditional upon the line being upgraded to a higher capacity.

A D Poulter

INSPECTOR

APPEARANCES

Note: The following list includes the advocates for, and persons presenting the main evidence relied upon by the Council, Consultees, and the Alliance.

Many other written statements were submitted by individuals and representative organisations. Several hundred local residents and other interested persons spoke in person during the inquiry sessions, either at the main venue or during evening sessions at community centres and in Welshpool. All the representations received at the inquiry have been taken into account, but it is impractical to list the names of all the persons who made them.

FOR THE LOCAL PLANNING AUTHORITY:

Mr S Bird QC

Mr T Cosgrove, of Counsel

Ms C Parry, of Counsel

They called:

Mr M Carpenter MRTPI

Planning and Energy Policy

Mr P Russell-Vick Dip LA CMLI

Landscape

Mr D Williams BSc MSc MICE

Local Transport

Mr A Croft BA MA

Cultural Heritage

Mr M Russell BEng MCIHT

Local Transport

Mr D Woodfield CEnv MCIEEM

Ecology

Mr M Axon CE FCIHT MTPS

Strategic Transport

Mr P Bufton BSc(Hons) EHORB CIEH

Noise (Amplitude Modulation)

FOR NATURAL RESOURCES WALES:

Mr B Smith

He called:

Mr P Minto BA MA AM DPhil MRTPI

Planning Balance

Mr R Mathews BSc(Hons) MSc

Curlew

Mr J Pearce-Higgins BSc(Hons) PhD

Curlew

Ms S Whitehead BSc(Hons) DPhil

Curlew

Mr J Campion BA(Hons) BLD MSc CMLI
MCIEEM

Landscape

Ms E Halliwell BSc(Hons) PhD

Dormice

Ms J Matthews BA(Hons) MPhil

Bats

Mr J Davies BSc MSc CEnv MCIEEM

Dormice

Ms Paola Reason BSc MSc CEnv

Bats / Veteran Trees

MCIEEM MIEMA

FOR THE ALLIANCE

Mr D Smith, of Counsel (Opening Session)

Mr B Kibble

Mrs J Kibble

Mr C Green

Mrs A Davies

Mr R Bonfield

Ms M Lloyd

They Called:

Mr R Durgan BEng CEng MICE

Local and Strategic transport

Mr B Kibble CEng MIMechE BSc(Hons)

Cultural Heritage / Peat / Grid

Connections and Transmission /

Planning and Carbon Balance

Mr R Bonfield

Decommissioning (Grid

Connection) / Consultation, Need

Ms A Davies

Ms M Lloyd

Mr G Weller BSc CEng FIEE

Mrs J Kibble

Mr D Watkins

Dr H Rodda PhD MCIWEM

Dr J Constable BA MA PhD FRSA

Mr S Wood

Dr S Myhill

Mr P Brebner (individual submissions)

and Design

Wildlife and Ecology / Community Consultation

Woodlands and Ecology

Amplitude Modulated Noise / Construction Traffic (Grid Connection)

Tourism and the Economy

Landscape

Hydrology

Overall Need / Planning Balance

Community Profiles

Noise and Health

Air Safety

FOR VATTENFALL (Llanbadarn Fynydd):

Mr Patrick Robinson

He called

Mr D Bell BSc(Hons) DipUD MRTPI MCIHT

Mr I Gates BA(hons) MLD CMLI

Mr S Atkinson BA(Hons) PGDip MIFA

Mr D Humpheson BSc(Hons) MSc MIOA

Dr S Salmon MSc PhD MCIWEM

Mr P Mansell BSc CEng MICE FCIHT

Planning and Energy Policy / Socio-Economic Effects

Landscape and Visual

Historic Environment

Noise and Health

Hydrology and Hydrogeology

Strategic Transport

FOR FERM WINT LLAITHDDU CYF (Llaithddu):

Mr R Kimblin, of Counsel

He called:

Mr D Parker RTPI

Mr C Goodrum BSc(Hons) DipLA FLI

Mr G Buchan BEng(Hons) MSc CMILT MCIHT

Mr C Le Quesne MA MIFA

Mr D Harries, Director FWLC

Planning Policy and Balance

Landscape and Visual

Transport

Historic Environment

Community and Other Benefits

FOR CELTPOWER (Llandinam Repowering):

Mr A Newcombe QC

He called

Mr P Frampton BSc(Hons) TP MRICS MRTPI

Mr J Welch FLI

Mr D Tucker MSc CEng MICE MIHT

Dr J Edis BA MA PhD MIFA IHBC

Dr M Cand PhD

Ms B Walker BSc(Hons) MIAIA

Dr S Holloway BSc PhD CMIEEM CEnv

Mr D MacArthur BSc(Hons) MSc MIEEM

Dr P Whitfield BSc PhD

Mr G Parker MICE IEng MBA MCFI

SQN LDR M Hale MBE MSc CFS

RAF(Rtd)

Planning Policy and Balance

Landscape

Traffic, Access and Transport

Heritage

Noise

Geology, Hydrology, Hydrogeology

Bats

Ecology

Ornithology

Construction

Aviation

FOR RES UK & IRELAND (Llanbrynmair):

Mr V Frazer QC

He called:

Mr D Stewart MA DipTP MRTPI	Planning Policy and Balance / Socio-Economic issues & Tourism
Mr M van Grieken FLI	Landscape
Mr K Martin BEng CEng MICE	Transport
Mr S Carter BSc PhD MIFa FSAScot	Cultural Heritage
Dr A McKenzie PhD BSc FIOA	Noise
Mr J Ferry MSc MSc	Peat and Peat Hydrology
Mr M Green MA BSc CEnv FIEEM	Habitats
Dr S M Percival BSc(Hons) PhD MCIEEM	Ornithology
Dr P Shepherd BSc(Hons) PhD MIEEM	Bats

FOR RWE NPOWER RENEWABLES LIMITED (Carnedd Wen):

Mr M Trinick QC

He called:

Mr K Craddick BA(Hons) MSc MRTPI	Planning Policy and Balance / Socio-Economic Considerations inc Common Land
Mr J Stevenson MA MPhil DipEconDev CMLI MRTPI MInstEnvSci MIE FRGS	Landscape and Visual
Mr C Piper BSc(Hons) MICFor	Forestry
Mr S Atkinson BSc(Hons) CEng MICE MCIHT MAPM	Local and Strategic Transport
Mr M Houtmeyers BEng(Hons)	Construction
Mr A Bullmore BSc PhD MIOA	Noise
Dr A Edwards BSc(Hons) PhD CGeol EurGeol FGS	Hydrology and Hydrogeology
Dr A Mills BSc(Hons) MSc PhD CGeol	Peat
Mr S Lowther BA(Hons) MSc CEnv MCIEEM	Ecology

FOR SP MANWEB PLC (Landinam 132kV Line):

Mr M Humphrey QC

Mr M Westland-Smith, of Counsel

They called:

Ms K Berry BA(Hons) RTPi	Planning Policy
Ms S Gibson BSc MLD CMLI	Landscape and Visual
Mr A Davies MSc CILT MIH MAPM	Transport and Highways
Mr R Livingston Div Manager, Amey PLC	Construction and Maintenance
Mr D Bonner BA(Hons)	Cultural Heritage
Dr J Swanson MA DPhil	Health
Mr J James BSc MSc MCIEEM CEnv	Ecology
Mr R Brooke BSc MSc RTPi	Socio-Economics (Inc Tourism)
Dr A Beddoes BEng(Hons) PhD MIET CEng	Network Design and Need
Mr E Leavy BSc MICE CEng	Company Policy
Mr E Paalman BEng	Engineering Project Design

Annex A**Llandinam Repowering Scheme – Schedule of Conditions****Consent under S.36 of the Electricity Act 1989 – Conditions**

1. Pursuant to section 36 of the Electricity Act 1989, the Secretary of State for Energy and Climate Change (“the Secretary of State”) hereby consents to the dismantling and removal of the existing wind farm and the construction, on the area of land delineated by a solid red line on the drawing number A4-1AD (“the Site”), of a wind turbine generating station (“the Development”) on land on the Waun Ddubarthog ridge near Llandinam, and to the operation of that generating station. This consent is granted to Celtpower Limited (“the Company”), its assignees and successors.
2. Subject to any variation in accordance with condition 3, the Development comprises:
 - The dismantling (decommissioning) of the existing wind farm including:
 - The dismantling and removal of 102 wind turbines and associated infrastructure
 - The upgrading of a number of the existing hardstandings and existing tracks to allow for crane access during dismantling;
 - Repowering and extension of the wind farm including:
 - Erection of 31 wind turbines having a height to blade tip of up to 121.2 metres, and 3 turbines (T29, T3 and T43) with a height to blade tip of up to 111.2m.
 - Crane hardstandings
 - Upgrading and construction of on-site access tracks and associated water-course crossings
 - Upgrading of the site access from the A483 road
 - An on-site electricity substation
 - Two permanent Power Performance Assessment (PPA) masts
 - On-site underground cabling
 - Three temporary construction compound and laydown areas;
 - Temporary Power Performance Assessment masts;
 - Eight borrow pits
 - Decommissioning of the wind farm at the end of its life

The proposed windfarm shall be as shown in drawing A4-1AD, subject to micro-siting and variation in accordance with conditions 21 to 23 of this consent, and drawing LLA-P-009 Rev A34 Sheets 1 & 2.

3. Subject to any minor changes which may be approved by the Local Planning Authority (as defined in the conditions of the deemed planning permission (“the Planning Conditions”) set out in paragraph 8 below), the Development shall be constructed and operated in accordance with the details contained in the Environmental Statement insofar as these do not conflict with any provision of the Planning Conditions or the terms of any scheme, programme, statement, plan, details, or report to be approved by the Local Planning Authority under the Planning Conditions.
4. The Development shall be commenced before the expiration of five years from the date of this consent
5. The Company shall not be permitted to assign this consent without the prior written authorisation of the Secretary of State. The Secretary of State may grant consent (with or without conditions) or refuse such authorisation as he may, in his own discretion, see fit. The consent shall not be capable of being assigned, alienated or transferred otherwise than in accordance with the foregoing procedure.

Deemed Permission under Section 90 of the Town And Country Planning Act 1990 – Conditions

6. In these conditions, unless the context otherwise requires:

"abnormal indivisible load" has the same meaning as in the Road Vehicles (Authorisation of Special Types) (General) Order 2003(a);

"commencement of development", in relation to the authorised development, means the date on which the authorised development begins by the carrying out of a material operation as defined in section 56 of the 1990 Act and "commence" and "commenced" shall be construed accordingly;

"construction period" means the period from work commencing on the Development until the date 6 months after the Site compounds have been reinstated in accordance with the conditions of this consent;

"dB" refers to the Decibel noise measurement unit;

"dB(A)" refers to a Decibel noise measurement unit, with the inclusion of the A-weighting filter in the measurements as referred to in ETSU-R-97;

"development" is as defined in condition 1 of this consent.

"ETSU-R-97" means the ETSU Report number ETSU-R-97 'The Assessment and Rating of Noise from Wind Farms' published in September 1996;

"final commissioning of the development" means the date on which the last wind turbine generator forming part of the Development is commissioned and generating electricity to the national grid;

"first export" means the date on which electricity is first exported to the Grid on a commercial basis;

"LA90" means the decibel (dB) level exceeded for 90% of each sample period;

"Local Planning Authority" means Powys County Council, or any successor authority;

"public holiday" means a day that is, or is to be observed as a public holiday;

"site" means land within the development boundary shown outlined in red on the map attached to this consent

"wind speed" means Wind Speeds measured on the wind farm Site at the turbine hub height, and corrected to a standard height of 10m above ground level, in a manner agreed with the Local Planning Authority;

"wind turbines" means the wind turbines forming part of the development and "wind turbine" shall be construed accordingly

Reason: For the avoidance of doubt.

7. Where under any condition details, a scheme, or a plan are to be submitted for the approval, or confirmation, of the local planning authority then unless the condition provides otherwise:

- (a) those details or scheme or plan and that approval must be in writing; and
- (b) the approved details, scheme or plan shall be taken to include any amendments that may subsequently be approved in writing by the local planning authority, provided that no amendments may be approved by the local planning authority

where such amendments may give rise to any materially different environmental effects to those assessed in the environmental statement.

Reason: For the avoidance of doubt.

The Development

8. The development shall be carried out in accordance with the following approved plans and documents:
- a) The application plan, labelled Figure A4-1AD, submitted to DECC in April 2013.
 - b) The Environmental Statement submitted to DECC in September 2008.
 - c) The Supplementary Environmental Information submitted to DECC in December 2011
 - d) The Supplementary Environmental Information submitted to DECC in April 2013.
- subject to micro siting in accordance with conditions 21 to 23.

Notwithstanding the reference in this condition to the Environmental Statement of September 2008 and the Supplementary Environmental Information of December 2011, it is the latest iteration of the design for the Development shown in the application plan that is authorised by this permission.

Reason: For the avoidance of doubt.

9. This permission is for a period of 25 years from the date of final commissioning, or 28 years from the date of commencement, whichever is the earlier, after which the Development shall be decommissioned and the Site restored.

Reason: For the avoidance of doubt and to establish the duration of this permission.

10. Confirmation of the date of commencement shall be provided to the local planning authority within one month of its occurrence.

Reason: To establish the date from which condition 9 shall apply.

11. Confirmation of the date of Final Commissioning shall be provided to the Secretary of State and the Local Planning Authority no later than one calendar month after that event.

Reason: To establish the date from which condition 9 shall apply.

Decommissioning of Existing Penrhyddlan & Llidiartywaun Wind Farm

12. No turbines shall be erected until a scheme for the decommissioning of the existing Penrhyddlan & Llidiartywaun wind farm has been submitted to and approved by the local planning authority. The scheme shall include the removal of existing turbines, and the removal of such tracks, cabling (including grid connection to Newtown) and other redundant infrastructure as are not to be retained. The scheme shall require existing turbines to be entirely taken down and removed from the site no later than 24 months after Commencement of the Development and shall require the removal of such tracks, cabling (including grid connection to Newtown) and other redundant infrastructure as are not to be retained no later than one year after Final Commissioning of the Development. The decommissioning shall thereafter be completed in accordance with the approved scheme.

Reason: To ensure the previous scheme is removed in an agreed manner and the site returned to an appropriate state.

Site Decommissioning & Restoration

13. Not less than 12 months before the expiry of this permission in accordance with condition 2, a scheme for the decommissioning and restoration of the Site shall be submitted to and approved by the Local Planning Authority. The scheme shall be informed by updated habitat bird and species surveys and implemented and completed within 24 months after the expiry of this permission. The scheme shall include, but not be limited to:
- a) location of material laydown areas;
 - b) an environmental management plan informed by updated habitat bird and species surveys to include details of measures to be taken during the decommissioning period to protect wildlife and habitats;
 - c) details of all tracks, structures, buildings, underground cables and utilities, and other associated infrastructure to be removed;
 - d) details of means of removal;
 - e) earth moving & soil replacement;
 - f) restoration of the landscape;
 - g) monitoring of the restored areas and remedial actions.

Reason: to ensure development is removed in a sympathetic manner upon expiry of this permission.

14. Prior to the implementation of the Site Decommissioning and Restoration Scheme, a community liaison scheme shall be submitted to and approved by the local planning authority. The community liaison scheme shall be implemented as approved and include:
- a) details of developer liaison with the local community to ensure residents are informed of how the decommissioning of the development is progressing;
 - b) a mechanism for dealing with complaints from the local community during the decommissioning of the development; and
 - c) a nominated representative of the developer who will have the lead role in liaising with local residents and the relevant planning authority.

Reason: To ensure the amenity of local residents is protected.

15. On completion of the restoration work carried out in accordance with condition 13, any remaining fixed equipment, machinery and buildings erected or brought onto the site for the purpose of the implementing the Decommissioning and site Restoration scheme shall be removed from the site.

Reason: to ensure the site is left in a satisfactory manner upon completion of the Site Decommissioning and Restoration Scheme.

16. No development shall take place on the site until the Company has submitted to the local planning authority details of a financial instrument, and arrangements which will ensure that funds sufficient to cover the completion of the decommissioning and site restoration costs are available to the planning authority prior to the commencement of decommissioning and site restoration. The financial instrument shall include arrangements for funds to increase with inflation and shall include a review provision upon the 5th, 10th, 15th and 20th anniversary of the First Export to ensure that the funds remain sufficient to cover the completion of the decommissioning and site restoration costs.

Reason: to ensure the site is left in a satisfactory manner upon completion of the Site Decommissioning and Restoration Scheme.

17. No development shall take place on site until the local planning authority has approved the financial instrument, it is in place and arrangements have been secured to ensure

that funds will be in place prior to the commencement of decommissioning and site restoration. The financial instrument shall be maintained throughout the duration of the permission and reinstatement period and the arrangements for deposit of funds, inflation adjustment and review of the financial instrument will be implemented.

Reason: to ensure the site is left in a satisfactory manner upon completion of the Site Decommissioning and Restoration Scheme.

Turbine Failure

18. If any wind turbine fails to provide electricity to the grid for a continuous period of 12 months or more (other than for reasons relating to noise) the local planning authority;
- a) shall be notified upon expiry of that 12 month period; and
 - b) can instruct the developer to submit a detailed scheme setting out how the wind turbine will be removed from the site, what associated tracks, structures, buildings and other associated infrastructure (including cabling) are to be removed from the site and how these will be removed and how the disturbed areas will be restored. The scheme shall include details of any necessary protection for breeding birds required as a consequence of the works. The scheme shall be submitted to the local planning authority within 2 months of the local planning authority's instruction and implemented within 6 months of approval unless a longer period is agreed in writing by the local planning authority provided that if, during the period following an instruction to the developer from the local planning authority in accordance with (b) the turbine once again provides electricity to the grid, there will be no requirement to remove the turbine or associated infrastructure .

Reason: To ensure appropriate provision is made for a turbine or turbines requiring repair or for a turbine or turbines which require decommissioning.

Development Micro-Siting

19. The wind turbines and anemometer masts shall be erected at the coordinates given on Drawing No. 4-1AD. Subject to condition 21, a variation of the indicated position of any of the wind turbines shall be permitted by up to 50 metres in any direction. Subject to condition 21, a variation of the position of any tracks shall be permitted by up to 100 metres in any direction from that shown on the approved plan 4-1AD. Micrositing tolerances are shown on Drawing No. LLA-P-009 Rev A4 Sheets 1 & 2.

Reason: To allow the developer flexibility during construction to make minor changes in the location of infrastructure to deal with difficulties such as poor ground conditions that become apparent during construction.

20. Condition 19 does not permit variation of the position of the development infrastructure such that any part of it falls within the restricted areas shaded grey on Drawing No. LLA-P-009 Rev A4 Sheets 1 & 2. The position of any part of the development infrastructure presently shown on the approved plan Drawing No. 4-1AD as being within the restricted areas shall be varied in accordance with condition 19 or condition 21 such that it is no longer within the restricted areas.

Reason: To ensure that impact upon peaty soils and their related habitats at the Site is reduced to a minimum having regard to other relevant constraints.

21. Notwithstanding the constraints placed on variation of the location of tracks by condition 19, the following sections of track may be realigned as shown on Drawing No. LLA-P-009 Rev A4 Sheets 1 & 2 from the route shown in purple to the route shown in blue:
- a) Section of access track between grid references 302697,281288 and 302809,281249

- b) Section of access track between grid references 303908,285307 and 303903,285309
- c) Section of access track between grid references 303623,285259 and 303774,285190

Reason: To allow for minor variations such that tracks can be more efficiently aligned and can avoid peaty soils and their related habitats, or in the case of the track alignment north and south of T35, to reduce the number of water crossings.

22. Within 6 months after final commissioning, a plan showing the exact location of all development (including tracks, hardstandings, access areas, turbines, borrow pits etc.) shall be submitted to the local planning authority.

Reason: to record the final as built scheme once micro-siting allowances have been taken into account.

Detailed Development - Design & Appearance

23. No turbines shall be delivered to site until details of the turbines, including make, model, design, size, and if there is an external transformer, the transformer location, the power rating, the anemometer mast and associated apparatus has been submitted to and approved by the local planning authority. The turbines, anemometer mast and associated apparatus shall be constructed in accordance with the approved details.

Reason: to ensure satisfactory appearance and in the interests of visual amenity.

24. No turbines shall be erected until the proposed colour shall be submitted to and approved by the local planning authority. Development shall be carried out in accordance with the approved colour scheme.

Reason: to ensure satisfactory appearance and in the interests of visual amenity.

25. The wind turbine blades on all the turbines hereby granted consent shall rotate in the same direction.

Reason: To safeguard the visual amenities of the area.

26. All electricity cables connecting the turbine arrays and the substation shall be installed underground.

Reason: In the interests of visual amenity.

27. No development of the on-site substation building shall commence until details relating to its location, external treatment, design, materials, landscaping (if any), and orientation have been submitted to and approved by the local planning authority. The substation shall be constructed in accordance with the approved details.

Reason: In the interests of visual amenity.

28. No outdoor lighting other than:
- a) aviation lighting to be installed in accordance with condition 57 of this Consent;
 - b) temporary site illumination approved under condition 42 as part of the Construction Method Statement.
- may be used in the course of the Development unless details of such lighting have been submitted to and approved by the local planning authority. Such outdoor lighting shall only be provided in accordance with the approved details.

Reason: in the interests of visual amenity.

29. Except during the construction period, no symbols, signs, logos or other lettering, other than those required by law for health and safety reasons, shall be displayed on any part of the turbines nor any building or structures without approval from the local planning authority.

Reason: In the interests of visual amenity.

Construction Hours

30. Construction work shall only take place between the hours of 07:30 - 19:30 hours on Monday to Friday inclusive and 07:30 - 13:00 hours on Saturdays, with no construction work on a Sunday or public holiday. Outside these hours, works at the site shall be limited to emergency works, erection of turbines, dust suppression, and the testing/maintenance of plant and equipment, or construction work that is not audible from any noise sensitive property, unless otherwise approved in writing by the Local Planning Authority. The Local Planning Authority shall be informed in writing of emergency works within three working days of occurrence.

Reason: To protect amenity.

31. All activities associated with the construction of the development shall be carried out in accordance with British Standard BS5228:2009: Code of Practice for noise and vibration control on construction and open sites – Part 1: Noise and Part 2: Vibration

Reason: To protect amenity.

Highways

32. No development shall take place other than site establishment and creation of the construction compound until details of the works at the junction of the C2025 with the A483 have been submitted to and approved by the Local Planning Authority. The details shall include:
- a) details of visibility splays that shall be kept free at all times of any obstruction including trees and shrubs exceeding 1.05 metres in height above the adjoining carriageway;
 - b) drainage details; and
 - c) road markings and signage proposals
- No construction works or decommissioning requiring the use of HGVs (other than works required in connection with site establishment and creation of the construction compound) shall take place prior to the implementation of the works in accordance with the approved details.

Reason: To ensure a satisfactory means of access to and from the Trunk Road is provided in the interests of highway safety.

33. No development shall take place other than site establishment and creation of the construction compound until detailed plans of the works to be carried out to the C2025 Pentre Road and U2835 unclassified county highway have been submitted to and approved in writing by the local planning authority. The details submitted shall include:
- a) details of localised widening and indivisible load passing places;
 - b) details of changes to vertical alignments;
 - c) details of visibility splays that shall be kept free at all times of any obstruction including trees and shrubs exceeding 1.05 metres in height above the adjoining carriageway;
 - d) drainage details;

- e) road markings and signage proposals; and
- f) a programme for the works.

The works shall be implemented in accordance with the approved details.

Reason: To ensure a satisfactory access to and from the development is provided in the interests of highway safety, amenity and nature conservation.

34. Prior to the submission of the Transport Management Plan required by condition 35 a plan for the assessment of the capacity of and impact on highways structures including layover areas, passing places, bridges, culverts, retaining walls, embankments and drainage systems, that may be affected by abnormal indivisible load deliveries shall be submitted to and approved by the local planning authority. No deliveries by abnormal indivisible load shall take place until the approved assessment has been carried out. Where the approved assessment indicates strengthening or other works may be required, no abnormal indivisible loads shall be delivered until full engineering details and drawings of any works required to such structures to accommodate the passage of abnormal indivisible loads have been submitted to and approved by the Local Planning Authority and the approved works shall be completed prior to any abnormal indivisible load deliveries to the site.

Reason: in the interests of highway safety and amenity.

35. No abnormal indivisible loads shall be delivered to the Site until a Traffic Management Plan (TMP) for abnormal indivisible load deliveries has been submitted to and approved by the local planning authority. Thereafter abnormal indivisible loads shall be carried out in accordance with the approved TMP. The TMP shall include:
- a) abnormal indivisible load vehicle routing;
 - b) the carrying out of any widening or junction improvements and works (including to street lighting, street signs and safety barriers) and the provision of passing places, layover areas and welfare facilities required to achieve the delivery of abnormal indivisible loads along the proposed route;
 - c) availability of access to any passing places, layover areas and welfare facilities that are not proposed to form a part of the highway network;
 - d) the outcome of trial runs to demonstrate the suitability of the route;
 - e) management of junctions and crossings of highways and other public rights of way while abnormal indivisible load deliveries take place;
 - f) management and maintenance of layover areas, passing places and welfare facilities;
 - g) details of temporary warning signs;
 - h) restrictions on abnormal indivisible load movements during special events including (without limitation) the Royal Welsh and Smallholders shows;
 - i) for any highway works proposed to be carried out, a statement whether they are to be permanent or temporary and, if temporary, when they will be removed and the highway restored to its previous condition; and
 - j) details of a review mechanism to enable changes in circumstances after the agreement of the TMP to be addressed.

Furthermore, details of the highway works associated with the construction of the layover areas, passing places and highway improvements shall be set out in the TMP. These shall include methods of construction, drainage, street lighting, signage and road markings. The works shall be completed in accordance with the approved details prior to the commencement of any abnormal indivisible load deliveries to the site.

Reason: in the interests of highways safety and amenity.

36. No AIL deliveries shall be made to the site until an AIL Management Strategy has been submitted to and approved in writing by the Local Planning Authority. All AIL deliveries

shall be carried out in accordance with the approved AIL Management Strategy, which shall include details of the following:

- a) persons responsible for the management and implementation of the AIL Management Strategy;
- b) means of control of timing of delivery AIL movements;
- c) temporary traffic diversions and traffic hold points;
- d) details of banksmen and escorts for abnormal loads;
- e) coordination with all other AIL deliveries (including without limitation to other wind farms in Mid Wales)
- f) description of procedures for the allocation of delivery slots including delivery slot triggers and trading;
- g) the appointment and role of a Transport Coordinator;
- h) management and maintenance of layover areas and welfare facilities;
- i) liaison with relevant highway and planning authorities and the Police;
- j) liaison with members of the public and local communities;
- k) liaison with the hauliers, developers and landowners.

Reason: In the interests of highway safety and amenity

37. No developments shall commence until a scheme providing for the remediation of any damage directly attributable to the Development to the highway infrastructure which will be utilised during the construction of the development has been submitted to and approved by the local planning authority following consultation with the relevant highway authorities. The scheme shall be implemented as approved.

Reason: To ensure the safety of the highways affected and that the developer rectifies any directly attributable damage caused.

38. No construction works or decommissioning requiring the use of HGVs (other than works required in connection with site establishment and creation of the construction compound) shall take place on site until a traffic management plan for construction vehicles has been submitted to and approved in writing by the local planning authority. The approved traffic management plan shall thereafter be complied with and will include details of the following:
- a) construction vehicle routing;
 - b) means of monitoring vehicle movements to and from the site including the use of liveried construction vehicles displaying the name of the developer, the vehicle number, a telephone number for complaints and procedures for dealing with complaints;
 - c) timing of deliveries of construction materials to the site;
 - d) the management of junctions and crossings of roads and other public rights of way;
 - e) measures to be put in place including contractual arrangements with contractors and subcontractors to ensure that complaints and breaches of the TMP requirements are able to be remedied;
 - f) a travel plan aimed at maximising the use of sustainable travel by the construction workforce associated with the development;
 - g) vehicle movements during special events including (without limitation) the Royal Welsh and Smallholders shows;
 - h) communications with members of the public and local communities;
 - i) details of a review mechanism to enable changes in circumstances after the agreement of the TMP to be addressed.

Reason: In the interests of highway safety and amenity.

39. No abnormal indivisible load movements associated with any repairs, removal, or replacement components shall take place during the life of the development until a traffic

management plan dealing with such repair and/or replacement has been submitted to and approved by the local planning authority and thereafter the approved TMP shall be implemented.

Reason: To ensure the safety of the highways affected and in the interests of amenity

40. No movement of traffic associated with the decommissioning of the development shall take place until a traffic management plan dealing with such decommissioning has been submitted to and approved in writing by the local planning authority and thereafter the approved TMP shall be implemented.

Reason: To ensure the safety of the highways affected and in the interests of amenity

Construction Management

41. No development shall commence until a Construction Environmental Management Plan (CEMP) has been submitted to and approved in writing by the Local Planning Authority. The CEMP shall be adhered to throughout the decommissioning of the existing turbines, construction, and post-construction restoration period, subject to any variations approved in writing by the Local Planning Authority. The CEMP shall include:
- a) details of the temporary site compounds and laydown areas including temporary structures/buildings, fencing, parking and storage provision to be used in connection with the construction of the development;
 - b) location and method of working of borrow pits;
 - c) details of the proposed storage of materials and disposal of surplus materials to include soil, peat, rock and waste;
 - d) dust management details;
 - e) an Environmental Management & Pollution Prevention Plan including a Drainage Management Plan and a Ground & Surface Water Management Plan to address pollution control, protection of the water environment and private water supplies, bunding of fuel storage areas, ground & surface water drainage, sewage disposal and discharge of foul drainage, water quality monitoring, and measures to deal with heavy rain;
 - f) temporary site illumination during the decommissioning and construction period;
 - g) details of the phasing of construction works;
 - h) details of and method statements for surface treatments and the construction of all hard surfaces, tracks and cable trenches;
 - i) details of emergency procedures and pollution response plans including those for heavy rain;
 - j) siting and details of wheel washing facilities;
 - k) details of cleaning of site entrances, site tracks and the adjacent public highway and the sheeting of all HGVs taking spoil or construction materials to/from the site to prevent spillage or deposit of any materials on the highway;
 - l) a site environmental management plan to include details of measures to be taken during the decommissioning and construction period to protect wildlife and habitats;
 - m) areas on the Site designated for the storage, loading, off-loading, parking and manoeuvring of heavy duty plant, equipment and vehicles;
 - n) details of the measures to be taken to ensure that the visibility splays remain free of obstacles exceeding 1.05m in height throughout the construction and post construction restoration period;
 - o) details and a timetable for post construction restoration/reinstatement of the temporary working areas, laydown areas and the construction compounds, track verges and cable trenches;
 - p) details of coordination with any approved scheme of archaeological works;
 - q) details of the design and construction of any water crossings and culverts;

- r) details for the decommissioning and removal of the existing wind turbines and associated infrastructure on the Site;
- s) details of tree felling, timber removal and any replanting proposed;
- t) monitoring procedures to ensure compliance;
- u) working practices for protecting nearby residential dwellings, including measures to control noise and vibration arising from on-site activities, to be adopted as set out in British Standard 5228:2009: Code of Practice for noise and vibration control on construction and open sites – Part 1: Noise and Part 2: Vibration;
- v) details of soil and peat management;
- w) details of concrete mixing and washout areas; and
- x) a waste management plan.

Reason: To ensure a satisfactory level of environmental protection and to minimise disturbance to local residents during the construction process

Rights of Way Management Plan

42. No development shall commence until a Rights of Way Management Plan (RWMP) has been submitted to and approved by the local planning authority. The RWMP shall be implemented as approved and shall include:
- a) details of the temporary re-routing of public rights of way during construction of the authorised development;
 - b) details of the provision of signage and other information alerting the public to construction works;
 - c) details of any fencing or barriers to be provided during the construction period;
 - d) details as to how public rights of way, paths and roads will be inspected prior to and monitored during the construction period; and
 - e) details of protection of breeding birds where any public right of way is re-routed.

Reason: to protect public rights of way.

Ecology

43. No vegetation clearance and tree felling or other development shall commence until a Breeding Bird Protection Plan has been submitted to and approved by the Local Planning Authority. The Plan shall incorporate the proposals scoped in the 2013 SEI and, for curlews, the draft Breeding Bird Protection Plan for this species, dated 20 September 2013, and shall detail measures to protect breeding birds and discourage birds from breeding on those areas of the Development Site to be worked on during the relevant breeding season. The Breeding Bird Protection Plan shall be implemented as approved throughout the decommissioning of the existing wind farm and construction phases of the scheme unless amended with the prior approval of the Local Planning Authority.

Reason: To protect breeding birds during wind farm construction and decommissioning.

44. Prior to the commencement of site vegetation clearance, tree felling or other development a scheme for protected species update surveys shall be submitted to and approved in writing by the Local Planning Authority. The survey results and a programme of any modification to mitigation required as a consequence shall be submitted to and approved in writing by the Local Planning Authority prior to any works associated with the development taking place. The surveys shall be undertaken by a suitably qualified ecologist in the last suitable season prior to site preparation and construction work commencing, and the programme of mitigation work shall be implemented as approved for the duration of decommissioning of the existing windfarm and construction activities.

Reason: In the interests of nature conservation.

45. First export shall not take place unless a post-construction monitoring programme has been submitted to and approved by the Local Planning Authority. The programme shall monitor habitat areas, selected bird species and bats detailed in the Habitat Management Plan (HMP) agreed pursuant to condition 46. The monitoring programme shall incorporate the scope and frequency of the proposals set out in the agreed HMP and shall report as agreed to the Local Planning Authority and other parties as deemed appropriate by the Local Planning Authority. The Post-Construction Monitoring Programme shall be implemented as approved unless amended with the prior approval of the Local Planning Authority.

Reason: To protect breeding birds during the wind farm's construction, operation, and decommissioning

46. No vegetation clearance, tree felling or development shall commence until a Habitat Management Plan (HMP) has been submitted to and approved by the Local Planning Authority. The HMP shall incorporate the proposals set out in the Environmental Statement, the 2011 SEI and the 2013 SEI, and the draft proposals dated 23 September 2013. The habitat management plan shall include measures to:
- enhance the soligenous fen and bogmire habitat,
 - enhance the habitat for brown hares,
 - enhance the habitat for viviparous lizard,
 - enhance the habitat for breeding curlews.

The HMP shall be implemented as approved unless amended with the prior approval of the Local Planning Authority.

Reason: In the interests of safeguarding or enhancing the relevant habitats and conditions for associated species.

47. Prior to the commencement of site clearance, tree felling or other development an Ecological Clerk of Works (ECoW) shall be in place. The ECoW shall be appointed after approval by the Local Planning Authority for the period from commencement of development to Final Commissioning of the development. The scope of work of the ECoW shall include:
- monitoring compliance with the ecological mitigation works that have been approved in this consent and providing quarterly reports reporting compliance to the local planning authority;
 - advising the Company on adequate protection of nature conservation interests on the Site and downstream on the River Wye SAC;
 - directing the micro-siting and placement of turbines, tracks and other infrastructure;
 - monitoring the compliance with environmental management measures in the CEMP and all methods statements and keeping an audit trail of compliance;
 - providing advice to contractors about legally protected species and the River Wye SAC.

Reason: In the interests of protecting the ecological and ornithological environment.

Shadow Flicker

48. Prior to the erection of the first turbine, a written scheme shall be submitted to and approved in writing by the Local Planning Authority setting out a protocol for the assessment of shadow flicker in the event of any complaint to the Local Planning Authority from the owner or occupier of a residential Dwelling. The written scheme shall include remedial measures to alleviate any shadow flicker attributable to the development. The turbines shall be operated in accordance with the approved protocol unless the Local Planning Authority gives its prior written consent to any variations.

Reason: In the interests of residential amenity.

Television Interference

49. No turbine shall be erected until a scheme has been submitted to and approved by the Local Planning Authority providing for the investigation of and remediation of any interference with television reception at any dwelling which lawfully existed or had planning permission at the date of this permission. The scheme shall provide for the investigation by a qualified independent television engineer of any complaint of interference with television reception at a lawfully occupied dwelling, where such complaint is notified to the developer by the local planning authority within 24 months of the date of final commissioning. The scheme shall be implemented as approved.

Reason: In the interests of residential amenity.

Archaeology

50. No development shall commence until a scheme of archaeological investigation has been submitted to and approved by the local planning authority. The scheme of archaeological investigation shall be implemented as approved.

Reason: To ensure that any archaeological remains present are investigated and preserved.

51. All records collated, as a result of the Scheme of Archaeological Investigation, shall be submitted to the local planning authority and sent to the Historic Environment Record (currently held by Clwyd-Powys Archaeological Trust) within 6 months of the record being gathered.

Reason: To ensure that any archaeological findings are suitably recorded.

Aviation

52. No wind turbine shall be erected before the following information has been provided to the Defence Geographic Centre of the Ministry of Defence:
- a) the date that construction starts and ends;
 - b) the maximum height of construction equipment;
 - c) the latitude and longitude of every turbine.

Reason: In the interests of aviation safety.

53. 25 candela omni-directional aviation lighting or infra-red aviation lighting, accredited by the Ministry of Defence and with an optimised flash pattern of 60 flashes per minute of 200ms to 500ms duration, shall be installed on the nacelles of Turbines 1, 5, 8, 13, 15, 17, 27, 28, 32, 34, 38 and 42 as shown on Figure A4-1 of the 2013 SEI or such other turbines as the local planning authority, having consulted the Ministry of Defence, agrees will provide equally effective illumination for air navigation purposes. The lighting shall remain operational until such time as the wind turbines are decommissioned and removed from the site.

Reason: In the interests of aviation safety.

Community Liaison

54. No development shall commence until a community liaison scheme for the construction period including decommissioning of the existing Penrhyddlan & Llidiartywaun Wind Farm

has been submitted to and approved by the local planning authority. The community liaison scheme shall be implemented as approved and include:

- a) details of developer liaison with the local community to ensure residents are informed of how the construction, including decommissioning of the existing Penrhyddlan & Llidiartywaun Wind Farm of the development is progressing;
- b) a mechanism for dealing with complaints from the local community during the construction of the development and decommissioning of the existing Penrhyddlan & Llidiartywaun Wind Farm; and
- c) a nominated representative of the developer who will have the lead role in liaising with local residents and the relevant planning authority.

Reason: To ensure the amenity of local residents is protected.

Noise

55. No turbine hereby approved shall be brought into operation prior to the submission to and approval in writing by the Local Planning Authority of a scheme for the assessment and regulation of Excess Amplitude Modulation (EAM). That scheme shall be in general accordance with, if it exists at the time of submission:

- a) relevant guidance endorsed in National Planning Policy; or in the absence of endorsed guidance;
- b) relevant guidance published by the Institute of Acoustics.

The approved scheme shall be implemented for the life of the development hereby approved.

Reason: In the interests of public amenity to ensure that EAM is suitably addressed.

56. The rating level of noise immissions from the combined effects of the wind turbines (including the application of any tonal penalty) when determined in accordance with the attached Guidance Notes (to this condition), shall not exceed the values for the relevant integer wind speed set out in, or derived from, the table attached to this condition at any dwelling which is lawfully existing or has planning permission at the date of this permission and:

- a) The Company shall continuously log power production, wind speed and wind direction, all in accordance with Guidance Note 1(d). These data shall be retained for a period of not less than 24 months. The Company shall provide this information in the format set out in Guidance Note 1 (e) to the Local Planning Authority on its request, within 14 days of receipt in writing of such a request.
- b) No electricity shall be exported until The Company has submitted to the Local Planning Authority for written approval a list of proposed independent consultants who may undertake compliance measurements in accordance with this condition. Amendments to the list of approved consultants shall be made only with the prior written approval of the Local Planning Authority.
- c) Within 21 days from receipt of a written request from the Local Planning Authority following a complaint to it from an occupant of a dwelling alleging noise disturbance at that dwelling, The Company shall, at its expense, employ a consultant approved by the Local Planning Authority to assess the level of noise immissions from the wind farm at the complainant's property in accordance with the procedures described in the attached Guidance Notes. The written request from the Local Planning Authority shall set out at least the date, time and location that the complaint relates to and any identified atmospheric conditions, including wind direction, and include a statement as to whether, in the opinion of the Local Planning Authority, the noise giving rise to the complaint contains or is likely to contain a tonal component.
- d) The assessment of the rating level of noise immissions shall be undertaken in accordance with an assessment protocol that shall previously have been submitted

- to and approved in writing by the Local Planning Authority. The protocol shall include the proposed measurement location identified in accordance with the Guidance Notes where measurements for compliance checking purposes shall be undertaken, whether noise giving rise to the complaint contains or is likely to contain a tonal component, and also the range of meteorological and operational conditions (which shall include the range of wind speeds, wind directions, power generation and times of day) to determine the assessment of rating level of noise immissions. The proposed range of conditions shall be those which prevailed during times when the complainant alleges there was disturbance due to noise, having regard to the written request of the Local Planning Authority under paragraph (c), and such others as the independent consultant considers likely to result in a breach of the noise limits.
- e) Where a dwelling to which a complaint is related is not listed in the tables attached to these conditions, The Company shall submit to the Local Planning Authority for written approval proposed noise limits selected from those listed in the Tables to be adopted at the complainant's dwelling for compliance checking purposes. The proposed noise limits are to be those limits selected from Table 1, having regard to Table 2, and specified for a listed location which the independent consultant considers as being likely to experience the most similar background noise environment to that experienced at the complainant's dwelling. The rating level of noise immissions resulting from the combined effects of the wind turbines when determined in accordance with the attached Guidance Notes shall not exceed the noise limits approved in writing by the Local Planning Authority for the complainant's dwelling.
- f) The Company shall provide to the Local Planning Authority the independent consultant's assessment of the rating level of noise immissions undertaken in accordance with the Guidance Notes within 2 months of the date of the written request of the Local Planning Authority for compliance measurements to be made under paragraph (c), unless the time limit is extended in writing by the Local Planning Authority. The assessment shall include all data collected for the purposes of undertaking the compliance measurements, such data to be provided in the format set out in Guidance Note 1(e) of the Guidance Notes. The instrumentation used to undertake the measurements shall be calibrated in accordance with Guidance Note 1 (a) and certificates of calibration shall be submitted to the Local Planning Authority with the independent consultant's assessment of the rating level of noise immissions.
- g) Where a further assessment of the rating level of noise immissions from the wind farm is required pursuant to Guidance Note 4(c), The Company shall submit a copy of the further assessment within 21 days of submission of the independent consultant's assessment pursuant to paragraph (d) above unless the time limit has been extended in writing by the Local Planning Authority.

Reason: in the interests of the protection of residential amenity

Table 1: Noise limits expressed in dB LA90,10 minute as a function of the standardised wind speed (m/s) at 10 metre height as determined within the site averaged over 10 minute periods.

Location	Standardised wind speed at 10 meter height (<i>rnl</i> s) within the site averaged over 10-minute periods											
	1	2	3	4	5	6	7	8	9	10	11	12
Cwm Diffwys	35.0	35.0	35.0	35.0	36.5	38.0	38.0	38.0	38.0	38.0	38.0	38.0
Pantydwr	35.0	35.0	35.0	35.0	36.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0
Cwm Feinon	35.0	35.0	35.0	35.0	37.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0
Waen Cwm Yr Ynys	35.0	35.0	35.0	35.0	38.0	39.5	39.5	39.5	39.5	39.5	39.5	39.5
Waenllwydion	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Wainhir	35.0	35.0	35.0	35.0	36.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0
Bryn Llyndwr	35.0	35.0	35.0	35.0	36.0	36.5	37.0	37.5	37.5	37.5	37.5	37.5
Paby Llwyd 1	35.0	35.0	35.0	35.0	37.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0
Paby Llwyd 2	35.0	35.0	35.0	35.0	37.0	38.0	39.0	39.0	39.0	39.0	39.0	39.0
Paby Llwyd 3	35.0	35.0	35.0	35.0	36.0	36.0	37.0	39.0	39.0	39.0	39.0	39.0
Paby Llwyd 4	35.0	35.0	35.0	35.0	35.0	35.0	36.0	37.0	37.0	37.0	37.0	37.0

Table 2: Coordinate locations of the properties listed in Table 1

Property	Easting	Northing	Applicable limit (table 1)
Cwm Diffwys	301115	281407	Cwm Diffwys
Community centre	300083	281670	Pantydwr
Pen-y-lan	300194	282226	Pantydwr
Pantydwr	300388	282065	Pantydwr
Pen-y-banc	300720	282740	Pantydwr
Graig	300771	282459	Pantydwr
Cwm farm	300958	282570	Pantydwr
Ty'n-y-pwll	300787	283285	Pantydwr
Rhiwysgyfarnog	301162	283099	Pantydwr
Cwm Feinon	301467	283746	Pantydwr
Gwern-y-gigfran	301259	284336	Pantydwr
Bryn Coch	301063	283695	Pantydwr
Foel Fawr	301830	284360	Cwm Feinon
Foel Fach	301541	284471	Pantydwr
Cwm Feinon	301986	184682	Cwm Feinon
Glyn Fach	301501	284752	Pantydwr
Waen Cwm Yr Ynys	302505	285224	Waen Cwm Yr Ynys
Coed-y-Gaer	300965	285007	Waenllwydion
Cwmffrwd	304159	287611	Waenllwydion
Waenllwydion	303775	287263	Waenllwydion
Wainhir	305296	286650	Wainhir
Ty'n-y-velvn	305271	286985	Wainhir
Pentre	306484	286038	Wainhir
Duqwm Farm	305619	285068	Waan Cwm Yr Ynys
Gwrhyd	306481	285167	Bryn Llyndwr
Bryn Picca	306766	284176	Wainhir
Bryn Llyndwr	305950	283300	Bryn Llyndwr
Paby Llwyd 1	305324	282553	Paby Llwyd 1
Paby Llwyd 2	305039	282383	Paby Llwyd 2
Paby Llwyd 3	304807	281859	Paby Llwyd 3
Paby Llwyd 4	304774	281328	Paby Llwyd 4

Note to Table 2: The geographical coordinate references are provided for the purpose of identifying the general location of dwellings to which a given set of noise limits applies.

General Note: For the purposes of this condition, a dwelling is a building within use class C3 and C4 of the Town and Country Planning (Use Classes) Order 1987 (as amended) which lawfully exists or had planning permission as at the date of this consent.

Guidance Notes for Noise Conditions

These notes are to be read with and form part of the noise condition. They further explain the condition and specify the methods to be employed in the assessment of complaints about noise immissions from the wind farm. The rating level at each integer wind speed is the arithmetic sum of the wind farm noise level as determined from the best-fit curve described in guidance Note 2 of these Guidance Notes and any tonal penalty applied in accordance with Guidance Note 3. Reference to ETSU-R-97 refers to the publication entitled "The Assessment and Rating of Noise from Wind Farms" (1997) published by the Energy Technology Support Unit (ETSU) for the Department of Trade and Industry (DTI)).

Guidance Note 1

(a) Values of the LA90(10 minute) noise statistic should be measured at the complainant's property, using a sound level meter of EN 60651/BSB EN 60804 Type 1, or BSB EN 61672 Class 1 quality (or the equivalent UK adopted standard in force at the time of the measurements) set to measure using the fast time weighted response as specified in SS EN 60651/BSB EN 60804 or BS EN 61672-1 (or the equivalent UK adopted standard in force at the time of the measurements). This should be calibrated in accordance with the procedure specified in BS 4142: 1997 (or the equivalent UK adopted standard in force at the time of the measurements). Measurements shall be undertaken in such a manner to enable a tonal penalty to be applied in accordance with Guidance Note 3.

(b) The microphone should be mounted at 1.2 -1.5 metres above ground level, fitted with a two-layer windshield or suitable equivalent approved in writing by the Local Planning Authority, and placed outside the complainant's dwelling. Measurements should be made in "free field" conditions. To achieve this, the microphone should be placed at least 3.5 metres away from the building facade or any reflecting surface except the ground at the approved measurement location. In the event that the consent of the complainant for access to his or her property to undertake compliance measurements is withheld, The windfarm operator shall submit for the written approval of the Local Planning Authority details of the proposed alternative representative measurement location prior to the commencement of measurements and the measurements shall be undertaken at the approved alternative representative measurement location.

(c) The LA90(10 minute) measurements should be synchronised with measurements of the 10-minute arithmetic mean wind and operational data logged in accordance with Guidance Note 1 (d), including the power generation data from the turbine control systems of the wind farm.

(d) To enable compliance with the conditions to be evaluated, The wind farm operator shall continuously log arithmetic mean wind speed in metres per second and wind direction in degrees from north at hub height for each turbine and arithmetic mean power generated by each turbine, all in successive 10-minute periods. Unless an alternative procedure is previously agreed in writing with the Planning Authority, this hub height wind speed, averaged across all operating wind turbines, shall be used as the basis for the analysis. All 10 minute arithmetic average mean wind speed data measured at hub height shall be 'standardised' to a reference height of 10 metres as described in ETSU-R-97 at page 120 using a reference roughness length of 0.05 metres. It is this standardised 10 metre height wind speed data, which is correlated with the noise measurements determined as valid in accordance with Guidance Note 2, such correlation to be undertaken in the manner described in Guidance Note 2. All 10 minute periods shall commence on the hour and in 10- minute increments thereafter.

(e) Data provided to the Local Planning Authority in accordance with the noise condition shall be provided in comma separated values in electronic format.

(f) A data logging rain gauge shall be installed in the course of the assessment of the levels of noise immissions. The gauge shall record over successive 10minute periods synchronised with the periods of data recorded in accordance with Note 1 (d).

Guidance Note 2

(a) The noise measurements shall be made so as to provide not less than 20 valid data points as defined in Guidance Note 2 (b)

(b) Valid data points are those measured in the conditions specified in the agreed written protocol under paragraph (d) of the noise condition, but excluding any periods of rainfall measured in the vicinity of the sound level meter. Rainfall shall be assessed by use of a rain gauge that shall log the occurrence of rainfall in each 10 minute period concurrent with the measurement periods set out in Guidance Note 1.

(c) For those data points considered valid in accordance with Guidance Note 2(b), values of the LA90,10 minute noise measurements and corresponding values of the 10- minute wind speed, as derived from the standardised ten metre height wind speed averaged across all operating wind turbines using the procedure specified in Guidance Note 1 (d), shall be plotted on an XY chart with noise level on the Y-axis and the standardised mean wind speed on the X-axis. A least squares, "best fit" curve of an order deemed appropriate by the independent consultant (but which may not be higher than a fourth order) should be fitted to the data points and define the wind farm noise level at each integer speed.

Guidance Note 3

(a) Where, in accordance with the approved assessment protocol under paragraph (d) of the noise condition, noise immissions at the location or locations where compliance measurements are being undertaken contain or are likely to contain a tonal component, a tonal penalty is to be calculated and applied using the following rating procedure.

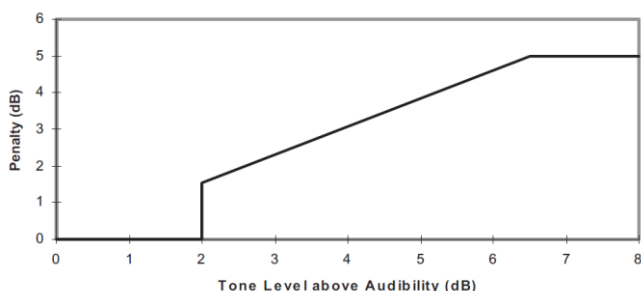
(b) For each 10 minute interval for which LA90 .10 minute data have been determined as valid in accordance with Guidance Note 2 a tonal assessment shall be performed on noise immissions during 2 minutes of each 10 minute period. The 2 minute periods should be spaced at 10 minute intervals provided that uninterrupted uncorrupted data are available ("the standard procedure"). Where uncorrupted data are not available, the first 'available uninterrupted clean 2 minute period out of the affected overall 10 minute period shall be selected. Any such deviations from the standard procedure, as described in Section 2.1 on pages 104-109 of ETSU-R-97, shall be reported.

(c) For each of the 2 minute samples the tone level above or below audibility shall be calculated by comparison with the audibility criterion given in Section 2.1 on pages 104-109 of ETSU-R-97.

(d) The tone level above audibility shall be plotted against wind speed for each of the 2 minute samples. Samples for which the tones were below the audibility criterion or no tone was identified, a value of zero audibility shall be used.

(e) A least squares "best fit" linear regression line shall then be performed to establish the average tone level above audibility for each integer wind speed derived from the value of the "best fit" line at each integer wind speed. If there is no apparent trend with wind speed then a simple arithmetic mean shall be used. This process shall be repeated for each integer wind speed for which there is an assessment of overall levels in Guidance Note 2.

(f) The tonal penalty is derived from the margin above audibility of the tone according to the figure below.



Guidance Note 4

(a) If a tonal penalty is to be applied in accordance with Guidance Note 3 the rating level of the turbine noise at each wind speed is the arithmetic sum of the measured noise level as determined from the best fit curve described in Guidance Note 2 and the penalty for tonal noise

as derived in accordance with Guidance Note 3 at each integer wind speed within the range specified by the Local Planning Authority in its written protocol under paragraph (d) of the noise condition.

(b) If no tonal penalty is to be applied then the rating level of the turbine noise at each wind speed is equal to the measured noise level as determined from the best fit curve described in Guidance Note 2. .

(c) In the event that the rating level is above the limit(s) set out in the Tables attached to the noise conditions or the noise limits for a complainant's dwelling approved in accordance with paragraph (e) of the noise condition, the independent consultant shall undertake a further assessment of the rating level to correct for background noise so that the rating level relates to wind turbine noise immission only.

(d) The Company shall ensure that all the wind turbines in the development are turned off for such period as the independent consultant requires to undertake the further assessment. The further assessment shall be undertaken in accordance with the following steps:

(e). Repeating the steps in Guidance Note 2, with the wind farm switched off, and determining the background noise (L3) at each integer wind speed within the range requested by the Local Planning Authority in Its written request under paragraph (c) and the approved protocol under paragraph (d) of the noise condition.

(f) The wind farm noise (L1) at this speed shall then be calculated as follows where L2 is the measured level with turbines running but without the addition of any tonal penalty:

(g) The rating level shall be re-calculated by adding arithmetically the tonal penalty (if any is applied in accordance with Note 3) to the derived wind farm noise L1 at that integer wind speed.

(h) If the rating level after adjustment for background noise contribution and adjustment for tonal penalty (if required in accordance with note 3 above) at any integer wind speed lies at or below the values set out in the Tables attached to the conditions or at or below the noise limits approved by the Local Planning Authority for a complainant's dwelling in accordance with paragraph (e) of the noise condition then no further action is necessary. If the rating level at any integer wind speed exceeds the values set out in the Tables attached to the conditions or the noise limits approved by the Local Planning Authority for a complainant's dwelling in accordance with paragraph (e) of the noise condition then the development fails to comply with the conditions.

CONDITIONS END

Annex B

Llaithddu Scheme – Schedule of Conditions

Consent under S.36 of the Electricity Act 1989 – Conditions

1. Pursuant to section 36 of the Electricity Act 1989, the Secretary of State for Energy and Climate Change (“the Secretary of State”) hereby consents to the construction, on area of land delineated by a solid red line on the drawing number Figure 1.3 described as Option 2 layout plan as contained in the Supplementary Environmental Information June 2013, of a wind turbine generation station on land to the west of the hamlet of Llaithddu, Powys (‘the Development’) and to the operation of that generating station. This consent is granted to Fferm Wynt Llaithddu Cyf (‘the Company’), its assignees and successors.
2. Development shall be over 50MW rated capacity and up to 62.1MW rated capacity and comprise:
 - a) up to 27 wind turbines in the locations numbered 3 to 29 indicated within figure 1.3 Option 2 - Alternative Proposal for 27 Turbines -submitted within the June 2013 Supplementary Environmental Information, each sited on concrete foundations, incorporating hardstanding for cranes, and fitted with rotating blades. 14 having a height to blade tip of up to 99.5m and 13 having a height to blade tip of up to 115.5m.
 - b) A series of cables buried beneath the surface of the ground and connecting the wind turbines to the substation.
 - c) A series of access tracks between the wind turbines
 - d) A construction, maintenance and emergency site access road.
 - e) An onsite electricity substation.
 - f) Two anemometry masts.
 - g) Four borrow pits for the extraction of stone to be used in the construction of the development.
3. Subject to any minor changes which may be approved by the Local Planning Authority (as defined in the conditions of the deemed planning permission (“the Planning Conditions”) set out in paragraph 8 below), the Development shall be constructed and operated in accordance with the details contained in the Environmental Statement and Supplementary Environmental Information insofar as these do not conflict with any provision of the Planning Conditions or paragraphs 4 and 5 of this consent, or with the requirements of the Planning Conditions or the terms of any scheme, programme, statement, plan, details, or report to be approved by the Local Planning Authority under the Planning Conditions.
4. The Development shall be commenced before the expiration of five years from the date of this consent.
5. The Company shall not be permitted to assign this consent without the prior written authorisation of the Secretary of State. The Secretary of State may grant consent (with or without conditions) or refuse such authorisation as he may, in his own discretion, see fit. The consent shall not be capable of being assigned, alienated or transferred otherwise than in accordance with the foregoing procedure.

Deemed Permission under Section 90 of The Town And Country Planning Act 1990 – Conditions

6. In these conditions, unless the context otherwise requires:

"abnormal indivisible load" has the same meaning as in the Road Vehicles (Authorisation of Special Types) (General) Order 2003(a);

"commencement of development", in relation to the authorised development, means the date on which the authorised development begins by the carrying out of a material operation as defined in section 56 of the 1990 Act and "commence" and "commenced" shall be construed accordingly;

"construction period" means the period from work commencing on the Development until the date 6 months after the Site compounds have been reinstated in accordance with the conditions of this consent;

"dB" refers to the Decibel noise measurement unit;

"dB(A)" refers to a Decibel noise measurement unit, with the inclusion of the A-weighting filter in the measurements as referred to in ETSU-R-97;

"development" is as defined in condition 1 of this consent.

"deforestation" means any felling or lopping undertaken.

"European Protected Species" means a species listed in Schedules 2 or 5 of the Conservation of Habitats and Species Regulations 2010.

"ETSU-R-97" means the ETSU Report number ETSU-R-97 'The Assessment and Rating of Noise from Wind Farms' published in September 1996;

"first export" means the date on which electricity is first exported to the Grid on a commercial basis;

"LA90" means the decibel (dB) level exceeded for 90% of each sample period;

"Local Planning Authority" means Powys County Council, or any successor authority;

"public holiday" means a day that is, or is to be observed as a public holiday;

"site" means land within the development boundary shown outlined in red on the map attached to this consent

"wind speed" means Wind Speeds measured on the wind farm Site at the turbine hub height, and corrected to a standard height of 10m above ground level, in a manner agreed with the Local Planning Authority;

"wind turbines" means the wind turbines forming part of the development and "wind turbine" shall be construed accordingly

Reason: For the avoidance of doubt.

7. Where under any condition details, a scheme, or a plan are to be submitted for the approval, or confirmation, of the local planning authority then unless the condition provides otherwise:
 - (a) those details or scheme or plan and that approval must be in writing; and
 - (b) the approved details, scheme or plan shall be taken to include any amendments that may subsequently be approved in writing by the local planning authority, provided that no amendments may be approved by the local planning authority

where such amendments may give rise to any materially different environmental effects to those assessed in the environmental statement.

Reason: For the avoidance of doubt.

The Development

8. The development shall be carried out, subject to the conditions below, in accordance with 'Option 2' as described in the formally amended application made in June 2013 and the Supplementary Environmental Information submitted in June 2013, as well as the 2008 Environmental Statement and 2014 Supplementary Environmental Information to the extent that the same is not inconsistent with the above.

Reason: For the avoidance of doubt.

9. This permission is for a period of 25 years from the date of the first export

Reason: For the avoidance of doubt and to establish the duration of this permission.

10. Confirmation of the date of first export shall be provided in writing to the local planning authority within one month of its occurrence.

Reason: To establish the date from which condition 9 shall apply.

11. No development shall commence until all areas that will be disturbed by the development have been photographically recorded and these photos, alongside a plan detailing the precise location and bearing of these photos have been submitted to and approved by the local planning authority.

Reason: to record the landscape and site prior to the development commencing and provide a basis for the decommissioning and site restoration scheme.

Decommissioning and Restoration

12. Not less than 18 months before the expiry of this permission, a scheme for the decommissioning and restoration of the Site shall be submitted to and approved by the Local Planning Authority. The scheme shall be informed by updated habitat bird and species surveys and implemented and completed within 12 months after the expiry of this permission. The scheme shall include, but not be limited to:
- a) details of all tracks, structures, buildings, underground cables and utilities, and other associated infrastructure to be removed to accord with best practice;
 - b) details of removal, and how this will avoid encroachment on peatland habitats;
 - c) phasing of removal of tracks, structures, buildings and other associated infrastructure;
 - d) earth moving & soil replacement;
 - e) restoration of the landscape;
 - f) reinstatement of public rights of way, paths and footpaths;
 - g) monitoring of the restored areas and remedial actions.

Reason: to ensure development is removed in a sympathetic manner upon expiry of this permission.

13. Prior to the implementation of the Site Decommissioning and Restoration Scheme, a community liaison scheme shall be submitted to and approved by the local planning authority. The community liaison scheme shall be implemented as approved and include:

- a) details of developer liaison with the local community to ensure residents are informed of how the decommissioning of the development is progressing;
- b) a mechanism for dealing with complaints from the local community during the decommissioning of the development; and
- c) a nominated representative of the developer who will have the lead role in liaising with local residents and the relevant planning authority.

Reason: To ensure the amenity of local residents is protected.

14. On completion of the restoration work, any remaining fixed equipment, machinery and buildings erected or brought onto the site for the purpose of the implementing the scheme shall be removed from the site.

Reason: to ensure the site is left in a satisfactory manner upon completion of the Site Decommissioning and Restoration Scheme.

15. No development shall take place on the site until the Company has submitted to the local planning authority details of a financial instrument, and arrangements which will ensure that funds sufficient to cover the completion of the decommissioning and site restoration costs, in accordance with Condition 15 above, are available to the planning authority prior to the commencement of decommissioning and site restoration. The financial instrument shall include arrangements for funds to increase with inflation and shall include a review provision upon the 5th, 10th, 15th and 20th anniversary of the First Export to ensure that the funds remain sufficient to cover the completion of the decommissioning and site restoration costs.

Reason: to ensure the site is left in a satisfactory manner upon completion of the Site Decommissioning and Restoration Scheme.

16. No development shall take place on site until the local planning authority has approved the financial instrument, it is in place and arrangements have been secured to ensure that funds will be in place prior to the commencement of decommissioning and site restoration. The financial instrument shall be maintained throughout the duration of the permission and reinstatement period and the arrangements for deposit of funds, inflation adjustment and review of the financial instrument will be implemented.

Reason: to ensure the site is left in a satisfactory manner upon completion of the Site Decommissioning and Restoration Scheme.

Turbine Failure

17. If any wind turbine fails to provide electricity to the grid for a continuous period of 12 months or more (other than for reasons relating to noise) the local planning authority;
 - a) shall be notified upon expiry of that 12 month period; and
 - b) can instruct the developer to submit a detailed scheme setting out how the wind turbine will be removed from the site, what associated tracks, structures, buildings and other associated infrastructure (including cabling) are to be removed from the site and how these will be removed and how the disturbed areas will be restored. The scheme shall include details of any necessary protection for breeding birds required as a consequence of the works. The scheme shall be submitted to the local planning authority within 2 months of the local planning authority's instruction and implemented within 6 months of approval unless a longer period is agreed in writing by the local planning authority provided that if, during the period following an instruction to the developer from the local planning authority in accordance with (b) the turbine once again provides electricity to the grid, there will be no requirement to remove the turbine or associated infrastructure .

Reason: To ensure appropriate provision is made for a turbine or turbines requiring repair or for a turbine or turbines which require decommissioning.

Development Micro-Siting

18. No development shall commence until a micro-siting protocol; has been submitted to and approved by the local planning authority. It shall set out the methodology for deciding on micro siting of all development to minimise the development's impact on, but not limited to, peat, curlew, protected species, watercourses, footpaths and other public rights of way, and blade tips not to be located within 50 metres of woodland edges and streams and any other identified environmental constraints.

Reason: To allow the developer flexibility during construction to make minor changes in the location of infrastructure to minimise impact on the natural environment.

19. All aspects of the development shall be located within 50m of the locations shown within figure 1.3 Option 2 – Alternative Proposal for 27 Turbines – submitted within the June 2013 SEI in accordance with protocols established in condition 18.

Reason: To allow the developer flexibility during construction to make minor changes in the location of infrastructure to minimise impact on the natural environment.

20. Within 6 months after the first export date, a plan showing the exact location of all development (including tracks, hardstandings, access areas, turbines, borrow pits etc.) shall be submitted to and approved by the local planning authority.

Reason: to record the final as built scheme once micro-siting allowances have been taken into account.

Detailed Development - Design & Appearance

21. No turbines shall be delivered to site until details of the turbines, including make, model, design, size, and if there is an external transformer, the transformer location, the power rating, the anemometer mast and associated apparatus has been submitted to and approved by the local planning authority. The turbines, anemometer mast and associated apparatus shall be constructed in accordance with the approved details.

Reason: to ensure satisfactory appearance and in the interests of visual amenity.

22. No turbines shall be erected until the proposed colour shall be submitted to and approved by the local planning authority. The development shall be carried out in accordance with the approved colour scheme.

Reason: to ensure satisfactory appearance and in the interests of visual amenity.

23. The wind turbine blades on all the turbines hereby granted consent shall rotate in the same direction.

Reason: To safeguard the visual amenities of the area.

24. All electricity cables connecting the turbine arrays and the substation shall be installed underground.

Reason: In the interests of visual amenity.

25. No development of the on-site substation building shall commence until details relating to its location, external treatment, design, materials, landscaping (if any), and orientation have been submitted to and approved by the local planning authority. The substation shall be constructed in accordance with the approved details.

Reason: In the interests of visual amenity.

26. No outdoor lighting other than:
- a) aviation lighting to be installed in accordance with condition 55 of this Consent;
 - b) temporary site illumination approved under condition 39 as part of the Construction Method Statement;
- may be used in the course of the Development unless details of such lighting have been submitted to and approved by the local planning authority. Such outdoor lighting shall only be provided in accordance with the approved details.

Reason: in the interests of visual amenity.

27. Except during the construction period, no symbols, signs, logos or other lettering, other than those required by law for health and safety reasons, shall be displayed on any part of the turbines nor any building or structures without approval from the local planning authority.

Reason: In the interests of visual amenity.

Construction Hours

28. Construction work shall only take place between the hours of 07:30 - 19:30 hours on Monday to Friday inclusive and 07:30 - 13:00 hours on Saturdays, with no construction work on Sundays or public holiday. Outside these hours, works at the site shall be limited to emergency works, erection of turbines, dust suppression, and the testing/maintenance of plant and equipment, or construction work that is not audible from any noise sensitive property, unless otherwise approved in writing by the Local Planning Authority. The Local Planning Authority shall be informed in writing of emergency works within three working days of occurrence.

Reason: To protect amenity.

29. All activities associated with the construction of the development shall be carried out in accordance with British Standard BS5228:2009: Code of Practice for noise and vibration control on construction and open sites – Part 1: Noise and Part 2: Vibration

Reason: To protect amenity.

Highways

30. No AIL deliveries shall take place until details of the works at the junction of the C2025 with the A483 have been carried out in accordance with details submitted to and approved by the Local Planning Authority. The details shall include:
- a) details of visibility splays that shall be kept free at all times of any obstruction including trees and shrubs exceeding 1.05 metres in height above the adjoining carriageway;
 - b) drainage details; and
 - c) road markings and signage proposals.

Reason: To ensure a satisfactory means of access to and from the Trunk Road is provided in the interests of highway

31. No development shall take place other than site establishment and creation of the construction compound until detailed plans of the works to be carried out to the C2025 Pentre Road and U2835 unclassified county highway have been submitted to and approved in writing by the local planning authority. The details submitted shall be informed by ecological surveys and shall include:
- a) details of localised widening and indivisible passing places;
 - b) details of changes to vertical alignments;
 - c) details of visibility splays at junctions along the county roads where works are required, including of how these shall be kept free at all times of any obstruction including trees and shrubs exceeding 1.05 metres in height above the adjoining carriageway;
 - d) drainage details;
 - e) road markings and signage proposals; and
 - f) a programme for the works.

The works shall be implemented in accordance with the approved details and programme.

Reason: To ensure a satisfactory access to and from the development is provided in the interests of highway safety, amenity and nature conservation.

32. No deliveries by abnormal indivisible load shall take place until an assessment of the load bearing capacity of all structures forming part of the highway along the delivery route including layover areas, passing places, bridges, culverts, retaining walls, embankments, drainage systems, and any affected street furniture is carried out and submitted to and approved by the Local Planning Authority and full engineering details and drawings of any works required to such structures to accommodate the passage of abnormal indivisible loads have been submitted to and approved by the local highway authority. The approved works shall be completed prior to any abnormal indivisible load deliveries to the site.

Reason: in the interests of highway safety.

33. No abnormal indivisible loads shall be delivered to the Site until a Traffic Management Plan (TMP), generally in accordance with the draft TMP dated February 2014 and informed by ecological surveys, has been submitted to and approved by the local planning authority. Thereafter abnormal indivisible loads shall be carried out in accordance with the approved TMP. The TMP shall include:
- a) abnormal indivisible load vehicle routing;
 - b) the carrying out of any widening or junction improvements and works (including to street lighting, street signs and safety barriers) and the provision of passing places layover areas and welfare facilities required to achieve the delivery of abnormal indivisible loads along the proposed route;
 - c) availability of access to any passing places, layover areas and welfare facilities that are not proposed to form a part of the highway network;
 - d) management of junctions and crossings of highways and other public rights of way while abnormal indivisible load deliveries take place;
 - e) management and maintenance of layover areas, passing places and welfare facilities;
 - f) details of temporary warning signs;
 - g) restrictions on abnormal indivisible load movements during special events including (without limitation) the Royal Welsh and Smallholders shows;
 - h) for any highway works proposed to be carried out, a statement whether they are to be permanent or temporary and, if temporary, when they will be removed and the highway restored to its previous condition;
 - i) details of a review mechanism to enable changes in circumstances after the agreement of the TMP to be addressed.

Furthermore, details of the highway works associated with the construction of the layover areas, passing places and highway improvements shall be set out in the TMP. These shall include methods of construction, drainage, street lighting, signage and road markings. The works shall be completed in accordance with the approved details prior to the commencement of any abnormal indivisible load deliveries to the site.

Reason: in the interests of highways safety and amenity.

34. No AIL deliveries shall be made to the site until an AIL Management Strategy has been submitted to and approved in writing by the Local Planning Authority. All AIL deliveries shall be carried out in accordance with the approved AIL Management Strategy, which shall include details of the following:
- a) persons responsible for the management and implementation of the AIL Management Strategy;
 - b) means of control of timing of delivery AIL movements;
 - c) temporary traffic diversions and traffic hold points;
 - d) details of banksmen and escorts for abnormal loads;
 - e) coordination with all other AIL deliveries (including without limitation to other wind farms in Mid Wales);
 - f) description of procedures for the allocation of delivery slots including delivery slot triggers and trading;
 - g) the appointment and role of a Transport Coordinator;
 - h) management and maintenance of layover areas and welfare facilities;
 - i) liaison with relevant stakeholders and authorities.

Reason: In the interests of highway safety and amenity

35. No developments shall commence until a scheme providing for the remediation of any damage directly attributable to the Development to the highway infrastructure which will be utilised during the construction of the development has been submitted to and approved in writing by the local planning authority following consultation with the relevant highway authorities. The scheme shall be implemented as approved

Reason: To ensure the safety of the highways affected and that the developer rectifies any directly attributable damage caused.

36. No construction works shall take place on site until a traffic management plan (TMP) has been submitted to and approved in writing by the local planning authority. The approved TMP shall thereafter be complied with and will include details of the following:
- a) construction vehicle routeing;
 - b) means of monitoring, controlling and enforcing vehicle movements and access routes to and from the site;
 - c) timing of deliveries of construction materials to the site;
 - d) the management of junctions and crossings of roads and other public rights of way;
 - e) a travel plan aimed at maximising the use of sustainable travel by the construction workforce associated with the development;
 - f) communications with members of the public and local communities;
 - g) measures to control construction traffic offsite together with contractual arrangements and to ensure that complaints and breaches of the TMP requirements can be remedied;
 - h) details of a review mechanism to enable changes in circumstances after the agreement of the TMP to be addressed.

Reason: In the interests of highway safety and amenity.

37. No movement of traffic associated with the decommissioning of the development shall take place until a traffic management plan dealing with such decommissioning has been submitted to and approved in writing by the local planning authority and thereafter the approved TMP shall be implemented.

Reason: To ensure the safety of the highways affected and in the interests of amenity

38. No AIL movements associated with any repairs or replacement components shall take place during the life of the development until a traffic management plan dealing with such repair and/or replacement has been submitted to and approved by the local planning authority, and thereafter the approved TMP shall be implemented.

Reason: To ensure the safety of the highways affected and in the interests of amenity

Construction Management

39. No development, including site clearance, scrub and vegetation removal, and tree felling works shall commence until a Construction Environmental Management Plan (CEMP) has been submitted to and approved in writing by the Local Planning Authority. The CEMP shall be implemented as approved throughout the construction, and post-construction restoration period, subject to any variations approved in writing by the Local Planning Authority. The CEMP shall include:
- a) detailed contractor arrangements, monitoring and contingency proposals, including an environmental management and pollution prevention plan, and the identification of an ecological clerk of works;
 - b) management arrangements setting out how the developer, contractors and regulators will work together to ensure that the provisions of the CEMP are carried out Location and method of working of borrow pits.
 - c) a detailed timetable for tree felling, vegetation and site clearance, construction and habitat management up to the commissioning of the turbines and site restoration;
 - d) details of the management and monitoring of water, including quality, as set out in the Water Management and Monitoring Plan Dust management details;
 - e) details of how Public Rights of Way are to be managed as set out in the Rights of Way Management Plan;
 - f) proposals for the demarcation and protection of Sites of Special Scientific Interest, Biodiversity Action Plan and Local Biodiversity Action Plan habitats and Scheduled Ancient Monuments within or adjoining the Site, and the River Wye;
 - g) measures for the storage of all fuels, oils, cement, concrete and chemicals on impervious bases away from watercourses or water features;
 - h) details, including the volume and source, of any material to be imported to site for backfilling trenches, or constructing access tracks and other infrastructure;
 - i) details of track design and construction, including the excavation and make up of internal access roads and hard standings, including measures to address silt laden run off from any working, temporary and permanent access roads, soil storage and other engineering operations including borrow pits;
 - j) detailed measures to minimise disturbance to and the impacts on breeding birds to be set out in updated Breeding Birds Protection Plan (BBPP);
 - k) details to manage peat and soil as set out in the Peat Management Plan;
 - l) construction arrangements for turbine foundations, access roads and other infrastructure, including concrete batching and dewatering arrangements to treat potentially sediment laden water;
 - m) cable laying on the site including the detailed design of the trenches;
 - n) construction method statements for the construction works compound and all infrastructure, including their eventual removal and satisfactory reinstatement;
 - o) Details and method statements for hedgerows, stone walls and banks that are to be removed and relocated, including those to be removed for highway improvements;

- p) Reinstatement of the ground post construction, including re-vegetation of access track and highway edges and hardstanding areas, in order to reduce their visual impact, together with measures to monitor its success;
- q) Arrangements to prevent the spread of non-native invasive species;
- r) Details of approach to borrow pits including: Proposed location, opening, working and reinstatement of on-site borrow pits;
- s) No excavation of the borrow pit shall take place below the depth of the water table;
- t) Backfill material for the borrow pits shall be of similar permeability to the excavated rock and inert material;
- u) Measures to control dust and mud arising from the site including damping down, the provision of wheel washing facilities and the sheeting of HGV's taking spoil or construction materials to and from the site;
- v) Measures to clean and maintain the site entrance and the adjacent public highway.

Reason: To ensure a satisfactory level of environmental protection and to minimise disturbance to local residents during the construction process

Rights of Way Management Plan

40. No development shall commence until a Rights of Way Management Plan (RWMP) has been submitted to and approved in writing by the local planning authority. The RWMP shall be implemented as approved and shall include:
- a) details of the temporary re-routing of public rights of way during construction of the authorised development;
 - b) details of the provision of signage and other information alerting the public to construction works;
 - c) details of any fencing or barriers to be provided during the construction period;
 - d) details as to how public rights of way, paths and roads will be inspected prior to and monitored during the construction period;
 - e) details of any alternative routes for any public rights of way that need to be diverted;
 - f) details of permissive routes to be provided within the site;
 - g) measures to be taken to protect the rights, interests and safety of users of public rights of way crossing the site and open access land within the site during the construction of the development;
 - e) details of how ecological receptors will be protected where any public right of way is re-routed.

Reason: to protect public rights of way.

41. No development shall commence until a Local Access Improvement Scheme to provide for the protection and enhancement of public rights of way in the vicinity of the proposed wind farm has been submitted to and agreed in writing with the local planning authority. Development shall be carried out in accordance with the approved scheme

Reason: To protect public rights of way

Ecology

42. No development, including site and vegetation clearance and tree felling at the site shall commence until a Habitat Management Plan (HMP) has been submitted to and approved in writing by the Local Planning Authority. The HMP shall incorporate the objectives and proposals set out in the Draft Proposed Habitat Enhancement proposals dated August 2013. The HMP shall be implemented as approved unless amended with the prior approval in writing of the Local Planning Authority.

Reason: In the interests of safeguarding or enhancing the relevant habitats and conditions for associated species.

43. No development, including site and vegetation clearance and tree felling at the site shall commence until a detailed Breeding Bird Protection Plan (BBPP) shall be submitted to and approved in writing by the Local Planning Authority. The BBPP shall incorporate the objectives and proposals set out in the 'Draft Llaithddu Breeding Bird Protection Plan' dated 2 August 2013. The BBPP shall be implemented as approved unless amended with the prior approval in writing of the Local Planning Authority.

Reason: To protect breeding birds during the wind farm's construction, operation, and decommissioning

44. No development shall commence until a water quality management and monitoring scheme has been submitted to and approved in writing by the Local Planning Authority. The scheme shall include measures to monitor and protect water quality in the Wye catchment and other drainage systems, wetlands and water environment from the Development. The management and monitoring scheme is to be implemented in accordance with the approved scheme, and will need to include the following measures:
- a) measures to prevent pollution of watercourses and procedures in the event of a pollution event;
 - b) water quality targets for watercourses;
 - c) locations of settlement ponds and other mitigation measures required to meet water quality targets;
 - d) locations of all water quality monitoring points;
 - e) procedures for water quality monitoring;
 - f) measures and procedures for acting on exceedence of sediment and other identified water quality targets;
 - g) role of the Ecological Clerk of Works in implementing the plan;
 - h) detailed measures for stream crossings to allow surface water flows to pass beneath or through tracks;
 - i) details of measures to prevent any polluting discharge from haul roads from entering the water environment;
 - j) working statement (including design and construction) to cover all channel and bank works including all channel crossings; and
 - k) proposals for the management of foul water, including concrete wash-out.

Reason: In the interests of protecting the water environment

45. No development, site clearance or tree felling shall commence until a detailed Protected Species Protection Plan shall be submitted to the Local Planning Authority and approved in writing. The plan shall be implemented as approved and include but not be limited to details of:
- a) the specification for pre-commencement surveys to be undertaken for bats, otters, water vole, and badgers, to include survey methodology, schedule and timing, the development of casualty risk models for bats, and if present suitable mitigation measures to ensure their protection throughout the pre construction, construction and operational phases of the development;
 - b) detailed survey of watercourses and wetland areas for the presence of otter breeding and resting sites within a radius of 500m around each turbine and 500m either side of access tracks and areas subject to construction, clearance and felling disturbance;
 - c) a survey of watercourses and wetland areas for the presence of water vole burrows, feeding and foraging areas to include the area 500m up and down stream from areas subject to construction, clearance and felling disturbance, and appropriate mitigation to maintain habitat connectivity for water voles;

- d) a survey check for badger setts or badger foraging activity up to within 50m around construction, clearance and felling areas and 100m of drilling, piling or blasting activity;
- e) the preparation of a hedgerow/habitat plan to include details of removal, translocation, and aftercare of all hedgerows and habitat to be affected by works within the site and the access road;
- f) the measures to be undertaken to confirm compliance of all protected species mitigation, compensation and enhancement measures.

Reason: In the interests of the conservation of protected species

46. No development, including site and vegetation clearance and tree felling at the site shall commence (including at the site) until a detailed Peat Management Plan (PMP) shall be submitted to the LPA and approved in writing. The PMP shall be implemented as approved unless amended with the prior approval in writing of the Local Planning Authority and shall include but not be limited to:
- a) details of how construction works, including the movement of plant, machinery and vehicles will avoid encroachment on to peatland habitats;
 - b) details of peat/soil stripping including procedures for excavation;
 - c) details of all peat storage areas;
 - d) procedures to prevent the drying out of peat;
 - e) intended re-use of peat.

Reason: In the interests of conserving the peat resource

47. Prior to the installation of any turbine on site, a red kite monitoring scheme shall be submitted to and approved in writing by the local planning authority. The scheme shall be implemented as approved, and shall include:
- a) provision for surveying red kites presence and nesting activities on site;
 - b) monitoring of red kite breeding success on site;
 - c) measures to record activity and mortality rates;
 - d) annual reporting of the results of surveys and monitoring with recommendations for any remedial action, if such action has been identified as required, that may reduce red kite mortality;
 - e) a procedure for agreeing and implementing remedial measures aimed at avoiding or reducing red kite mortality;
 - f) an agreed timeframe for monitoring, sufficient to determine the impact of the operation of the windfarm on red kites and the efficacy of any remedial measures that may be implemented.

Reason: In the interests of minimising impact on red kite

48. No development shall commence until an ecological monitoring scheme shall be submitted to and approved in writing by the local planning authority. The Plan shall be implemented as approved, and include the monitoring arrangements for the Plans referred to in conditions 44-49, and shall include the following:
- a) monitoring measures to record bat activity using automated bat detectors and weather conditions at wind turbines;
 - b) monitoring procedure to record bat mortality at wind turbines;
 - c) annual reporting of the results of monitoring with recommendations for any remedial action that may reduce bat mortality;
 - d) a procedure for agreeing and implementing remedial measures aimed at avoiding or reducing bat mortality. Such measures may include, but not be limited to, turbine curtailment and, or land management changes;

- e) an agreed timeframe for monitoring, sufficient to determine the impact of the operation of the windfarm on bats and the efficacy of any remedial measures that may be implemented;
- f) details of curlew monitoring;
- g) monitoring of all hedgerows and habitat to be affected by works within the site and the access road;
- h) monitoring and Review of the HMP;
- i) monitoring the impacts of the infrastructure development on deep peat.

Monitoring shall be undertaken of the measures agreed in the BBPP at periods of at least 1, 2, 3, 5, 10 and 15 years after the final commissioning of the windfarm. For breeding curlew the monitoring should be conducted to an identical standard on both the windfarm site and an appropriate reference site. The raw data, collated and interpreted results of all monitoring shall be made available to PCC and NRW within six months of being completed in each of the respective years.

Monitoring and review of the HMP and its objectives shall be undertaken in years 1, 2, 5, 10 and 15 after the final commissioning of the windfarm. If necessary the actions set out in the HMP will be amended after agreement with PCC and NRW.

Monitoring protocols shall be agreed in writing by the Local Planning Authority.

Reason: To ensure the effectiveness of the Plans

49. Prior to the commencement of site clearance, tree felling or other development an Ecological Clerk of Works (ECoW) shall be in place. The ECoW shall be appointed after approval in writing by the Local Planning Authority for the period from commencement of development to Final Commissioning of the development. The scope of work of the ECoW shall include:
- a) monitoring compliance with the ecological mitigation works that have been approved in this consent and providing quarterly reports reporting compliance to the local planning authority;
 - b) advising the Company on adequate protection of nature conservation interests on the Site;
 - c) directing the micro-siting and placement of turbines, tracks and other infrastructure;
 - d) monitoring the compliance with environmental management measures in the CEMP and all methods statements and keeping an audit trail of compliance;
 - e) providing advice to contractors about legally protected species.

Reason: In the interests of protecting the ecological and ornithological environment.

Shadow Flicker

50. Prior to the erection of the first turbine, a written scheme shall be submitted to and approved in writing by the Local Planning Authority setting out a protocol for the assessment of shadow flicker in the event of any complaint to the Local Planning Authority from the owner or occupier of a residential Dwelling. The written scheme shall include remedial measures to alleviate any shadow flicker attributable to the development. The turbines shall be operated in accordance with the approved protocol unless the Local Planning Authority gives its prior written consent to any variations.

Reason: In the interests of residential amenity.

Television Interference

51. No turbine shall be erected until a scheme has been submitted to and approved by the Local Planning Authority providing for the investigation of and remediation of any interference with television reception at any dwelling which lawfully existed or had planning permission at the date of this permission. The scheme shall provide for the investigation by a qualified independent television engineer of any complaint of interference with television reception at a lawfully occupied dwelling, where such complaint is notified to the developer by the local planning authority within 24 months of the date of final commissioning. The scheme shall be implemented as approved.

Reason: In the interests of residential amenity.

Archaeology

52. No development shall commence until a scheme of archaeological investigation has been submitted to and approved by the local planning authority. The scheme of archaeological investigation shall be implemented as approved.

Reason: To ensure that any archaeological remains present are investigated and preserved.

53. All records collated, as a result of the Scheme of Archaeological Investigation, shall be submitted to the local planning authority and sent to the Historic Environment Record (currently held by Clwyd-Powys Archaeological Trust) within 6 months of the record being gathered.

Reason: To ensure that any archaeological findings are suitably recorded.

Aviation

54. No wind turbine shall be erected before the following information has been provided to the Defence Geographic Centre of the Ministry of Defence:
- a) the date that construction starts and ends;
 - b) the maximum height of construction equipment;
 - c) the latitude and longitude of every turbine.

Reason: In the interests of aviation safety.

55. 25 candela omni-directional aviation lighting or infra-red aviation lighting, accredited by the Ministry of Defence and with an optimised flash pattern of 60 flashes per minute of 200ms to 500ms duration, shall be installed on the nacelles of such other turbines as the local planning authority, having consulted the Ministry of Defence, agrees will provide equally effective illumination for air navigation purposes. The lighting shall remain operational until such time as the wind turbines are decommissioned and removed from the site.

Reason: In the interests of aviation safety.

Community Liaison

56. No development shall commence until a community liaison scheme for the construction period has been submitted to and approved in writing by the local planning authority. The community liaison scheme shall be implemented as approved and include:
- a) details of developer liaison with the local community to ensure residents are informed of how the construction of the development is progressing;
 - b) a mechanism for dealing with complaints from the local community during the construction of the development; and
 - c) a nominated representative of the developer who will have the lead role in liaising with local residents and the relevant planning authority.

Reason: To ensure the amenity of local residents is protected.

Noise

57. No turbine hereby approved shall be brought into operation prior to the submission to and approval in writing by the Local Planning Authority of a scheme for the assessment and regulation of Excess Amplitude Modulation (EAM). That scheme shall be in general accordance with, if it exists at the time of submission:
- a) relevant guidance endorsed in National Planning Policy; or in the absence of endorsed guidance;
 - b) relevant guidance published by the Institute of Acoustics.

The approved scheme shall be implemented for the life of the development hereby approved.

Reason: In the interests of public amenity to ensure that EAM is suitably addressed.

58. The rating level of noise immissions from the combined effects of the wind turbines (including the application of any tonal penalty) when determined in accordance with the attached Guidance Notes (to this condition), shall not exceed the values for the relevant integer wind speed set out in, or derived from, the table attached to this condition at any dwelling which is lawfully existing or has planning permission at the date of this permission and:
- a) The Company shall continuously log power production, wind speed and wind direction, all in accordance with Guidance Note 1(d). These data shall be retained for a period of not less than 24 months. The Company shall provide this information in the format set out in Guidance Note 1 (e) to the Local Planning Authority on its request, within 14 days of receipt in writing of such a request.
 - b) No electricity shall be exported until The Company has submitted to the Local Planning Authority for written approval a list of proposed independent consultants who may undertake compliance measurements in accordance with this condition. Amendments to the list of approved consultants shall be made only with the prior written approval of the Local Planning Authority.
 - c) Within 21 days from receipt of a written request from the Local Planning Authority following a complaint to it from an occupant of a dwelling alleging noise disturbance at that dwelling, The Company shall, at its expense, employ a consultant approved by the Local Planning Authority to assess the level of noise immissions from the wind farm at the complainant's property in accordance with the procedures described in the attached Guidance Notes. The written request from the Local Planning Authority shall set out at least the date, time and location that the complaint relates to and any identified atmospheric conditions, including wind direction, and include a statement as to whether, in the opinion of the Local Planning Authority, the noise giving rise to the complaint contains or is likely to contain a tonal component.
 - d) The assessment of the rating level of noise immissions shall be undertaken in accordance with an assessment protocol that shall previously have been submitted to and approved in writing by the Local Planning Authority. The protocol shall include the proposed measurement location identified in accordance with the Guidance Notes where measurements for compliance checking purposes shall be undertaken, whether noise giving rise to the complaint contains or is likely to contain a tonal component, and also the range of meteorological and operational conditions (which shall include the range of wind speeds, wind directions, power generation and times of day) to determine the assessment of rating level of noise immissions. The proposed range of conditions shall be those which prevailed during times when the complainant alleges there was disturbance due to noise, having regard to the written request of the Local Planning Authority under

- paragraph (c), and such others as the independent consultant considers likely to result in a breach of the noise limits.
- e) Where a dwelling to which a complaint is related is not listed in the tables attached to these conditions, The Company shall submit to the Local Planning Authority for written approval proposed noise limits selected from those listed in the Tables to be adopted at the complainant's dwelling for compliance checking purposes. The proposed noise limits are to be those limits selected from Table 1, having regard to Table 2, and specified for a listed location which the independent consultant considers as being likely to experience the most similar background noise environment to that experienced at the complainant's dwelling. The rating level of noise immissions resulting from the combined effects of the wind turbines when determined in accordance with the attached Guidance Notes shall not exceed the noise limits approved in writing by the Local Planning Authority for the complainant's dwelling.
 - f) The Company shall provide to the Local Planning Authority the independent consultant's assessment of the rating level of noise immissions undertaken in accordance with the Guidance Notes within 2 months of the date of the written request of the Local Planning Authority for compliance measurements to be made under paragraph (c), unless the time limit is extended in writing by the Local Planning Authority. The assessment shall include all data collected for the purposes of undertaking the compliance measurements, such data to be provided in the format set out in Guidance Note 1(e) of the Guidance Notes. The instrumentation used to undertake the measurements shall be calibrated in accordance with Guidance Note 1 (a) and certificates of calibration shall be submitted to the Local Planning Authority with the independent consultant's assessment of the rating level of noise immissions.
 - g) Where a further assessment of the rating level of noise immissions from the wind farm is required pursuant to Guidance Note 4(c), The Company shall submit a copy of the further assessment within 21 days of submission of the independent consultant's assessment pursuant to paragraph (d) above unless the time limit has been extended in writing by the Local Planning Authority.

Reason: in the interests of the protection of residential amenity

Table 1: Noise limits expressed in dB LA90,10 minute as a function of the standardised wind speed (m/s) at 10 metre height as determined within the site averaged over 10 minute periods.

Location Name	Easting	Northing	Standardised wind speed at 10 meter height (<i>rnl</i> s) within the site averaged over 10-minute periods										
			3	4	5	6	7	8	9	10	11	12	
Bondre Fach	303537	275935	45	45	45	45	45	45	45	46	48.7	51.7	55
Bondre Fawr	303478	277256	45	45	45	45	45	45	45	45.2	48	50.9	53.8
Custogion	305341	279784	45	45	45	45	45	45	47	50.7	54.3	57.9	61.4
Ddullui Bank	305205	280834	45	45	45	45	45	45	45	46.8	49.7	52.6	55.7
Newhouse	304934	27613045	45	45	45	45	45	45	45	45	45	47.5	50.7
Paby Llwyd 1	305324	282553	39.1	39.1	39.1	39.1	40.1	42.8	44	45.4	46.9	48.5	
Paby Llwyd 2	305039	282383	39.4	39.4	39.4	39.4	40.5	42.8	44	45.4	46.9	48.5	
Paby Llwyd 3	304807	281859	35	35	35	37.4	38.5	41.7	45.8	48.7	51.6	54.7	
Paby Llwyd 4	304774	281328	35	35	35	37.4	39	42.1	46.2	49.1	52	55.1	
Nant-hir	305502	277960	35	35	35	35	38.1	41.3	44.6	48	51.4	54.8	
Upper Nant Hir	305694	277841	35	35	35	35	38.1	41.3	44.6	48	51.4	54.8	
Ffordd-Ias	305307	277940	45	45	45	45	45	45	45	48	51.4	54.8	
Rock House	305750	278241	35	35	35	35	38.1	41.3	44.6	48	51.4	54.8	
Great Meadows	305891	278415	35	35	35	35	38.1	41.3	44.6	48	51.4	54.8	
Green Meadows	306021	278379	35	35	35	35	38.1	41.3	44.6	48	51.4	54.8	
Gryn Llyndwr	305950	283300	35	35	35	35	36.5	38	38	38	38	38	
Cwm Derw	303060	278760	35	35	35.4	37.5	39.9	42.4	45.2	48	50.9	53.8	

Note: For the purposes of this condition a "dwelling" is a building within Use Class C3 of the Use Classes Order which lawfully exists or had planning permission at the date of this consent. applies.

Guidance Notes for Noise Conditions

These notes are to be read with and form part of the noise condition. They further explain the condition and specify the methods to be employed in the assessment of complaints about noise immissions from the wind farm. The rating level at each integer wind speed is the arithmetic sum of the wind farm noise level as determined from the best-fit curve described in guidance Note 2 of these Guidance Notes and any tonal penalty applied in accordance with Guidance Note 3. Reference to ETSU-R-97 refers to the publication entitled "The Assessment and Rating of Noise from Wind Farms" (1997) published by the Energy Technology Support Unit (ETSU) for the Department of Trade and Industry (DTI)).

Guidance Note 1

(a) Values of the LA90(10 minute) noise statistic should be measured at the complainant's property, using a sound level meter of EN 60651/BSB EN 60804 Type 1, or BSB EN 61672 Class 1 quality (or the equivalent UK adopted standard in force at the time of the measurements) set to measure using the fast time weighted response as specified in SS EN 60651/BSB EN 60804 or BS EN 61672-1 (or the equivalent UK adopted standard in force at the time of the measurements). This should be calibrated in accordance with the procedure specified in BS 4142: 1997 (or the equivalent UK adopted standard in force at the time of the measurements). Measurements shall be undertaken in such a manner to enable a tonal penalty to be applied in accordance with Guidance Note 3.

(b) The microphone should be mounted at 1.2 -1.5 metres above ground level, fitted with a two-layer windshield or suitable equivalent approved in writing by the Local Planning Authority, and placed outside the complainant's dwelling. Measurements should be made in "free field" conditions. To achieve this, the microphone should be placed at least 3.5 metres away from the building facade or any reflecting surface except the ground at the approved measurement location. In the event that the consent of the complainant for access to his or her property to undertake compliance measurements is withheld, The windfarm operator shall submit for the written approval of the Local Planning Authority details of the proposed alternative representative measurement location prior to the commencement of measurements and the measurements shall be undertaken at the approved alternative representative measurement location.

(c) The LA90(10 minute) measurements should be synchronised with measurements of the 10-minute arithmetic mean wind and operational data logged in accordance with Guidance Note 1 (d), including the power generation data from the turbine control systems of the wind farm.

(d) To enable compliance with the conditions to be evaluated, The wind farm operator shall continuously log arithmetic mean wind speed in metres per second and wind direction in degrees from north at hub height for each turbine and arithmetic mean power generated by each turbine, all in successive 10-minute periods. Unless an alternative procedure is previously agreed in writing with the Planning Authority, this hub height wind speed, averaged across all operating wind turbines, shall be used as the basis for the analysis. All 10 minute arithmetic average mean wind speed data measured at hub height shall be 'standardised' to a reference height of 10 metres as described in ETSU-R-97 at page 120 using a reference roughness length of 0.05 metres. It is this standardised 10 metre height wind speed data, which is correlated with the noise measurements determined as valid in accordance with Guidance Note 2, such correlation to be undertaken in the manner described in Guidance Note 2. All 10 minute periods shall commence on the hour and in 10- minute increments thereafter.

(e) Data provided to the Local Planning Authority in accordance with the noise condition shall be provided in comma separated values in electronic format.

(f) A data logging rain gauge shall be installed in the course of the assessment of the levels of noise immissions. The gauge shall record over successive 10minute periods synchronised with the periods of data recorded in accordance with Note 1 (d).

Guidance Note 2

(a) The noise measurements shall be made so as to provide not less than 20 valid data points as defined in Guidance Note 2 (b)

(b) Valid data points are those measured in the conditions specified in the agreed written protocol under paragraph (d) of the noise condition, but excluding any periods of rainfall measured in the vicinity of the sound level meter. Rainfall shall be assessed by use of a rain gauge that shall log the occurrence of rainfall in each 10 minute period concurrent with the measurement periods set out in Guidance Note 1.

(c) For those data points considered valid in accordance with Guidance Note 2(b), values of the LA90,10 minute noise measurements and corresponding values of the 10- minute wind speed, as derived from the standardised ten metre height wind speed averaged across all operating wind turbines using the procedure specified in Guidance Note 1 (d), shall be plotted on an XY chart with noise level on the Y-axis and the standardised mean wind speed on the X-axis. A least squares, "best fit" curve of an order deemed appropriate by the independent consultant (but which may not be higher than a fourth order) should be fitted to the data points and define the wind farm noise level at each integer speed.

Guidance Note 3

(a) Where, in accordance with the approved assessment protocol under paragraph (d) of the noise condition, noise immissions at the location or locations where compliance measurements are being undertaken contain or are likely to contain a tonal component, a tonal penalty is to be calculated and applied using the following rating procedure.

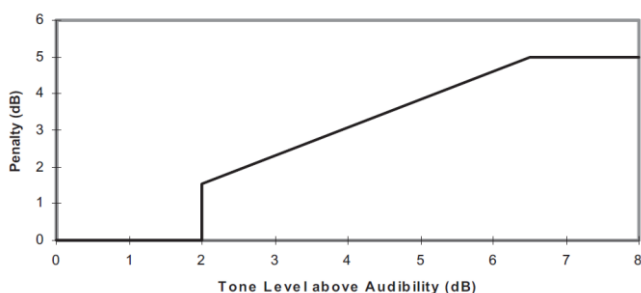
(b) For each 10 minute interval for which LA90 .10 minute data have been determined as valid in accordance with Guidance Note 2 a tonal assessment shall be performed on noise immissions during 2 minutes of each 10 minute period. The 2 minute periods should be spaced at 10 minute intervals provided that uninterrupted uncorrupted data are available ("the standard procedure"). Where uncorrupted data are not available, the first 'available uninterrupted clean 2 minute period out of the affected overall 10 minute period shall be selected. Any such deviations from the standard procedure, as described in Section 2.1 on pages 104-109 of ETSU-R-97, shall be reported.

(c) For each of the 2 minute samples the tone level above or below audibility shall be calculated by comparison with the audibility criterion given in Section 2.1 on pages 104-109 of ETSU-R-97.

(d) The tone level above audibility shall be plotted against wind speed for each of the 2 minute samples. Samples for which the tones were below the audibility criterion or no tone was identified, a value of zero audibility shall be used.

(e) A least squares "best fit" linear regression line shall then be performed to establish the average tone level above audibility for each integer wind speed derived from the value of the "best fit" line at each integer wind speed. If there is no apparent trend with wind speed then a simple arithmetic mean shall be used. This process shall be repeated for each integer wind speed for which there is an assessment of overall levels in Guidance Note 2.

(f) The tonal penalty is derived from the margin above audibility of the tone according to the figure below.



Guidance Note 4

(a) If a tonal penalty is to be applied in accordance with Guidance Note 3 the rating level of the turbine noise at each wind speed is the arithmetic sum of the measured noise level as

determined from the best fit curve described in Guidance Note 2 and the penalty for tonal noise as derived in accordance with Guidance Note 3 at each integer wind speed within the range specified by the Local Planning Authority in its written protocol under paragraph (d) of the noise condition.

(b) If no tonal penalty is to be applied then the rating level of the turbine noise at each wind speed is equal to the measured noise level as determined from the best fit curve described in Guidance Note 2. .

(c) In the event that the rating level is above the limit(s) set out in the Tables attached to the noise conditions or the noise limits for a complainant's dwelling approved in accordance with paragraph (e) of the noise condition, the independent consultant shall undertake a further assessment of the rating level to correct for background noise so that the rating level relates to wind turbine noise immission only.

(d) The Company shall ensure that all the wind turbines in the development are turned off for such period as the independent consultant requires to undertake the further assessment. The further assessment shall be undertaken in accordance with the following steps:

(e). Repeating the steps in Guidance Note 2, with the wind farm switched off, and determining the background noise (L3) at each integer wind speed within the range requested by the Local Planning Authority in Its written request under paragraph (c) and the approved protocol under paragraph (d) of the noise condition.

(f) The wind farm noise (L1) at this speed shall then be calculated as follows where L2 is the measured level with turbines running but without the addition of any tonal penalty:

(g) The rating level shall be re-calculated by adding arithmetically the tonal penalty (if any is applied in accordance with Note 3) to the derived wind farm noise L1 at that integer wind speed.

(h) If the rating level after adjustment for background noise contribution and adjustment for tonal penalty (if required in accordance with note 3 above) at any integer wind speed lies at or below the values set out in the Tables attached to the conditions or at or below the noise limits approved by the Local Planning Authority for a complainant's dwelling in accordance with paragraph (e) of the noise condition then no further action is necessary. If the rating level at any integer wind speed exceeds the values set out in the Tables attached to the conditions or the noise limits approved by the Local Planning Authority for a complainant's dwelling in accordance with paragraph (e) of the noise condition then the development fails to comply with the conditions.

CONDITIONS END

Annex C

Llanbadarn Fynydd – Schedule of Conditions

Consent under S.36 of the Electricity Act 1989 – Conditions

1. Pursuant to section 36 of the Electricity Act 1989, the Secretary of State for Energy and Climate Change (“the Secretary of State”) hereby consents to the construction, on the area of land delineated by a solid red line on the drawing number Figure 1.1 Site Layout (17414-S498) February 2013 SEI, of a wind turbine generating station on land at Llanbadarn Fynydd, Powys (“the Development”) and to the operation of that generating station. This consent is granted to Nuon UK Ltd (“the Company”), its assignees and successors.
2. Subject to any variation in accordance with condition 3, the Development shall be over 50MW rated capacity and up to 59.5 MW rated capacity and comprise:
 - a) up to 17 wind turbines each sited subject to conditions in locations shown on plan Figure 1.1 Site Layout (17414-S498) February 2013 SEI on concrete foundations incorporating hardstanding for cranes and fitted with rotating blades having a height to blade tip of up to 126.5 metres including transformers;
 - b) a series of cables buried beneath the surface of the ground and connecting the wind turbines to the substation;
 - c) a series of access tracks between the wind turbines;
 - d) a construction, maintenance and emergency site access road;
 - e) an onsite electricity substation;
 - f) an anemometry mast;
 - g) borrow pits for the extraction of stone to be used in the construction of the development.
3. Subject to any minor changes which may be approved by the Local Planning Authority (as defined in the conditions of the deemed planning permission (“the Planning Conditions”) set out below), the Development shall be constructed in accordance with the application plans and in general accordance with the objectives, scope and methodology of the Environmental Statement and subsequent SEI, insofar as these do not conflict with any provision of the conditions of the deemed planning permission or the terms of any scheme, programme, statement, plan, details, or report to be approved by the Local Planning Authority under the Planning Conditions.
4. The Development shall be commenced before the expiration of five years from the date of this consent.
5. The Company shall not be permitted to assign this consent without the prior written authorisation of the Secretary of State. The Secretary of State may grant consent (with or without conditions) or refuse such authorisation as he may, in his own discretion, see fit. The consent shall not be capable of being assigned, alienated or transferred otherwise than in accordance with the foregoing procedure.

Deemed Permission under Section 90 of the Town And Country Planning Act 1990 – Conditions

6. In these conditions, unless the context otherwise requires:

“abnormal indivisible load” has the same meaning as in the Road Vehicles (Authorisation of Special Types) (General) Order 2003(a);

“commencement of development”, in relation to the authorised development, means the date on which the authorised development begins by the carrying out of a material operation as

defined in section 56 of the 1990 Act and "commence" and "commenced" shall be construed accordingly;

"construction period" means the period from work commencing on the Development until the date 6 months after the Site compounds have been reinstated in accordance with the conditions of this consent;

"dB" refers to the Decibel noise measurement unit;

"dB(A)" refers to a Decibel noise measurement unit, with the inclusion of the A-weighting filter in the measurements as referred to in ETSU-R-97;

"development" is as defined in condition 1 of this consent.

"deforestation" means any felling or lopping undertaken.

"development" means the works that are permitted to take place, as set out at Condition 2 above.

"emergency" means circumstances in which there is reasonable cause for apprehending imminent injury to persons, serious damage to property or danger of serious pollution to the environment'

"ETSU-R-97" means the ETSU Report number ETSU-R-97 'The Assessment and Rating of Noise from Wind Farms' published in September 1996;

"European Protected Species" means a species listed in Schedules 2 or 5 of the Conservation of Habitats and Species Regulations 2010;

"final commissioning of the development" means the date on which the last wind turbine generator forming part of the Development is commissioned and generating electricity to the national grid;

"first export" means the date on which electricity is first exported to the Grid on a commercial basis;

"LA90" means the decibel (dB) level exceeded for 90% of each sample period;

"Local Planning Authority" means Powys County Council, or any successor authority;

"public holiday" means a day that is, or is to be observed as a public holiday;

"site" means land within the development boundary shown outlined in red on the map attached to this consent

"wind speed" means Wind Speeds measured on the wind farm Site at the turbine hub height, and corrected to a standard height of 10m above ground level, in a manner agreed with the Local Planning Authority;

"wind turbines" means the wind turbines forming part of the development and "wind turbine" shall be construed accordingly

Reason: For the avoidance of doubt.

7. Where under any condition details, a scheme, or a plan are to be submitted for the approval, or confirmation, of the local planning authority then unless the condition provides otherwise:

- (a) those details or scheme or plan and that approval must be in writing; and
- (b) the approved details, scheme or plan shall be taken to include any amendments that may subsequently be approved in writing by the local planning authority, provided that no amendments may be approved by the local planning authority where such amendments may give rise to any materially different environmental effects to those assessed in the environmental statement.

Reason: For the avoidance of doubt.

The Development

8. Subject to the conditions attached to this permission the development shall be carried out in accordance with the following approved plans and documents:

- a) Figure 1.1 (Site Layout (17414-S498) February 2013 SEI);
- b) Figure 4.1 (Eastern Access Arrangement, June 2013 SEI);
- e) Figure 4.2 (Longitudinal Visibility Splay, June 2013 SEI);
- f) Figure 4.3 (Passing Place A, June 2013 SEI);
- g) Figure 4.4 (Passing Places B and C, June 2013 SEI);
- h) Figure 4.5 (SE Access Arrangement and Passing Place D, June 2013 SEI);
- i) Figure 4.7 (Minor Road Crossing, June 2013 SEI);
- j) Figure 5.1 (Western Access Visibility Splays, February 2013 SEI);
- k) Figure 5.2 (Western Access, February 2013 SEI);
- l) Figure 5.3 (Western Access – Swept Paths, February 2013 SEI);
- m) Details set out in the revised Strategic Traffic Management Plan for Mid Wales Wind Farms Section 6 of 6: Newtown to SSA C (AECOM, March 2014), including 6.3b Fryd Vaughan;
- n) Figure 6.4C (Mochdre Industrial Estate, STMP section 6, March 2014);

In general accordance with the following typical details set out in the 2007 ES:

- o) 5.2 (typical wind turbine);
- p) 5.9(a) and (b) (western access general arrangement and cross section);
- q) 6.1 (site road cross section) ;
- r) 6.2 (culvert detail);
- s) 6.3 (typical foundation);
- t) 6.4 (crane hardstanding);
- u) 6.5 (cable trench);
- v) 6.6 (substation);
- w) 6.7 (anemometer mast);

and in general accordance with the objectives, scope and methodology set out in the Supplementary Environmental Information submitted in 2008, 2010, February 2013, June 2013, December 2013 and March 2014.

Reason: For the avoidance of doubt.

9. This permission is for a period of 25 years from the date of first export.

Reason: For the avoidance of doubt and to establish the duration of this permission.

10. Confirmation of the date of commencement shall be provided to the local planning authority within one month of its occurrence.

Reason: To establish the date from which condition 9 shall apply.

11. Confirmation of the date of Final Commissioning shall be provided to the Secretary of State and the Local Planning Authority no later than one calendar month after that event.

Reason: To establish the date from which condition 9 shall apply.

Site Recording

12. No development shall commence until all areas that will be disturbed by the development have been photographically recorded and these photos, alongside a plan detailing the precise location and bearing of these photos have been submitted to and approved by the local planning authority.

Reason: to record the landscape and site prior to the development commencing and provide a basis for the decommissioning and site restoration scheme

Decommissioning & Restoration

13. Not less than 24 months before the expiry of this permission, scheme details and methodologies of updated habitat, bird and protected species surveys to inform a site decommissioning and restoration Scheme shall be submitted to and agreed in writing by the LPA.

Reason: To inform the decommissioning scheme.

14. Not less than 12 months before the expiry of this permission, a scheme for the decommissioning and restoration of the Site shall be submitted to and approved by the Local Planning Authority. The scheme shall be informed by the updated habitat, bird and species surveys and implemented and completed within 12 months after the expiry of this permission. The scheme shall include, but not be limited to:
 - a) details of all tracks, structures, buildings, underground cables and utilities, and other associated infrastructure to be removed;
 - b) details of the means of removal, including means of avoiding impacts on peatland habitats;
 - c) phasing of the removal of tracks, structures, buildings and other associated infrastructure;
 - d) earth moving & soil replacement;
 - e) restoration of the landscape;
 - f) monitoring of the restored areas and remedial actions;
 - h) reinstatement of public rights of way, footpaths and bridleways.

Reason: to ensure development is removed in a sympathetic manner upon expiry of this permission.

15. Prior to the implementation of the Site Decommissioning and Restoration Scheme, a community liaison scheme shall be submitted to and approved by the local planning authority. The community liaison scheme shall be implemented as approved and include:
 - a) details of developer liaison with the local community to ensure residents are informed of how the decommissioning of the development is progressing;
 - b) a mechanism for dealing with complaints from the local community during the decommissioning of the development; and
 - c) a nominated representative of the developer who will have the lead role in liaising with local residents and the relevant planning authority.

Reason: To ensure the amenity of local residents is protected.

16. On completion of the restoration work, any remaining fixed equipment, machinery and buildings erected or brought onto the site for the purpose of the implementing the Decommissioning and Site Restoration scheme shall be removed from the site.

Reason: to ensure the site is left in a satisfactory manner upon completion of the Site Decommissioning and Restoration Scheme.

17. No development shall take place on the site until the Company has submitted to the local planning authority details of a financial instrument, and arrangements which will ensure that funds sufficient to cover the completion of the decommissioning and site restoration costs are available to the planning authority prior to the commencement of decommissioning and site restoration. The financial instrument shall include arrangements for funds to increase with inflation and shall include a review provision upon the 5th, 10th, 15th and 20th anniversary of the First Export to ensure that the funds remain sufficient to cover the completion of the decommissioning and site restoration costs.

Reason: to ensure the site is left in a satisfactory manner upon completion of the Site Decommissioning and Restoration Scheme.

18. No development shall take place on site until the local planning authority has approved the details of the financial instrument, it is in place and arrangements have been secured to ensure that funds will be in place prior to the commencement of decommissioning and site restoration. The financial instrument shall be maintained throughout the duration of the permission and reinstatement period and the arrangements for deposit of funds, inflation adjustment and review of the financial instrument will be implemented.

Reason: to ensure the site is left in a satisfactory manner upon completion of the Site Decommissioning and Restoration Scheme.

Turbine Failure

19. If any wind turbine fails to provide electricity to the grid for a continuous period of 6 months or more (other than for reasons relating to noise):
- a) the local planning authority shall immediately be notified of the failure;
 - b) the local planning authority may require a scheme to be submitted for the repair or removal of that turbine;
 - c) within 2 months of receipt of such a request, a scheme for the repair or removal of that turbine shall be submitted to the local planning authority. The scheme shall be informed by updated bird and species surveys;
 - d) the approved scheme shall be implemented within 6 months of approval unless a longer period is agreed in writing by the local planning authority.

Reason: To ensure appropriate provision is made for a turbine or turbines requiring repair or for a turbine or turbines which require decommissioning.

Development Micro-Siting

20. No development shall commence until a micro-siting protocol has been submitted to and approved by the local planning authority. It shall set out a protocol for deciding on micro-siting of all development to minimise the developments impact on, but not limited to, curlew, protected species, watercourses, rights of way, bats, with blade tips not being located within 50 metres of woodland edges, and any other identified environmental and engineering constraints

Reason: To allow the developer flexibility during construction to make minor changes in the location of infrastructure to deal with difficulties such as poor ground conditions that become apparent during construction.

21. All aspects of the development shall be located within 50m of the locations shown on Figure 1.1 Site Layout (17414-S498) contained within February 2013 Supplementary Environmental Information in accordance with the protocols established in relation to micro siting.

Reason: To minimise environmental impact.

22. Within 3 months after the first export date, a plan showing the exact location of all development (including tracks, hardstandings, access areas, turbines, borrow pits etc.) shall be submitted to the local planning authority

Reason: to record the final as built scheme once micro-siting allowances have been taken into account.

Detailed Development - Design & Appearance

23. No turbines shall be delivered to site until details of the turbines, including make, model, design, size, and if there is an external transformer, the transformer location, the power rating, the anemometer mast and associated apparatus has been submitted to and approved by the local planning authority. The turbines, anemometer mast and associated apparatus shall be constructed in accordance with the approved details.

Reason: to ensure satisfactory appearance and in the interests of visual amenity.

24. No turbines shall be erected until the proposed colour shall be submitted to and approved by the local planning authority. The turbines shall be finished in the approved colour.

Reason: to ensure satisfactory appearance and in the interests of visual amenity.

25. The wind turbine blades on all the turbines hereby granted consent shall rotate in the same direction.

Reason: To safeguard the visual amenities of the area.

26. All electricity cables connecting the turbine arrays and the substation shall be installed underground.

Reason: In the interests of visual amenity.

27. No development of the on-site substation building shall commence until details relating to its location, external treatment, design, materials, landscaping (if any), and orientation have been submitted to and approved by the local planning authority. The substation shall be constructed in accordance with the approved details.

Reason: In the interests of visual amenity.

28. No outdoor lighting other than:
a) aviation lighting;
b) temporary site illumination approved as part of the Construction Method Statement may be used in the course of the Development unless details of such lighting have been submitted to and approved by the local planning authority. Such outdoor lighting shall only be provided in accordance with the approved details.

Reason: in the interests of visual amenity.

29. Except during the construction period, no symbols, signs, logos or other lettering, other than those required by law for health and safety reasons, shall be displayed on any part of the turbines nor any building or structures without approval from the local planning authority.

Reason: In the interests of visual amenity.

Construction Hours

30. Construction work shall only take place between the hours of 07:30 - 19:30 hours on Monday to Friday inclusive and 07:30 - 13:00 hours on Saturdays, with no construction work on a Sunday or public holidays. Outside these hours, works at the site shall be limited to emergency works, erection of turbines, dust suppression, and the testing/maintenance of plant and equipment, or construction work that is not audible from any noise sensitive property, unless otherwise approved in writing by the Local Planning Authority. The Local Planning Authority shall be informed in writing of emergency works within three working days of occurrence.

Reason: To protect amenity.

31. All activities associated with the construction of the development shall be carried out in accordance with British Standard BS5228:2009: Code of Practice for noise and vibration control on construction and open sites – Part 1: Noise and Part 2: Vibration

Reason: To protect amenity.

Highways

32. No development shall take place until detailed plans of the new junction with the A483 trunk road have been submitted to and approved in writing by the local planning authority. The details submitted shall reflect plan references 0448-002B, 003 and 004 and include:
- a) details of visibility splays that shall be kept free at all times of any obstruction including trees and shrubs exceeding 1.05 metres in height above the adjoining carriageway;
 - b) drainage details; and,
 - c) road markings and signage.

The works shall be implemented in accordance with the approved details and within five days of the new access first being brought into use, the existing access to Hafod Fach shall be permanently closed and the highway reinstated in accordance with the agreed details.

Reason: To ensure a satisfactory means of access to and from the Trunk Road is provided in the interests of highway safety.

33. No development shall take place until detailed plans of the new junctions and other highway works on the C1057 and U1298 county highways have been submitted to and approved in writing by the local planning authority. The details submitted shall reflect plan references 0448-101B, 102B, 103A, 104, 105A, 106A and 107A and include:

- a) details of visibility splays that shall be kept free at all times of any obstruction including trees and shrubs exceeding 1.05 metres in height above the adjoining carriageway;
- b) drainage details;
- c) road markings and signage proposals; and
- d) a programme for the implantation of the works.

The works shall be implemented in accordance with the approved details.

Reason: To ensure a satisfactory access to and from the development is provided in the interests of highway safety, amenity and nature conservation.

34. No deliveries by Abnormal Indivisible Load (AIL) shall take place until an assessment of the capacity of and impact on highways structures including layover areas, passing places, bridges, culverts, retaining walls, embankments and drainage systems, that may be affected by abnormal indivisible load deliveries is carried out and submitted to and approved by the local planning authority. Where the approved assessment indicates strengthening or other works may be required, no abnormal indivisible loads shall be delivered until full engineering details and drawings of any works required to such structures to accommodate the passage of abnormal indivisible loads have been submitted to and approved by the Local Planning Authority and the approved works shall be completed prior to any abnormal indivisible load deliveries to the site.

Reason: in the interests of highway safety and amenity.

35. AILs shall be delivered along the routes specified in sections 1,2,4, 5 (part within Newtown) and 6 of the Strategic Traffic management Plan for Mid Wales (STMP) dated August 2012, and for Section 6 Revision T dated March 2014 unless the Newtown Bypass is constructed. No abnormal indivisible loads shall be delivered to the Site until a Traffic Management Plan (TMP) for abnormal indivisible load deliveries has been submitted to and approved by the local planning authority. Thereafter abnormal indivisible load deliveries shall be carried out in accordance with the approved TMP. The TMP shall include:
- a) rights of access to any junction improvements, passing places layover areas and welfare facilities that are not proposed to form a part of the highway network;
 - b) management of junctions and crossings of highways and other public rights of way while abnormal indivisible load deliveries take place;
 - c) management and maintenance of layover areas, passing places and welfare facilities while abnormal invisible load deliveries take place;
 - d) details of temporary warning signs;
 - e) restrictions on indivisible load movements during special events including (without limitation) the Royal Welsh and Smallholders shows;
 - f) details of any alterations to any works that are carried out to enable abnormal indivisible load movements proposed to be implemented after such movements are completed;
 - 7) Details of a review mechanism to enable changes in circumstances after the agreement of the TMP to be addressed.

Reason: in the interests of highways safety and amenity.

36. No AIL deliveries shall be made to the site until an AIL Management Strategy has been submitted to and approved in writing by the Local Planning Authority. All AIL deliveries shall be carried out in accordance with the approved AIL Management Strategy, which shall include details of the following:
- a) persons responsible for the management and implementation of the AIL Management Strategy;
 - b) means of control of timing of delivery AIL movements;

- c) temporary traffic diversions and traffic hold points;
- d) details of banksmen and escorts for abnormal loads;
- e) coordination with all other AIL deliveries (including without limitation to other wind farms in Mid Wales)
- f) description of procedures for the allocation of delivery slots including delivery slot triggers and trading;
- g) the appointment and role of a Transport Coordinator
- h) liaison with relevant highway and planning authorities and the Police;
- i) liaison with members of the public and local communities;
- l) liaison with the hauliers, developers and landowners.

Reason: In the interests of highway safety and amenity

37. No development shall commence until a scheme providing for the remediation of any damage directly attributable to the Development to the highway infrastructure which will be utilised during the construction of the development has been submitted to and approved by the local planning authority following consultation with the relevant highway authorities. The scheme shall include:
- a) a condition survey prior to development of the sections of the C1057 and U1298 that would be used by construction traffic and AILs, and other agreed roads in the event of a material change to the STMP route;
 - b) further post-construction survey work of these sections of highway;
 - c) details and timescales for works to remediate damage to all parts of the highway, including street furniture, structures, verges, footways and the carriageway surface.

The scheme shall be implemented as approved.

Reason: To ensure the safety of the highways affected and that the developer rectifies any directly attributable damage caused.

38. No construction works shall take place on site until a Construction Traffic Management Plan (CTMP) has been submitted to and approved in writing by the local planning authority. The approved traffic management plan shall thereafter be complied with and will include details of the following:
- a) construction vehicle routeing;
 - b) means of monitoring vehicle movements to and from the site including the use of liveried construction vehicles displaying the name of the developer, the vehicle number, a telephone number for complaints and procedures for dealing with complaints;
 - c) timing of deliveries of construction materials to the site;
 - d) the management of junctions and crossings of roads and other public rights of way;
 - e) measures to be put in place including contractual arrangements with contractors and subcontractors to ensure that complaints and breaches of the TMP requirements are able to be remedied;
 - f) a travel plan aimed at maximising the use of sustainable travel by the construction workforce associated with the development;
 - g) vehicle movements during special events including (without limitation) the Royal Welsh and Smallholders shows;
 - h) communications with members of the public and local communities;
 - i) details of a review mechanism to enable changes in circumstances after the agreement of the TMP to be addressed.

Reason: In the interests of highway safety and amenity.

39. No abnormal indivisible load movements associated with any repairs, removal, or replacement components shall take place during the life of the development until a traffic

management plan dealing with such repair and/or replacement has been submitted to and approved by the local planning authority and thereafter the approved TMP shall be implemented

Reason: To ensure the safety of the highways affected and in the interests of amenity

40. No movement of traffic associated with the decommissioning of the development shall take place until a traffic management plan dealing with such decommissioning has been submitted to and approved in writing by the local planning authority and thereafter the approved TMP shall be implemented.

Reason: To ensure the safety of the highways affected and in the interests of amenity

Construction Management

41. No development or site clearance, scrub or vegetation removal, or tree felling works shall commence until a Construction Environmental Management Plan (CEMP) has been submitted to and approved in writing by the Local Planning Authority. The CEMP shall be adhered to throughout the site preparation, construction, and post-construction restoration period, subject to any variations approved in writing by the Local Planning Authority. The CEMP shall include:
- a) a track construction plan including the excavation and make up of internal access roads and hard standing areas, including measures to address silt-laden run-off from any workings, temporary and permanent access roads, soil storage and other engineering operations;
 - b) a working statement (including design and construction) to cover all channel and bank works including all channel crossings;
 - c) a detailed timetable for tree felling, vegetation and site clearance, construction and habitat management up to the commissioning of the turbines and site restoration. The timetable should include potential contingencies for birds and protected species;
 - d) measures to be taken during vegetation and site clearance, tree felling and the construction and restoration periods to protect wildlife and habitats including legally protected species, and the River Wye SAC;
 - e) the hours of working for all construction activities;
 - f) an Environmental Management and Pollution Prevention Plan (to include a water quality monitoring plan, surface water management plan and a drainage management plan) which comprises arrangements to protect groundwater, surface water and the River Wye SAC during site clearance, construction and the restoration phases of development including wet weather contingency measures and an Incident Response Plan in the event of a pollution incident and measures for the storage of materials including soil and its disposal;
 - g) construction arrangements for turbine foundations, access roads and other infrastructure, including concrete batching and dewatering arrangements to treat potentially sediment laden water;
 - h) arrangements for fuel storage and fuelling, the storage and handling of oils and lubricants, and the handling of cement materials to prevent any entry to watercourses and contingency plans in the event of spillage;
 - i) cable laying on the site including the detailed design of the trenches;
 - j) access, signing and re-routing arrangements for recreational users during construction activities;
 - k) construction method statements for the construction works compound and all infrastructure, including their eventual removal and satisfactory reinstatement;
 - l) details and method statements for hedgerows, stone walls and banks that are to be removed and relocated, including those to be removed for highway improvements;

- m) reinstatement of any disturbed ground post construction, including re-vegetation of access track and highway edges and hardstanding areas, in order to reduce their visual and ecological impact, together with measures to monitor its success;
- n) emergency site procedures in the event of disturbance or fatality of any otter or badgers;
- o) arrangements to prevent the spread of non-native invasive species;
- p) approach to excavated materials, including location, opening, working and reinstatement of borrow pits;
- q) nothing other than uncontaminated excavated natural materials shall be tipped on the site;
- r) measures to control dust and mud arising from the site including damping down, the provision of wheel washing facilities and the sheeting of HGV's taking spoil or construction materials to and from the site;
- s) measures to clean and maintain the site entrance and the adjacent public highway;
- t) temporary site illumination including proposed lighting levels together with the specification of any lighting;
- u) measures to avoid environmental effects from works on any off-site access roads.

Reason: To ensure a satisfactory level of environmental protection and to minimise disturbance to local residents during the construction process

42. Before any wind turbine is removed or replaced a revised CEMP dealing solely with that removal or replacement shall be submitted to and approved in writing by the local planning authority. The revised CEMP shall be implemented as approved.

Reason: To ensure a satisfactory level of environmental protection and to minimise disturbance to local residents during the construction process

Rights of Way Management Plan

43. No development shall commence until a Rights of Way Management Plan (RWMP) has been submitted to and approved by the local planning authority. The RWMP shall be implemented as approved and shall include:
- a) details of the temporary re-routing of public rights of way during construction of the authorised development;
 - b) details of the provision of signage and other information alerting the public to construction works;
 - c) details of any fencing or barriers to be provided during the construction period;
 - d) details as to how public rights of way, paths and roads will be inspected prior to and monitored during the construction period; and
 - e) details of protection of breeding birds where any public right of way is re-routed.

Reason: to protect public rights of way.

Ecology

44. No development shall commence until an on-site detailed Habitat Management Plan (HMP), setting out detailed nature conservation management objectives including the management of priority habitats and species, and a timetable for its implementation, has been submitted to and approved in writing by the Local Planning Authority. The HMP shall include (but not be limited to) details of the habitat management measures contained in the Environmental Statement (dated November 2007), the outline HMP submitted with the 2008 Supplementary Environmental Information (SEI) and the subsequent 2013 SEI. The approved HMP shall be implemented as agreed, and be reviewed in years 1, 2, 3, 5, 10 and 15 following the completion of its implementation to assess its effectiveness.

Reason: In the interests of nature conservation

45. No development shall commence, including vegetation clearance and tree felling, until details of a suitably qualified Ecological Clerk of Works (ECoW) to be employed on the development shall be submitted to and approved in writing by the Local Planning authority. The ECoW shall be a member of the Chartered Institute of Ecology and Environmental Management. The approved ECoW shall be appointed at least one month prior to the commencement of any tree felling/site and vegetation clearance works or development. The scope of the ECoW shall include, but not be limited to:
- a) monitoring compliance with and reporting on the success or failure of the approved mitigation works and in the event of failures advising on remedial mitigation measures;
 - b) advising the developer on the implementation of the approved mitigation proposals and the protection of important nature conservation interests on the site;
 - c) directing and consulting on the micro-siting and placement of turbines, roads and other infrastructure;
 - d) monitoring and reporting on the compliance with the Construction Environmental Management Plan (CEMP) and Ecological Monitoring Plan;
 - e) attending liaison meetings with and reporting compliance with conditions and plans and mitigation measures to PCC and NRW and other parties as necessary.

Reason: to ensure that the protection and mitigation measures are implemented correctly and in agreement with relevant statutory bodies

46. A Breeding Bird Protection Plan (BBPP) shall be submitted to and approved in writing by the Local Planning Authority at least 6 months prior to the commencement of construction and site and vegetation clearance/tree felling. The BBPP shall be implemented as agreed and shall include but not be limited to details of:
- a) measures to prevent disturbance to waders, including the avoidance of vegetation clearance, site investigations, and construction works within a distance of 300m of active wader nests generally, and within 800m of active curlew nests;
 - b) pre-commencement surveys for waders and red kite, to include territory mapping, breeding success and ranging behaviour (determined through the use of standard field survey techniques such as vantage point watches and transect surveys). The results of this survey shall be fed into the Construction Environment Management Plan to ensure that measures to protect breeding birds are implemented;
 - c) a scheme to ensure that site clearance and construction within 800m of known curlew territories (based on all data collected over the two breeding seasons immediately prior to construction, where curlew are present in at least one year) is halted prior to curlew returning (from 15th February), to ensure that birds are not deterred from settling to breed by construction activity. Construction works shall not resume in areas where activity was suspended unless it can be demonstrated that curlew have not arrived to occupy the territory, which would be demonstrated by no registrations up until 30th April, after which time construction activities may continue; or curlew have failed in their breeding attempt and left the territory, or have successfully fledged young and left the territory, which would be demonstrated by 3 consecutive surveys after the 30th of April at least a week apart, recording no birds. In all cases, construction activity can resume from 31st July.
 - d) measures during the site clearance, tree felling and construction period between 15th February and April 30th to determine whether any further curlew territories have been established, and the measures to be taken if further curlew territories are identified.

Survey methodologies and scope shall be agreed in writing with the LPA. All surveys shall be undertaken by a suitably qualified and experienced surveyor approved in writing by the LPA.

Reason: To protect breeding birds during wind farm construction and decommissioning.

47. Prior to the commencement of site vegetation clearance, tree felling or other development a Protected Species Plan (PSP) shall be submitted to and approved in writing by the Local Planning Authority. The Plan, survey results and a programme of any modification to mitigation required as a consequence shall be submitted to and approved in writing by the Local Planning Authority prior to any works associated with the development taking place. The surveys shall be undertaken by a suitably qualified ecologist in the last suitable season prior to site preparation and construction work commencing, and the programme of mitigation work shall be implemented as approved for the duration of decommissioning of the existing wind farm and construction activities. The Plan shall include, but not be limited to:
- a) the specification for pre-commencement update surveys to be undertaken for bats, great crested newts, otters, dormouse, water vole, and badgers, to include survey methodology, schedule and timing, the development of casualty risk models for bats, and if present suitable mitigation measures to ensure their protection throughout the pre construction, construction and operational phases of the development;
 - b) detailed surveys of watercourses and wetland areas for the presence of otter breeding and resting sites within a radius of 300m around each turbine and 300m either side of access tracks and areas subject to construction disturbance;
 - c) detailed survey of areas up to 500m from water bodies for great crested newts;
 - d) a survey of watercourses and wetland areas for the presence of water vole burrows, feeding and foraging areas to include the area 500m up and down stream from areas subject to construction disturbance, and appropriate mitigation to maintain habitat connectivity for water voles;
 - e) a survey check for badger setts or badger foraging activity within 50m of construction areas and 100m of drilling, piling or blasting activity
 - f) the preparation of a hedgerow/habitat plan to include details of removal, translocation, and aftercare of all hedgerows and habitat to be affected by works within the site and the access road;
 - g) the measures to be undertaken to confirm compliance of all protected species mitigation, compensation and enhancement measures

Reason: In the interests of nature conservation.

48. No development shall commence until an ecological monitoring plan has been submitted to and approved in writing by the Local Planning Authority. The Plan shall include the monitoring arrangements for the Habitat Management, Breeding Bird Protection, and Protected Species Plans referred to in these conditions, and:
- a) monitoring measures to record weather conditions and bat activity at wind turbines using automated bat detectors
 - b) monitoring procedures to record bat mortality at wind turbines during the first full 3 years of operation
 - c) annual reporting of the results of monitoring with recommendations for any remedial action that may reduce impacts on bat populations;
 - d) a procedure for agreeing and implementing remedial measures aimed at avoiding or reducing bat mortality. Such measures may include, but not be limited to, turbine curtailment and, or land management changes;
 - e) an agreed timeframe for monitoring, sufficient to determine the impact of the operation of the windfarm on bats and the efficacy of any remedial measures that may be implemented;
 - f) details of curlew monitoring;
 - g) monitoring of all hedgerows and habitat to be affected by works within the site and the access road;

h) monitoring and review of the HMP.

Monitoring shall be undertaken of the HMP, breeding birds, bats and great crested newts at periods of at least 1, 2, 3, 5, 10 and 15 years after first export. For breeding birds the monitoring should be conducted to an identical standard on both the wind farm site and an appropriate reference site. The raw data, collated and interpreted results of all monitoring shall be made available to the local planning authority and NRW within six months of being completed in each of the respective years. Monitoring protocols shall be agreed in writing by the local planning authority. The monitoring results shall be taken into account when reviewing the HMP and if necessary the actions set out in the HMP shall be amended after agreement with the local planning authority.

The Plan shall be implemented as agreed.

Reason: To ensure that impacts on the environment are minimised

49. Development activities shall be carried out in full compliance with the mitigation measures identified on page 12 'Llanbadarn Windfarm – Supplementary Information for Habitats Regulations Assessment' 4 August 2010.

Reason: in order to limit any impacts on the River Wye SAC.

50. Within 6 months of permission being granted, all databases & records collated within the Environmental Statement and Supplementary Environmental Information shall be digitally sent to Biodiversity Information Service for Powys and Brecon Beacons National Park (BIS)

Reason: to ensure that environmental data and information gathered is properly recorded

51. All biodiversity databases & records collated as a result of surveys/monitoring over the development's lifetime, which shall include pre-commencement surveys, shall be digitally submitted to the local planning authority and sent to the Biodiversity Information Service for Powys and Brecon Beacons National Park (BIS) within 6 months of the data being gathered.

Reason: to ensure that environmental data and information gathered is properly recorded

Drinking Water Supplies

52. No development shall commencement until a report addressing the potential effect of the development on any private drinking water resources in the area and any measures required to minimise the impact on drinking water quality during construction and operation has been submitted to and approved by the local planning authority. The report shall be implemented as approved.

Reason: In the interests of protecting the water environment.

Shadow Flicker

53. Prior to the erection of the first turbine, a written scheme shall be submitted to and approved in writing by the Local Planning Authority setting out a protocol for the assessment of shadow flicker in the event of any complaint to the Local Planning Authority from the owner or occupier of a residential Dwelling. The written scheme shall include remedial measures to alleviate any shadow flicker attributable to the development. The turbines shall be operated in accordance with the approved protocol unless the Local Planning Authority gives its prior written consent to any variations.

Reason: In the interests of residential amenity.

Television Interference

54. No turbine shall be erected until a scheme has been submitted to and approved by the Local Planning Authority providing for the investigation of and remediation of any interference with television reception at any dwelling which lawfully existed or had planning permission at the date of this permission. The scheme shall provide for the investigation by a qualified independent television engineer of any complaint of interference with television reception at a lawfully occupied dwelling, where such complaint is notified to the developer by the local planning authority within 24 months of the date of final commissioning. The scheme shall be implemented as approved.

Reason: In the interests of residential amenity.

Archaeology

55. No development shall commence until a scheme of archaeological investigation has been submitted to and approved by the local planning authority. The scheme of archaeological investigation shall be implemented as approved.

Reason: To ensure that any archaeological remains present are investigated and preserved.

56. All records collated, as a result of the Scheme of Archaeological Investigation, shall be submitted to the local planning authority and sent to the Historic Environment Record (currently held by Clwyd-Powys Archaeological Trust) within 6 months of the record being gathered.

Reason: To ensure that any archaeological findings are suitably recorded.

Aviation

57. No wind turbine shall be erected before the following information has been provided to the Defence Geographic Centre of the Ministry of Defence:
- a) the date that construction starts and ends;
 - b) the maximum height of construction equipment;
 - c) the latitude and longitude of every turbine.

Reason: In the interests of aviation safety.

58. No wind turbine shall be erected until details of the installation of infra-red aviation warning lights have been submitted to and approved by the local planning authority. The lights shall be installed in accordance with the approved details and maintained until the wind turbines are decommissioned and removed from.

Reason: In the interests of aviation safety.

Community Liaison

59. No development shall commence until a community liaison scheme for the construction period has been submitted to and approved by the local planning authority. The community liaison scheme shall be implemented as approved and include:
- a) details of developer liaison with the local community to ensure residents are informed of how the construction of the development is progressing;
 - b) a mechanism for dealing with complaints from the local community during the construction of the development; and,

- c) a nominated representative of the developer who will have the lead role in liaising with local residents and the relevant planning authority.

Reason: To ensure the amenity of local residents is protected.

60. The development hereby approved shall not commence until details of a Training and Employment Management Plan has been submitted to and approved in writing by the Local Planning Authority. The plan will aim to promote training and employment opportunities at all stages of the development for local people and maximise the use of local contractors and supply chains, in so far as this is commercially viable.

The Plan shall be implemented as approved.

Reason: In the interests of the local economy

Noise

- 61. No turbine hereby approved shall be brought into operation prior to the submission to and approval in writing by the Local Planning Authority of a scheme for the assessment and regulation of Excess Amplitude Modulation (EAM). That scheme shall be in general accordance with, if it exists at the time of submission:
 - a) relevant guidance endorsed in National Planning Policy; or in the absence of endorsed guidance;
 - b) relevant guidance published by the Institute of Acoustics.

The approved scheme shall be implemented for the life of the development hereby approved

Reason: In the interests of public amenity to ensure that EAM is suitably addressed.

- 62. The rating level of noise immissions from the combined effects of the wind turbines (including the application of any tonal penalty) when determined in accordance with the attached Guidance Notes (to this condition), shall not exceed the values for the relevant integer wind speed set out in, or derived from, the table attached to this condition at any dwelling which is lawfully existing or has planning permission at the date of this permission and:
 - a) The Company shall continuously log power production, wind speed and wind direction, all in accordance with Guidance Note 1(d). These data shall be retained for a period of not less than 24 months. The Company shall provide this information in the format set out in Guidance Note 1 (e) to the Local Planning Authority on its request, within 14 days of receipt in writing of such a request.
 - b) No electricity shall be exported until The Company has submitted to the Local Planning Authority for written approval a list of proposed independent consultants who may undertake compliance measurements in accordance with this condition. Amendments to the list of approved consultants shall be made only with the prior written approval of the Local Planning Authority.
 - c) Within 21 days from receipt of a written request from the Local Planning Authority following a complaint to it from an occupant of a dwelling alleging noise disturbance at that dwelling, The Company shall, at its expense, employ a consultant approved by the Local Planning Authority to assess the level of noise immissions from the wind farm at the complainant's property in accordance with the procedures described in the attached Guidance Notes. The written request from the Local Planning Authority shall set out at least the date, time and location that the complaint relates to and any identified atmospheric conditions, including wind direction, and include a statement as to whether, in the opinion of the Local Planning Authority, the noise giving rise to the complaint contains or is likely to contain a tonal component.

- d) The assessment of the rating level of noise immissions shall be undertaken in accordance with an assessment protocol that shall previously have been submitted to and approved in writing by the Local Planning Authority. The protocol shall include the proposed measurement location identified in accordance with the Guidance Notes where measurements for compliance checking purposes shall be undertaken, whether noise giving rise to the complaint contains or is likely to contain a tonal component, and also the range of meteorological and operational conditions (which shall include the range of wind speeds, wind directions, power generation and times of day) to determine the assessment of rating level of noise immissions. The proposed range of conditions shall be those which prevailed during times when the complainant alleges there was disturbance due to noise, having regard to the written request of the Local Planning Authority under paragraph (c), and such others as the independent consultant considers likely to result in a breach of the noise limits.
- e) Where a dwelling to which a complaint is related is not listed in the tables attached to these conditions, The Company shall submit to the Local Planning Authority for written approval proposed noise limits selected from those listed in the Tables to be adopted at the complainant's dwelling for compliance checking purposes. The proposed noise limits are to be those limits selected from Table 1, having regard to Table 2, and specified for a listed location which the independent consultant considers as being likely to experience the most similar background noise environment to that experienced at the complainant's dwelling. The rating level of noise immissions resulting from the combined effects of the wind turbines when determined in accordance with the attached Guidance Notes shall not exceed the noise limits approved in writing by the Local Planning Authority for the complainant's dwelling.
- f) The Company shall provide to the Local Planning Authority the independent consultant's assessment of the rating level of noise immissions undertaken in accordance with the Guidance Notes within 2 months of the date of the written request of the Local Planning Authority for compliance measurements to be made under paragraph (c), unless the time limit is extended in writing by the Local Planning Authority. The assessment shall include all data collected for the purposes of undertaking the compliance measurements, such data to be provided in the format set out in Guidance Note 1(e) of the Guidance Notes. The instrumentation used to undertake the measurements shall be calibrated in accordance with Guidance Note 1 (a) and certificates of calibration shall be submitted to the Local Planning Authority with the independent consultant's assessment of the rating level of noise immissions.
- g) Where a further assessment of the rating level of noise immissions from the wind farm is required pursuant to Guidance Note 4(c), The Company shall submit a copy of the further assessment within 21 days of submission of the independent consultant's assessment pursuant to paragraph (d) above unless the time limit has been extended in writing by the Local Planning Authority.

Reason: in the interests of the protection of residential amenity

Guidance Notes

Table 1 – Noise limits expressed in dB LA90,10 minute as a function of the standardised windspeed (m/s) at 10 m height to be applied to Noise from Llanbadarn Fynydd Wind Farm at all times of Day or Night

Location	Standardised 10 metre-height Wind Speed (as defined in accordance with the attached Guidance Notes to the noise condition)									
	4	5	6	7	8	9	10	11	12	13
Lower Foel	38	38	38	38	40	42	43	45	47	50
Butterwell	38	38	38	38	38	38	40	42	45	47
Springfield	45	45	45	45	45	48	52	56	60	64
Garn	45	45	45	45	45	48	52	56	60	64
Higher Fiddlers Green	38	38	38	38	38	38	40	42	45	47
Fiddlers Green	38	38	38	38	38	38	40	42	45	47
Lower Gwenlas	38	38	40	41	43	45	47	49	51	53
Gwenlas	38	38	39	40	42	44	47	49	52	55
Cwm-mawr	38	38	38	38	38	38	40	42	45	47
Pen-y-Bank	45	45	45	45	45	45	48	51	54	58
House south of Pen-y-bank	38	38	38	39	42	45	48	51	54	58
Esgairuchaf	45	45	45	45	45	45	45	45	45	46
Lower Crochran	40	40	40	40	41	43	45	48	50	53
Cochran	40	40	40	40	41	43	45	48	50	53
Hafod-fach	45	45	45	45	45	45	46	48	50	53
Esgairdracnllwyn	40	40	40	40	40	41	43	44	45	46
Carnat Bridge	40	40	40	40	41	43	45	48	50	53

Table 2: Coordinate locations of the dwellings listed in Table 1.

Dwelling	Easting	Northin g
Lower Foel	309609	283311
Butterwell	311013	282412
Springfield	310544	281884
Garn	310200	281697
Higher Fiddlers Green	311658	281737
Fiddlers Green	311672	281732
Lower Gwenlas	311435	280395
Gwenlas	311368	280351
Cwm-mawr	310786	278885
Pen-y-Bank	310310	279751
House south of Pen-y-bank	310217	279481
Esgairuchaf	309357	279437
Lower Crochran	308556	280569
Cochran	308233	280735
Hafod-fach	308641	281545
Esgairdracnllwyn	308289	282079
Carnanat Bridge	308698	282911

Note to Table 2: The geographical coordinate references are provided for the purpose of identifying the general location of dwellings to which a given set of noise limits applies

General Note: For the purposes of this condition, a dwelling is a building within use class C3 and C4 of the Town and Country Planning (Use Classes) Order 1987 (as amended) which lawfully exists or had planning permission as at the date of this consent.

Guidance Notes for Noise Conditions

These notes are to be read with and form part of the noise condition. They further explain the condition and specify the methods to be employed in the assessment of complaints about noise immissions from the wind farm. The rating level at each integer wind speed is the arithmetic sum of the wind farm noise level as determined from the best-fit curve described in guidance Note 2 of these Guidance Notes and any tonal penalty applied in accordance with Guidance Note 3. Reference to ETSU-R-97 refers to the publication entitled "The Assessment and Rating of Noise from Wind Farms" (1997) published by the Energy Technology Support Unit (ETSU) for the Department of Trade and Industry (DTI)).

Guidance Note 1

(a) Values of the LA90(10 minute) noise statistic should be measured at the complainant's property, using a sound level meter of EN 60651/BSB EN 60804 Type 1, or BSB EN 61672 Class 1 quality (or the equivalent UK adopted standard in force at the time of the measurements) set to measure using the fast time weighted response as specified in SS EN 60651/BSB EN 60804 or BS EN 61672-1 (or the equivalent UK adopted standard in force at the time of the measurements). This should be calibrated in accordance with the procedure specified in BS

4142: 1997 (or the equivalent UK adopted standard in force at the time of the measurements). Measurements shall be undertaken in such a manner to enable a tonal penalty to be applied in accordance with Guidance Note 3.

(b) The microphone should be mounted at 1.2 -1.5 metres above ground level, fitted with a two-layer windshield or suitable equivalent approved in writing by the Local Planning Authority, and placed outside the complainant's dwelling. Measurements should be made in "free field" conditions. To achieve this, the microphone should be placed at least 3.5 metres away from the building facade or any reflecting surface except the ground at the approved measurement location. In the event that the consent of the complainant for access to his or her property to undertake compliance measurements is withheld, The windfarm operator shall submit for the written approval of the Local Planning Authority details of the proposed alternative representative measurement location prior to the commencement of measurements and the measurements shall be undertaken at the approved alternative representative measurement location.

(c) The LA90(10 minute) measurements should be synchronised with measurements of the 10-minute arithmetic mean wind and operational data logged in accordance with Guidance Note 1 (d), including the power generation data from the turbine control systems of the wind farm.

(d) To enable compliance with the conditions to be evaluated, The wind farm operator shall continuously log arithmetic mean wind speed in metres per second and wind direction in degrees from north at hub height for each turbine and arithmetic mean power generated by each turbine, all in successive 10-minute periods. Unless an alternative procedure is previously agreed in writing with the Planning Authority, this hub height wind speed, averaged across all operating wind turbines, shall be used as the basis for the analysis. All 10 minute arithmetic average mean wind speed data measured at hub height shall be 'standardised' to a reference height of 10 metres as described in ETSU-R-97 at page 120 using a reference roughness length of 0.05 metres. It is this standardised 10 metre height wind speed data, which is correlated with the noise measurements determined as valid in accordance with Guidance Note 2, such correlation to be undertaken in the manner described in Guidance Note 2. All 10 minute periods shall commence on the hour and in 10- minute increments thereafter.

(e) Data provided to the Local Planning Authority in accordance with the noise condition shall be provided in comma separated values in electronic format.

(f) A data logging rain gauge shall be installed in the course of the assessment of the levels of noise immissions. The gauge shall record over successive 10minute periods synchronised with the periods of data recorded in accordance with Note 1 (d).

Guidance Note 2

(a) The noise measurements shall be made so as to provide not less than 20 valid data points as defined in Guidance Note 2 (b)

(b) Valid data points are those measured in the conditions specified in the agreed written protocol under paragraph (d) of the noise condition, but excluding any periods of rainfall measured in the vicinity of the sound level meter. Rainfall shall be assessed by use of a rain gauge that shall log the occurrence of rainfall in each 10 minute period concurrent with the measurement periods set out in Guidance Note 1.

(c) For those data points considered valid in accordance with Guidance Note 2(b), values of the LA90,10 minute noise measurements and corresponding values of the 10- minute wind speed, as derived from the standardised ten metre height wind speed averaged across all operating wind turbines using the procedure specified in Guidance Note 1 (d), shall be plotted on an XY chart with noise level on the Y-axis and the standardised mean wind speed on the X-axis. A least squares, "best fit" curve of an order deemed appropriate by the independent consultant (but which may not be higher than a fourth order) should be fitted to the data points and define the wind farm noise level at each integer speed.

Guidance Note 3

(a) Where, in accordance with the approved assessment protocol under paragraph (d) of the noise condition, noise immissions at the location or locations where compliance measurements are being undertaken contain or are likely to contain a tonal component, a tonal penalty is to be calculated and applied using the following rating procedure.

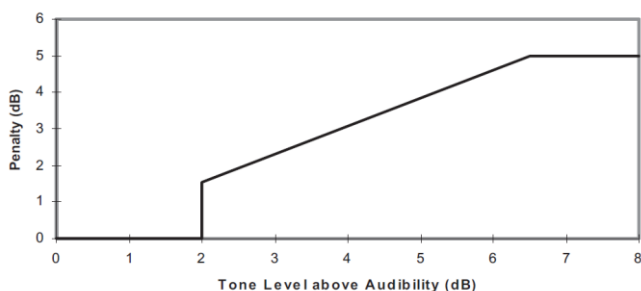
(b) For each 10 minute interval for which LA90 .10 minute data have been determined as valid in accordance with Guidance Note 2 a tonal assessment shall be performed on noise immissions during 2 minutes of each 10 minute period. The 2 minute periods should be spaced at 10 minute intervals provided that uninterrupted uncorrupted data are available ("the standard procedure"). Where uncorrupted data are not available, the first 'available uninterrupted clean 2 minute period out of the affected overall 10 minute period shall be selected. Any such deviations from the standard procedure, as described in Section 2.1 on pages 104-109 of ETSU-R-97, shall be reported.

(c) For each of the 2 minute samples the tone level above or below audibility shall be calculated by comparison with the audibility criterion given in Section 2.1 on pages 104-109 of ETSU-R-97.

(d) The tone level above audibility shall be plotted against wind speed for each of the 2 minute samples. Samples for which the tones were below the audibility criterion or no tone was identified, a value of zero audibility shall be used.

(e) A least squares "best fit" linear regression line shall then be performed to establish the average tone level above audibility for each integer wind speed derived from the value of the "best fit" line at each integer wind speed. If there is no apparent trend with wind speed then a simple arithmetic mean shall be used. This process shall be repeated for each integer wind speed for which there is an assessment of overall levels in Guidance Note 2.

(f) The tonal penalty is derived from the margin above audibility of the tone according to the figure below.



Guidance Note 4

(a) If a tonal penalty is to be applied in accordance with Guidance Note 3 the rating level of the turbine noise at each wind speed is the arithmetic sum of the measured noise level as determined from the best fit curve described in Guidance Note 2 and the penalty for tonal noise as derived in accordance with Guidance Note 3 at each integer wind speed within the range specified by the Local Planning Authority in its written protocol under paragraph (d) of the noise condition.

(b) If no tonal penalty is to be applied then the rating level of the turbine noise at each wind speed is equal to the measured noise level as determined from the best fit curve described in Guidance Note 2.

(c) In the event that the rating level is above the limit(s) set out in the Tables attached to the noise conditions or the noise limits for a complainant's dwelling approved in accordance with paragraph (e) of the noise condition, the independent consultant shall undertake a further assessment of the rating level to correct for background noise so that the rating level relates to wind turbine noise immission only.

(d) The Company shall ensure that all the wind turbines in the development are turned off for such period as the independent consultant requires to undertake the further assessment. The further assessment shall be undertaken in accordance with the following steps:

(e). Repeating the steps in Guidance Note 2, with the wind farm switched off, and determining the background noise (L3) at each integer wind speed within the range requested by the Local Planning Authority in Its written request under paragraph (c) and the approved protocol under paragraph (d) of the noise condition.

(f) The wind farm noise (L1) at this speed shall then be calculated as follows where L2 is the measured level with turbines running but without the addition of any tonal penalty:

(g) The rating level shall be re-calculated by adding arithmetically the tonal penalty (if any is applied in accordance with Note 3) to the derived wind farm noise L1 at that integer wind speed.

(h) If the rating level after adjustment for background noise contribution and adjustment for tonal penalty (if required in accordance with note 3 above) at any integer wind speed lies at or below the values set out in the Tables attached to the conditions or at or below the noise limits approved by the Local Planning Authority for a complainant's dwelling in accordance with paragraph (e) of the noise condition then no further action is necessary. If the rating level at any integer wind speed exceeds the values set out in the Tables attached to the conditions or the noise limits approved by the Local Planning Authority for a complainant's dwelling in accordance with paragraph (e) of the noise condition then the development fails to comply with the conditions.

CONDITIONS END

Annex D

Llanbrynmair – Schedule of Conditions

Consent under S.36 of the Electricity Act 1989 – Conditions

1. Pursuant to section 36 of the Electricity Act 1989, the Secretary of State for Energy and Climate Change (“the Secretary of State”) hereby consents to that part of the proposed development comprising the construction, on the area of land delineated by a solid red line on the drawing number 01592D2205-16 – Drawing 1A Site Boundary, Drawing 1 B Site Boundary (to the extent that it refers to sheets 3A to 3E only) and Drawings 1-3A to 1-3E Site Boundary¹²², of a wind turbine generating station on land between the villages of Llanbrynmair and Llanerfyl in Powys (“the Development”) and to the operation of that generating station. This consent is granted to RES UK and Ireland Limited (“the Company”), its assignees and successors. Consent for that part of the proposed development comprising works to provide access for Abnormal Indivisible Loads from the Llanerfyl to Talerddig road is refused (Drawings 1-1A to 1-1K and 1-2A to 1-2G inclusive).
2. Subject to paragraph 3, the Development shall be over 50MW rated capacity and up to 90MW rated capacity and comprise:
 - a) up to 30 wind turbines each sited on concrete foundations incorporating hard standing for cranes and fitted with rotating blades having a height to blade tip of up to 126.5 metres including transformers;
 - b) a series of cables buried beneath the surface of the ground and connecting the wind turbines to the substation;
 - c) a series of access tracks between the wind turbines;
 - d) any additional construction, maintenance and emergency site access tracks;
 - e) one onsite electricity substation and two welfare buildings;
 - f) a permanent anemometry mast and five pairs of temporary power performance calibration masts;.
 - g) six borrow pits for the extraction of stone to be used in the construction of the development;
 - h) a communications mast;
 - i) a new junction for the A470 at Talerddig and associated highways works to facilitate access to the site.
3. Subject to any minor changes which may be approved by the Local Planning Authority (as defined in the conditions of the deemed planning permission (“the Planning Conditions”) set out below), the Development shall be constructed in accordance with the application plans and in general accordance with the objectives, scope and methodology of the Environmental Statement and subsequent SEI, insofar as these do not conflict with any provision of the conditions of the deemed planning permission or the terms of any scheme, programme, statement, plan, details, or report to be approved by the Local Planning Authority under the Planning Conditions.
4. Phase 1 and Phase 2 of the development hereby permitted shall each be commenced within 8 years of from the date of this consent.
5. The Company shall not be permitted to assign this consent without the prior written authorisation of the Secretary of State. The Secretary of State may grant consent (with or without conditions) or refuse such authorisation as he may, in his own discretion, see fit. The consent shall not be capable of being assigned, alienated or transferred otherwise than in accordance with the foregoing procedure.

¹²² Contained within the SEI dated February 2013, at page 52

Deemed Permission under Section 90 of The Town And Country Planning Act 1990 – Conditions

6. In these conditions, unless the context otherwise requires:

"abnormal indivisible load" has the same meaning as in the Road Vehicles (Authorisation of Special Types) (General) Order 2003(a);

"commencement of development", in relation to the authorised development, means the date on which the authorised development begins by the carrying out of a material operation as defined in section 56 of the 1990 Act and "commence" and "commenced" shall be construed accordingly;

"construction period" means the period from work commencing on the Development until the date 6 months after the Site compounds have been reinstated in accordance with the conditions of this consent;

"dB" refers to the Decibel noise measurement unit;

"dB(A)" refers to a Decibel noise measurement unit, with the inclusion of the A-weighting filter in the measurements as referred to in ETSU-R-97;

"development" is as defined in condition 2 of this consent.

"deforestation" means any felling or lopping undertaken.

"development" means the works that are permitted to take place, as set out at Condition 2 above.

"emergency" means circumstances in which there is reasonable cause for apprehending imminent injury to persons, serious damage to property or danger of serious pollution to the environment'

"ETSU-R-97" means the ETSU Report number ETSU-R-97 'The Assessment and Rating of Noise from Wind Farms' published in September 1996;

"European Protected Species" means a species listed in Schedules 2 or 5 of the Conservation of Habitats and Species Regulations 2010;

"final commissioning of the development" means the date on which the last wind turbine generator forming part of the Development is commissioned and generating electricity to the national grid;

"first export" means the date on which electricity is first exported to the Grid on a commercial basis;

"LA90" means the decibel (dB) level exceeded for 90% of each sample period;

"Local Planning Authority" means Powys County Council, or any successor authority;

"public holiday" means a day that is, or is to be observed as a public holiday;

"site" means land within the development boundary shown outlined in red on the map attached to this consent

“wind speed” means Wind Speeds measured on the wind farm Site at the turbine hub height, and corrected to a standard height of 10m above ground level, in a manner agreed with the Local Planning Authority;

“wind turbines” means the wind turbines forming part of the development and “wind turbine” shall be construed accordingly

Reason: For the avoidance of doubt.

7. Where under any condition details, a scheme, or a plan are to be submitted for the approval, or confirmation, of the local planning authority then unless the condition provides otherwise:
- (a) those details or scheme or plan and that approval must be in writing; and
 - (b) the approved details, scheme or plan shall be taken to include any amendments that may subsequently be approved in writing by the local planning authority, provided that no amendments may be approved by the local planning authority where such amendments may give rise to any materially different environmental effects to those assessed in the environmental statement.

Reason: For the avoidance of doubt.

The Development

8. Subject to the conditions attached to this permission the development shall be carried out in accordance with the following approved plans and documents:
- a) Planning Application Red Line Boundary With Site Approach, Drawing Numbers 1A, 1B insofar as it relates to Sheet 3A – Sheet 3E, and 1-3A to 1-3E (SEI, February 2014);
 - b) Turbine Layout, Figure 3.5 (SEI, August 2013);
 - e) Turbine Layout and Micro Siting Areas, Figures 3.25a & 3.25b (SEI August 2013)
 - d) Alternative Infrastructure Layout, Fig 4.1 (February 2014 SEI)

And in general accordance with the typical details, objectives, scope and methodologies set out in the Supplementary Environmental Information submitted in August 2013, October 2013, December 2013 and February 2014, in so far as they are relevant to the development permitted.

Reason: For the avoidance of doubt.

9. The permission for phase 1 of the development shall be for a period of 25 years from the first export from phase 1. The permission for phase 2 of the development shall be for a period of 25 years from the first export from phase 2.

Reason: For the avoidance of doubt and to establish the duration of this permission.

10. Confirmation of the date first export for each phase shall be provided to the local planning authority within one month of its occurrence.

Reason: To establish the date from which condition 9 shall apply.

11. Confirmation of the date of Final Commissioning shall be provided to the Secretary of State and the Local Planning Authority no later than one calendar month after that event.

Reason: To establish the date of final commissioning.

Decommissioning & Restoration

12. Not less than 24 months before the expiry of this permission in relation to Phase 1 of the development, and by the same period in relation to Phase 2 of the development, scheme details and methodologies of updated habitat, bird and protected species surveys to inform a site decommissioning and restoration Scheme shall be submitted to and agreed in writing by the LPA

Reason: To inform the decommissioning scheme.

13. Not less than 18 months before the expiry of this permission in relation to the Phase 1 development and by the same period in relation to the Phase 2 development, a scheme for the decommissioning and restoration of the relevant part of site shall be submitted to and approved by the local planning authority. The schemes shall be informed by updated habitats and species surveys and shall be implemented as approved and be completed within 12 months of the expiry date of the permission for Phase 2. The scheme shall include, but not be limited to:
- details of all tracks, structures, buildings, underground cables and utilities, and other associated infrastructure to be removed to a depth of 1m below ground;
 - details of the means of removal, including means of avoiding impacts on peatland habitats;
 - phasing of the removal of tracks, structures, buildings and other associated infrastructure;
 - earth moving & soil replacement;
 - restoration of the landscape and habitat;
 - monitoring of the restored areas and remedial actions.
 - reinstatement of public rights of way, footpaths and bridleways.

Reason: to ensure development is removed in a sympathetic manner upon expiry of this permission.

14. Prior to the implementation of the Site Decommissioning and Restoration Scheme, a community liaison scheme shall be submitted to and approved by the local planning authority. The community liaison scheme shall be implemented as approved and include:
- details of developer liaison with the local community to ensure residents are informed of how the decommissioning of the development is progressing;
 - a mechanism for dealing with complaints from the local community during the decommissioning of the development; and
 - a nominated representative of the developer who will have the lead role in liaising with local residents and the relevant planning authority.

Reason: To ensure the amenity of local residents is protected.

15. On completion of the restoration work, any remaining fixed equipment, machinery and buildings erected or brought onto the site for the purpose of the implementing the Decommissioning and Site Restoration scheme shall be removed from the site.

Reason: to ensure the site is left in a satisfactory manner upon completion of the Site Decommissioning and Restoration Scheme.

16. No development shall take place on the site until the Company has submitted to the local planning authority details of a financial instrument, and arrangements which will ensure that funds sufficient to cover the completion of the decommissioning and site restoration costs are available to the planning authority prior to the commencement of decommissioning and site restoration. The financial instrument shall include arrangements for funds to increase with inflation and shall include a review provision upon the 5th, 10th, 15th and 20th anniversary of the First Export to ensure that the

funds remain sufficient to cover the completion of the decommissioning and site restoration costs.

Reason: to ensure the site is left in a satisfactory manner upon completion of the Site Decommissioning and Restoration Scheme.

17. No development shall take place on site until the local planning authority has approved the financial instrument, it is in place and arrangements have been secured to ensure that funds will be in place prior to the commencement of decommissioning and site restoration. The financial instrument shall be maintained throughout the duration of the permission and reinstatement period and the arrangements for deposit of funds, inflation adjustment and review of the financial instrument will be implemented.

Reason: to ensure the site is left in a satisfactory manner upon completion of the Site Decommissioning and Restoration Scheme.

Turbine Failure

18. If any wind turbine fails to provide electricity to the grid for a continuous period of 6 months or more (other than for reasons relating to noise):
- a) the local planning authority shall immediately be notified of the failure;
 - b) The local planning authority may require a scheme to be submitted for the repair or removal of that turbine;
 - c) within 2 months of receipt of such a request, a scheme for the repair or removal of that turbine shall be submitted to the local planning authority. The scheme shall be informed by updated bird and species surveys;
 - d) the approved scheme shall be implemented within 6 months of approval unless a longer period is agreed in writing by the local planning authority.

Reason: To ensure appropriate provision is made for a turbine or turbines requiring repair or for a turbine or turbines which require decommissioning.

Development Micro-Siting

19. Prior to commencement of development on the wind farm site (excluding tree felling, site and vegetation clearance) a micro-siting protocol shall be submitted to and approved in writing by the Local Planning Authority. The micro-siting protocol shall include:
- a) agreed criteria for micro-siting turbines, access tracks, borrow pits, crane pads and turning circles, contractor's compounds and all other infrastructure associated with the development, in relation to, but not limited to, the requirement to minimise impacts on peat habitat and deep peat; bats; curlew; watercourses; footpaths and bridleways including Glyndŵr's Way National Trail, and maintaining distances of at least 50 m from blade tip to woodland and forestry edges
 - b) an agreed hierarchy of issues to be considered in micro-siting decisions; and,
 - c) the extent of any NRW involvement in the final micro-siting approval process and implementation of the approved scheme.

Following forestry felling, a detailed peat depth assessment in all areas where infrastructure may have an impact on peat shall be undertaken to inform the micro-siting protocol. The development hereby approved shall be carried out and operated in accordance with the approved micro-siting protocol.

Reason: To allow the developer flexibility during construction to make minor changes in the location of infrastructure to deal with difficulties such as poor ground conditions that become apparent during construction.

20. All aspects of the Development shall be carried out within 50 metres from their approved location for turbines and 100 metres for access tracks and access crossings of drains or ditches, and other infrastructure.

Reason: To minimise environmental impact.

21. Within 3 months after the first export date of phase 2, a plan showing the exact location of all development (including tracks, hardstandings, access areas, turbines, borrow pits etc.) shall be submitted to the local planning authority

Reason: to record the final as built scheme once micro-siting allowances have been taken into account.

Detailed Development - Design & Appearance

22. No turbines shall be delivered to site until details of the turbines, including make, model, design, size, and if there is an external transformer, the transformer location, the power rating, the anemometer mast and associated apparatus has been submitted to and approved by the local planning authority. The turbines, anemometer mast and associated apparatus shall be constructed in accordance with the approved details.

Reason: to ensure satisfactory appearance and in the interests of visual amenity.

23. No turbines shall be erected until such time as a scheme for specifying the colour and finish has been submitted to and approved in writing by the local planning authority. The scheme shall include:
- a) a sample of the colour proposed
 - b) a written explanation of the colour selected, including an explanation of the landscape and visual considerations that have informed the proposal and an illustration of the proposed colour in the landscape by means of sample panels and/or photomontages.

No turbines shall be erected until the proposed colour is approved by the local planning authority and the turbines shall be finished in accordance with the approved colour.

Reason: to ensure satisfactory appearance and in the interests of visual amenity.

24. All electricity cables connecting the turbine arrays and the substation shall be installed underground.

Reason: In the interests of visual amenity.

25. No development of the on-site substation building shall commence until details relating to its location, external treatment, design, materials, landscaping (if any), and orientation have been submitted to and approved by the local planning authority. The substation shall be constructed in accordance with the approved details.

Reason: In the interests of visual amenity.

26. No outdoor lighting other than:
- a) aviation lighting
 - b) temporary site illumination approved as part of the Construction Method Statement may be used in the course of the Development unless details of such lighting have been submitted to and approved by the local planning authority. Such outdoor lighting shall only be provided in accordance with the approved details.

Reason: in the interests of visual amenity.

27. Except during the construction period, no symbols, signs, logos or other lettering, other than those required by law for health and safety reasons, shall be displayed on any part of the turbines nor any building or structures without approval from the local planning authority.

Reason: In the interests of visual amenity.

Construction Hours

28. Construction work shall only take place between the hours of 07:30 - 19:30 hours on Monday to Friday inclusive and 07:30 - 13:00 hours on Saturdays, with no construction work on a Sunday or public holidays. Outside these hours, works at the site shall be limited to emergency works, erection of turbines, dust suppression, and the testing/maintenance of plant and equipment, or construction work that is not audible from any noise sensitive property, unless otherwise approved in writing by the Local Planning Authority. The Local Planning Authority shall be informed in writing of emergency works within three working days of occurrence.

Reason: To protect amenity.

29. All activities associated with the construction of the development shall be carried out in accordance with British Standard BS5228:2009: Code of Practice for noise and vibration control on construction and open sites – Part 1: Noise and Part 2: Vibration

Reason: To protect amenity.

Highways

30. No AIL deliveries shall take place until a new junction onto the A458 trunk road and the abnormal indivisible load route from the A458 to the site boundary of the development has been constructed to the satisfaction of the local planning authority. The construction of the junction and the access track shall reflect the adjacent access proposals contained within the Supplementary Environmental Information submitted in relation to the adjacent Carnedd Wen windfarm proposal in September 2013.

Reason: To ensure a satisfactory means of access to and from the Trunk Road is provided in the interests of highway safety.

31. No development shall take place until detailed plans of the new junction for the A470 at Talerddig have been submitted to and approved in writing by the local planning authority. The details submitted shall reflect plan reference 60283248-D-040 Revision G and include:
- a) details of visibility splays that shall be kept free at all times of any obstruction including trees and shrubs exceeding 1.05 metres in height above the adjoining carriageway
 - b) drainage details, and,
 - c) road markings and signage proposals; and,
 - d) a programme for the implantation of the works.

The works shall be implemented in accordance with the approved details

32. No development including site clearance and felling shall take place until detailed plans of the works to be carried out along the county highway from the junction of the A470 at Talerddig to site entrance 4 have been submitted to and approved in writing by the local planning authority. The details submitted shall include:
- a) details of localised widening and indivisible passing places;

- b) details of changes to vertical alignments;
- c) details of visibility splays that shall be kept free at all times of any obstruction including trees and shrubs exceeding 1.05 metres in height above the adjoining carriageway;
- d) drainage details; and'
- e) road markings and signage proposals.

The works shall be implemented in accordance with the approved details.

Reason: To ensure a satisfactory access to and from the development is provided in the interests of highway safety, amenity and nature conservation.

33. No deliveries by Abnormal Indivisible Load (AIL) shall take place until an assessment of the capacity of and impact on highways structures including layover areas, passing places, bridges, culverts, retaining walls, embankments and drainage systems, that may be affected by abnormal indivisible load deliveries is carried out and submitted to and approved by the local planning authority. Where the approved assessment indicates strengthening or other works may be required, no abnormal indivisible loads shall be delivered until full engineering details and drawings of any works required to such structures to accommodate the passage of abnormal indivisible loads have been submitted to and approved by the Local Planning Authority and the approved works shall be completed prior to any abnormal indivisible load deliveries to the site.

Reason: in the interests of highway safety and amenity.

34. No Abnormal Indivisible Loads associated with the development shall be transported until a Building Condition and Building Structural Survey Plan for those properties on B4381 Severn Street, Welshpool (between the Canal and the Cross) to which access can be obtained, to include details of its timing and implementation, has been submitted to and approved in writing by the local planning authority. This will include details of the following:
- a) frequency and timing of Building Condition and Building Structure surveys in relation to abnormal indivisible load deliveries;
 - b) identification of relevant matters to be contained within a Building Condition and Building Structure Survey;
 - c) details of Survey Report submission requirements to the local planning authority;
 - e) the appointment of a competent independent professional approved in writing by the local planning authority who has relevant experience within the building surveying sector to undertake the Building Condition and Building Structure Surveys;
 - f) procedures for the design and implementation of any strengthening works identified as necessary by the Building Condition and Building Structure Survey;
 - g) procedures for the approval and implementation of any remediation works to individual properties identified as required.

The plan shall be implemented as approved

Reason: In the interests of avoiding damage to property

35. No abnormal indivisible loads shall be delivered to the Site until a Traffic Management Plan for abnormal indivisible load deliveries has been submitted to and approved by the local planning authority. Thereafter abnormal indivisible loads shall be carried out in accordance with the approved TMP. The TMP shall include:
- a) abnormal Indivisible Load vehicle routeing;
 - b) details of any widening or junction improvements and works and the provision of passing places layover areas and welfare facilities required to achieve the delivery of abnormal indivisible loads along the proposed route;

- c) rights of access to any junction improvements, passing places layover areas and welfare facilities that are not proposed to form a part of the highway network;
- d) management of junctions and crossings of highways and other public rights of way while abnormal indivisible load deliveries take place;
- e) management and maintenance of layover areas, passing places and welfare facilities while abnormal invisible load deliveries take place;
- f) details of temporary warning signs;
- g) restrictions on indivisible load movements during special events including (without limitation) the Royal Welsh and Smallholders shows;
- h) details of any alterations to any works that are carried out to enable abnormal indivisible load movements proposed to be implemented after such movements are completed;
- i) Details of a review mechanism to enable changes in circumstances after the agreement of the TMP to be addressed.

Reason: in the interests of highways safety and amenity.

36. No AIL deliveries shall be made to the site until an AIL Management Strategy has been submitted to and approved in writing by the Local Planning Authority. All AIL deliveries shall be carried out in accordance with the approved AIL Management Strategy, which shall include details of the following:
- a) persons responsible for the management and implementation of the AIL Management Strategy;
 - b) means of control of timing of delivery AIL movements;
 - c) temporary traffic diversions and traffic hold points;
 - d) details of banksmen and escorts for abnormal loads;
 - e) coordination with all other AIL deliveries (including without limitation to other wind farms in Mid Wales)
 - f) description of procedures for the allocation of delivery slots including delivery slot triggers and trading;
 - g) the appointment and role of a Transport Coordinator
 - h liaison with relevant highway and planning authorities and the Police;
 - i) liaison with members of the public and local communities;
 - j) liaison with the hauliers, developers and landowners;
 - k) details of how use of the access road into the site can accommodate abnormal indivisible loads for both the Carnedd Wen and Llanbrynmair wind farm schemes;
 - l) details of a review mechanism to enable changes in circumstances after the agreement of the TMP to be addressed.

Reason: In the interests of highway safety and amenity

37. No developments shall commence until a scheme providing for the remediation of any damage directly attributable to the Development to the highway infrastructure which will be utilised during the construction of the development has been submitted to and approved by the local planning authority following consultation with the relevant highway authorities.

The scheme shall be implemented as approved.

Reason: To ensure the safety of the highways affected and that the developer rectifies any directly attributable damage caused.

38. No construction works shall take place on site until a Construction Traffic Management Plan (CTMP) in respect of general construction traffic has been submitted to and approved in writing by the local planning authority. The approved traffic management plan shall thereafter be complied with and will include details of the following:
- a) construction vehicle routeing;

- b) means of monitoring vehicle movements to and from the site including the use of liveried construction vehicles displaying the name of the developer, the vehicle number, a telephone number for complaints and procedures for dealing with complaints;
- c) timing of deliveries of construction materials to the site;
- d) the management of junctions and crossings of roads and other public rights of way;
- e) measures to be put in place including contractual arrangements with contractors and subcontractors to ensure that complaints and breaches of the TMP requirements are able to be remedied;
- f) a travel plan aimed at maximising the use of sustainable travel by the construction workforce associated with the development;
- g) vehicle movements during special events including (without limitation) the Royal Welsh and Smallholders shows;
- h) communications with members of the public and local communities;
- i) details of how internal links within the site can accommodate construction traffic for both the Carnedd Wen and Llanbrynamir windfarm schemes; and,
- i) details of a review mechanism to enable changes in circumstances after the agreement of the TMP to be addressed.

Reason: In the interests of highway safety and amenity.

39. No abnormal indivisible load movements associated with any repairs, removal, or replacement components shall take place during the life of the development until a traffic management plan dealing with such repair and/or replacement has been submitted to and approved by the local planning authority and thereafter the approved TMP shall be implemented.

Reason: To ensure the safety of the highways affected and in the interests of amenity

40. No movement of traffic associated with the decommissioning of the development shall take place until a traffic management plan dealing with such decommissioning has been submitted to and approved in writing by the local planning authority and thereafter the approved TMP shall be implemented.

Reason: To ensure the safety of the highways affected and in the interests of amenity

Felling, Vegetation Clearance and Peat Management

41. No development including site and vegetation clearance and deforestation shall commence on Phase 1 or Phase 2 until a detailed Felling and Vegetation Clearance and Peat Management Plan (FVCPMP) relating to the relevant Phase has been submitted to and approved in writing by the Local Planning Authority in consultation with NRW. The FVCPMP shall be in accordance with the objectives and conditions set out in the Peat Management Plan at Appendix 8.9 (Volume I IB) of the August 2013 SEI. It shall include but not be limited to:
- a) measures to minimise effects on peat and peatland habitats during the construction of on-site access roads, site clearance and felling;
 - b) pre-commencement update surveys to be undertaken for otters, water vole, and badgers, and if present details of suitable mitigation measures to ensure their protection;
 - c) measures to manage areas for curlew, insofar as they are affected by felling, vegetation and site clearance;
 - d) details of methods to be used in the post-forestry felling peat depth assessments;
 - e) the objectives and conditions set out in the Peat Management Plan at Appendix 8.9 (Volume I IB) of the August 2013 SEI;
 - f) measures to monitor the implementation of the plan and any necessary remedial measures to be out in place;

- g) a working statement, including design and construction, to cover all channel and bank works including crossings;
- h) the proposed storage of materials (including waste materials) and disposal of surplus materials;
- i) a detailed timetable for forestry felling and site clearance and habitat management. The timetable should include potential contingencies for birds and protected species;
- j) measures to be taken during site clearance, tree felling and the construction of roads to protect wildlife and habitats including legally protected species and Gweunydd Dolwen SSSI including but not limited to details of any outdoor lighting provision;
- k) construction method statements for access roads, construction compounds and other infrastructure;
- l) a water quality and pollution prevention plan, to include measures to avoid pollution from run off, bunding around fuel tanks, response plans, water quality monitoring measures, drainage management and the roles and responsibilities of persons responsible for the management and implementation of the FVCPMP.

The FVCPMP shall be implemented as approved.

Reason: In the interests of minimising effects on wildlife, habitats and peat during on-site tree felling and vegetation clearance

42. No development (other than felling and vegetation clearance) shall take place on Phase 1 or Phase 2 until a final peat management plan (PMP) relevant to that Phase and informed by the post-forestry felling peat depth assessments have been submitted to and approved in writing by the Local Planning Authority. Any PMP submitted in accordance with this condition shall include all of those details included within the relevant FVCPMP plus any updated/additional measures required to achieve those measures. The FVCPMP(s) and PMP(s) shall be implemented as approved.

Reason: In the interests of minimising effects on peat

Construction Management

43. No development other than site clearance, scrub or vegetation removal or tree felling works shall commence until a Construction Environmental Management Plan (CEMP) has been submitted to and approved in writing by the Local Planning Authority. The CEMP shall include details of:
- a) any temporary construction compound including temporary structures/buildings, welfare facilities, fencing, parking and storage provision to be used in connection with the site clearance, tree felling and construction of the development;
 - b) a working statement (including design and construction) to cover all channel and bank works including all channel crossings;
 - c) the proposed storage of materials (including waste materials) and disposal of surplus materials;
 - d) the deposition, grading and finishing (in relation to local land form and habitat) of any soil and other natural materials not removed from the site during construction works;
 - e) details of surface treatments and the construction of all hard surfaces and tracks;
 - f) construction method statements for turbines, access roads, construction compounds and other permanent and temporary infrastructure;
 - g) a water quality and pollution prevention plan, to include measures to avoid pollution due to run-off, pollution response plans, and water quality monitoring;
 - h) details of production processes for concrete, including washin out procedures;
 - i) emergency procedures;

- j) measured to control dust and mud, including wheel washing facilities and the sheeting of HGVs;
- k) temporary site illumination;
- l) methods to control construction noise;
- m) the opening, excavation and reinstatement of on-site borrow pits;
- n) details of phasing of the construction works;
- o) a post construction restoration plan, including removal of temporary structures, construction compounds, and construction materials;
- p) details of measures to prevent the spread of non-native invasive species;
- q) details of how access routes and tracks shall be constructed and managed to accommodate AILs for both the Carnedd Wen and Llanbrynmair schemes; and,
- q) the roles and responsibilities of persons responsible for the management and implementation of the CEMP

The CEMP shall be implemented as approved

Reason: To ensure a satisfactory level of environmental protection

44. Before any wind turbine is removed or replaced a revised CEMP dealing solely with that removal or replacement shall be submitted to and approved in writing by the local planning authority. The revised CEMP shall be implemented as approved.

Reason: To ensure a satisfactory level of environmental protection

Rights of Way Management Plan

45. No development shall commence until a Rights of Way Management Plan (RWMP) has been submitted to and approved by the local planning authority. The RWMP shall be implemented as approved and shall include:
- a) details of the temporary re-routing of public rights of way during construction of the authorised development;
 - b) details of the provision of signage and other information alerting the public to construction works;
 - c) details of any fencing or barriers to be provided during the construction period;
 - d) details as to how public rights of way, paths and roads will be inspected prior to and monitored during the construction period; and
 - e) details of protection of breeding birds where any public right of way is re-routed.

Reason: to protect public rights of way.

Ecology

45. No development shall commence on-site until a detailed Habitat Management Plan (HMP), setting out detailed nature conservation management objectives including the management of priority habitats and species, and a timetable for its implementation, has been submitted to and approved in writing by the Local Planning Authority. The HMP shall include (but not be limited to) details of the habitat management measures contained set out in Appendix 5.2 (Volume II) of the August 2013 SEI and the following details;
- a) the inclusion of ditch blocking in Habitat Management Area ('HMA') 3 as identified in figure 5.3 of SEI 2013;
 - b) ditch blocking of grips across the HMAs (outside of the black grouse breeding season in areas where pre-commencement surveys identify breeding black grouse and schedule 1 raptors);
 - c) retention of open tree cover where possible;
 - d) a timetable for the implementation and completion of all mitigation measures proposed, (including but not limited to a commitment to complete all drain

- blocking on the Phase 1 and Phase 2 development within 5 years of commencement of each relevant phase of the development);
- e) a scheme and programme to secure the eradication of re-seeded conifers and rhododendron;
 - f) a minimum blanket bog restoration area target;
 - g) retention of areas of rough grassland to provide suitable foraging habitat for barn owls;
 - h) management and stocking rates of restored blanket bog habitat
 - i) measures for moorland breeding birds including curlew, hen harrier, and black grouse, which shall include details of the cutting and grazing regimes in the curlew management area;
 - j) the measures to be secured to implement the provisions of the HMP;
 - k) a timeframe for monitoring, sufficient to determine the impact of the operation of the development on habitats and species and the efficacy of any remedial measures that may be implemented;

The development shall be carried out and operated in accordance with the approved HMP

Reason: In the interests of nature conservation

46. No development shall commence, including vegetation clearance and tree felling, until details of a suitably qualified Ecological Clerk of Works (ECoW) to be employed on the development shall be submitted to and approved in writing by the Local Planning authority. The ECoW shall be a member of the Chartered Institute of Ecology and Environmental Management. The approved ECoW shall be appointed at least one month prior to the commencement of any tree felling/site and vegetation clearance works or development. The scope of the ECoW shall include, but not be limited to:
- a) monitoring compliance with and reporting on the success or failure of the approved mitigation works and in the event of failures advising on remedial mitigation measures;
 - b) advising the developer on the implementation of the approved mitigation proposals and the protection of important nature conservation interests on the site;
 - c) directing and consulting on the micro-siting and placement of turbines, roads and other infrastructure;
 - d) monitoring and reporting on the compliance with the Construction Environmental Management Plan (CEMP) and Ecological Monitoring Plan;
 - e) attending liaison meetings with and reporting compliance with conditions and plans and mitigation measures to PCC and NRW and other parties as necessary.

Reason: to ensure that the protection and mitigation measures are implemented correctly and in agreement with relevant statutory bodies

47. A Breeding Bird Protection Plan (BBPP) shall be submitted to and approved in writing by the Local Planning Authority at least 15 months prior to the commencement of construction. The BBPP shall be implemented as agreed and shall include but not be limited to details of:
- a) black grouse surveys to be carried out one breeding season prior to construction which shall take place during the lekking period of Mid-March – the end of May and annually thereafter until the end of the construction phase;
 - b) breeding bird surveys to be carried out 1 breeding season prior to construction and annually thereafter until the end of the construction phase of the development;
 - c) curlew surveys to be carried out one breeding season prior to construction and annually thereafter until the end of the construction phase;
 - d) pre-construction surveys for Schedule 1 birds if works are to be undertaken during the breed birding season, 1st March – 31 August;
 - e) measures to prevent disturbance to schedule 1 raptors, curlew, black grouse, red grouse, barn owl and hen harrier during the forest felling, site and vegetation

- clearance, construction and operational phases of the development, including the restriction of works during the breeding season in the construction activity restriction zones;
- f) prohibition of track construction between 15 February to end July each year in areas where curlew are present as indicated by pre-commencement surveys;
 - g) a cap of 80 HGV movements to site per day during 15 February to end July each year (i.e. 160 trips per day);
 - h) measures to monitor collisions of hen harrier, red kite and golden plover with wind turbines, and should monitoring identify significant collision risk to these species, the remedial measures that will be put in place to limit future collision risk;
 - i) measures to limit collision of barn owl with associated infrastructure and fencing; and
 - j) A timeframe for monitoring, sufficient to determine the impact of the operation of the development on birds and the efficacy of any remedial measures that may be implemented.

Survey methodologies and scope shall be agreed in writing with the LPA. All surveys shall be undertaken by a suitably qualified and experienced surveyor approved in writing by the LPA. The BBPP shall be implemented as approved.

Reason: To protect breeding birds during wind farm construction and decommissioning.

48. No development, other than tree felling vegetation and site clearance works shall take place until a Protected Species Plan (PSP) shall be submitted to and approved in writing by the Local Planning Authority. The Plan shall include, but not be limited to:
- a) pre-commencement update surveys to be undertaken for bats, otters, dormouse, water vole, badgers, and, if present, suitable mitigation measures to ensure their protection throughout the pre construction, construction and operational phases of the development;
 - b) an assessment of the impacts on bat roosts as a result of the tree clearance works, along with associated mitigation measures;
 - c) a monitoring procedure to record weather conditions and bat activity at wind turbines using automated bat detectors;
 - d) a monitoring procedure to record bat mortality at wind turbines;
 - e) annual reporting of the results of monitoring with recommendations for any remedial action that may reduce bat mortality;
 - f) a procedure for agreeing and implementing remedial measures aimed at avoiding or reducing bat mortality. Such measures may include, but not be limited to, turbine curtailment and, or land management changes;
 - g) an agreed timeframe for monitoring, sufficient to determine the impact of the operation of the windfarm on bats and the efficacy of any remedial measures that may be implemented.

The PSP shall be implemented as approved.

Reason: In the interests of the favourable conservation status of protected species

49. Within 6 months of permission being granted, all databases & records collated within the Environmental Statement and Supplementary Environmental Information shall be digitally sent to Biodiversity Information Service for Powys and Brecon Beacons National Park (BIS)

Reason: to ensure that environmental data and information gathered is properly recorded

50. All biodiversity databases & records collated as a result of surveys/monitoring over the development's lifetime, which shall include pre-commencement surveys, shall be digitally submitted to the local planning authority and sent to the Biodiversity Information Service

for Powys and Brecon Beacons National Park (BIS) within 6 months of the data being gathered.

Reason: to ensure that environmental data and information gathered is properly recorded

Shadow Flicker

51. Prior to the erection of the first turbine, a written scheme shall be submitted to and approved in writing by the Local Planning Authority setting out a protocol for the assessment of shadow flicker in the event of any complaint to the Local Planning Authority from the owner or occupier of a residential Dwelling. The written scheme shall include remedial measures to alleviate any shadow flicker attributable to the development. The turbines shall be operated in accordance with the approved protocol unless the Local Planning Authority gives its prior written consent to any variations.

Reason: In the interests of residential amenity.

Television Interference

52. No turbine shall be erected until a scheme has been submitted to and approved by the Local Planning Authority providing for the investigation of and remediation of any interference with television reception at any dwelling which lawfully existed or had planning permission at the date of this permission. The scheme shall provide for the investigation by a qualified independent television engineer of any complaint of interference with television reception at a lawfully occupied dwelling, where such complaint is notified to the developer by the local planning authority within 24 months of the date of final commissioning. The scheme shall be implemented as approved.

Reason: In the interests of residential amenity.

Archaeology

53. No development shall commence until a scheme of archaeological investigation has been submitted to and approved by the local planning authority. The scheme of archaeological investigation shall be implemented as approved.

Reason: To ensure that any archaeological remains present are investigated and preserved.

54. All records collated, as a result of the Scheme of Archaeological Investigation, shall be submitted to the local planning authority and sent to the Historic Environment Record (currently held by Clwyd-Powys Archaeological Trust) within 6 months of the record being gathered.

Reason: To ensure that any archaeological findings are suitably recorded.

Aviation

55. No wind turbine shall be erected before the following information has been provided to the Defence Geographic Centre of the Ministry of Defence:
- a) the date that construction starts and ends;
 - b) the maximum height of construction equipment;
 - c) the latitude and longitude of every turbine

Reason: In the interests of aviation safety.

56. No wind turbine shall be erected until details of the installation of infra-red aviation warning lights have been submitted to and approved by the local planning authority. The

lights shall be installed in accordance with the approved details and maintained until the wind turbines are decommissioned and removed from.

Reason: In the interests of aviation safety.

Community Liaison

57. No development shall commence until a community liaison scheme for the construction period has been submitted to and approved by the local planning authority. The community liaison scheme shall be implemented as approved and include:
- a) details of developer liaison with the local community to ensure residents are informed of how the construction of the development is progressing;
 - b) a mechanism for dealing with complaints from the local community during the construction of the development; and,
 - c) a nominated representative of the developer who will have the lead role in liaising with local residents and the relevant planning authority.

Reason: To ensure the amenity of local residents is protected.

58. The development hereby approved shall not commence until details of a Training and Employment Management Plan has been submitted to and approved in writing by the Local Planning Authority. The plan will aim to promote training and employment opportunities at all stages of the development for local people and maximise the use of local contractors and supply chains, in so far as this is commercially viable

Reason: In the interests of the local economy

Noise

59. No turbine hereby approved shall be brought into operation prior to the submission to and approval in writing by the Local Planning Authority of a scheme for the assessment and regulation of Excess Amplitude Modulation (EAM). That scheme shall be in general accordance with, if it exists at the time of submission:
- a) relevant guidance endorsed in National Planning Policy; or in the absence of endorsed guidance;
 - b) relevant guidance published by the Institute of Acoustics.

The approved scheme shall be implemented for the life of the development hereby approved

Reason: In the interests of public amenity to ensure that EAM is suitably addressed.

60. The rating level of noise immissions from the combined effects of the wind turbines (including the application of any tonal penalty) when determined in accordance with the attached Guidance Notes (to this condition), shall not exceed the values for the relevant integer wind speed set out in, or derived from, the table attached to this condition at any dwelling which is lawfully existing or has planning permission at the date of this permission and:
- a) The Company shall continuously log power production, wind speed and wind direction, all in accordance with Guidance Note 1(d). These data shall be retained for a period of not less than 24 months. The Company shall provide this information in the format set out in Guidance Note 1 (e) to the Local Planning Authority on its request, within 14 days of receipt in writing of such a request.
 - b) No electricity shall be exported until The Company has submitted to the Local Planning Authority for written approval a list of proposed independent consultants who may undertake compliance measurements in accordance with this condition.

- Amendments to the list of approved consultants shall be made only with the prior written approval of the Local Planning Authority.
- c) Within 21 days from receipt of a written request from the Local Planning Authority following a complaint to it from an occupant of a dwelling alleging noise disturbance at that dwelling, The Company shall, at its expense, employ a consultant approved by the Local Planning Authority to assess the level of noise immissions from the wind farm at the complainant's property in accordance with the procedures described in the attached Guidance Notes. The written request from the Local Planning Authority shall set out at least the date, time and location that the complaint relates to and any identified atmospheric conditions, including wind direction, and include a statement as to whether, in the opinion of the Local Planning Authority, the noise giving rise to the complaint contains or is likely to contain a tonal component.
 - d) The assessment of the rating level of noise immissions shall be undertaken in accordance with an assessment protocol that shall previously have been submitted to and approved in writing by the Local Planning Authority. The protocol shall include the proposed measurement location identified in accordance with the Guidance Notes where measurements for compliance checking purposes shall be undertaken, whether noise giving rise to the complaint contains or is likely to contain a tonal component, and also the range of meteorological and operational conditions (which shall include the range of wind speeds, wind directions, power generation and times of day) to determine the assessment of rating level of noise immissions. The proposed range of conditions shall be those which prevailed during times when the complainant alleges there was disturbance due to noise, having regard to the written request of the Local Planning Authority under paragraph (c), and such others as the independent consultant considers likely to result in a breach of the noise limits.
 - e) Where a dwelling to which a complaint is related is not listed in the tables attached to these conditions, The Company shall submit to the Local Planning Authority for written approval proposed noise limits selected from those listed in the Tables to be adopted at the complainant's dwelling for compliance checking purposes. The proposed noise limits are to be those limits selected from Table 1, having regard to Table 2, and specified for a listed location which the independent consultant considers as being likely to experience the most similar background noise environment to that experienced at the complainant's dwelling. The rating level of noise immissions resulting from the combined effects of the wind turbines when determined in accordance with the attached Guidance Notes shall not exceed the noise limits approved in writing by the Local Planning Authority for the complainant's dwelling.
 - f) The Company shall provide to the Local Planning Authority the independent consultant's assessment of the rating level of noise immissions undertaken in accordance with the Guidance Notes within 2 months of the date of the written request of the Local Planning Authority for compliance measurements to be made under paragraph (c), unless the time limit is extended in writing by the Local Planning Authority. The assessment shall include all data collected for the purposes of undertaking the compliance measurements, such data to be provided in the format set out in Guidance Note 1(e) of the Guidance Notes. The instrumentation used to undertake the measurements shall be calibrated in accordance with Guidance Note 1 (a) and certificates of calibration shall be submitted to the Local Planning Authority with the independent consultant's assessment of the rating level of noise immissions.
 - g) Where a further assessment of the rating level of noise immissions from the wind farm is required pursuant to Guidance Note 4(c), The Company shall submit a copy of the further assessment within 21 days of submission of the independent consultant's assessment pursuant to paragraph (d) above unless the time limit has been extended in writing by the Local Planning Authority.

Reason: in the interests of the protection of residential amenity

Guidance Notes

Table 1 – Noise limits expressed in dB LA90,10 minute as a function of the standardised windspeed (m/s) at 10 m height to be applied to Noise from Llanbrynmair Wind Farm at all times of Day or Night

Table 1: Noise limits expressed in dB LA90, 10 minute to be applied to Noise from Llanbrynmair at all times of Day or Night

Locations	Standardised 10 metre-height Wind Speed (as defined In accordance with the attached Guidance Notes to the noise condition)											
	1	2	3	4	5	6	7	8	9	10	11	12
Ysgubor Cannon	38.9	38.9	38.9	38.9	39.0	39.5	40.3	41.3	42.4	42.4	42.4	42.4
Pen yr Eisteddfod	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3
Dolwen Isaf	35.6	35.6	35.6	35.6	35.7	36.2	37.0	38.0	39.1	39.1	39.1	39.1
The Barn -Blaen y Cwm	34.6	34.6	34.6	34.6	34.6	34.6	35.0	35.0	35.0	36.5	37.8	38.5
Rhydymeirch	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.2	37.3	39.0	40.3	41.0
Abercannon	38.4	38.4	38.4	38.4	38.5	39.1	39.8	40.8	42.0	42.0	42.0	42.0
Beulah Chapel House	37.8	37.8	37.8	37.8	37.9	38.5	39.2	40.2	41.4	41.4	41.4	41.4
Neinthirion	37.8	37.8	37.8	37.8	37.9	38.5	39.2	40.2	41.4	41.4	41.4	41.4
Delfryn	38.0	38.0	38.0	38.0	38.0	38.0	38.0	40.0	42.3	42.3	42.3	42.3
Berth-Iwyd	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	36.1	36.1	36.1	36.1
Castell y Gwynt	38.0	38.0	38.0	38.0	38.0	38.0	38.0	40.0	42.2	42.2	42.2	42.2
Pant y Powsi	35.0	35.0	35.0	35.0	35.0	35.0	35.0	36.6	38.9	38.9	38.9	38.9
Nant yr Esgairwen	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.6	37.9	37.9	37.9	37.9
Capel yr Aber	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	36.5	36.5	36.5	36.5
Hafodowen	38.9	38.9	38.9	38.9	38.9	40.1	42.7	45.9	49.2	49.2	49.2	49.2
Cwm-carnedd-isaf	35.9	35.9	35.9	35.9	35.9	35.9	35.9	35.9	38.0	38.0	38.0	38.0
Cwm-carnedd-uchaf	36.2	36.2	36.2	36.2	36.2	36.2	36.2	36.2	38.3	38.3	38.3	38.3
Dolau	35.7	35.7	35.7	35.7	35.7	36.3	37.0	38.0	39.2	39.2	39.2	39.2
Dolau-ceimion	36.3	36.3	36.3	36.3	36.4	36.9	37.7	38.7	39.9	39.9	39.9	39.9
Bryn Du	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Glegyrnant	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	37.0	38.0	39.0

	0	0	0	0	0	0	0	0	9	6	9	6
Blaen y Cwm	34. 1	34. 1	34. 1	34. 1	34. 1	34. 1	35. 0	35. 0	35. 0	36. 2	37. 5	38. 2
Cwm Pen Llydan	33. 8	33. 8	33. 8	33. 8	33. 8	33. 8	36. 0	38. 1	40. 2	41. 9	43. 2	43. 9
Cwm-y-ffynnon	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 3	35. 3	35. 3	35. 3
Pwll-melyn	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 4	35. 4	35. 4	35. 4
Ffrliddfawr	38. 7	38. 7	38. 7	38. 7	38. 7	38. 7	38. 7	40. 7	42. 9	42. 9	42. 9	42. 9
Cwmdrwen	38. 1	38. 1	38. 1	38. 1	38. 1	38. 1	38. 1	40. 0	42. 3	42. 3	42. 3	42. 3
Cannon	39. 0	39. 0	39. 0	39. 0	39. 1	39. 6	40. 4	41. 4	42. 6	42. 6	42. 6	42. 6
Dolwen Uchaf	35. 8	35. 8	35. 8	35. 8	35. 8	36. 4	37. 2	38. 1	39. 3	39. 3	39. 3	39. 3
Ffridd Newydd	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0
Caecrwn	32. 1	32. 1	32. 1	32. 1	32. 1	32. 1	32. 1	32. 1	32. 1	32. 1	32. 1	32. 1
Llwyn	31. 1	31. 1	31. 1	31. 1	31. 1	31. 1	31. 1	31. 1	31. 1	31. 1	31. 1	31. 1
Maes Llymystyn	30. 4	30. 4	30. 4	30. 4	30. 4	30. 4	30. 4	30. 4	30. 4	30. 4	30. 4	30. 4
Moel Ddolwen	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0
Tyn-y-fedw	33. 9	33. 9	33. 9	33. 9	33. 9	33. 9	33. 9	33. 9	33. 9	33. 9	33. 9	33. 9
Gesail-ddu	29. 7	29. 7	29. 7	29. 7	29. 7	29. 7	29. 7	29. 7	29. 7	29. 7	29. 7	29. 7
Caer-Iloi	29. 2	29. 2	29. 2	29. 2	29. 2	29. 2	29. 2	29. 2	29. 2	29. 2	29. 2	29. 2
Dol-y-maen	30. 1	30. 1	30. 1	30. 1	30. 1	30. 1	30. 1	30. 1	30. 1	30. 1	30. 1	30. 1
Nant-y-dugoed	30. 7	30. 7	30. 7	30. 7	30. 7	30. 7	30. 7	30. 7	30. 7	30. 7	30. 7	30. 7
Talglannau	30. 5	30. 5	30. 5	30. 5	30. 5	30. 5	30. 5	30. 5	30. 5	30. 5	30. 5	30. 5
Barwn	31. 4	31. 4	31. 4	31. 4	31. 4	31. 4	31. 4	31. 4	31. 4	31. 4	31. 4	31. 4
Ty-coch	31. 3	31. 3	31. 3	31. 3	31. 3	31. 3	31. 3	31. 3	31. 3	31. 3	31. 3	31. 3
Groes-heol	32. 0	32. 0	32. 0	32. 0	32. 0	32. 0	32. 0	32. 0	32. 0	32. 0	32. 0	32. 0
Glan-yr-afon	32. 5	32. 5	32. 5	32. 5	32. 5	32. 5	32. 5	32. 5	32. 5	32. 5	32. 5	32. 5
Blaentafalog Farm	33. 2	33. 2	33. 2	33. 2	33. 2	33. 2	33. 2	33. 2	33. 2	33. 2	33. 2	33. 2
Nant-Hir	34. 1	34. 1	34. 1	34. 1	34. 1	34. 1	34. 1	34. 1	34. 1	34. 1	34. 1	34. 1
Nant Carfan	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0
DoI Fawr	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0

Gerddi-gleision	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0
The Lodge	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0
Cefn	36. 1	36. 1	36. 1	36. 1	36. 1	36. 1	36. 1	36. 1	38. 2	38. 2	38. 2	38. 2
Caeau-gleision	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0	35. 0

Table 2: Coordinate locations of the dwellings listed in Table 1.

Property	Easting	Northing
Ysgubor Cannon	295941	307427
Pen yr Eisteddfod	297925	310831
Doiwen Isaf	297529	307560
The Barn -Blaen y Cwm	291684	307903
Rhydymeirch	292058	306823
Abercannon	296279	306935
Beulah Chapel House	296391	306648
Neinthirion	296386	306621
Delfryn	295709	305450
Berth-Iwyd	291029	303782
Castell y Gwynt	294857	302951
Panty Powsi	294820	302356
Nant yr Esgairwen	294406	302236
Cape! yr Aber	293953	301802
Hafodowen	292785	302747
Cwm-carnedd-isaf	291916	302705
Cwm-carnedd-uchaf	291578	302872
Doiau	297042	308720
Dolau-celmion	296367	305821
Bryn Du	298673	309646
Glegyrnant	292154	307624
BlaenyCwm	291582	308033
Cwm Pen Llydan	292893	306371
Cwm-y-ffynnon	291242	305314
Pwll-melyn	291008	304715
Ffrliddfawr	294629	303945
Cwmderwen	295533	305435
Cannon	295885	307416
Dolwen Uchaf	297496	307622
Ffridd Newydd	298558	308877
Caecrwn	298045	310848
Llwyn	297508	311561
Maes Llymystyn	297081	311578
Moel Ddolwen	299312	307798
Tyn-y-fedw	298458	311040
Gesail-ddu	295260	312217
Caer-11oI	295255	312635
Dol-y-maen	294289	313607
Nanl-y-dugoed	291872	313235
Talglannau	291309	312606
Barwn	290828	312354
Ty-coch	290257	312064

Groes-heol	289577	311083
Glan-yr-afon	289377	310403
Blaenlafalog Fann	289347	309423
Nant-Hir	289127	308752
Nant Carlan	289367	307302
DoIFawr	288957	306421
Gerddi-gleision	289397	305491
The Lodge	290237	305472
Celn	292539	302062
Caeau-gleision	290993	305193

Note to Table 2: The geographical coordinate references are provided for the purpose of identifying the general location of dwellings to which a given set of noise limits applies

General Note: For the purposes of this condition, a dwelling is a building within use class C3 and C4 of the Town and Country Planning (Use Classes) Order 1987 (as amended) which lawfully exists or had planning permission as at the date of this consent.

Guidance Notes for Noise Conditions

These notes are to be read with and form part of the noise condition. They further explain the condition and specify the methods to be employed in the assessment of complaints about noise immissions from the wind farm. The rating level at each integer wind speed is the arithmetic sum of the wind farm noise level as determined from the best-fit curve described in guidance Note 2 of these Guidance Notes and any tonal penalty applied in accordance with Guidance Note 3. Reference to ETSU-R-97 refers to the publication entitled "The Assessment and Rating of Noise from Wind Farms" (1997) published by the Energy Technology Support Unit (ETSU) for the Department of Trade and Industry (DTI)).

Guidance Note 1

(a) Values of the LA90(10 minute) noise statistic should be measured at the complainant's property, using a sound level meter of EN 60651/BSB EN 60804 Type 1, or BSB EN 61672 Class 1 quality (or the equivalent UK adopted standard in force at the time of the measurements) set to measure using the fast time weighted response as specified in SS EN 60651/BSB EN 60804 or BS EN 61672-1 (or the equivalent UK adopted standard in force at the time of the measurements). This should be calibrated in accordance with the procedure specified in BS 4142: 1997 (or the equivalent UK adopted standard in force at the time of the measurements). Measurements shall be undertaken in such a manner to enable a tonal penalty to be applied in accordance with Guidance Note 3.

(b) The microphone should be mounted at 1.2 -1.5 metres above ground level, fitted with a two-layer windshield or suitable equivalent approved in writing by the Local Planning Authority, and placed outside the complainant's dwelling. Measurements should be made in "free field" conditions. To achieve this, the microphone should be placed at least 3.5 metres away from the building facade or any reflecting surface except the ground at the approved measurement location. In the event that the consent of the complainant for access to his or her property to undertake compliance measurements is withheld, The windfarm operator shall submit for the written approval of the Local Planning Authority details of the proposed alternative representative measurement location prior to the commencement of measurements and the measurements shall be undertaken at the approved alternative representative measurement location.

(c) The LA90(10 minute) measurements should be synchronised with measurements of the 10-minute arithmetic mean wind and operational data logged in accordance with Guidance Note 1 (d), including the power generation data from the turbine control systems of the wind farm.

(d) To enable compliance with the conditions to be evaluated, The wind farm operator shall continuously log arithmetic mean wind speed in metres per second and wind direction in degrees from north at hub height for each turbine and arithmetic mean power generated by each turbine, all in successive 10-minute periods. Unless an alternative procedure is previously agreed in writing with the Planning Authority, this hub height wind speed, averaged across all operating wind turbines, shall be used as the basis for the analysis. All 10 minute arithmetic average mean wind speed data measured at hub height shall be 'standardised' to a reference height of 10 metres as described in ETSU-R-97 at page 120 using a reference roughness length of 0.05 metres. It is this standardised 10 metre height wind speed data, which is correlated with the noise measurements determined as valid in accordance with Guidance Note 2, such correlation to be undertaken in the manner described in Guidance Note 2. All 10 minute periods shall commence on the hour and in 10- minute increments thereafter.

(e) Data provided to the Local Planning Authority in accordance with the noise condition shall be provided in comma separated values in electronic format.

(f) A data logging rain gauge shall be installed in the course of the assessment of the levels of noise immissions. The gauge shall record over successive 10minute periods synchronised with the periods of data recorded in accordance with Note 1 (d).

Guidance Note 2

(a) The noise measurements shall be made so as to provide not less than 20 valid data points as defined in Guidance Note 2 (b)

(b) Valid data points are those measured in the conditions specified in the agreed written protocol under paragraph (d) of the noise condition, but excluding any periods of rainfall measured in the vicinity of the sound level meter. Rainfall shall be assessed by use of a rain gauge that shall log the occurrence of rainfall in each 10 minute period concurrent with the measurement periods set out in Guidance Note 1.

(c) For those data points considered valid in accordance with Guidance Note 2(b), values of the LA90,10 minute noise measurements and corresponding values of the 10- minute wind speed, as derived from the standardised ten metre height wind speed averaged across all operating wind turbines using the procedure specified in Guidance Note 1 (d), shall be plotted on an XY chart with noise level on the Y-axis and the standardised mean wind speed on the X-axis. A least squares, "best fit" curve of an order deemed appropriate by the independent consultant (but which may not be higher than a fourth order) should be fitted to the data points and define the wind farm noise level at each integer speed.

Guidance Note 3

(a) Where, in accordance with the approved assessment protocol under paragraph (d) of the noise condition, noise immissions at the location or locations where compliance measurements are being undertaken contain or are likely to contain a tonal component, a tonal penalty is to be calculated and applied using the following rating procedure.

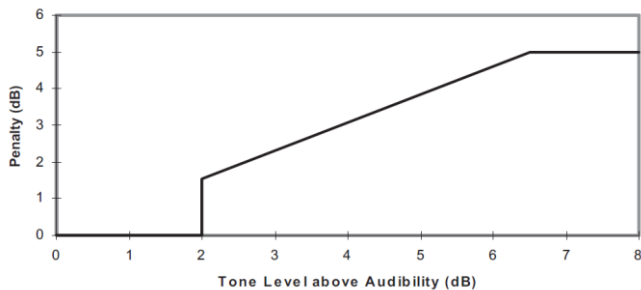
(b) For each 10 minute interval for which LA90 .10 minute data have been determined as valid in accordance with Guidance Note 2 a tonal assessment shall be performed on noise immissions during 2 minutes of each 10 minute period. The 2 minute periods should be spaced at 10 minute intervals provided that uninterrupted uncorrupted data are available ("the standard procedure"). Where uncorrupted data are not available, the first 'available uninterrupted clean 2 minute period out of the affected overall 10 minute period shall be selected. Any such deviations from the standard procedure, as described in Section 2.1 on pages 104-109 of ETSU-R-97, shall be reported.

(c) For each of the 2 minute samples the tone level above or below audibility shall be calculated by comparison with the audibility criterion given in Section 2.1 on pages 104109 of ETSU-R-97.

(d) The tone level above audibility shall be plotted against wind speed for each of the 2 minute samples. Samples for which the tones were below the audibility criterion or no tone was identified, a value of zero audibility shall be used.

(e) A least squares "best fit" linear regression line shall then be performed to establish the average tone level above audibility for each integer wind speed derived from the value of the "best fit" line at each integer wind speed. If there is no apparent trend with wind speed then a simple arithmetic mean shall be used. This process shall be repeated for each integer wind speed for which there is an assessment of overall levels in Guidance Note 2.

(f) The tonal penalty is derived from the margin above audibility of the tone according to the figure below.



Guidance Note 4

(a) If a tonal penalty is to be applied in accordance with Guidance Note 3 the rating level of the turbine noise at each wind speed is the arithmetic sum of the measured noise level as determined from the best fit curve described in Guidance Note 2 and the penalty for tonal noise as derived in accordance with Guidance Note 3 at each integer wind speed within the range specified by the Local Planning Authority in its written protocol under paragraph (d) of the noise condition.

(b) If no tonal penalty is to be applied then the rating level of the turbine noise at each wind speed is equal to the measured noise level as determined from the best fit curve described in Guidance Note 2.

(c) In the event that the rating level is above the limit(s) set out in the Tables attached to the noise conditions or the noise limits for a complainant's dwelling approved in accordance with paragraph (e) of the noise condition, the independent consultant shall undertake a further assessment of the rating level to correct for background noise so that the rating level relates to wind turbine noise immission only.

(d) The Company shall ensure that all the wind turbines in the development are turned off for such period as the independent consultant requires to undertake the further assessment. The further assessment shall be undertaken in accordance with the following steps:

(e). Repeating the steps in Guidance Note 2, with the wind farm switched off, and determining the background noise (L3) at each integer wind speed within the range requested by the Local Planning Authority in Its written request under paragraph (c) and the approved protocol under paragraph (d) of the noise condition.

(f) The wind farm noise (L1) at this speed shall then be calculated as follows where L2 is the measured level with turbines running but without the addition of any tonal penalty:

(g) The rating level shall be re-calculated by adding arithmetically the tonal penalty (if any is applied in accordance with Note 3) to the derived wind farm noise L1 at that integer wind speed.

(h) If the rating level after adjustment for background noise contribution and adjustment for tonal penalty (if required in accordance with note 3 above) at any integer wind speed lies at or below the values set out in the Tables attached to the conditions or at or below the noise limits approved by the Local Planning Authority for a complainant's dwelling in accordance with paragraph (e) of the noise condition then no further action is necessary. If the rating level at any integer wind speed exceeds the values set out in the Tables attached to the conditions or the noise limits approved by the Local Planning Authority for a complainant's dwelling in accordance with paragraph (e) of the noise condition then the development fails to comply with the conditions.

CONDITIONS END

Annex E

Carnedd Wen – Schedule of Conditions

Consent under S.36 of the Electricity Act 1989 – Conditions

1. Pursuant to section 36 of the Electricity Act 1989, the Secretary of State for Energy and Climate Change (“the Secretary of State”) hereby consents to that part of the proposed development comprising the construction by RWE Innogy UK Limited (“the Company”) on the area of land delineated by a solid red line on Figure 1.2 revision 2 May 2014, of a wind turbine generating station on land at Carnedd Wen on the Llanbrynmair Estate, south of the A458, Powys (“the Development”), and to the operation of that generating station, subject to the following conditions. Consent for that part of the proposed development comprising turbine numbers R23, R26, R28, R29 and R30 is refused.
2. The Development shall have a maximum electricity generation capacity of 135 MW and comprise:
 - a) up to 45 wind turbine generators
 - b) two anemometry masts;
 - c) an electricity sub-station building and underground electrical cabling connections;
 - d) the clear-felling of 1,409 ha of plantation woodland and the restoration of natural habitats;
 - e) an access road from the A458 trunk road;
 - f) access tracks incorporating cattle grids and new and upgraded water course crossings;
 - g) borrow pits and construction compounds;
 - h) associated plant, buildings and civil engineering works required for the construction and operation of the Development.
3. Subject to any minor changes which may be approved in writing by the Local Planning Authority (as defined in the conditions of the deemed planning permission (“the Planning Conditions”) set out below), the Development shall be constructed in accordance with the application plans and in general accordance with the objectives, scope and methodology of the Environmental Statement and subsequent SEI, insofar as these do not conflict with any provision of the conditions of the deemed planning permission or the terms of any scheme, programme, statement, plan, details, or report to be approved in writing by the Local Planning Authority under the Planning Conditions.
4. The commencement of the Development shall take place within 5 years from the date of this consent.
5. The Company shall not be permitted to assign this consent without the prior written authorisation of the Secretary of State. The Secretary of State may grant consent (with or without conditions) or refuse such authorisation as he may, in his own discretion, see fit. The consent shall not be capable of being assigned, alienated or transferred otherwise than in accordance with the foregoing procedure.

Deemed Permission under Section 90 of the Town And Country Planning Act 1990 – Conditions

7. In these conditions, unless the context otherwise requires:

“abnormal indivisible load” has the same meaning as in the Road Vehicles (Authorisation of Special Types) (General) Order 2003(a);

“commencement of development”, in relation to the authorised development, means the date on which the authorised development begins by the carrying out of a material operation as

defined in section 56 of the 1990 Act and "commence" and "commenced" shall be construed accordingly;

"construction period" means the period from work commencing on the Development until the date 6 months after the Site compounds have been reinstated in accordance with the conditions of this consent;

"dB" refers to the Decibel noise measurement unit;

"dB(A)" refers to a Decibel noise measurement unit, with the inclusion of the A-weighting filter in the measurements as referred to in ETSU-R-97;

"development" is as defined in condition 2 of this consent.

"deforestation" means any felling or lopping undertaken.

"development" means the works that are permitted to take place, as set out at Condition 2 above.

"emergency" means circumstances in which there is reasonable cause for apprehending imminent injury to persons, serious damage to property or danger of serious pollution to the environment'

"ETSU-R-97" means the ETSU Report number ETSU-R-97 'The Assessment and Rating of Noise from Wind Farms' published in September 1996;

"European Protected Species" means a species listed in Schedules 2 or 5 of the Conservation of Habitats and Species Regulations 2010;

"final commissioning of the development" means the date on which the last wind turbine generator forming part of the Development is commissioned and generating electricity to the national grid;

"first export" means the date on which electricity is first exported to the Grid on a commercial basis;

"LA90" means the decibel (dB) level exceeded for 90% of each sample period;

"Local Planning Authority" means Powys County Council, or any successor authority;

"public holiday" means a day that is, or is to be observed as a public holiday;

"site" means land within the development boundary shown outlined in red on the map attached to this consent

"wind speed" means Wind Speeds measured on the wind farm Site at the turbine hub height, and corrected to a standard height of 10m above ground level, in a manner agreed with the Local Planning Authority;

"wind turbines" means the wind turbines forming part of the development and "wind turbine" shall be construed accordingly

Reason: For the avoidance of doubt.

The Development

8. Subject to the conditions attached to this permission the development shall be carried out in accordance with the following approved plans and documents:
- a) Figure 1.2 revision 2 May 2014, but excluding turbines in locations numbered R23, R26, R28, R29, R30 on Figure 2.1 SEI 2013;
 - b) Drawing Number 417097.020: Optimised Access Layout;

And in general accordance with the typical details, objectives, scope and methodologies set out in the Supplementary Environmental Information submitted in September 2011 and July 2013, in so far as they are relevant to the development permitted.

Reason: For the avoidance of doubt.

9. This permission is for a period of 25 years from the date of final commissioning, or 29 years from the date of commencement, whichever is the earlier, after which the Development shall be decommissioned and the Site shall be restored

Reason: For the avoidance of doubt and to establish the duration of this permission.

10. Confirmation of the date of commencement shall be provided in writing to the local planning authority within one month of its occurrence.

Reason: To establish the date from which condition 9 shall apply.

11. Confirmation of the date of final commissioning shall be provided in writing to the local planning authority no later than one calendar month after that event.

Reason: To establish the date from which condition 9 shall apply.

Decommissioning & Restoration

12. Not less than 24 months before the expiry of this permission, scheme details and methodologies of updated habitat, bird and protected species surveys to inform a site decommissioning and restoration scheme shall be submitted to and agreed in writing by the LPA.

Reason: To inform the decommissioning scheme.

13. Not less than 12 months before the expiry of this permission, a scheme for the decommissioning and restoration of the site shall be submitted for the written approval of the local planning authority. The scheme shall be informed by updated habitats and species surveys scheme and shall include, but not be limited to:
- a) details of the wind farm infrastructure to be removed;
 - b) details of the management and timing of works;
 - c) works of restoration and aftercare.

The scheme implemented as approved and shall be completed within 24 months of 12 months of the expiry date the permission.

Reason: to ensure development is removed in a sympathetic manner upon expiry of this permission.

14. On completion of the restoration work, any remaining fixed equipment, machinery and buildings erected or brought onto the site for the purpose of the implementing the Decommissioning and Site Restoration scheme shall be removed from the site.

Reason: to ensure the site is left in a satisfactory manner upon completion of the Site Decommissioning and Restoration Scheme.

15. No development shall take place on the site until the Company has submitted to the local planning authority details of a financial instrument, and arrangements which will ensure that funds sufficient to cover the completion of the decommissioning and site restoration costs are available to the planning authority prior to the commencement of decommissioning and site restoration. The financial instrument shall include arrangements for funds to increase with inflation and shall include a review provision upon the 5th, 10th, 15th and 20th anniversary of the First Export to ensure that the funds remain sufficient to cover the completion of the decommissioning and site restoration costs. No development shall take place on site until the financial instrument has been approved in writing and is in place. It shall thereafter be maintained throughout the duration of the permission and reinstatement period and the arrangements for deposit of funds, inflation adjustment and review of the financial instrument shall be implemented.

Reason: to ensure the site is left in a satisfactory manner upon completion of the Site Decommissioning and Restoration Scheme.

Turbine Failure

16. If any wind turbine fails to provide electricity to the grid for a continuous period of 6 months or more (other than for reasons relating to noise):
- a) the local planning authority shall immediately be notified of the failure;
 - b) The local planning authority may require a scheme to be submitted for the repair or removal of that turbine;
 - c) within 2 months of receipt of such a request, a scheme for the repair or removal of that turbine shall be submitted to the local planning authority. The scheme shall be informed by updated bird and species surveys;
 - d) the approved scheme shall be implemented within 6 months of approval unless a longer period is agreed in writing by the local planning authority.

Reason: To ensure appropriate provision is made for a turbine or turbines requiring repair or for a turbine or turbines which require decommissioning.

Development Micro-Siting

17. No development shall take place until a micro-siting protocol has been submitted to and approved in writing by the Local Planning Authority. The micro-siting protocol shall include:
- a) a methodology for a detailed peat depth assessment;
 - b) a protocol for deciding on micro siting of all development to minimise the developments impact on, but not limited to, peat, curlew, black grouse, protected species, watercourses, and any other identified environmental constraints;

The micro-siting protocol shall be implemented as approved.

Reason: To allow the developer flexibility during construction to make minor changes in the location of infrastructure to deal with difficulties such as poor ground conditions that become apparent during construction.

18. No part of the proposed development shall be sited more than 50 metres from the position shown on the approved plans.

Reason: To minimise environmental impact.

19. Within 3 months after the first export date, a plan showing the exact location of all development (including tracks, hardstandings, access areas, turbines, borrow pits etc.) shall be submitted to the local planning authority

Reason: to record the final as built scheme once micro-siting allowances have been taken into account.

Detailed Development - Design & Appearance

20. No turbines shall be delivered to site until the following details have been submitted to, and approved in writing by the Local Planning Authority:
- a) the external finish and colour of the proposed turbines;
 - b) transformer locations and the external finish of any external transformer housing;
 - c) the siting, design, materials and landscape screen planting strategies to be used for the on-site sub-station and access road;
 - d) the height, siting, appearance and construction of any permanent means of enclosure, mast or associated structure to be erected on the site.

Development shall be carried out in accordance with the approved details.

Reason: to ensure satisfactory appearance and in the interests of visual amenity.

21. No turbines shall be erected until such time as a scheme for specifying the colour and finish has been submitted to and approved in writing by the local planning authority. The scheme shall include:
- a) a sample of the colour proposed
 - b) a written explanation of the colour selected, including an explanation of the landscape and visual considerations that have informed the proposal and an illustration of the proposed colour in the landscape by means of sample panels and/or photomontages.

No turbines shall be erected until the proposed colour is approved by the local planning authority and the turbines shall be finished in accordance with the approved colour.

Reason: to ensure satisfactory appearance and in the interests of visual amenity.

22. All turbines shall be of a standard 3 blade horizontal axis design and all of the wind turbines' blades shall rotate in the same direction.

Reason: to ensure satisfactory appearance and in the interests of visual amenity

23. All electricity cables connecting the turbine arrays and the substation shall be installed underground.

Reason: In the interests of visual amenity.

24. No development of the on-site substation building shall commence until details relating to its location, external treatment, design, materials, landscaping (if any), and orientation have been submitted to and approved in writing by the local planning authority. The substation shall be constructed in accordance with the approved details.

Reason: In the interests of visual amenity.

25. No outdoor lighting other than:
- a) aviation lighting
 - b) temporary site illumination approved as part of the Construction Method Statement

may be used in the course of the Development unless details of such lighting have been submitted to and approved in writing by the local planning authority. Such outdoor lighting shall only be provided in accordance with the approved details.

Reason: in the interests of visual amenity.

26. Except during the construction period, no symbols, signs, logos or other lettering, other than those required by law for health and safety reasons, shall be displayed on any part of the turbines nor any building or structures without approval in writing from the local planning authority.

Reason: In the interests of visual amenity.

Construction Hours

27. Construction work shall only take place between the hours of 07:30 - 19:30 hours on Monday to Friday inclusive and 07:30 - 13:00 hours on Saturdays, with no construction work on a Sunday or public holidays. Outside these hours, works at the site shall be limited to emergency works, erection of turbines, dust suppression, and the testing/maintenance of plant and equipment, or construction work that is not audible from any noise sensitive property, unless otherwise approved in writing by the Local Planning Authority. The Local Planning Authority shall be informed in writing of emergency works within three working days of occurrence.

Reason: To protect amenity.

28. All activities associated with the construction of the development shall be carried out in accordance with British Standard BS5228:2009: Code of Practice for noise and vibration control on construction and open sites – Part 1: Noise and Part 2: Vibration

Reason: To protect amenity.

Highways

29. No development shall take place until detailed plans of the new junction with the A458 trunk road have been submitted to and approved in writing by the local planning authority. The details submitted shall reflect plans reference Figure revision 2 May 2014, and Drawing 4197.020/Optimised Access Layout and include:.
- a) details of visibility splays that shall be kept free at all times of any obstruction including trees and shrubs exceeding 1.05 metres in height above the adjoining carriageway;
 - b) drainage details; and
 - c) road markings and signage proposals

The works shall be implemented in accordance with the approved details.

Reason: To ensure a satisfactory means of access to and from the Trunk Road is provided in the interests of highway safety.

30. No development shall take place until detailed plans of the new junction for the A470 at Talerddig have been submitted to and approved in writing by the local planning authority. The details submitted shall reflect plan reference 60283248-D-040 Revision G and include:
- a) details of visibility splays that shall be kept free at all times of any obstruction including trees and shrubs exceeding 1.05 metres in height above the adjoining carriageway
 - b) drainage details, and,

- c) road markings and signage proposals; and,
- d) a programme for the implantation of the works.

The works shall be implemented in accordance with the approved details

31. No development other than the harvesting and removal of trees from the site, the construction of new and upgraded access tracks within the site and the construction of the new junction with the A458 trunk road shall be undertaken until an assessment of all structures within those parts of the trunk road network which shall be utilised for the movement of AILs (including bridges, culverts, retaining walls, and embankments) and details of any works required to improve such structures for the development have been submitted to and approved in writing by the local planning authority. The approved works identified in the assessment shall be completed prior to the commencement of any AIL movements to the site.

Reason: to maintain the integrity of the public highway and related structures

32. No Abnormal Indivisible Loads associated with the development shall be transported until a Building Condition and Building Structural Survey Plan for those properties on B4381 Severn Street, Welshpool (between the Canal and the Cross) to which access can be obtained, to include details of its timing and implementation, has been submitted to and approved in writing by the local planning authority. This will include details of the following:
- a) frequency and timing of Building Condition and Building Structure surveys in relation to abnormal indivisible load deliveries;
 - b) identification of relevant matters to be contained within a Building Condition and Building Structure Survey;
 - c) details of Survey Report submission requirements to the local planning authority;
 - e) the appointment of a competent independent professional approved in writing by the local planning authority who has relevant experience within the building surveying sector to undertake the Building Condition and Building Structure Surveys;
 - f) procedures for the design and implementation of any strengthening works identified as necessary by the Building Condition and Building Structure Survey;
 - g) procedures for the approval and implementation of any remediation works to individual properties identified as required.

The plan shall be implemented as approved

Reason: In the interests of avoiding damage to property

33. No abnormal indivisible loads shall be delivered to the Site until a Traffic Management Plan for abnormal indivisible load deliveries in general accordance with Sections 1, 2 and 3 of the Strategic Traffic Management Plan for Mid-Wales Wind Farms (the sTMP) August 2012 has been submitted to and approved in writing by the Local Planning Authority. Thereafter abnormal indivisible loads shall be carried out in accordance with the approved TMP. The TMP shall include:
- a) restrictions on indivisible load movements during special events including (without limitation) the Royal Welsh and Smallholders shows;
 - b) details of a review mechanism to enable changes in circumstances after the agreement of the TMP to be addressed.

Reason: in the interests of highways safety and amenity.

34. No abnormal indivisible load deliveries shall be made to the site until an abnormal indivisible load management strategy has been submitted to and approved in writing by the Local Planning Authority. All AIL deliveries shall be carried out in accordance with the

approved abnormal indivisible load management strategy which will include details of the following:

- a) persons responsible for the management and implementation of the AIL Management Strategy;
- b) means of control of timing of delivery AIL movements;
- c) temporary traffic diversions and traffic hold points;
- d) details of banksmen and escorts for abnormal loads;
- e) coordination with all other AIL deliveries (including without limitation to other wind farms in Mid Wales)
- f) description of procedures for the allocation of delivery slots including delivery slot triggers and trading;
- g) the appointment and role of a Transport Coordinator
- h) liaison with relevant highway and planning authorities and the Police;
- i) liaison with members of the public and local communities;
- j) liaison with the hauliers, developers and landowners;
- k) details of how use of the access road into the site can accommodate abnormal indivisible loads for both the Carnedd Wen and Llanbrynmair wind farm schemes;
- l) details of how use of the access road into the site can accommodate abnormal indivisible loads for both the Carnedd Wen and Llanbrynmair windfarm schemes
- m) details of a review mechanism to enable changes in circumstances after the agreement of the TMP to be addressed.

Reason: In the interests of highway safety and amenity

35. No developments shall commence until a scheme providing for the remediation of any damage directly attributable to the Development to the highway infrastructure which will be utilised during the construction of the development has been submitted to and approved in writing by the local planning authority following consultation with the relevant highway authorities.

The scheme shall be implemented as approved.

Reason: To ensure the safety of the highways affected and that the developer rectifies any directly attributable damage caused.

36. No construction works shall take place on site until a Construction Traffic Management Plan (CTMP) in respect of general construction traffic has been submitted to and approved in writing by the local planning authority. The approved traffic management plan shall thereafter be complied with and will include details of the following:
- a) construction vehicle routeing;
 - b) means of monitoring vehicle movements to and from the site including the use of liveried construction vehicles displaying the name of the developer, the vehicle number, a telephone number for complaints and procedures for dealing with complaints;
 - c) timing of deliveries of construction materials to the site;
 - d) the management of junctions and crossings of roads and other public rights of way;
 - e) measures to be put in place including contractual arrangements with contractors and subcontractors to ensure that complaints and breaches of the TMP requirements are able to be remedied;
 - f) a travel plan aimed at maximising the use of sustainable travel by the construction workforce associated with the development;
 - g) vehicle movements during special events including (without limitation) the Royal Welsh and Smallholders shows;
 - h) communications with members of the public and local communities;
 - i) details of how internal links within the site can accommodate construction traffic for both the Carnedd Wen and Llanbrynamir windfarm schemes; and,

- i) details of a review mechanism to enable changes in circumstances after the agreement of the TMP to be addressed.

Reason: In the interests of highway safety and amenity.

37. No abnormal indivisible load movements associated with any repairs, removal, or replacement components shall take place during the life of the development until a traffic management plan dealing with such repair and/or replacement has been submitted to and approved in writing by the local planning authority and thereafter the approved TMP shall be implemented

Reason: To ensure the safety of the highways affected and in the interests of amenity

38. No movement of traffic associated with the decommissioning of the development shall take place until a traffic management plan dealing with such decommissioning has been submitted to and approved in writing by the local planning authority and thereafter the approved TMP shall be implemented

Reason: To ensure the safety of the highways affected and in the interests of amenity

Construction Management

39. No development shall commence until a Construction Method Plan (CMP), incorporating a Construction Environmental Management Plan (CEMP) in general accordance with the objectives, scope and methodology of the draft CEMO at Plan 1.1 of the July 2013 SEI, has been submitted to and approved in writing by the Local Planning Authority. The CMP shall include, but not be limited to details of:

- a) dust management;
- b) measures to secure the cleaning of site entrances, bound or covered site tracks and the adjacent public highway including the provision of a wheel wash facility in an agreed location for vehicles leaving the site;
- c) measures for the protection of water courses, including submission of details of water course engineering works and crossing points, and mitigation measures to protect groundwater and soils;
- d) the management and disposal of foul water;
- e) pollution control, including fuel, oil, concrete and chemical storage;
- f) noise management during the construction phase;
- g) vibration control;
- h) any temporary site illumination;
- i) the disposal of surplus construction materials;
- j) any temporary on-site diversions of public rights of way or temporary closures of access land, and associated signage;
- k) the protection of private water supplies;
- l) a construction schedule and programme of the proposed works.
- m) the methodology for the removal of temporary buildings, containers, machinery, equipment and hard-standings associated with the construction of the proposed wind farm,
- n) arrangements for the stockpiling of aggregates and other materials employed in construction;
- o) source of stone, which shall be from approved borrow pits.

The CEMP shall be implemented as approved

Reason: To ensure a satisfactory level of environmental protection

40. Before any wind turbine is removed or replaced a revised CMP dealing solely with that removal or replacement shall be submitted to and approved in writing by the local planning authority. The revised CMP shall be implemented as approved.

Reason: To ensure a satisfactory level of environmental protection

Rights of Way Management Plan

41. No development shall commence until a Rights of Way Management Plan (RWMP) has been submitted to and approved in writing by the local planning authority. The RWMP shall be implemented as approved and shall include:
- a) details of the temporary re-routing of public rights of way during construction of the authorised development;
 - b) details of the provision of signage and other information alerting the public to construction works;
 - c) details of any fencing or barriers to be provided during the construction period;
 - d) details as to how public rights of way, paths and roads will be inspected prior to and monitored during the construction period; and
 - e) details of protection of breeding birds where any public right of way is re-routed.

Reason: to protect public rights of way.

Ecology

42. No development shall commence on-site until a detailed Habitat Restoration and Management Plan (HRMP), setting out detailed nature conservation management objectives including a Breeding Birds Protection Plan (BBPP), a Protected Species Plan, an Environmental Monitoring Scheme, the management of priority habitats and species, and a timetable for its implementation, has been submitted to and approved in writing by the Local Planning Authority. The HRMP shall include (but not be limited to) details of the habitat management measures set out in Volume 4, Plan 1.4 of the Carnedd Wen Wind Farm and Habitat restoration Project SEI, Volume 4, Plan 1.4 and the details of:
- a) proposals to minimise adverse effects on peat and ecology;
 - b) the maintenance of existing areas of peatland habitats;
 - c) the maximisation of peat restoration across the site;
 - d) measures to avoid ditch blocking impacting upon black grouse and schedule 1 raptors;
 - e) methods to provide suitable habitat to support black grouse;
 - f) a programme for the implementation of Black Grouse surveys, including any mitigation subsequently required in event that Black Grouse are identified;
 - g) methods to be applied to restore the water table to allow restoration and maintenance of blanket bog habitat;
 - h) a timetable for the implementation and completion of all HRMP measures (including tree harvesting);
 - i) a scheme to secure the removal of re-seeded conifers and rhododendron;
 - j) measures to monitor that the HMP objectives are being met.

The development shall be implemented in accordance with the approved plans.

Reason: In the interests of nature conservation

43. No development shall commence until a Peat Management Plan (PMP) incorporating the objectives and measures outlined in the PMP contained within the Carnedd Wen Wind Farm and Habitat Restoration Project Supplementary Environmental Information 2013

(Volume 4. Plan 1.5) has been submitted to, and approved in writing by, the local planning authority. The PMP shall include:

- a) measures to minimize impacts on peatland habitats during site clearance, tree harvesting and construction;
- b) updated peat probing surveys and peat depth modelling;
- c) the storage, handling and re-use of all excavated peat;
- d) a revised peat budget based on a drain survey and revised peat excavation volumes;
- e) Measures for the blocking and/or infilling of drains

The development shall be implemented in accordance with the approved plan.

44. No development shall commence until details of a suitably qualified Ecological Clerk of Works (ECoW) to be employed on the development shall be submitted to and approved in writing by the Local Planning authority. The ECoW shall be a suitably qualified person and shall be retained throughout the duration of the construction works. The scope of the ECoW's duties shall include, but not be limited to:
- a) monitoring compliance with and reporting on the success or failure of the approved mitigation works and in the event of failures advising on remedial mitigation measures;
 - b) advising the developer on the implementation of the approved mitigation proposals and the protection of important nature conservation interests on the site;
 - c) directing and consulting on the micro-siting and placement of turbines, roads and other infrastructure;
 - d) monitoring and reporting on the compliance with the Construction Environmental Management Plan (CEMP) and Ecological Monitoring Plan;
 - e) attending liaison meetings with and reporting compliance with conditions and plans and mitigation measures to PCC and NRW and other parties as necessary.

Reason: to ensure that the protection and mitigation measures are implemented correctly and in agreement with relevant statutory bodies

45. No development shall take place before a Drainage Management Plan (DMP) has been submitted to the local planning authority and has been approved in writing. Thereafter, forest felling, construction and habitat restoration works shall be carried out in accordance with the approved Plan. The DMP shall generally accord with the objectives, methodology and scope of the draft DMP that forms Plan 1.2 of the Supplementary Environmental Information, submitted by the Applicant in support of the application hereby approved in July 2013.

Reason: To protect the water environment

46. No development shall take place before a Forestry Management Plan (FMP) has been submitted to the local planning authority and has been approved in writing. The FMP shall generally accord with the objectives, methodology and scope of the Outline Habitat Management Plan that forms Plan 1.3 of the Supplementary Environmental Information, submitted by the Applicant in support of the application hereby approved in July 2013, and shall include details of the management of tree felling to allow the use of access road into the site and internal roads within the site to accommodate abnormal indivisible loads and construction traffic for both the Carnedd Wen and Llanbrynmair wind farm schemes. Forestry Management and tree felling shall be carried out in accordance with the approved Plan.

Reason: In the interests of ecology

Shadow Flicker

47. Prior to the erection of the first turbine, a written scheme shall be submitted to and approved in writing by the Local Planning Authority setting out a protocol for the assessment of shadow flicker in the event of any complaint to the Local Planning Authority from the owner or occupier of a residential Dwelling. The written scheme shall include remedial measures to alleviate any shadow flicker attributable to the development. The turbines shall be operated in accordance with the approved protocol unless the Local Planning Authority gives its prior written consent to any variations.

Reason: In the interests of residential amenity.

Television Interference

48. No turbine shall be erected until a scheme has been submitted to and approved in writing by the Local Planning Authority providing for the investigation of and remediation of any interference with television reception at any dwelling which lawfully existed or had planning permission at the date of this permission. The scheme shall provide for the investigation by a qualified independent television engineer of any complaint of interference with television reception at a lawfully occupied dwelling, where such complaint is notified to the developer by the local planning authority within 24 months of the date of final commissioning. The scheme shall be implemented as approved.

Reason: In the interests of residential amenity.

Archaeology

49. No development shall commence until a scheme of archaeological investigation has been submitted to and approved in writing by the local planning authority. The scheme of archaeological investigation shall be implemented as approved.

Reason: To ensure that any archaeological remains present are investigated and preserved.

50. All records collated, as a result of the Scheme of Archaeological Investigation, shall be submitted to the local planning authority and sent to the Historic Environment Record (currently held by Clwyd-Powys Archaeological Trust) within 6 months of the record being gathered.

Reason: To ensure that any archaeological findings are suitably recorded.

Aviation

51. No wind turbine shall be erected before the following information has been provided to the Defence Geographic Centre of the Ministry of Defence:
- a) the date that construction starts and ends;
 - b) the maximum height of construction equipment;
 - c) the latitude and longitude of every turbine

Reason: In the interests of aviation safety.

52. No wind turbine shall be erected until details of the installation of infra-red aviation warning lights have been submitted to and approved in writing by the local planning authority. The lights shall be installed in accordance with the approved details and maintained until the wind turbines are decommissioned and removed from.

Reason: In the interests of aviation safety.

Community Liaison

53. No development shall commence until a community liaison scheme for the construction period has been submitted to and approved by the local planning authority. The community liaison scheme shall be implemented as approved and include:
- a) details of developer liaison with the local community to ensure residents are informed of how the construction of the development is progressing;
 - b) a mechanism for dealing with complaints from the local community during the construction of the development; and,
 - c) a nominated representative of the developer who will have the lead role in liaising with local residents and the relevant planning authority.

Reason: To ensure the amenity of local residents is protected.

54. No development shall commence until a scheme has been submitted to and approved in writing by the Local Planning Authority relating to the promotion of economic benefits from the development in the local authority area of Powys. The developer shall use reasonable endeavours to implement the approved scheme, which shall:
- a) commit the developer to the inclusion on contract tender invitations of such companies with addresses in Powys as the Local Planning Authority shall notify to the developer in writing;
 - b) ensure that any company invited to tender for work in relation to the construction of the development is given written instructions to use reasonable endeavours to use local people and local businesses in relation to the construction of the Development;
 - c) commit the developer to the provision of relevant training opportunities for companies or individuals who are contracted to work on the development.

Reason: In the interests of the local economy

Noise

55. No turbine hereby approved shall be brought into operation prior to the submission to and approval in writing by the Local Planning Authority of a scheme for the assessment and regulation of Excess Amplitude Modulation (EAM). That scheme shall be in general accordance with, if it exists at the time of submission:
- a) relevant guidance endorsed in National Planning Policy; or in the absence of endorsed guidance;
 - b) relevant guidance published by the Institute of Acoustics.

The approved scheme shall be implemented for the life of the development hereby approved

Reason: In the interests of public amenity to ensure that EAM is suitably addressed.

56. The rating level of noise immissions from the combined effects of the wind turbines (including the application of any tonal penalty) when determined in accordance with the attached Guidance Notes (to this condition), shall not exceed the values for the relevant integer wind speed set out in, or derived from, the table attached to this condition at any dwelling which is lawfully existing or has planning permission at the date of this permission and:
- a) The Company shall continuously log power production, wind speed and wind direction, all in accordance with Guidance Note 1(d). These data shall be retained for a period of not less than 24 months. The Company shall provide this information in the format set out in Guidance Note 1 (e) to the Local Planning Authority on its request, within 14 days of receipt in writing of such a request.

- b) No electricity shall be exported until The Company has submitted to the Local Planning Authority for written approval a list of proposed independent consultants who may undertake compliance measurements in accordance with this condition. Amendments to the list of approved consultants shall be made only with the prior written approval of the Local Planning Authority.
- c) Within 21 days from receipt of a written request from the Local Planning Authority following a complaint to it from an occupant of a dwelling alleging noise disturbance at that dwelling, The Company shall, at its expense, employ a consultant approved by the Local Planning Authority to assess the level of noise immissions from the wind farm at the complainant's property in accordance with the procedures described in the attached Guidance Notes. The written request from the Local Planning Authority shall set out at least the date, time and location that the complaint relates to and any identified atmospheric conditions, including wind direction, and include a statement as to whether, in the opinion of the Local Planning Authority, the noise giving rise to the complaint contains or is likely to contain a tonal component.
- d) The assessment of the rating level of noise immissions shall be undertaken in accordance with an assessment protocol that shall previously have been submitted to and approved in writing by the Local Planning Authority. The protocol shall include the proposed measurement location identified in accordance with the Guidance Notes where measurements for compliance checking purposes shall be undertaken, whether noise giving rise to the complaint contains or is likely to contain a tonal component, and also the range of meteorological and operational conditions (which shall include the range of wind speeds, wind directions, power generation and times of day) to determine the assessment of rating level of noise immissions. The proposed range of conditions shall be those which prevailed during times when the complainant alleges there was disturbance due to noise, having regard to the written request of the Local Planning Authority under paragraph (c), and such others as the independent consultant considers likely to result in a breach of the noise limits.
- e) Where a dwelling to which a complaint is related is not listed in the tables attached to these conditions, The Company shall submit to the Local Planning Authority for written approval proposed noise limits selected from those listed in the Tables to be adopted at the complainant's dwelling for compliance checking purposes. The proposed noise limits are to be those limits selected from Table 1, having regard to Table 2, and specified for a listed location which the independent consultant considers as being likely to experience the most similar background noise environment to that experienced at the complainant's dwelling. The rating level of noise immissions resulting from the combined effects of the wind turbines when determined in accordance with the attached Guidance Notes shall not exceed the noise limits approved in writing by the Local Planning Authority for the complainant's dwelling.
- f) The Company shall provide to the Local Planning Authority the independent consultant's assessment of the rating level of noise immissions undertaken in accordance with the Guidance Notes within 2 months of the date of the written request of the Local Planning Authority for compliance measurements to be made under paragraph (c), unless the time limit is extended in writing by the Local Planning Authority. The assessment shall include all data collected for the purposes of undertaking the compliance measurements, such data to be provided in the format set out in Guidance Note 1(e) of the Guidance Notes. The instrumentation used to undertake the measurements shall be calibrated in accordance with Guidance Note 1 (a) and certificates of calibration shall be submitted to the Local Planning Authority with the independent consultant's assessment of the rating level of noise immissions.
- g) Where a further assessment of the rating level of noise immissions from the wind farm is required pursuant to Guidance Note 4(c), The Company shall submit a copy of the further assessment within 21 days of submission of the independent

consultant's assessment pursuant to paragraph (d) above unless the time limit has been extended in writing by the Local Planning Authority.

Reason: in the interests of the protection of residential amenity

Guidance Notes

Table 1: Noise limits expressed in dB LA90,10 minute as a function of the standardised wind speed (m/s) at 10 metre height as determined within the site averaged over 10 minute periods.

Location	Standardised wind speed at 10 meter height (m/s) with the site averaged over 10-minute periods											
	1	2	3	4	5	6	7	8	9	10	11	12
Ysgubor Cannon	33.6	33.6	33.6	33.6	33.7	34.2	35.0	36.0	37.1	37.1	37.1	37.1
Pen yr Eisteddfod	35.0	35.0	35.0	35.0	35.0	35.4	38.1	39.2	39.2	39.2	39.2	39.2
Dolwen Isaf	35.7	35.7	35.7	35.7	35.8	36.3	37.1	38.1	39.3	39.3	39.3	39.3
The Barn - Blaen y Cwm	37.8	37.8	37.8	37.8	37.8	37.8	40.0	42.2	44.2	46.0	47.2	47.9
Rhydymeirch	37.9	37.9	37.9	37.9	37.9	37.9	40.1	42.3	44.3	46.1	47.4	48.0
Abercannon	34.8	34.8	34.8	34.8	34.9	35.4	36.2	37.2	38.3	38.3	38.3	38.3
Beulah Chapel House	35.3	35.3	35.3	35.3	35.3	35.9	36.7	37.6	38.8	38.8	38.8	38.8
Neinthirion	35.3	35.3	35.3	35.3	35.3	35.9	36.7	37.6	38.8	38.8	38.8	38.8
Delfryn	35.7	35.7	35.7	35.7	35.7	35.7	35.7	37.6	39.9	39.9	39.9	39.9
Berth-lwyd	33.2	33.2	33.2	33.2	33.2	33.2	33.2	33.2	35.3	35.3	35.3	35.3
Castell y Gwynt	35.7	35.7	35.7	35.7	35.7	35.7	35.7	37.6	39.9	39.9	39.9	39.9
Pant y Powsi	31.8	31.8	31.8	31.8	31.8	31.8	31.8	33.8	36.1	36.1	36.1	36.1
Nant yr Esgairwen	31.2	31.2	31.2	31.2	31.2	31.2	31.2	33.1	35.4	35.4	35.4	35.4
Capel yr Aber	30.4	30.4	30.4	30.4	30.4	30.4	30.4	32.4	34.6	34.6	34.6	34.6
Hafodowen	32.7	32.7	32.7	32.7	32.7	33.8	36.5	39.7	42.9	42.9	42.9	42.9
Cwm-carnedd-isaf	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	34.6	34.6	34.6	34.6
Cwm-carnedd-uchaf	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	32.8	32.8	32.8	32.8
Dolau	35.4	35.4	35.4	35.4	35.5	36.0	36.8	37.8	38.9	38.9	38.9	38.9
Dolau-ceimion	35.6	35.6	35.6	35.6	35.7	36.3	37.0	38.0	39.2	39.2	39.2	39.2
Bryn Du	35.0	35.0	35.0	35.0	35.7	37.2	37.9	37.9	37.9	37.9	37.9	37.9
Glegyrnant	38.2	38.2	38.2	38.2	38.2	38.2	40.3	42.5	44.6	46.3	47.6	48.3
Blaen y Cwm	37.4	37.4	37.4	37.4	37.4	37.4	39.6	41.8	43.8	45.6	46.8	47.5
Cwm Pen Llydan	43.8	43.8	43.8	43.8	43.8	43.8	43.8	43.8	45.2	47.0	48.2	48.9

Cwm-y-ffynnon	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	36.1	36.1	36.1	36.1
Pwll-melyn	33.9	33.9	33.9	33.9	33.9	33.9	33.9	33.9	33.9	36.0	36.0	36.0	36.0
Ffriddfawr	34.1	34.1	34.1	34.1	34.1	34.1	34.1	34.1	36.1	38.4	38.4	38.4	38.4
Cwmdrwen	35.6	35.6	35.6	35.6	35.6	35.6	35.6	35.6	37.6	39.8	39.8	39.8	39.8
Cannon	33.1	33.1	33.1	33.1	33.2	33.7	34.5	35.5	36.7	36.7	36.7	36.7	36.7
Dolwen Uchaf	35.4	35.4	35.4	35.4	35.5	36.0	36.8	37.8	38.9	38.9	38.9	38.9	38.9
Ffridd Newydd	35.0	35.0	35.0	35.0	35.7	37.2	37.6	37.6	37.6	37.6	37.6	37.6	37.6
Caecrwn	35.0	35.0	35.0	35.0	35.7	37.2	39.0	39.2	39.2	39.2	39.2	39.2	39.2
Llwyn	35.0	35.0	35.0	35.0	35.7	37.2	39.0	39.4	39.4	39.4	39.4	39.4	39.4
Maes Llymystyn	35.0	35.0	35.0	35.0	35.7	37.2	39.0	39.5	39.5	39.5	39.5	39.5	39.5
Moel Ddolwen	30.6	30.6	30.6	30.6	30.7	31.2	32.0	33.0	34.2	34.2	34.2	34.2	34.2
Tyn-y-fedw	32.9	32.9	32.9	32.9	33.6	35.1	36.7	36.7	36.7	36.7	36.7	36.7	36.7
Gesail-ddu	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6
Caer-lloi	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6
Dol-y-maen	37.6	37.6	37.6	37.6	37.6	37.6	37.6	37.6	37.6	37.6	37.6	37.6	37.6
Nant-y-dugoed	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5
Talglannau	30.2	30.2	30.2	30.2	30.9	32.4	34.2	34.7	34.7	34.7	34.7	34.7	34.7
Barwn	32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.7
Ty-coch	28.7	28.7	28.7	28.7	29.4	30.9	32.7	33.1	33.1	33.1	33.1	33.1	33.1
Groes-heol	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5
Glan-yr-afon	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4
Blaentafalog Farm	32.6	32.6	32.6	32.6	32.6	32.6	32.6	32.6	32.6	32.6	32.6	32.6	32.6
Nant-Hir	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.1
Nant Carfan	32.6	32.6	32.6	32.6	32.6	32.6	32.6	32.6	32.6	32.6	32.6	32.6	32.6
Dol Fawr	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6
Gerddi-gleision	33.6	33.6	33.6	33.6	33.6	33.6	33.6	33.6	33.6	35.7	35.7	35.7	35.7
The Lodge	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	36.9	36.9	36.9	36.9
Cefn	33.8	33.8	33.8	33.8	33.8	33.8	33.8	33.8	33.8	35.9	35.9	35.9	35.9
Caeau-gleision	34.2	34.2	34.2	34.2	34.2	34.2	34.2	34.2	34.2	36.3	36.3	36.3	36.3
Maes Glas	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4

Table 2: Coordinate locations of the dwellings listed in Table 1.

Location	Easting	Northing
Ysgubor Cannon	295941	307427
Pen yr Eisteddfod	297925	310831
Dolwen Isaf	297529	307560
The Bam -Blaen y Cwm	291684	307903
Rhydymeirch	292058	306823
Abercannon	296279	306935
Beulah Chapel House	296391	306648
Neinthirion	296386	306621
Delfryn	295709	305450
Berth-Iwyd	291029	303782
Castell y Gwynt	294857	302951
Pant y Powsi	294820	302356
Nant yr Esgairwen	294406	302236
Capel yr Aber	293953	301802
Hafodowen	292785	302747
Cwm-camedd-isaf	291916	302705
Cwm-camedd-uchaf	291578	302872
Dolau	297042	306720
Dolau-ceimion	296367	305821
Bryn Du	298673	309646
Glegyrnant	292154	307624
Blaen y Cwm	291582	308033
Cwm Pen Llydan	292893	306371
Cwm-y-ffynnon	291242	305314
Pwll-melyn	291008	304715
Ffriddfawr	294629	303945
Cwnderwen	295533	305435
Cannon	295885	307416
DoIwen Uchaf	297496	307622
Ffridd Newydd	298558	309877
Caecrwn	298045	310848
Llwyn	297508	311561
Maes Llymystyn	297081	311578
MoeI Ddolwen	299312	307798
Tyn-y-fedw	298458	311040
Gesail-ddu	295260	312217
Caer-Ilol	295255	312635
Dol-y-maen	294289	313607
Nant-y-dugoed	291872	313235

Talglannau	291309	312606
Barwn	290298	312458
Ty-coch	290257	312064
Groes-heol	289577	311083
Glan-yr-afon	289377	310403
Blaentafalog Farm	289347	309423
Nant-Hir	289127	308752
Nant Carfan	289367	307302
Dol Fawr	288957	306421
Gerddi-gleision	289397	305491
The Lodge	290237	305472
Cefn	292539	302062
Caeau-gleision	290993	305193
Maes Glas	291709	313323

Note to Table 2: The geographical coordinate references are provided for the purpose of identifying the general location of dwellings to which a given set of noise limits applies

General Note: For the purposes of this condition, a dwelling is a building within use class C3 and C4 of the Town and Country Planning (Use Classes) Order 1987 (as amended) which lawfully exists or had planning permission as at the date of this consent.

Guidance Notes for Noise Conditions

These notes are to be read with and form part of the noise condition. They further explain the condition and specify the methods to be employed in the assessment of complaints about noise immissions from the wind farm. The rating level at each integer wind speed is the arithmetic sum of the wind farm noise level as determined from the best-fit curve described in guidance Note 2 of these Guidance Notes and any tonal penalty applied in accordance with Guidance Note 3. Reference to ETSU-R-97 refers to the publication entitled "The Assessment and Rating of Noise from Wind Farms" (1997) published by the Energy Technology Support Unit (ETSU) for the Department of Trade and Industry (DTI)).

Guidance Note 1

(a) Values of the LA90(10 minute) noise statistic should be measured at the complainant's property, using a sound level meter of EN 60651/BSB EN 60804 Type 1, or BSB EN 61672 Class 1 quality (or the equivalent UK adopted standard in force at the time of the measurements) set to measure using the fast time weighted response as specified in SS EN 60651/BSB EN 60804 or BS EN 61672-1 (or the equivalent UK adopted standard in force at the time of the measurements). This should be calibrated in accordance with the procedure specified in BS 4142: 1997 (or the equivalent UK adopted standard in force at the time of the measurements). Measurements shall be undertaken in such a manner to enable a tonal penalty to be applied in accordance with Guidance Note 3.

(b) The microphone should be mounted at 1.2 -1.5 metres above ground level, fitted with a two-layer windshield or suitable equivalent approved in writing by the Local Planning Authority, and placed outside the complainant's dwelling. Measurements should be made in "free field" conditions. To achieve this, the microphone should be placed at least 3.5 metres away from the building facade or any reflecting surface except the ground at the approved measurement location. In the event that the consent of the complainant for access to his or her property to undertake compliance measurements is withheld, The windfarm operator shall submit for the written approval of the Local Planning Authority details of the proposed alternative representative measurement location prior to the commencement of measurements and the measurements shall be undertaken at the approved alternative representative measurement location.

(c) The LA90(10 minute) measurements should be synchronised with measurements of the 10- minute arithmetic mean wind and operational data logged in accordance with Guidance Note 1 (d), including the power generation data from the turbine control systems of the wind farm.

(d) To enable compliance with the conditions to be evaluated, The wind farm operator shall continuously log arithmetic mean wind speed in metres per second and wind direction in degrees from north at hub height for each turbine and arithmetic mean power generated by each turbine, all in successive 10-minute periods. Unless an alternative procedure is previously agreed in writing with the Planning Authority, this hub height wind speed, averaged across all operating wind turbines, shall be used as the basis for the analysis. All 10 minute arithmetic average mean wind speed data measured at hub height shall be 'standardised' to a reference height of 10 metres as described in ETSU-R-97 at page 120 using a reference roughness length of 0.05 metres. It is this standardised 10 metre height wind speed data, which is correlated with the noise measurements determined as valid in accordance with Guidance Note 2, such correlation to be undertaken in the manner described in Guidance Note 2. All 10 minute periods shall commence on the hour and in 10-minute increments thereafter.

(e) Data provided to the Local Planning Authority in accordance with the noise condition shall be provided in comma separated values in electronic format.

(f) A data logging rain gauge shall be installed in the course of the assessment of the levels of noise immissions. The gauge shall record over successive 10minute periods synchronised with the periods of data recorded in accordance with Note 1 (d).

Guidance Note 2

(a) The noise measurements shall be made so as to provide not less than 20 valid data points as defined in Guidance Note 2 (b)

(b) Valid data points are those measured in the conditions specified in the agreed written protocol under paragraph (d) of the noise condition, but excluding any periods of rainfall measured in the vicinity of the sound level meter. Rainfall shall be assessed by use of a rain gauge that shall log the occurrence of rainfall in each 10 minute period concurrent with the measurement periods set out in Guidance Note 1.

(c) For those data points considered valid in accordance with Guidance Note 2(b), values of the LA90,10 minute noise measurements and corresponding values of the 10- minute wind speed, as derived from the standardised ten metre height wind speed averaged across all operating wind turbines using the procedure specified in Guidance Note 1 (d), shall be plotted on an XY chart with noise level on the Y-axis and the standardised mean wind speed on the X-axis. A least squares, "best fit" curve of an order deemed appropriate by the independent consultant (but which may not be higher than a fourth order) should be fitted to the data points and define the wind farm noise level at each integer speed.

Guidance Note 3

(a) Where, in accordance with the approved assessment protocol under paragraph (d) of the noise condition, noise immissions at the location or locations where compliance measurements are being undertaken contain or are likely to contain a tonal component, a tonal penalty is to be calculated and applied using the following rating procedure.

(b) For each 10 minute interval for which LA90 .10 minute data have been determined as valid in accordance with Guidance Note 2 a tonal assessment shall be performed on noise immissions during 2 minutes of each 10 minute period. The 2 minute periods should be spaced at 10 minute intervals provided that uninterrupted uncorrupted data are available ("the standard procedure"). Where uncorrupted data are not available, the first 'available uninterrupted clean 2 minute period out of the

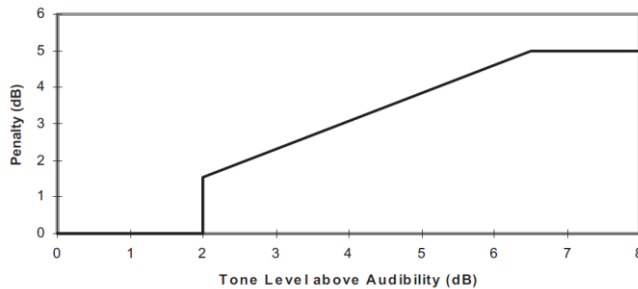
affected overall 10 minute period shall be selected. Any such deviations from the standard procedure, as described in Section 2.1 on pages 104-109 of ETSU-R-97, shall be reported.

(c) For each of the 2 minute samples the tone level above or below audibility shall be calculated by comparison with the audibility criterion given in Section 2.1 on pages 104-109 of ETSU-R-97.

(d) The tone level above audibility shall be plotted against wind speed for each of the 2 minute samples. Samples for which the tones were below the audibility criterion or no tone was identified, a value of zero audibility shall be used.

(e) A least squares "best fit" linear regression line shall then be performed to establish the average tone level above audibility for each integer wind speed derived from the value of the "best fit" line at each integer wind speed. If there is no apparent trend with wind speed then a simple arithmetic mean shall be used. This process shall be repeated for each integer wind speed for which there is an assessment of overall levels in Guidance Note 2.

(f) The tonal penalty is derived from the margin above audibility of the tone according to the figure below.



Guidance Note 4

(a) If a tonal penalty is to be applied in accordance with Guidance Note 3 the rating level of the turbine noise at each wind speed is the arithmetic sum of the measured noise level as determined from the best fit curve described in Guidance Note 2 and the penalty for tonal noise as derived in accordance with Guidance Note 3 at each integer wind speed within the range specified by the Local Planning Authority in its written protocol under paragraph (d) of the noise condition.

(b) If no tonal penalty is to be applied then the rating level of the turbine noise at each wind speed is equal to the measured noise level as determined from the best fit curve described in Guidance Note 2. .

(c) In the event that the rating level is above the limit(s) set out in the Tables attached to the noise conditions or the noise limits for a complainant's dwelling approved in accordance with paragraph (e) of the noise condition, the independent consultant shall undertake a further assessment of the rating level to correct for background noise so that the rating level relates to wind turbine noise immission only.

(d) The Company shall ensure that all the wind turbines in the development are turned off for such period as the independent consultant requires to undertake the further assessment. The further assessment shall be undertaken in accordance with the following steps:

(e). Repeating the steps in Guidance Note 2, with the wind farm switched off, and determining the background noise (L3) at each integer wind speed within the range

requested by the Local Planning Authority in Its written request under paragraph (c) and the approved protocol under paragraph (d) of the noise condition.

(f) The wind farm noise (L1) at this speed shall then be calculated as follows where L2 is the measured level with turbines running but without the addition of any tonal penalty:

(g) The rating level shall be re-calculated by adding arithmetically the tonal penalty (if any is applied in accordance with Note 3) to the derived wind farm noise LI at that integer wind speed.

(h) If the rating level after adjustment for background noise contribution and adjustment for tonal penalty (if required in accordance with note 3 above) at any integer wind speed lies at or below the values set out in the Tables attached to the conditions or at or below the noise limits approved by the Local Planning Authority for a complainant's dwelling in accordance with paragraph (e) of the noise condition then no further action is necessary. If the rating level at any integer wind speed exceeds the values set out in the Tables attached to the conditions or the noise limits approved by the Local Planning Authority for a complainant's dwelling in accordance with paragraph (e) of the noise condition then the development fails to comply with the conditions.

CONDITIONS END

Annex F
Llandinam Repowering Scheme – Schedule of Conditions

Definitions (applying to both the Section 37 Consent and Deemed Planning Permission)

"Application"	means the application for consent pursuant to Section 37 of the Electricity Act 1989 and deemed planning permission pursuant to Section 90(2) of the Town and Country Planning Act 1990 made by SP Manweb PLC and submitted to the Secretary of State on 2 December 2009 and as amended in January 2011;
"commissioning"	means the transmission of electricity through the development for distribution purposes except where such transmission is in respect of testing the development following completion of the construction works and "commissioned" shall be interpreted accordingly;
"completion"	means: (1) in respect of the construction works, the completion of all construction works involving the construction and installation of the development (including the restoration of any compounds, tracks and ground disturbance) but not including commissioning; (2) in respect of decommissioning, the restoration of the route following the decommissioning of the development;
"decommissioning"	means the final termination of transmission of electricity through the development and removal of the development and "decommissioned" shall be interpreted accordingly;
"development"	means: (1) with reference to the conditions

	<p>imposed in relation to the consent granted under Section 37 of the Electricity Act 1989, all works to construct and install, and keep installed; and</p> <p>(2) with reference to the conditions imposed in relation to the deemed planning permission granted by virtue of a direction under Section 90(2) of the Town and Country Planning Act 1990, all works to construct (including site clearance works and the felling and lopping of trees and hedgerows), install, keep installed and decommission</p> <p>a 132kv overhead line providing a 3-phase single circuit with 124MVA rated capacity over approximately 35km from a proposed new substation at Bryn Dadlau, Llandinam, to the existing substation at Welshpool within a 100m wide corridor as shown on drawing SP4068602 (Rev 1.0) as amended by drawing SP4071503 (Rev 3.0) all as specified in the Application;</p>
<p>"disconnection"</p>	<p>means the permanent electrical disconnection of all or any of the equipment that has been provided and installed by the relevant distribution network operator for the purposes of providing a connection, and "disconnected" shall be interpreted accordingly;</p>
<p>"Secretary of State"</p>	<p>means the Secretary of State for Energy and Climate Change or such other minister within Her Majesty's Government with responsibility for Section 37 of the Electricity Act 1989;</p>
<p>"Section 37 Consent"</p>	<p>means the consent granted pursuant to Section 37 of the Electricity Act 1989 in respect of the development;</p>

"Termination Notice"	means a notice from a relevant customer to the distribution network operator for the time being operating the development terminating the transmission of electricity through the development from the relevant customer's undertaking. In this definition the term "relevant customer" means a customer whose undertaking is connected to the development for the purposes of transmitting electricity generated from the customer's undertaking through the development;
"Updated Environmental Statement"	means the environmental statement prepared in accordance with the Electricity Works (Environmental Impact Assessment) (England and Wales) Regulations 2000 to assess the likely significant environmental effects of the development and submitted by SP Manweb PLC to the Secretary of State on 29 October 2013.

PART 1 – SECTION 37 CONSENT

1. Pursuant to Section 37(3) of the Electricity Act 1989, the Secretary of State hereby consents to the development.
2. The development shall comprise:
 - (i) Heavy Duty Flat Formation Overhead Line Design (OHL-03-132);
and
 - (ii) Three phase circuits (consisting of one conductor per phase) in horizontal formation, with underslung earth wire.
3. The commencement of the development shall not be later than 5 years from the date of this consent, or such longer period as the Secretary of State may hereafter direct in writing.
4. Pursuant to Section 37(3)(b) of the Electricity Act 1989, the Secretary of State may vary or revoke this consent at any time from the date hereof and in the event that the Secretary of State revokes this consent the development shall be decommissioned within such period as the Secretary of State may direct.

PART 2 – DEEMED PLANNING PERMISSION

Pursuant to Section 90(2) of the Town and Country Planning Act 1990 the Secretary of State hereby directs that planning permission for the development shall be deemed to be granted subject to the following conditions:

1. The development to which this permission relates shall be begun not later than the expiration of 5 years beginning with the date hereof.
2. Within a period of 5 working days of their occurrence, the local planning authority shall be given written notification of each of the following events:
 - (i) the commencement of development;
 - (ii) the completion of construction works;
 - (iii) the commissioning of development;
 - (iv) the receipt of a Termination Notice in respect of the development;
 - (v) the cessation of the transmission of electricity through the development from any consented wind farm within SSA C
 - (vi) completion of the decommissioning of the development.
3. The development shall comprise:
 - (i) Heavy Duty Flat Formation Overhead Line Design (OHL-03-132);
and
 - (ii) Three phase circuits (consisting of one conductor per phase) in horizontal formation, with underslung earth wire.
4. No development shall take place until details of the external appearance of the steel work supporting the insulators and the pole cross-bracing have been submitted to and approved in writing by the local planning authority. The development shall be implemented in accordance with the approved details.
5. No development shall take place until a detailed Environmental Management Plan has been developed, in accordance with the Updated Environmental Statement, for the site clearance and construction phases of the development and submitted to and approved in writing by the local planning authority. The Environmental Management Plan shall include:
 - (i) updated surveys to review the presence of any European or UK species afforded protection by statute to include otter, bat, badger, dormouse, great crested newt, barn owl, red kite and water vole and appropriate avoidance measures and mitigation to ensure compliance with legislation. The methodology and areas for such surveys shall be agreed in writing with the local planning authority;

- (ii) construction method statements for those specific aspects set out in the draft Environmental Management Plan, including species (curlew; bat; otters; water vole; dormouse; great crested newt; reptiles; barn owl; and amphibians) habitats and designated sites;
- (iii) updated surveys to review birds and implementation of a Bird Protection Plan that shall include mitigation for birds;
- (iv) a scheme for monitoring bats prior to, during and following construction, such scheme to involve deployment of detectors during spring, summer and autumn and the monitoring of features including all impacted hedgerows within 5 km of the Leighton Bat Roosts SSSI;
- (v) details for the protection of ecologically sensitive habitats (as outlined in the Updated Environmental Statement) and a plan to show their location;
- (vi) use of exclusion fences, protective barriers and warning signs;
- (vii) a scheme for tree, hedgerow and vegetation clearance and measures to protect trees to be retained during the development to comply with BS5837 (2012) standards for tree protection;
- (viii) updated survey of trees and hedgerows along the construction route for the development and following such survey:
 - (b) details of, where required for dormice and bat mitigation, temporary replacement of hedgerows;
 - (c) details of hedgerow translocation; and
 - (d) a consequent schedule of replacement trees, hedgerows and other mitigation planting, including numbers, species, provenance and specification of specimens and methods of planting, protection, establishment and maintenance schedule;
- (ix) a scheme of archaeological investigation and mitigation, and an associated implementation programme, including preventative measures, measured surveys and geophysical survey providing for archaeological evaluation and excavation as required based on survey results;
- (x) a flood risk management scheme to include:
 - (e) the design, use and siting of storage compounds, pole storage areas and access tracks (to address flood flow conveyance and flood water storage);
 - (f) details of poles to be provided with scour protection;
 - (g) details of a string clearance distance of 6.7m to be maintained above the flood level; and

- (h) an implementation programme;
- (xi) details of the responsible person(s) and lines of communication and reporting arrangements;
- (xii) the appointment of an ecological clerk of works for the site clearance, preparation and construction phases and a description of their role and responsibilities; and
- (xiii) details of when and how the Environmental Management Plan is to be reviewed and monitored throughout the construction phase.

The development shall be carried out in accordance with the approved Environmental Management Plan.

6. No development shall take place until a detailed Construction Method Statement has been developed, in accordance with the Updated Environmental Statement, for the construction phase of the development and submitted to and approved in writing by the local planning authority. The Construction Method Statement shall include:

- (i) contractor arrangements, monitoring and contingency proposals;
- (ii) the steps and the procedures that will be implemented to minimise the creation and impact of noise, vibration, dust and waste disposal resulting from the site preparation, groundwork and construction phases of the development, including details of working hours. It shall include the details of measures to be employed to prevent the egress of mud, water and other detritus onto the public highway. It shall also include details of any temporary site compound, soil storage mounds, required during the construction of the development;
- (iii) the location of works compounds or lay-down areas;
- (iv) waste and pesticide storage and management;
- (v) details of on-site road design and construction traffic management (a Traffic Management Plan) including detailed method statements for the building of all tracks, including measures to address silt-laden run off from any working, temporary and permanent access roads, soil storage and other engineering operations;
- (vi) measures to be taken to protect the rights, interests and safety of users of public rights of way crossing the site during the construction of the development;
- (vii) identification of pole working areas, site compounds and access tracks to those areas and compounds with demarcation of ecologically sensitive habitats (such habitats to be identified under condition 5) to ensure construction workers operate within the defined working areas;
- (viii) measures to be taken to avoid detrimental impact on watercourses, including the River Wye SAC;

- (ix) measures to avoid deep excavations being left open at night;
- (x) measures to avoid artificial lighting affecting ecologically sensitive habitats (such areas to be identified under condition 5);
- (xi) details, including the volume and source, of any material to be imported to site for construction including backfilling trenches, or constructing temporary access roads;
- (xii) details for conservation of topsoil resources;
- (xiii) details of the reinstatement of soils and habitats on conclusion of works;
- (xiv) contractor awareness talks; and
- (xv) a construction programme for the development.

The development shall be carried out in accordance with the approved Construction Method Statement.

7. Stringing of the conductors shall not take place until a bird strike monitoring and mitigation strategy for crossings of significant watercourses, as set out in the Updated Environmental Statement, has been submitted to and approved in writing by the local planning authority. The bird strike monitoring and mitigation strategy shall include:
- (i) the provision of bird deflectors, diverters and/or fireflies to be fitted to the lines north of the River Camlad in accordance with the wintering bird survey of the Updated Environmental Statement;
 - (ii) details of anti-perching devices; and
 - (iii) details as to how contingencies and/or remedial action will be identified, agreed with the local planning authority, implemented and maintained, if necessary, for the lifetime of the development.

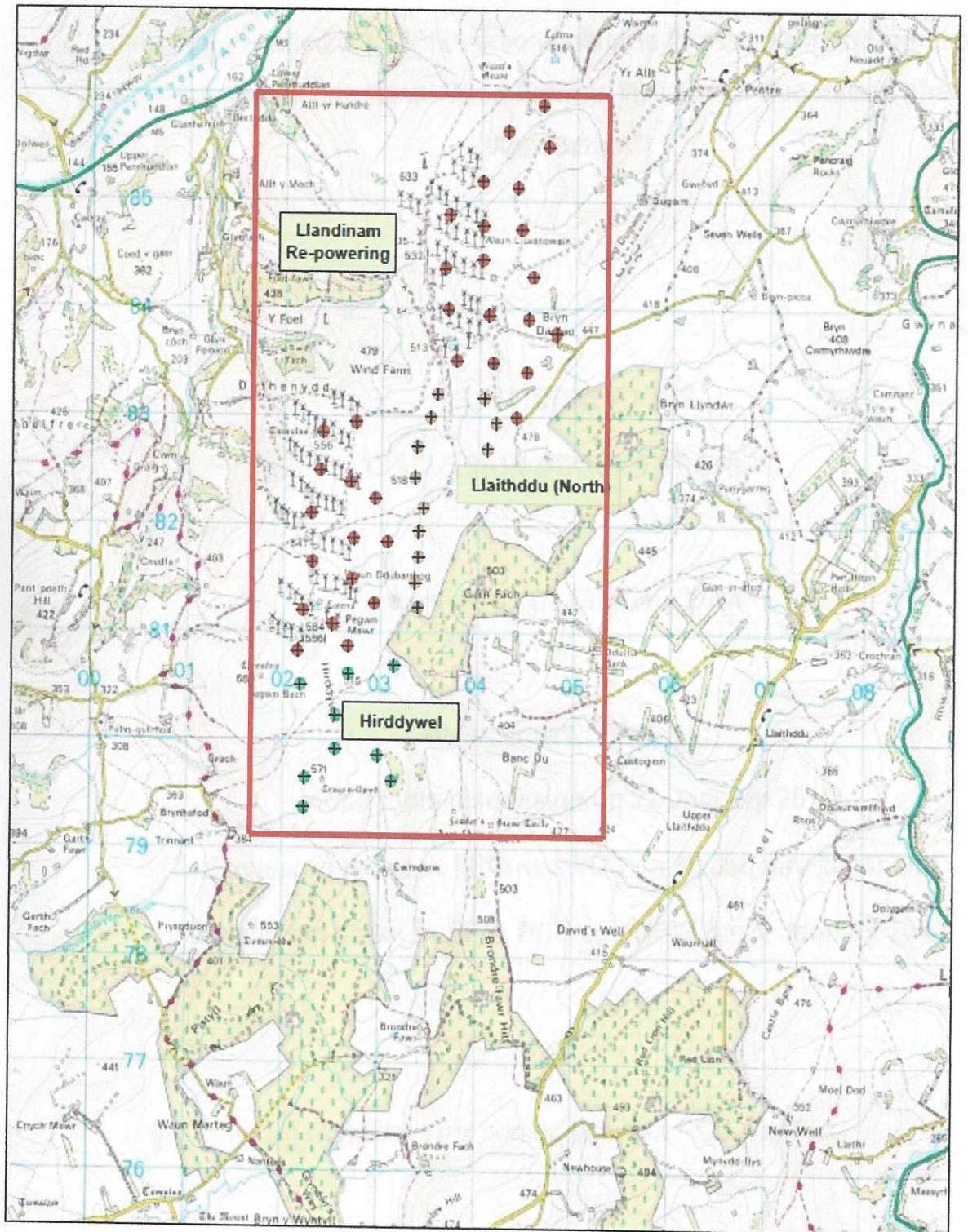
The development shall be carried out in accordance with the approved bird strike monitoring and mitigation strategy.

8. Within three months of the commencement of development, a habitat enhancement strategy, including a timescale for its implementation, shall be submitted for the written approval of the local planning authority. The habitat enhancement strategy shall include details of hedgerow and tree planting as outlined in the Updated Environmental Statement that goes beyond that set out in the Environmental Management Plan required by condition 5. The habitat enhancement strategy shall be implemented as approved.
9. The replacement trees and hedgerows and other mitigation planting approved pursuant to conditions 5 and 8 shall be carried out during the first available planting season following the completion of construction of the development. Any specimens which die, become seriously damaged or

diseased within five years of planting shall be replaced by trees or shrubs of a similar size and species to those originally required to be planted.

10. Plant failures shall be identified annually for a five year period, commencing on the second anniversary of planting, and a restocking schedule and plan submitted to the local planning authority for written approval in the September prior to restocking in the following planting season.
11. All temporary apparatus shall be dismantled and removed within six months from the date of commissioning of the development.
12. All land disturbed by the installation of the wood poles shall be reinstated within six months of completion of the said works.
13. Within six months of the receipt of a Termination Notice in respect of the development, a scheme for decommissioning and restoration shall be submitted for the written approval of the local planning authority. The approved decommissioning and restoration scheme shall be commenced on the expiry of a period of twelve months during which there has been a continuous cessation of transmission of electricity through the development or on the date of approval of the said scheme, whichever is the later. The approved decommissioning and restoration scheme shall be completed no later than 16 months from its commencement.
14. No works or development shall take place until a scheme of pole locations has been submitted to and approved in writing by the local planning authority. The development shall be carried out in accordance with the approved scheme.

PLAN B (referred to in condition 2(iv) and 13(A))



CONDITIONS END

ANNEX 1

LLANDINAM REPOWERING

APPLICANT'S CLOSING SUBMISSIONS

Introduction

The Applications

1. These Closing Submissions build on – and to an extent deliberately repeat – the Opening Submissions. Unusually there remains no live issue between the relevant local planning authority – Powys County Council (“PCC”) – and the Applicant. Nor is there any remaining issue of principle with any other statutory body save for mainly generalised objections from various parish or community councils.
2. The lifting of objections by bodies such as PCC, Natural Resources Wales¹ (“NRW”) and the transport arm of the Welsh Government (“WG”) reflects the availability to those bodies of relevant and appropriately qualified expert advice; the PCC, NRW and WG experts have been able to satisfy themselves that the Llandinam Re-powering scheme (“LR”) can proceed, subject to appropriate conditions. Whilst there are, unsurprisingly, some minor points of difference on matters of detail between those experts and those advising the Applicant, there is a substantial concordance of views. On all matters of principle, and most matters of detail, the opinions expressed by the Applicant’s own independent consultants are concurred in and validated by those experts advising the various statutory bodies. In the result, there is no tenable or evidentially robust basis to conclude anything other than a decisively positive overall balance for LR.
3. The Applicant in respect of this re-powering application - ie a scheme to repower the existing Llandinam/P&L wind farm with larger but fewer turbines - is Celtpower Limited (“CP”)².

¹ NRW Closing Submissions at paragraph 2.2

² CP is a joint partnership between Scottish Power Renewable Energy Limited and Eurus Energy Limited

4. There are before these conjoined inquiries, and the Secretary of State (“SofS”) two CP applications in respect of LR, namely (1) for consent under section 36 of the Electricity Act 1989³ (“the 1989 Act”) and (2) for a direction under section 90(2) of the Town and Country Planning Act 1990 (“the 1990 Act”) that planning permission be deemed granted for the development therein comprised (“the planning direction”). Also before these inquiries is a parallel project – separately promoted – under section 37 of the 1989 Act for a grid connection to serve LR. LR is alone amongst the wind farm projects here in having a specific grid-connection proposal both identified and at application stage. This is significant in several respects:

- a. NPSs EN 1 and 3⁴ each stress the importance of the grid connection, the desirability of concurrent applications (for grid connection and generating station) and the risk of advancing one without the other. In the absence of such a grid connection none of the benefits of generation from a given scheme is realisable. Thus LR is significantly more certain than any of the other schemes and at a materially more advanced stage in its evolution; it offers materially earlier delivery of the benefits.
- b. In EIA terms, irrespective of whether or not the grid connection is to be regarded as a part of a given project, sufficient evidence and information must be available to allow the combined environmental impacts properly to be assessed under both European and domestic law. Whilst, in this respect, the Alliance criticises each of the other wind farm schemes before this inquiry no such criticisms has been – or indeed properly could have been – advanced against LR⁵.
- c. There is no in-principle objection from PCC to LR’s grid connection. Whilst the county council argues for a section of the proposed line to be underground, PCC accepts that both LR and its grid connection should proceed, subject of course to appropriate conditions, including constraints as appropriate to reflect any ultimate decision on the issue of undergrounding. On that latter issue, CP supports the case advanced by SPM against undergrounding, albeit it is for the latter applicant to make that case.

³ CD/COM/023

⁴ CD/COM/001 - EN 1 paras 4.9.1-3; CD/COM/002 - EN 3 paras 2.7.8-9

⁵ CPL-004 Response to Alliance Doc ALL-002

- d. The form of the grid connection is on wooden poles, not latticed steel. It thus respects the criteria considered appropriate in the Welsh context.
5. The proposed wind farm would comprise 34 turbines⁶, each with an installed capacity of up to 3MW and giving an overall installed capacity of up to 102 MW. The turbines would comprise a tubular steel tower, a nacelle, and a three-blade rotor, having a height to blade tip of up to 121.2m (hub height up to 80m)⁷. The proposed development includes new access tracks and site access⁸. The existing P&L wind farm has been operating on the site since 1992 and comprises 102 turbines with an installed capacity of about 30MW; significantly, it was constructed and operates pursuant to a permanent planning permission, a position which can be contrasted with the present applications which are for temporary consents of twenty-five years. The proposed installed capacity, the reduction in turbine numbers and the change from permanent to temporary consent (with decommissioning requirements) represent a significant, triple benefit over the present position; and they place the LR proposal in an almost unique position, certainly so far as concerns these conjoined inquiries.
6. The LR applications were accompanied by an Environmental Statement ('ES') in accordance with the relevant EIA Regulations; there has been subsequent provision of tranches of further information⁹.

Electricity Act 1989

7. The 1989 Act imposes certain duties on any licence holder; CP holds such a licence¹⁰. Licence holders are required, in formulating

⁶ As against 102 existing turbines. The existing turbines have a hub-height of 31m with a rotor diameter of 28m; this gives height to blade tip of 45 m

⁷ Except for T29, 30 and 42 which will be 111.2 m to blade tip – Volume 1 of 2013 SEI at 4.2.4

⁸ The ES material has assumed micro-siting of up to 50 m for turbines and up to 100 m for tracks – ES Volume 1 at 4.5.1 paragraph 5

⁹ See AD/CPL/002 *et seq*

¹⁰ Thus LR is unaffected by any legal debate about the availability to non-licence holders of the 1989 Act application regime

any relevant proposals (including the construction of a generating station of more than 10 megawatts)¹¹, to:

- a. Have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting buildings and other objects of architectural, historic or archaeological interest; and
 - b. Do what they reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects.
8. The foregoing matters are relevant because, on an application such as this, the SofS is required¹² to have regard to the desirability of the matters in sub-paragraph (a) above (and to the extent to which any licence holder has complied with its duty under sub-paragraph (b) above). It can be seen, for reasons which follow, that the SofS can here be satisfied (1) that appropriate regard has been had to all the relevant matters and (2) that reasonable mitigation is available and can, where necessary, be secured by appropriate condition(s). In respect of (2) it is important to note that the test is "mitigation" – ie not "removal" – of any adverse effects and that the test is further qualified by the word "reasonably"; in other words this is a matter of judgement and balance, having regard to the need to bring forward renewable energy – and the urgency of so doing¹³ - to unlock the inherent benefits of renewable energy, particularly for the very environmental interests identified in that Schedule to the 1989 Act. Such benefits are too important and urgent to be lost. Given the material benefits of LR – as against the prevailing baseline of the existing wind farm – it cannot sensibly be argued other than that the cited criteria under the 1989 Act are demonstrably met.
9. There is an allied background point, which resonates under virtually all of the Matters identified by the SofS for these inquiries. The very essence of the proposals here promoted – ie not just LR but all the schemes here being considered - is to respond to the deleterious effects of climate change. Thus, whatever may or may not be the

¹¹ Schedule 9 para 1(1)

¹² Schedule 9 para 1(2)

¹³ CD-CPL-LEG-002 The Promotion of the Use of Energy from Renewable Sources Regulations 2011; see also the EU Renewables Directive

(inevitable) significant effects of any given scheme, renewable energy generation carries with it embedded environmental benefits. For example, when considering any significant landscape and visual impacts it is essential to include not merely adverse effects but also the climate-change benefits – in landscape terms - inherent in renewable energy. **These Closing Submissions seek to avoid repetition and this facet is not separately set out under each and every Matter which follows. Nevertheless, it is of fundamental importance and should be given significant weight throughout.**

Outstanding objections from the public and community/parish councils

10. As is often the way, the scheme has generated a number of representations, including expressions of support. In so far as objections reflect a desire to protect private interests, the latest, 2014 iteration of *Planning Policy Wales* indicates¹⁴:

*The planning system does not exist to protect the **private interests** of one person against the activities of another. Proposals should be considered in terms of their effect on the amenity and existing use of land and buildings in the public interest. The Courts have ruled that the individual interest is an aspect of the public interest, and it therefore valid to consider the effect of a proposal on the amenity of neighbouring properties. However, such consideration should be based on general principles, reflecting the wider public interest (for example a standard of 'good neighbourliness'), rather than the concerns of the individual.*

*When determining planning applications local planning authorities must take into account any relevant view on planning matters expressed by neighbouring occupiers, local residents and any other third parties. Whilst the **substance of local views** must be considered, the duty is to decide each case on its planning merits. As a general principle, local opposition or support for a proposal is not, on its own, a reasonable ground for refusing or granting planning permission; objections, or support, must be based on valid planning considerations. There may be cases where the development proposed may give rise to public concern. The Courts have held that perceived fears are a material planning consideration that should be taken into account in determining whether a proposed development*

¹⁴ At paragraph 3.1.7-8 – Version of February 2014

would affect the amenity of an area and could amount to a good reason for refusal of planning permission. It is for the local planning authority to decide whether, upon the facts of the particular case, the perceived fears are of such limited weight that a refusal on those grounds would be unreasonable. (emphasis as in the original)

As a general proposition, each land owner may develop his land as he sees fit; it is inevitable that any such development may have an impact on neighbouring land – but that, of itself, is not sufficient to refuse consent and the planning system recognizes the need for an element of ‘give-and-take’. The prevailing guidance effectively acknowledges the freedom to develop and the stress is on those matters which warrant protection in the public interest as opposed to individual interests *simpliciter*. Additionally, here the development is (1) of a type – renewable energy schemes – which itself falls to be brought forward in the public interest, (2) is wholly reversible in so far as any truly live issue(s) remain(s) before this inquiry and (3) offers significant benefits over the present, baseline situation. In the result, for any planning objection to succeed it must sound materially in the public interest and, additionally, be sufficiently substantial – and the more so since any adverse effect will be temporally limited - wholly to outweigh the other undoubted public benefits of the scheme.

11. There is, perhaps inevitably, a fundamental divide between the Alliance (and other objectors) on the one hand and the various applicants on the other. It is clear that those who have been regular attendees at the inquiry object strongly to the various schemes. And it is equally clear that each of these proposals will carry with it some significant effects – were it otherwise the various ESs would have nothing to say. It is thus important to bear the following in mind.

- a. Whilst it is appropriate to have regard to the concerns of those who oppose LR, any decision here falls to be made on an objective appraisal of the evidence. That called on behalf of LR has been from appropriately qualified experts, contains, in addition to qualitative opinion, quantitative appraisal where appropriate or possible and is expressly related to the detail of the development proposed. The response – and ultimate lack of objection – from public bodies such as NRW and PCC has similarly been based on input from appropriately qualified experts. By contrast, much (though not all) of the evidence for the objectors is non-expert, largely unsupported by any calculation or modelling and

highly generalised. A particular contrast can be drawn between NRW, whose objections to the proposal have all been met, and, for example, the Alliance's persistence – and without appropriate expert support – in advancing ecological objections. The independent validation by NRW, WG and PCC of the work of experts instructed for LR is compelling; in the result, little weight can be attached to the objections of the Alliance and other objectors.

- b. LR adopts the cogent formulation advanced by the former Sustainable Development Commission as follows¹⁵:

The impact that electricity generation has on the landscape and environment depends on the type of fuel and technology used to generate it... Fossil fuels such as gas and coal, and the uranium required for nuclear fission, all rely on extractive industries for fuel supply. In the case of coal and gas, this can have a wide and devastating effect on the landscape surrounding the mine site, with associated infrastructure and waste production contributing to a landscape and environmental impact that can last for years. For UK gas (and oil – although this is a minor contributor to electricity production), extraction is concentrated offshore and supplies of liquefied natural gas will arrive by sea. However, some onshore infrastructure will still be required to receive, store and distribute the gas and there are a number of environmental issues associated with offshore exploration. And in other countries, gas and oil are obtained from reserves in onshore locations, where landscape effects will be more pronounced. Although many of the landscape and environmental effects of our fuel needs will not be borne in the UK, a sustainable development approach implies all effects should be considered, wherever they occur in the world. It would not be equitable to suggest that landscape destruction in other countries is justified in order that UK landscapes are preserved. (emphasis added)

- c. It is also important to bear in mind that the Alliance position is not necessarily representative of all views of the public.

¹⁵ CPL-PLANNINGBALANCE-POE-APP4- FRAMPTON Wind Power in the UK at section 6.7. **NB LR attaches no weight to the fact that the words were formulated by the former SDC and merely adopts the words used as a convenient and pithy formulation of an important general point**

The significant expressions of support at the Session 1 evening meeting offer a strongly contrasting note. It is also worthy of note that a considerable proportion of the objection appears directed at the necessary grid infrastructure to unlock the generating sites rather than the wind farms themselves. In the case of LR itself, the proposed grid connection falls within that envisaged by the Welsh Government as not being inappropriate¹⁶.

- d. The modern inquiry does not represent a referendum. Thus the objectors' case does not improve the more supporters it calls forward. The test lies in identifying, and weighing, those matters which are material, irrespective of whether a given point is advanced by one or many; and, in so far as technical matters are in issue, the expert is to be preferred to the non-expert and the quantitative to the mere qualitative.

- e. Various objectors have advanced blanket criticisms that the wind farm applicants as 'just doing it for the money'; and it is entirely correct that corporate bodies owe a duty to their shareholders. But the criticism is at best naïve. Whilst people may not agree with Government policy, the effect of that policy is to place the burden for bringing forward energy generally, and renewable energy in particular, on the private sector; and the private sector necessarily needs to show a return on investment.

Alternative sites and solutions

12. So far as concerns LR:

- a. The environmental material contains clear evidence of the site selection process, and alternative design and layout; and there is no outstanding Request for Further Information issued by the SofS, whether in this or any other respect.

¹⁶ See eg CD/COM/020 the WG letter from Mr Griffiths of July 2011 re transmission network in Mid-Wales

- b. LR adopts as a correct statement of the law - on the need to consider the availability of alternatives – the text in Volume 2 of the Planning Encyclopedia¹⁷. In particular, even were the second test in **Edwards v SoSE** met, the third and fourth are not; where need is, as here unconstrained, logically no one site can be an alternative to another - and this is not a case where, as with for example a MSA¹⁸, only one (or a very limited number of) permission(s) is to be granted. The question in the context of on-shore wind farms was expressly considered in **Derbyshire Dales DC v SofS for CLG** (“the Carsington case”) and the local authority’s argument rejected by Carnwath LJ, as he then was¹⁹.

13. Whilst decided in the English jurisdiction, and under the former PPS 22, the Swinford planning appeal decision continues to reflect a helpful and correct application of the law in this respect, the more so since it was a recovered decision. The Inspector concluded, and the SofS expressly agreed²⁰:

*[Having considered PPS 22 (see now *inter alia* Reg 3 – “at least 15%”) I concur with Nuon that the need is unconstrained and RE generation needs to be brought forward wherever it can be, subject to its being acceptable when the overall balance is properly drawn.*

[The Council] considers that the proposed scale, arrangement and siting of the development have not been demonstrated to be avoidable with reference to alternatives, and submits that smaller or fewer turbines would have less impact on cultural heritage assets. Given the unconstrained nature of the need, Nuon believes that no one RE scheme can be regarded as an alternative to another, and that there is no requirement to provide a menu of different layouts, designs, size or number of turbines. Lord Justice Carnwath in the Carsington judgement refers to PPS 22 principle 1(viii), which provides that development proposals should demonstrate any environmental, economic and social benefits as well as how any environmental and social impacts have been minimised through careful consideration of location, scale, design and other measures. He accepted that “careful consideration of location” may be said to imply a need for the developer to demonstrate the particular merits of the selected site, but considered that it was far from requiring the decision-maker in every case to review potential alternatives as a matter of obligation.

¹⁷ At **P70.32-35**, photocopy appended

¹⁸ Motorway service area

¹⁹ [2009] EWHC 1729 (Admin)

²⁰ At IR para 228-230 and DL para 21 – CD – CPL – INS 002 and 003

This is not a proposal for which only one or at least a limited number of permissions could be granted. If an environmentally preferable alternative site were to be available, it seems to me that an argument might be advanced for the development of both sites, if this was necessary to achieve policy objectives and impacts could be satisfactorily in both cases. I consider that Nuon is correct that even were it the case that smaller or fewer or differently laid-out turbines might have a lesser impact, that is not a reason for refusal. What is relevant is not whether, following the various design iterations, the appeal scheme has adverse effects, but whether any such remaining adverse effects would be outweighed by the benefits. Paragraph 1(viii) of PPS 22 refers to a balance between benefits and impacts, and requires the latter to be minimised. In my view, this means firstly that harm would need to be minimised to the extent that it was outweighed by the benefits; and secondly, that any measures to minimise harm, which could reasonably be achieved without diminishing the benefits of the proposal, should be adopted. The objections to the proposal in this case do not raise any specific issues relevant to the second point. In my view, compliance with PPS 22 is therefore a matter of balance, which I deal with below, but, in the circumstances which apply here, I do not consider that there is any requirement to assess alternative sites or configurations for the proposed wind farm. (emphasis added)

14. So far as concerns the separately promoted grid connection for LR, that is primarily a matter for those promoting that element. For present purposes CP merely notes that the environmental material for that scheme includes consideration of, *inter alia*, alternatives and route selection²¹.

15. CP also adopts the submissions of RES on this aspect²².

²¹ Section 37 ES at Section 3 – AD/SPM/019

²² Llanbrynmair Wind Farm Legal Submissions paras 5-14

Environmental information

16. Regulation 13 of the Electricity Works (Environmental Impact Assessment) Regulations 2000 (“the 2000 Regs”) provides that *The Secretary of State, when dealing with a section 36 consent ... in relation to which an environmental statement has been provided, may in writing require the applicant to provide such further information as may be specified concerning any matter which is required to be, or may be, dealt with in the environmental statement.* Regulation 3(1) precludes grant of consent unless the requirements of Regulation 4²³ have been satisfied. Notwithstanding this, and as already noted, the SofS has not here felt it appropriate to make such a Regulation 13 request in respect of LR; nor, so far as CP understands it, does any person now seriously and tenably assert any material defect or lacuna in LR’s environmental material. The combined effect of these circumstances and of a correct construction of Regulations 3 and 4, read with Regulation 13, is to create a legitimate expectation that, even were the SofS now to conclude that the environmental material was not fit for purpose such that further information is required, he would not determine the application(s) unless and until he has so notified CP in writing and allowed it a fair opportunity to provide such information.

Appropriate assessment

17. NRW and CP have agreed that on-site decommissioning, construction and operation of LR are unlikely – whether alone or in combination - to have a significant effect on the River Wye SAC (“the SAC”); there is also agreement that, as far as concerns the proposed Bailey bridge crossing (which in any event is not the subject of the present applications), there is no reason to believe there will be a likely significant effect on, or adverse effect on the integrity of, the SAC. That agreement is obviously predicated on any consents containing the relevant conditions and the appropriate mitigation being brought forward²⁴. CP has – moreover and for the avoidance of doubt – carried out what is effectively a ‘shadow’ appropriate assessment²⁵. This confirms that, in any event, LR will not have an adverse impact on the integrity of the European site.

²³ Which sets minimum standards for environmental assessment in relation to a section 36 consent application

²⁴ SoCG dated 25th February 2014 – CPL-SOCG-HYDRO-CON-003-S4. The HRA is provided without prejudice to CP’s primary contention that no requirement for appropriate assessment is here triggered.

²⁵ SEI 2013 Volume 2 at Appendix 8-6; see also MacArthur Session 4 Proof CPL-ECOLOGY-ADDENDUM-S4 and appendices

In combination/cumulative

18. PCC here apparently argues that, in addition to assessing the incremental effects of each scheme, there should also be consideration of an appropriate cut-off level above which no further schemes should come forward. Two points arise. First, such an approach ignores the fact that the need is unconstrained and each scheme falls simply to be considered in terms of its acceptability, both alone and in combination. There is no justification for imposing some separate cut-off independent from, or additional to, the basic test of each scheme's acceptability. Second, and in any event, LR comes 'at the head of any queue' and the relevant question is limited to which other schemes should also come forward.

Need

19. Dr Constable seeks to argue that the need will be satisfied without need of the schemes before this inquiry. This does not bear examination. It depends upon such need being finite and the targets being capped; yet, as a matter of both law and policy, the need is unconstrained and the targets are minima not ceilings. The point is more generally and fully rebutted in the evidence of Mr Frampton, and others amongst the various applicants' planning witnesses²⁶

Carbon balance

20. The Alliance, through Mr Kibble²⁷, makes a generalised criticism of the various schemes' carbon balances²⁸. So far as LR is concerned, Ms Walker has submitted a detailed rebuttal²⁹. The Alliance's points are misconceived in this respect; in any event, even were the Alliance correct in all its points, this would still not amount to a reason for refusal. Moreover, Mr Kibble ignores the crucial comparison is between conventional and renewable generation; each will involve CO₂ loss during construction but the rationale underlying renewables is carbon saving during operation. The Alliance case on this effectively challenges Government policy.

²⁶ See Frampton proofs, particularly CPL-PLANNINGBALANCE-REBUTTAL-FRAMPTON

²⁷ ALL-CLO-POE-02

²⁸ In the case of LR see Chapter 14 of SEI April 2013, Volume 1

²⁹ CPL-015

Matters (1)-(3): The extent to which the proposed developments are consistent with:

- **The objectives of the Government Policy on the energy mix and maintaining a secure and reliable supply of electricity as the UK makes the transition to a low carbon economy and achieving climate change goals.**
- **The policies relating to generation of renewable energy contained within the relevant National Policy Statements for Energy Infrastructure: Overarching National Policy Statement for Energy (EN-1) of July 2011 and National Policy Statement for Renewable Energy Infrastructure (EN-3) July 2011.**
- **Welsh Government and local policies: including Planning Policy Wales, Edition 4 (2011)³⁰; Technical Advice Note 8, Planning for Renewable Energy (2005); and Energy Wales: A Low Carbon Transition (2012); and Powys Unitary Development Plan (adopted March 2010).**

Introductory

21. There is a large measure of agreement on the constituent parts of the policy matrix. The objectors have, however, variously argued that TAN8 is (i) unlawful or (ii) overtaken by events or (iii) needs to be read in a restrictive fashion, notwithstanding the unconstrained nature of the need identified in and required by international and domestic legislation and policy. Given the recent renewed endorsement of TAN8 in the 2014 Revision of Planning Policy Wales it is difficult to see how the objectors can succeed in this respect. But, irrespective of whatever approach is taken to TAN8, LR receives strong policy endorsement at all levels and the resulting planning balance for this scheme is unaltered.

22. So far as concerns the planning evidence of NRW, it should be noted that the statutory body itself felt constrained to distance itself from, and formally to delete, various elements of its own witness's planning-balance proof.

23. In terms of the interpretation of policy, there would appear to be broad and important acceptance by the local planning authority,

³⁰ PPW Edition 4 was replaced by Edition 5 in November 2012 and by Edition 6 in February 2014. CP's planning evidence for the Opening Sessions and up to February of this year relates to Edition 5; thereafter, primarily for the Planning balance Session, reference was made as appropriate to Edition 6

PCC, of LR's overall accord with development plan and other policy; the point is encapsulated in Mr Carpenter's final proof thus³¹:

In summary, whilst there would be some significant landscape and visual impacts, there would also be visual enhancements. The proposal does not therefore reach the threshold of unacceptability in landscape and visual terms. In cultural heritage terms, any effects with the revised proposal are less than substantial. There will be some highway disbenefits but these have been so mitigated so as not to be severe and the noise effects are not significant. These harms assessed both individually and in combination do not clearly outweigh the significant benefits of the proposal and I consider that the overall balance in the public interest now justifies grant of an appropriately conditioned consent.

24. Similarly, the Welsh Government ("WG") does not object to LR, recognising its characteristics as a re-powering scheme. See further below.

25. In the circumstances, it would be unhelpful for these closing submissions simply to parrot the planning and policy assessment carried out by CP's planning adviser, Mr Frampton, in his various proofs of evidence³². Accordingly these submissions adopt that analysis, which should be read as part of this Closing. The points made below under Matters 1 to 3 seek merely to highlight or comment on various aspects of the relevant issues.

International and UK policy and legal obligations

26. In the case of renewable energy the relevant policies inter-relate with various domestic and international legal obligations and cascade down from the international level through European, national and regional to the local level. There is seemingly substantial agreement on the relevance of various elements at the (inter)national level³³. Mr Frampton has summarised this higher tier material succinctly in his evidence, as has the Statement of

³¹ OBJ-002-PLANNINGBALANCE-POE-CARPENTER at para 4.9 and 7.3

³² CPL-PLA-POE- Peter Frampton proof, CPL-PLANNINGBALANCE-POE-FRAMPTON, CPL-009, CPL_PLANNINGBALANCE-REBUTTAL-FRAMPTON

³³ See finalised version of SoCG-Policy-001-Wales Statement of Common Ground between developers and SoCG-Policy-002 Final Statement of Policy between PCC, NRW and Snowdonia National Park Authority

Common Ground produced between the various applicants³⁴; that evidence is here adopted, without being repeated, for the purposes of these submissions. It is enough to stress two points: first, the duty on the SofS under Regulation 3 of the Promotion of the Use of Renewable Sources Regulations 2011 ("Reg 3")³⁵ *to ensure that the renewable share in 2020 is at least 15%*; second, the Government's White Paper policy imperative³⁶ *to produce around 30% of our electricity from renewables by 2020*.

27. In such circumstances the development plan, though still potentially important (subject to its being up-to-date, compliant and comprehensive), takes effect as a product of that overall chain. Even were section 38(6) of the 2004 Act to apply here – and there is agreement it does not – any development plan falls to be considered in the context of the higher legal and policy tiers. At best, the development plan can only hope to be up-to-date and to reflect accurately those higher tiers. In so far as it fails to accord with those higher tiers, the latter are most material considerations indicating otherwise.

28. The fact that the need for renewable energy, as has been recognized by Government, finds expression and is enjoined at the supra-national level is crucial. It means that, in drawing any planning balance, considerable weight is to be attached to bringing forward any relevant renewable energy project. There must be an imperative and overriding reason for refusing such a project. The mere fact there may be impacts – even at the national level and which some argue to be adverse – is not, of itself, sufficient to weigh the balance negatively. That clearly does not mean that no renewable scheme should ever be refused; but refusal can only issue where the adverse impacts are sufficiently great wholly to negate the need for renewable energy and the substantial climate-change and security-of-supply benefits. As accepted by, amongst others, PCC, NRW and the WG, no such adverse impact(s) arise in the case of LR.

29. The content of Government policy is not an appropriate subject for discussion and review at a public inquiry; the inquiries' role is, rather, to apply such policy³⁷. Self-evidently, no policy can

³⁴ CPL-PLA-POE Peter Frampton proof Section 2; Developers' SoCG Sections 3 to 5

³⁵ SI 243/2011 *Renewable share* is defined as *the share of energy from renewable sources in the United Kingdom as calculated in accordance with Article 5 of the Directive* – CD/COM/037

³⁶ The UK Low Carbon Transition Plan (CD/COM/027) – SoCG at paragraph 5.20

³⁷ **Bushell v SoSE** [1980] 2 All ER 608 HL

transmute an immaterial consideration into a material one, or vice versa. The policy-maker is not bound slavishly to follow his/her/its own policy – but any departure from such policy must be justified by clear and cogent reasons³⁸. And there must be a consistent approach to the construction of policy; such construction may ultimately be a matter for the courts³⁹.

30. The prevailing policy matrix fully reflects the general acceptance of the urgency and importance of responding to climate change by, *inter alia*, the bringing forward of renewable energy projects. The question is whether this proposal should come forward to assist in achieving the sort of objectives agreed to be necessary in responding to climate change. The present site and its surroundings are – and will remain – as much subject to the adverse effects of climate change as are other places.

31. The Energy White Paper 2007⁴⁰ stated, amongst other things:

New renewable projects may not always appear to convey any particular local benefit, but they provide crucial national benefits. Individual renewable projects are part of a growing proportion of low-carbon generation that provides benefits shared by all communities both through reduced emissions and more diverse supplies of energy, which helps the reliability of our supplies. This factor is a material consideration to which all participants in the planning system should give significant weight when considering renewable proposals. These wider benefits are not always immediately visible to the specific locality in which the project is sited. However, the benefits to society and the wider economy as a whole are significant and this must be reflected in the weight given to these considerations by decision makers in reaching their decisions.

This cited extract referred not only to the climate change benefits of renewable energy but also to the security-of-supply advantages; the strategic importance of this latter element – namely access to energy supplies which avoid the state's and its citizens' being held to ransom – is self-evident but, surprisingly, often ignored. CP's case is that any impacts of LR will not be unacceptable. But, even were CP wrong in that, any adverse impact must still be weighed

³⁸ **Gransden v SoSE** [1986] JPL 519, at 521; upheld at [1997] JPL 365

³⁹ **Tesco Stores v Dundee City Council** [2012] SC 13

⁴⁰ May 2007 (FWLC-PLA-002– Box 5.3.3; CPL-PLA- POE Frampton proof paragraphs 2.4 and 2.9

against the wider national and global imperative. The White Paper also, and unusually, specified the weight to be attached to renewable energy; the fact that this was not simply left to the decision-maker's discretion presumably reflects the overriding importance of bringing forward such projects.

32. Renewable generation needs to be brought forward wherever it can be, subject to its being acceptable when the overall balance is properly drawn. For example, the 2007 White Paper put the question of 'need' beyond doubt when it confirmed that⁴¹:

Recognising the particular difficulties faced by renewables in securing planning consent, the Government is also underlining that applicants will no longer have to demonstrate .. the need for their particular proposal to be sited in a particular location

This also re-confirmed that there is no need to deal with alternative sites. NPS EN 3 reiterates the urgency of the renewables need⁴²:

Paragraph 3.4.1 above sets out the UK commitments to sourcing 15% of energy from renewable sources by 2020. To hit this target, and to largely decarbonise the power sector by 2030, it is necessary to bring forward new renewable electricity generating projects as soon as possible. The need for new renewable energy electricity generation projects is therefore urgent.

33. The UK has not performed well in terms of meeting the relevant targets for the provision of energy from renewable sources⁴³; Mr Stewart for RES summarised the correct position orally during the planning-balance session. It should also be noted that the Welsh Government does not have devolved powers in respect of energy policy; thus, whilst Welsh policy must be taken into account, the policy context is provided by UK and national energy policy⁴⁴.

34. Matter 2 expressly refers to NPS EN 1 and 3. These are dealt with both in the evidence of Mr Frampton and the SoCG. For present

⁴¹ CPL-PLA-POE Frampton proof paragraph 2.9

⁴² COM-001 NPS EN1 para 3.4.5

⁴³ CPL-PLA-POE Frampton proof, eg paragraph 2.20

⁴⁴ TAN 8 paragraph 1.3 – CD/COM/016

purposes it may be sufficient merely to stress one point, namely that:

Modern onshore wind turbines that are used in commercial wind farms are large structures and there will always be significant landscape and visual effects from their construction and operation for a number of kilometres around a site (emphasis added)

This is but one recognition by the Government that some adverse impacts almost always 'go with the territory'. This further underpins that LR – in delivering landscape and visual benefits over the existing situation - differs fundamentally from the norm; this can only reinforce the acceptability of LR.

Welsh policy and advice

35. Welsh policy and guidance is rehearsed in Mr Frampton's proof⁴⁵ and the SoCG⁴⁶. For present purposes it suffices to stress the various points. First:

- a. As the Welsh Government accepts⁴⁷, LR - as a repowering scheme - falls into a different category from the other proposals here; *..Llandinam falls just outside SSA C. The Llandinam application is a re-powering of an existing development. The Welsh Government's policy in relation to the re-powering of existing developments which fall outside SSAs is that they should be encouraged **provided** that the environmental and landscape impacts are acceptable (Section 2.14, Technical Advice Note 8, Welsh Government, 2005).*
- b. Paragraph 2.14 of TAN 8 provides that *There will also be opportunities to re-power and/or extend existing wind farms which may be located outside SSAs and these should be encouraged provided that the environmental and landscape effects are acceptable.*
- c. The Welsh Government assumes, against LR, that the proposal falls outwith the relevant SSA boundary. This is correct in so far as regards the original TAN 8 boundary for SSA C⁴⁸. Here, of course, PCC has carried out a refinement exercise and LR lies wholly within the boundary as so refined. This reinforces the policy support which LR attracts⁴⁹.
- d. LR falls to be considered against the baseline not of an undeveloped site but of a site (i) which includes an existing wind farm with a materially greater number of (smaller) turbines (and with materially less installed capacity – 31MW)

⁴⁵ Paragraphs 3.8 to 3.46 and 4.2 to 4.28 CPL-PLA-PF-POE Peter Frampton proof session 1

⁴⁶ Sections 6 and 7

⁴⁷ Welsh Government letter of 21st January 2013 – CON-001-002

⁴⁸ TAN 8 paragraph 2.4 expressly envisages TAN 8 boundaries being open to refinement by local planning authorities

⁴⁹ As noted in PCC's Interim Development Control Guidance Onshore Wind Farm Developments ("IDCG") – at paragraph 2.2 – *The second draft of the IDCG was formally authorised by Powys County Council's Board on 22nd April 2008 for use in development control with immediate effect*

and (ii) where no condition determines the life of the existing permission or requires decommissioning.

- e. LR is additionally marked out by the fact of there already being a pending grid-connection application which is proceeding in parallel. That grid connection uses wood-poles and thus is TAN 8 compliant.

36.Second, PPW provides⁵⁰:

In the short to medium term, wind energy continues to offer the greatest potential (for activities within the control of the planning system in Wales) for delivering renewable energy. Wales has an abundant wind resource and power generation using this resource remains the most commercially viable form of renewable energy. The Welsh Government accepts that the introduction of new, often very large structures for onshore wind needs careful consideration to avoid and where possible minimise their impact. However, the need for wind energy is a key part of meeting the Welsh Government's vision for future renewable electricity production as set out in the Energy Policy Statement (2010) and should be taken into account by decision makers when determining such applications.

*The most appropriate scale at which to identify areas for onshore wind energy development is at an all-Wales level. Technical Advice Note 8: **Planning for Renewable Energy (2005)** identifies areas which, on the basis of substantial empirical research, are considered to be the most appropriate locations for large scale wind farm development; these areas are referred to as Strategic Search Areas (SSAs). The detailed characteristics of SSAs and the methodology used to define them are outlined in TAN8 and its Annexes. Development of a limited number of large-scale (over 25MW) wind energy developments in these areas will be required to contribute significantly to the Welsh Government's onshore wind energy aspiration for 2GW in total capacity by 2015/17...; UK and European renewable energy targets; to mitigate climate change and deliver energy security.*

Notwithstanding the words in parenthesis, the cited extract has resonance for present purposes. Irrespective of the weight – or lack

⁵⁰ PPW (Rev 6) paragraph 12.8.12-13; this has been submitted by RWE but, at the time of writing, has yet to be given a reference number

of it, *per* the Alliance – to be attached to TAN 8, the position remains the same. It is noteworthy that the latest iteration of PPW (February 2014) postdates the start of this inquiry and re-asserts the importance of TAN8. There is acceptance of the substantial role for onshore wind energy in Wales; and, whilst Welsh policy is to be taken into account (see above), the context is provided by UK and national policy – this matrix provides the clearest imperative for bringing forward renewable energy, of whatever type, wherever it achieves a positive overall balance.

37.Third, so far as regards TAN 8 itself:

- a. By letter to all chief planning officers⁵¹ the WG identified changes to the text of TAN8. These included confirmation that paragraph 2.5 (and Table 1 – giving indicative capacity targets for SSAs) of that document had been superseded by “A Low Carbon Revolution: Wales Energy Policy Statement”⁵².
- b. The WG letter of July 2011⁵³, *inter alia*, indicated the Garrad-Hassan-identified maximum capacities for each SSA were the basis for the estimates of potential in the Low Carbon Revolution document. Whilst the WG expectation may be that *...the Strategic Search Areas have a finite environmental capacity and output should not exceed the maximum levels as assessed in 2005...*, that does not in itself represent policy. In any event, that expectation falls to be construed and applied in the context of the prevailing legal requirement⁵⁴ for the UK’s achieving *a renewable share in 2020 [of] at least 15%*.
- c. Moreover, even if one ignores the target of ‘at least 15%’ and additionally treats the 2011 WG letter as policy, such ‘policy’ does no more than reveal an expectation based upon strategic search. That expectation may form the starting point for considering any individual proposal. But the site-specific assessment of a given proposal may well show that, even if exceeding that capacity upon which the WG’s expectation was based, it can still come forward without unacceptable impact. Such a result would not be surprising

⁵¹ CPL-008 WG letter of 28th February 2011 re Publication of Planning Policy Wales Edition 4

⁵² CD/COM/009

⁵³ CD/COM/020

⁵⁴ EU Renewables Directive; Promotion of the use of Energy from Renewable Sources Regs 2011

given two matters: first, strategic assessment must yield to the site-specific; second, changes in turbine technology, with increased generating capacities for individual turbines, necessarily render installed capacity expressed in MW a comparatively clumsy, even out-dated, yard-stick by which to judge environmental capacity and acceptability. Thus, consenting a scheme which would result in expected MW levels being exceeded in a given SSA involves no necessary breach of policy. And, even were a different view taken of Welsh policy, such policy must be read and applied in the overall UK context here.

- d. The latest iteration of PPW (Revision 6) was published this February. It expressly endorses the TAN 8 approach. The publication of this Revision, some 30 months after the Minister's letter of 2011, offered the opportunity for the WG expressly to impose a capacity cap as a matter of policy; significantly and decisively the Revision does not do that.

- e. Finally and in any event, as already noted, LR as a re-powering scheme etc, is not caught by any such policy debate. For example, the WG letter of January 2013⁵⁵ makes clear that that re-powering schemes fall to be considered separately from new proposals and are not affected or limited by any capacity constraints. LR can be consented irrespective of the approach taken to this aspect of Welsh policy.

Development plan

38. It is agreed that section 38(6) is not here engaged. But, even were the case otherwise – or the development plan to be regarded as a material consideration of such importance that the approach was the same as would be the case under section 38(6) – the development plan would still here need to be construed and applied in the context of the other policy and legal requirements⁵⁶.

39. The concept of accord with the development plan – whether required by statute or merely arising as a material consideration -

⁵⁵ CON-001-002

⁵⁶ Section 38(6) of the 2004 Act provides: *If regard is to be had to the development plan for the purpose of any determination to be made under the planning Acts the determination must be made in accordance with the plan unless material considerations indicate otherwise.*

does not require compliance with each and every policy thereof. The courts have confirmed that, in the context of the old section 54A of the Town and Country Planning Act 1990 (and, by parity of logic, one presumes, section 38(6) of the 2004 Act), it is necessary to read the development plan as a whole. It must also be read in the context of subsequent policy and legislative intervention. On any reasonable analysis, the overall dominant theme or policy matrix is that relating to bringing forward renewable energy to meet targets. LR accords with that theme, and with the policy which enshrines it, namely Policy E3 Wind Power⁵⁷; in any event, the other material considerations militate decisively in favour of consent issuing, even were there some material failure to accord with the development plan.

⁵⁷ CD/COM/006

Overall

40.LR wholly accords with relevant policy. Even were the SofS to reject that primary submissions – ie to find some material failure to accord with policy – other material considerations militate decisively in favour of consents issuing for LR.

Matter 4 – The individual and combined landscape and visual impact of the proposed development....; and cumulative impact with other wind farms in the Powys area which have been already been granted planning permission or where planning permission has been applied for [Reference to Snowdonia National Park deliberately omitted – only relevant to SSA B]

Landscape and visual - General

41. In circumstances where Messrs Welch and Russell-Vick – for CP and PCC respectively – reach substantially similar conclusions on both the benefits and overall acceptability of LR, it is not necessary to repeat that evidence⁵⁸. These closing submissions merely refer to and adopt that material. For the present it suffices to stress:

- a. PCC has concluded⁵⁹ that LR *can now be considered acceptable in landscape and visual terms*. This conclusion by PCC is fleshed out in the L&V SoCGs for Sessions 1 and 4 respectively⁶⁰. In such circumstances, the relevant planning authority raises no objection, cumulatively or alone, to LR, whether in terms of landscape impact, visual effects or residential amenity.
- b. Moreover, PCC's own expert, Mr Russell-Vick, expressly and fairly acknowledged benefits accruing from the substitution of LR for the existing P&L wind farm⁶¹. He amplified these orally when giving evidence during Session 1; he identified, *inter alia*, what he viewed as the existing wind farm's clutter, stacking and speed of blade rotation as significant existing detractors (acknowledging that the existing wind farm enjoyed a permanent rather than merely temporary permission). He contrasted the present situation with the benefits which would accrue with implementation of LR, the latter being a *more graceful and better fit*. He also identified that, personally, he *would have given it a bigger tick than, perhaps, Mr Welch and the SEI*.

⁵⁸ See evidence of Welch and Russell-Vick for Sessions 1 and 4

⁵⁹ OBJ-002-OSOC-2 PCC SofC at paragraph 6.3.2

⁶⁰ CPL-SOCG-009a, CPL-OBJ-002-SOCG-LAND-S4 and SOCG-LAND-S4

⁶¹ See PRV proofs for Sessions 1 and 4 – OBJ002-PCC-LAND-POE-RUSSELL-SSA-C, especially at section 5 and OBJ-002-LAND-POE-RUSSELL-S4

- c. NRW has withdrawn its objection in respect of the Caersws Basin Landscape of Special Historic Importance⁶². It has advanced no specific, evidentially supported L&V objection to LR.

- d. The Session 1 evidence adduced for the Alliance by Mr Watkins was limited to landscape impacts and was expressly cross-referenced to the PCC evidence; it is assumed that this reflects acceptance by Mr Watkins of at least those of Mr Russell-Vick's points which relate to visual impacts and residential amenity. Despite this, Mr Watkins still sought to argue that LR was unacceptable in landscape terms; this assertion is difficult to reconcile with Mr Russell-Vick's more nuanced, subtle and detailed approach. It is also noteworthy that Mr Russell-Vick takes the correct baseline for his assessment, namely the existing, permanent P&L wind farm; it is far from clear that Mr Watkins has adopted this approach and, to the extent that he has not, his downstream assessment is yet more and irredeemably flawed. Even were one wholly to reject the views of Messrs Russell-Vick and Welch to the extent they differ from that of Mr Watkins, the latter's generalised and limited assertions cannot begin to provide a legitimate, reasoned basis for refusal. Mr Watkins's Session 4 evidence was yet more generalised and failed to grapple with the essential acceptability of replacing the existing P&L wind farm with LR.

42. The above evidence also, and in any event, needs to be considered in the wider landscape and visual context. The various landscape witnesses have considered the various impacts, both in so far as adverse and where, as in the view of Messrs Russell-Vick and Welch, beneficial. In so far as there are adverse effects – and ignoring for a moment the benefits – these need to be weighed in a wider landscape balance; this is because (part of) the very essence of bringing forward renewable energy schemes is to arrest and redress the deleterious effects of climate change on receptors such as landscape and views, both generally and with particular regard to the receptor landscape and views in this part of Mid-Wales. It is thus necessary, and wholly independent of any drawing of the final planning balance, to ensure that these wider though necessarily less tangible landscape and visual benefits are given proper consideration in reaching a conclusion on the L&V issue. In other words there is an additional netting-off exercise which needs to be carried out. This can only have the effect of making LR yet more acceptable.

⁶² NRW letter dated 24th May 2013; CON-003-003

43. PCC acknowledges a need to consider an incremental approach to in-combination/cumulative assessment; but it also seemingly asserts a requirement to identify an appropriate cut-off above which additional wind farms should be refused, even if any incremental effect is not unacceptable. The evidence of Mr Russell-Vick is only of limited help in this latter respect. But, and in any event, LR – by virtue of its very special (and arguably uniquely acceptable) circumstances - falls to be taken as the first scheme in any building-block approach. Even were one to adopt PCC's approach, the question is thus not whether LR should come forward at some stage but simply which schemes should come forward after LR has been consented. In everyday language, LR falls to be consented even were all other schemes before these conjoined inquiries to be refused; PCC effectively adopts this approach and, in so far as concerns SSA C for example, asserts that the only additional scheme after LR should be the northern portion of Llaithddu. For its part, CP does not argue that the other schemes should not be consented but merely stresses its own primacy in terms of acceptability.

44. NPS EN3 indicates⁶³:

Modern onshore wind turbines that are used in commercial wind farms are large structures and there will always be significant landscape and visual effects from their construction and operation for a number of kilometres.

and;

The time-limited nature of wind farms, where a time limit is sought as a condition of consent, is likely to be an important consideration for the [decision-maker] when assessing the impacts such as landscape and visual effects and potential effects on the setting of heritage assets. Such judgements should include consideration of the period of time sought by the applicants for the generating station to operate and the extent to which the site will be returned to its original state may also be a relevant consideration.

These two citations are of central importance. First, one might legitimately question the extent to which the first quotation properly encapsulates a situation where many of the significant

⁶³ CD-COM-002 NPS EN3 paras 2.7.48 and 2.7.17

impacts are positive and not negative; thus, on this score alone, LR performs materially better than almost any other wind farm. Second the temporal nature of LR is of paramount importance. Whereas the existing P&L wind farm - with its permanent permission and absence of decommissioning and restoration requirements - carries with it no enforceable mechanism for return to the *status quo ante*, implementation of LR will be subject to a fixed duration for the development and an enforceable return to a pre-wind farm landscape at the end of that period. These two factors reinforce LR's almost unique position in policy terms and militate decisively in favour of its being consented.

45. As the former SDC indicated⁶⁴:

Recent changes to planning guidance across the UK require local decision-makers to consider national energy priorities when deciding on local renewable energy projects, and in many cases it is now unlikely to be enough to reject an application on landscape grounds alone. Considering the high level of national and often local support for wind power this seems a reasonable approach in cases where there is no special landscape designation.

There is a strong case for viewing wind developments as temporary structures, pending longer-term approval on landscape grounds. As a full decommissioning is usually possible, lasting objections could potentially be remedied by on a case-by-case basis by the eventual removal of the turbines at the end of their working lives. The energy options will have changed by then, and other technologies may be available. However, it should also be recognised that landscape change has a long history and that what may seem alien now may become accepted over time. Evidence suggests that hostile opinion towards wind farms tend to soften after they are commissioned, and there is no reason to believe this trend will not be replicated at future developments.

Any concern that UK landscapes will be ruined wind farm developments needs to be balanced against the widespread harm that climate change itself could cause. Previous chapters have shown that wind power is a practical and viable solution to climate change as part of the much wider societal and economic change that is necessary. The development of onshore wind power will make a major

⁶⁴ CPL-PLANNING-BALANCE-POE-APP4—FRAMPTON: SDC *Wind Power in the UK* at 6.9. Again, LR notes that the SDC has ceased to exist and relies on the quotation simply as a helpful encapsulation of a number of points. NB the Guide remains available on the internet.

contribution to meeting renewable energy targets, and it is not practical to expect offshore wind, which is significantly more expensive, to do this alone.

Overall

46. In the result, there can be no L&V reason for refusal. Moreover, it is important to carry forward into the overall balance the clear L&V benefit delivered by LR as against the existing baseline.

Matter 5 – The individual and cumulative impact of construction traffic on the surrounding locality, including transportation access routes and traffic management, taking into account the cumulative impact with other wind farms in the Powys area which have been granted planning permission or where planning permission has been applied for.

General

47. These Closing Submissions adopt, without repeating, the proofs and other material submitted to the inquiry by Mr Tucker on behalf of CP.

Local access to the site

48. The Welsh Government (“WG”) raised matters going only to the trunk road network. As Mr Tucker explained orally⁶⁵, the WG is content with access to the site from the trunk road. PCC indicated⁶⁶ that it had *...no objection to the local access arrangements subject to imposition of conditions and satisfactorily resolving the issue regarding the stand of mature trees adjacent to the U2835*. CP has secured land such that a diversion around the relevant stand of trees can be achieved. Thus no local objection remains in respect of local access from any relevant highway authority.

49. NRW originally raised a concern re an asserted lack of a co-ordinated approach between CP and those promoting Llaithddu as regards proposed modifications to the minor road running from the junction of the A483 to the site entrances to the two sites. Following discussions with PCC, NRW has confirmed⁶⁷ it is happy to leave such matters to PCC – who do not have any such objection; thus NRW has no remaining issues of significance to raise under Matter 5.

Non-local and strategic access and AILs

⁶⁵ Session 1 Day 1

⁶⁶ OBJ-002-(PCC)- TRANSPORT-POE-WILLIAMS-SSA-C Williams proof paragraph 45; see also CPL-SOCG-006

⁶⁷ CON-003-011

50. So far as concerns non-AIL traffic generally, Mr Axon has advised PCC that such movements will be reasonable and not of sufficient scale to maintain an objection⁶⁸; PCC has accepted that advice. Nor does WGT raise any such objection.

51. As regards AILs, Mr Axon has concluded⁶⁹ that *...Llandinam AILs are capable of being appropriately accommodated by the [southern] route and has no ...preference in principle between the use of Ellesmere Port and Newport for the transport of Wind Farm components from ship to shore. I understand that PCC also supports the use in principle of either route.*

52. By letter dated 25th February 2014⁷⁰, the WGT confirmed it had revised its position, no longer objecting to LR, and identified the conditions it wishes imposed. It had already confirmed, in its letter of 21st January 2014⁷¹ that it had no objection in principle to the southern route. The WGT has re-confirmed its position⁷² by letter dated 28th March 2014 and has no objection in principle. It is confident that an engineering solution to the Crossgates Bridge can be found; it further confirms that, so far as concerns the Bailey bridge crossing, WG's only remit is the tie-in points for the private haul road with the trunk road – and it is satisfied these can be dealt with as matters of detailed design at that later stage. PCC sees no reason in principle why planning permission should not be granted for the Bailey bridge⁷³.

53. Llaithddu and LR have agreed a joint statement⁷⁴ relating to the strategic transport routes proposed for delivery of turbine parts and other AILs on the trunk road network. This deals *inter alia* with the question of such deliveries to both schemes concurrently. As there identified, there are two significant reasons why this could not occur: First, the two grid connection dates are materially separated, with LR's being 2017 against Llaithddu's 2019; second, the Police have advised that they will not allow two convoys on the same part of the network at the same time. There is no basis for concluding other than that concurrent use cannot and will not occur.

⁶⁸ OBJ-002-TRANS-POE-AXON-S4 Axon Proof Session 4 at para 2.29

⁶⁹ *ibid* Axon Session 4 Proof at 2.25 and 26

⁷⁰ CON-001-POE-S4-CPL, WGT indicated it accepted

⁷¹ CON-001-SOC-S4-CPL

⁷² CON-001-008-Response to Inspector's questions

⁷³ PCC Submissions at para 985

⁷⁴ FWL-CPL-SOCG-TRANS-S4

54. There is clearly a significant planning advantage in the proposed use of the southern route for AILs; it is deliverable, including obtaining the necessary consents, without any appreciable delay to LR. It will thus facilitate prompt delivery of the enhanced renewable generation which LR will unlock. Nor can the uncertainties in respect of the sTMP route – including timescales and mechanisms for delivery of shared works by the relevant applicants – sensibly be ignored⁷⁵. Mr Tucker also identifies the northern route's reliance on major improvements to the A483 through Dolfor and the associated link to the Mochdre Estate. In all the circumstances, the southern route allows LR to come forward without the significant delay which would accrue were LR to be required to use the sTMP route. In saying that, CP does not seek to criticise the northern - ie sTMP – route; it merely notes the elements of that route which have yet to be fully resolved and finalised. The point CP makes is thus that the southern route, even put at its lowest, involves no greater uncertainties than the northern; and, in the case of LR, the southern route allows the scheme to proceed without delay.

55. Of additional note are the material advantages offered by the southern route in allowing AIL deliveries between Newport Docks and the LR site in a single day; without need of overnight layover. Such layover is unavoidable with the northern route.

Overall

56. There is thus no objection from either relevant highway authority and no basis, whether alone or in combination, for refusing LR on transport grounds.

57. The evidence of Mr Durgan is noted but it cannot sensibly stand against the robust evidence from, and detailed aspects of agreement between, Mr Tucker for CP and those experts who advise WGT and PCC. Mr Tucker has commented, orally in Session 1 and in writing and orally in Session 4⁷⁶, on these and other points made by objectors; it is unnecessary to reiterate those responses.

⁷⁵ CPL-TRANS-POE-TUCKER-S4 Tucker Session 4 Proof paras 7.1-2

⁷⁶ CPL-TRANS-STATEMENT-TUCKER-S4 responding to Durgan proof

Matter 6 – The individual and combined impact of the noise generated during the construction and from the operation of the proposed development taking into account the cumulative impacts with other wind farms in the Powys area which have already been granted planning permission or where planning permission has been granted

General

58. The starting point is PCC's acceptance that the appropriate noise levels can be met for LR, both alone and in combination/cumulatively⁷⁷. That agreement extends to include ETSU-R-97 limits, tonal noise, low frequency noise, infrasound, ground-borne vibration and amplitude modulation ("AM" – further submissions re AM are made below). This agreement is important given that it represents 'sign-off' by the local environmental health authority on the basis of clear professional advice from that authority's appropriately qualified expert.

59. The agreement with PCC also includes construction noise; the relevant controls include the specific powers to control construction noise under sections 60 and 61 of the Control of Pollution Act 1974 and the use of condition(s) to control working hours.

60. The Alliance has had the opportunity to provide expert evidence in so far as it disagrees with the joint opinion of PCC and CP – ie qualitative evidence - and to produce its own calculations/measurements in so far as it disagrees with the quantitative material provided by CP. I deal with AM below; in all other respects, the objectors have substantially failed to call evidence - as opposed to assertion - and thus advance no technically competent objection of substance. To the extent that objectors have called subjective evidence of residents' experiences at other wind farm(s), this has again fallen short of quantitative evidence to substantiate any precisely measured or calculated impact at such other wind farm(s). In any event, there is no evidence to support any tenable conclusion that such effects will occur at LR.

⁷⁷ CPL-SOCG-004a-NOISE

Amplitude modulation - AM

61. As identified by Mr Hayes in his Session 1 evidence⁷⁸, ETSU-R-97 already takes account of AM. The question thus concerns enhanced or excessive AM, if and where it were to occur. In that document Mr Hayes' evidence then goes on to deal with and respond to the various points raised by Mr Weller in his Session 1 proof on behalf of the Alliance.
62. A Joint Statement on AM, produced by the experts for the various applicants, is at Appendix A of Dr Bullmore's Session 4 proof⁷⁹. Enhanced AM is not an inherent feature of wind turbines and does not occur at all sites. It should also be borne in mind that there exists the statutory nuisance regime which, the SofS may conclude, offers a more flexible and precise tool to deal with any risk of enhanced AM than an AM condition⁸⁰. RWE has produced a helpful Note summarising the difficulties with an AM condition⁸¹.
63. In the premises, the SofS may well feel entitled to conclude that an AM condition is neither necessary nor appropriate here. CP notes the various, very recent decisions, referred to and submitted by RWE, where the SofS has chosen not to impose an AM condition⁸². One notes that Mr Bufton, a senior environmental health officer and the acoustic expert on behalf of PCC, expressly declines to argue that an AM condition is required⁸³. If, however, the Secretary of State decides to impose a condition, it should be in the form suggested by Dr Cand⁸⁴.

Health/noise interface

⁷⁸ FWLC-008-Amplitude-Modulation-Malcolm-Hayes

⁷⁹ APPLICANTS-NOISE-POE3-BULLMORE-SESSION4

⁸⁰ PCC seemingly asserts that the statutory nuisance regime prevents nuisance rather than protecting amenity (PCC closing submissions, footnote 1134 to paragraph 918) . Even assuming that is more than a distinction without a difference, it fails to explain or justify why the statutory nuisance regime is other than wholly appropriate for present purposes.

⁸¹ Carnedd Wen note for the Conditions Session re Condition Relating to Amplitude Modulation

⁸² Submitted by e-mail dated 26.v.14, by RWE; at the time of writing no reference number yet allotted

⁸³ OBJ-002-NOISE-BUFTON-S4 at para 6

⁸⁴ CPL-014-Dr Cand Note on Noise

64. Dr Myhill's proof⁸⁵ asserts health impacts in so far as concerns noise from turbines ie operational noise. The proof appears for the most part to contain the results of an internet trawl. No site-specific calculations or survey material are provided in so far as concerns the applications before these inquiries. The material relied upon is used merely to make general and somewhat vague assertions re wind farms generally; it seemingly makes no specific reference to the wind farms here being considered. Dr Cand has provided a detailed rebuttal of Dr Myhill's assertions and concludes⁸⁶:

In conclusion, there currently exists no evidence that noise and vibration generated by wind turbines causes any specific health effects. Whilst a proportion of people living near wind farms may experience annoyance and or stress caused by audible noise that may lead to impacts on health, this is no different from any other development that generates noise. Consequently, there is no reason to treat the impact of noise from wind farm development any differently to noise from other form of development.

Compliance with ETSU-R-97 means that, although noise may be audible in some conditions, noise levels would be considered to have an acceptable impact on existing communities and will therefore accord with the requirements of national and local planning policy.

Dr Cand also provides a detailed and cogent critique of Dr Myhill's approach to AM and her suggested condition⁸⁷.

Overall

65. No noise or noise-related health matter can here amount to a reason for refusing LR. The SofS is further entitled to conclude that no AM condition is required or appropriate; even were he to take the view that such a condition were necessary, it should be on the lines advanced by Dr Cand.

⁸⁵ ALL-S4-POE-07

⁸⁶ CPL-NOISE-REBUTTAL-S4-Rebuttal of Dr Myhill at 1.15-6

⁸⁷ *ibid* paras 1.17-21

Matter 7 – The individual and cumulative impact of the proposed development of the proposed development on biodiversity, including the ecological functioning of ... the River Wye SAC; impacts on European Protected Species under Conservation of Habitats And Species Regulations 2010 (as amended) (“the Habitats Regulations”); and the likely effectiveness of proposed mitigation measures

Preliminary

66. The submissions under this Matter deal only with such issues as were raised by the relevant statutory bodies - though all such issues have since been settled with the body raising them. So far as concerns the various, generalised concerns raised by others – and unsupported by quantitative analysis – CP refers to its environmental material and the proofs of its relevant experts; there is no substance in such concerns and it is unnecessary to deal with them here. As regards peat, CP recognizes this can be seen to have a biodiversity element but this aspect is more appropriately dealt with under Matter 13 below.

River Wye SAC (and mitigation)

67. As detailed above in the Introduction, NRW has now accepted that the SAC aspect can be appropriately dealt with and does not represent a reason for refusal of the two LR applications before this inquiry; see SoCG⁸⁸. That SoCG also deals with the Bailey bridge crossing, though this is not the subject of the present applications; in that respect CP and NRW agree that (i) there is no reason to believe there will be a likely significant effect on the SAC as a result of the construction and use of the Bailey bridge, whether alone or in combination and (ii) it should be possible through appropriate mitigation - secured by conditions attached to any Bailey bridge planning permission – to conclude it will not adversely affect the integrity of the SAC.

68. There is no other appropriately qualified expert evidence of any substance to contradict the agreement between NRW and CP. In the result, no issue remains.

⁸⁸ CPL-SOCG-HYDRO-CON-003-S4

Protected species (and mitigation)

a. Bats

69. NRW has concluded that there would be no likely significant effect upon bats nor any likely detriment to the favourable conservation status of bat species. It has therefore withdrawn its objection to LR⁸⁹.

70. There is no other appropriately qualified expert evidence of any substance to contradict NRW's view. No reason for refusal in this respect arises.

b. Curlew

71. There is agreement of common ground between CP and NRW; the latter has withdrawn its LR objection, subject to the imposition of agreed conditions⁹⁰.

72. There is no other appropriately qualified expert evidence of any substance to contradict NRW's view. No reason for refusal in this respect arises.

c. Other protected species

73. No other outstanding issues arise so far as concerns NRW. Nor is there any appropriately qualified expert evidence of substance capable of raising any other issues. CP refers generally to the extensive written evidence and other material provided by its various experts, in both Sessions 1 and 4, which deal with all ecological matters (including curlew, bats and the SAC); that evidence is comprised in the various proofs and other material provided by Ms Walker, Dr Holloway, Dr Whitfield, Mr MacArthur and Mr Parker. Reference is also made to the original ES and subsequent SEI material. The various mitigation measures are dealt with in those proofs, and in the LR environmental material, in so far as appropriate.

⁸⁹ CPL-SOCG-001A-BATS

⁹⁰ CPL-SOCG-002B-ORNITHOLOGY

74.No reason for refusal arises.

Alliance/objector points

75.Mrs Davies provided a proof of evidence for Session 4 dealing with Wildlife and Ecology⁹¹. The proof is generic rather than specific. A Rebuttal Proof is provided by Mr MacArthur⁹². Mrs Davies's points do not alter the submissions already made above.

Overall

76.Overall, whether viewed alone or in combination, no issue remains under Matter 7 to preclude consents issuing for LR.

⁹¹ ALL-S4-POE-06

⁹² CPL-ECOLOGY-REBUTTAL-MACARTHUR-S4

Matter 8 – The individual and combined social and economic impact of the proposed development, including on tourism

77. A convenient starting point is PCC's confirmation that it raises no objection in respect of the matters covered by Matter 8⁹³. That is the more significant since PCC originally had reserved its position in this respect and only confirmed its absence of objection after it had carried out specific investigations. PCC stated⁹⁴:

"The Council have now concluded their investigations and has concluded that, given the siting of the proposals within SSA's and given that the proposals are for nationally important infrastructure projects, there is insufficient evidence to support an impact on socio-economic interests of sufficient magnitude to give rise to a refusal of some or all of the projects on this ground. In the circumstances the Council do not intend to call evidence on the socio-economic impacts of these developments and do not intend to pursue an argument that they should be refused on that basis".

78. Further assistance in approaching this Matter is found in EN 1 which indicates⁹⁵:

The [decision-maker] should have regard to the potential socio-economic impacts of new energy infrastructure identified by the applicant and from any other sources that the [decision-maker] considers both relevant and important to its decision.

The [decision-maker] may conclude that limited weight is to be given to assertions of socio-economic impacts that are not supported by evidence (particularly in view of the need for energy infrastructure as set out in this NPS).

79. Further important considerations are as follows:

- a. The underlying cause of concern of the Alliance and other objectors is the asserted effects on the environment, especially but not exclusively in landscape and visual terms; these allegedly translate into adverse socio-economic effects,

⁹³ PCC Updated Outline Statement of Case Addendum 1 OBJ-002-OSCO-2-ADD Addendum to revised statement of case

⁹⁴ OBJ-002-OSCO-2-ADD Addendum to revised statement of case, paragraph 2.4

⁹⁵ CD-COM-001 paras 5.12.6-7

including on tourism. The Alliance identifies the receiving environment of concern under this Matter⁹⁶ thus:

The overriding characteristic is the unspoilt, tranquil landscape and outstanding, panoramic views. It is a rural, mainly upland hill farming, area with fertile green valleys providing good grazing land; market towns and business parks.

It is the asserted adverse impacts on this receiving environment which broadly underpin the objectors' socio-economic objection.

- b. The Alliance and other objectors fail in this context to acknowledge the reasons underlying the strong national and international support for renewable energy, namely to stem or reverse the deleterious environmental effects of climate change on just such receiving environments and to provide energy security. The landscape (and ecology) in Mid-Wales, so lyrically described by the Alliance, is no more immune to the deleterious effects of climate change than landscape anywhere else. And neither business nor tourism interests are likely to welcome or benefit from any shortfall in energy security.
- c. To the extent that the wind farms respond to deleterious climate-change effects (and improve energy security) – and even assuming, which is not accepted, the objectors were correct in every other aspect of their socio-economic objection – it would be unfair and wrong to ignore the very real and relevant benefits of renewable energy.
- d. In any event and unusually, LR carries with it material, scheme-specific benefits, including in terms of L&V and cultural heritage, as spoken to by CP's witnesses and expressly accepted by PCC's experts and others. Thus, even putting the objectors' case at its highest, LR's visual benefits would do their bit in making the area more attractive to tourists and businesses generally.

⁹⁶ ALL-S4-POE-04 at para 1.1

- e. Nor will traffic delays have any materially adverse effect on tourism. Mr Tucker's evidence⁹⁷ demonstrates that the impact on existing traffic will be minimal. This has not been challenged by either PCC or WG. And the Alliance has produced no quantitative evidence to challenge Mr Tucker's work.

80. Mr Frampton identifies⁹⁸ that, so far as he is aware, *..there is no evidence from other parts of the UK that the presence of wind turbines in the open countryside has resulted in measurable harm to a local tourist industry*. In this statement he is supported by the views of others, including Mr Cradick⁹⁹ and Mr Stewart¹⁰⁰. His view also echoes the conclusion reached by PCC after its independent research of the matter. These closing submissions rely also and generally on Mr Frampton's other treatment of the tourism issue¹⁰¹.

81. So far as concerns the wider socio-economic benefits:

- a. Mr Frampton¹⁰², amongst other things, (i) concludes that, if the WG ambitions for onshore wind are met, significant economic opportunities exist for the Welsh economy and (ii) cites and produces an onshore-wind-development report by Regeneris and the Welsh Economic Research Unit at Cardiff Business School indicating that £2.3 billion GVA could be added to the Welsh economy between 2012 and 2015 with over 2000 jobs on average per annum.
- b. The influential Stern Review¹⁰³ expressly concludes that the (economic) benefits of strong early action on climate change outweigh the costs. Were a simple 'Business as usual approach' (BAU) to be continued, i.e. simply to go on as we are:

⁹⁷ CPL-TRANS-POE-TUCKER-S4, especially paras 5.3-5 and 8.5

⁹⁸ CPL-PLANNINGBALANCE-POE-FRAMPTON at para 5.10

⁹⁹ RWE-SOCIOECO-POE-CRADICK-S4

¹⁰⁰ RES-TOURISM-POE-STEWART-S4 and RES-SOCIOECO-REBUTTAL-STEWART-S4

¹⁰¹ See CPL-PLA-PF-POE Peter Frampton proof at paras 4.61-65, CPL-009 Peter Frampton statement at section 2 and CPL-PLANNINGBALANCE-POE-FRAMPTON at Section 5

¹⁰² CPL-PLA-PF-POE Peter Frampton proof at paras 4.66-68

¹⁰³ CD-CPL-MIS-001 The Stern review: The Economics of Climate Change – Final report October 2006 – Executive Summary

In summary, analyses that take into account the full ranges of both impacts and possible outcomes – that is, that employ the basic economics of risk – suggest that BAU climate change will reduce welfare by an amount equivalent to a reduction in consumption per head of between 5 and 20%. Taking account of the increasing scientific evidence of greater risks, of aversion to possibilities of catastrophe, and of a broader approach to the consequences than implied by narrow output measures, the appropriate estimate is likely to be in the upper part of this range.

82. By way of aside, rights of way (so far as they affect tourism), are dealt with under Matter 15 below.

83. Overall it can be concluded that: first, there is no sustainable and evidentially justified objection to any of the projects before these inquiries; second, and in any event, no such objection can represent a reason for refusing LR (or its associated grid connection) given the material benefits which LR delivers over the existing situation with the P&L wind farm.

Matter 9 – The potential impact of the proposed development on human health

84. In so far as necessary and save for one point, this aspect has been covered above under Matter 6 – Noise. This is because that is the context in which such points have been taken by objectors.

85. So far as concerns shadow flicker, there is no objection from PCC. A detailed assessment is contained in the LR environmental material and there is no basis for withholding consent on this ground. Even were there potential for effects here, the turbines would incorporate the appropriate control mechanism and EN 3 helpfully confirms¹⁰⁴:

Modern wind turbines can be controlled such that the operation of individual wind turbines at periods when shadow flicker has the potential to occur at a specific property or group of properties can be inhibited on sunny days, for those properties, for specific times of the day, and on specific days of the year.

In circumstances where a wind turbine has the potential to affect a property, but is fitted with a mechanism to inhibit shadow flicker, the [decision-maker] should be able to judge the shadow flicker effects on that property to be of negligible significance.

86. There are no health grounds for refusing the LR consents sought.

¹⁰⁴ NPS EN3 paragraphs 2.7.68-69

Matter 10 – The impact of the proposed development on cultural heritage

Extent of objection (in so far as comprises the views of relevant experts)

87. NRW, CPAT, PCC and CADW have no cultural heritage objection to LR in its now proposed form; see in particular the statement of Common Ground between PCC and the evidence of Dr Edis¹⁰⁵. That lack of objection, from bodies with access to appropriately qualified, expert advice, is significant. Similarly, whilst the Alliance and other objectors raise various criticisms on LR in this respect, none is supported by any expert evidence and they must yield to the evidence of Dr Edis¹⁰⁶; see also the evidence of Mr Croft, encapsulating his advice to PCC. In particular, the evidence of Mr Kibble falls materially short of anything which could contradict the broad level of agreement between the relevant expert bodies¹⁰⁷; in giving evidence at Session 1, Mr Kibble very frankly accepted he had no relevant expertise or qualification in cultural heritage matters.

General

88. It must be recognised that, as with L&V, the reduction in LR turbine numbers and the resulting benefits acknowledged by Mr Russell-Vick apply equally when looking at cultural heritage issues. Here again, LR finds itself in an almost uniquely favourable position.

89. Similarly, the importance of the development's being temporary and reversible is material, as is the correct base-line for assessment – ie the existing P&L wind farm, with its permanent permission and absence of decommissioning requirement. EN 3 enjoins¹⁰⁸:

As explained in paragraphs 2.7.13 to 2.7.17 above, onshore wind turbines are generally consented on the basis that they will be time-limited in operation. The [decision-maker]

¹⁰⁵ CPL-SOCG-008-Cultural heritage

¹⁰⁶ CPL-HERITAGE-POE-EDIS-SSA-C, CPL-HERITAGE-REBUTTAL-SSA-C, CPL-012-Comments on Proofs of Andrew Croft and Martin Carpenter and CPL-CULTHER-POE-EDIS-S4;

¹⁰⁷ See also CPL-HERITAGE-REBUTTAL-SSA-C

¹⁰⁸ NPS EN3 at para 2.7.43

should therefore take into account the length of time for which consent is sought when considering any indirect effect on the historic environment, such as effects on the setting of designated heritage assets.

The change from the P&L wind farm to LR would thus represent a material advantage by establishing a finite life for the repowered wind farm, with clear decommissioning requirements.

90. CP recognizes and stresses the various statutory duties on decision-makers, including those under sections 66 and 72 of the Planning (Listed Buildings etc) Act 1990¹⁰⁹. Whether or not such statutory provisions duties are strictly engaged here, the duties they enshrine apply equally as material considerations; and the result is little different. A careful analysis of relevant heritage assets is to be found in the LR environmental material and, in so far as appropriate, in the evidence of Dr Edis. It is unnecessary to rehearse those matters further here.

91. In Session 1, Mr Croft accepted the approach to substantial harm adumbrated in the Airfield farm decision¹¹⁰ ie that such harm must be regarded as something approaching demolition or destruction. The case of **Bedford BC v SofS**¹¹¹ - where that Airfield Farm appeal decision was unsuccessfully challenged - was not overruled by the Court of Appeal in the **Barnwell Manor** case¹¹² but, as noted by PCC¹¹³, needs to be read in the light of that later Court of Appeal judgment.

92. It is unnecessary to take these submissions further in this respect. PCC accepts that Matter 10 does not raise any issue justifying refusal of the LR consents. Mr Andrew Croft's report on behalf of PCC identifies that LR can come forward not only in isolation but

¹⁰⁹ As to section 66, see PCC Legal Submissions at paragraph 15. As to section 72, and as expressly noted by CP during Session 1, that duty would not seem to be engaged here, given that the decision-maker is not here exercising any functions under any relevant Acts ... *with respect to any buildings or other land in a conservation area* – none of the LR development lies within a conservation area. But CP accepts that, even if section 66 and/or 72 are not engaged, the same duties devolve upon the decision maker as most material considerations; see also schedule 9 of the 1989 Act.

¹¹⁰ Accepted by Croft xx by Robinson Day 3 of Session 1: see Airfield Farm decision letter VATT-INS-11 – also High Court challenge CPL-12a-Appendix – 1- Judgement- Poddington.

¹¹¹ [2013] EWHC 2847

¹¹² [2014] EWCA Civ 137

¹¹³ PCC legal submissions at para 12

also with, *inter alia*, the northern portion of Llaithddu and Hirddywel; these PCC considers¹¹⁴ to be *acceptable in the context of relevant national policy*. In any event, and on a proper and fair analysis of the evidence, LR affords material benefits in cultural heritage terms over the existing situation. No cultural heritage reason for refusal arises.

¹¹⁴ OBJ-002-CULTHER-POE—CROFT-S4

Matter 11 – the individual and cumulative impact of the development on aviation

93. No relevant aviation body objects under this head. In particular, there is no objection from the MoD, either in respect of radar or of low flying. This last contrasts starkly with the submission of Mr Brebner which purports effectively both to raise, on behalf of the MoD, a low flying objection and, seemingly at the same time, to criticise the MoD generally. Mr Brebner neither asserts nor demonstrates any relevant expertise. He chose not to appear to xx Sqn Ldr Hale; and, by making his submission a written statement, he did not tender himself to be xx'd.
94. Mr Brebner's written submission¹¹⁵ falls to be considered against both the MoD's express lack of objection and the detailed, and appropriately professionally qualified, evidence of Squadron Leader Hale (Retd); the latter, now a private consultant, is himself a former fast-jet pilot of great experience and, more recently, the Officer Commanding the Low Flying Operations Squadron ie he was the man appointed by the RAF, on behalf of military aviation generally, to assess wind farm proposals. There is no tenable basis upon which Mr Brebner's evidence can prevail in the face of the MoD's lack of objection and Sqn Ldr Hale's carefully presented, professional analysis¹¹⁶.
95. A similar response extends to Mr Day¹¹⁷ who asserts various aspects of air safety, radar impact etc. Mr Day's assertions do not go beyond generalisations and are completely at variance with the stance of the various aviation consultees. It is, with respect, inconceivable that, had there been any basis for material concern, the MoD – or indeed any other relevant aviation interest - would have failed to lodge objection in the clearest terms; the absence of such objection is eloquent of an absence of any material problem.

¹¹⁵ OBJ822-AIRSAFETY-POE-BREBNER-SSA-C, OBJ-822-001-Addition to Statement of Case including reply to statement by Mike Hale

¹¹⁶ Sqn Ldr Hale Response to Mr Brebner CPL-AIRSAFETY-REBUTTAL-HALE-SSA-C; also Sqn Ldr Hale's oral response to Mr Brebner's reply

¹¹⁷ OBJ-176-OSOC

Matter 12 – The impact of the proposed development on hydrology and hydrogeology, to include impacts on sensitive water features (streams, ponds, wetlands); impacts on private water supplies; fisheries and water courses; and impacts on groundwater; and the likely effectiveness of proposed mitigation measures

96.CP refers to the evidence adduced generally on ecology, and especially the hydrological, and hydrogeological, evidence of Ms Walker and the construction/engineering evidence of Mr Parker in Sessions 1 and 4¹¹⁸. In particular, Ms Walker concludes¹¹⁹:

Construction of the infrastructure and tracks and application of standard engineering practices, as informed by the soils and hydrological conditions on the site, will not cause significant alteration of the current hydrological regime, and therefore there will be no significant change to water quality or quantity to the existing fen and blanket bog peatlands.

97.Vague and generalised flooding concern, in respect of schemes generally, has been expressed. Whether understandable or not, such concern must yield to the technical analysis of experts and, in the case of LR, to that of Ms Walker who concludes¹²⁰:

...the site geology reveals that bedrock is at or near the surface and is relatively impermeable, meaning that much of the rainfall on the site is discharged quickly and there is minimal onsite water storage. Hence the introduction of other impermeable features, such as the control room, will make little difference. The shallow soils overlying the bedrock also have little capacity to store water. Any water storage on the site would be contained within the shallow peaty soil horizons which occur over most of the site, and within the small pockets of deeper peat. These areas have been avoided in construction.

98. There is no technically competent evidence to challenge Ms Walker's conclusions, whether on the above matters or in any other hydrological and hydro-geological respect. Nor does NRW raise any concerns in this respect. The sole issue relating to hydrology raised originally by NRW as a concern was an asserted potential for in-

¹¹⁸ See also CPL-VATT-FWLC-PS-HYDRO-FIGA-S4

¹¹⁹ CPL-HYDROLOGY-POE-WALKER-SSA-C para 6.2

¹²⁰ CPL-HYDROLOGY-POE-WALKER-SSA-C at para 5.61

combination effect from simultaneous erection of various wind farms on the River Wye SAC. NRW agreed during the course of the inquiry, subject to the imposition of appropriate conditions, there was no such likely significant effect. The SAC aspect has been covered under Matter 7 above.

99. So far as concerns LR, no issue remains under Matter 12, whether alone or in combination, to preclude consents issuing.

Matter 13 – The impact of the proposed development on peat

100. Reference again is made to the ecological evidence in Sessions 1 and 4, especially that of Ms Walker, Mr Parker and Mr MacArthur. Additionally, in so far as Mrs Davies refers to peat¹²¹, reference is made to Mr MacArthur's rebuttal¹²².
101. NRW has withdrawn its objection in so far as relates to peat¹²³. There is no suitably qualified expert evidence of substance to question NRW's acceptance that, subject to the imposition of appropriate conditions, LR will not have any unacceptable impact on peat. No reason for refusal arises under Matter 13.

¹²¹ ALL-S4-POE-06

¹²² CPL-ECOLOGY-REBUTTAL-MACARTHUR-S4

¹²³ CPL-SOCG-010 Peat statement of common ground

Matter 14 – The potential of the proposed development to be connected to the electricity grid network (DECC document ‘The consenting process for onshore generating stations above 50 MW in England and Wales: a guidance note on Section 36 of the Electricity Act 1989’ refers

102. So far as concerns the main thrust of this Matter, it is unnecessary to elaborate on the fact of LR’s being the only scheme where the consent applications for the generating station are proceeding in parallel with applications for the necessary grid connection. As already noted, this places LR at the ‘head of any relevant queue’.
103. This Matter also provides the appropriate point at which to touch on sub-station location in the context of resistivity. During Session 3 the Alliance asserted insufficient consideration had been given to siting the Bryn Dadlau sub-station. The Statement by Messrs Parker and Howarth responds to this¹²⁴, indicating amongst other things that *...ground conditions at the site have been extensively surveyed and no suitable location for a locally earthed substation has been identified*. The evidence reveals an absence of any alternative sub-station location which is both environmentally acceptable and able to provide a locally earthed option. Nor has the Alliance sought to show that such a location exists. And PCC has found the proposed grid connection acceptable, subject only to the issue of a section of undergrounding; it is thus difficult to understand how the issue of a need to consider an alternative location can here arise, whether as a matter of fact and degree or of law.
104. The preceding point links with the question whether it is technically feasible to have a ‘remote earthing’ station along the line of the grid connection. This is primarily a matter for evidence from SPM and CP notes the latter’s response on this¹²⁵. CP further notes that PCC concludes¹²⁶ on this issue that *...PCCcannot advise the Secretary of State that [remote earthing] is necessary to make the Llandinam scheme acceptable. Further insofar as it has potential to either significantly delay the Llandinam line or to prevent the Llandinam line being upgraded to 160MW (thus causing a step change in infrastructure required elsewhere) PCC would consider the limited benefit from partial use of Trident would not justify those harms*.

¹²⁴ CPL-011-Locationof Sub-station-Session 3, especially at para 4.1

¹²⁵ SPM/029

¹²⁶ PCC Response to SPM/029 ‘Remote Earthing Paper’ at para 10

105. In the result, (i) the potential to connect LR to the electricity grid network cannot seriously be doubted and (ii) no other grid connection issue(s) exist(s) to warrant any adverse conclusion under this Matter.

Matter 15 – Any other matter the Inspector considers relevant

Preliminary

106. CP takes this heading as covering not just matters to which the Inspector has referred but also, in so far as appropriate, various other matters which have been raised by objectors. CP adopts this course in order that, should the Inspector or the Secretary of State view them as material, CP's submissions are recorded. CP refers to its evidence generally but needs here only to mention a couple of elements.

Rights of way etc

107. There can be no serious assertion that LR would result in any materially adverse impacts upon rights of way, whether directly in terms of L&V impacts or safety of users or cultural heritage or indirectly in terms of economic impacts including tourism or in any other relevant way. PCC raises no such objection. And it is unnecessary to rehearse yet again the acceptance by PCC of material visual benefits in a change from the permanent, existing wind farm, with its materially greater number of turbines and resulting clutter, to LR, with its finite life and secured decommissioning. CP relies on the LR environmental material together with the evidence of Messrs Frampton, Welch and Edis. The DVD material produced in co-operation with the BHS in Scotland, featuring Whitelee, is also pertinent; this both demonstrates that equitation can be safely pursued within wind farms and the opportunities for the tracks within such areas to enhance opportunities for riders and horses.

108. In fact, LR in this respect would deliver a significant improvement over the present situation. The existing turbines, in addition to being more numerous, are considerably closer to public rights of way than the proposed turbines. The latter will be at least a distance from public rights of way equivalent to their height from

ground to blade tip (as recommended by TAN 8, Annex C, paragraph 2.25).

Community Benefits

109. CP has outlined measures for provision of a community fund. CP stresses that it does not regard such provision as necessary for the development to proceed.

Fire and poisonous chemicals

110. This point was raised by Mr Brown at the Session 4 Evening Session. Amongst other things, it ignores the fact that fire, health and safety aspects of development generally are regulated by the relevant statutory codes. A detailed response on behalf of CP has been provided¹²⁷.

¹²⁷ CPL-016

Conditions

111. CP refers to, without repeating, the various points it has made in the Conditions Session.

Overall balance

112. Even were LR not a re-powering scheme, the overall planning balance would be positive. And the fact of its being a re-powering scheme (with generally acknowledged benefits over the existing situation), and coupled with its being paralleled by an acceptable, and TAN8-compliant grid connection, puts the matter beyond doubt. The balance drawn in Mr Frampton's proof for the Planning Balance Session is here adopted as though it formed part of these Submissions.

Conclusion

113. CP commends this scheme to the inquiry as one which, for reasons revealed by the evidence called, achieves a positive overall planning balance such that consents sought should issue.

Francis Taylor Building

Temple

ANDREW NEWCOMBE QC

29th May 2014

ANNEX 2

IN THE MATTER OF

ELECTRICITY ACT 1989 (SECTIONS 36, 37, 62(3) AND SCHEDULE 8)

THE ELECTRICITY GENERATING STATIONS AND OVERHEAD LINES (INQUIRY PROCEDURE (ENGLAND AND WALES)) RULES 2007

APPLICATION BY FFERM WYNT LLAITHDDU DATED 7TH MAY 2008 FOR CONSENT UNDER SECTION 36 OF THE ELECTRICITY ACT 1989 TO CONSTRUCT AND OPERATE A 62.1MW WIND TURBINE GENERATING STATION IN POWYS, MID WALES

CLOSING STATEMENT
ON BEHALF OF FFERM WYNT LLAITHDDU

INTRODUCTION¹

1. The structure of these submissions is:
 - A. To describe the proposal, its design and the reasons for it;
 - B. To describe the nature of the objections to the scheme and the means by which they have been successfully resolved;
 - C. To address each of the matters upon which the Secretary of State wishes to be informed;
 - D. To identify the role of conditions;
 - E. To analyse the evidence which has been presented and heard in the prevailing policy context and provide conclusions.

¹ Where found in these submissions, emphasis has been added

2. We firstly acknowledge the courtesy which has been extended to us by the Inquiry and the parties. In particular, the Alliance and other community groups have marshalled the cases for individuals in a manner, if we may say so, which has been both effective and efficient. We take their case seriously and seek to respond appropriately. Where we deal solely with the positions adopted by PCC and statutory bodies, we mean no disrespect to the Alliance point of view, but propose to deal with their points separately, where necessary.
3. We do not rehearse the evidence, nor do we seek to summarise it without reference to the way in which the evidence evolved orally. Rather, we have sought to set out the most relevant matters in a way which can be incorporated substantially unaltered into your Report as a tolerably succinct set of submissions.

[A] THE PROPOSAL

[Key documents: Design Statement, April 2008, p 7 at A.10 [FWLC-BAC-004]; ES 2008; Session 1 Proof of Proof of Evidence of David Harries]

4. The proposal has been developed and promoted via cooperation between a number of hill farmers whose land lies within the refined TAN 8 (Technical Advice Note 8) Strategic Search Area 'C' (SSA) which is preferred for wind farm development. The directors of Fferm Wynt Llaithddu ('FWL')² are hill farmers and experienced developers of wind farms on a community basis in Wales. Their faces appear on the application documentation. Those are not stock images but are the people who are concerned with this application. They realised that they could bring forward a wind farm within refined SSA 'C' and in doing so bring about significant community benefit³. The aim is to retain over half of the project value in the local economy. That is what they set about achieving.
5. The application site covers an area of about 660 hectares, positioned about 8 kilometres to the southwest of Newtown. It was proposed to erect some 29 wind turbines, each to produce 2.3MW. Infrastructure would be associated with the turbines, such as access tracks and a control building, etc. The application site has the characteristics which are typical of those sought for designation as SSAs, namely:
 - Being an extensive area with a good wind resource.
 - Being in the upland area of Wales, well over 300 metres above ordnance datum.
 - Being sparsely populated.
 - Being impoverished or improved moorland.
 - Having a general absence of nature conservation or historic landscape designation.
 - Being unaffected by any broadcast transmission, radar or military

² Fe-(e as in bet)-rm Wint-(as in mint) Ll-'l'-th-(as in think)-thee

³ Design Statement, April 2008, p 7 at A.10 [FWLC-BAC-004]

restraint or constraint.

6. The proposal was the subject of the sort of consultation which you would expect, with both the public who might be affected and with statutory consultees. Both FWL and the Llaithddu farmers were concerned to produce the best possible planning application, with sensitivity to the local community. Accordingly, FWL has sought to:

select and site turbines to minimise environmental impact;

site turbines at least 1km from non-participating dwellings;

work to local planning guidelines;

respond to feedback from statutory and non-statutory consultees⁴.

7. The design has responded to feedback from the community and professional consultees, as the history shows⁵:

Early 2006	Scoping and consultation on initial design of a 70MW scheme. Ministry of Defence identified the value of part of the site as a tactical training area. As a result, a 'gateway' was designed into the scheme which allows tactical training to continue throughout the area.
Early 2007	Proposed layout amended to take account of: noise sensitive dwellings; settlements in proximity to the southern part of the scheme; a ridge used as a soaring slope for Red Kites; a Scheduled Ancient Monument (Fowler's Armchair). The height of the southern turbines was reduced to 64 m to hub/99.5 m to tip.

⁴ See § 15 of the Proof of Evidence of David Harries

⁵ Design Statement, April 2008, p18 at B.45 to B.62 [FWLC-BAC-004]

October 2007	Exhibitions within the community to present the draft final design (30 October in Pant y Dwr Village Hall; 31 October in Llanbadarn Fynydd Village Hall (the Wellingtonia Centre); 1 November in Llandinam Village Hall). Turbines were relocated to: (i) minimise effects on bridleways, at the request of PCC; (ii) to provide ecological mitigation, at the request of CCW (now NRW), and; (iii) to site infrastructure and turbines to take account of heritage effects, at the request of Clwd Powys Archaeological Trust (CPAT).
7 May 2008	Application made, anticipating mobilisation to site in 2010 and commissioning in the third quarter of 2011
15 May 2008	The Application was registered
Summer 2008	Consultation responses on the application and ES were received
5 March 2010	Meeting between PCC, Capita Symonds, FWL and RPS at which it was agreed to revise the layout and to provide additional viewpoints for the LVIA
August 2010	PCC received the Review of Landscape and Visual Impact Assessment and SEI by its consultants, Capita Symonds
June 2012	PCC received the addendum report on LVIA by Capita Symonds resulting in advice that the revised arrangement reduced stacking and had balanced and equal spacing and a good relationship of turbines to the horizon. The effects upon Fowler's Armchair were considered to be resolved.
25 September 2012	Report to PCC Cabinet
2 October 2012	PCC Cabinet Executive received a report for decision on the conjoined inquiry
14 June 2013	SEI
24 June 2013	Letter from FWL to DECC confirming that Option 2 in the SEI was the basis on which the application was to be determined, namely the 27 turbine scheme

8. The community consultations were important. The majority of attendees supported the application. A good proportion of the attendees changed from 'concerned' to 'support', having seen the detail of the scheme. PCC's officers were encouraging. Mr Steve Packer, Senior Planning Officer for PCC (now retired) described the application as exemplary⁶.
9. The candidate turbine was chosen specifically to avoid the need to carry out improvement works to County highways and to yield visual and noise benefits. The Enercon E70 wind turbine does not have a conventional gearbox and so is unusually quiet and has significantly shorter blades than other machines with a similar capacity. This resulted in a generating capacity of 66.7MW as a 29 turbine scheme. This was a conscious choice not to use 3MW turbines and a choice made to minimise effects. As Mr Harries explained in evidence, entirely unchallenged⁷, the Enercon E70 was at this time unique but significantly more expensive than alternative machines which were and are available on the market. He explained that the particular candidate turbine was chosen because of low environmental impact in noise and visual terms and because of its greater efficiency. On the later point, he drew attention to the Carno 2 turbines which are each rated at 1.3MW, being 1MW less than the Enercon E70, but being of similar size.

[B] RESPONSES AND OBJECTIONS

[Key documents: Cabinet Report of PCC dated 25 September 2012, p 3- 87 [FWLC-BAC-006]; Session 1 Proof of Proof of Evidence of David Harries]

10. The responses and objections to the application from statutory consultees were⁸:

CADW/CPAT - A comprehensive Environmental Statement dealing appropriately with the impact on the historic environment. Request to reduce impact on the setting of Fowler's Armchair.

WAG - Significant liaison had taken place during the years between 2007 and 2012, but WAG still did not agree the Transport Management Plan.

Environment Agency Wales - no objection but observations on mitigation measures during construction.

Civil Aviation Authority - no objection.

Ministry of Defence - no objection.

CCW - objected on the basis of: (i) impact on curlew cumulatively with

⁶ See §23 of the Proof of Evidence of David Harries.

⁷ [FWLC-COMM-POE-Harries-SSAC]; It is to be emphasised that no party asked Mr Harries any questions.

⁸ Cabinet Report of PCC dated 25 September 2012, p 3- 87 [FWLC-BAC-006]

the Llandinam scheme; (ii) lack of information on the landscape and visual effects of grid connection, both alone and cumulatively; (iii) increased sediment loading on the River Wye SAC. CCW checked the carbon balance calculation in the ES and agreed it at 75,336 tones of CO2 per year, being (175,200 MWh/y x 0.43).

PCC - objected on the basis of: (i) the transportation route; (ii) local traffic impacts; (iii) cumulative landscape impact (following CCW); (iii) impact on curlew (following CCW); (iv) insufficient information in respect of hydrology and peat resource (following CCW); (v) insufficient information in respect of adverse noise impacts.

11. Officers of PCC did not articulate any concluded view on the proposal. The Report to Cabinet contained no recommendation. No officer of the Council has given evidence at the Inquiry so it has not been possible to establish what recommendation would have been made.
12. Hence, at the time that the decision to hold an inquiry was taken, the Llaithddu proposal faced objection from: (i) the WG on transport grounds; (ii) CCW on effects on curlew cumulatively with Llandinam, cumulative effects with grid infrastructure and sediment load to the SAC, and; (iii) via its Outline Statement of Case⁹, PCC added that in the light of concerns expressed by CCW regarding cumulative impacts and lack of mitigation, it objected on landscape and visual impact grounds.
13. That position evolved during the course of the inquiry process, as we shall explain. It is an important evolution in the context of a statutory decision-making framework which focusses on minimising effects.

⁹ [OBJ-002-OSSC-Outline Statement FINAL - 21.01.13]

[C] THE SECRETARY OF STATE'S MATTERS

Matter 14 - Grid¹⁰**[Key documents: Grid Connections Options Review]**

14. We deal with issues arising from grid infrastructure at this stage for two reasons. Firstly, it is convenient to understand the likely associated infrastructure before turning to issues of effect, impacts and mitigation. Secondly, it is quite clear that the consequences of consenting wind farms in SSAs has informed much objection to the proposal and has also been significant in influencing ministerial views, principally the Griffiths letter¹¹.
15. The impact of concerns about the necessary infrastructure is illustrated by the CCW letter of objection which stated¹² "In common with our position on similar current applications within SSA C, CCW objects to this application because there is insufficient information to allow the potential impacts from the overhead grid connection to be assessed. We advise that the proposed grid connection has the potential to have significant environmental impacts along and cumulatively with other grid connections and wind farms."
16. However, the starting point here is Section 4.9 of EN-1. The connection of a proposed wind farm to the electricity network is a consideration for applicants. It is a matter for the applicant to ensure that the necessary infrastructure and capacity will be in place to accommodate the renewable energy which will be generated. This is reflected in TAN8 (Annex C) §2.13: "There is currently very restricted capacity for further wind power developments in North and Mid Wales (Scottish Power / Manweb network) and the re-enforcement of the network through the construction of new high voltage distribution and transmission lines is vital to the realization of any significant additional generating capacity as well as providing a stronger, more reliable network for electricity users in the western mid Wales area. The Assembly Government strongly supports the principle of this scheme."
17. The role of the decision maker is to be satisfied that there is no obvious reason why a grid connection would not be possible¹³. Further, the decision maker must be satisfied that there are no obvious reasons why the necessary approvals for grid connections are likely to be refused¹⁴.
18. Via the SEI of January 2014, the reasonable options for grid connection have been explored and assessed at an appropriate level of detail to inform the decision maker about the indirect, secondary and cumulative effects of the proposal.

¹⁰ the potential for the proposed developments to be connected to the electricity grid network (DECC document 'The consenting process for onshore generating stations above 50MW in England and Wales: a guidance note on Section 36 of the Electricity Act 1989 refers')

¹¹ Minister for Environment and Sustainable Development, Mr John Griffiths, in his letter dated July 2011 [CD/COM/020]

¹² [FWCL-BAC-006]

¹³ §4.9.1 EN-1

¹⁴ §4.9.3 EN-1

19. Llaithddu could either connect to the 400kV grid eastwards using the proposed 132kV line to Welshpool and beyond, or westwards to Cefn¹⁵ Coch at SSA B¹⁶. PCC object to the western route, but the eastern route is broadly supported by the Council. At Session 3, PCC accepted that the Llandinam¹⁷ 132kV overhead line (with the under grounding section) would be acceptable in landscape and visual terms when considered cumulatively with Llandinam wind farm and Llaithddu wind farm¹⁸. PCC's case is that no more than 160MW of generating capacity should be permitted in SSA C¹⁹.
20. There is currently no National Grid network (i.e. 275 kV or 400 kV network) in or near the mid Wales SSAs, so all existing generation is connected to the SP Manweb network at voltages up to and including 132 kV. Generation in mid Wales in excess of local requirements is therefore exported via the 132 kV network, and a significant proportion of its export potential has already been utilised. There are two principal 132 kV circuits into the area from the supergrid substation at Legacy (near Oswestry): one to Welshpool and the other to Newtown.
21. The Welshpool to Oswestry circuit is the only 132 kV circuit able to connect new generation. SP Manweb currently plans to connect 90 MW of wind generation (from Llandinam) to this circuit, which is the maximum that can be accepted at present due to constraints on the SP Manweb network above Welshpool. However, SP Manweb has provisionally considered that, with reinforcement of their network, up to about 160 MW of generation (i.e. 70 MW more than at present) could be accepted.
22. The upshot is²⁰:
The two largest wind farms in SSA C (Llaithddu and Llandinam repowering) total 164.4 MW (SOR3) or 182 MW (application). Since up to 160 MW of generation could be connected at Welshpool following upgrades by SP Manweb, essentially any two of the wind farms in SSA C could be connected via a 132 kV HDWP circuit to Welshpool. This assumes the possibility of generation being constrained at times of minimum system load, if those two wind farms were to be Llaithddu and Llandinam repowering. Based on the SOR3 figure, it is likely that very little, if any, restriction on generation would be required in practice, but might be unacceptable for the higher level of generation proposed in the application.
23. For the remaining wind farm in SSA C, there would need to be another 132 kV circuit to connect to the National Grid. That would be likely to be a connection to a 132 kV hub substation in SSA B, which would be needed for the wind farms in that area. Depending on which two wind farms connect to Welshpool, up to 80 MW of generation would need to be

¹⁵ Kevn (Kevin without the i) Co (as in 'coco') ch (soft and aspirated as in the Scottish loch)

¹⁶ Figures 29, 30 in Appendix 2 to Mr Goodrum's Session 4 Proof

¹⁷ LI-and-ee-nam

¹⁸ PCC Statement of Case for Session 4 at §4.2.1 [OBJ-002-SOC-S4 Powys CC Session 4 Cumulative Effects]

¹⁹ PCC Statement of Case for Session 4 at §9.1 [OBJ-002-SOC-S4 Powys CC Session 4 Cumulative Effects]

²⁰ Grid Connections Options Review at p7, §3.1.1

connected via a 132 kV circuit to SSA B. In order to ensure acceptable power flows on their 132 kV network, SP Manweb would not normally operate with these two circuits electrically connected in SSA C, therefore two of the wind farms would export via the Welshpool circuit, and the third via SSA B.

24. Overall, it is clear that there is a variety of means by which the SSA C wind farms may be connected to the grid. In EN-1 terms, there is no reason to conclude that connection to grid infrastructure would prove to be an obstacle to development of the wind farms. Hence, there is no preliminary issue or inhibition to the schemes, when the terms of EN-1 are applied to the facts as heard at the inquiry. There are further questions as to cumulative effects as between grid infrastructure and the wind farms which are very much focused on landscape and visual effects. We deal with those under Matter 4, below.

MATTERS 1-3 (POLICY)

[Key documents: EN-1; EN-3; Planning Policy Wales; TAN 8; Minister for Environment and Sustainable Development, Mr John Griffiths, in his letter dated July 2011 [CD/COM/020; OBJ-002-PLA-SOCG Statement of Common Ground – Policy – Powys CC version – clean copy; Proofs of Evidence from the parties for the Policy Session]

Matter 1 - Consistency with Energy Policy²¹

25. There is now a broad range of international obligations and accords which record the Government's commitment to addressing climate change through energy policy and the use of renewable forms of energy. That is a feature of energy policy which attracts no controversy because it sets the goals and the objectives without identifying the means and the location of the infrastructure to achieve those ends. However, when coming to examine the fine detail of effects on a particular view point or, for example, the setting of Fowler's Armchair, the decision maker has to recall binding goals, their importance, and the discipline of linking the policy imperative to the reality of its implementation.
26. Those international obligations translate to domestic law. The policies to which we turn shortly are in place to give effect to those legal instruments and are consistent with them. We touch only upon the Climate Change Act 2008. The Climate Change Act 2008 created a new legal framework for the UK to reduce, through domestic and international action, greenhouse gas emissions to at least 80% below 1990 levels by 2050. The UK government is required to set five-year carbon budgets, which place binding limits on greenhouse gas emissions and define the trajectory towards the 2050 target.
27. Following advice received in December 2008 from the independent Committee on Climate Change, the UK government announced the level of

²¹ the extent to which the proposed developments are consistent with the objectives of the Government Policy on the energy mix and maintaining a secure and reliable supply of electricity as the UK makes the transition to a low carbon economy, and achieving climate change goals;

the first three carbon budgets (2008- 2012, 2013-2017, and 2018-2022) and published its response to the Committee on Climate Change's advice alongside the Budget on 22 April 2009. The levels of the first three carbon budgets were approved by Parliament in May 2009, and are now set in law. The fourth carbon budget (2023 -2027) became law at the end of June 2011. It requires greenhouse gas emissions to be reduced by at least 50% in the fourth budget period, relative to 1990 levels.

28. The question which is posed by Matter 1 is whether the proposal would be consistent with Government energy policy. It is a given that the proposals before this inquiry would make a significant contribution to the objectives of the Climate Change Act 2008. Nobody in their closing submissions has contended otherwise. In the context of Wales it is especially important to deliver at least the stated capacities from the Strategic Search Areas (SSAs) since it is to these areas that the Welsh Government has directed strategic wind farm developments (i.e. over 25MW).
29. We return to the impact of these points below. They are the 'big picture'. If that canvas is going to be completed, in the urgent timeframe which has been identified, it is not feasible to concentrate solely on one corner.

Matter 2 - Consistency with NPSs²²

30. We will return to the question of consistency with NPSs when we have considered the benefits and effects of the proposal. However, we emphasise the key policy framework which is to be found in the National Policy Statements²³. The overarching National Policy Statement for Energy emphasises:

The legally binding target to cut greenhouse gas emissions by at least 80% by 2050 (cf. 1990 levels).

The move from 20% to 30% emissions reductions by 2020.

The need to make a transition to a low carbon economy with a safety margin of spare capacity to accommodate unforeseen fluctuations.

To meet emissions targets, the electricity being consumed will need to be almost exclusively from low carbon sources.

31. PCC took a fair and balanced approach to summarising the effect of EN-1²⁴:

Part 3 of EN-1 explains the need for new nationally significant energy infrastructure projects.

3.1.1 The UK needs all the types of energy infrastructure covered by this NPS in order to achieve energy security at the same time as dramatically reducing greenhouse gas emissions.

3.1.2 It is for industry to propose new energy infrastructure projects

²²the extent to which the proposed developments are consistent with the policies relating to generation of renewable energy contained within the relevant National Policy Statements for Energy Infrastructure: Overarching National Policy Statement for Energy (EN-1) July 2011 and National Policy Statement for Renewable Energy Infrastructure (EN-3) July 2011

²³ Principally EN1 and EN3 [CD/COM/01 and 02]

²⁴ Policy SoCG at §2.5 [[OBJ-002-PLA-SOCG Statement of Common Ground – Policy – Powys CC version – clean copy](#)]

within the strategic framework set by Government. The Government does not consider it appropriate for planning policy to set targets for or limits on different technologies.

3.1.3 The IPC should therefore assess all applications for development consent for the types of infrastructure covered by the energy NPSs on the basis that the Government has demonstrated that there is a need for those types of infrastructure and that the scale and urgency of that need is as described for each of them in this Part.

3.1.4 The IPC should give substantial weight to the contribution which projects would make towards satisfying this need when considering applications for development consent under the Planning Act 2008.

32. Likewise, we agree with PCC that²⁵:

EN1 para. 3.4.5 is directly relevant in the current context:

The urgency of need for new renewable electricity generation
3.4.5 Paragraph 3.4.1 above sets out the UK commitments to sourcing 15% of energy from renewable sources by 2020. To hit this target, and to largely decarbonise the power sector by 2030, it is necessary to bring forward new renewable electricity generating projects as soon as possible. The need for new renewable electricity generation projects is therefore urgent.

33. In the context of the discussion which is to be had in respect of the TAN 8 capacity figures, it is important to emphasise that the Overarching National Policy Statement as adopted by the Secretary of State is that need is no longer expressed in terms of specific targets and the urgency for new energy infrastructure to be consented is of itself a significant policy objective.

34. Need is an important feature of the decision in respect of renewable schemes generally and in the context of PCC's objection. I referred Mr Russell-Vick to the Swinford decision in xx²⁶. Mr Woolcock considered '...that NUON is correct that even were it the case that smaller or fewer or differently laid-out turbines might have a lesser impact, that is not a reason for refusal. What is relevant is not whether, following various design iterations, the appeal scheme has adverse effects, but whether any such remaining adverse effects would be outweighed by the benefits.[..] I do not consider that there is any requirement to assess alternative sites or configurations of the proposed wind farm."

35. Lastly on this matter, we draw attention to EN-3 as to effects and design:

2.7.48 Modern onshore wind turbines that are used in commercial wind farms are large structures and there will always be significant landscape and visual effects from their construction and operation for a number of kilometres around a site.

²⁵ §2.15 of OBJ-002-PLA-SOCG Statement of Common Ground – Policy – Powys CC version – clean copy

²⁶ CD-CPL-INS 002/003 in particular at §§228-230 IR

2.7.49 The arrangement of wind turbines should be carefully designed within a site to minimise effects on the landscape and visual amenity while meeting technical and operational siting requirements and other constraints.

36. In due course we shall turn to the significant effects of the wind farm but note here that there is no objection from PCC on the matters referred to in §2.7.49.

Matter 3 - Consistency with Welsh and Local Policy²⁷

37. Energy policy is not a devolved matter. However, Powys County Council and others rightly draw attention to the ways in which the Welsh Government has expressed its own energy policy and produced policy statements which deal with spatial planning issues so far as renewables are concerned. In that context, it is plainly material to consider Planning Policy Wales (PPW) and its supporting Technical Advice Note, TAN 8 not least because the policy context in Wales is more welcoming of sustainable energy production than in England.
38. When read as a whole, planning policy in Wales is supportive and welcoming of means to address climate change and reduce greenhouse gas emissions. Further, it is supportive and welcoming of wind energy, including onshore wind. However, it seeks to ensure that such development comes forward in a way which is not damaging to the natural and historic assets which Wales enjoys. It is clear that the Welsh Government is committed to playing its part by delivering an energy programme which contributes to reducing carbon emissions²⁸. It seeks to optimise renewable energy generation as part of the overall commitment to tackle climate change, reduce greenhouse gas emissions and increase energy security²⁹. Indeed, one sees in PPW a clear reference back to those matters which we canvassed above in that planning authorities are asked to ensure that development management decisions are consistent with national and international climate change obligations, including contributions to renewable energy targets and aspirations³⁰.
39. WG and, in turn, PCC, accept that the introduction of new, often very large structures for onshore wind needs careful consideration to avoid and where possible minimise their impact. Having regard to their impact, TAN 8 has sought to identify appropriate locations for large scale wind farm development. Such findings are self evidently weighty material considerations as to the appropriateness of the application site to receive the Llaithddu wind farm. As we have acknowledged, TAN 8 SSAs are expressly 'broad brush' and do not short circuit scheme-specific assessment but when it comes to locational questions - where to consent

²⁷ the extent to which the proposed developments are consistent with Welsh Government and local policies: including Planning Policy Wales, Edition 4 (2011); Technical Advice Note 8: Planning for Renewable Energy (2005); and Energy Wales: A Low Carbon Transition (2012); and Powys Unitary Development Plan (adopted March 2010)

²⁸ See PPW at 12.8.1 [CD/COM/8]

²⁹ See PPW at 12.8.8

³⁰ See PPW at 12.8.9 at second bullet point.

and where to exclude - it provides a the policy framework.

40. In closing, NRW stated its position like this: "NRW considers that the UK and Wales Government policy on onshore wind are compatible and that the spatial approach and targets set out in TAN 8 are working to meet the objectives of National Policy Statements EN-1 and EN-3. NRW wholly endorses the objectives of both Governments to increase dramatically renewable energy capacity, with much of that new capacity being via onshore and offshore wind in the short to medium term. Equally, NPS recognises that impacts on the environment should be minimised and that renewable provision should not compromise international and national statutory obligations for designated areas, species and habitats. TAN 8 Annex D sets out environmental issues, including ecology and landscape/visual effects, to be taken account of in development control decisions. The finite environmental capacity of the SSA's is also recognised by the Wales Government First Minister's Statement on 11/6/2012³¹.
41. On the basis of that understanding, and as we note further below, NRW considers that the Llaithddu proposal is acceptable, subject to appropriate conditions.
42. The Alliance takes a contrary view on the basis of what is, if we may say so, a detailed and forensic review of the history of the SSA designations³². Whatever the merits of those points, and we make no concession as to the merits of any of them, in the main they are not points which can advance to any helpful conclusion for any party in this inquiry because matters of policy are not open for debate at a public local inquiry. The SSAs were broad brush indications of suitable locations for wind farm developments of this size. Those indications have been further refined by the respective local planning authorities. So far as SSA C is concerned, Powys have undertaken that exercise after careful study and consideration.
43. That leaves only the question of the amount of wind farm development which a particular Strategic Search Area may accommodate. The answer to that question is very much a function of the particular schemes which come forward. The TAN 8 targets are about environmental capacity. That was their function and purpose. They are, however, to be understood in the context of the over-arching obligations and policies (Matters 1 and 2 above) and not in isolation. This must be correct as a matter of interpretation of policy but it is also correct as a matter of history and practicality. Turbine designs have improved and are substantially more efficient than in 2005, when TAN 8 was issued. That point is of actual significance for the Llaithddu application because its design approach was to optimise output from turbines of materially smaller scale than those assessed in the TAN 8 studies.
44. Further, if a substantial renewable energy benefit may be obtained from within a Strategic Search Area without exceeding its environmental

³¹ NRW Closing Submissions at §6.1; 28 May 2014 PM

³² Alliance Closing Submissions Section 1 - ALL-10 being particularly emphasised

capacity, it would not be a rational understanding of the TAN 8 indicative targets to turn it away on the simple basis that it exceeds the TAN 8 target.

45. Moreover, the expressions of capacity which were alighted upon some little time ago (2005) have to be understood in the context of more recent and weightier statements of policy. EN-1 confirms an urgent need for new electricity capacity (particularly low carbon capacity) to be brought forward as soon as possible. To minimise risks to energy security and to ensure resilience it is prudent to plan for a minimum of 59GW of new electricity capacity by 2025³³.
46. The interpretation of TAN 8 targets which is provided by the Griffiths letter³⁴ suggests a maximum installed capacity for each SSA, using MW figures. This approach conflicts with the approach to targets which is set out in NPS EN-1 (see para 3.1.2). The need for additional renewable energy as expressed in NPS EN-1 is no longer defined by specific targets, but rather a much wider qualitative need to decarbonise the energy sector.
47. Hence, so far as the capacity of a particular SSA is concerned, it is of course material to assess the cumulative impact of proposals which fall for determination and to make an assessment as to whether or not those cumulative impacts are acceptable or not. However, it is that specific assessment upon consideration of the detail of the particular proposals which is to be undertaken, and not for there to be a predetermined target in MW terms.
48. The net result of the policy conundrum which was set by the Minister, is to revert to a simple and familiar question which is the balancing exercise to be undertaken as between the weighty legislative and policy support and imperative on the one hand, and the degree to which the proposals give rise to harms which are more than those which are inevitable from such proposals and which arise from failures by an applicant to do what he reasonably can to mitigate the impacts of the proposals.
49. In that balancing exercise, the TAN 8 SSA's weigh in favour of the proposals because they tell us where the good wind resource is and are relevant to any identified impacts because they tell us where such impacts are best accommodated. We then revert to the Schedule 9 considerations and upon consideration of those matters and the weight to be attached to their assessed significance, the determination falls to be made but without reference to any predetermined numerical capacity limit.
50. So far as the PCC UDP is concerned, Policy E3 adds little to the main issues but is in any event fully addressed in the FWL Planning Balance Evidence³⁵.

³³ See paragraph 3.2.23 of EN-1

³⁴ Minister for Environment and Sustainable Development, Mr John Griffiths, in his letter dated July 2011 [CD/COM/020]

³⁵ FWLC - Planning Balance - Parker; S38(6) of the Planning and Compulsory Purchase Act 2004 does not apply, but the policy is a material consideration

Statutory Framework

51. By reason of Schedule 9 to the Electricity Act 1989³⁶, the Secretary of State will have regard to the desirability of a number of matters when considering the application, namely:

Preserving natural beauty.

Conserving flora, fauna and geological and physiographical features of special interest.

Protecting sites, buildings and objects of architectural, historic or archaeological interest.

52. Further, the applicant is to do what he reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on such flora, fauna, features, sites, buildings or objects. Such is the key statutory decision making framework.

MATTER 5 - TRANSPORT³⁷

[FWLC-Highways-SOCG-SSA-C; FWL-CPL-SOCG-TRANS-S4; The Proofs of Evidence from Mr Buchan and Mr Durgan; The TMP]

Local Transport Issues

53. PCC are content that the Llaithddu scheme "can be safely accessed, without unacceptable effects on other local road users or on the very rural character of the affected local roads" and both the applicant and PCC agree that any improvements required to local roads can be managed by appropriate conditions and agreements.³⁸

54. There has never been any doubt about the deliverability of those measures because all of the land required for the improvements is within the ownership of those members of the community who are associated with the Llaithddu scheme. FWL³⁹ have the consent of all those who own land surrounding the highway to carry out the necessary works, and so what was originally a matter of concern for PCC has fallen away.

55. PCC confirmed in closing that in light of the evidence now before the Inquiry, they no longer object to any of the SSAC proposals by reason of their impact on the local road network⁴⁰. In Llaithddu's case roads C2025 and U2835 provide access to the site from the A438. The local road network also encompasses access roads from the port at Newport and the

³⁶ [CD/COM/023]

³⁷ the individual and combined impact of construction traffic on the surrounding locality, including transportation access routes and traffic management, taking into account the cumulative impact with other wind farms in the Powys area which have already been granted planning permission or where planning permission has been applied for

³⁸ [FWLC-Highways-SOCG-SSA-C]

³⁹ [FWL TRA 012]

⁴⁰ PCC Closing para 283

A479 between Bronllys⁴¹ and Llyswen⁴², but no objection has ever been raised in that regard.

56. The mitigation measures proposed will not alter the character of the road, as agreed by Mr Williams on behalf of PCC⁴³ and reiterated in closing⁴⁴. The works proposed are not major works, and FWL will be guided by the Council who have expressed a desire to grasscrete (or similar) the widened part of the road so that grass can grow through giving the appearance of a narrower carriageway once the development phase is complete. The works proposed will strengthen the verges and widen the road precisely to avoid HGVs coming into conflict; those verges will remain strengthened should any future AIL be required to be delivered to site but the road will appear in the same way it does now.
57. There will be 26 passing places along the road to the site which, will undoubtedly be a benefit to all road users as Mr Williams agreed during his evidence in chief. Monitoring of the local road network secured by condition would ensure the benefits remained⁴⁵, and the presence of a ready supply of road repair material on site means that any defects could be quickly and effectively attended to.
58. FWL welcomes a coordinated approach to mitigation works should both FWL and Llandinam receive consent. They have signed an agreement to that effect⁴⁶, and proposed a condition to secure a common set of works. If Llandinam begins construction first, which is highly likely given the earlier grid connection date, then no additional highway works will be required for the Llaithddu scheme.
59. The local road network has been tried and tested and has been found to be capable of accommodating both construction traffic generated by the Llaithddu scheme and the delivery of AILs in much the same way as the trunk road network. Mr Buchan's proof confirms at paragraph 5.3 that the access road has been used previously (without improvement) to serve the existing Llandinam wind farm which is home to some 103 turbines. Furthermore, the test run that was undertaken by Scottish Power in May 2010⁴⁷ demonstrates that the access from the A483 to site can be successfully used for the Llaithddu scheme, particularly given that the test components were 45m long and 4.5m diameter. The Enercon Blade is 33.3m and was selected for the very reason that it could be transported more easily on the roads of Powys than other larger blade.

Strategic Highway Issues

60. It may be thought to be surprising that government in both Westminster and Cardiff have: (i) identified the urgent need to deliver renewable

⁴¹ Bron (roll the r, 'on' as in 'switch on') llys (ll - an l with a th in front of it, y - as the 'i' in pita, s - as in 'this')

⁴² Llys (ll - an l with a th in front of it, y - as the 'i' in pita, s - as in 'this') wen (like win but with an e as in 'bet')

⁴³ **OBJ-002 (PCC) - Transport- POE-Williams- SSAC para 23 POE**

⁴⁴ **PCC Closing para 290**

⁴⁵ **FWLC/TRANSPORT/POE/BUCHAN/SSA-C para 5.2.7**

⁴⁶ [FWL-CPL-SOCG-TRANS-S4 transport SOCG session 4, para 1.10]

⁴⁷ **FWL-TRA-10 Llaithddu** Transport Management Plan, p.20, para.4.3

energy at a strategic scale via onshore wind, and; (ii) identified those locations in Wales which are preferred for such development, and yet the question should then arise "Is it feasible to construct such wind farms?". However, that is what has happened. WG has made objections and is a party to the inquiry, albeit that no representative has ever appeared. The issue between FWL and WG has always been whether the proposal to bring abnormal indivisible loads along the strategic highway network can be done in a safe and appropriate manner that can be adequately managed via conditions imposed on a consent. WG have now agreed that is so⁴⁸ - it can be adequately managed.

61. Until late in the inquiry process, the WG has required quite extraordinary levels of information as to the effects of delivering AILs upon the strategic road network. It objected to the scheme when it was before PCC, became a party to the inquiry and provided a statement of case and persisted with its objection until shortly before the relevant session⁴⁹. Mr Buchan confirmed the level of work undertaken to secure agreement on highways matters. The TMP extends to well over 200 pages, and there has been a great deal of correspondence on the matter as can be seen from the Correspondence Summary.⁵⁰ Further, there have been on-site meetings, and test runs on both the local and trunk roads to which representatives of both PCC and the WG were invited, demonstrating the helpful and constructive way in which FWL have engaged on this particular issue.
62. Even in the context of that engagement the WG persisted in their objection despite it being obvious that their concerns as to the strategic highway network were resolvable by means of conditions and appropriate management of AIL transport on the trunk roads. This is so because:

The route from Newport docks (the port of entry) to the local road network in the vicinity of the application site is the shortest practicable route which is compliant with AIL transport legislation;

The route requires no significant infrastructure works, in part because of the deliberate choice of turbine by FWL in order to ease its transportation;

The route is predominantly on trunk roads, and for the majority of its length - the category of road that is expected to cope with such loads.

The great majority of the route was actually used for the delivery of similarly sized Carno 2 components;

While there may be some limited disruption and delay as a result of the transportation of AILs, the route is proposed to be used only by the FWL and Llandinam Developments and as such avoids cumulative effects with other schemes.

⁴⁸ CON-001-POE-S4-FWLC WG letter dated 25 February 2014

⁴⁹ Session 4 on cumulative effects

⁵⁰ FWL TRA-06

63. WG are also satisfied in respect of two particular issues which arise in respect of the strategic highway network and which the Alliance have drawn attention to in their closing submissions:

Castle Square, Builth Wells, and;

Crossgates Bridge.

64. In respect of Castle Square, it should be noted that:

Significantly longer blades, nearly 6m longer than those proposed by FWLC have been modelled as being capable of transiting Castle Square.

Furthermore, construction of the Carno 2 wind farm involved components measuring over 30m were moved through Builth Wells without incident ;

The TMP⁵¹ demonstrates that the blade movement is accomplished without having to overrun the traffic island to the west of Castle Square. If this island was to be utilised (and there is no engineering reason why it should not be) the clearances would be very greatly increased; there is however no need nor justification for this; and

The width test run⁵² was carried out with a width of 4.2m and was unproblematic. It was sufficient to demonstrate to representatives of the WG and Powys County Council - those who were there specifically to observe and record and potential problems - that no further test run would be required.⁵³ Accordingly, so there can be a great deal of confidence that movement of FWLC components through Castle Square will be successful and without incident.

65. So far as the Crossgates Bridge is concerned, the evidence (that should not be obscured by a rogue inaccurate reference⁵⁴) demonstrates there is ample clearance which is well beyond the minimum that would be necessary to avoid risk of bridge strike. In any event, one observes that nearly all routes to wind farm developments in mid-Wales require that ALLs pass beneath bridges. In respect of Crossgates, there is the additional material consideration that the Llandinam proposal would also use the Crossgates Bridge and would require additional works (works which would not be required by the FWL proposal) which would provide still further clearance. Llandinam and FWL agree that it is most unlikely that the FWL scheme would come forward before Llandinam⁵⁵.

⁵¹ [FWL TRA-10] - see Drawings SPA001 and SPA001-2 in Appendix A

⁵² [FWL TRA-09]

⁵³ [FWL TRA-10 Email dated 11 May 2012 given in Appendix A]

⁵⁴ Alliance Closing para 10.42 but see FWL-TRA-014 - Session 4 Clarification Note

⁵⁵ [FWL-CPL-SOCG-TRANS-S4 transport SOCG session 4]

66. Hence, on the likely order of construction, FWL would have the benefit of those construction works at Crossgates Bridge.
67. The Alliance have also raised concerns about the trunk road network and cumulative impacts. However, the case has simply been misunderstood⁵⁶.
68. Moreover, the only site that could be constructed concurrently with Llaithddu is Llanbadarn Fynydd⁵⁷. The cumulative traffic impact of both wind farm developments is a maximum of 11% increase in total flow (for the peak month of construction), it is short term, and as such, is not considered to be significant in environmental impact assessment terms.⁵⁸
69. It is FWL's case that in respect of the cumulative impact of AIL deliveries, there are a number of constraints in construction of wind farms that provide a natural limit on the volumes and timings of deliveries:
- It is only FWL and CeltPower that are proposing to use the AIL route from the south and they have different grid connection dates;
- The availability of suitable delivery vehicles, specialist haulers, and cranes as well as turbine supply lines, and road conditions all act to constrain the number of deliveries that can take place at any one time.
70. FWL and CeltPower have reached agreement that in the unlikely event that the construction of Llandinam is delayed such that it coincides with the proposed commencement of Llaithddu's construction, neither intends to run AIL deliveries at the same time as the other, nor do they consider it possible in practice⁵⁹.
71. In conclusion, the proposed development can be accommodated on both the local and the trunk road networks without significant or long term adverse impact on the safety or amenity of other road users or the character of the local roads. The use of planning conditions can and will protect the interests of all parties. The proposed routes are agreed to be acceptable for all construction traffic, whether alone or cumulatively, and also, for AIL deliveries.

MATTER 8 - SOCIO-ECONOMIC EFFECTS⁶⁰

⁵⁶ Mr Durgan relied on the out of date information contained within Chapter 12 of the 2008 ES, and although he recorded having seen the more recent June 2013 TMP, there are a number of inaccuracies as a consequence including the level of anticipated traffic increase, and the routing of HGVs and AILs. The construction period is cited as being two years rather than the period of 17 months given in the SEI, and Mr Durgan assumed a higher increase in traffic than will be experienced in reality. More recently, FWL have confirmed that concrete batching will take place on site which will reduce the number of HGV movements required so that the total daily average vehicle movements at the height of construction will be 114 rather than 122. It should be remembered that fewer turbines are proposed now than were initially anticipated, and that the height of the construction stage lasts only 2 months. For the remaining 14 months, the vehicle movements are far less than 100 per day, and for 9 months of the 17, are less than 20 a day.

⁵⁷ Ll-Anne-bad-arn Ver-nith- Ll (an L with a th in front of it) an (as in 'and') bad (as in bad/evil) arn (roll the r) Fyn (sounds like vin) ydd (ith - as in 'the')

⁵⁸ [AD/FWLC/050A-C 2013 SEI, Chapter 9, Table 9.27]

⁵⁹ [FWL-CPL-SOCG-TRANS-S4 transport SOCG session 4, para 1.10]

⁶⁰ the individual and combined social and economic impact of the proposed developments, including on tourism;

72. In their original reasons for objection, PCC reserved the right to raise objections on other grounds including socio-economic impacts. In their updated outline statement of case⁶¹ they noted that:
- “In relation to socio-economic impacts, the Council are in the process of investigating socio-economic impacts and at the moment propose to call evidence on the impact of the proposal, individually and cumulatively with the other applications before this inquiry and in the planning process, on tourism and other economic factors, and to demonstrate that the Applicant’s assessment of the socio- economic impacts in their ES is inadequate. If the Council provide such socio-economic evidence it will be presented in the timetabled session 4 (March/April 2014) in conjunction with the other individual and cumulative socio economic points relating to other proposals.”
73. By an addendum to that statement of case PCC confirmed that they had researched the socio-economic position and noted the policy approach to socio-economic impacts in EN-1. PCC’s position is:
- “The Council have now concluded their investigations and has concluded that, given the siting of the proposals within SSA’s and given that the proposals are for nationally important infrastructure projects, there is insufficient evidence to support an impact on socio-economic interests of sufficient magnitude to give rise to a refusal of some or all of the projects on this ground. In the circumstances PCC do not intend to call evidence on the socio-economic impacts of these developments and do not intend to pursue an argument that they should be refused on that basis.”
74. FWL agrees.
75. There are generic and specific benefits which would flow from consenting of the scheme. Those benefits will include, but of course will not be limited to, the local economic benefits. FWL accept that financial benefits to the community in the form of a community trust fund are not benefits which the decision maker may lawfully take into account. An offer of a financial contribution which fails the tests in 13/97 or by analogy with CIL is not a material consideration is to be disregarded. However, the Government (in TAN 8 and elsewhere) and PCC consider community benefits to be a welcome and a fully justifiable component of a wind energy development and its relationship with its host community.
76. The scheme does not need such a material consideration to make it acceptable, but it remains important that a public inquiry has a full understanding of the whole proposal, particularly where the applicant’s case is that the scheme responds to a variety of community concerns which have informed the detail of the proposal.
77. The Llaithddu farmers wanted to ensure that members of the community were involved where it was fair to do so. It is a typical feature of sites like

⁶¹ [OBJ/002/OSOC/2]

this that some farmers with land close to the turbines miss out on any direct benefit, as their land is not required for the development of the wind farm scheme. In this case, the farmers' group included some who would not be putting their land in the scheme because it was felt to be fair that they should be⁶². We draw this to your attention because it is said against FWL (and other schemes) that "if the large scale wind farm developments go ahead with the infrastructure proposed, it is akin to a reverse up to date Robin Hood. Reverse because the schemes will rob the poor, Mid Wales does not have a great economic base, and giving to the rich via subsidies which the local economy does not benefit from."⁶³ This is simply not so. Great care has been taken to include the community and return the benefits of the scheme to it, as we have explained above and as Mr Harries explained in evidence and upon which he was available to be asked questions, but was not. His evidence is important because it shows the decision maker that significant objection to the proposal is misinformed and thus misconceived. In fact, when you come to consider the extent of truly local objection, i.e. people who live near the Llaithddu scheme including in the Afon Marteg Valley you will find such level of objection to be modest and the support to be significant. We do encourage you to undertake that exercise.

78. There are other land owners who are not part of the farming group but who live close by. Those people are involved too and in the most practical and fundamental of ways. One person lives in a house with no mains electricity - on consent being granted, a supply will be laid to that house.

MATTERS 7, 12 & 13 - Protected Species and Habitats⁶⁴, Hydrology⁶⁵ and Peat⁶⁶
Curlew

[Key documents: FWLC-SoCG-003 with NRW on Ecology and Ornithology; FWLC-SoCG-004 with NRW on Peat Resource; FWLC-005-Habitats Note 5 June 2013; FWLC-SOCG-005; CPL-VATT-FWLC-PS-HYDRO-S4-Position-Statement-SSA-C-Applicants-Hydrological-Session-4-Cumulative-Effects; Schedule of Conditions]

79. The position during the Initial Inquiry Session was that NRW considered that Llandinam repowering "will make the most significant contribution to the cumulative effect of the three schemes, including Llaithddu and Hirddywel" and "does not accept the view that there would be no

⁶² Proof of Evidence of David Harries at § 10

⁶³ Closing submissions of Robert Robinson FRICS AILCM on behalf of North Montgomery Local Government Forum, p 6, given on 28 May 2014, AM.

⁶⁴ the individual and cumulative impact of the proposed developments on biodiversity, including the ecological functioning of European Protected Sites (e.g. the River Wye Special Area for Conservation (SAC), Berwyn Special Protection Area (SPA) and South Clwyd Mountains SAC); impacts on European Protected Species under the Conservation of Habitats and Species Regulations 2010 (as amended) "(the Habitats Regulations)"; and the likely effectiveness of proposed mitigation measures

⁶⁵ the impact of the proposed developments on hydrology and hydrogeology, to include impacts on sensitive water features (streams, ponds, wetlands); impacts on private water supplies; fisheries and watercourses; and impacts on groundwater; and the likely effectiveness of proposed mitigation measures;

⁶⁶ the impact of the proposed developments on peat

significant effect for the existing curlew populations from either the Llandinam or Llaithddu schemes." We were surprised by that position having regard to the scheme amendments and mitigation proposed and the reaction we had from NRW officers during early 2012. There was further helpful dialogue after the Inquiry Initial Session. This resulted in a SoCG which records that "The method of the surveys was discussed and agreed with CCW/NRW."⁶⁷ Four or five pairs of curlew were recorded, all of them outside the site boundary. All were over 600m from proposed turbines⁶⁸.

80. After receipt of NRW's Outline Statement of Case there was formal amendment of the proposal to delete two turbines. This permits implementation of the mitigation requested by NRW in respect of curlew. The amendments, the draft Habitat Management Plan (HMP) and the Breeding Birds Protection Plan (BBPP)⁶⁹ reduce the cumulative effects of the Llaithddu proposal to an acceptable level when considered with other schemes⁷⁰.
81. In common with curlew, NRW now agrees that there will be no significant effect on any other species⁷¹. This position has been updated. Overall the surveys carried out in 2013 /14 confirm that the bird assemblage and usage of the site is very similar to that recorded in 2006 and the results of the original assessment, that the proposed wind farm with agreed mitigation will have no significant impacts on the birds using the site, remain the same. The site displays the usual paucity of species and numbers typical of an upland site in Mid-Wales during this time of year⁷².

Peat

82. NRW has never advanced a case specifically against the Llaithddu proposal on the basis of its impacts on either peat or the historic landscape⁷³. The Alliance case simply refuses to pay any attention to the evidence. As in so many other respects, there is no mention at all of evidence (often unchallenged) which demonstrates the contrary case. On this issue the Alliance exemplify this approach by alleging peat impacts and impacts on the SAC without referring to a single document or piece of oral evidence⁷⁴.
83. So far as peat is concerned, further surveys, micrositing of turbines and the amendment of the route of on-site access tracks resolved NRW's initial concerns. The subsequent deletion of turbines 1 and 2 further reduced peat impacts. It is now agreed that, subject to a condition on the submission, agreement and implementation of a Peat Management Plan, there is no impact on peat on the majority of the site and the impact

⁶⁷ [FWLC-SoCG-003 with NRW on Ecology and Ornithology at § 5.3]

⁶⁸ The Alliance did not provide a proof of evidence which specifically addressed ecology in respect of SSA C

⁶⁹ [FWLC-SoCG-003 with NRW on Ecology and Ornithology at Appendix 2 and 3 respectively]

⁷⁰ [FWLC-SoCG-003 with NRW on Ecology and Ornithology at § 7.4]

⁷¹ [FWLC-SoCG-003 with NRW on Ecology and Ornithology at § 7.5]

⁷² Updated Protected Species Report May 2014 [FWLC -016-Updated Protected Species Report] at §3.36

⁷³ [CON-003-004; the NRW opening Statement at §3.2 and 3.3]

⁷⁴ Alliance Closing Submissions Section 10 at §§ 10.8 to 10.13 at p57-58

elsewhere is acceptable⁷⁵.

84. ES Chapter 5⁷⁶ set out Soils and Agriculture Land Use Assessment. At the time there was no requirement for a detailed assessment of peat as a soil resource. However, CCW then published specific guidance on the assessment of peat resource and peatland habitats in connection with wind farm developments⁷⁷. Hence, a Peat Survey methodology was agreed with CCW in January 2011 and the survey was undertaken⁷⁸. By letter dated 13 December 2011 FWL were thanked for their constructive consideration of the issues and CCW agreed peat mitigation and turbine micro-siting.
85. The June 2013 SEI⁷⁹ included assessment of specific amendments to the wind farm including amendments agreed with CCW regarding peat resource:
- Micro-siting of Turbines 1, 12 and 24
 - Alternative permissive route to the east of Turbines 1 to 3
 - Condition setting out changes to siting of Turbines 3 and 5
86. A further site visit was undertaken in May 2013 to examine soil profiles for those amended turbine locations set out in Options 1 and Option 2 in the SEI.
87. The SoCG agreed with NRW⁸⁰ regarding Peat Resource records:

The peat resource work undertaken in 2011 and 2013 has confirmed that there are no significant areas of land within the development footprint that comprise moderately (>50cm) or deep (>1m) peat resources. On the southern part of the site the soils are predominantly non-peaty and where peat resources are encountered these are predominantly shallow (<50cm in depth).

The impact on peat is localised, with little or no impact on peat for the majority of the site.

NRW raise no objection to the proposal on the grounds of the effects on peat resources

88. We invite you to find accordingly.

⁷⁵ [FWLC-SoCG-004 with NRW on Peat Resource]

⁷⁶ [FWL-BAC-003]

⁷⁷ 2010 "Guidance Note Assessing the Impact of Wind farm Developments on Peatlands in Wales"

⁷⁸ Peat Resource Report was submitted to DECC and sent to Powys County Council (PCC) and CCW in April 2011 (Refer to June 2013 SEI Appendix 2.1 [FWL-BAC-010] for copy of Peat Resource Report)

⁷⁹ [FWL-BAC-010] - refer to SEI para 1.1.2 and SEI Table 2.5. Total volume of peat disturbance calculated as 18,689 cubic metres.

⁸⁰ [FWL-SOCC-004]

Hydrology

89. So far as the River Wye Site of Special Scientific Interest and Special Area of Conservation is concerned, NRW and FWL have agreed that the impacts of the Llaithddu scheme will not give rise to a 'likely significant effect'. We have set out the tests to be applied under the The Conservation of Habitats and Species Regulations 2010 ("the Habitats Regulations") in a Note on Appropriate Assessment⁸¹.
90. The River Wye catchment as a whole is in excess of 4000 km², of which the sub-catchments in which the Llaithddu site is situated constitutes less than 1%. Having considered the assessment of construction impacts on the SAC and the SEI, NRW is content that suitable conditions which secure, amongst other things, a Construction Environmental Management Plan, would ensure that there would be no likely significant effect on the SAC when the Llaithddu scheme is considered alone⁸². So far as in combination effects are concerned, the first question remains 'in combination with what?' Grid connection agreements which are in place suggest that simultaneous construction of SSA C consented wind farms is unlikely. In any event, even on a 'worst case' scenario, and after very careful consideration, the hydrological specialists instructed by the three applicants in SSA C will say that there is no likely significant effect on the SAC.
91. We note and respect the views advanced by the Alliance and others, for example via the evidence of Dr Rodda⁸³. That amounted to no more than a critique of the ES and presented no independent or free-standing evidence. What the evidence of Dr Rodda did not do was explain why issues of runoff could not be appropriately managed and such management secured by condition. A full reply to the points was provided by Mr Bagley⁸⁴.
92. So far as cumulative effects are concerned, it is the considered view of three hydrologists⁸⁵ that either alone, collectively or in combination with the other developments in the catchment, there will be no significant change to the hydrological processes of the River Wye either in terms of water quality or water quantity. In respect of water quality, the large scale of the sub-catchment, the large volume of water in the catchment, the relatively small proportion of the sub-catchment occupied by each scheme, and, importantly, the spatial positioning of each of the schemes within the sub-catchment relative to each other, to any other proposed wind farm scheme or any other activity, and to the likely receptor locations mean that, without mitigation, there will be either no additional sedimentation effect or a negligible effect within the SAC. Nonetheless mitigation measures are proposed.

⁸¹ [FWLC-005-Habitats Note 5 June 2013]

⁸² [FWLC-SOCG-005 at §6.3]

⁸³ [ALL-SSAC-POE-02 Hydrology] - Dr Rodda did not appear at the Inquiry

⁸⁴ [FWLC-007 Note on Hydrology]

⁸⁵ [CPL-VATT-FWLC-PS-HYDRO-S4-Position-Statement-SSA-C-Applicants-Hydrological-Session-4-Cumulative-Effects]

93. NRW has confirmed its position as to both 'likely significant effect' and the mitigation which is proposed (which is very much standard practice and easily achievable by all three proposed wind farms) thus⁸⁶:

NRW considers that the proposals would not have a likely significant effect on the River Wye SAC alone or in-combination with other plans or projects taking into account the mitigation measures that have been embedded within the proposals and the suggested conditions that have been agreed between the applicants and NRW. It will be important for the SoS to satisfy himself that:

- (a) the mitigation measures proposed in the ES and SEI are delivered as part of suitable planning conditions [the schedule of conditions does indeed achieve this];
- (b) the generic principles and measures in the draft mitigation measures are translated into suitably designed and appropriate site specific measures, for example in [the] final Construction Environmental Management Plan and Pollution Prevention Plans [we can confirm that such is the intention of FWL and so much is capable of being secured by an agreed condition];
- (c) that measures are in place to ensure that the final mitigation measures are assessed and approved by appropriate bodies [NRW took an active part in the discussion of conditions both outside and within the Inquiry and have secured this outcome];
- (d) that measures are in place to ensure that there is compliance with and necessary monitoring and enforcement of all final mitigation measures in the planning conditions [the deemed consent would be subject to the usual enforcement mechanisms available to the planning authority and there has been no suggestion that PCC is anything other than equipped to discharge its enforcement duties].

94. Overall, we will submit that this body of evidence and agreement demonstrates that the application scheme succeeds in conserving flora, fauna and geological and physiographical features of special interest⁸⁷.

MATTERS 6 & 9 - NOISE⁸⁸ & HUMAN HEALTH⁸⁹

[Key Documents: ES 2008; SEI; FWLC 002 SoCG Noise; Schedule of Conditions]

95. There never has been any real objection to the scheme on an acoustic basis. Even the Alliance's closing submissions appear accepting of the use of conditions to address this issue⁹⁰. The 2008 ES⁹¹ and 2013 SEI⁹² record

⁸⁶ [NRW- Closing Submissions]

⁸⁷ Schedule 9 to the Electricity Act 1989 [CD/COM/023]

⁸⁸ the individual and combined impact of noise generated during construction and from the operation of the proposed developments taking into account the cumulative impact with other wind farms in the Powys area which have already been granted planning permission or where planning permission has been applied for

⁸⁹ the potential impact of the proposed developments on human health

⁹⁰ Alliance Closing Submissions, Section 7, §13, p44

⁹¹ Chapter 10

⁹² Chapter 8

the assessments of the potential noise impact of the operational turbines, and the cumulative noise impact of the proposed neighbouring wind farms. The assessments followed the guidance contained within ETSU-R-97. The conclusions of those assessments were that the proposals:⁹³

Will meet the Lower Absolute Amenity Hours Noise Criterion in respect of operational noise levels at associated and non-associated receptor locations;

Night-time Operational Noise Levels will meet the ETSU-R-97 night-time noise criterion;

Cumulative noise predictions indicate that levels will meet the Lower Absolute Amenity Hours Noise Criterion;

Night-time operation cumulative noise levels will meet the night-time noise criterion specified within ETSU-R-97; and

An assessment of the potential noise associated with construction of the wind farm indicated that noise associated with such activity will be limited to acceptable levels.

96. The cumulative effects are agreed with the Environmental Health Officer of PCC⁹⁴. The Inquiry is fortunate to have particular experience and expertise amongst the parties' witnesses. As a result, agreed conditions have been arrived at which deal with the individual and cumulative effects of the schemes. So far as concern has been raised in respect of the effects of amplitude modulation⁹⁵ those concerns are misplaced for the reasons explained in Mr Hayes' Note on the topic. It is, however, acknowledged to be a developing area of expertise upon which you have been provided with ample material.
97. Notwithstanding that observation, in light of the recent RenewableUK December 2013 Paper on 'Wind Turbine Amplitude Modulation: Research to Improve Understanding as to its Cause and Effect', a Joint Proof of evidence was drafted on behalf of all applicants⁹⁶. The statement provides an overview of EAM and included a Joint Statement at Appendix A which made the following points:
98. A level of AM often referred to as 'blade swish' is recognised as a typical feature of wind turbine development;

At some wind farms, that characteristic blade swish turns into a higher level 'whooping sound' audible at considerably greater distances than could ordinarily be perceived;

⁹³ SEI page 108

⁹⁴ FWLC 002 SoCG Noise

⁹⁵ [OBJ772-Noise PoE-Weller-SSA C]

⁹⁶ [APPLICANTS-NOISE-POE3-BULLNORE-S4]

Excessive AM (EAM)⁹⁷ can occur at any planned wind farm;

EAM can lead to increased annoyance in people exposed to the sound;

There is an indication it is occurring at some wind farms;

It is now possible to develop an objective test and methodology for identifying, quantifying and regulating EAM;

As a result of the research ReUK have proposed a planning condition which the Institute of Acoustics has welcomed while noting that it requires a period of testing and validation before it can be considered good practice.

99. Accordingly, there has been discussion both at, and outside of the Inquiry as to what condition to attach to any consent granted in respect of this and the other schemes before the Inquiry. FWL are content to accept a condition that prevents operations of the turbines unless and until a scheme for assessing and regulating EAM has been submitted to and agreed with PCC in line with appropriate guidance in force at that time.

MATTER 11 - AVIATION⁹⁸

100. We make no submissions in this regard save to observe the lack of objection from those who may be concerned and the fact that the scheme specifically accommodates the tactical training requirements of the MoD.

⁹⁷ Also described as OAM (Other Amplitude Modulation) in the ReUK report.

⁹⁸ the individual and combined impact of the proposed developments on aviation

MATTERS 4 & 10 - LANDSCAPE AND VISUAL⁹⁹ & CULTURAL HERITAGE¹⁰⁰

[Key Documents: June 2013 SEI; January 2014 SEI; Proofs of Evidence and Appendices (Sessions 1 and 4) of Colin Goodrum, Philip Russell-Vick and Dominic Watkins]

Landscape and Visual - Approach and Structure

101. By its decision dated 25th September 2012, the Council adopted a position, namely "In the light of concerns expressed by the Countryside Council for Wales (now NRW) regarding cumulative impacts and lack of mitigation, it is considered that the landscape and visual impact of the proposal is unacceptable."
102. It has to be observed and emphasised that NRW's case before this Inquiry in respect of the Llaithddu scheme is entirely silent on the topic of landscape. In closing, NRW explained:
- ...NRW's remit is limited by its role as the statutory advisor to the Welsh Government on sustaining and enhancing the natural resources of Wales. This has meant restricting its involvement to specific areas within that remit, broadly landscape, habitats and species.
-
- NRW has no outstanding objections to any of the individual wind farm schemes within SSA C¹⁰¹.
103. The Alliance's case is uncompromising. It advances the ambitious and brave case that no combination of proposed wind farms before the Inquiry is acceptable in principle¹⁰².
104. In the absence of any continued objection by NRW, the applicants are now invited to meet the Council's case as it has developed and which seems to have two limbs: (i) in respect of indicative capacity limits, and; (ii) in respect of landscape and visual impact of a part of the Llaithddu scheme. As to (i) there is evident concern as to the consequences in terms of grid infrastructure if certain 'tipping' points are reached. As we explain, we do not consider that this issue need arise nor is it central to the matters for decision.
105. The primary remaining issue is the PCC case on those turbines situated to the south. However, it is an issue to be considered in the context of the scheme's merits as a whole because the scheme was designed and brought through the consenting process as a whole. The statutory

⁹⁹ the individual and combined landscape and visual impact of the proposed developments taking into account the proximity to Snowdonia National Park (Strategic Search Area B); and cumulative impact with other wind farms in the Powys area which have already been granted planning permission or where planning permission has been applied for;

¹⁰⁰ the impact of the proposed developments on cultural heritage

¹⁰¹ NRW Closing Submissions at §§ 1.1 and 2.2 respectively; given 28 May PM

¹⁰² See the conclusions to Mr Watkins' proof [ALL-SSAC-POE-04]

framework for decision taking is focussed upon the extent of mitigation of impacts and here the scheme design is one which successfully mitigates its effects across the whole scheme. So, consistent with that fact, the landscape and visual effects are considered as a whole.

106. The history of assessment of suitability of the site and its vicinity also points to a consideration and assessment of the scheme as a whole. This is seen in the various ways in which landscape character assessments have defined the various characters of the area. That history of assessment is of some importance and is the starting point for these submissions. It is helpful to the decision maker as independent assessment of suitability and also whether or not to exclude particular areas from future large scale wind farm development.
107. Hence, these submissions start by summarising the position adopted by PCC as to the suitability of the site, namely the 'Arup' studies of 2006 and 2008. We then turn to the LANDMAP character assessments and the scheme-specific advice received and adopted by PCC.
108. Having done so, we then consider the substantial areas of common ground between the landscape architects who have given evidence and the reasons for the narrow area of disagreement by reference to the LVIA materials.
109. We then deal with cultural heritage in the above context. We do so because there is agreement with PCC and statutory consultees as to acceptability in cultural heritage terms. So far as there remains an issue raised by the Alliance in respect of Fowler's Armchair, that is founded in visual terms and is most conveniently considered within the overall context of the visual case.

Suitability and Exclusion

110. The following is not contentious¹⁰³.
111. SSA C and its surrounding area was considered via a number of zones. The scheme falls within Zones 8, 10 and 11. Zone 15 is also very close by. The Zones were assessed and ranked for their suitability by Arup in two studies, in 2006 and 2008. In accordance with the methodology which is anticipated and advised in TAN 8¹⁰⁴, they contain useful, relevant evidence which can be used as guidance in assessing the acceptability of the scheme. The result of the assessment does not amount to a definitive or absolute answer as to whether a particular scheme is acceptable in landscape and visual terms, but it does provide a ranked assessment which informs the decision taker as to areas of exclusion, and conversely as to inclusion. The aim of the detailed assessment was to identify the preferred sites [which] will be the ones that have the lowest landscape impact¹⁰⁵. In other words, Arup's brief was to map the best locations for

¹⁰³ xx Mr Russell-Vick Day 11, 4 October 2014

¹⁰⁴ See Annex D at p 57 of TAN 8 for the methodology proposed

¹⁰⁵ Arup 2006 [COM 17 and also COM 10A], p7, last bullet point

wind farm development¹⁰⁶.

112. The approach is a relative assessment. Hence, the outcomes of the studies are relevant because, if onshore wind farms are going to be permitted within identified, chosen areas, the decision maker is inevitably concerned with relative effects, to a degree.
113. The second Arup study, in 2008, had a still greater focus on landscape effects than the 2006 study. It was more detailed and concerned with identification of the boundary of the Strategic Search Area. For its visual assessment, it assumed 125m¹⁰⁷ turbines rather than 99.5m (64 m to hub/99.5 m to tip), per the Llaithddu application. It considered environmental constraints in the manner envisaged by the advice in TAN 8 and produced criteria for spatial decision making between the zones within the SSAs and between the SSAs. The result was a ranking of the relative environmental, technical and landscape performance of the various parts of the SSAs.
114. The purpose of the local planning exercise was to achieve a finer grain of development allocation within the SSA, taking into account landscape, visual and cumulative impacts¹⁰⁸. The purpose is to be emphasised. When using the SSAs and the fine grain of the assessments they are to be understood as being for the purpose of development allocation, as TAN 8 expressly states.
115. The assessments of the zones of particular interest demonstrate that there are no 'absolute' constraints such as impacts upon national trails¹⁰⁹. The result of the assessment was to rank the zones overall thus:
- | | |
|---------|------------------------|
| Zone 8 | Ranked First (Highest) |
| Zone 10 | Ranked Thirteenth |
| Zone 11 | Ranked Sixteenth |
| Zone 15 | Ranked Ninth |
116. PCC accepts and has no objection to turbines located in Zone 11, to the north (ranked sixteenth). Rather, PCC's case is focussed on Zone 8 (ranked first and highest). Zone 8 lies to the south of Zone 10.
117. The SSA C Local Refinement Report from Arup in 2008¹¹⁰ excluded some areas of SSA C. The function and purpose of the report was to do exactly that: exclude areas which were unsuitable for wind farm development from the SSA. After this process of local refinement, Zones 8 and 10 were found to be suitable and not excluded from the SSA.

Visual Effects

118. There is much common ground on the assessment of landscape and visual

¹⁰⁶ Arup 2006, p6 at §1.2

¹⁰⁷ See App G, p 6 to the Arup 2006 study

¹⁰⁸ See TAN 8 Annex D, p58 at §1.2

¹⁰⁹ Arup 2006 at p 17, 4th row of the table.

¹¹⁰ [COM 10A and 18]

effects. The Llaithddu scheme was designed in the knowledge that the site had been identified by PCC as suitable for large scale wind farm development. As explained by Mr Goodrum¹¹¹, and as has not been contradicted, it has been designed sensitively in response to local landscape character and landform, sensitive landscape and visual receptors, and other environmental and technical reasons.

119. As canvassed in evidence, it is instructive to consider just how much of the compass is agreed not to receive any significant effect from the Llaithddu application. Effects to the north and west of the northern part of the proposed wind farm would be limited by the presence of the existing P&L turbines and the screening effects of landform. Effects to the north east would be Medium magnitude up to approximately 4km, reducing to Low, Negligible or no effect beyond due to the effects of distance, forestry or screening.
120. To the south east, effects would reduce rapidly to Negligible magnitude or no effect beyond approximately 1km except where there are small areas with visibility where effects could be as high as Medium magnitude. To the south east, south and south west effects would be of High magnitude up to approximately 1km in all directions except where commercial forestry provides a buffer. Effects would be of Medium magnitude up to approximately 4km to the south west and east where not screened or buffered by forestry or other elements in the landscape.
121. The southern group form either: (i) on FWL's case, an attractive composition on the elevated land of Brondre Fawr Hill, responding positively to the landform pattern^{112,113}, or; (ii) on PCC's case, a threatening, isolated addition to the landscape, too close to Bwlch y Sarnau which would loom over the valley and be visually dominant¹¹⁴. Having identified that clear disagreement between FWL and PCC we turn from the prose to the LVIA assessments. PCC has chosen to set out its closing submissions by reference a scale of 'faint' to 'dominant', following the approach of its landscape witness. We prefer to consider significance by reference to Minor-Major significance and reproduce by way of summary, Table 1 from Mr Goodrum's proof, which we understand to be agreed with PCC.

¹¹¹ Proof of Evidence of Colin Goodrum at §2.3.3

¹¹² per Mr Goodrum - see especially Viewpoint 34 in SEI Volume 4 Appendix 7) and illustrate the proposed view in Figures 10_WF_34 and 10_PM_34

¹¹³ Figures 10_PM_2, 4, 5 and 34 (SEI Volume 3 section 3)

¹¹⁴ See PCC Closing Submissions at §161, p75 of 481

Summary of Viewpoint Assessment from Selected Viewpoints

VP No	Visual Receptor	Approx. distance	Sensitivity	Magnitude	Significance
1	<p>Minor Road at David's Well</p> <p>The southern part of the wind farm would be visible as a line extending along the ridge of high land and the northern part would be visible as a continuation to the north, albeit not as close to the receptor. Effects of the southern part of the wind farm would be the same as for the wind farm as a whole.</p>	1.4	Low	High	<u>Moderate to Major</u>
2	<p>Minor Road West of Bwlch y Sarnau</p> <p>The southern part of the wind farm would be visible as a line extending along the ridge of high land. The northern part would be largely screened by landform. Effects of the southern part of the wind farm would be the same as for the wind farm as a whole.</p>	2.2	Low	High	<u>Moderate to Major</u>
4	<p>Glyndwr's Way, South of Bwlch y Sarnau</p> <p>Effects of the southern part of the wind farm would be the same as for the wind farm as a whole.</p>	2.5	High	Medium to High	<u>Major to Moderate</u>
5	<p>Minor Road East of Pantydwr</p> <p>Effects of the southern part of the wind farm would be the same as for the wind farm as a whole.</p>	4.4	Low	Medium	Moderate to Minor

VP No	Visual Receptor	Approx. distance	Sensitivity	Magnitude	Significance
7	Junction with B4518 near Sun Inn, St. Harmon Effects of the southern part of the wind farm would be the same as for the wind farm as a whole.	6.1	High	Negligible	Minor
10	B4518 South of St Harmon Effects of the southern part of the wind farm would be the same as for the wind farm as a whole.	7.7	Low	Low	Minor
13	Near Glyndwr's Way on B4518, Llyn Clywedog The southern part of the wind farm would not cause any effects. All effects would be caused by the northern group.	11.6	High	Negligible to Low	Minor to Moderate
34	Glyndwr's Way, Bwlch y Sarnau Effects of the southern part of the wind farm would be the same as for the wind farm as a whole.	1.8	High	High	<u>Major</u>
36	Glyndwr's Way, Fron Top Effects of the southern part of the wind farm would be the same as for the wind farm as a whole.	6.5	High	Low to Medium	Moderate

0.

122. There is no suggestion that this assessment is wrong, or underplayed.

123. The scheme would cause a limited number of significant effects. That small number of significant effects is based on agreed, representative view points and an agreed ZTV. That small number is to be seen in the context of the totality of the agreed representative view points and their assessments. We invite you to take a balanced view of that overall assessment. When that is

done we anticipate that you will see why PCC reached the stance which was reported to Cabinet, supported by its own independent advice.

124. If you wish to examine the worst case¹¹⁵, then VP34 illustrates that, lying just outside the settlement edge, where effects would be greatest. The character of Bwlch y Sarnau would neither be defined by the scheme nor would they be otherwise dominated in the manner sought to be argued now by PCC. Moreover, the agreed ZTV¹¹⁶ demonstrates that intervening landform would screen the wind farm from a large proportion of this settlement.
125. Further, there is an interesting 'baseline' question for you if you follow the invitation from PCC to consent Llandinam. This is because you will then assess the Llaithddu scheme against the repowering scheme and not the existing P&L wind farm¹¹⁷. We submit that such assessment is likely to be material and requires consideration.
126. At the time of the Cabinet Report there had been 111 letters of objection and 241 letters of support for the proposal "which emphasised the level of support from the neighbouring communities for the scheme".
127. Cumulative effects created by Llaithddu wind farm on users of two main road routes (A483 and A470) passing through the study area would be limited. These roads generally pass along valley bottoms close to Llaithddu, and enclosing landform vegetation would restrict views of Llaithddu wind farm. Llaithddu wind farm also lies on slightly lower ground and east of higher ground on which Hirddywel and Llandinam would be located and would generally be less visible from these routes.
128. Further, it is agreed that there are no significant cumulative effects between SSA B and C. For the seven proposed wind farms within SSA C, Mr Goodrum considered them in terms of those on the eastern and western sides of the valley. In particular, he noted the Llaithddu Option 2 and Llandinam wind farms provide a good combined arrangement¹¹⁸.

Character

129. The application site does not lie within, or near to, any landscapes of national importance. The Shropshire Hills Area of Outstanding Natural Beauty and Snowdonia National Park are located more than 12km and 31km away from the site respectively. These distances provide adequate separation between the protected landscapes and the proposed Llaithddu wind farm individually which would ensure preservation of their character and special qualities¹¹⁹.
130. There is a general consensus, based on an established pattern of appeal

¹¹⁵ We submit that you are not concerned with the worst case, but with seeking to identify the effects as best possible from all of the materials and your site view.

¹¹⁶ Figure 18 in Appendix 1 of Mr Goodrum's proof

¹¹⁷ See para 163 of PCC Closing Submissions at p76 of 481

¹¹⁸ Noting, of course, that Llaithddu was designed in advance of any knowledge of the Llandinam CeltPower scheme

¹¹⁹ SoCG - FWLC-006-Landscape

decisions, that significant effects on landscape character arising from wind farms are generally confined to the immediate vicinity¹²⁰. Such effects are generally agreed as being of High magnitude within up to 1km of turbines (where the turbines may become the dominant characteristic of the landscape), reducing to Medium within up to 4km (where the turbines may become one of the key characteristics of the landscape) and decreasing further thereafter. The scale of the development, the nature and sensitivity of the receiving landscape, and local 'barriers' in the landscape (such as breaks of topography, woodlands, settlements, and roads or rivers) will determine the exact extent of effects for each development, but in practice significant effects are highly unlikely beyond 10km. We do not understand that general approach to be in dispute.

131. There are two landscape character areas which would host the wind turbines: M32 – Waun Ddubarthog¹²¹, and; R17 – Bwlch-y-Sarnau Uplands. Overall effects on the character areas would not be significant for these summary reasons.
132. The southern group of proposed turbines would give rise to effects of High magnitude which would extend up to approximately 1km to the west, east and south. This would extend down the slopes of Brondre Fawr¹²² to the eastern edge of the Afon Marteg¹²³ valley to the west, to Bailey Hill (where there is already a small single turbine¹²⁴) to the south, and down the eastern slopes of Brondre Fawr to David's Well and Red Lion Hill to the east, except where there are existing plantations. Extensive parts of this area are characterised by large scale commercial forestry plantations which would reduce the magnitude of effect due to their large scale commercialisation of the landscape and by screening the turbines where the plantations have not been felled.
133. The presence of existing P&L turbines is a defining characteristic of M32¹²⁵. The character of the remaining landscape character areas in the detailed assessment area (within 15km) would not be affected to any significant degree and the character of the wider study area (within 35km) would be unaffected.
134. R17 – 'Bwlch-y-Sarnau Uplands' is turbine host area for the southernmost turbines. The Special Qualities (Key Landscape Characteristics) are given as:

"Large upland mass affected by coniferous woodland plantations of a large scale and extent

¹²⁰ Mr Goodrum's Proof of Evidence at §5.3.9

¹²¹ Whine Theebarth-(as in think)-og

¹²² Brondr-ay Vour

¹²³ Av-(av in have)-on Mart-egg

¹²⁴ A small single turbine is located at Bwlch y Sarnau (which can be seen on the right hand side of wireframes and photomontage from Viewpoint 34). The turbine lies approximately 1.2km south of T29 on Bailey Hill

¹²⁵ Mr Goodrum's Summary Proof of Evidence at §1.6.3. & 1.6.4 & Main Proof: 5.3.1; 5.3.7 - PCC do not object on the basis of landscape character effects within SSA C

Strong visual influence of the large-scale wind farm developments on nearby upland areas with, consequent effects on long views out from this area

The northern section of this LCA has a distinct and relatively unusual landscape type for the study area, upland area displaying the small to medium scale irregular field patterns and hedgerow boundaries more typical of the mid-Montgomeryshire region"

135. Visual and Sensory Characteristics are defined as:

"The northern area is characterised by an upland area of small to medium scale irregular field patterns and hedgerow boundaries, with strong visual links towards Waun Ddubarthog Wind Farm to the north east and Bryn Titli¹²⁶ Wind Farm to the west. In the south is an area of upland hills, plateau and ridges which have had more than half of there (sic) area planted with large-scale coniferous woodlands. Regular straight boundaries form incongruous harsh lines in the undulating landscape. Dark conifer clad hillsides result in rather bland but brooding landscapes in places."

136. This area extends from the west of the site, beyond the existing P&L wind farm, and to the south and east where it wraps around the bottom part of the site and hosts the five southern proposed turbines.

137. The northern part broadly corresponds to LANDMAP visual and sensory aspect area 438 which would experience Negligible magnitude effects. The southern part of R17 broadly corresponds with LANDMAP visual and sensory aspect area 125. This has a Moderate overall evaluation (as well as Moderate evaluation for scenic quality, integrity, character and rarity) with the justifying text saying:

"rather unattractive & unnatural landscape due to extensive conifer forests which are not particularly well related to topography and stifle underlying intrinsic characteristics".

138. LANDMAP aspect area 125 is assessed as experiencing High magnitude effects within approximately 1km (except where screened by plantations where it would be lower) and overall effects of Low to Medium magnitude. It is to this vicinity that PCC directs its objection, i.e., a rather unattractive and unnatural landscape.

139. Further, part of the LCA is covered by SSA C zone 8 and 9 within PCC's second TAN 8 study (with the southern five turbines lying in zone 8). Zone 8 is defined as medium-low landscape character sensitivity to large scale wind farm development.

140. Overall the area is considered to be of Medium sensitivity to the proposed development.

¹²⁶ Br-in Tit-ley

Public Rights to Way (PRoW)

141. With respect to recreational routes, users of certain parts of the PRoW network within approximately 6km of the wind farm would experience significant visual effects. The main routes affected to 'major or 'major to moderate' degree would be those bridleways and footpaths crossing, or situated immediately adjacent to, the site from which uninterrupted views of the proposals would be available. This would include a short stretch (approximately 2km) of Glyndwr's¹²⁷ Way at Bwlch y Sarnau which is likely to be exposed to major or major to moderate visual effects. This is agreed in the landscape SoCG¹²⁸.
142. The June 2013 SEI included an updated assessment of effects on access land, public rights of right (PRoW) and non motorised users arising from construction, operation and decommissioning of the proposed project. A further 'Note on Recreation' was submitted to the Inquiry in October 2013¹²⁹ which summarised the current scheme in relation to PRoW and included details of mitigation. The note addressed the consultation that had been undertaken with the British Horse Society, subsequent to the submission of the SEI, and responded to the BHS Statement of Case¹³⁰. Following discussions in 2012 PCC withdrew its holding objection on this issue.¹³¹
143. The main routes affected to 'major or 'major to moderate' degree would be those bridleways and footpaths crossing, or situated immediately adjacent to, the site from which uninterrupted views of the proposals would be available. None of the other publicly accessible routes, either locally or in the wider study area, would be affected to any significant degree. Long distance trails such as Glyndwr's Way, Offa's Dyke, The Severn Way, The Shropshire Way and the National Cycle Network Routes would not be affected to a significant degree by the proposed wind farm.
144. The use of the Prince Llewelyn Ride was recorded between 7th August and 15th September 2013¹³². The bridleway was monitored at the junction of Bridle Way No. LD 755 and No. LD 756 north of Fowler's Armchair. Horses and their riders were observed on the PRoW on just 3 days during the period of over 5 weeks.
145. Following discussion with PCC Countryside Services and BHS, a package of mitigation measures has been developed to include:
146. An alternative permissive bridleway at a distance of more than 200 metres from the turbines so that there is a choice for users of the PRoWs depending on their preference. The Note on Recreation confirmed that all

¹²⁷ Glin-doo-r's

¹²⁸ Proof of Evidence of Colin Goodrum at §1.7.5.

¹²⁹ FWLC-011

¹³⁰ OBJ-313-British Horse Society-Statement of Case-Llaihddu

¹³¹ [D/FWL/BAC/007] page 16

¹³² Explanatory Note FWLC-010

permissive routes fall within the ownership of participating landowners and so there is no uncertainty as to delivery, even where the proposal falls outside of the application boundary.

147. The June 2013 SEI takes into account the 2013 BHS Guidance and sets out mitigation measures as follows:

That conflict between vehicles and non-motorised users on the PRoW is minimised;

That additional links are provided to improve the connectivity of the bridleway network;

The provision of £72,500 to improve the local PRoW network; and

The provision of facilities to allow horses to become accustomed to turbines, such as familiarisation days with controlled turbine movement.

Residential Amenity

148. There are no issues in respect of impacts on particular properties. None have been raised by PCC at any stage and neither the Alliance nor any individual has made a representation as to effects upon the amenity of a particular dwelling or group of dwellings.

Independent Advice

149. Capita Symonds prepared a full report on the Llaithddu proposals¹³³. One issue raised by PCC's landscape consultants was clustering of turbines at the southern end of the wind farm (5 turbines) when viewed from Bwlch y Sarnau. Hence, the layout of the southern five turbines was revised and wireframe views of the submitted and revised scheme submitted¹³⁴. The revision has been assessed¹³⁵. The visualisations from Viewpoint 34 illustrate that the layout of the southern turbines will provide a balanced and equal spacing with no 'stacking' seen on the horizon from Bwlch y Sarnau and this was accepted by PCC's landscape consultant¹³⁶.
150. PCC's Planning Officer reported the landscape consultant's conclusions with approval¹³⁷. Such concerns as had been identified were addressed and it was concluded¹³⁸:

"Overall, in our opinion, the developer has addressed or clarified many of our concerns and the efforts made to refine the design of the scheme have resulted in a considerable improvement in the appearance of the southern arm of the scheme where it will be seen largely in isolation on the skyline. It is now recommended that the scheme be approved in

¹³³ Capita Symonds full report is [FWL-LAN-0022]

¹³⁴ Submitted with a covering letter dated 26 March 2013 (see SEI Volume 4 Appendix 2)

¹³⁵ LVIA by Colin Goodrum (see Viewpoint 34 in SEI Volume 4 Appendix 7) and illustrate the proposed view in Figures 10_WF_34 and 10_PM_34 in sections 2 and 4 of SEI Volume 3

¹³⁶ Proof of Evidence of Colin Goodrum at §2.5.11

¹³⁷ [FWL-BAC-007]

¹³⁸ Quoted in Proof of Evidence of Colin Goodrum at § 2.5.4.

terms of landscape and visual matters.”

151. Until the inquiry process was well under way, PCC’s position was that no further amendment was required. FWL were given no indication by PCC that the scheme was anything other than acceptable. As Mr Russell-Vick put it, when FWL saw the Council’s recorded position “I assume your clients looked at that and thought ‘job done’”.

Conclusion on LVIA

152. Mr Goodrum is an experienced landscape architect, particularly in respect of onshore wind proposals. He took an independent and balanced view which was not easily accepting of the LVIA work which had gone before. His considered and detailed approach was not undermined in any way in cross examination. His analysis and opinion should carry significant weight.
153. He considers that the development is well designed. The presence of existing P&L turbines is a defining characteristic of the local area. The design responds particularly well to the scale and pattern of the landform and the character of the landscape, following the pattern of high land at Waun Ddubarthog and Brondre Fawr, and the simple, exposed, open and windswept location. It will present itself as an attractive composition, in keeping with the scale and form to the landscape. When seen from the surrounding landscape the southern turbines in particular would form an attractive composition extending along the ridge top. The scheme would cause some significant but limited effects on sensitive landscape and visual receptors. Mr Goodrum’s firm opinion is that these effects are acceptable. He considers that in landscape and visual terms it is a very good scheme and should be consented¹³⁹.
154. NRW, the WG advisor on landscape matters, summarised its approach to landscape issues during the closing session¹⁴⁰: *“waiting for perfection is ridiculous – re Area C we don’t object to any of the schemes – we advise on nature conservation and landscape not on targets. We wouldn’t treat these targets as overriding. In particular Area C is already has a wind farm landscape so addition of new turbines doesn’t significantly alter landscape. There is also the issue of cumulative impact but given my position that overall contribution to the 2GW target it is important, individual schemes that are acceptable are approved.”*
155. The focus upon Bwlch y Sarnau and the Marteg Valley is one which should be seen in the context of the whole of the LVIA, its agreed VPs and ZTV. Along with the impact of intervening vegetation, the particular geography of the settlement on the nose of the ridge and the agreed absence of any unacceptable impact on any dwelling, we submit that the effects, though significant, have been over stated by PCC.

¹³⁹ Proof of Evidence of Colin Goodrum at §2.3.3

¹⁴⁰ Closing Session - Planning Balance; 20 May 2014

156. In summary on this topic, via detailed and carefully considered evidence, it has been demonstrated that the Llaithddu scheme:

has been designed sensitively in response to local landscape character, landform and visual receptors;

which design responds particularly well to the scale and pattern of the landform and character of the landscape at Waun Ddubarthog and Brondre Fawr;

which will itself present as an attractive composition;

which design, after responding to feedback provided on behalf of the Council, was considered acceptable by landscape consultants appointed by the Council to give their independent and expert opinion;

which would cause some significant but limited effects which are acceptable, and;

is a very good scheme which should be consented.

Cultural Heritage

157. We touch briefly on historic landscape and specific assets. In respect of the former, a detailed assessment was carried out using the ASIDOHL¹⁴¹ methodology produced by Cadw/NRW. This was carried out at the request of CPAT despite the fact that the application site does not fall within any of the designated historic landscapes of special or historic importance. The nearest such areas are the Caersws Basin Landscape of Special Historic Interest (a minimum of 4km to the north) and the Clywedog¹⁴² Landscape of Special Historic Interest (a minimum of 7km to the west). The outcome is agreement between the statutory consultees that the effect on historic landscape is acceptable.

158. Fowlers Armchair is an ancient monument. When seen in the field, it is far from obvious that it is an ancient monument. As a result of consultation with Cadw and CPAT on the setting of Fowlers Armchair the application has been amended as set out in the revised planning application of June 2013. These involved the movement of Turbine 17, and also envisages providing access to the monument, fencing it from the existing nearby bridlepath, providing a stile and the provision of an information panel. PCC take no point on Fowler's Armchair. It may be recorded that:

PCC raised no issue in this regard in its Outline Statement of Case;

PCC raised no issue in this regard in its Full Statement of Case;

PCC's Opening Statement was silent on the topic;

Mr Russell-Vick gave no evidence in respect of Fowler's Armchair;

PCC called no cultural heritage evidence in respect of the Llaithddu proposal;

PCC asked no questions of Mr Le Quesne who gave detailed oral evidence on cultural heritage issues;

PCC were careful to avoid any adverse comment on this topic in the Closing Submissions.

159. The Alliance case was advanced by Mr Kibble.¹⁴³ The case was put rather higher in closing by reference to the Bryn Llywelyn, Llanllwni, Pencader decision¹⁴⁴. We draw attention to the case being advanced by the Council, namely an adverse impact on the setting of SAMs and associated historic landscape impacts, put this way:

Under the historic landscape layer (CRMRTL42421) Mynydd Llanllwni is evaluated as outstanding. Again the relevance of the moorland is

¹⁴¹ Assessment of the Significance of Impacts of Development on Historic Landscape

¹⁴² Cl-oh-ed-og-(as in frog)

¹⁴³ [ALL-SSAC-POE-05]

¹⁴⁴ Appeal refs APP/M6825/A/12/2189697, APP/M6825/X/13/515763 & APP/M6825/X/13/515764 Powys CC core document

noted "Mynydd Llanllwni is open moorland with Bronze Age barrows a distinctive feature". There is no quibble about its quality – the assessor notes "this area scores highly in all evaluation categories. It is a good example of an upland landscape with nationally important components." The LANDMAP landscape habitats aspect layer also considers Mynydd Llanllwni (CRMRTLH112) to be outstanding – again for the quality of its heath¹⁴⁵.

160. FLW do not face such a case nor a factual matrix which is at all analogous to that decision. Rather, the important conclusion derives from the third bullet point to Sch 9 of Electricity Act 1989¹⁴⁶ which has been amply satisfied because the scheme protects sites, buildings and objects of architectural, historic or archaeological interest. We say this having regard to amendments made to the scheme, early in its development, which the statutory consultees do not suggest does anything other than minimise impacts. So far as the historic environment is concerned, the two principal heritage consultees have confirmed their agreement to a SoCG¹⁴⁷. That document records the satisfaction of both CPAT and CADW with the revised relationship between T17 and the SAM and as to the mitigation proposed.
161. Part of that mitigation includes the provision of an interpretation board. That might be thought to be of little moment until one recalls the question asked of Mr Le Quesne by Mr Truman. He asked "I went there on Monday and what I saw was a circular mound on the ground and a scattering of stones and a large rock - what was I looking at?" Mr Le Quesne explained that the circular mound is not the monument. This exchange illustrated just how unclear the SAM is as a feature to be 'read' in the field. It is not visible at any great distance, being located in a saddle, and not legible even when you are adjacent to it. Mr Le Quesne's view was that it was important to put resources into the understanding of the monument but that construction of the turbines would not cause any harm and was in any event reversible¹⁴⁸.
162. Of course, the historic environment is all-pervading in Wales. For the reasons explained above in respect of landscape and visual effects, if there were a preferable location for such renewable energy projects on historic environment grounds, TAN 8 would have directed us to it.

¹⁴⁵ See §260 of the Decision, *ibid*

¹⁴⁶ [CD/COM/023]

¹⁴⁷ [FWLC-007-(Hist Env)]

¹⁴⁸ Answers to Mrs Davies' questions; Day 6 of the Inquiry (AM), 5 September 2013

[D] CONDITIONS

163. The schedule of conditions is very largely agreed. Those conditions are necessary to address matters of legitimate environmental concern. Through a very long process of dialogue with statutory consultees, a suite of conditions has been agreed which entirely addresses the following the issues:

- Construction effects
- Archaeology
- Effects upon protected species
- Ecological effects generally
- Hydrology
- Peat
- Shadow Flicker
- Drinking water supplies

164. Likewise, there is a schedule of conditions to address both local and strategic highways effects. There remains some dispute as to how best to frame those conditions. However, the key fact is that there is agreement that those conditions will provide for appropriate traffic management. However, those conditions address a somewhat unrealistic worst case. They are highly likely to apply to circumstances which do not reflect the concerns articulated by opponents to these and other proposals.

165. Grid connection timing makes it almost certain that Llandinam would be built out before Llaithddu. Overlap in AIL movements is not a realistic scenario in any event. Moreover, such improvements to the strategic and local highway network as are undertaken for the Llandinam scheme would further benefit the Llaithddu scheme, albeit that they are not required.

[E] ANALYSIS AND CONCLUSIONS

166. We approach this analysis by reference to:

The type of development proposed and the framework which the Secretary of State has invited us, and Parliament required, to take to such decisions;

The 'long view' of the evolution of this proposal and the consequential range of agreements which has resulted between the applicant and those who are charged with scrutiny of the proposals by reference to environmental issues, which we acknowledge to be of importance;

The totality of the scheme, its benefits and the means by which its effects are agreed to be mitigated;

The totality of the evidence - not some of it.

167. Even the most casual reading of the over-arching policy documents to which we have referred in respect of Matters 1-3 yields a strong impression of the urgency attached to the delivery of the infrastructure which the Llaithddu scheme would provide. The policy ambition is to provide a step change and a steep rate of change. It is therefore something of a surprise that the scheme has been in the consenting system since 2006 without decision. We do not complain. Rather we point to the position which has been arrived at now and the opportunity to deliver development, in a real tangible way, which meets those policy objectives, now. In other words, if it takes eight or nine years to equip the decision maker with the material to consent nationally important infrastructure, required to address issues which are as serious as climate change and energy security for the nation, then the reasons advanced for turning away deliverable capacity need very careful scrutiny.

168. As EN-1 indicates, and PCC acknowledge, the decision maker should start with a presumption in favour of granting consent to applications for energy NSIPs¹⁴⁹. That is a further means by which the national policy seeks to explain that it is necessary for the infrastructure to be delivered and acknowledges that such delivery will produce environmental change. The Schedule 9 requirement is that such environmental effects are minimised. That is necessarily a holistic assessment. Hence, we come to the phrase 'planning balance.' In this sphere of decision making, it is a balance which acknowledges two important starting points: (i) need and urgency, and; (ii) inevitability of effects in locations which are not the norm for substantial development proposals. WG has gone to the trouble of identifying those areas in which to search for sites for such schemes, to avoid proliferation and to avoid the more sensitive sites. In a world of relative assessment, the planning balance starts from a position of informed relative acceptability and a presumption in favour of the proposal.

¹⁴⁹ PCC Closing Submissions at §938, p 448

- 169.** The position today is significantly different to that which was announced in the various Outline Statements of Case. The WG and PCC, supported so far as necessary by NRW, CPAT and Cadw, now agree that there is policy compliance and the statutory requirement to 'do what [an applicant] reasonably can to mitigate' has been met, as have all other statutory requirements, in respect of:

All ecological effects including effects upon protected species, including curlew
Effects upon peat;

Hydrological effects arising from construction and operation particularly in respect of there being no likely significant effect upon the Wye Valley SAC;

Noise;

Effects upon residential amenity;

Cultural heritage effects;

Local traffic and transport effects;

Strategic highways issues.

- 170.** That was not the position when this Inquiry process commenced. The balance of considerations is therefore fundamentally and radically different at the end of the Inquiry process. Through the substantial work undertaken by the parties, largely outside the Inquiry, the environmental effects of the scheme are very largely agreed to be acceptable, subject to the point taken by PCC in respect of the southernmost turbines.

- 171.** This balance of considerations is achieved by the scheme as a whole. We deal with that point in three ways. Firstly, we draw particular attention to:

Provision of ecological mitigation outside of the 'northern' turbine area;

The fact that the scheme was consulted on as a whole and the community was involved as a whole;

There is no formula for participation and community benefit which attaches to the northern area.

- 172.** Secondly, we draw attention to the factual context within which PCC's objection is now advanced. The following facts are germane:

The TAN 8 SSA studies, refining the SSA areas on behalf of PCC were accepted and adopted by PCC, ranking the now disputed area highly;

PCC took and accepted scheme specific advice which is contrary to the position now adopted;

PCC's current position was prompted by CCW/NRW. NRW now considers that the scheme is acceptable in all respects in which it is competent, which of course includes landscape.

- 173.** While it is entirely open for PCC to run its case contrary to the above positions, and we deal with those points on their merits, it is notable that PCC do not address this factual context in the direct way which is called for. The combined professional views and assessments of Arup (accepted by PCC), Capita Symonds (accepted by PCC), RPS (the ES and SEI) NRW (not addressed by PCC) and Mr Goodrum are highly material.
- 174.** Thirdly, we deal with the impact (and suggested remedy for) the refusal of consent which PCC now invite on the basis of its limited landscape objection. We pointed out to PCC that there is no such thing as a partial s36 consent for a generating station less than 50MW. PCC agree with that proposition. They suggest that a part of the scheme could be consented under the Town and Country Planning Act 1990¹⁵⁰. It is boldly asserted (without any evidential support) that such an application would be consented in ample time to benefit from a 2019 grid connection date. That bare advocate's point is misconceived and discloses a failure by PCC to engage in the reality of the consent process and the delivery of renewable projects. It is startling that such a point is made when it is known that this application has taken eight or nine years to reach the decision maker, that objections have been taken by PCC to each and every scheme in SSA C, the fact of active local opposition and publicly expressed political opposition to wind farm proposals in Powys.
- 175.** PCC have given no consideration to: (i) the cost associated with the grid connection contract (existing); (ii) the cost of a further grid connection contract; (iii) most importantly, the community acceptability of the benefits and burden which would result given the radically different land ownership situation. In summary, a TCPA would not meet the pressing need for renewable energy, whereas the application scheme would. It is not accepted that the late identification of an alternative scheme and approach is realistically available by reference to the above factors.
- 176.** The Alliance approach to landscape issues has remained uncompromising throughout. That is not a criticism but it is an accurate characterisation of the position which has been adopted. The overriding difficulties with that position are that it: (i) pays no attention to policy imperatives and associated acceptance of landscape change; (ii) does not deal with the relative assessment of LVIA which is not said to be anything other than objective and independent analysis; (iii) amounts to a de facto no-go area; (iv) does not deal with the policy approach of strategic search and concentration rather than dispersal of the necessary infrastructure. As we say, it is important to have regard to all of the features of the proposal and all of the evidence.
- 177.** Let us examine the position if you accept the PCC case on landscape

¹⁵⁰ §995 of the PCC Closing Submissions at 468 of 481

impact in its entirety and find against the whole of Mr Goodrum's evidence. Even in such circumstances, which would not be consistent at all with the way that the evidence came out at the Inquiry, but taking that scenario we submit that the balance weighs in FWL's favour:

there are no other issues which, after full consideration and agreement through the inquiry process, remain live;

the case against the proposal at the point causing the inquiry to be heard has diminished considerably - the balance to be struck is a fundamentally different one to that contemplated by our opponents at the outset of the Inquiry process;

all issues save LVIA are resolved as between FWL and statutory parties;

the 'tipping point' grid issue has been shown to be less significant than PCC feared;

The LVIA case against the proposal is heavily dependent on environmental capacity by reference to the TAN 8 limits. Those are out of date for the reasons we have set out. So far as they are of any relevance, we do not accept that Llandinam re-powering is a contribution to SSA C targets.

There are significant material benefits as identified by PCC in respect of those schemes which it supports, e.g. Llandinam. Economic and local employment opportunities also derive from the income by which landowners will facilitate agricultural diversification and provide long term security for farming operations. We agree that, taken together, the renewable electricity, economic and employment benefits are considerable¹⁵¹.

- 178.** So, you have before you a scheme which is widely acknowledged to provide benefits to which substantial weight should be given. It is similarly acknowledged to be well designed with mitigation measures which address the environmental capacity of the area. The location of the scheme is one which avoids the dispersal of such schemes throughout Wales and which need not give rise to the sort of grid infrastructure which has prompted such strong objection, even if more than just the Llaithddu scheme were to be consented in SSA C.
- 179.** We ask that you commend the application to the Secretary of State, subject to appropriate conditions to secure the environmental protection which PCC and the Alliance properly seek.

Richard Kimblin
Thea Osmund-Smith

¹⁵¹ See PCC Closing Submissions at §980 re Llandinam and §988 re Llaithddu

No. 5 Chambers
London • Birmingham • Bristol
30th May 2014

IN THE MATTER OF

APPLICATION BY FFERM WYNT LLAITHDDU DATED 7TH
MAY 2008 FOR CONSENT UNDER SECTION 36 OF THE
ELECTRICITY ACT 1989 TO CONSTRUCT AND
OPERATE A 62.1MW WIND TURBINE GENERATING
STATION IN POWYS, MID WALES

CLOSING STATEMENT
ON BEHALF OF FFERM WYNT LLAITHDDU

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Richard Kimblin
Thea Osmund-Smith



London • Birmingham • Bristol

Ref: 582095

ANNEX 3

THE MID WALES (POWYS) CONJOINED WIND FARMS PUBLIC INQUIRY

**APPLICATION BY NUON UK LTD DATED 30 NOVEMBER 2007
FOR CONSENT UNDER SECTION 36 OF THE ELECTRICITY ACT 1989
TO CONSTRUCT AND OPERATE A 59.5MW WIND TURBINE
GENERATING STATION
IN POWYS, MID WALES
(‘LLANBADARN FYNYDD’)**

APPLICANT'S CLOSING SUBMISSIONS

30 MAY 2014

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1 INTRODUCTION

- 1.1 This closing sets out the case for the Llanbadarn Fynydd project, which means summarising not only the disputed matters heard in evidence at inquiry but also setting out an amount of surrounding context which is important in making the decision but not necessarily contentious in itself. In presenting the closing orally, the concentration will be on the matters in dispute.
- 1.2 Whatever is happening in Scotland with the Viking litigation, in Wales Section 36 and the grant of a deemed planning permission remains open to all the applicants before you, without further inquiry into their specific licensing arrangements. We have clarified before this closing session that Nuon UK Ltd are the properly named applicant, albeit Vattenfall is the name under which the company now trades.
- 1.3 This closing allows the key tests that you face to be set out, together with the evidence to apply to them. However, it allows something additional to be done, which is to set right any perception there may have been, or may sought to have been created, that the Llanbadarn Fynydd project is somehow separate in this inquiry, in facing hurdles to securing approval not faced by the other schemes.
- 1.4 The history of this application would suggest no such thing, but from the point at which the Council's Form B was lodged reciting cumulative landscape concerns similar to the other schemes, a case against Llanbadarn Fynydd in particular began to develop from quarters where there had hitherto been no concern, initially on landscape and then on heritage grounds. We have, of course, answered the case put against us, however recent in origin, and where we believe we have now got to is to have restored the status quo that existed before the inquiry, of there being no sustainable case objectively to oppose this development and with the resolution of the one issue that had been holding up development to date, that of the strategic transport route through and south of Newtown, permission can now be granted.

2 NEED AND ENERGY AND POLICY

- 2.1 We can start with the uncontentious proposition that extant Government ^{National need} policy is an important material consideration in this Inquiry and cannot be challenged or its merits debated. (David Bell Energy and Planning Policy Statement of Case para 4.1.2)
- 2.2 EN – 1 recognises (para 1.7) that some significant adverse effects are unavoidable from such developments (para 3.3.10), that Government is committed to increasing the renewable generation capacity from onshore and offshore wind and that (para 3.3.15) in order to meet 2050 energy obligations, there is an urgent need for new energy NSIPS to be developed over the next 10 to 15 years (David Bell Energy and Planning Policy Statement of Case para 4.2.7, 4.2.9 and 4.2.11).
- 2.3 EN-1 forms this need to a presumption in favour of granting consent for major energy infrastructure given the level and urgency of need.

Decision makers are advised to take potential benefits into account, balancing contribution to the need for energy infrastructure, job creation and long-term or wider benefits, against potential adverse impacts (David Bell Energy and Planning Policy Statement of Case para 5.2.5).

- 2.4 At a European level, renewable energy generation targets are ambitious, the "20 20 by 2020" EU package includes a 16% reduction in UK greenhouse gas emissions by 2020 and for 15% of all UK energy consumed to come from renewable sources by 2020.
- 2.5 UK targets are not capped to ensure that decision makers do not stop consenting projects because interim targets are achieved. (David Bell Energy and Planning Policy Statement of Case para 4.4.7)
- 2.6 The UK pipeline to 2020 in terms of renewable and onshore wind may be reasonably healthy, but that largely depends on proposals in the planning system, like Llanbadarn Fynydd, coming to fruition and Government ambitions extend beyond 2020. (David Bell Energy and Planning Policy Statement of Case para 4.4.9)
- 2.7 The Annual Energy Statement 2013 (CD/SPM/POL/01, para 3.28) confirms that the UK is now at 4.1% against its target to source 15% of energy from renewable sources by 2020, a substantial shortfall, and that moving forward, support for large scale renewable power generation investments will be through Contracts for Difference. (David Bell Planning Balance Statement para 5.2.6)
- 2.8 The Update to the UK Renewable Energy Roadmap (VATT-SOCIO-001) in November 2013 confirms onshore wind continues to have an important part to play in UK energy policy and a long term investment framework underpins that commitment. (David Bell Planning Balance Statement para 5.2.28)
- 2.9 HM Treasury National Infrastructure Plan December 2013 (VATT-SOCIO-008) continues to make clear that energy, including renewable energy is a priority sector in the Government's NIP. (David Bell Planning Balance Statement para 5.2.38)
- 2.10 Alliance evidence that there is already enough development developed or consented to meet 2020 targets fails to look beyond 2020, ignores the actual reliance there will have to be on renewables for energy generation, relies on an interpretation of subsidy policy that is misplaced in this inquiry and is at odds with policy recognising need in EN-1 and PPW6. (Dr Constable Planning Balance Session)
- 2.11 PPW Edition 6 (CD/VATT/PLA/018) summarises UK and Welsh policy, targets and obligations for increasing the use of renewables and recognises (paras 12.8.13) an onshore wind target in Wales of 2GW by 2015 /17.
- 2.12 This follows TAN 8 in which Welsh Assembly Government set a renewable energy target of 4TWh per annum by 2020 as part of what was then the wider UK national target of generating 10% of electricity

PPW6 and
TAN 8

- consumption from renewable sources and identified a need to plan for 800MW of installed capacity of onshore wind by 2010. (David Bell Energy and Planning Policy Statement of Case para 5.4.2)
- 2.13 This Welsh target of 800MW by 2010 was missed and is still being missed, leaving a significant shortfall against the target of attaining 2GW of capacity by 2015/17. (David Bell Energy and Planning Policy Statement of Case para 4.4.3)
- 2.14 PPW6 states (CD/VATT/PLA/018 para 12.8.13) that TAN8 "*identifies areas in Wales which, on the basis of substantial empirical research, are considered to be the most appropriate locations for large scale wind farm development....*" and that they will be required to contribute to the UK and European targets. (David Bell Energy and Planning Policy Statement of Case para 5.3.6/7).
- 2.15 There is recognition (para 12.8.14) that cumulative impacts can be a material consideration in SSAs but should be balanced against the need to meet the Welsh Government's aspirations. The installed capacity targets given in TAN8 Table 1 are intended to assist the planning process but are not seen as definitive capacity for the area as there may be practical, technical or environmental reasons why the capacity is more or less. (David Bell Energy and Planning Policy Statement of Case para 5.3.8 and 5.4.4)
- 2.16 This new national planning policy is an important re-validation of the currency of TAN8 meaning that it should continue to attract significant weight. (David Bell Planning Balance Statement para 6.3.11)
- 2.17 Annex D of TAN 8 provided for the refinement of the SSAs, a two stage process in this case by Ove Arup in 2006 (CD/COM/017) and again in 2008 in light of appeal decisions and turbine height increases (CD/COM/018) by which SSA C became a single area, with eastern and western parts linked across the Ithon Valley to the north of Llanbadarn Fynydd (David Bell Energy and Planning Policy Statement of Case para 5.5.3). All five schemes are accepted to be within the present SSA boundaries.
- 2.18 The Second Draft Interim Development Control Guidance (CD/COM/019) 'formally authorised' by PCC for development control recognises the refined SSA boundary (para 11.1) stating that "*It is likely that SSAs in Powys will become prime examples of wind farm landscapes with intervisibility from Dyfnant Forest in the north to Llandinam/Llanbadarn Fynydd in the south. This is an accepted consequence of TAN 8 ...*" and (para 8.4) that "*Within (and immediately adjacent to) the SSAs, the implicit objective is to accept landscape change.*" (David Bell Energy and Planning Policy Statement of Case para 5.5.8/9)
- 2.19 The Alliance case that no weight should be given to TAN 8 in terms of enumerated targets leads to the question of what policy would apply otherwise. TAN 8 provides what might be seen as a benefit by opponents of development in that it operates to hold back a proliferation

of turbines outside its boundaries. Even the Ramblers anticipated adverse consequences if TAN 8 had no weight attached to it (Opening Session Policy Hearing).

- 2.20 The Alliance concern that fixing of SSA boundaries is a significant weakness in TAN 8 because of the lack of Strategic Environmental Assessment is countered by the level of evidence relied upon in the pre and post-TAN 8 reports. (Opening Session Policy Hearing and Planning Balance Session)
- 2.21 As to whether Llandinam, as a repowering, should count towards TAN 8 targets at all, there remains argument, although Llandinam certainly sees itself outside those limits (Opening Session Policy Hearing and Planning Balance Session) but if TAN 8 targets are treated as guides only, as they should be, it is easier to allow for any uncertainty about this.
- 2.22 Equally TAN 8 is not a straightjacket, with EN3 (para 2.2.1) looking to avoid slavish adherence to policy and thus treating TAN 8 targets as guidance only when considering what harm would arise if targets were exceeded (Opening Session Policy Hearing).
- 2.23 The WG Minister letter of July 2011 (**CD/COM/020**) referred to the Garrad Hassan study (**CD/COM/031**) and identified a maximum capacity of circa 1,700 MW for all 7 SSAs with 300MW anticipated from developments under 25MW equating to the 2GW target aspiration in 'A Low Carbon Revolution for 2020 – 2025'. The figure derived as the maximum capacity for SSA C is 98MW. (David Bell Energy and Planning Policy Statement of Case para 5.5.10)
- 2.24 The recent Bryn Llywelyn decision included the Inspector reporting that it was not his place to challenge these figures (Insp Q Planning Balance Session), but that does not require you to read into them things that aren't there, such as treating them as proxies for the finite environmental capacities of each SSA, as they were not proposed within TAN 8 as such, nor are they seen as good indicators of where the environmental capacity of an SSA might be, (David Bell Planning Balance Session) and certainly not in the absence of a full investigation of the actual impacts of any scheme. A pure arithmetic approach is in any event unhelpful as the capacities Garrad Hassan were considering in 2005 based upon 2MW machines could change significantly with technology changes and increase in turbine capacity (Insp Q Planning Balance Session).
- 2.25 Treating the Minister's position as an unqualified requirement that the SSA figures are treated as maximum capacities, would contradict TAN8, which expressly states that the SSA capacity targets are not definitive capacities. (David Bell Energy and Planning Policy Statement of Case para 5.5.12) but that is not being required of the decision maker here.
- 2.26 In the Brechfa Forest West Wind Farm Examining Authority report to the SoS it was noted of TAN8 "indicative" capacity targets that these were "*... intended to assist the planning process and not to be seen as*

WG
Minister's
letter

the definitive capacity for the area" (David Bell Energy and Planning Policy Statement of Case para 5.6.2).

2.27 In the Pen Y Cymoedd Wind Farm Section 36 decision the SoS noted that "*taking into account the maximum capacity of the development (299MW) the total possible for SSA F would be 464.5MW...i.e. a possible exceedance of some 8% of the maximum capacity*". That was acknowledged to occur if all applications were consented and constructed and if that materialised, the decision makers would have concluded the individual and cumulative visual impacts of each were acceptable. (David Bell Energy and Planning Policy Statement of Case para 5.1.15)

2.28 The approach in previous decisions was recognised at the Opening Session as giving a steer on policy interpretation. Whatever weight is given to targets, the planning balance on the merits of each application is more important (Opening Session Policy Hearing). We came back to this in the Planning Balance Session and identified that whilst the WG letters could be seen as a simple statement that it does not want to see development in excess of those capacities that wish has to be linked to the underlying concerns described in those letters, that of respecting the finite environmental capacities of the SSAs and avoiding intrusive large scale grid development. Provided those concerns can be shown to have been met, which has been done here, there is no contradiction between WG letter, TAN 8 and allowing this development, even if a numerical exceedance of the 98MW figure occurs. Permission should be granted in such circumstances (David Bell Planning Balance Session).

2.29 NRW support this approach of a merits led interpretation of the TAN 8 capacities, PCC similarly so, but with a warning that the more you exceed the capacity the greater is likely to be cumulative impacts (Peter Minto, Martin Carpenter Planning Balance Session) - against which we can note that PCC takes no exception to the cumulative impacts of the s36 schemes alone.

2.30 From all of this material we see a very strong policy drive to continue to develop renewable energy. International and national commitments have been made to address the effects of climate change and to achieve greater security in the domestic supply of energy. (David Bell Planning Balance Statement para 5.3.1)

Precedence
of national
policy

2.31 Renewable energy policy consistently shows that the UK and Wales needs urgently to increase its delivery of renewable energy sources and that on-shore wind is considered an important element of land-based renewable energy generation, in the overall energy mix and this proposed development can make a significant contribution to unmet Welsh, UK and EU targets for renewable energy generation. (David Bell Planning Balance Statement para 5.3.3)

2.32 The question whether there is divergence between WG policy and national policy (especially the NPS) is important, as the greater the consistency with national policy, the more weight that can be given by the decision maker. We adopt the argument that full weight can be

given to TAN 8 as being consistent with national policy provided it is not interpreted as imposing absolute limits on installed capacity and in that way the Griffiths letter is not being disregarded.

- 2.33 PCC in its opening stated that the decision maker, faced with a number of applications should be seeking the "least damaging result." (Opening Session Policy Hearing). What should be looked for instead is the approach that says what can be acceptably developed should be permitted, as there is need for all these developments. (Opening Session Policy Hearing)

3 LANDSCAPE AND VISUAL

3.1 PCC and NRW stances before and at inquiry

- 3.2 The landscape and visual case against the scheme has principally been that of PCC, which, according to its Outline Statement of Case (OBJ-002-OSOC-2) relates primarily to potential effects upon the Shropshire Hills AONB and that the application site and surrounding areas are "*almost entirely 'untouched' by wind farm development ... and would set a precedent for other wind farm development in the same landscape unit.*" (Ian Gates Proof, paragraph 1.3.2)

- 3.3 To put this into some context, PCC's, Planning Officer's appraisal in the Cabinet Report of 2012 noted that '*... the proposal is located in an area of medium to low landscape sensitivity...*' and that cumulative impacts with regard to existing wind farms such as Llandinam '*are considered to be acceptable.*' (Ian Gates Proof, paragraph 3.7.18).

- 3.4 Countryside Council for Wales (now NRW), the other main consultee charged with a landscape preservation function, does not object to the scheme. Its recommended change to minimise the impact of the scheme on landscape and visual amenity (to the access track from the A483) has been adopted. (VATT/LAN/013 and Ian Gates Proof, paragraph 3.7.2)

- 3.5 In forming its opinion CCW noted that '*Future likely wind farm development within the SSA will undoubtedly lead to cumulative impacts...However, TAN 8 implicitly accepts landscape change within Strategic Search Areas.*' (Ian Gates Proof, paragraph 3.7.3)

3.6 Criteria for assessing impacts : SNH

- 3.7 The developer has drawn on Scottish Natural Heritage (SNH) 'Guidance Assessing the Cumulative Impact of Onshore Wind Energy Developments' (Version 3, March 2012 CPL/LAN/007) and 'Siting and Design Windfarms in the Landscape' (Version 1 December 2009 VATT/LAN/002), which pose three thresholds of cumulative wind farm effect:

SNH
Guidance

- *where windfarms are seen as separate isolated features within the landscape character type, too infrequent and of insufficient significance to be perceived as a characteristic of the area;*

- *where windfarms are seen as a key characteristic of the landscape, but not of sufficient dominance to be a defining characteristic of the area; and*
- *where windfarms appear as a dominant characteristic of the area, seeming to define the character type as a 'windfarm landscape character type.'*

(Ian Gates Proof, paragraph 2.2.2)

3.8 SNH "Siting and Design" guide (VATT/LAN/002, page 37) also lists key landscape principles with multiple wind farms as including, that :

- *Individual wind farms should generally appear visually separated from one another in a landscape, unless specifically designed to create the appearance of a single combined wind farm, and that*
- *Different forms of wind farm development should respond to different landscape character types, to ensure wind farm landscapes complement the landform in their positioning, extent and density.*

(Ian Gates Proof, paragraph 2.2.3)

3.9 Reviewing the landscape and visual evidence against these objective standards, as we have done, will assist in reaching the conclusion that the impacts are acceptable.

3.10 NPS Guidance on the Nature of Potential Effects

3.11 NPS EN-3 notes that the construction and operation of large commercial onshore wind farms will cause significant landscape and visual effects for a number of kilometres and that wind farms are a reversible form of development (CD/COM/002, para 2.7.17 and 2.7.48). Inevitable, significant effects do not mean consents should be refused, rather consideration has to be given to whether negative effects would significantly and demonstrably outweigh benefits. (Ian Gates Proof, paragraph 2.2.4) ^{NPS EN-3}

3.12 A precautionary approach has been taken which assumes that the nature of the effects would be negative unless otherwise stated. (Ian Gates Proof, paragraph 2.2.5)

3.13 Wind farm development is visually permeable and views, although possibly interrupted, are not screened or prevented. Wind farms have a small development footprint that preserves the physical landscape elements. (Ian Gates Proof, paragraph 2.2.7)

3.14 Guidance on Acceptability of Impacts : The Arup Reports

3.15 Arup had two roles in respect of Llanbadarn Fynydd, first in authoring the reports by which PCC refined the SSA boundaries and second in reviewing the acceptability of Llanbadarn Fynydd, appointed to do so by PCC.

3.16 The ARUP refinement studies were referred to several times. The ARUP zones 2b, 4 and 5 that make up the site are agreed as having medium-low landscape sensitivity to this type of development (CD/COM/16 page 11 and 13) even without the presence of an existing windfarm, which was given as the reason for the medium low sensitivity of C11 on the western side of the valley (Kimblin XE Philip Russell-Vick). Ranked against impact on AONBs, settlements, RoW and National Trails (within 200m) those three parcels scored extremely well (CD/COM/16 Table 7b). PCC accept this information evidences acceptability of impacts (XE Philip Russell-Vick) but caveats that Llanbadarn Fynydd scores well in ARUP because it is well contained, rather than any qualitative judgement being applied to actual impacts. It is, however, hard to understand why being a well contained site shouldn't be a plus for the site.

Arup's refinement of SSA C in the east

3.17 PCC seek to undermine the ARUP refinement work, notwithstanding it is their own document. They highlight failures to explain some matters, like why areas C2a and C2b have the same high landscape value but only one (the Llanbadarn Fynydd part) has been selected as suitable for development. However, a high landscape value doesn't inevitably mean unacceptable impacts from development (XE Ian Gates).

3.18 PCC state ARUP did not consider cumulative impacts, and it is accepted a formal cumulative impact assessment would be difficult to achieve outside a conjoined inquiry (XE Ian Gates). They accept that the significant impacts of the s36 schemes are contained within areas considered by ARUP (XE Philip Russell-Vick) so it is not a case of ARUP not assessing affected areas. ARUP filtered suitable and unsuitable areas, leading to boundaries between them, as between RDNRVS122 and RDNRVS128. PCC accepted that the authors did consider if there should be any exclusions, say at the edge of areas (Kimblin XE Philip Russell-Vick) but no such exclusion was made for example to Zones 4 and 5 because of proximity to the Cwm Nant Ddu (Arup 2008 page 28 Table 8b). PCC seem to suggest that development in suitable area 122 should not be allowed because there are two turbines in the less suitable area 128 and the wider development is adjacent to it (XE Ian Gates). This was not agreed and the better argument is that the Applicant has assessed the suitability of areas in the round, and has taken care over transition areas.

3.19 In spite of its misgivings over the ARUP refinement, PCC does not argue that in principle, wind farm development should not take place in the Eastern part of SSA C. This concession seriously compromises PCC's claim that Llanbadarn Fynydd is simply unacceptable as it is "*...in the wrong landscape*" (XinC Philip Russell-Vick) When adding the Council's view that the "cluster" layout of the scheme responds reasonably well to the landform beneath it (XinC Philip Russell-Vick) and makes no suggestion to improve the design, as it did with the two other SSA C schemes, despite this layout having remained fixed since 2007 (XinC Ian Gates), we are left with PCC trying to hold an increasingly untenable position with its opposition to the actual impacts of Llanbadarn Fynydd alone.

PCC acceptance of development in the SSA C east

- 3.20 It is accepted that the ARUP study and SSA boundary exercise compared landscapes at the widest possible scale, across Wales. (XE Philip Russell-Vick) This provides substantial reassurance that Llanbadarn Fynydd is simply not in the wrong landscape.
- 3.21 PCC's further criticism that ARUP does not contain an acceptability threshold holds no force. It was conceded that no guidance document could usurp the decision maker's role (XE Philip Russell-Vick) but that does not diminish the contribution the refinement exercise makes to substantiating the SSA's capacity to accommodate development. Gates remained firm that TAN 8 SSAs should be seen as a measure of the acceptability of development within them (XE Ian Gates).
- 3.22 PCC sought to establish that Llanbadarn Fynydd's landscape assessment relied upon the ARUP 2008 landscape criteria (XE Ian Gates), to argue that if a landscape sensitivity was medium-high it would be inappropriate for development. Gates did not concede that (XE Ian Gates) as his assessment used ARUP as a bridge to TAN 8, rather than the basis of the LVIA, which was a stand-alone exercise reliant upon Landmap as its base material (XinC and ReEx Ian Gates).
- 3.23 Llanbadarn Fynydd has been carefully designed to concentrate high magnitudes of landscape change generated by its operation in an area of comparatively low landscape sensitivity, (Ian Gates Proof, paragraph 5.2.27) that complies with TAN 8 Para 2.9 criteria (of being over 300m, predominantly plateau, sparsely populated, improved moorland with no historic designations) and Annex D para 6.5 criteria (of openness, a non-distinctive skyline, and limited time depth) (XinC Ian Gates). PCC's comment that TAN 8 was seeking an optimum balance of environmentally acceptable impacts was not disputed (XE Ian Gates), but it isn't clear how this equates with PCC's suggestion that the Secretary of State should not allow "more harmful" schemes (ReEx Ian Gates) to achieve that acceptable balance. Not that it is accepted this scheme is any more harmful than any other before this inquiry. Llanbadarn Fynydd is the only SSA C site that has consistently been most contained within the revised SSA boundary, (Ian Gates Proof, paragraph 5.2.28), but the relative impact of the schemes is not the issue before this inquiry. Consistency with TAN 8 design criteria
- 3.24 The Arup Development Control Support Report (VATT/LAN/015) offered three landscape criteria to review the acceptability of Llanbadarn Fynydd (Ian Gates Proof, paragraph 3.7.6) ARUP development control report
- (a) Avoid distorting the landscape's sense of scale – in contrast with PCC's inquiry position in respect of the Cwm Nant Ddu Valley, ARUP acknowledged that such views would be rarely available. (Ian Gates Proof, paragraph 3.7.14)
 - (b) Avoid severe effects upon '*sensitive local landscape character*' - Arup attributed only medium-low landscape character sensitivity to large scale wind farms in the host areas. (Ian Gates Proof, paragraph 3.7.15)

- (c) Avoid poor quality and cluttered wind farm layouts. On this criterion Arup concluded that it '*...would be located within a relatively large scale landscape and appears generally well laid out in response to the landscape setting.*' (Ian Gates Proof, paragraph 3.7.16)

3.25 The Council dismiss the ARUP assessment as repeating its earlier work in concluding the underlying areas were suitable for development (XE Philip Russell-Vick). You will hopefully feel more persuaded that the unanimity of the ARUP SSA studies, CCW involvement, a site specific ARUP study, PCC's officers at Committee and Mr Gates' evidence all point to acceptability of this development here and outweigh the one contrary landscape expert opinion tendered by the Council at inquiry.

3.26 The character of the receiving landscape

3.27 Key to the acceptability of development on this site is a detailed understanding of why the underlying landscape is accommodating of this type of development.

3.28 Llanbadarn Fynydd's landcover is dominated by improved and semi-improved grassland, converted to more intensive pastoral use than the moorland on Banc Gorddwr. It is divided into medium to large sized, regular-shaped fields with smoother and more verdant appearance than the surrounding predominant moorland. (Ian Gates Proof, paragraph 3.5.4) PCC agree and accept that the aerial photograph of Butterwell (Gates Appx LVIA 2) was a fair representation of field pattern from the site to Teme valley (XE Philip Russell-Vick) even if fields got larger towards the East.

Improved agricultural land characterising the site

3.29 Similarly PCC accept that post and wire fences to provide field boundaries rather than stone walls are characteristic of the area (XE Philip Russell-Vick). Together with the use of narrow, mixed species shelterbelts and clipped coniferous hedgerow boundaries to increase the sense of exposure away from the Cwm Nant Ddu and Gwenlas Valley. (Ian Gates Proof, paragraph 3.5.5)

3.30 Host LANDMAP VSAA descriptions of remoteness are balanced by modern development, mostly farmhouses surrounded by trees, outbuildings, barns, farm tracks, and sheep or cattle pens that remove any sense of 'wildness'. (Ian Gates Proof, paragraph 3.5.7). PCC does not challenge to this argument, partly because it said there are more intensively farmed landscapes in the UK, which tells us little, but partly because it would conflict with its case about differences with the moorland to the West (XE Philip Russell-Vick).

3.31 We will return to Landmap in more detail, but to set the scene on why this is an accommodating landscape, we can start with the Landmap database description for host VSAA RDNRVS122 that the landscape is '*discordant*' with the existing management being '*generally inappropriate*' because '*farming is generally too intensive and unsuitable...*' and '*intensive farming reduces integrity*'. (Ian Gates Proof, paragraph 3.5.9). These, together with "*the lack of distinctive features*"

making the landscape "*not particularly memorable*" were accepted by PCC who fairly conceded that it could be seen why the assessor applied only a moderate value to this VSAA (XE Philip Russell-Vick). The other two host LANDMAP VSAs (RDNRVS111 and RDNRVS128) are both transitional areas sharing similar improved and semi-improved grazing as much of RDNRVS122. (Ian Gates Proof, paragraph 3.5.10 and 11)

- 3.32 Differences between East and West of SSA C are advanced to support PCC's arguments, describing the West as massive and the East as smaller (XinC Philip Russell-Vick) and incised by valleys such as the Cwm Nant Ddu. However RDNRVS111 and RDNRVS122 are accepted by PCC as being described as large scale by the Landmap assessor (XE Philip Russell-Vick) The Survey Collector questions for RVS111, 122, 128 and MVS443 (VATT/LAN/20) show consistency between these areas. PCC's response is to accept the large scale of Llanbadarn Fynydd site is accommodating of development, but the vast scale of MVS443 more so, which again does little to argue against Llanbadarn Fynydd, or to establish that the East of the valley is the more precious landscape resource (XinC Ian Gates). Contrasts made between east and west of SSA
- 3.33 Whilst accepting that each site has to be looked at on its own merits regarding its capacity to accommodate development (XE Philip Russell-Vick) PCC referred to so-called "golden rules" of mid-Wales wind farm development. One of which was contended to be location of development on the highest ground possible, albeit not the sensitive high ground of RDNRVS110 and 111 to the north of the SSA (XE Philip Russell-Vick). High ground increases turbine visibility, albeit at greater distances, and so it was said to be important to protect valleys by setting development back from valley edges, (XE Philip Russell-Vick). This we have seen incorporated into the Llanbadarn Fynydd design. PCC "Golden Rule" – develop on high ground
- 3.34 PCC acknowledge that it is heavily influenced by the existence of the P&L windfarm in the West to draw a distinction between the two sides (XE Philip Russell-Vick). This should do nothing to persuade you that Llanbadarn Fynydd is in the wrong place or cause you to doubt the ability of Llanbadarn Fynydd to accommodate development.
- 3.35 The suggestion that the lack of a major break in the landscape to the East of Llanbadarn Fynydd means landscape impacts are spread over a greater area than for Llandinam (XE Philip Russell-Vick) must be tempered by PCC's acceptance that Llanbadarn Fynydd is visually well contained and significant landscape impacts eastward stop at the Teme valley.
- 3.36 A further "golden rule" was argued to be the maintenance of "generous" separation distances between developments (Philip Russell-Vick proof para 3.17). The apparent conflict of this "golden rule" with the concentration approach of TAN 8 search areas was acknowledged by PCC (XE Philip Russell-Vick) whilst still maintaining the SSA approach could achieve "generous" separation distances. PCC resisted the suggestion that the most that could be hoped for was "adequate" separation distances, such as the 4.6km across the Ithon valley which prevents a windfarm landscape being created (XE Philip Russell-Vick). PCC "Golden Rule" – generous separation

"Adequate" is an appropriate standard within the SSA and is only separated by semantics from "generous" – unless generous is submitted by PCC to mean the actual separations between Carno, P&L and Bryn Titli (Philip Russell-Vick para 3.17) which could never be accommodated in an SSA. Welch confirmed that smaller shallower valleys like the Ithon played a greater role in diminishing visibility than wider deeper valleys with turbines in an elevated position at one side (XinC James Welch).

- 3.37 PCC suggested that the lack of separation between the three SSA C schemes was evidenced by the overlap of areas where there would be significant impacts from each individual development (XE Philip Russell-Vick). It is not clear why this should be a criticism of any of the developments (ReEx Ian Gates). The schemes would not read as one, and the windfarm landscape does not flow across the valley (XE Philip Russell-Vick) which evidences separation between schemes. If overlap of impacts was a major consideration it would have featured as a negative finding in the cumulative impact assessment, but doesn't.
- 3.38 SNH guidance (CD/VATT/LAN/02 page 44 para 19) that the effect of undeveloped ground between turbines depends on landform is relevant to the Ithon Valley, with PCC accepting the topography's contribution to the separation between schemes (XE Philip Russell-Vick). It was accepted that setting turbines back behind the break of a ridgeline or plateau reduces their impact and makes them harder to scale (XE Philip Russell-Vick) and that is what you will see looking across the Ithon valley to Llanbadarn Fynydd from the East and what Gates described as the design ethos of the scheme (XinC Ian Gates).

3.39 Extent of Landscape Impacts

- 3.40 High magnitudes of landscape change are confined to locations within 1.5km but even this separation distance, in the Gwenlas and Ithon Valleys, gives a magnitude of landscape change that is medium or low, because of the difference in elevation between the valley bottoms and the incised plateau (Ian Gates XinC and Proof, paragraph 5.2.3 and Appendix LVIA 7) and high levels of screening from vegetation. PCC agree the low level of the Ithon Valley impacts (XE Philip Russell-Vick). PCC use the phrase "domestic scale" here, but do not define this. The suggestion that domestic scale conflicts with turbines was weakened when PCC accepted that its reference to domestic for VP5 (SEI Fig 3.54) was driven by visible development, the more developed, the more domestic. On that basis, the Gwenlas valley is accepted to be only lightly settled (in comparison with the Ithon Valley) thus not domestic in scale and benefitting from significant screening from vegetation (XE Philip Russell-Vick).
- 3.41 One area of difference in extent of landscape impact remains, where Gates maintains that to the South East, the "landscape with windfarms" subtype (where turbines might be prominent but not dominant) would not exist past Fron Top (c2km), (XinC Ian Gates) while PCC say that it would extend to VP 11 Moelfre Hill (c4km). (XE Philip Russell-Vick). This is a matter for judgement following the site views, but fixing the threshold of change from "windfarm landscape" to "landscape with

Landscape impacts assessed by distance

windfarm" will never be exact and does not appear to be abnormally greater here than might be expected of any windfarm.

- 3.42 Medium magnitudes of landscape change have been assessed for VSAAs or parts of large or sinuous VSAAs within 4-5km with the exception of the north, where effects are minimised or removed altogether. (Ian Gates Proof, paragraph 5.2.4). PCC concede that screening means the majority of the high value MNTGMVS254 facing north over the Severn Valley and the Ithon valley slopes of RDNRVS136 are unaffected by the development (XE Philip Russell-Vick). The northern views were described as spectacular, but do not carry around to the East (InspQ Colin Goodrum). Landscape impacts by VSAAs affected
- 3.43 For other than the three host VSAAs, turbines would not significantly adversely affect their key characteristics. (Ian Gates Proof, paragraph 5.2.5) Numbers of VSAAs affected is not a reliable guide to level of impact. It is not a simple headcount (XE Philip Russell-Vick). PCC argue the greater the number of VSAAs affected, the more varied and complex the landscape, but balanced against this is the site assessment and concentration of impacts into RDNRVS122 and parts of the two adjacent VSAAs most closely following its characteristics.

3.44 The Host VSAAs : RDNRVS111 – Upland Moor, Kerry Hills

- 3.45 The part of RDNRVS111 within and closest to the site has been subject to agricultural improvement similar to RDNRVS122. Its high landscape sensitivity should be reduced in its south-western part to accord with the medium landscape sensitivity ascribed to RDNRVS122, suitable for a limited number of turbines. (Ian Gates XinC and Proof, paragraph 5.2.8 and 9). The Landmap survey question VS39 that windfarm development is a major threat is because it is the only likely development in this area (XinC Ian Gates) and applies to the extensive area, not just the transitional part to area 122. The same comment is made regarding area 128 and is similar comments to the Collector survey question for area MNT443 around P&L, also in the West of the SSA C, where the recommendation is "*limit further development*". RVS111 transition area only affected
- 3.46 The 2008 Arup Local Refinement Study (CD/COM/010 & 010A) incorporated the western part of RDNRVS111 in Zone C2b: Banc Gorddwr assessed as possessing medium-low landscape character sensitivity as enclosed upland grassland. (Ian Gates Proof, paragraph 5.2.10)
- 3.47 PCC's rejection of this transition area argument recognises some landscape changes within RDNRVS111, indeed, they accept the five turbines are more surrounded by fields than moorland and this part of RDNRVS111 is properly described as a mix of fields and moorland (XE Philip Russell-Vick) but seeks to persuade you on the basis that Landmap has the boundary "broadly right" (XinC Philip Russell-Vick). This does not tackle the point that there are blurred edges between such areas, which the application has sought to use sensitively. The substance of PCC's opposition is not improved by comments like "*you shouldn't salami-slice*" these areas (XE Philip Russell-Vick). Even if you

look at areas as a whole, you come to a boundary where influence from neighbouring areas will occur. It was accepted by us that if you ignored the transition area and treated the area as uniform value there would be turbines in an area of high sensitivity (the same goes for the two turbines in area 128) (XE Ian Gates) but that requires the boundaries to be applied excessively rigidly.

- 3.48 PCC's opposition is weakened by its acceptance that there can be flexibility in the interpretation of landscape area boundaries (XE Philip Russell-Vick). We are happy to accept the gloss PCC add that you should define by geographical features and landforms (XE Philip Russell-Vick), as it is the reason Gates pointed out why the boundaries of the VSAs around the site should be interpreted as he suggests.
- 3.49 This is in an area to which PCC ascribes "*a spiritual and historic layer that adds value*" (Philip Russell-Vick proof para 7.16). It was not meant as any formal reference to heritage assets or their settings (XE Philip Russell-Vick) but rather an overall feeling people have outdoors in a remote tranquil landscape. You will be judging the extent of remoteness and tranquillity (we say not much) but it was conceded these responses are not unique to this landscape (XE Philip Russell-Vick). Gates did not see any noticeable time depth, especially given the 3.3km to the Kerry Ridgeway (XE Ian Gates).

3.50 The Host VSAs : RDNRVS122 – Improved Upland, South of Kerry Hills

- 3.51 Land-cover consists of improved grassland in large, angular fields bound by post and wire fences and trimmed coniferous hedgerows, LANDMAP describing the effect as '*unnatural*' and '*visually unattractive*' and the intensive pastoral farming as intensive and '*inappropriate*'. (Ian Gates Proof, paragraph 5.2.14 and Viewpoints 3 and 4 in Figures 3.11 and 3.12)
- 3.52 LANDMAP commentary for RDNRVS122 is of '*low*' scenic quality and '*fairly typical hill country*.' with only 'moderate to low' value, one of the lowest LANDMAP evaluations. (Ian Gates Proof, paragraph 5.2.15)
- 3.53 Not surprisingly Arup's Local Refinement Study (CD/COM/010 & 010A) concluded this area, its Zones 4 and 5, possess only low-medium landscape character sensitivity. (Ian Gates Proof, paragraph 5.2.17)
- 3.54 Turbines would represent large scale, man-made elements in a landscape that has already experienced landscape change through twentieth century agricultural intensification. (Ian Gates Proof, paragraph 5.2.16). On whether a managed landscape was more suitable to accommodate turbines, it was conceded these attributes would make an area more appropriate but that you couldn't generalise or apply this in Mid-Wales (XE Philip Russell-Vick). Given its argument about Llanbadarn Fynydd de-sensitising the surrounding landscape, it is surprising PCC demonstrated such discomfort in this concession.

3.55 The Host VSAs : RDNRVS128 – Upland Valleys South of Kerry Hills

- 3.56 This extensive VSA extends into the site along Cwm Nant Ddu and the western side of the Gwenlas Valley but turbines 11 and 12 on the boundary of RDNRVS128 are more accurately considered to be located in the less sensitive RDNRVS122. PCC Development Control Support Report December 2008 confirmed these turbines are '*...located back from the break of slope.*' (Ian Gates Proof, paragraph 5.2.21 and 22)
- 3.57 Presence of turbine hubs and blade tips in Cwm Nant Ddu would give a high magnitude of landscape change although they would not be readily appreciated and would not reduce landscape elements within Cwm Nant Ddu or RDNRVS128. (Ian Gates Proof, paragraph 5.2.23) Limited visibility into and out of the valley is accepted by PCC, who nevertheless resist the suggestion that the most important views are those from within the valley, when you are in the actual landscape unit (XE Philip Russell-Vick).
- 3.58 This explains why PCC relied heavily on the setting of the Cwm Nant Ddu being affected, but conceded this was not something referred to in any published study (XE Philip Russell-Vick). PCC referred to the Llanbadarn Fynydd February 2013 SEI (para 3.2.7, Page 14) about the extent of the setting of the valley including the table top plateaux (Re-Ex Philip Russell-Vick) but this was not put to Mr Gates. On a fair reading the reference being made was to the Ithon valley, not Cwm Nant Ddu.
- 3.59 RDNRVS128 in the Gwenlas Valley has lower landscape change and is less sensitive to change than Cwm Nant Ddu as it shares more characteristics with the less sensitive RDNRVS122. (Ian Gates Proof, paragraph 5.2.24 and 25)
- 3.60 In response PCC ask you to consider montages where you can see RDNRVS122 and 128 together, say from Fron Top (XinC Philip Russell-Vick), and as turbines are factually in RDNRVS128, the debate about transition areas is, they say, "*not one worth having*". Gates stressed that from Fron Top the less sensitive Gwenlas valley was in the foreground and the location of the turbines on the table top plateau was evident. When in the Cwm Nant Ddu, the sense of scale of the valley itself and its remaining tranquillity would not be lost (XE Ian Gates). PCC stress the initial "outstanding" evaluation of RDNRVS128 (subsequently reduced after quality assurance testing to "high" – Fig 3.20 Vol 4 Feb 2013 SEI) but even when in place applied to the whole VSA. "Transition areas" answers the question why the site has emerged as suitable for development. Transition areas are definitely a debate worth having and explain why turbines are appropriately located at the edge of RDNRVS128.

3.61 Cumulative impacts of windfarms : by VSAs

- 3.62 Significant cumulative impacts of Llaithddu and/or Llandinam in tandem with Llanbadarn Fynydd that are greater than the impacts of Llanbadarn

L/F not the cause of significant cumulative impacts

Fynydd alone occur only in RDNRVS115 and RDNRVS123 but the addition of Llanbadarn Fynydd is not the difference between significant or no significant effects. (Ian Gates Proof, paragraph 8.2.7 and 8)

3.63 For VSAA's RDNRVS110, RDNRVS130 and RDNRVS136 the introduction of Llanbadarn Fynydd will increase magnitude of landscape effects around individual viewpoints but not significantly across the whole of those areas. (Ian Gates Proof, paragraph 8.2.14)

3.64 Landscape impacts where all proposed wind farms in SSA C are operational are the same with or without Llanbadarn Fynydd save that its introduction makes the difference between them being significant or not significant in the VSAA sub areas of RDNRVS122 (Two Western Sub-Areas) and RDNRVS128 (Cwm Nant-Ddu Sub-Area) (Ian Gates Proof, paragraph 8.3.5/6).

3.65 PCC criticisms of the Applicant's cumulative assessments advanced at the inquiry were not enthusiastically endorsed by its witness, who conceded there was no lack of information before the Inspector. PCC's query became one of which parts of the assessments were incremental and which "in combination". (XE Philip Russell-Vick). Gates maintained he had undertaken an in combination assessment, identifying where any additional development would result in a change to significance to any receptor, similar to each scheme assessment in Area C (XE Ian Gates).

PCC
criticism of
Applicant's
assessment

3.66 Most importantly PCC accepted that its assessments concluded that the impacts of Llanbadarn Fynydd in addition to the other two schemes amounted to no more than the impacts of Llanbadarn Fynydd alone (XE Philip Russell-Vick). This confirms there really is nothing to fear from the three schemes together having greater impacts than if considered alone.

PCC's "de-
sensitisation"
argument

3.67 PCC also accept that conclusion undermines the argument that development should be kept to the West of the Ithon Valley (XE Philip Russell-Vick) which leaves the Council only with its "de-sensitisation" argument.

3.68 This argument, as a reason for refusal, is raised by PCC in respect of the AONB. Separately, it is advanced in terms of the eastern part of the SSA, on the basis that if Llanbadarn Fynydd is consented it will make it harder to refuse other applications in that area. Interestingly, the Landmap collector questions run contrary to this. They accord overall high evaluation of MVS443 not despite the P&L turbines, but partly because of them, adding positively to the sense of place and tranquillity. Whilst PCC describe these findings as "surprising" they agree that turbines do not automatically reduce landscape value (XE Philip Russell-Vick).

3.69 In essence, any argument of de-sensitisation is vulnerable to the well-established principle that any application must be found to be acceptable on its own merits, given the baseline against which it is measured. This is accepted by PCC (XE Philip Russell-Vick) and is not weakened by accepting that an existing windfarm, like P&L, is relevant

to assessing the existing baseline (XE Ian Gates). Approving Llanbadarn Fynydd was agreed not to be handing *carte blanche* to the ensuing TCPA applications (XE Philip Russell-Vick). If as PCC contends, subsequent developers will find their developments judged more acceptable (XE Philip Russell-Vick) that must be a facet of Llanbadarn Fynydd simply having been judged acceptable by itself.

- 3.70 PCC accept that future controls over development provide adequate protection of landscape and amenity but comment that post Llanbadarn Fynydd, decision makers would not be dealing with a "virgin landscape" (XE Philip Russell-Vick). Reiterating the point I made during the inquiry, PCC confirms it has no "in principle" opposition to development in the East of the SSA (XE Philip Russell-Vick).
- 3.71 Put simply, the Council's de-sensitisation argument cannot stand alongside its willingness to see development in this area.

3.72 Impact of development on other LANDMAP Aspect Areas

- 3.73 Historic Landscape Aspect Area RDNRHL613 closely follows the boundaries of the Cwm Nant Ddu (SEI Fig 3.22) separating it from the site and distinguishing the valley from the site. PCC were uncomfortable with this evidence, conceding that there was a lower sensitivity in the Northern Gwenlas Valley but unwilling to accept the separation between the Cwm Nant Ddu and the site, which contradicts the importance they placed on this HLAA. Cwm Nant Ddu as a Historic Aspect Area
- 3.74 Llanbadarn Fynydd does not stand out in terms of proximity to HLAA's, with Llandinam accepted as being broadly comparable, being within 1km of MHL789 and MHL124. (XE Philip Russell-Vick)
- 3.75 HLAA RDNRHL613, with high sensitivity, would experience significant cumulative landscape effects from all the s36s (Ian Gates Proof, paragraph 8.2.17) but even with all the SSA C wind farms operational Llanbadarn Fynydd would not incrementally 'tip the balance' changing significance for any non-VSAA aspect area. (Ian Gates Proof, paragraph 8.3.10)

3.76 Landscape impacts by Powys Landscape Character Areas (LCAs)

- 3.77 The analysis of Powys LCAs has been undertaken (Ian Gates Proof, paragraph 5.4.1 to 5.4.11) but as they are derived from Landmap data they do not add to the VSAA assessments, as accepted by PCC (XE Philip Russell-Vick).
- 3.78 Thus care is needed not to aggregate LANDMAP aspect areas and Powys LCA impacts as this would result in double counting of landscape effects. (Ian Gates Proof, paragraph 5.4.2) Avoiding double counting of impacts

3.79 Cumulative impacts by Powys LCAs

- 3.80 Cumulative impacts on LCA R12 would not be significant, and the already significant impacts on LCA R18 will not be increased by Llanbadarn Fynydd. (Ian Gates Proof, paragraph 8.2.22)

- 3.81 LCA M29, with Llanbadarn Fynydd, Llaithddu and Llandinam operational would result in a moderate/substantial level of cumulative landscape effect that would be significant, due to proximity. (Ian Gates Proof, paragraph 8.2.24)
- 3.82 With all SSA C wind farms operational significant cumulative landscape effects will occur in LCA M29; LCA R18 and LCA M32 but this remains so with or without Llanbadarn Fynydd. (Ian Gates Proof, paragraph 8.3.11)
- 3.83 Llanbadarn Fynydd would increase significant cumulative landscape effects in a further five VSAs and one HLAA, all geographically compact areas. (Ian Gates Proof, paragraph 8.4.3)

3.84 The Shropshire Hills AONB

- 3.85 Minimum separation distance is 5.5km from the AONB boundary to Llanbadarn Fynydd Turbine 17, but to areas of visibility in the AONB, is 6.5km (XE Ian Gates). No objections have been raised by the AONB Partnership, CCW (NRW) or in Arup Reports for PCC. (VATT/LAN/016 and Ian Gates Proof, paragraph 4.1.4) Separation distance to the AONB
- 3.86 The Shropshire Hills AONB Draft Management Plan (VATT/LAN/012) "Statement of significance and special qualities" contain only two that mention outward views that could be impacted. None of the seven 'key issues' relate to wind farm development or the scenic or environmental quality key characteristic. (Ian Gates Xinc and Proof, paragraph 4.2.3). Whilst tranquillity is a feature of the AONB, it is not characteristic of Llanbadarn Fynydd, because of intensive agriculture and local roads (Xinc Ian Gates).
- 3.87 The AONB Management Plan Policy that 'Land within 5km of the AONB is unsuitable for any large scale wind farm development and should be excluded from any Search Areas' is respected. (Ian Gates Proof, paragraph 4.2.5)
- 3.88 In any event, there are examples in England and Wales where wind farms using similar height turbines have been permitted within 5km of an AONB. (Ian Gates Proof, paragraph 4.4.2).
- 3.89 Whilst the hub height ZTV extends over 5.1% of the AONB the actual scale and prominence of the turbines at Llanbadarn Fynydd can be seen at 7.8km from Viewpoint 16 on Black Mountain near Anchor in the Clun Forest. At these separation distances the turbines would not be conspicuous or prominent landscape features in outward views. (Ian Gates Proof, paragraph 4.3.2/3 and Appendix LVIA 4)
- 3.90 In respect of PCC's assertion that the site is within a 'landscape unit' that extends eastwards to encompass the Shropshire Hills AONB, the five LANDMAP aspect layers show this purported 'landscape unit' is not readily identifiable. PCC maintain that topography shows continuity but accept (XE Philip Russell-Vick) there are several intervening LCAs of moderate evaluation between the site and the AONB. This implies that this part of eastern Powys does not share the same outstanding Alleged landscape similarity to the AONB

landscape value as the adjoining AONB. (Ian Gates Proof, paragraph 4.3.8 and 9). PCC accepts that the features identified as similar extend from the Clun Forest all the way to the Cambrian Mountains (XE Philip Russell-Vick).

- 3.91 No mention of landscape similarity or its importance is made by the AONB partnership in the Management Plan, existing or draft (XE Philip Russell-Vick). Since the point made relates to impact on the AONB, it undermines PCC's "single landscape unit" point.
- 3.92 PCC's argument that conifer blocks and post and wire fences in the AONB are similarities between the two (XinC Philip Russell-Vick) does nothing to elevate the importance of the site. PCC accepts that the AONB has less valuable, more bland areas, but does not suggest that RDNRV5122 is in fact worthy of AONB protection (XE Philip Russell-Vick), despite the management plan stating there are adjoining areas of considerable landscape quality (ReEx Philip Russell-Vick). This might apply to border areas, but not RVS122 (XinC Ian Gates).
- 3.93 All of the above has to be seen in light of PCC's acceptance that the impacts on the AONB from Llanbadarn Fynydd alone will not be significant (XE Philip Russell-Vick).

AONB
impacts of
L/F alone
judged
acceptable

3.94 AONB Cumulative impacts

- 3.95 PCC describe its argument as being "*a simple matter of common sense*" (XinC Philip Russell-Vick) that to the West of the SSA its lack of opposition to Llandinam and Llaithddu is borne of the existence of the P&L windfarm, hence that desensitisation of the landscape could occur, if Llanbadarn Fynydd is consented.
- 3.96 However, the addition of Llaithddu and/or Llandinam would not cause significant cumulative landscape effects in the AONB with key characteristics, including scenic and environmental quality and tranquillity, remaining in place, (Ian Gates Proof, paragraph 8.2.4), agreed by PCC and that impacts on the AONB of all s36 schemes would not be significant (XinC and XE Philip Russell-Vick).
- 3.97 Bryngydfa and Garreg Llwyd Wind Farms would play the largest incremental role of the SSA C wind farms in generating the cumulative magnitude of landscape change experienced by the AONB. (Ian Gates Proof, paragraph 8.3.2)
- 3.98 Even if you accept that impacts on the AONB with all SSA C schemes would be unacceptable, as contended by PCC (XinC Philip Russell-Vick) but not by Gates (XinC Ian Gates) Llanbadarn Fynydd's turbines would never increase the magnitude of cumulative landscape change due to the size of the AONB and the low, non-significant level of cumulative landscape effects it would cause. (Ian Gates Proof, paragraph 8.3.4)
- 3.99 PCC accepts that additional TCPA applications are not for determination at this inquiry and that should Llanbadarn Fynydd be consented, the cumulative impacts of all together will be before the decision maker

PCC further
reliance on
desensitisation

before any consent is granted. It also accepts that if there is a significance threshold that is passed in the determination of those TCPA applications, that will be a material consideration (XE Philip Russell-Vick).

3.100 PCC's desensitisation argument, this time in relation to the AONB, cannot stand against these facts.

3.101 Visual impacts : the nature of likely impacts

3.102 Topographical variations ensure the whole site is never visible from points within it or close by. The northern part has little visibility from the central and southern parts. Views out of Cwm Nant Ddu, the Gwenlas Valley and the upper section of the Teme Valley are limited by the rising valley sides and the nearest section of the Ithon Valley is not visible from the application site due to the 'tabletop effect'. (Ian Gates Proof, paragraph 3.6.1/4)

The effects of topography

3.103 This advantageous topography means that in most directions beyond approximately 3.5km and only ZTV fragments out to 6km. (Ian Gates Proof, paragraph 6.3.9)

3.104 Dispute over the extent of significant visual impacts is limited principally to VP6, a gateway on the A483, and VP7, a minor road, in both cases due to receptor sensitivity. PCC prefer to list all road users as having high sensitivity (XE Philip Russell-Vick) however people on daily business do not have the same sensitivity as those specifically on a footpath for recreation. PCC agree there will be no significant visual impacts over 4.4km (XinC Ian Gates and VATT/LAN/18).

Receptor sensitivity to visual change

3.105 PCC sought to highlight locations where turbines would be seen as "dominant" but conceded that visual dominance equates with high magnitude of visual change. Crucially it was accepted that none of the locations connoted unacceptability of development, rather they were inevitable, being close to a windfarm (XE Philip Russell-Vick, ReEx Ian Gates) which took the force from PCC's suggestion that the "threshold of unacceptability" occurred where turbines were dominant (XE Ian Gates).

Acceptability of impact and magnitude of visual change

3.106 PCC concedes that Llanbadarn Fynydd is not materially more visible over a wider area than the other two schemes in SSA C and compares favourably in that it does not have significant visual impacts on settlements or unacceptable effects on residential properties (XE Philip Russell-Vick).

3.107 As to turbine appearance, we heard that there is acceptance of their place in the countryside as they become a more familiar sight (InspQ Ian Gates).

3.108 The Arup Development Control Support Report (VATT/LAN/015) offered three visual criteria against which to review acceptability, those being to avoid :

- (a) unacceptable visual effects upon residential properties,
- (b) unacceptable visual effects upon recreational visual receptors and
- (c) 'over dominant' effects on the skyline from 'key or sensitive viewpoints'

3.109 All of these have been shown to be satisfied. (Ian Gates Proof, paragraph 3.7.13)

3.110 Visual impacts to Settlements

3.111 Of 19 settlements assessed, 16 would sustain no effects reflecting that many are located along valley bottoms such as Beguildy, Felindre and Llanbister. (Ian Gates Proof, paragraph 6.2.1)

3.112 Llanbadarn Fynydd village properties (those with a clear northern view) would sustain no more than a low magnitude of visual change from the partial presence of some turbines, albeit within those views, Llanbadarn Fynydd will make the greatest incremental contribution to cumulative visual effects. (Ian Gates Proof, paragraph 6.2.3 and 9.4.7)

3.113 Residential Properties

3.114 Assessment of properties up to 2.5km from any turbine shows that residents in 13 properties would sustain medium or high magnitudes of visual change and significant visual effects, representing only 20% of isolated properties within that distance, indicative of acceptability in visual terms. (Ian Gates Proof, paragraph 6.3.5 and 6.3.10)

3.115 Higher levels of visual change for landowners with a financial interest (Springfield; Hafod-fach; Garn; Esgairuchaf) can be afforded less emphasis. (Ian Gates Proof, paragraph 6.3.6)

3.116 Significant visual effects tend to reside in properties where the nearby topography prevents the full tabletop effect, such as at Lower Camnant and on the western side of the Ithon Valley, principally Esgairdraenllwyn; Glen Ithon Lodge; School House; and Banc-Newydd as well as at a single property: Esgairwyndwn, on Fron Top. (Ian Gates Proof, paragraph 6.3.8)

3.117 When addressing residential visual amenity we consider whether turbines would result in an 'overbearing' effect upon residents and/or whether the turbines' presence would result in 'unsatisfactory living conditions' at a property. (Ian Gates Proof, paragraph 7.1.1). PCC accept that no such conditions would arise, having reviewed the evidence (XE Philip Russell-Vick).

Agreement on no overbearing impacts

3.118 Relevant factors are visible array width, separation distances, internal layout and external orientation of properties and the effects of topography and screening (Ian Gates Proof, paragraph 7.1.2) At Butterwell, for example, at 965m separation at an array width of less than 120°, there is no prospect of impacts being overbearing, certainly by reference to previous decisions (XE Ian Gates). Where distances are

less, say at 700m for Blaen Nant Ddu the wireframes show significant screening enhanced by buildings and planting plus principle views being away from turbines.

3.119 Of those 13 properties with significant visual effects Esgairdraenllwyn resulted in particular discussion, as to why at 880m to the nearest turbine at an array width of 85° and 17 turbines visible the effects were still judged moderate? The considered answer was given that the valley gives a clear sense of separation, as do turbines being located some way behind the break of the slope of the top of the eastern side of the Ithon Valley giving a partial tabletop effect meaning their full height cannot be scaled against landscape features and at an array width of 85° turbines are at increasing distances that give no sense of the property being surrounded (InspQ Ian Gates).

Esgair-
draenllwyn

3.120 Even though each decision must be made on its own facts Earl's Hall, Tendring in Essex (VATT/LAN/017), Kelmarsh (VAT/INS/001), Burnthouse Farm in Cambridgeshire (VATT/INS/003) and Cleek Hall, Selby in Yorkshire (VATT/INS/005) all contained closer proximity to turbines. (Ian Gates Proof, paragraph 7.2.11/12). Greater information elsewhere in evidence on distance vs residential amenity support the distances referred to above. (Goodrum Appx 5 and ReEx James Welch)

3.121 Cumulative visual impacts to residential properties

3.122 Llanbadarn Fynydd would generate significant visual effects at 16 of the 53 cumulative viewpoints over a maximum separation distance of 4.4 km with Llaithddu and Llandinam alone generating significant visual effects at eight. Selection of cumulative viewpoints had a natural bias towards viewpoints where Llanbadarn Fynydd created impacts, as VPs where it had no effect were excluded. (Ian Gates Proof, paragraph 9.1.4 and Feb 2013 SEI Vol1 para 3.6.4).

3.123 With all seven SSA C wind farms operating significant cumulative visual effects would occur at two additional viewpoints, 2: Minor road close to Rhos and 11: Minor road close to Meolfre City. (Ian Gates Proof, paragraph 9.4.3)

Extent of
additional
cumulative
visual
impacts

3.124 For properties within 2.5 km, Llanbadarn Fynydd would make the largest incremental contribution to cumulative visual effects, but in the Gwenlas Valley the visual role of turbines at Garreg Llwyd becomes increasing important and the incremental roles of them and those at Llanbadarn Fynydd would become approximately equal. Further north along the Valley turbines at Neuadd Goch Bank would assume a greater incremental visual role. (Ian Gates Proof, paragraph 9.4.6-10)

3.125 At the top of the Gwenlas Valley and for residential visual receptors in upper Teme valley properties, turbines at Neuadd Goch Bank would assume a greater incremental visual role than Llanbadarn Fynydd. (Ian Gates Proof, paragraph 9.4.11)

3.126 Minimum separation distances of 4.6 km between Llanbadarn Fynydd and Llaithddu or Llandinam make it extremely unlikely that in

No
overbearing
cumulative
visual
impacts to
properties

combination they could be considered to be 'overbearing'. (Ian Gates Proof, paragraph 9.3.2)

- 3.127 With all SSA C wind farms operating residents in nine properties would experience an increase in cumulative residential visual amenity effects. Eight would arise because of Bryngydfa, Garreg Llwyd and/or Neuadd Goch Bank. The increase at Upper Camnant (property No.7) would remain due to the long turbine array at Llandinam Repowering and Llaithddu. (Ian Gates Proof, paragraph 9.5.1)
- 3.128 At four of the eight properties (Butterwell; Lower Foel; Lower Camnant; and the new house at Esgairuchaf) the increase in effect upon residential visual amenity would be from moderate to moderate/substantial. At the other properties (29) Dolfryn; 34) Lower Fiddler's Green; 35) Fiddler's Green; and 37) New house at Pen-y-Bank) the increase would be slight/moderate to moderate. The incremental contribution made by Llanbadarn Fynydd to effects upon residents' cumulative residential visual amenity would decrease, behind the effects of Garreg Llwyd and Bryngydfa. (Ian Gates Proof, paragraph 9.5.2)

3.129 National Trails

- 3.130 Three sections of Glyndwr's Way have views of Llanbadarn Fynydd. Section 2 Llangunllo to Felindre would sustain periodic effects not exceeding a low magnitude of visual change that would not be significant. (Ian Gates Proof, paragraph 6.4.3)

Glyndwr's
Way

- 3.131 The most open and elevated views in Section 3 Felindre to Llanbadarn Fynydd are available along Fron Top, giving recreational receptors high magnitudes of visual change and significant visual effects. (Ian Gates Proof, paragraph 6.4.5) PCC accept that as you walk westwards you get a consistent view, bar in the Gwenlas valley (XinC Ian Gates) which offers some advantage over views of turbines "coming and going". The 14-15km total length of exposure with closest points within a windfarm landscape is a significant adverse impact (XinC and XE Philip Russell-Vick) and on a precautionary basis is put forward as a worst case effect (InspQ Ian Gates).
- 3.132 Section 4 Llanbadarn Fynydd to Abbey Cwmhir puts turbines 'behind' walkers in most guidebooks. For the final third, limited views mean low magnitudes of visual change that would be not significant. (Ian Gates Proof, paragraph 6.4.6/8). On the West side of the Ithon Valley PCC accept that the impacts of the three schemes begin to balance equally, remembering that PCC sees no significant impacts on the route from Llandinam and Llaithddu (XE Philip Russell-Vick). This tells us that the only difference in impact on the route is that you walk nearer to Llanbadarn Fynydd than the other two sites.
- 3.133 PCC seek to distinguish Llanbadarn Fynydd as the scheme with the greatest impact on this route, based on lengths of view within 5km, accepting the baseline impacts of existing P&L turbines, and having no firm figure for the visibility of either Llandinam or Llaithddu (XE and ReEx Ian Gates). However, when the visibility of windfarms from

Glyndwr's Way at greater than 5km is considered, Llanbadarn Fynydd ceases to be the object of this individual criticism (Figure 5 Gates LVIA Rebuttal Session 1).

3.134 Walking the full length takes between nine and twelve days, with PCC accepting that the impacts are only to one section (XE Philip Russell-Vick). The route passes close to several operational wind farms with user survey material not listing them as detractors (XinC Ian Gates and VATT/LAN/021). The presence of Llanbadarn Fynydd for approximately two days' walking would be highly unlikely to be significant upon the Way as a whole. Long distance walkers (or cyclists and riders) may derive some benefit from turbines as fixed landmarks aiding direction finding. (Ian Gates Proof, paragraph 6.4.8)

3.135 Kerry Ridgeway is 24km long with predominant views northwards over the Severn Valley of which the western-most 1.5km would have a medium magnitude of visual change, the remainder being low, or no impacts. (Ian Gates Proof, paragraph 6.4.9 to .12)

Kerry
Ridgeway

3.136 Cumulative impacts to National and Regional Trails

3.137 On Section 2 of Glyndwr's Way Llanbadarn Fynydd and Llandinam Repowering would generate approximately equal incremental contributions to cumulative visual effects for recreational visual receptors. (Ian Gates Proof, paragraph 9.2.13)

3.138 Along Section 3 (Felindre to Llanbadarn Fynydd) the turbines at Llanbadarn Fynydd will consistently make the largest incremental contribution to cumulative visual effects. (Ian Gates Proof, paragraph 9.2.14)

3.139 On Section 4 the incremental roles played by the three wind farms would become similar as the route of climbs out of the Ithon Valley. (Ian Gates Proof, paragraph 9.2.15)

3.140 Llanbadarn Fynydd's greatest incremental contribution would be for approximately 4km from the summit of Fron Top across the Ithon Valley until the slopes of Moel Dod. It would make an equal contribution with Garreg Llwyd and Bryngydfa for the open length of the Way into and out of the Gwenlas Valley over 1.5km and at Location Viewpoints 20-22 south of Moel Dod. (Ian Gates Proof, paragraph 9.4.17)

Contribution
of other
SSA C east
schemes

3.141 On Kerry Ridgeway Garreg Llwyd and Bryngydfa would make a greater incremental contribution to cumulative visual effects although not significant. (Ian Gates Proof, paragraph 9.4.20)

3.142 From east of Two Tumps the greatest incremental role would be at Neuadd Goch Bank, Garreg Llwyd and Bryngydfa making a similar incremental contribution to Llanbadarn Fynydd. (Ian Gates Proof, paragraph 9.4.21)

3.143 Visual Receptors using Local PRow and Road Network

- 3.144 16 PRowS and one network would sustain significant visual effects, but a high density of local PRowS and low levels of usage and poor connectivity mean the significant effects do not warrant refusal, with the PCC Cabinet Report of March 2012 describing the network as '*disjointed*' and '*not heavily used*'. (Ian Gates Proof, paragraph 3.6.10 and 6.5.3)
- 3.145 Medium magnitudes of visual change occur on relatively short-lived sections of the A483 and the B4355. PCC's reference to there being no build up to the view when approaching from the North (XinC Philip Russell-Vick) relates to one of these views but it is short lived even if experienced by residents on daily business. On the two minor roads that cross the site the effect of minor junction changes will be to a low-medium landscape sensitivity area. (Ian Gates Proof, paragraph 6.6.1 to .4)
- 3.146 Some concern was expressed at the level of road users assumed for the A483, Gates indicating it was hundreds, but this seems correct in light of the Tucker Appendices 2015 baseline figure of 2145 movements in a 12 hour period. In any event, the GLVIA guidance (page 114 para 6.33) high sensitivity arises only with evidence of use being for the purpose of enjoying the view, which does not apply to daily users of the A483. Gates maintained his finding of medium magnitude of change (InspQ Ian Gates) an approach supported by Llandinam (XinC James Welch).

3.147 Cumulative visual impacts to Local PRow and Road Network

- 3.148 The cumulative visual effects sustained by the limited number of recreational visual receptors using local PRowS and roads would be similar to those outlined for longer distance routes. (Ian Gates Proof, paragraph 9.2.17 and .18)
- 3.149 Llanbadarn Fynydd makes the greatest impact to PRowS and roads crossing the site and on the closest parts of the western side of the Ithon Valley. (Ian Gates Proof, paragraph 9.4.22)
- 3.150 To the north, on Banc Gorddwr and Cilfaesty Hill Neuadd Goch would make a greater incremental contribution. (Ian Gates Proof, paragraph 9.4.24)

3.151 Landscape and visual impacts of grid

- 3.152 In respect of grid impacts, the speculative corridors identified are unassessed as there is no detailed route and little merit in considering more than whether a route could be avoided altogether (InspQ Ian Gates Session 4) or avoidance of the move from 132kV to 400kV that the Inspector considered a "step change". (Session 4 Grid Hearing)
- 3.153 In the round table discussion on grid technical matters including input from Charles Lynch, a key point was whether any necessary grid connections could be achieved by 132kV lines only, given the reference

Extent of the investigation into grid

to 132kV in TAN 8 para 2.13 Annex C and the Griffiths letter of July 2013 (Session 4 Grid Hearing).

- 3.154 TAN 8 contemplates possible strategic reinforcement of the mid-Wales network (above 132kV) may be required (Session 4 Grid Hearing) which would provide a stronger and more reliable network for West- and Mid-Wales (InspQ Philip Russell-Vick Session 4).
- 3.155 There is a policy question for the decision maker to recognise that whilst the 400kV transmission is not necessary for these developments, it would create capacity for further development, making that a factor in whether to stay within TAN 8 capacities or , if not, how far to exceed them (Session 4 Grid Hearing). That was reinforced by evidence that if Nant y Moch (in SSA D) is connected at Cefn Coch it will take the Legacy connection up to 400kV (InspQ Philip Russell-Vick Session 4). In any event, the strategic benefit of a 400kV line may be considered important by WG (InspQ Philip Russell-Vick Session 4).
- 3.156 The Mott McDonald report concluded that if Area B was connected via 132kV lines, they would be unusually long, but voltage regulation issues are manageable. All five windfarms are capable of being connected via 132kV lines (Mott McDonald Table 3.3 Options) and whilst it would be technically preferable to move to the Cefn Coch hub and 400kV line, the 400kV line is not an inevitable consequence (Session 4 Grid Hearing) even if the CC1 132kV line is used to connect Area C to B. (Mott McDonald's option 8a, Session 4 Grid Hearing). No inevitability of a 400kV line
- 3.157 Keeping all transmission to 132kV also means that any substation needed would be half the size required to convert 132kV to 400kV (Session 4 Grid Hearing).
- 3.158 There is no technical distinction between the Area C sites, any of them could be connected east or west (Session 4 Grid Hearing). The theme in PCC's case of Llanbadarn Fynydd being the trigger that causes unacceptable grid impacts cannot stand against its acceptance that a double HDWP can connect all five schemes to Legacy without a 132/400kV substation, and that consenting all schemes does not make CC1 an inevitability (XE Philip Russell-Vick Session 4). PCC accepted that Llanbadarn Fynydd is not a trigger for CC1. CC1 not triggered by L/F
- 3.159 Concern that pylons could be erected in place of double HDWPs was raised in several scenarios, including PCC's preferred scenario, where two schemes in Area C are consented. In that case, the double HDWP link to Legacy could be provided on L7 towers, smaller than a 400kV line, but substantially taller than wooden poles (Session 4 Grid Hearing). Montgomeryshire Against Pylons debated whether smaller pylons would be more acceptable, but said the move to double HDWPs would have avoided opposition (Session 4 Grid Hearing).
- 3.160 The Alliance raised financial viability in opposition to all the grid options. Viability has not been a material consideration before this inquiry (as opposed to cost benefit considerations) nor has any developer indicated Financial viability

concerns that grid options should be discounted on this basis (Session 4 Grid Hearing).

3.161 The 400kV line

3.162 The 400kV line from Cefn Coch to Legacy was not addressed in evidence by Vattenfall as there are no cumulative impacts of Llanbadarn Fynydd and that route, nor is it infrastructure that is required exclusively for it. No developer thought it necessary to comment on the impact of the 400kV route (XinC Ian Gates Session 4).

3.163 Using the terminology “step change” it was accepted that moving from double HDWP to 400kV line could be seen more as a step change, given the difference in height (XinC Ian Gates Session 4).

3.164 PCC describe it as a combined effect with Llanbadarn Fynydd, accepted by Gates (XE Ian Gates Session 4) but that only means it forms part of a network to which it and other schemes might be connected.

3.165 CC1

3.166 SP Manweb's 'Line Routeing Methodology and Appraisal – Phase 3 Report' (VATT-LVIA-04) has assessed the proposed route between SSA C and the Cefn Coch substation. (Ian Gates Session 4 Proof, paragraph 2.1.7)

3.167 Along the majority of CC1 there would be no potential for any cumulative interaction with Llanbadarn Fynydd. (Ian Gates Session 4 Proof, paragraph 3.4.3)

3.168 As CC1 adheres to the Holford Rules in that it follows the landscape grain, is confined within valleys and contained by topography and woodland planting wherever possible, a detailed landscape and visual character assessment would be likely to conclude that CC1 is acceptable in landscape and visual terms. (Ian Gates Session 4 Proof, paragraph 5.3.11). These conclusions in Mr Goodrum's evidence were tested but did not result in any concessions. (XE Colin Goodrum Session 4) He reaffirmed that on the information available the CC1 route would not cause unacceptable significant impacts.

CC1 and the
Holford
Rules

3.169 The CC1 route crossing the Waun Ddubarthog ridge is unaffected in significance terms by whether Llaithddu South is consented. Mr Goodrum's assessment would stay the same regardless. The close presence of turbines mean the contributory effect of CC1 is lessened, although an overhead line (rather than undergrounded) would cause localised effects, which would be the same for any line crossing a ridge (XE Colin Goodrum Session 4). The visual impact increases as the line crosses the slopes of the Waun Ddubarthog ridge, and then in the context of nearby turbines, is back dropped against the hill, reducing its impact to a modest intrusion.

3.170 PCC's assessment of CC1 impacts was put to Mr Gates who accepted the factual description of what VSAs lay along the route, but contended (in

agreement with Mr Goodrum for Llaithddu) that the characteristics that gave sensitivity to these aspect areas would not be affected by CC1 (XE Ian Gates Session 4).

3.171 PCC's concerns over CC1 are quantifiable by its case that however adverse the impacts might be, they do not warrant undergrounding. The qualification that the concern is over "an accumulation of effects" (XE Philip Russell-Vick Session 4) does not avoid the conclusion that the impacts requiring debate in Session 3 over undergrounding are not in prospect for CC1.

3.172 Additionally, PCC accepts that impacts from CC1 (CC2 and CC3) grid corridors are contained and do not add incrementally to the windfarm impacts (XE Philip Russell-Vick Session 4).

Grid not adding to windfarm impacts

3.173 Describing CC1 as a step change merely describes the difference between the route being built and not, it does not assist with a judgement on significance of impacts. It is not properly a step change if the impacts of the route can be satisfactorily accommodated (XinC Ian Gates Session 4).

3.174 CC1 is not exclusively referable to Llanbadarn Fynydd (XE Ian Gates Session 4). It is one possible combination; another is a dual or single 132kV line eastward to Welshpool, depending on what schemes are consented.

3.175CC2 (and CC1 in the Ithon Valley)

3.176 The only part of the western grid connection that relates solely to Llanbadarn Fynydd is CC2 and eastern-most part of the CC1 east of the Waun Ddubarthog Ridge. This has been assessed, on the information available, to the connection point of Llaithddu, leaving no unassessed "gap" (ReEx Ian gates Session 4). The landscape west of the A483 is of medium sensitivity due to its scale, blocks and belts of coniferous woodland and existing wind farms. This part of CC1 follows the field pattern, using field boundaries and shelterbelts to screen and backdrop the route. It will be visible in views in the open landscape but broken by existing planting with limited skyline visibility as it crosses the A483. Residential properties are limited, with only five likely to have views of the route, notably two at Blue Lins Farm. (Ian Gates Session 4 Proof, paragraph 2.1.7)

Agreement on acceptability of impacts in the Ithon

3.177 A section of the CC2 OHL could potentially be visible to southbound users of the A483 for c1.5 km, at 60 km/h for some 90 seconds with minimal incremental effect upon the cumulative visual effects of southbound vehicle users. (Ian Gates Session 4 Proof, paragraph 5.7.6)

3.178 Northbound travellers on the A483 could have filtered views of the CC2 OHL for 60 seconds south of the minor road to Bwlch-y-Sarnau and potential limited sequential cumulative visual effects with the proposed 132kV Landinam-Welshpool OHL as it crosses above the A483. (Ian Gates Session 4 Proof, paragraph 5.7.7)

3.179 The crossing of the Ithon Valley does not concern PCC, who see no distinction between impacts of CC2 and the Llandinam line as they cross the valley. (XE Philip Russell-Vick Session 4) If they were concerned, there is the option of connecting Llanbadarn Fynydd via the Llandinam line and Llaithddu via CC1 to reduce the crossings (XE Philip Russell-Vick Session 4). PCC accepted the entirety of CC1 and CC2 in the Ithon valley did not cause adverse findings (XE Philip Russell-Vick Session 4).

3.180 Once users of Glyndwr's Way have descended westwards to the western side of the Ithon Valley the only views of Llanbadarn Fynydd are briefly those south of Bwlch-y-Sarnau. (Ian Gates Session 4 Proof, paragraph 3.5.2) Glyndwr's Way

3.181 For the length of Glyndwr's Way outside SSA C, Llanbadarn Fynydd would make effectively no contribution to cumulative visual effects. (Ian Gates Session 4 Proof, paragraph 3.5.4) and although the Severn Way, would be by CC1 in places, any impacts would only be for very short sections, 200m each side of the line, as established in Session 3 (XE Ian Gates Session 4).

3.182 The Llandinam/Welshpool Line

3.183 The Llandinam/Welshpool 132kV route is relevant to Llanbadarn Fynydd as options include using it or providing a parallel HDWP 132kV line alongside it (Session 4 Grid Hearing).

3.184 160MW could be connected via the Llandinam-Welshpool 132kV OHL, sufficient for two of three proposed SSA C wind farms. (Ian Gates Session 4 Proof, paragraph 2.3.1)

3.185 The bulk of this route, bar that closest to Llanbadarn Fynydd, was not assessed in detail as it was assumed to follow a similar route to the s37 application. Mr Gates doesn't see the additional line as representing any "step change". Any increase in impacts is likely to be contained within the same 1km corridor and similar siting and mitigation options exist with plentiful tree cover (XinC Ian Gates Session 4). Impacts of a parallel 132kV line

3.186 SPEN indicate that the minimum separation distance between parallel lines is 20m, derived from the height of the HDWPs.

3.187 PCC calling this additional parallel line a "step change" is because it contends any new line would be a step change (XinC Philip Russell-Vick Session 4). On that analysis, the Llandinam/Welshpool line that PCC finds acceptable is also a step change.

3.188 The Northern Spur

3.189 The Llandinam/Welshpool 132kV route relevant to Llanbadarn Fynydd runs from the A483 across Old Neuadd Bank to Cae Betin Wood. Any cumulative effects with the windfarm would be restricted to the 2.5km section between the A483 at Gwynant and B4355 at Black Gate. Only 1.5 km would cross a relatively open landscape, the remainder crossing improved or semi-improved grassland fields with coniferous and

deciduous shelterbelts. (Ian Gates Session 4 Proof, paragraph 2.2.2). It is accepted these are adverse effects (XE Ian Gates Session 4) but only over a small area.

- 3.190 Llanbadarn Fynydd would require a 132kV connection to be teed in between the A483 at Gwynant and the B4355 at Black Gate. It is assumed to have a maximum height of 16m and fall within an indicative triangle. (Ian Gates Session 4 Proof, paragraph 2.3.5 and Figure 5)
- 3.191 PCC's stance is that the only unacceptable part of the 132kV Llandinam-Welshpool line is between the A483 and B4355. (Ian Gates Session 4 Proof, paragraph 5.1.5).
- 3.192 The sensitivity of that part is not agreed (XE Ian Gates Session 4) but PCC agrees that the concern is overcome with undergrounding and if the Secretary of State concluded that was justified, that reasoning would apply to Llanbadarn Fynydd's Northern Spur (InspQ Ian Gates Session 4 and Xinc Philip Russell-Vick Session 4). Ability to overcome concerns with undergrounding
- 3.193 The northern spur would be a prominent landscape element within a few hundred metres of its chosen route, generating landscape effects in an area (MNTGMVS254) already sustaining a high magnitude of landscape change. (Ian Gates Session 4 Proof, paragraph 5.2.10) We can be confident that the spur could avoid the loss of any existing tree shelterbelts (XE Ian gates Session 4).
- 3.194 PCC's case that undergrounding would not be necessary if Neuadd Goch were consented, but would be if only Llanbadarn Fynydd was (XE Philip Russell-Vick Session 4) suggests Llanbadarn Fynydd has more limited and acceptable effects in the area of the Llandinam line considered most sensitive by PCC.
- 3.195 The northern spur would have only one residential property: Lower Foel, within 200 m, Cider House, Lower Camnant and Upper Camnant would be between 250 m and 480 m from any potential OHL. (Ian Gates Session 4 Proof, paragraph 5.6.1) Residential properties
- 3.196 Lower Foel magnitude of visual change from turbines has been assessed as low recognising that tree cover would provide good screening. (Ian Gates Session 4 Proof, paragraph 5.6.2)
- 3.197 The potential 132kV northern spur would be viewed below the distant elevated horizons of the western side of the Ithon Valley, Glog and/or Banc Gorddwr making it unlikely that the northern spur would incrementally increase the visual effects to the north sustained by Lower Foel. (Ian Gates Session 4 Proof, paragraph 5.6.3) Impacts from turbines would exceed any grid impacts (XE Ian Gates Session 4).
- 3.198 The northern spur would not make a difference to the significance of cumulative effects sustained by users of Kerry Ridgeway. (Ian Gates Session 4 Proof, paragraph 5.6.5)

3.199 Users of Glyndwr's Way at 2.0 km from the northern spur (in the upper Gwenlas Valley) and at 4.0 km (to the north of Moel Dod) from the CC1 132kV OHL mean neither would result in a change to significance of visual effects. (Ian Gates Session 4 Proof, paragraph 5.6.7)

3.200 The northern spur could only make the difference between significant and non-significant cumulative visual effects close to short sections of PRowS. (Ian Gates Session 4 Proof, paragraph 5.6.11)

3.201 Conclusions on landscape and visual impacts of grid

3.202 There is a danger when considering grid for that to dictate what windfarm development goes ahead. PCC accepts that grid should not be prevented if its impacts are considered acceptable, including CC1. (XE Philip Russell-Vick Session 4).

3.203 Moreover, PCC accepted that whatever weight was attached to TAN 8 (such as setting SSA boundaries) acceptable schemes should not be refused because of a ceiling derived from TAN 8 figures (XE Philip Russell-Vick Session 4).

3.204 The balance is overwhelmingly that turbines cause impacts, not 132kV grid connections, due to the disparity in height. Cables have greater ability to be mitigated by tree cover making impacts localised (XinC Ian Gates Session 4). PCC in principle accept this. (XE Philip Russell-Vick Session 4)

3.205 It is agreed there is no danger of harm to the AONB to the East (XE Philip Russell-Vick Session 4).

3.206 The argument by PCC that HDWPs are "not slender and readily absorbed" (XinC Philip Russell-Vick Session 4) leaves PCC in the difficult position that they are acceptable in single and double configuration in some cases (in place of the 400kV and for the s37 Llandinam connection) but not in others (for CC1 or parallel to the Llandinam line) yet the equipment is the same and it is impossible to identify impacts of sufficient strength to support the differentiation.

3.207 Misapprehension as to the visibility of grid was illustrated by Mr Kibble asking whether looking north from Llanbadarn Fynydd or south from the Glog you would see "*an agglomeration of lines*", disputed by Gates who said visibility would be limited by topography and distance (XE Ian Gates Session 4).

3.208 PCC accepts that the adverse impacts of grid will not combine with any otherwise acceptable windfarm to render the totality unacceptable (XE Philip Russell-Vick Session 4) and that an acceptable windfarm will not be made unacceptable by grid options.

3.209 The Session 4 grid evidence has answered the EN-1 test of there being "no obvious reason" why any scheme could not be consented, as no-one has identified any reason why any of the five schemes cannot be consented (InspQ Jeffery Stevenson Session 4).

3.210 Landscape and Visual Conclusions

- 3.211 PCC has portrayed its case as providing a view of the totality of effects of all schemes, including grid (XinC Philip Russell-Vick Session 4). It presents itself as capable of advising on what level of impact is acceptable, in place of each developer considering its own impacts. However PCC accepted that its overall view was no more than an aggregation of the merits arguments advanced in each inquiry session, with no additional level of analysis that offered the decision maker guidance on the acceptable level of impacts (XE Philip Russell-Vick Session 4). There are unresolved differences of opinion between developers and PCC in every Session and you should treat with caution against any conclusion that PCC offers more with its arguments on how they should be resolved.
- 3.212 There is, in reality, a consensus of professional opinion regarding Llanbadarn Fynydd's acceptability under a variety of landscape and visual criteria. (Ian Gates Proof, paragraph 10.2.3). PCC's inquiry case stands alone from all these.
- 3.213 Llanbadarn Fynydd is an appropriate scale and located in an accommodating landscape where significant landscape effects will be restricted to the site and its environs where substantial landscape change has taken place over the past century. (Ian Gates Proof, paragraph 10.6.2)
- 3.214 PCC's unwillingness to recognise transition zones between LANDMAP VSAs flies in the face of ARUP's refinement exercise.
- 3.215 PCC's contention that the scheme is simply unacceptable as it is "*...in the wrong landscape*" (XinC Philip Russell-Vick) is untenable even on its own evidence.
- 3.216 PCC's desensitisation of the SSA C eastern area does not work on an individual or cumulative landscape impact basis, nor does it in relation to the AONB.
- 3.217 Llanbadarn Fynydd has been sited away from the most elevated locations ensuring its blade tip ZTV is compact. (Ian Gates Proof, paragraph 10.4.1)
- 3.218 The separation distance of 4.6km between Llanbadarn Fynydd and the closest Llaithddu and Llandinam turbines allied to the topography and landcover severely limit significant cumulative visual effects, making Llanbadarn Fynydd appear visually separate according with the separation principle in SNH '*Siting and Design of Windfarms in the Landscape*' (VATT/LAN/02 and Ian Gates Proof, paragraph 10.5.2).
- 3.219 Separation distances, intervening topography and landcover patterns prevent the formation of a '*wind farm landscape*' across the upper Ithon Valley. (Ian Gates Proof, paragraph 10.5.3)

- 3.220 Predicted impacts on residents are low for a 17 turbine wind farm and indicate a suitable site for this type of development. (Ian Gates Proof, paragraph 10.4.8)
- 3.221 PCC's consultants' main concern was potential effects upon residential visual amenity but even then, they felt these concerns '*... do not justify a reason for refusal.*' PCC no longer advances concerns for residents in properties as a reason for refusal. (Ian Gates Proof, paragraph 10.2.2)
- 3.222 Visual impacts to PRoWs and local roads are unexceptional and if there is anything different in this scheme to others in Area C in relation to Glyndwr's Way, it is that the route passes closer to the site than to other sites, but that is inconsequential in respect of impact to the totality of that route. Further comfort may be taken on the acceptability of these impacts from CCW raising no opposition despite being charged with protection of the route.

4 CULTURAL HERITAGE

- 4.1 PCC Reasons for Objection of March 2012 contained no historic environment issues and its later Statement of Case Addendum (SOC-SSA-C-ADD1) relates only to cumulative effects with other SSA C east schemes. (Simon Atkinson Proof, paragraph 1.3.1, 1.3.2 and 3.5.2)
- 4.2 Neither Clwyd Powys Archaeological Trust nor Cadw objects (subject to the imposition of standard conditions) either alone or in combination with other wind farms, or contend any inadequacy in the assessment material. (VATT/HISENV/SOCG/SSA-C and Simon Atkinson Proof, paragraph 1.3.3, 3.3.1 and 3.7.1)
- 4.3 The endorsement of both these bodies sits ill with the suggestion by Mr Kibble, adopted during the inquiry by PCC (XinC Andrew Croft) that the Llanbadarn Fynydd assessments were out of step with those of the other eastern area applications, a difference attributable to a combination of differences in terminology used and judgements made in those four independently made assessments (XinC Simon Atkinson).
- 4.4 Similarly, the suggestion that all Atkinson had done with his cumulative assessment was adopt the conclusions of others, was rejected by him, making it quite clear that the extracts of other ES material he had referred to were in addition to his own assessments of cumulative effects.
- 4.5 CPAT state "*Direct impacts will be negligible while indirect impacts will be generally low to moderate. Overall this would seem to be a very low impact development in archaeological terms.*" (Simon Atkinson Proof, paragraph 3.7.1 and VATT-CUL-004)

Stances of
PCC, CADW
and CPAT

4.6 Legal and Policy Considerations

- 4.7 Section 66 of the Planning (Listed Buildings and Conservation Areas) Act 1990 (CPL-LEG-008) is of particular importance when considering listed buildings and their settings. (Simon Atkinson Proof, paragraph 2.2.2) It

should not be considered as discharged by the application of other policy tests at local and national level, but rather that desirability of preserving the settings of these assets is to be considered on its own, noting that the duty is not to resist all change (XinC Simon Atkinson). The Council's legal submission that s66 does not strictly apply in s36 cases is not challenged on the basis that the same considerations should appropriately be in the mind of the decision maker in any event.

- 4.8 NPS EN-1 (CD/COM/001) has been our starting point at the inquiry for policy considerations, including the question of what is substantial harm to an asset, requiring consideration of the effects on both designated and non-designated heritage assets, that account should be taken of the desirability of sustaining the significance of assets and that any harm to heritage assets should be weighed against the public benefits of development with greater harm requiring a greater level of justification. (Simon Atkinson Proof, paragraph 2.7.3 to 2.3.9) NPS
guidance
- 4.9 These tests are required by policy, but in noting the legal submissions made by PCC in respect of the *Barnwell Manor* case, you should be cautious about criticism made of factors like ability to visually separate old from new. In *Barnwell Manor* the decision maker's reasoning was flawed not because they considered matters such as visual separation, but because they failed then to apply the full range of policy test required by, in that case, the NPPF. The full EN-1 and EN-3 tests have been addressed in evidence in respect of Llanbadarn Fynydd.
- 4.10 This is an appropriate point to comment that in closing PCC has sought to portray our heritage evidence in an especially unfavourable light, something which is unjustified and unnecessary. Take for example the application of the tests from EN – 1 and EN – 3. In Mr Atkinson's proof (together with the ES and SEI, both of which he authored on heritage matters) you will find for every asset a definition of the setting and of its heritage significance. Separately you will find an assessment of the impact on the asset of Llanbadarn Fynydd alone and of any cumulative impact. Visual effect of development plays a part in that assessment, but only to inform heritage significance.
- 4.11 Yet despite this, and it being enough for the Council to say merely that it prefers the opinions of its expert, criticism is levelled at Mr Atkinson
- for using a formulaic approach to significance (PCC Closing para 274 b.i.), but why so, given he is dealing with many similar types of monument?
 - for making no finding of cumulative impact when Llanbadarn Fynydd had no significant effect (PCC Closing para 276c), but why given Llanbadarn Fynydd is the development he was speaking to?
 - for accepting a point on Castell y Blaidd in cross examination that was not in his proof (PCC Closing para 274 b. iii.) but are witnesses expected to be censured for agreeing a point that goes beyond their proof?

- 4.12 These are sufficient as examples of why that type of criticism is unjustified. It is also particularly inappropriate, in that PCC basically agree the impacts on SAMs of Llanbadarn Fynydd alone, in the sense of accepting they are less than substantial. PCC's criticisms here are directed only at cumulative impacts, for which they also have to make good their desensitisation argument, which we say they cannot.
- 4.13 NPS EN-3 (CD/COM/003) notes that onshore wind farms' time-limited permissions should be taken into account when considering effects on the settings of designated assets and such effects on the historic environment there may be are reversible on the decommissioning of the scheme, whilst the contribution of the wind farm to mitigating climate change will also be of benefit to the historic environment. (Simon Atkinson Proof, paragraph 2.3.11 and 6.3.5)
- 4.14 Setting, being linked to experience or appreciation of the asset should direct you to experience in a tangible way (XinC Simon Atkinson) the most obvious example being visibility of the asset. Settings and visibility
- 4.15 Changes to the setting of a heritage asset as the result of wind turbines will most commonly occur as a result of intervisibility or direct views between the asset and the proposed development, making it necessary to identify views where intervisibility was intended or where a vista or sight line contributes to the heritage significance of the asset, with effects on the asset assessed as a whole not simply in the views affected by the proposal. (Simon Atkinson Proof, paragraph 2.5.8) Atkinson fully had in mind the different extracts of the EH guidance on setting (VATT-CUL-001) that were put to him, including the suggestion that views were important as one "*moved through the landscape*" (XE Simon Atkinson). The fact remains, however, that it is accepted Llanbadarn Fynydd does not lie on any sight line between any heritage assets (XE Andrew Croft).
- 4.16 The intellectual process of using maps and guides to locate no longer visible remains is less affected by the presence of turbines and as such the evidential value of sight lines between monuments is less affected when relying solely on maps in that way, again suggesting that setting is more based around what can be seen today (InspQ Simon Atkinson). Whilst Croft sought to argue that degradation of a monument did not reduce its significance, he acknowledged that as visibility reduces over time you have to work harder to perceive them, which can be a challenge, even for professionals (XinC Andrew Croft).
- 4.17 The existence of long views from an asset do not necessarily result in the setting being defined as everything that can be seen in those views (XinC Simon Atkinson). PCC seem to suggest wider settings, such as Warren Hill at some 6km being within the setting of Fiddlers Green Barrows (XinC Andrew Croft) and the Moel Dod ES VP8 being within the setting of the Glog at 8km. Extent of settings
- 4.18 Croft rejected the suggestion that defining setting around everything visible from such assets resulted in unmanageably large settings, but then appeared to qualify it by accepting there had to be consideration of

actual impact on setting, which for the Glog at 8km was unlikely to be serious (XE Andrew Croft) and that it was right to ask if the relationship between asset and underlying topography could still be seen, which manifestly is still possible in that example.

- 4.19 A point was sought to be made out of the use of the phrase "immediate setting" in the SEI and the omission of that phrase in Atkinson's proof, with the suggestion there may have been the attempt to narrow the setting of assets. This was rejected by Atkinson who pointed to the recognition made of both immediate and wider views (XE Simon Atkinson) and confirmed whilst all may play a part in the totality of a setting, greater weight should attach to the immediate setting that you see particularly associated with a monument, an example being the river valley next to Castellinboeth (ReEx Simon Atkinson). "Immediate settings"
- 4.20 There is a link here with our case that approaches to a monument can only sensibly be incorporated in the setting of the monument when you are sufficiently close to the monument that it becomes a visible destination for you (ReEx Simon Atkinson). PCC offered a figure of the last 500m or so to differentiate what was meant by the approach to a monument, rather than some wider concept of "remembered view" as you pass through the landscape, accepting a correlation between this and "immediate settings" (XE Andrew Croft). This narrows the apparent gap between the experts, even with Croft's addition that the correlation applied only "*to some monuments*".
- 4.21 PCC criticised as inadequate assessment of views in the round, but these boiled down to a suggestion that in addition to the 34 360° wirelines out from each monument there should have been supplemented by similar (or maybe more) visuals into those monuments, plus a slightly incongruous challenge that wirelines from monuments in the SEI and proof had not all been taken from precisely the same location (XE Simon Atkinson), which begs the question, where would those "views to the asset" have been from, and what would they have shown with monuments that are rarely distinguishable over a few hundred metres away? No greater substance was contained in the criticism that when Atkinson addressed significance of assets in his proof he did not refer specifically to visibility, for example in relation to RD084 Fiddlers Green barrows and RD251 Banc Gorddwr barrow (XE Simon Atkinson) given that he had done so in the preceding paragraphs when addressing setting. Adequacy of assessment
- 4.22 Cadw tell us that contribution to the heritage significance of an asset can include considerations that are evidential, historical, aesthetic or communal (CPL-CUL-003) or archaeological, architectural, aesthetic or historic (Glossary to the NPPF, FWL-CON-003). Even if there is harm to the setting of an asset, other aspects of significance may remain unaffected – such as evidential value (XinC Simon Atkinson). Despite the weight put on impacts to setting by PCC it stopped short of saying that any asset being considered has a setting that makes a profound contribution to its significance (XE Andrew Croft and proof para 4.11) and so no asset suffers total loss of significance because of impacts to No total loss of significance of any asset alleged

its setting. It follows that even on PCC's analysis some heritage significance in each asset would remain, regardless of how much development went ahead.

- 4.23 Assistance in applying these principles can be found in the Kelmarsh decision, where the Inspector relied on separation between turbines and assets (in that case of some 1.5km) to avoid visual confusion about the origins or purpose of either or both, as supportive of impacts being acceptable, Croft going as far as saying turbines would never be read as part of a heritage asset (XinC Simon Atkinson and XE Andrew Croft). Atkinson explained visual confusion as a change making it more difficult to understand the relationship of the monument with the landscape (XE Simon Atkinson). Previous decisions
- 4.24 It was accepted that other principles from Kelmarsh could be applied here, such as
- (a) that where turbines were a noticeable presence in views but did not fill a field of view there could still be appreciation of how the asset sits in the landscape, and
 - (b) that turbines would be unlikely to harmonise with historic assets but would be perceived as 21st C products responding to a modern need
 - (c) and that they could still be acceptable even if appreciation of heritage impacts might be easier without the distraction they posed, Croft occasionally reminding us that it would be easier to interpret assets without turbines, for example in relation to the Glog barrows (XE Andrew Croft).
- 4.25 The Alliance stressed movement of turbines drawing the eye in a way not apparent from montages (the example given was at Fiddlers Green) a factor Atkinson accepted was relevant to the distraction posed by turbines in views and that EH Guidance noted as relevant to impact on setting (XE Simon Atkinson) but one of which he was fully aware.
- 4.26 An important threshold now in any case involving impacts on heritage assets is how, in practice, to apply the thresholds of "substantial" and "less than substantial" harm as used in NPS EN-1. The thresholds suggested by PCC were advanced as ones of professional judgement, against there being no fixed definitions (XinC Andrew Croft) but not endorsed by any independent decision maker to date (XE Andrew Croft). Whilst describing his interpretation of substantial harm test as "a high bar" he still maintained that degradation of key aspects of the setting of a monument were akin to total loss of that asset and even that his threshold of less than substantial harm was set at "*quite notable changes in significance*" (XE Andrew Croft). Substantial and Less than Substantial Harm
- 4.27 In such cases the considered approach of Inspectors in previous appeals carries an additional degree of independence and rigour. The recent Airfield Farm decision addressed the issue directly and clearly, recording that on a fair reading of the guidance, substantial harm equated with

something approaching total loss of the asset (XinC Simon Atkinson) potentially because of the need for exceptional or wholly exceptional circumstances to warrant such impacts (InspQ Andrew Croft). It was accepted the wording of the policy allowed for such an interpretation (XE Andrew Croft). Doing so would be quite consistent with DCLG July 2013 guidance (para 34), that development in the setting of an asset could amount to substantial harm. It could do so, but it still requires you to consider the setting and the extent of the harm to that setting to see if that substantial threshold is met (InspQ Simon Atkinson).

- 4.28 This point was tested with Atkinson who could not accept Mr Croft's hypothesis that substantial harm could arise from impacts within a setting alone that removed key aspects of the significance if other key aspects of significance remained, certainly not if the Airfield farm decision is to be applied (XE Simon Atkinson).
- 4.29 Again there is unjustified criticism of Mr Atkinson here, in saying that as he made no finding of substantial harm in any situation he had failed to engage with policy in a way that provided any assistance to the inquiry (PCC Closing para 271/272). The criticism is excessive. Even the Council accept that what constitutes substantial harm is a matter of judgement for the decision maker, in which case they should not in the same breath (PCC Closing paras 111c and 274d) say that Mr Atkinson was wrong to (i.e. could not) have treated substantial harm as something akin to total loss of significance. Mr Atkinson has given reasons in every case for why he makes no finding of substantial harm. If you feel a different conclusion is justified on those facts, you can use his assessment to do so.

4.30 Historic Environment of the Site and Surroundings

- 4.31 The site comprises an extensive area of relatively level elevated land at an altitude of 400-450 m, cut by a number of steep-sided valleys. The higher ground largely comprises improved pasture fields with a smooth grass surface, enclosed by post and wire fencing. Historic OS maps show that this was largely open moorland at the end of the nineteenth century, but subsequently was ploughed for arable and root crops in the mid twentieth century. (Simon Atkinson Proof, paragraph 4.1.2)
- 4.32 Most of the archaeology identified within the site appears to be post-Medieval in date and, largely speaking, is no longer visible. (Simon Atkinson Proof, paragraph 4.1.5 to 4.1.8)
- 4.33 It is agreed there are no scheduled monuments within the application site itself (XE Andrew Croft).
- 4.34 The nearest designated historic landscape, which would be treated as an asset in its own right under NPS EN-1 (XE Andrew Croft) is Caersws Basin, approximately 7 km from the nearest turbine from which there will be negligible visibility that would not be expected to affect its historic character in any way. (Simon Atkinson Proof, paragraph 3.4.1)

Absence of designated historic landscape

- 4.35 As the Llanbadarn Fynydd proposal will not impact on any registered landscape no ASIDOHL has been completed for this scheme and no heritage consultee has requested that one. (Simon Atkinson Proof, paragraph 3.4.5/6) the Alliance accepting that it has merely raised why some schemes used ASIDOHL and others didn't, rather than offering it as a criticism. (XE Jonathan Edis)
- 4.36 PCC's argument that the site is no less valuable because it is not in a registered landscape is right in the simplistic sense that not being registered does not alter the assets within the area or the heritage significance of them (XE Simon Atkinson) but wrong if it is suggested that the unregistered landscape is of equivalent importance to one that is. Manifestly a registered landscape has been recognised as being of the highest value, a non-registered landscape, such as here, has not.
- 4.37 CPAT's October 2006 desk-based historic landscape characterisation of the TAN 8 Strategic Search Areas in Powys (FWL-CUL-001) contributed to inclusion of this area in the SSA partly as a result of it not been identified as being of any special historic landscape interest, in line with TAN8 (para 2.9, CD/COM/016) that SSAs all display characteristics which include *a general absence of nature conservation or historic landscape designations*. (Simon Atkinson Proof, paragraph 4.2.2 and 6.2.4) CPAT input to SSA boundary setting
- 4.38 CPAT (CD/COM/016) describe Historic Landscape Character Area Esgair-uchaf (SSA Powys 41) that would contain 12 turbines as an extensive area of predominantly enclosed moorland plateau with fields generally appearing to have been formed through a process of nineteenth century enclosure. (Simon Atkinson Proof, paragraph 4.2.4)
- 4.39 Historic Landscape Character Area Bryngydfa (SSA Powys 44) that would contain four turbines CPAT record that either side of the minor road on the line of Glyndwr's Way is predominantly moorland enclosed during the twentieth century through the creation of largely regular fields. (Simon Atkinson Proof, paragraph 4.2.5)
- 4.40 Land within the remainder of the eastern part of SSA C was assessed as predominantly comprising enclosed moorland with some unenclosed land remaining, such as at Banc Gorddwr, those later enclosure resulted in a regular pattern of larger, straight-sided enclosures, sometimes also edged by shelter belts and other blocks of conifers. (Simon Atkinson Proof, paragraph 4.2.9)
- 4.41 Criticism was levelled by PCC at the use by Vattenfall of these character areas, with the suggestion that LANDMAP would have provided more baseline data, but this criticism amounted to no more than saying that landforms important to heritage assessment could straddle landscape areas and that Landmap offers some general landscape descriptions to assist identification of settings, such MNT124 in which the Glog and Two Tumps are located within a prehistoric landscape of key importance. All of which Atkinson was clearly quite aware of in making his assessments (XE and ReEx Simon Atkinson, XE Andrew Croft) and none of which were shown to be in any way unusual for an SSA C site.

4.42 PCC's criticism of reliance on the CPAT 2006 Study being smaller than the full TAN8 and final refined boundaries (XE Simon Atkinson) but that criticism is not directed at suggesting there is some more suitable location for turbine development in the refined SSA that has been missed by the developers.

4.43 The time spent by PCC in suggesting TAN8 did not look at heritage impacts in any detail (XinC Andrew Croft) does little to advance its case. We have never suggested inclusion in the SAA was all that was needed, hence the full assessment of heritage impacts. If the most that can be said is that TAN8 and the Arup studies were a coarse level of removing the most sensitive heritage areas, that still stands in favour of using sites that passed that process, and again, no suggestion was made by PCC of any more suitable area to which the Llanbadarn Fynydd turbines should be relocated. Atkinson's agreement that this would be the first time detailed layouts had been considered in terms of heritage impacts (XE Simon Atkinson) is hardly revelatory. No filtering out of unsuitable development areas is ever likely to attempt to second guess what detailed layouts will come forward.

4.44 It may be suggested that the Western part of the SSA is just such a better place to locate turbines, from a heritage perspective. Comparison with the western part of the SSA was before us at the inquiry solely in response to the suggestion by the Council that the eastern area is the more sensitive but no consistent picture emerges of the eastern area being less suitable for development because of heritage impacts. Numbers and types of monuments are broadly similar with location of assets in open areas. (XinC Simon Atkinson). No reliable case is before you that any area, including the western part of the SSA is better for development not least because Mr Croft offered no assessment of the impacts of the development in the west, stating simply that he found it acceptable. That lack of comparable assessment by PCC also means little reliance can be placed on the references made a number of times that the Llanbadarn Fynydd is not the same as the higher, historically less used and developed land to the west (XinC and XE Andrew Croft).

Comparison
between
east and
west of SSA
C

4.45 It is accepted that Radnorshire has twenty similar monuments to Castelltinboeth and Castell y Blaidd and over 290 similar to the deserted medieval settlements (no-one tried to count the number of barrows, but there was no suggestion these were any less numerous) which were accepted as making the eastern part of the SSA fairly typical (XE Andrew Croft). Despite Croft's comment that he has not been supplied evidence on other areas outside the SSA (ReEx Andrew Croft) he accepted the contention that to the extent there was a reduction in the ability of the lay public to see the history in this part of the landscape, this was not some unique resource that was being affected (XE Andrew Croft).

4.46 The one factor that did emerge clearly in the approach of PCC as a differentiator from west to east in the SSA is the existing presence of turbines in the west (XinC and XE Andrew Croft). That, of course, does nothing to inform you of the capacity of the eastern areas to

satisfactorily accommodate development which is the principal consideration before you.

- 4.47 It also emerges from comparison of the approach to east and west that PCC have not sought to advance any case that removal or relocation of turbines at Llanbadarn Fynydd would reduce impacts to an acceptable level, which they have done in the west (XE Andrew Croft). This provides reassurance that there isn't some aspect of the design chosen that you should approach with concern, in respect of any asset. It shouldn't, however, be interpreted as PCC advancing opposition in principle to any use of the eastern area, because PCC's case is that it is only cumulative impacts that it objects to. At all times we have to remember that we are talking about development wholly within the refined SSA.
- 4.48 Croft was clear that his expertise extended only to the extent of heritage impacts and their acceptability judged solely within that sphere and that he did not seek to prejudge the question of the adequacy of the heritage capacity to accommodate this development by reference to TAN8 areas, targets, or any other external factors such as these (XE Andrew Croft). TAN 8 targets not advanced by PCC on heritage
- 4.49 The 5 km area around Llanbadarn Fynydd turbines contains a number of types of scheduled monument, the most common being Bronze Age grassed burial mounds, isolated or in small clusters. CPAT (FWL-CUL-003) note that here barrows are not generally located on the highest ground, but a little off the summits, possibly indicating an intent that they should be locally prominent from within a specific area rather than in longer distance views. (Simon Atkinson Proof, paragraph 4.2.14 and 4.2.15) Types of monuments around the site
- 4.50 The defended Iron Age hill-forts at Castell y Blaidd (RD102) and Castell Tinboeth (RD038), group of cross-dykes to the north of the site and Medieval or post-Medieval settlement sites, such as at Castell y Blaidd and Castle Bank. (Simon Atkinson Proof, paragraph 4.2.16-20) make up the remainder of monuments considered.
- 4.51 Whilst there are similarities in the form of many of these features, the suggested dates for them does not lead to any conclusion that they would have been contemporary with each other. (Simon Atkinson Proof, paragraph 4.2.16 and 21)
- 4.52 Visibility of these monuments is variable, with low grassed barrows easily being lost to view in grazing fields, and only where monuments are found on skylines does their visibility increase, generally to around 1.5km (XinC Simon Atkinson). You will have to form your own opinion between this and the suggestion by PCC that visibility of monuments was far higher (XinC Andrew Croft) given that no real attempt was made by PCC to give distances. Instead examples of particularly visible monuments such as at Gors Lydan (itself over 4km from a Llanbadarn Fynydd turbine) were given but still only by reference to "*many kilometres*", or alternatively to euphemisms such not all the monuments being "*shrinking violets*" (XinC Andrew Croft). When distances were Visibility of monuments in the area

mentioned, such as Two Tumps being visible at 6km (XE Andrew Croft) it became clear that Croft was not distinguishing between monument and landform, even to the point of asserting that the heritage significance of both is the same which if right, potentially renders inconsequential the part visibility of a monument plays in its significance, which cannot be right.

- 4.53 Assertions about integrity of a '*prehistoric and medieval landscape*', advanced by PCC only as relevant to establishing the setting of monuments (XE Andrew Croft) need to be treated with a great deal of caution. Features from similar broad periods are seen as an element of a landscape which is continuing to develop. The dominant characteristics of the Llanbadarn Fynydd site derive from a process of nineteenth and twentieth century agricultural improvement. PCC accept these are modern influences (XE Andrew Croft) and that "time depth" alone, as in the ability to witness historic changes in a landscape is not unusual in most UK landscapes.
- 4.54 Whilst it would not be impossible to reverse this agricultural improvement, it would have to be carefully managed (XE Andrew Croft) in the event anyone should choose to do so in the future, whereas the removal of the turbines is a planned event with a high degree of confidence that it can be satisfactorily achieved.
- 4.55 It would give a false impression to suggest that the scheduled monuments survive within an unchanged or unchanging setting. (Simon Atkinson Proof, paragraph 4.3.2). When considering any contribution this generalised landscape makes to the significance of any of the following assets, the modern influences apparent in the landscape weaken any historic connection with the assets that are located in it (XinC Simon Atkinson). That is not to say you can build anything you want as a result, it is just a recognition of a material change in the baseline that has taken place in the last 150 years (InspQ Simon Atkinson).
- 4.56 PCC suggest monuments in a field of improved grassland do not alter how you see them (XinC Andrew Croft) but at the same time we have Croft telling us that the western part of the SSA is a more untouched, prehistoric landscape and that these modern features are merely an extra layer of "time depth" (XE Andrew Croft). With respect, the Council can't have it both ways.
- 4.57 In the same way suggestions about "intensive occupation" of this area since the Bronze Age run up against a lack of certainty as to what "intensive" means here, given it is unlikely the monuments being referred to here are in any meaningful way contemporary with each other (XE Simon Atkinson).
- 4.58 When reference was made to non-designated assets by PCC, the purpose of doing so was in support of this generalised argument about a historic landscape (XinC Andrew Croft) as no argument was advanced that the impacts on any specific non-designated asset would be unacceptable. The suggestion that these had been somehow missed in

Whether prehistoric landscapes are still visible

the ES was simply incorrect, as non-scheduled monuments had been considered within the site and up to 500m from it (XE and ReEx Simon Atkinson).

- 4.59 The stress laid by PCC on impacts as one "*moved through the landscape*" raised the inevitable question as to what routes were being considered? Atkinson conceded the Kerry Ridgeway was important (ReEx Simon Atkinson) but it was already clear that he placed particular emphasis on this route, the Glog and the Two Tumps area in his assessment and remained of the opinion that visibility of monuments as you did "move through the landscape" was key, meaning something like the inconspicuous barrow RD250 at Banc Gorddwr would be unlikely to feature to a person doing that. Croft accepted there were no modern routes purposely linking these assets together, but that it would be possible for a walker to stitch a route together if they were of a mind to (XE Andrew Croft). Perception when moving through the landscape
- 4.60 Glyndwr's Way was raised by the Alliance, although not itself a noted historic movement route (InspQ Simon Atkinson) which raised the question of lay people's enjoyment of the history they see in the landscape using such a route, albeit something that might not of itself go to the historic significance of the assets themselves. Here Atkinson drew attention particularly to the ability in all cases to see turbines as modern and separate features, differentiated from the visible historic features (InspQ Simon Atkinson).
- 4.61 Croft accepted the relevance to the Kelmarsh reasoning already mentioned, that impacts from turbines could still be acceptable even if appreciation of heritage impacts might be easier without the distraction turbines might pose (XE Andrew Croft).
- 4.62 Three Round Barrows NW of Fiddler's Green Farm (RD084)**
- 4.63 A group of three round barrows, one of the northern two truncated on the south side by a road verge, located within an area of improved or semi-improved pasture enclosed by post and wire fencing with a footpath running through the group. (Simon Atkinson Proof, paragraph 4.3.4 - 6)
- 4.64 Whilst this group forms part of a broader group of barrows running to Crugyn and Two Tumps in the north, there is little intervisibility between them, partly due to the asset being located on only a small local rise in land, and so possibly not intended to be prominent, even in local views. In common with many of the barrows here, its significance is representative of the prehistoric use in an area now more characterised by nineteenth and twentieth century enclosure. (XinC Simon Atkinson and Proof, paragraph 4.3.9)
- 4.65 If all of Llanbadarn Fynydd, Bryngydfa, Garreg Lwyd and Neuadd-goch Bank were to be built there would be some sense of the asset being surrounded by turbines (Appendix 2 VP17) at a distance of 800 m, some Llanbadarn Fynydd turbines would be partially hidden by topography, the land falling to the turbines that offers visual separation such that on No significant impacts from L/F alone

its own the scheme will not have a significant effect. (XinC Simon Atkinson and Proof, paragraph 5.2.2)

- 4.66 The Llanbadarn Fynydd turbines would not however interfere with any sight-lines between this and other barrows or barrow groups in the area, the key consideration raised by Cadw as statutory consultee. Whilst the cumulative effect would be significant this would not result in substantial harm to the significance of the monument and the monument would continue primarily to be seen in the context of the enclosed agricultural landscape in which it is located. (XinC Simon Atkinson and Proof, paragraph 5.2.3). Against this you have the Alliance suggestion that there must be a significant impact because of turbines "*marching up the hill towards the monument in a threatening manner*" to which Atkinson remained firmly of the view that despite the relative proximity (these are the nearest monuments to Llanbadarn Fynydd turbines) there remains visual separation (XE Simon Atkinson). Significant cumulative impacts, but no substantial
- 4.67 It was fair to point out that Atkinson's comment that there would be no interference with sight lines from all of the eastern area developments combined, whilst correct for Llanbadarn Fynydd alone, is not for Bryngydfa, which lies between this monument and Warren Hill (XE Simon Atkinson) albeit a sight line between a low visibility monument and a point some 5.6km distant. What was not fair was the suggestion that correction necessarily leads to a finding of substantial harm, which was firmly rejected by Atkinson (ReEx Simon Atkinson).

4.68 Crugyn Bank Dyke (MG062) and Dyke Near Two Tumps (MG063)

- 4.69 Cross dykes comprising a linear earthwork with two banks surviving to a height of 1-2 m, with a ditch between. The appearance of a key historic and visual link between these dykes which may have formed part of a single landscape boundary feature within this watershed location. (Simon Atkinson Proof, paragraph 4.3.10 - 15)
- 4.70 The monuments have little intervisibility with other distant monuments, their settings primarily defined by the fields in which the dyke sits as well as views across to the Two Tumps area. (Simon Atkinson Proof, paragraph 4.3.12 and 15)
- 4.71 Even in the event of all of the proposed schemes proceeding there would not be a significant adverse cumulative effect on the setting of these dykes, the moderate effect on setting predicted for Neuadd-goch would not be added to materially by the other schemes as they would not alter way in which the monument can be appreciated alongside related features. The Llanbadarn Fynydd turbines would be seen at a greater distance and without increasing the field of view in which turbines would be seen with a separation that avoids any visual confusion. (XinC and Simon Atkinson Proof, paragraph 5.2.4 and 5). PCC maintain that the effect of the turbines changing the setting of what was otherwise an open rural landscape is harmful but the fact that they accept that the original function of the dykes, as boundary markers, and the land that they divided, can still be seen with the turbines present (XE Andrew Croft) help you with the weight to attach Cumulative effects no greater than moderate

to this concern over the generalised rural setting of monuments, which remains even when the function of the monument remains clearly discernible.

4.72 Glog Round Barrows (MG121) and Crugyn Round Barrows (MG122)

4.73 A group of round barrows at the top of a steeply sloped spur of land in an area of large regular post and wire enclosed fields, and at least five barrows to the north of the Crugyn Bank Dyke partially damaged by modern, agricultural activities. (Simon Atkinson Proof, paragraph 4.3.17 and 21)

4.74 Forming an overall Crugyn group apparently situated to overlook the lower ground to north and west, their setting is primarily defined by the elevated spur of land on which the Glog barrows sit, and extending to the Crugyn Barrows the setting of which has been compromised by tree planting weakening the sense of group, and its intervisibility with other barrows. (XinC Simon Atkinson and Proof, paragraph 4.3.19 and 23)

4.75 Again, the significant effect on its setting predicted for Neuadd-goch would not be added to notably as they would not affect the way in which the barrows may be appreciated in their local context or in relation to other barrows or barrow groups. The Llanbadarn Fynydd turbines at 3-5 km would be seen at a greater distance and without increasing the field of view in which turbines would be seen and allowing clear visual separation, including between Llanbadarn Fynydd and Neuadd-goch (XinC Simon Atkinson and Proof, paragraph 5.2.6 and 7) that alone would create only a low magnitude of change and no significant impact.

No significant impacts from L/F

4.76 Two Tumps Round Barrows (MG048)

4.77 Two grassed mound barrows within an area of upland grazing having the Kerry Ridgeway footpath to the immediate north and a cross-dyke to the west. (Simon Atkinson Proof, paragraph 4.3.29)

4.78 The setting is primarily defined by the elevated area in which the barrows sit, including the sources of the Teme and Mule with visibility from other barrow groups in the area such as at Glog and Crugyn (Simon Atkinson Proof, paragraph 4.3.30), the view west to the Glog being key (XinC Simon Atkinson). The juxtaposition of the Kerry Ridgeway and the Cross Dykes led Atkinson to describe it as an important group of monuments (XE Simon Atkinson). The challenge put to Atkinson was that he was failing to consider key views to the south, also from the Glog and Banc Gorddwr barrows, (XE Simon Atkinson) but it was clear that he had considered all views, and remained of the opinion the views to the west are the defining ones, which will be a matter for your judgement.

Views to the west most important

4.79 Croft accepted a distinction that the view to north and west was in his words "*strong*" with the view to the south described by him as "*also important*" (XE Andrew Croft) a distinction he accepted also informed the difference between immediate and wider setting.

- 4.80 All four schemes would be seen to the south, Neuadd Goch closest, with Llanbadarn Fynydd visually separate beyond this and Bryngyddfa and Garreg Lwyd further to the southeast, this separating effect of topography accepted by Croft (XE Andrew Croft). There would be no visual confusion and no sense of enclosure in views toward the related barrow group at Crugyn. Appreciation of the barrows in the context of the ridge on which they are located would be unchanged, hence no significant adverse individual or cumulative effect on the setting of the monument. (XinC Simon Atkinson and Proof, paragraph 5.2.9)

No individual or cumulative significant impacts

4.81 Banc Gorddwr barrows (RD250 and RD251)

- 4.82 The northern of these is a small single grassed mound within an area of upland grazing situated within the open moorland of Banc Gorddwr suffering a degree of erosion from agricultural activities, it has improved or semi-improved pasture lying to the north and is enclosed by post and wire fencing with a pond and a minor road nearby. (Simon Atkinson Proof, paragraph 4.3.36/37)

- 4.83 The southern is a single barrow located within an area of coarse grass pasture that is not locally prominent with few surrounding features apart from a minor road to the west. Neither is locally prominent with little if any intervisibility remaining between it and the Crugyn and Two Tumps barrow group of which they form part. (Simon Atkinson Proof, paragraph 4.3.38 to 44)

- 4.84 The significant effect on setting predicted for Neuadd-goch Bank would not be meaningfully added to by any of the other schemes, Llanbadarn Fynydd being seen at a greater distance, without increasing the field of view in which turbines would be seen, and located outside the open moorland of Gorddwr historic landscape character area (SSA Powys 42) in which the monuments are located. (Simon Atkinson Proof, paragraph 5.2.12 and 13)

No significant impact from L/F alone

- 4.85 An additional significant cumulative effect is predicted to the southern barrow from Llanbadarn Fynydd, due to some increased sense of enclosure of the monument, however the Llanbadarn Fynydd turbines would not interfere with any sight-lines between this and other barrows or barrow groups in the area. Accordingly, there would not be substantial harm to the significance of the monument and because Llanbadarn Fynydd turbines would not affect the way in which the barrow may be appreciated in the context of its surrounding moorland. (XinC Simon Atkinson and Proof, paragraph 5.2.13)

Cumulative impacts would not amount to substantial

4.86 Castell Tinboeth (RD038)

- 4.87 A defended enclosure, of medieval date, possibly with Iron Age elements set in an elevated and prominent position on the top of a spur of higher ground overlooking the River Ithon, which defines its setting, terminating at a steep escarpment to the river, relevant to its historic function as a defensive site. (Simon Atkinson Proof, paragraph 4.3.57). The fact that it is best appreciated from Moel Dod (Gates LVIA 5 Fig 8b) from, where it will be seen to the south east, with Llanbadarn Fynydd

Setting defined by the Ithon River

turbines away to the left (XinC Simon Atkinson) is an indicator of how the important parts of the setting focus on the river valley, not the windfarm. Even Croft partially accepted this distinction, seeing a "particular relationship" with the river valley whilst also arguing a link to the uplands around it (of which Llanbadarn Fynydd would occupy only one part) that the monument would have been used to manage (XE Andrew Croft).

- 4.88 Turbines of all four schemes would be seen as two groups to the north and northeast of the monument at a distance of 4.4 km and beyond (Appendix 2 VP1). We can note this is a distance that when separating the existing P&L windfarm and the Glog Croft saw as making them "distant and separate" but here in the east he concluded would make the turbines "very visible and prominent". We leave it to your judgement to assess whether this apparent inconsistency of approach is adequately explained by the different topography between monument and turbines in each case, as suggested by Croft. I suggest this brief glimpse of his thinking from the western side again shows a lack of consistent approach between each side. Extent of visual separation
- 4.89 All turbines would be seen as be seen as relatively distant and separate to the spur of higher ground on which the monument is located. Whilst turbines would be visible, they would be seen to be beyond the setting of the monument with clear visual separation and no impact on the appreciation of the asset in its local setting such that and would be a low magnitude of change and no significant individual or cumulative effect on this monument. (XinC Simon Atkinson and Proof, paragraph 5.2.18) No significant impacts
- 4.90 Castell y Blaidd (RD102)**
- 4.91 Most likely to be a small Iron Age hill fort, possibly Medieval, and a locally prominent feature when approached from the north or south along Glyndwr's Way. (Simon Atkinson Proof, paragraph 4.3.46)
- 4.92 Its setting is primarily defined by the hill on which it sits and the immediately surrounding land which it overlooks, extending across the spur of higher ground on the eastern side of Gwenlas Brook. As it does not occupy the highest ground it may not have been intended to be prominent. (Simon Atkinson Proof, paragraph 4.3.47). Castell y Blaidd offers a useful contrast to Castelltinboeth, the latter being very obviously designed around the particular feature of the river valley, the latter less obviously demonstrating such a strong relationship with its surrounding topography (ReEx Simon Atkinson) which counters the suggestion by PCC that Castell y Blaidd was intended to control the landscape around it (XinC Andrew Croft). Setting not clearly linked to surrounding topography
- 4.93 There may be some sense of enclosure of this monument, PCC pointing to the effects on the Gwenlas Valley shown in Atkinson wireframe 17, but even there the turbines are beyond the valley giving visual and functional separation from it (XE Simon Atkinson). Bryngydfa and Garreg Lwyd Wind Farms together would result in a significant cumulative effect, but Llanbadarn Fynydd will not contribute to this and L/F not creating significant impacts

without these schemes there would be no significant adverse effect on the monument, even in the event that all other SSA C schemes were developed. (Simon Atkinson Proof, paragraph 5.2.15).

4.94 Fowler's Arm Chair Stone Circle & Round Cairns, Banc Du (RD039)

4.95 A stone circle (being a much less common type of monument than barrows (InspQ Charles LeQuesne) with broader views in most directions but at 5 km from Llanbadarn Fynydd there will be no significant individual or cumulative effect on the setting of this monument. (Simon Atkinson Proof, paragraph 5.2.25).

4.96 Blaen-Nant Ddu (82989 LBII)

4.97 The fact that significant time was being taken over only one listed building for a development of this size was not disputed as being supportive of this location as being appropriate for development, but we should record PCC comment that this is not unusual for mid Wales (XE Andrew Croft).

4.98 Blaen Nant Ddu, in addition to being a small nineteenth century farmhouse with a range of associated farm buildings (that being the description in the official listing used in the ES) set alongside a bend in the road within a thickly wooded area is also the single asset where PCC contend Llanbadarn Fynydd alone will result in substantial harm to a heritage asset.

Substantial harm alleged by PCC

4.99 Surrounding trees tightly enclose the buildings (a number of which are of modern construction) and greatly restrict any views in or out, also limiting the setting of the farm to its immediate surroundings. They include the smaller irregular fields immediately surrounding the farm buildings, acknowledged (XE Andrew Croft) to be an older landform that would have been the field system existing that the building was constructed to serve. (XinC Simon Atkinson and Proof, paragraph 4.4.4). The modern farm buildings, which PCC accept reduce the asset's sensitivity to change (XE Andrew Croft) are changes within the asset itself, rather than external factors desensitising the landscape to further change, as suggested by the Alliance (XE Simon Atkinson).

Sensitivity of the asset reduced Setting not clearly linked to surrounding

4.100 PCC dismissed the relevance of the visible differences in the historic use of land around the farmhouse, preferring instead to argue for a link to the general rural landscape that is experienced on the approach to the asset (XinC Andrew Croft) i.e. as this is a farmhouse, so all the farmland around it is linked to it (XE Andrew Croft). This remains a difference between us, and even Croft accepted there had to be some limit to the amount of farmland in the setting, so opted for the valley sides and land up to the adjacent roads incorporating some turbines, which ultimately calls for a an exercise of your judgement to resolve.

Dispute over extent of setting

4.101 Whilst the Llanbadarn Fynydd turbines would theoretically be seen as group to the south and west of the building (Appendix 2 VP29), in reality the mature trees and farm buildings are likely to filter views and

turbines will also be located on higher ground, in the larger fields of the later 19th and 20thC enclosures, away from the area of small irregular fields around the farm. Llanbadarn Fynydd is sufficiently separate to avoid visual confusion with the asset and allow it to continue to relate to the smaller fields in which it is located (XinC Simon Atkinson) or, put another way, the tall modern structures that from the road above the farm will be seen together with it clearly do not relate to it and will be seen as separate features (XE Simon Atkinson). Questions of prominence of turbines from such vantage points are rightly more ones of landscape impact (InspQ Simon Atkinson). Turbines of other wind farms within the eastern part of SSA C will not be visible and so there would be no significant cumulative effect on the setting of this building. (Simon Atkinson Proof, paragraph 5.2.27)

- 4.102 The argument that substantial harm would be caused to this listed building by Llanbadarn Fynydd turbines alone was maintained despite an acceptance that changes there would be in the setting could only ever have a partial effect on the heritage significance of the asset, and despite the Airfield Farm Inspector's approach to the meaning of substantial harm being something akin to total loss of significance (InspQ Andrew Croft). PCC's substantial harm argument
- 4.103 Whilst other listed buildings were mentioned in the proofs, Blaen Nant Ddu sets the high water mark of whatever impacts there may be, so is an appropriate base on which to undertake consideration of the duty under s66, which stands independent of the substantial/non-substantial considerations. On the evidence before you of the level of adverse impact it is open to you to conclude that even having regard to the desirability of preserving the setting of this and other listed buildings, permission can be granted. Indeed no-one has advanced a case that you cannot do so or that s66 directs you to recommend refusal. (InspQ Andrew Croft) The s66 test
- 4.104 PCC's opposition to cumulative effects of SSA C east schemes**
- 4.105 PCC raise no cultural heritage objection to the impacts of Llanbadarn Fynydd alone only by reference to cumulative impacts with other schemes. Support for this stance was sought to be drawn from there being no SEI on cumulative impacts before the Council when it made its determination in March 2012 (ReEx Andrew Croft). This argument is not assisted by CPAT and Cadw having raised no similar objection having seen that cumulative material. PCC opposition only to cumulative impacts
- 4.106 In fact, the only difference between Croft and the PCC Committee resolution that offered no heritage objection on Llanbadarn Fynydd is his finding on Blaen Nant Ddu, something that would have been open to them, but on which no comment was made, or even suggested as an issue.
- 4.107 This casts even greater attention on the substance of the Council's argument that allowing Llanbadarn Fynydd would desensitise the historic landscape to a point that would, in fact they say now only "could" (XE Andrew Croft) make it impossible to refuse subsequent PCC's desensitisation argument

applications that in totality would create substantial harm to the range of assets claimed.

- 4.108 The extent of those cumulative impacts have been addressed already, but even irrespective of them it is apparent, in a way that PCC have not sought, or indeed are not able to refute (XE Andrew Croft), that even on its own analysis, there is a level of harm to monuments beyond the less than substantial harm PCC predict to be caused by Llanbadarn Fynydd alone, which the planning system is quite capable of recognising and, if appropriate, preventing.
- 4.109 Any consideration of cumulative impacts has to start from the premise that mere consideration of combined impacts of as yet un-consented projects carries with it no presumption that such future consents will be granted. Every project has to be looked at on its own merits at the point a decision is made upon it. On top of that well accepted point of principle, even on the Council's analysis of impacts there is a divide at some point beyond the granting of permission for Llanbadarn Fynydd where there will be a move from less than substantial to substantial impacts which, if correct, would offer the decision maker a robust basis against which to make a separate decision on the merits of those later schemes without those future permissions inevitably being granted (XinC Simon Atkinson).
- 4.110 That is assuming PCC are right with its conclusions of substantial harm arising from all the eastern schemes together, which is not the finding of Atkinson, who sees significant cumulative effect on the settings of only two scheduled monuments Banc Gorddwr barrow (RD251) and Three Round Barrows NW of Fiddler's Green Farm (RD084) but in each case amounting to less than substantial harm and no significant cumulative effects on the settings of listed buildings (VATT/HISENV/SOCG/SSA-C and Simon Atkinson Proof, paragraph 6.2.1/5).
- 4.111 It follows that there are impacts but of an order that requires no consideration of exceptional circumstances, let alone wholly exceptional circumstances to be present, just the weighing up of such impacts as there are in the overall planning balance, in a similar way to how that will also be done in respect of the developments in the west of the SSA, plus the separate application of the s66 test in respect of the listed buildings, already mentioned.

4.112 Cultural Heritage and Grid

4.113 Limitations on what can be achieved by the Session 4 grid evidence apply just as much to cultural heritage, in terms of the purpose of considering impacts (given that infrastructure is not before this inquiry) and the link between any individual project and grid options. Applying the tests for impacts on heritage assets that have been done for the windfarms is impossible for grid due to insufficient information.

4.114 Notable points from the written evidence include :

- (a) Between SSAs B and C there is no potential for significant cumulative effects. (Simon Atkinson Statement, paragraph 1.3.5)
- (b) Cumulative effects arising between Llanbadarn Fynydd and the 132kV Llandinam-Welshpool line are restricted to the section from the A483, across Old Neuadd Bank to the B4355 crossing at Black Gate. (Simon Atkinson Statement, paragraph 2.2.3)
- (c) PCC accepts the need for the 132kV Welshpool connection, with the principal contention on historic environment being whether, in the area of Kerry Hills, undergrounding is required to avoid 'substantial harm' to the cross-dyke comprising Crugyn Bank Dyke (MG062) and Dyke Near Two Tumps (MG063). (Simon Atkinson Statement, paragraph 3.1.3)
- (d) Where the OHL continues north from Black Gate, topography ensures there will be limited visibility of turbines and the distance between designated assets and turbines is too great to give rise to potential 'sequential' effects as an observer moves between monuments. (Simon Atkinson Statement, paragraph 3.1.9)
- (e) The only significant effect of the northern spur would be an incremental effect to the Round Barrow S of Ciderhouse Wood (MG109) which is of doubtful archaeological origin according to CPAT. (Simon Atkinson Statement, paragraph 3.2.5/6)
- (f) Separation distances to the grid route mean Llanbadarn Fynydd with CC1 and CC2 would not be likely incrementally to have a significant effect on Bryn Cwmyrhiwdre Round Barrow (MG280) or Fowler's Arm Chair (RD039). (Simon Atkinson Statement, paragraph 3.3.4)
- (g) In terms of the entire CC1-CC4 route there are no scheduled monuments within the defined 100m wide corridor with those within 2 km being prehistoric burial and ritual monuments typical for a routing corridor of this size in mid-Wales. It is expected that there will be some changes in their settings. There are few listed buildings higher than Grade II within 2 km of the route corridor as well as the Clywedog Valley and Caersws Basin Registered Historic Landscapes. (Simon Atkinson Statement, paragraph 3.3.6)
- (h) As the selection of route options adhered to the Holford Rules, where possible following the landscape grain, being contained by topography, using woodland planting and not physically disturbing any designated heritage assets, it should avoid unacceptable effects. (Simon Atkinson Statement, paragraph 3.3.7)

4.115 Cultural heritage conclusions

4.116 Notwithstanding the inevitability of some visibility between monuments and turbines the key factors in the acceptability of this site from a heritage perspective include that:

- (a) there are no high value assets or pre-medieval visual remains in the site,
- (b) turbines are 3km from the main group of Glog/Two Tumps barrows,
- (c) there is clear visual separation and hence no visual confusion between any assets and turbines,
- (d) the nearest registered historic landscape is at least 7km away,
- (e) modern site features are accommodating to the siting of turbines,
- (f) monuments, settlement and defensive sites within 5km are typical for the Radnorshire area
- (g) to the extent impacts from grid can be assessed there seems little likelihood of unacceptable effects
- (h) the desensitisation argument is equally ineffective in this context as it is in respect of cumulative landscape issues.

In which case it is not surprising that neither CPAT nor Cadw objected to this development (XinC Simon Atkinson and proof paragraph 6.1.1 to 6.1.5) as it should rightly be considered unobjectionable.

5 TRANSPORT

5.1 Local/Site Access Issues

5.2 PCC objections have been resolved by a Statement of Common Ground between Vattenfall, PCC and Welsh Government Transport (WGT) (VATT/TRANS/SOCG/SSA-C) confirming no significant local transport effects from access off the A483, C1057 and U1298, subject to mitigation conditions (Peter Mansell Statement, session 1, paragraph 1.2) and Vattenfall having agreed to produce a Travel Plan to maximise the use of sustainable travel by construction workers associated with the development (Peter Mansell SOCG, session 1, paragraph 4.1.1).

5.3 Alliance (Durgan) concerns have been answered in that:

- (a) the duration of AIL deliveries depends on the convoy size and actual concrete imports may be less than the assumed worst case of all requirement being met by imported concrete (Peter Mansell Statement, session 1, paragraph 2.2 and 2.3);
- (b) the operation of the intervisible passing places on the C1057 will be appropriately managed by the contractor (Peter Mansell Statement, session 1, paragraph 2.7); and

- (c) the impact of the proposed site access on the residents of Hafod Fach, who are interested parties, has not been raised by them (Peter Mansell Statement, session 1, paragraph 2.17).
- 5.4 We do not accede to the request that an indemnity should be offered to owners of properties adjacent to highways from the effects of HGV and AIL movements as these roads are or will be suitable for such vehicles. (XE Peter Mansell Session 1)
- 5.5 Strategic Transport Issues**
- 5.6 Vattenfall has been actively involved in developing the sTMP for wind farms in SSAs B and C to minimise the impact of AILs on public highway users. (Peter Mansell Proof, paragraph 3.1)
- 5.7 In response to the suggestion of sharing an AIL route from a South Wales port to avoid additional works, Vattenfall remains fully committed to the sTMP northern route. If a southern route is approved, it would offer an alternative, longer route and flexibility if required for unforeseen reasons. (Peter Mansell Proof, paragraph 3.3) The routes can be co-ordinated to limit interference with each other and surrounding traffic (Session 4 Transport Hearing). Northern route preferred
- 5.8 Sections 1 to 5 of the sTMP were finalised in August 2012 and agreed by WG. (Peter Mansell Proof, paragraph 3.6). Most questions raised during the hearing session apply to any scheme using the northern route. They established that there could be between three to five convoy days per week, convoys would not move in circumstances considered unsafe by the escort police, including inadequate light. Police would not be diverted from front line policing duties or work outside normal expectations and the sTMP has taken account of all s36 and TCPA applications (Session 4 Transport Hearing). STMP WG approved
- 5.9 Variability in the starting dates of schemes, due to grid connection availability or otherwise, has been assessed and the sTMP and Transport Tool shown to be capable of managing AILs within existing levels of predicted impacts or less (Session 4 Transport Hearing).
- 5.10 Questions have been raised over how and why communities can and should absorb impacts from AIL movements. The sTMP has emerged as the shortest, most convenient means of facilitating the developments and the public will be able to anticipate and react to predictable and well publicised movements. The community representatives have not indicated that a lower level of impact from fewer schemes would be acceptable (Session 4 Transport Hearing). Out of fairness to the communities in knowing what to expect and certainty for developers, the sTMP should be specifically referred to in a planning condition as the basis of future traffic management details to be agreed (Conditions Session).
- 5.11 Shropshire Council Planning Department's letter of objection has not raised any new issues and is at odds with its highways department Shropshire Council

raising no objection during the sTMP consultation stage (Mansell Response to SC 12th March 2014 and Session 4 Transport Hearing).

- 5.12 PCC's objection relating to the significant upgrade of the C2058, the Vastre, is of historic interest only which no longer forms part of sTMP Section 6 or the application. (Peter Mansell Proof, paragraph 3.9 and Session 4 Transport Hearing) The Vastre
- 5.13 Use of Heol Treowen by AILs would be supported by PCC only as an emergency measure at best hence the consideration of the haul road between Heol Ashley in the Mochdre Industrial Estate and the A483, south of Newtown as the basis of the revised sTMP section 6. (Peter Mansell Proof, paragraph 3.14) Heol Treowen
- 5.14 The Mochdre Industrial Estate route was submitted as SEI in February 2014 and demonstrates an acceptable route for AILs between Newtown and SSA C, agreed by WG. (Peter Mansell Proof, paragraph 3.17, Session 4 Transport Hearing, WG agreed version of sTMP 6 dated 12th March 2014) Mochdre Industrial Estate
- 5.15 Whilst the Newtown By-Pass could be open for traffic by 2018, SSA C developers are not currently able to rely on it as an available route (Peter Mansell Proof, paragraph 3.7/8). If it does become available, it is likely to be in everyone's interest for it to be used by AIL convoys in preference to the Mochdre or Heol Treowen routes (Peter Mansell Session 4 Hearing), in which case a revised TMP would be developed with WG. Most of the works to the A483 south of Newtown will still be required. (Peter Mansell Proof, paragraph 3.19). The by-pass team are aware of the sTMP, which is not seen as any barrier to delivery of the by-pass (Peter Mansell Session 4 Hearing). Newtown ByPass
- 5.16 There is no evidence of any impacts of concern to the occupants of the Mochdre Industrial Estate from the use of this route, either from the pre 7am, 4 minute transit or the time needed to hold traffic to allow the convoy to pass, or in respect of allowing emergency vehicles to pass the convoy. (Peter Mansell Session 4 Hearing).
- 5.17 Similarly transit times through Newtown will avoid heavy traffic conditions and the 4 month delivery programme gives ample opportunity to work outside the dark winter months (Peter Mansell Session 4 Hearing).
- 5.18 Whilst the construction works for sTMP Section 6 require the use of land outside of what is understood to be the highway boundary, it adjoins the highway and is predominately agricultural. Apart from the Mochdre link requiring a culvert and significant embankment, the works involve localised widening of bends to provide overrun or oversail areas. (Peter Mansell Proof, paragraph 3.22) Whilst discussions continue with landowners, there appears to be no insurmountable problems with land control, including from WG (Peter Mansell Proof, paragraph 3.24 and Session 4 Hearing) and no significant environmental effects are anticipated along the route. (Peter Mansell Proof, paragraph 3.27)

- 5.19 The worst potential cumulative impacts of non-AIL construction traffic are a slight increase (37.4%) in HGV traffic in October 2018 on Link 25 and a moderate increase (62.0%) in April 2019. These are acceptable as increases to low starting points for traffic on this part of the trunk road, which has only a quarter of expected trunk road traffic flow, of which HGVs comprise 1 in 17 vehicles compared to 1 in 8 north of Newtown. The greatest impact represents only one additional HGV every 12 minutes. (Peter Mansell Proof, paragraph 4.7 to 4.18 and Session 4 Transport Hearing)
- 5.20 This is the worst case as if stone is imported from quarries east of Llandrindod Wells and concrete from Newtown, traffic impacts on Dolfor would be less. (Peter Mansell Proof, paragraph 4.13 and Session 4 Transport Hearing). The majority of predicted impacts from temporary construction traffic are within the 30% increase threshold suggested by IEA Guidelines for noticeable environmental effects and where this is approached or occasionally passed, impacts are based on low existing traffic flow figures (Session 4 Transport Hearing).
- 5.21 Predicted traffic impacts are also a reason why restoration of the site should be limited to 1m below ground level, leaving turbine bases in situ, as this is the basis upon which environmental assessment has been taken. In this case, of traffic movements not being required for what would be extensive demolition works (Conditions Session).
- 5.22 No evidence of highway safety concerns have been advanced relating to the sTMP to challenge its acceptability. It is reasonable to expect that drivers will obey the usual rules of the road if they do encounter HGVs or AILs (Session 4 Transport Hearing).
- 5.23 Permanent widening of the A483 south of Newtown is a benefit. The proposed passing places, agreed with WG, will not form part of the permanent highway. These improvements will not cause delays over that associated with ongoing maintenance works, regulated by existing design guides and traffic signs standards, and will only involve traffic control when off-site works are tied into the main carriageway (Peter Mansell Session 4 Hearing).
- 5.24 HGV routes identified in the Construction Traffic Management Plan (CTMP) can be policed by requirements for route signing and lorry identification to allow the public to report any breaches (Session 4 Transport Hearing).
- 5.25 AIL traffic was originally the cause of the delay in determination of these applications. Through hard work and the application of all parties, these concerns have been overcome and reliable, deliverable solutions achieved.

6 NOISE

- 6.1 A Statement of Common Ground with PCC includes agreement on single and cumulative issues relating to construction, baseline data, noise

predictions and limits in conditions. (Darran Humpheson Proof, paragraph 2.2)

- 6.2 ETSU-R-97 (CPL-NOI-001) remains the principal guidance document on the assessment and rating of noise from wind turbines (Darran Humpheson Proof, paragraph 4.1) and there is no adduced evidence of any intended revisions (XE Matthew Hayes). ETSU addresses internal noise levels and applies to the proposed turbine size (XinC Darran Humpheson). Alliance concerns raised over increases in noise over low background levels within ETSU levels were acknowledged to include instances where turbines would be audible (XE Darran Humpheson) but inaudibility of turbines is not the basis of ETSU. Use of ETSU
- 6.3 The IoA Good Practice Guide (May 2013), endorsed by Welsh Assembly, (Darran Humpheson XinC and proof, paragraph 4.3) provides reassurance that the noise predictions can be relied upon. Use of IoA guidance
- 6.4 The February 2013 SEI (AD/VATT/018) used the draft recommendations of the IoA's 2012 consultation document (Darran Humpheson Proof, paragraph 4.5).

6.5 Noise limits

- 6.6 A single set of noise limits have been agreed for non-stakeholder dwellings, regardless of time of day. Different fixed limits were used, either 38 dB or 40 dB $L_{A90(10min)}$ depending upon the measured or assumed prevailing noise environment at each dwelling. (Darran Humpheson Proof, paragraph 4.11)
- 6.7 The lowest measured background data was used to derive the lowest set of noise limits at each location (Darran Humpheson Proof, paragraph 4.12) and monitoring locations were agreed with the independent PCC EHO (InspQ Darran Humpheson), including moving the Lower Foel equipment to a location reflecting actual amenity areas (XE Darran Humpheson). Limits at specific properties
- 6.8 Mr Halsey's request for raw noise data for his property (XE Darran Humpheson) we were not aware of as an unmet request or outstanding issue but in any event that information was supplied after Session 1.
- 6.9 The single table of limits preserves future cumulative noise headroom capacity within SSA C, offers enhanced amenity for dwellings in lower background noise level areas (Darran Humpheson Proof, paragraph 4.13) and is lower than those proposed in the 2013 SEI (AD/VATT/018). The smallest headroom figure predicted is 0.9dB at Lower Cochrane, with the average being approximately 7dB, and at Mr Halsey's property a 5dB minimum (XinC and InspQ Darran Humpheson). Operational noise at Lower Foel Farmhouse will be within the 38dB fixed limit and not significant, even when considered cumulatively with Neuadd Goch Bank. (Darran Humpheson Proof, paragraph 5.37). Mrs Siddel's sincerity is not doubted in presenting her experience in South Ayrshire, but no meaningful comparisons can be made with the SSA C assessments.

- 6.10 Lower Cochrane is the only property that cumulatively might experience noise from a windfarm in each direction presenting similar noise levels, but is mitigated by high background noise levels from the A483 (InspQ Darran Humpheson).
- 6.11 Miss Flanders raised concerns over noise 'echo' around the hills. The IoA Guide (CPL-NOI-005, paragraph 4.3.9) allows for situations where receivers could be affected by multiple reflection paths. Llanbadarn Fynydd's topography does not traverse significant valleys even when considered cumulatively with Garreg Lwyd (Darran Humpheson Proof, paragraph 5.41). Her concerns over use of a proxy background noise level from Neuadd Goch were answered as Fiddlers Green is sufficiently distant and with a minimum headroom of 3dB, so is not "controlling" the noise levels (XinC and InspQ Darran Humpheson).

6.12 Alliance issues

- 6.13 The Alliance suggested, without reference to any guidance, that daytime noise levels should be 35dB to provide better amenity for residents. However 38dB (which applies to schemes that are consented) is a reduction from ETSU, is agreed with PCC and is not predicted to occur, bar the few instances of 40dB fixed limits, unless the alternative background plus 5dB standard is applied in noisier conditions (XE Darran Humpheson).
- 6.14 Regarding the concern that noise affects those who are enjoying the countryside, turbines will generate audible noise no greater than 50 dB $L_{A90(10min)}$, even on rights of way. (Darran Humpheson Proof, paragraph 5.3)
- 6.15 The Alliance sought confirmation that noise assessments adopted the correct operating modes for candidate turbines. The 2013 SEI (Section 4.6) considered cumulative noise using identified candidate turbines with manufacturer's safety margins applied to the highest sound power level for a worse case assessment. (Darran Humpheson Proof, paragraphs 5.6 and 5.7)
- 6.16 The Vestas V90-3.0 MW turbine in noise Mode 3 demonstrates Llanbadarn Fynydd's ability to operate within the noise limits of the 2007 ES (AD/VATT/003-005) at the most noise sensitive dwellings of Garn, Cwm-mawr and Lower Cochran (Darran Humpheson Proof, paragraph 5.14) although other turbines could be used (InspQ Darran Humpheson). The predictions show the proposed condition can be met but does not require the candidate turbine to be installed or operated in Mode 3 (XE Darran Humpheson). Post-consent noise assessment will result in less curtailment than a 'blanket' non-standard operating mode, which may only be necessary under certain wind speeds and directions. (Darran Humpheson Proof, paragraph 5.13)
- 6.17 Latest manufacturer's sound power level data show Mode 3 is only needed between 6 to 11 m/s wind speeds. Outside this, other operating modes can be used without any impact on the calculated turbine noise levels at dwellings. (Darran Humpheson Proof, paragraph 5.15)

Relevance
of noise
curtailment
modes

- 6.18 All noise modes achieve the rated power of 3MW at wind speeds from 16 m/s to 20 m/s. (Darran Humpheson Proof, paragraph 5.9). In assessing the likely power loss impact, the mitigation strategy shows that compared to all turbines operating in Mode 0, the yield calculation is 0.2% lower for Mode 3 used only when needed, compared to an 11.7% reduction for blanket Mode 3 across all turbines, due to the affected properties of Cwm-mawr and Lower Cochran not falling within the prevailing wind direction from the south west. (Darran Humpheson Proof, paragraph 5.19)
- 6.19 Vattenfall has said it will demonstrate compliance with the noise condition for various wind conditions (Darran Humpheson Proof, paragraph 5.20 and .23) but this is no different to what any developer of a windfarm will do in its commissioning period and there is no need for a separate condition requiring additional approvals of turbine type or noise profile, beyond that which has already been done (Brett Kibble Question, Conditions Session). Continuous noise monitoring through operation was also requested but is not agreed (XE Darran Humpheson) and no site-specific factors were advanced to justify it.

6.20 Amplitude Modulation

- 6.21 The evidence of Mr Weller (who conceded he was not an expert available for full cross examination) addressed all sites, not any particular site. A large flat area, like East Anglia, was suggested for a link between high wind shear and AM (XE Matthew Hayes). This is not a description applied to Area C sites.
- 6.22 Examples of recorded AM played were not reliable control samples, merely illustrative. The issue is whether there should be a precautionary condition controlling AM (Kimblin XE Weller) to which we say no, as Inspectors have not applied Denbrook style conditions due to enforceability and precision concerns, (XinC Darran Humpheson) such as the Batsworthy Cross decision (VATT/INS/06) and Brechfa NSIP examination (InspQ Matthew Hayes).
- 6.23 AM was reconsidered in Session 4, in terms of new information and the potential use of a condition to control it, should it occur. Whilst Mr Humpheson did not attend, Vattenfall participated in the hearing session and as anticipated, no site specific issues arose in terms of the drafting of a condition.
- 6.24 Prior to session 4 in December 2013, new information was published by RenewableUK (ReUK) relating to AM wind farm noise. (Darran Humpheson Session 4 Statement, paragraph 1.3)
- 6.25 This points to local stall as the more common cause of 'other' AM (OAM) and adverse wind shear conditions as the most likely non-uniform in-flow condition that can occur at a wind farm. It indicates that local stall can be reduced by operating blades at a lower angle of attack or using aerofoils with a higher stall angle. (Darran Humpheson Session 4 Statement, paragraphs 3.4 and 4.5)

- 6.26 An investigation into wind shear at Llanbadarn Fynydd in accordance with IOA Good Practice Guide using 12 month on site wind speed data shows the site compares favourably with IOA data, with wind shear exponents towards the lower end of the range for night-time and whole-day annual averages. (Darran Humpheson Session 4 Statement, paragraphs 4.2) On site wind shear data
- 6.27 Wind shear induced AM is therefore unlikely to be an issue at Llanbadarn Fynydd. (Darran Humpheson Session 4 Statement, paragraph 5.1)
- 6.28 The University of Salford study points to limited occurrence of OAM at operational wind farms. The ReUK research indicates a possibility that OAM could occur at planned wind farms (Darran Humpheson Session 4 Statement, paragraph 5.2) but certainly not at all wind farms in all conditions (Session 4 AM Hearing).
- 6.29 The ReUK research offers no reliable method for predicting the occurrence of OAM so it is not possible to say that OAM will occur at Llanbadarn Fynydd, or whether it will be noticeable to neighbouring residents. (Darran Humpheson Session 4 Statement, paragraph 5.4)
- 6.30 OAM comes from the turbine itself, rather than interaction between turbines. Responses to OAM will be directed to turbine operation, potentially by manufacturers, such as software fixes and changes to blade rotation in individual conditions. What is less of an option is switching off a turbine should OAM occur as such instances are not predictable (Session 4 AM Hearing).
- 6.31 Until such time as the IoA validates the ReUK condition, which it has not done, current good practice is not to assign an AM condition (Darran Humpheson Session 4 Statement, paragraph 6.3 and Session 4 AM Hearing). Use of an AM condition
- 6.32 Our primary submission remains that an AM condition is not warranted, due to the inadequacies of operation of conditions and the low likelihood of OAM at the site (Session 4 AM Hearing).
- 6.33 We make these comments aware of the Inspector's position that the risk of AM is such that conditions should be applied to all consented inquiry schemes (Session 4 AM Hearing). We have not replicated the evidence of others regarding the necessity of conditions, but repeat that whatever is decided will apply across all consented sites.
- 6.34 Regarding the condition wording, we adopt the concerns directed at the Denbrook formulation that requires subjective judgement to differentiate natural variation in noise level and OAM (Session 4 AM Hearing) and instead have suggested a preferred wording if it is resolved such a condition should be applied.

6.35 Health effects

- 6.36 PCC has not called evidence on any matters related to health effects. (Darran Humpheson Proof, paragraph 5.25)
- 6.37 With regards sleep disturbance, ETSU night time noise limits (CPL-NOI-005) reflect WHO guideline levels and should not cause health concerns. (Darran Humpheson Proof, paragraph 5.27) Sleep disturbance
- 6.38 For non-stakeholder locations, the SoCG noise limits (VATT/NOISE/SOCG/SSA-C) of either 38dB or 40dB provide additional protection against sleep disturbance. (Darran Humpheson Proof, paragraph 5.28)
- 6.39 Recent appeal decisions such as Spaldington Airfield (CPL-INS-011 - APP/E2001/A/10/2137617) support this (Darran Humpheson XinC and Proof, paragraph 5.30) and EN3 (page 70) recites why there is no evidence that ground transmitted vibration from turbines is harmful. (XinC Matthew Cand)
- 6.40 In Session 4 Dr Myhill presented generic evidence suggesting links between turbines and health effects. No party cross examined Dr Myhill, but it is clear her arguments are not accepted, from written evidence and the unanimity in appeal decisions that fears over health effects are not matters afforded substantial weight in decision making. No arguments related to particular schemes or cumulative effects with other developments. Dr Myhill concluded that an AM condition should be attached to any consent granted, not that the developments should be refused because of adverse health effects.

6.41 Construction noise

- 6.42 Construction noise and operational noise are considered acceptable by PCC subject to appropriate planning conditions. (Darran Humpheson Proof, paragraph 2.1)
- 6.43 Mr Halsey's and Miss Flanders' concerns over construction noise relate to temporary impacts. With the closest turbines nearly 900m away, construction noise will not be audible all the time, at levels of 54 dB(A) during stone import and 45 dB(A) during turbine erection. There will be increases over background noise from vehicles on tracks, but these are low in comparison to other construction projects and normal traffic noise and even at 3dB, the doubling of traffic volumes is at the threshold of audibility (Darran Humpheson Proof, paragraph 5.34 and XE Darran Humpheson).
- 6.44 Conditions (VATT/NOISE/SOCG/SSA-C) will limit construction hours and the construction method statement will agree methods of noise and vibration control (Darran Humpheson Proof, paragraph 5.35) and noise levels from construction, which could reflect the modal noise limits of BS5228 continuously monitored at the site boundary (XE Darran Humpheson). Miss Flanders stated she was happy in respect of

emergency works if she received prior notification from PCC (XE Darran Humpheson).

6.45 Shadow flicker

6.46 The assessment of predicted shadow flicker shows that only T17 (866m) could be a concern, 840m being the 10x rotor diameter limit beyond which the effect is unlikely to occur. Even for properties with predicted effects, the relation of turbines to specific windows can be fixed and a strategy for specific turbine automatic shutdown designed to avoid effects (XinC Darran Humpheson).

7 HYDROLOGY

7.1 The hydrology Statement of Common Ground with PCC records agreement of no significant hydrological/hydrogeological effects from the development alone, subject to mitigation secured by condition. Residents can be consulted on the mitigation which may address localised variations in conditions like isolated areas of acidified water and provide for appropriate water monitoring levels (Shaun Salmon XE and Submission, paragraph 71.1.3).

7.2 The SOCG confirms that in-combination effects with the other SSA C wind farms are unlikely to be significant for local watercourses. Separate information concluding the same has been supplied to NRW in respect of the River Wye catchment to inform the Appropriate Assessment that will be undertaken on this issue (Shaun Salmon Submission, paragraph 1.1.4). Appropriate Assessment will be made by the decision maker and on the basis of cumulative data submitted on all of the Area C schemes. NRW has confirmed that Llanbadarn Fynydd on its own would make no significant impact to the SAC and it is believed that the Appropriate Assessment will conclude that no significant impacts are predicted from any in combination effects for Area C Schemes. (David Bell Planning Balance Statement para 4.8.3)

River Wye
SAC data

7.3 Concerns raised by two local residents, Mr Halsey and Miss Flanders, that private water supplies (PWSs) were not assessed partly derives from the lack of registration of water sources. However, between PCC EHO records, canvassing of residents, and AMEC interpretation of the water 'baseline' environment, assessment has been made of all sources before the inquiry (XinC Shaun Salmon).

Private
water
supplies

7.4 A risk assessment of the PWS at Lower Foel has concluded:

Lower Foel

- (a) The spring catchment does not incorporate areas of proposed construction working;
- (b) The physical separation of the site from the supply (approximately 850m) ensures over-ground run-off would infiltrate into the site prior to reaching the supply;

- (c) The small watercourse running off the application site northwards and alongside Lower Foel, hydrologically unrelated to the PWS, would intercept any over-ground flow; and
 - (d) The risk to the supply should be classified as 'none', following the methodology in the 2008 PWS Assessment (ADD/VATT/010) and ES and SEI mitigation measures (Shaun Salmon Submission, paragraph 3.1.17.4).
- 7.5 Mr Halsey's concerns over flood risk can be addressed through attenuation measures, and, post-construction, by dressing back construction areas with soil, secured through a detailed site drainage management plan to be produced prior to commencement of development (Shaun Salmon Submission, paragraph 3.1.2). The risk assessment relied upon the ES construction data, such as the size of foundations, but the proximity to the catchment is the determining factor for effects (ReEx Shaun Salmon).
- 7.6 The Applicant ought not reasonably be expected to offer "hold harmless" agreements to landowners in respect of impacts from developments. Mr Halsey suggested a form of guarantee to back the predictions of no significant hydrological impacts. This would place a burden of drafting and agreeing terms that is not justified, nor usual practice (XinC Shaun Salmon).
- 7.7 If a PWS was affected by this development, there are practical options for laying replacement supplies (XinC Shaun Salmon), but the evidence is that these will not be needed.
- 7.8 In respect of Miss Flanders' concerns over Fiddlers Green, we have addressed the potential for interference with the spring-fed Fiddlers Green Pond to the extent it is the source or contributor to the PWS (XinC Shaun Salmon). Other elements feature, including a feeder tank and a borehole (XinC Shaun Salmon). The catchment for these features has been defined (Shaun Salmon Figure 9.1), together with their proximity to Fiddlers Green and its neighbour Lower Fiddlers Green, despite initial misnaming of properties in the ES. (XE Shaun Salmon).
- 7.9 Miss Flanders emphasised that the pond plays no part in her PWS, indicating the source was a spring and borehole further down the slope, in which case both have been assessed and their catchments do not extend to the C1057 (XE Shaun Salmon). Miss Flanders suggested there was too much conjecture, but no argument was made that the assessment was incorrect or the conclusions of 'no impact' wrong. Developers rely on landowner co-operation to investigate PWSs and whatever difficulties there have been with obtaining information, it can safely be concluded there is no material risk of harm (ReEx Shaun Salmon).
- 7.10 Fiddlers Green is separated from the turbines by the C1057, the Cwm Nant-Ddu valley and higher topography, so construction and operation run-off cannot enter the PWS. The risk from runoff is therefore assessed

Fiddler's
Green

as 'none' (Shaun Salmon Submission, paragraph 4.1.1) and no pathway for radon gas has been identified (XinC and XE Shaun Salmon).

- 7.11 The additional passing places for HGV construction traffic along the C1057 would be on the opposite side of Fiddlers Green Pond, so the potential for run-off would be mitigated by the passing place constructed with a cross-slope to direct surface water into the adjoining field. The adjoining verge would act as a potential bund to contain any run-off, and additional temporary screening used to reduce dust deposition (Shaun Salmon Submission, paragraph 4.1.2 and 4.1.3).
- 7.12 No hydrological concerns remain that should be of concern in the making of this decision.

8 PUBLIC OPINION

- 8.1 The Llanbadarn Fynydd Scheme was considered twice in evening sessions arranged for the public, specifically for Area C in October 2013 and then as part of the cumulative issues session in April 2014. There were, of course many public contributions during inquiry sessions in addition to the input of the Alliance.
- 8.2 Where specific issues were raised in respect of Llanbadarn Fynydd by the public they have been dealt with elsewhere in this closing. Similarly, where generic items were raised by the Alliance or other witnesses applicable to all projects, such as concern over health effects, these too have been dealt with elsewhere.
- 8.3 That leaves a range of matters that were raised in public meetings but without expert evidence and applicable to all sites, such as effects on house prices, health and safety considerations of turbine operation, impacts on equestrian use. This list is not intended to be exhaustive but to indicate that where such matters have been raised and have been addressed for one scheme, those answers apply equally to all schemes.
- 8.4 Beyond that there is little we can offer by commenting on the content of the public sessions, other than to respect the sincerity, depth of feeling and unflinching politeness with which those comments were made.
- 8.5 Whilst there were voices in support as well as opposition nobody could describe the sum total of those meetings as any vote for these developments but you cannot help but notice that any agenda to portray Llanbadarn Fynydd as the "worst" scheme for any reason was not reflected in those meetings. If that was the prevailing view locally or generally you can be sure you would have heard it, but no such message has emerged from the public.

9 SOCIO-ECONOMIC IMPACTS

- 9.1 PCC acknowledge that given the siting of the proposals within SSAs and nature of nationally important infrastructure projects, there is insufficient evidence to support socio-economic impacts giving rise to a refusal of any of the projects. (David Bell Proof, paragraph 1.4.10)

- 9.2 NPS EN-1 states (para 2.1.2) that energy is vital to the economic prosperity and social well-being of the UK and that whilst EIA should consider relevant socio-economic impacts, decision makers may give limited weight to assertions not supported by evidence. (David Bell Proof, paragraph 2.2.8)
- 9.3 Where socio economic arguments have been raised in opposition by the Alliance, they are not argued in relation to individual schemes but to the cumulative effect of this development in Mid-Wales. The evidence that has been submitted in response addresses multiple schemes and supporting grid connections. The Moffatt Report is an example of research looking at impacts of multiple windfarm development and supporting grid (XE and ReEx David Bell Session 4) accepted as such by the Alliance (XE Jill Kibble Session 4).
- 9.4 The Alliance argue that a tipping point will be reached with the cumulative impacts of the developments but accept this is a statement of opinion only (XE Jill Kibble Session 4).
- 9.5 DECC's UK Renewable Energy Roadmap Update of November 2013 states that the UK enjoys strong levels of investment in renewables which supports a wide range of jobs and new companies. (David Bell Proof, paragraph 2.2.2 and XinC David Bell Session 4) Economic benefits of development
- 9.6 The National Infrastructure Plan 2013 supports this type of investment in electricity generation, transmission and distribution infrastructure until 2020 that could support up to 250,000 jobs in the energy sector. (David Bell Proof, paragraph 2.2.14/16)
- 9.7 The May 2012 ReUK/DECC Biggar Economics research indicates that 98% of development expenditure, 45% of construction expenditure and 90% of operation of maintenance expenditure currently occurs in the UK with the wind sector contributing £198m in tax annually to the UK Exchequer including £59m in domestic rates, a significant contributor to the national economy. (David Bell Proof, paragraph 3.2.4/10)
- 9.8 Welsh Government's 'A Low Carbon Transition' March 2012 aims to ensure that Wales is in the best position to create jobs in supply chain opportunities and take advantage of the potential to export energy, expertise, goods and services to other nations, by having a competitive Welsh energy supply chain. (David Bell Proof, paragraph 2.3.8/12)
- 9.9 The Alliance argument that renewable development has a net adverse economic effect is without foundation and contrary to government policy. (XinC David Bell Session 4)
- 9.10 Vattenfall is experienced in advancing projects where local supply chain opportunities are maximised, such as Pen y Cymoedd. The January 2013 Regeneris 'Economic Opportunities for Wales from Future Onshore Wind Development' specifically mentions the Pen y Cymoedd scheme as allowing potential local sub-contractors to become involved in construction. It concludes that if 2,000MW of onshore wind capacity is installed by 2025, Wales may be able to secure £2.3bn of gross value Applicant experience of delivering benefits

added between 2012 and 2050 and over 2,000 FTE jobs per annum on average. (David Bell Proof, paragraph 2.2.3 and 3.2.40)

- 9.11 Llanbadarn Fynydd would contribute to and support national economic growth, employment creation and policy objectives. Construction over 2 years would create or retain 41 FTE jobs and other indirect employment benefits and the operational phase an estimated 2 FTE jobs. (David Bell Proof, paragraph 2.4.3 and 3.4.2/4)
- 9.12 The developer has committed to a community fund providing £5,000 per MW of installed capacity per annum, equating to £255k - £297k per year (index linked) and wider benefits to the Welsh economy will include income from business rates. (David Bell Proof, paragraph 3.4.14) although it is accepted the decision maker will not be taking account of the first of these, the community fund, as an economic advantage to the area or otherwise as a material consideration.

9.13 Tourism

- 9.14 The June 2013 Miller Report (VATT-SOCIO-010) shows the economy in SSAs B & C is similar to Powys with 6% of total employment in accommodation and food services, relatively modest, albeit important and capable of expansion. (David Bell Proof, paragraph 3.3.10) Data on the local tourist economy
- 9.15 Access to services and limited transport are weaknesses of the area and whilst tourism contributes, there is a shortage of serviced accommodation, lack of identity and limited destination marketing. Diversification of agriculture is a key opportunity to increase the resilience of the economy. (David Bell Proof, paragraph 3.2.13/14)
- 9.16 Capitalising on the likely investment in renewables to assist opportunities is highlighted (David Bell Proof, paragraph 3.2.16). The local tourism economy is not fragile (XE David Bell Session 4) with which the Alliance agree. In contrast, questions from the Alliance over whether supply chain benefits will be felt in the locality do not evidence they won't be.
- 9.17 Visitors would undoubtedly note the presence of wind farms, but there is no third party evidence to indicate that the development would adversely affect visitor numbers or spend to a significant or unacceptable degree. (David Bell Proof, paragraph 4.1.3)
- 9.18 The argument that turbine views from a bedroom window would result in reduction in rental rate takes no account of other actions that accommodation provider may take to make its offering more attractive. (XE David Bell Session 4)
- 9.19 The May 2012 ReUK/DECC Biggar Economics research states there is no evidence of negative impacts on tourism and the Visit Scotland research confirms the presence of wind farms has no influence on tourists' decision making but can lead to improved path networks and tourist attractions and facilities. (David Bell Proof, paragraph 3.2.11/12) National research on tourist impacts

- 9.20 The UWE Study (2004) demonstrated that the construction of Fullabrook wind farm would not have a detrimental impact on tourist numbers, experience or expenditure in North Devon. (David Bell Proof, paragraph 4.3.2)
- 9.21 The 2008 Moffat Report was cited in a 2012 submission to the Scottish Parliament's Renewable Energy Inquiry as providing a high degree of validity and reliability. It confirms that no study to date has demonstrated that adverse impacts are likely to occur. The Scottish Government is therefore satisfied that its targets for the development of tourism and renewable energy do not conflict. (David Bell Proof, paragraph 4.4.1/2)
- 9.22 The research recognises that despite Scottish tourism depending heavily on landscape, turbine development does not concern tourists or cause adverse impact upon tourism numbers, 93-99% of those who had seen a wind farm suggested the experience would not have any effect. (David Bell Proof, paragraph 4.4.10)
- 9.23 A significantly higher proportion of tourists were positively, rather than negatively disposed towards wind farms and those engaged in hiking, hill-walking, cycling and mountain-biking were more positively disposed towards wind farms than the general tourist population. (David Bell Proof, paragraph 4.4.20/21)
- 9.24 The Alliance's suggestion that any percentage of the population that is not well disposed towards windfarms would equate with a drop in tourist revenue of the same order is not a valid argument (XE David Bell Session 4). Clearly, there will always be some percentage who do not favour windfarms, however the question is put to elicit that opinion. A split of 80% pro, 20% con was accepted as being "*in the right place*" to visualise how the differing split of opinion might average out (InspQ David Bell Session 4). In response to the question, "*how should a local business be comforted over 20% of its clientele being put off visiting*" the answer is that the evidence points to no resulting drop of business, or of local accommodation providers and tourist businesses being forced to close because of nearby windfarms (InspQ David Bell Session 4). Opposition to windfarms not shown to reduce visitor numbers
- 9.25 This is partly because 80% represents a sizeable resource to whom continued marketing of the business can be directed and additional business secured (ReEx David Bell Session 4). The Alliance commented that local businesses cannot respond to challenges windfarms may make to their offering because they are already offering a high quality service (XE Jill Kibble Session 4). Whether or not that is so, the remaining 80% untroubled by windfarms are there for that high quality offering to be put to.
- 9.26 The Alliance challenge Fullabrook and Moffatt as irrelevant because North Devon and Caithness offer different tourist propositions to Mid Wales (XE David Bell Session 4). This fails to recognise the depth of research and objectivity they offer. It may be the case that the combination of The Flow Country described by David Bell and those visiting en route to Orkney or as part of doing the UK "the long way

round" means that on balance there is less focus on landscape in the marketing of Caithness than in Mid Wales (InspQ David Bell Session 4).

- 9.27 However, contrary statistics offered by the Alliance drawn from The Scottish Mountaineering Council and John Muir Trust are drawn from bodies actively campaigning against windfarms (XE David Bell Session 4).
- 9.28 The Moffatt report concluded that concentrating developments rather than a dispersal of smaller wind farms over a wider area is better, as any loss of value already occurs by the presence of the first wind farm (David Bell Proof, paragraph 4.4.25). Whilst TAN 8 has a concentration policy at its core, the Alliance sought to argue that the proposals are of a different order of magnitude, because some properties would have turbines in more than 180° field of view (XE Jill Kibble Session 4). That does little to undermine the confidence drawn from Moffatt' recommendation that the TAN 8 concentration approach is the best way to look after tourism, if there is any harm to be suffered. Concentration of impacts
- 9.29 The 2011 VisitScotland Research respondents did not feel that wind farms ruin the tourism experience. (VATT-SOCIO-003 and David Bell Proof, paragraph 4.5.7)
- 9.30 The Economy, Energy and Tourism Committee of the Scottish Parliament inquiry findings of November 2012 demonstrate the lack of empirical evidence that tourism will be adversely affected by onshore wind. (VATT-SOCIO-011 and David Bell Proof, paragraph 4.6.3).
- 9.31 Particular emphasis can be put on the Moffatt Report because of the quality of its research and its endorsement by the Scottish Parliament inquiry and the May 2012 DECC Economic Impacts Report (VATT SOCIO 005 and XinC David Bell Session 4).
- 9.32 The Regeneris Report of February 2014, available after the close of the Session Four evidence, has been addressed by the Alliance, Celtpower and RWE. Its findings are consistent with the findings of early reports, namely negligible impact on the national tourist sector and limited evidence of any local tourist impacts (Planning Balance Session).
- 9.33 EN-1 (para 5.12.3) sets a standard that to put substantial weight on adverse socio-economic impacts there must be evidence of them, not mere assertion (XinC David Bell Session 4). What emerges from the Alliance evidence is a concern that there may be an adverse effect which cannot be disproved (XE Jill Kibble Session 4) but genuine and sincerely held as that concern is, it falls far short of the evidence based case that is required to meet national policy.

10 PLANNING BALANCE

- 10.1 The statutory Development Plan is a consideration which should be taken into account in the round with all other relevant considerations, even though section 38(6) of the Planning and Compulsory Purchase Act 2004 (**CD/SPM/LEG/07**) is not engaged. (David Bell Planning Balance

Statement para 3.3.1 and SoCG Section 8). A full analysis of the proposals against the UDP policies have been supplied which shows the development would be consistent. (David Bell Planning Balance Statement para 4.2.49). We do not need to go beyond that in this closing as it is not argued by any party that there are any principles by which to determine acceptability found in the UDP, not otherwise found in national policy.

- 10.2 The Electricity Act 1989 (para 3(2), Schedule 9) directs the Secretary of State to the matters to which regard should be had in making this decision and these have been addressed in evidence and tested at inquiry.
- 10.3 Those material considerations we have been though at length clearly showing that on the principal areas put before the inquiry by PCC, of landscape, visual and heritage impacts, the development is entirely suitable for approval on any objective criteria. It follows that we reject PCC's legal submission that we cannot satisfy Schedule 9 as all we have done is mitigate adverse impacts as far as we can do. That is not and never has been our case. Consistently we have argued that this development is appropriately located.
- 10.4 On transport, the resolution of sTMP6 via the Mochdre removed the one matter of substance that had long held up consent. On hydrology and noise, whilst the inquiry gave the opportunity for questions from local residents, all of these have been able to be answered. Economic benefits will flow from this development and tourism will not, on the basis of objective assessment, be adversely affected to any material degree.
- 10.5 NPS EN-1 (para 1.1.1) combined with the relevant technology-specific energy NPS EN-3 provides the primary basis for this decision, carrying with it a presumption in favour of granting consent to applications for this type of development given the level and urgency of need.
- 10.6 NPS EN-1 has explicit recognition that there will be some significant adverse effects arising from developments, but what has been shown in evidence is that not only is this an appropriately located development, but where mitigation through design has been available, it has been incorporated.
- 10.7 PPW (Edition 6 February 2014, section 4.5), the latest Welsh policy, highlights that tackling climate change is a fundamental part of delivering sustainable development in Wales and (section 12.8) directs attention to TAN8 in order that development in the SSAs will contribute significantly to the Welsh Government onshore wind energy aspiration for 2GW by 2015/17. This new national planning policy re-validates the currency of TAN8 and so it should continue to attract significant weight.
- 10.8 TAN 8's objectives including 800MW of installed onshore wind by 2010 have not been met, and its indicative capacities should not, and need not be seen as a 'straightjacket'.

- 10.9 The merits of each application are the starting point and should be the decisive consideration. If impacts are acceptable, any finite capacity of an SSA is being respected and the underlying concerns of WG Ministers will have been met. In that way there is no inherent contradiction between the letters from WG and policy to be applied here and no need to disregard the concerns expressed in those letters.
- 10.10 Similarly, the concern expressed over grid in those letters is met in there being no inevitability of 400kV lines being developed as a result of this scheme being approved.
- 10.11 Whilst policy provides that in the event of conflict with development plan documents, the NPS documents are to prevail, there are no significant conflicts. Approving this development will be consistent with local and national planning policy.
- 10.12 There never was substance to Llanbadarn Fynydd being a scheme that should be refused, for any reason, less still that it should be seen as weaker than other proposals. This inquiry has demonstrated the sites acceptability in depth and accordingly we respectfully ask that the approval is granted.

Patrick Robinson

Burges Salmon LLP

30th May 2014

ANNEX 4

MID-WALES WIND FARM INQUIRY

APPLICATION BY RWE INNOGY UK LIMITED FOR CONSENT UNDER SECTION 36 ELECTRICITY ACT 1989 AND A DIRECTION FOR DEEMED PLANNING PERMISSION UNDER SECTION 90(2) TOWN & COUNTRY PLANNING ACT 1990 FOR CARNEDD WEN WIND FARM AND HABITAT RESTORATION PROJECT ON LAND AT CARNEDD WEN POWYS

CLOSING SUBMISSIONS ON BEHALF OF THE APPLICANT

**Marcus Trinick QC
Eversheds LLP**

29 May 2014

OVERVIEW

1. Carnedd Wen is a remarkable scheme. Imaginative in concept, it achieves a number of key policy objectives of relevance to sustainable development: the generation of renewable electricity, the landscape improvement of a large area of currently afforested land and biodiversity gains of national significance.
2. Of course Carnedd Wen, like any very large infrastructure development, has impacts to which objections have been made, but in approaching my submissions I ask that you bear in mind a number of headline points.
 - 2.1 In 2012 Powys County Council (PCC) objected to the Carnedd Wen project (from now on in most places 'Carnedd Wen') for nine reasons relating to nature conservation, transport, landscape, socio-economic matters, and consequent contended breaches of policy. However, starting as long ago as the receipt of the first consultation responses to Carnedd Wen from bodies such as CCW, Forestry Commission Wales and Snowdonia National Park Authority, RWE has assiduously and systematically addressed concerns about the project. Since the resolution of PCC in 2012 that process has accelerated. As a result this very large project now has outstanding objections from consultees in relation only to the landscape and visual effects of the development. The objections from NRW and SNPA are to the whole of the project. Their focus is the Snowdonia National Park. The nine objections of PCC have been reduced to a single outstanding objection to 5 of the proposed 50 wind turbines.
 - 2.2 You will have seen from the evidence of Mr Stevenson, Mr Atkinson, Mr Cradick and a group of five witnesses brought together to discuss peat, hydrology, forestry and ecology just how much work RWE has put into refining Carnedd Wen into a project which now has so few objections. You will no doubt have noted from SEI 2013¹ that a very detailed level of understanding of the environmental consequences of the project has been achieved, perhaps well beyond that normal for a project in its planning stages. This development has been very carefully prepared and refined, based indeed on the experience of RWE in developing numerous wind energy projects in Wales, England and Scotland, in particular in upland landscapes.
 - 2.3 Carnedd Wen will generate a substantial inward investment into Powys and, more widely, Wales. Access to the countryside will be further encouraged and enhanced through the proposed public access strategy. And there will be indirect social benefits from these environmental improvements, economic advantages and additional opportunities for recreation.

¹ AD/RWE/026 to AD/RWE/030

- 2.4 That RWE has been able to bring before you a scheme with so few objections and with so many advantages reflects its location. The Carnedd Wen plateau is very extensive and it is sparsely populated. It is currently dominated by long established commercial forestry, and there are few or no nature conservation, cultural heritage, aviation or telecommunications constraints. The site can be accessed direct from the A458 trunk road, utilising an existing forestry access which it is clear has proved to be an attractive feature of the development from the perspective of PCC. The site is close to the boundary of the National Park, but it must be remembered that the process of SSA selection, cumulating in TAN 8², explicitly took the presence of National Parks into account. While it may be that limited weight can be given to the 2006³ and 2008⁴ Arup refinement studies based on TAN 8 it may be noted that these studies recommended that the area of Carnedd Wen should remain a zone for large scale wind farm development, except for the area of five proposed turbines, which are nonetheless within 5km of the SSA boundary. Indeed the virtues of Carnedd Wen were reaffirmed as recently as 2012 in the study carried out by Aecom for PCC.⁵
3. Another topic that I will visit in a little detail is the potential for Carnedd Wen (and indeed Llanbrynmair) to be connected to the grid. It became clear in Session 4 that SSA Area B can be connected to the grid on heavy duty wooden poles running direct to England, if need be. The grid requirements of Area B do not include a new 400kV overhead line. Such a requirement only arises if more than a certain amount of development in SSA Area C is also to be implemented.
4. I will turn shortly to the matters on which the Secretary of State notified in his Rule 4 statement that he wished to be informed. I note at the outset that I will focus principally on matters which I believe will materially influence the outcome of the inquiry My focus will therefore be on:
- (a) The landscape and visual effects of Carnedd Wen Wind Farm on the National Park and the issue of the "Carnedd Wen Five"; and
 - (b) The landscape and biodiversity benefits of the Habitat Restoration and Management Plan (from now on the HRMP), and the other benefits of the development to which I have already alluded.
5. I have not said that I will focus particularly on Matter 5 (transport) because I believe that the continuing objections of the Alliance attract little weight given the agreement that has been reached between RWE and the Welsh Government and PCC as the relevant highway authorities. You have been presented with an acceptable package of delivery

² CD-COM-016

³ CD-COM-017

⁴ CD-COM-018

⁵ CD-RWE-PLA-001

measures for both abnormal invisible loads (AILs) and other construction traffic. Again, Carnedd Wen presents no challenges for the decision maker in relation to any of the other matters on which you must inform the Secretary of State.

6. In summary I believe that in drawing the planning balance for Carnedd Wen the principal focus should be on the issues canvassed in paragraph 4. In saying this I do not belittle the evidence of the Alliance. I say now that RWE has had enormous respect for the professionalism, evidence and civilised engagement of members of the Alliance. That has been constantly remarked within the RWE inquiry team. It is a shame that we remain in opposition to such an able group of people. Nor does RWE underestimate the extent to which the lives of those in the Alliance have been taken over by this inquiry, and the extent to which other matters may have been put on hold until the end of the inquiry. However, I think that it is worth noting that, at least in the view of RWE, much of the opposition, or at least the vehemence of the opposition, has derived from the failure of those promoting grid connections to communicate that the 400kV overhead line is not in all circumstances necessary. While objection would no doubt have always been taken to the proposed wind energy developments it has seemed to me for some months that the intensity of the opposition has to a material degree been informed by apprehension about the nature of the proposed grid connection, as communicated by the grid bodies. That is a pity.
7. In summary in relation to the position of the Alliance I would not wish them to think that, in the concentration that there will be in these submissions on the views of statutory bodies, their evidence is in any way to be ignored. I will deal with it explicitly at appropriate points.
8. My final introductory comment is that these closing submissions are to a considerable extent the joint product of the work of Karl Cradick and me. I strongly commend Mr Cradick's closing session Hearing Statement which was deliberately written in the form of a closing submission. Therefore I have without shame incorporated many passages within it into these submissions. I now turn to the Secretary of States' Rule 4 matters.

MATTER 4

"The individual and combined landscape and visual impact of the proposed developments taking into account the proximity to Snowdonia National Park (Strategic Search Area B); and cumulative impact with other wind farms in the Powys area which have already been granted planning permission or where planning permission has been applied for."

9. Since this is the primary issue for Carnedd Wen I have given the topic detailed consideration. In posting my submissions I first describe the common ground that has been achieved between RWE and other parties. I then set out my view of the conclusions that can be drawn from the evidence, dealing in turn with some observations on the evidence on

behalf of NRW and then turning to look at distinct landscape and visual, recreational, National Park and access road issues. I then look at planning conditions and planning policy compliance before turning finally to some concluding thoughts on the National Park and on the five turbines objected to by PCC.

Common Ground

10. Through a process of dialogue and project refinement substantial common ground has been agreed about the landscape and visual effects of the project.
 - 10.1 RWE has agreed statements of common ground (SoCGs) in relation to landscape and visual matters with Powys County Council⁶ (PCC) and Natural Resources Wales⁷ (NRW). Extensive agreement was secured on the methodology for landscape and visual impact assessment (LVIA) and on the matters on which the focus of the inquiry was required.
 - 10.2 All three parties are in agreement that the environmental information submitted with RWE's application and subsequent SEI submissions provide an adequate basis for the assessment of the landscape and visual effects of the proposal. It is accepted that that the identified Zones of Theoretical Visibility (ZTV) offer a fair and reasonable representation of the theoretical maximum potential visibility of the wind turbines in the wider landscape.
 - 10.3 In the SoCG between RWE and Powys CC it is stated that the Council considers that the five north-eastern wind turbines (R23, R26, R28, R29 and R30) are unacceptable in landscape and visual terms and that these lie outside of the Arup 2008 refined boundary of SSA-B. However, Powys CC takes no objection to the individual or cumulative landscape and visual impacts of the remainder of the scheme (para. 5). Powys CC accepts (para 8) that the effects with respect to Snowdonia National Park have been satisfactorily addressed, having regard to Powys UDP⁸ policy ENV2: *Safeguarding the landscape*. In paras. 12 and 13 it is confirmed that residential amenity and historic landscapes are not matters that form a part of the Council's case in respect of Carnedd Wen.
 - 10.4 With respect to the proposed site access from the A458, it is agreed in the SoCG between RWE and Powys CC that *'the Carnedd Wen access proposal is acceptable in landscape and visual terms'* (para 6). The SoCG between RWE and NRW states that *'... it is accepted by NRW that [the Applicant] is able to provide a satisfactory commitment to the maintenance of the forestry blocks ... such that NRW is satisfied that the landscape and visual effects*

⁶ RWE-PCC-SOCG-LAND-SSA-B

⁷ RWE-NRW-SOCG-LAND-SSA-B

⁸ CD-CON—003-PLA-013

of access works would be acceptable through the life of the development’.

- 10.5 Following clarification given during the examination of evidence presented by NRW’s landscape witness Mr John Campion it is understood that NRW is not maintaining its objection to the vehicular access from the A458, subject to the maintenance of a tree screen along the north-western side of the track.

Conclusions From The Evidence

Overview

11. Detailed evidence on the landscape and visual effects of the proposed Carnedd Wen has been presented by Mr Jeffrey Stevenson. Mr Stevenson was the author of the chapters dealing with landscape and visual effects set out in the Environmental Statement (2008) and the SEIs of 2009, 2011 and 2013. He played a significant role in the refinement of the wind farm design and habitat restoration proposals. Given Mr Stevenson’s deep involvement in and understanding of the project from its earliest stages, added weight should be given to the conclusions he draws. Responding to para. 3.3 of the closing submissions made on behalf of NRW, I am unhappy with the contention that Mr Stevenson is in any way predisposed to view landscape and visual changes positively.
12. In para. 70 of the PCC closing submissions, it is said that a number of applicants flirted with the ‘anything goes’ approach to wind farm development on the basis of the advice in Annex D to TAN8, which recognises an implicit objective to accept landscape change in SSAs. If that accusation was aimed at Mr Stevenson, it would be unfair and wrong for reasons given in the following paragraphs.
13. Mr Stevenson made clear that project evolution has had regard to landscape character and capacity along with consideration of potential visual interactions with high sensitivity observers, notably within the Snowdonia National Park and on major routes to and from the Park. From the outset RWE sought a development layout founded on the principles of avoidance, minimisation and mitigation of potentially significant adverse effects. By these means harm to on-site landscape features was avoided and the substantial potential for landscape enhancement, through the removal of regimented forest plantations and subsequent habitat restoration, was identified. In cross examination Mr Campion confirmed that no point was taken by NRW concerning the design and layout of the wind farm, so that the advice in para 2.7.49 of National Policy Statement EN-3⁹ was satisfied (see also his proof at 3.14¹⁰).

⁹ CD-COM-002

¹⁰ RWE-LAND-POE-STEVENSON-SSA-B

14. For want of a better place to insert a stray point arising from Mr Campion's evidence, I deal with it here. In 5.31 of his proof¹¹, he deployed the concept of blade swept area as some kind of metaphor for visual effects on the wind farm. In XX I believe that it became tolerably clear that due to the real life intervention of such factors as topography, distance and wind direction, any use of blade swept area in visual impact assessment is of little or no use, and indeed I was rather surprised to see this concept in Mr Campion's evidence.
15. Before addressing the points in relation to landscape and visual effects, one or two points in the evidence of Mr Campion should be noted as I believe they should go to the weight that you give to what he had to say:
- at 5.38 of his proof, Mr Campion presented his views on landscape and visual sensitivity. He acknowledged in XX that he was dealing with the baseline sensitivity of the area, not its sensitivity to the development proposed, as he should have done;
 - in para 5.38 of his proof, Mr Campion took the curious step of conflating landscape and visual sensitivity (both baseline, but that is a separate point). As I put to him in XX this is a completely incorrect approach in terms of the clear advice in the Guidelines for Landscape and Visual Impact Assessment to keep landscape sensitivity and visual sensitivity separate¹²;
 - in 5.42 of his proof, Mr Campion again departed from well established practice (followed by Mr Stevenson) in conducting what I put to him in XX was a crude mathematical averaging exercise in order to arrive at a view on landscape capacity. Mr Campion acknowledged that he had provided averages for landscape and visual sensitivity. This again is unhelpful to you in evaluating (separately) the sensitivity of the landscape and of the area's visual amenity to the development proposed;
 - in paras 5.33-5.43 of his proof, Mr Campion addressed landscape capacity. You will remember that I asked him some questions about this material. In closing I do not need to rehearse the complexities of the relationships which exist between the landscape character sensitivity, visual sensitivity, value and landscape capacity. It is sufficient for me to commend TAN 8 as the product of a landscape capacity study which determined the best way of achieving a quantified amount of on-shore wind energy (the capacity target)¹³. TAN 8, the ARUP requirement studies¹⁴ and the 2012 AECOM study¹⁵ carried out for PCC have all confirmed that (a) the area including Carnedd

¹¹ CON-003-LAND-POE-CAMPION-SSA-B-CW

¹² CPL-LAN-005

¹³ CD-COM-016

¹⁴ CD-COM-017 & CD-COM-018

¹⁵ CD-RWE-PLA-001

Wen is the best to provide large scale wind energy development and (b) the site of Carnedd Wen is, within SSA Area B, a specific tract of land suitable for larger scale wind energy development. It may be remembered that none of the documents I have canvassed took into account the potential for a habitat restoration and management project.

16. Mr Champion's attempts to derive a conclusion of medium-low landscape capacity for the Carnedd Wen development are internally flawed (see my comments above about conflation of landscape and visual amenity and the use of baseline sensitivity) and also fail to grapple with TAN 8 and succeeding documents. Indeed, the approach of NRW and Carnedd Wen seems to be on the basis that SSA Area B does not exist, so that it is appropriate to evaluate the development outside the context of the capacity studies completed for the Welsh Government and others. This does seem an extraordinary position for a statutory advisor to the Welsh Government to take. Indeed, you may feel as RWE does, that it is really quite inappropriate for NRW to take such an extreme position.
17. Perhaps of more importance is the complete failure of both of NRW's relevant witnesses (Mr Champion and Mr Minto) to recognise the fact of and benefits of the habitat restoration and management project. This topic entirely escaped attention in the evidence of Mr Champion, as he recognised in XX. It entirely escaped attention in the evidence of Mr Minto. You may feel that NRW has fallen very short here in a proper appreciation of the scope of the project advanced by RWE and its apparent unwillingness to treat Carnedd Wen as any more than just another wind farm project. This point was discussed in the closing hearing session in the context of Mr Minto's evidence. As far as Mr Champion's evidence is concerned you may find the point conveniently highlighted in paragraph 3.4 of his proof where he boldly states that the design of the proposed wind farm "has not demonstrated there is any landscape contribution to the enhancement of the quality of the area..". It really would appear that Mr Champion has focused only on the wind turbines, a significant drawback in terms of evaluating the impact of the development as a whole in (particularly) a National Park context.
18. Finally, on design and mitigation matters, in response to earlier concerns expressed by CCW concerning the visual presence of the proposals when seen from the lower valleys in the National Park, and from the main roads into and out of the Park, RWE reduced the wind farm from 65 to 50 turbines (as assessed in the 2011 SEI¹⁶).
19. The landscape of the plateau itself would become open and more diverse in character as a consequence of forest removal. In evidence concerning landscape character and visual and sensory LANDMAP criteria Mr Stevenson has demonstrated that nothing of *High* or *Outstanding* LANDMAP value (in terms of individual criteria – Scenic Quality, Integrity, Character, Rarity or Overall Evaluation) would be significantly affected save for part of the Llanerfyl Mosaic Farmlands to the east/north-east.

¹⁶ AD-RWE-013 TO AD-RWE-018

The host LANDMAP units (Unit 320 - Banwy Forest and Unit 571 - Pencoed) are respectively of *Low and Moderate* value. Direct significant landscape effects would be contained wholly within these landscape units.

20. Mr Stevenson concluded that the wind farm's significant landscape character effects would be contained almost completely within the TAN 8 boundary (see JSA session 2 Proof Appendix 14 Figure 14a¹⁷). The assessments of visual effects included in the 2008 ES and all subsequent SEI have found consistently that significant visual effects arising from Carnedd Wen wind farm would arise for a potential distance of up to c. 5-7 km from the nearest turbines depending on the location of the observer and, from some elevated viewpoints, for up to c.8.5-10.5 km from the turbines. Users of the A458, which is used by visitors *en route* to the National Park as well as by more local traffic, would only see the wind turbines for a limited stretch of their journey.
21. Subjective individual responses to the sight of a wind farm will vary. Nonetheless, the removal of plantation woodland and the restoration of peat habitat would provide walkers on Glyndŵr's Way with new views towards the uplands on the southern side of Snowdonia National Park and an opportunity to appreciate upland peat landscapes at close quarters. Appendix 28 of Mr Stevenson's evidence to session 2 of the current inquiry identifies opportunities for enhanced permissive access to the site. One of the submitted conditions addresses this opportunity by requiring the approval and implementation of a Rights of Way Management Plan. Responding to para. 3.8 of the closing submissions made on behalf of NRW, Mr Stevenson might well have confirmed that the delivery of public access is not yet detailed. But that is an unfair criticism: the details will emerge in the Plan to be submitted for approval.
22. In XX Mr Campion, by reference to his para 3.14, acknowledged that some walkers would, taking into account the wind farm, appreciate the benefits achieved by the removal of forestry, whilst some would not. That is a perfectly fair appreciation, but it must be remembered that the benefits of the removal of forestry will subsist beyond the decommissioning of the wind farm, and will be managed for a total of 50 years from the commencement of development. Thus in closing I advance the benefits of forestry removal for recreational users as a benefit of the project of some significance. Indeed (see section 2.5 (Public Rights of Way) in SEI 2011¹⁸) PCC has for some time recognised this benefit.
23. As recorded in paragraph 2.4 the presence of National Parks was taken into account explicitly in the designation of the TAN 8 SSAs. In evidence Mr Stevenson acknowledged that it is inevitable that the visual effects of large scale commercial wind energy development in the TAN 8 SSA B area will extend into parts of the south-eastern portion of the Snowdonia National Park and that some of the visual effects will be significant, individually and cumulatively – albeit diminishing in significance with

¹⁷ RWE-LAND-POE-APP-STEVENSON-SSA-B

¹⁸ AD-RWE-013 TO AD-RWE-018

distance. However, he does not consider that there would be a material adverse effect on any of the National Park's Special Qualities as defined in the Snowdonia National Park Management Plan 2010-2015¹⁹, including Special Quality 5 - *'the opportunity for people to understand and enjoy the National Park actively, whilst maintaining areas of tranquillity and solitude, thus promoting aspects of health, well-being and personal reflection'* – which received close attention in evidence.

24. Mr Stevenson and Mr Champion disagree concerning whether or not there would be significant landscape character effects arising within the National Park as a result of the wind turbines. You must form your own view, but I would ask you to accept the evidence of Mr Stevenson that (see para 20 above) significant landscape effects will be contained almost completely within the TAN 8 boundary and will not extend into the National Park.
25. NRW through Mr Champion take the view that Special Qualities 1 and 6 will be adversely affected by the wind turbines (see para 5.20 of Mr Champion's proof notes) in addition to Special Quality 5 discussed in para 23 above). You may remember that I cross-examined Mr Champion on Special Qualities 1 and 6, and I ask you to accept the view of RWE that neither has the potential to be adversely impacted by the proposed wind turbines. Special Quality 1 is concerned with the diversity of landscape within the National Park and could not possibly be affected. With regard to Special Quality 6 nothing which is proposed within the current wind development could affect "Extensive opportunities for recreation..." within the National Park. If there is any issue relating to Special Qualities, it relates to Special Quality 5 on which I have already submitted.
26. On the assumption that 'harm' is deemed to arise from the wind farm's presence Mr Stevenson has set out in evidence a series of points to which recognition must be given, leading to the conclusion that the proposed Carnedd Wen wind farm and habitat restoration project would, on balance, provide substantial benefits to the interests of the National Park (Stevenson evidence for session 2²⁰). Even if visual effects were considered significantly adverse, he considers that in the longer term the net effect would be substantial, positive and worthwhile and would not prove offensive to the statutory purposes of National Park designation during either the operational stage or emphatically after the decommissioning of the wind farm, noting that the habitat restoration project will be for a period of 50 years.
27. Mr Stevenson concludes that the vast majority of the National Park would not be affected by the presence of Carnedd Wen. The area of the Park into which significant effects might extend does not appear to be much visited. Finally, he does not consider that opportunities to seek solitude and/or tranquillity would be much diminished – even if seeking solitude or tranquillity is dependent on not seeing a wind farm.

¹⁹ CD-COM-PLA-01

²⁰ RWE-LAND-POE-STEVENSON-SSA-B

28. Mr Stevenson's conclusions are consistent with those of PCC's independent landscape consultant Capita Symonds²¹. Capita Symonds provided PCC with a review of RWE's landscape and visual impact assessment for the original 65 turbine project in August 2009. In this original report, Capita Symonds expressed concern at the effects of the wind farm on the landscape character and visual amenity of Snowdonia National Park.
29. The applicant's revised proposal (see RWE 's 2011 SEI²²), in which the number of wind turbines was reduced from 65 to 50, the total length of new access tracks was reduced from 29.7 km to 16.6 km and the numbers of borrow pits anemometry masts and substations also fell, responded in part to Capita Symonds' concerns. Powys CC instructed Capita Symonds to review the revised proposal. Capita Symonds affirmed that the revised layout substantially addressed many of its concerns, particularly with respect to the effects on Snowdonia National Park. Whereas the wind farm would continue to be visible from more elevated areas of the National Park at greater range, Capita Symonds noted that:

'The revised proposals have excluded turbines from the north-western corner of the site and this change will reduce or eliminate effects on areas to the north around to the west, particularly in the lower parts of the landscape within the National Park and along the A458 corridor' (CD/RWE/LAN/03 page 1).

30. The full conclusion of Capita Symonds' report on the revised proposals were as follows.

'The revisions address many of the original concerns, particularly in relation to effects on sensitive areas to the north and to the west. Residual effects will remain, particularly with regard to elevated areas in the National Park and the Berwyn Hills, although, in our opinion, these effects will be consistent with those anticipated in relation to the implementation of TAN 8 policy.

'The revisions will not benefit visual effects on residents within Llanbrynmair or significantly at Llangadfan. However, at both locations effects will be seen cumulatively, with Llanbrynmair to the fore at the former, and Mynydd Waun Fawr and, potentially, Dyfnant Forest at the latter. These effects are acknowledged within the assessment.

'The assessment also considers effects in relation to the access track and effects at the entrance off the A458. The track is unlikely to have any significant effects and the extent of the cutting is far removed in extent from the indications provided in the original report.

'Overall, in its current form and taking account of the overall effect likely to occur as a consequence of TAN 8, in our opinion, this development is acceptable in Landscape and Visual terms' (CD/RWE/LAN/03 pp2-3).

²¹ CD-RWE-LAN-03

²² AD-RWE-013 TO AD-RWE-018

31. Capita Symonds' conclusion was reflected in the planning officer's report on the Carnedd Wen project to PCC's cabinet on 13 March 2013²³. In paragraph 45.14, at the end of the landscape and visual section of the report, it was concluded that:

The revision therefore substantially minimises the impacts of the development upon National Park and wider landscapes with residual effects consistent with those that can be anticipated from the implementation of planning guidance based on TAN 8 (Planning Policy Wales February 2011). The proposal would also be consistent with the requirements of Powys UDP Policy ENV2 in that the revisions contained within the SEI have satisfactorily taken into account the visual quality and sensitivity of the landscape, particularly in respect of the National Park where landscape and visual impacts have been substantially reduced (CD/RWE/LAN/02, p.53).

32. I return to matters relating to Snowdonia National Park after considering policy. At that stage I also deal with the five turbines to which PCC objects.

The Access Road

33. Here I deal with the access road from the junction with the A458 to the Carnedd Wen plateau. You will remember that there was considerable discussion in XX of Mr Campion about NRW's then outstanding concerns relating to the visual impact of this existing forestry track (and the vehicles using that track) when viewed from the National Park.
34. RWE attempted to engage with NRW over a long period on this issue. I refer to what Mr Stevenson had to say in evidence in chief concerning correspondence with NRW in the months leading up to the inquiry (see for example Savills' correspondence at Mr Stevenson's Appendix 21²⁴). The position with regard to the screening of the access road has been clear and available to NRW since SEI 2011, a document over which we trawled in XX of Mr Campion.
35. It is now clear that NRW does not object to the limited improvements there will need to be to the access track, nor to the use of the track for construction vehicles, subject to the maintenance of tree screening. It may be noted that if Carnedd Wen does not receive consent (and the access track is not used for the purposes of another wind farm with its own requirement to maintain tree screening) NRW will have no control over the long-term maintenance of these trees. They may be felled or might otherwise disappear. Therefore, the agreement by RWE to maintain tree screening for the lifetime of the development may be seen as a benefit of the project.
36. During session 4 of the inquiry Mr Stevenson presented evidence concerning the cumulative landscape and visual effects of Carnedd Wen

²³ CD-RWE-LAN-02

²⁴ RWE-LAND-POE-APP-STEVENSON-SSA-B

in conjunction with wind farms in SSA-C²⁵. By reference to a range of viewpoints, it was concluded the distance between SSA-B and SSA-C is too great for significant cumulative landscape and visual effects to arise, and this is consistent with the position of PCC.

37. Evidence was also presented to session 4 of the inquiry concerning the cumulative landscape and visual effects of grid connections from different combinations of wind farm development to the electricity grid. This evidence was informed by a technical assessment by Mott MacDonald²⁶ and an environmental appraisal by Land Use Consultants²⁷, submitted as SEI at the end of 2013. This SEI demonstrated that it is technically and environmentally feasible to connect the Carnedd Wen wind farm to the National Grid, whether in isolation, in conjunction with Llanbrynmair wind farm or with both Llanbrynmair wind farm and some new generation capacity in SSA-C, by means of a heavy duty wood pole connection. This solution would substantially respond to strategic objections from the Alliance and others over the environmental effects of the grid connections, and underlines the practical feasibility of wind farm development in SSA-B. The ability of RWE to connect Carnedd Wen (with further possibilities for the connection of other wind farms as just described) without the need for pylons was explicitly confirmed in the session 4 oral evidence of Dr Lynch of Mott MacDonald.
38. In para. 4.2.3 of its Statement of Case for session 4²⁸, PCC affirmed that:
- PCC considers that the parallel twin 132kV OHL connections from the Llanbrynmair and Carnedd Wen sub-stations (to the proposed sub-station at Cefn Coch and/or beyond to the Oswestry sub-station) could be acceptable in landscape and visual terms, both in its own right and cumulatively, subject to appropriate detailed design and mitigation, including the consideration of undergrounding and alternative designs such as parallel twin "trident" poles, to reasonably minimise the landscape and visual effects.*
39. This position is consistent with the conclusions of both the LUC study and Mr Stevenson's evidence to inquiry session 4.
40. One final point I do need to cover on cumulative effects relates to the approach taken by Mr Stevenson to cumulative assessment. In oral evidence in chief he confirmed that he had both assessed the in-combination effects of Carnedd Wen with other developments and the incremental effects of Carnedd Wen on a variety of baselines. He needed to cover this point because, to be fair, it was not entirely clear within his cumulative Appendix 1, although the position was set out in paras 3.65 and 3.8 of his session 4 proof²⁹. Responding to paras. 822-826 of PCC's closing submissions, it is not correct that Mr Stevenson adopted only the

²⁵ RWE-LAND-POE-STEVENSON-S4

²⁶ AD-RWE-031

²⁷ AD-RWE-032

²⁸ OBJ-002-SOC-S4

²⁹ RWE/LAND/POE/STEVENSON/S4

incremental approach to cumulative assessment. In fact, the reason I covered the matters just rehearsed in evidence in chief was that there might have been accusations that he had only addressed combined effects.

41. In its closing submissions the Alliance claimed at para. 14.42 that Mr Stevenson stated in oral evidence that 'tranquillity will be much diminished' if development proceeded. I do not recall such a comment and do not accept that it was made.

Planning Conditions

42. In order to ensure effective delivery of the landscape enhancements that are integral to the Carnedd Wen wind farm and habitat restoration project, RWE has agreed a number of planning conditions.
- 42.1 The conditions envisage a series of environmental implementation plans to ensure the transformation of the site from spruce plantations to a more traditional open peat landscape. Whereas the immediate intention of these plans is to provide for the effective management of forestry, drainage, peat and wildlife habitats, etc, especially during construction of the wind farm, their combined effect will be to assist the landscape transformation described.
- 42.2 The Forestry Management Plan³⁰ includes provision for the retention of woodland plantations in areas of the site where visual screening from the wind farm is considered desirable, include the north-western slope of the site up which the site access passes.
43. The proposed conditions substantially speak for themselves, but I do need to briefly focus on the colour of the proposed wind turbines. This was discussed in the conditions session and you will remember that I supported the position taken by PCC in its May 2014 "Statement on the Matter of Turbine Colour"³¹. Indeed the position of PCC can be found reflected in paras 58-61 of the 2008 ES, and it was given attention in oral evidence by Mr Stevenson. For the reasons given by Mr Stevenson, in the ES and by PCC, a careful selection of colour can make a difference to perceptions of wind turbines and to visual impact, and I urge you to recognise this in the conditions you will advance to the Secretary of State.
44. Further planning conditions agreed by RWE would further ensure that the Carnedd Wen project is implemented in a manner informed by landscape and visual considerations.

Planning Policy Compliance

UK Policy

³⁰ AD-RWE-029

³¹ OBJ-002-016

45. The approach to landscape design and assessment adopted by RWE is consistent with relevant policy provisions of the ***Overarching National Policy Statement for Energy*** (EN-1)³².
- 45.1 Paras. 5.9.5 - 5.9.7 set out the UK Government's broad expectations concerning the assessment of landscape and visual effects undertaken by the applicant. RWE has complied with all relevant provisions in that it has included a landscape and visual assessment in its ES in accordance with published good practice guidance, and has taken into account available landscape character studies - including NRW's LANDMAP resource - and local development plan policy.
- 45.2 The project approach is also consistent with para. 5.9.8 of EN-1, with the potential effects on landscape exerting a significant influence on the design of the proposed wind farm, including its siting, layout and access arrangements.
- 45.3 Paras. 5.9.12 – 5.9.13 of EN-1 address developments outside nationally designated areas that might affect such areas. The need to have regard to the purposes of nationally designated areas is highlighted, and *'the aim should be to avoid compromising the purposes of designation . . .'* (para. 5.9.12), not least through sensitive design. Mr Stevenson's evidence explains how this has been achieved in the current context with respect to Snowdonia National Park.
46. The ***National Policy Statement for Renewable Energy Infrastructure*** (EN-3)³³ provides additional policy guidance on landscape and visual considerations, including guidance relating specifically to onshore wind projects. Relevant provisions include the following.
- 46.1 Para. 2.4.2 states that *'proposals for renewable energy infrastructure should demonstrate good design in respect of landscape and visual amenity . . .'* The influence of landscape and visual amenity on the design of the Carnedd Wen project is described in the 2008 ES, subsequent SEI and the evidence of Mr Stevenson.
- 46.2 Section 2.7 of EN-3 addresses onshore wind specifically. According to para. 2.7.17, *'The time-limited nature of wind farms, where a time limit is sought by an applicant as a condition of consent, is likely to be an important consideration for the IPC when assessing impacts such as landscape and visual effects and potential effects on the settings of heritage assets. Such judgements should include consideration of the period of time sought by the applicants for the generating station to operate and the extent to which the site will return to its original state may*

³² CD-COM-001

³³ CD-COM-002

also be a relevant consideration'. Carnedd Wen is a time-limited and reversible proposal.

46.3 Para. 2.7.48 – 2.7.49 of EN-3 state that:

2.7.48 Modern onshore wind turbines that are used in commercial wind farms are large structures and there will always be significant landscape and visual effects from their construction and operation for a number of kilometres around a site.

2.7.49 The arrangement of wind turbines should be carefully designed within a site to minimise effects on the landscape and visual amenity while meeting technical and operational siting requirements and other constraints.

Again, the 2008 ES, subsequent SEI and the evidence of Mr Stevenson explain how RWE has pursued this design approach.

Welsh Policy

47. ***Planning Policy Wales*** (Edition 6, Welsh Government, February 2014)³⁴ sets out landscape policies in Chapter 5: *Conserving and improving natural heritage and the coast*. It is noteworthy that PPW6 presents its landscape management provisions in the context of wider environmental considerations, including biodiversity and the management of soils as a carbon store (para. 5.1.2), which is the approach adopted for Carnedd Wen. This holistic approach is evident also in section 5.3 of PPW6, which identifies *'measures to conserve landscape and biodiversity'*.
48. Para. 5.3.4 of PPW6 outlines the statutory purposes of National Parks, and para. 5.3.7 advises that *'the duty to have regard to National Park and AONB purpose applies to activities affecting these areas, whether those activities lie within or outside the designated areas'*.
49. To inform appropriate provisions for renewable energy in development plans, paras. 12.8.18 and 12.9.2 of PPW advise local planning authorities to undertake assessments of potential renewable energy resources in their areas. Powys CC has undertaken such an exercise (*The Renewable and Low carbon Energy Assessment*, Aecom, October 2012)³⁵.
50. The Aecom report examines the potential contribution of each of the principal renewable energy sources including, on pp 22-32 of the report, from wind. As Figure RWE-3 of the Hearing Statement for the opening session³⁶ of the current inquiry shows, the central zone of SSA area B, which accords closely with the boundary of the proposed Carnedd Wen wind farm site, is one the largest areas of Powys remaining for potential wind farm development, once identified constraints including National Park boundaries are taken into account. This latest analysis provides

³⁴ RWE-PLA-03

³⁵ CD-RWE-PLA-001

³⁶ RWE-006

further justification for the favourable consideration of Carnedd Wen for a strategic wind energy development. The Aecom report demonstrates that, if one follows the approach recommended in PPW para. 12.8.18, Carnedd Wen emerges as a leading contender for wind energy development quite apart from the strategic imperatives identified in TAN 8.

51. ***Planning Policy Wales Technical Advice Note 8: Planning for Renewable Energy*** (Welsh Government, July 2005)³⁷ provide guidance on the identification of sites for strategic wind farm development. Para. 2.9 of TAN 8 describes the general characteristics of SSAs. Four of the seven characteristics are landscape-related, confirming that landscape and visual considerations exerted a significant influence on SSA designation. The Carnedd Wen site accords with all of these landscape criteria, being:
- an upland area (typically over 300m above ordnance datum) which contains a dominant landform that is flat (plateau) rather than a series of ridges;
 - generally sparsely populated;
 - dominated by conifer plantation and/or improved/impoverished moorland;
 - with a general absence of nature conservation or historic landscape designations.
52. Para. 2.10 of TAN 8 identifies some local issues for local planning authorities to consider in order to secure the best outcomes from wind farm development in SSAs. Landscape-related considerations that reflect the suitability of Carnedd Wen for wind energy development include:
- the extent of tree-felling;
 - opportunities to enhance, extend or re-create habitats of significant wildlife or landscape value;
 - local historic and landscape considerations.
53. The potential for strategic wind farm development at Carnedd Wen was reaffirmed by subsequent refinement studies, including the TAN 8 Annex D Study of Strategic Search Areas B (Carno North) and C (Newtown South) Final Issue Report, 2006³⁸, and the Local refinement of TAN 8 Strategic Search Areas B and C Review Exercise 2008³⁹, both prepared for Powys CC by Arup. Both studies took the presence of Snowdonia National Park into account.

³⁷ CD-COM-016

³⁸ CD-COM-017

³⁹ CD-COM-018

Local Policy

54. According to part B in policy SP12: *Energy Conservation and Generation of the Powys Unitary Development Plan 2010*⁴⁰ 'proposals for energy generation from renewable sources will be approved providing that they meet the landscape, environmental, amenity and other requirements set out in this plan'.
55. General landscape protection provisions are set out in policy ENV2 of the adopted Powys UDP. As noted above, PCC accepts that the effects with respect to Snowdonia National Park have been satisfactorily addressed in the context of this policy (para 8 of SoCG with RWE)⁴¹. RWE's habitat restoration proposals are consistent with UDP policy ENV9: woodland planting, part 6 of which seeks to ensure that '*the integrity of extensive wild, open and undeveloped tracts of land and other upland landscape, which it is important to conserve in its own right, for landscape conservation, nature conservation, recreation or grazing purposes remains unaffected*'.
56. 3.35 Policy E3 wind power includes the following provisions with respect to landscape:

Policy E3 - wind-power

Applications for wind farms including extensions to existing sites and individual wind turbine generators will be approved where:

1. They do not unacceptably adversely affect the environmental and landscape quality of Powys, either on an individual basis or in combination with other proposed or existing similar developments. Where the cumulative impact of proposals in combination with other approved or existing wind farms would be significantly detrimental to overall environmental quality they will be refused ...

57. The policy was not cited by the County Council in its original landscape objections to the Carnedd Wen wind farm and habitat restoration project. On the basis of the evidence presented by RWE to this public inquiry, the Carnedd Wen project provides no offence to UDP policy E3(1).

Analysis of Policy

58. The above summary of landscape policy highlights several consistent themes running through policy at all levels, including the need to:
- 58.1 balance landscape and other environmental effects against the clearly-expressed need to bring forward new renewable energy generation capacity in suitable locations;
- 58.2 have regard to the presence of nationally-designated landscapes, but to not to regard this as a reason for refusal *per se*;

⁴⁰ CD-CON-003-PLA-013

⁴¹ RWE-PCC-SOCG-LAND-SSA-B

- 58.3 have regard to the time-limited nature of wind farm development and the reversibility of any adverse effects;
- 58.4 ensure that detailed consultations take place between wind farm developers and organisations responsible for landscape management and protection;
- 58.5 view landscape protection in the context of climate change, biodiversity, soil protection and land management objectives;
- 58.6 adopt a strategic approach to the siting of large wind farms in Wales, and to refine strategic designations in the light of local circumstances;
- 58.7 consider the individual and cumulative effects of a proposal.
59. All of these core requirements have either been met or are pertinent to the determination of the Carnedd Wen application, and the performance of the project against specific policy objectives has been highlighted at relevant points.
60. Importantly, there is a clear recognition at a national and strategic policy level that wind farms will be visible features in the landscape and will affect the character of the surrounding landscape. It is inevitable that some significant landscape and visual effects will result. It was partly with this concern in mind that the Welsh Government adopted the Strategic Search Area approach for strategic wind farm development in TAN 8⁴². TAN 8 identifies landscapes best suited to accommodating strategic wind farm development, consistent with the 'all-Wales' approach advocated in para. 12.8.13 of PPW⁴³. TAN 8 has been drafted with the specific characteristics of wind farms in mind. A corollary of this approach is that most of the Welsh landscape will not host strategic wind farm development. The strategy will only work if a permissive approach is adopted to wind farm proposals in those areas of Wales identified as being best suited to large wind farm development – the SSAs.
61. The urgent requirement for new renewable energy generation capacity was acknowledged in the opening session of the current public inquiry, and the Carnedd Wen project responds to this need. However, when weighing the landscape and visual effects of the project from a planning perspective, a significant distinguishing feature of the current proposal is the habitat restoration strategy that forms an integral part of the project. The proposed clear-felling of 1,409 ha of coniferous plantations and the restoration of 459 ha of peat bog will have a beneficial and transformative effect on the landscape of Carnedd Wen. The habitat restoration strategy also includes the selective planting of broadleaved trees in valleys on the site, assisting further the reversion to a more natural landscape. As shown above, the value of such benefits is widely acknowledged in relevant planning policy.

⁴² CD-COM-016

⁴³ RWE-PLA-03

62. Significant weight should attach to these integral scheme benefits, which accord with the various of the landscape policy provisions identified above, including paras. 5.9.22-23 of EN-1⁴⁴ on landscape mitigation, para. 2.4.2 of EN-3⁴⁵ on the need for good design, para. 5.1.2 of PPW concerning the Welsh Government's objectives for the conservation and improvement of the natural heritage, and para. 2.10 of TAN 8 concerning opportunities to enhance, extend or recreate habitats of significant wildlife or landscape value. The approach is also consistent with Policy ENV2: *Safeguarding the landscape* of the Powys UDP, which requires *inter alia* that projects should contain appropriate measures to ensure the satisfactory integration into the landscape.
63. Against these landscape benefits must be balanced two considerations which will now be considered in turn – the relationship of the wind farm and Snowdonia National Park, and the acceptability or otherwise of the five wind turbines on the north-eastern edge of the project that Powys CC would prefer to have deleted.

The National Park

64. Carnedd Wen lies outside of any protective landscape designation. However, the presence to the north-west of Snowdonia National Park has, as noted, influenced the layout and design RWE's proposals as well as informing some objections to the project.
65. The Environment Act 1995⁴⁶ imposes a general duty to have regard to the purposes of National Park designation when exercising any functions in relation to or affecting land in a National Park. The purposes of a National Park are to:
- conserve and enhance the natural beauty, wildlife and cultural heritage of the park;
 - promote opportunities for the understanding and enjoyment of the special qualities of the park, by the public.
66. A National Park Authority also has a duty to seek to foster the social and economic well being of the local communities within the Park area.
67. In considering the weight to be given to the effects of the proposed wind farm on Snowdonia National Park it is important to acknowledge that such effects can only be indirect, as no part of the proposed development lies within the National Park. As acknowledged by Capita Symonds⁴⁷ (see paras **29-31** above), an effect of the reduced wind farm layout submitted by RWE in 2011 is to '*reduce or eliminate effects on areas to the north around to the west, particularly in the lower parts of the landscape within the National Park and along the A458 corridor*'. Views that would remain

⁴⁴ CD-COM-001

⁴⁵ CD-COM-002

⁴⁶ CD-VATT-LEG-005

⁴⁷ CD-RWE-LAN-03

of the proposed wind farm from within the National Park would generally be from more elevated positions at greater range from the wind farm than the closest parts of the National Park. The significance of effects on views out of the National Park diminishes with distance.

68. There are various examples of wind farm developments adjacent to National Parks and AONBs. Cemmaes 1 and 2 wind farm in SSA-B is located c. 3 km from the southern edge of Snowdonia National Park. Elsewhere, Kirkby Moor wind farm is less than 1 km from the boundary of the Lake District National Park, and was approved following a call-in. Wharrels Hill wind farm is a similar distance from the boundary of the Lake District National Park, and the Carsington Pastures wind farm, which was allowed on appeal and proceeded following an unsuccessful High Court challenge, lies approximately 2 km from the boundary of the Peak District National Park. Other examples could be cited, including the Goonhilly wind farm that lies within the AONB on the Lizard peninsula.
69. Another case of interest in the current context is the Den Brook wind farm in Devon (CD-COM/INS/007)⁴⁸, which lies c.5.5 km from Dartmoor National Park. The project was considered at appeal twice, with the first decision being quashed by the Court of Appeal. In both instances the Inspector concluded that the appeal should be upheld, and in both instances the Inspector concluded that the distances between the wind farm and the National Park and the main focal points of visitor interest were such that there would be no significant harm to the natural beauty, character, qualities or setting of Dartmoor, nor any conflict with the purposes of national park designation.
70. Caution must obviously be exercised in acknowledging such precedents because the landscape and visual circumstances of any development will be particular to that project. However, in none of the developments cited was it concluded that the wind farm would significantly compromise the purposes of National Park or AONB designation.
71. On this basis and having regard to the detailed technical evidence of Mr Stephenson, it cannot credibly be concluded that the Carnedd Wen wind farm would compromise the purposes of national park designation. This conclusion is consistent with para. 5.9.13 of EN-1⁴⁹ (*The fact that a proposed project will be visible from within a designated area should not in itself be a reason for refusing consent*) and para. 5.3.7 of PPW⁵⁰. Simply put, a holiday or day out in Snowdonia will offer the same opportunities to understand and enjoy the natural beauty, wildlife and cultural heritage of the national park whether or not the Carnedd Wen wind farm is built. A further implication of this is that the social and economic well being of the local communities within the Park area would also be unaffected, a matter considered further in evidence presented to session 4 of the current public inquiry.

⁴⁸ CD-COM-INS-007

⁴⁹ CD-COM-001

⁵⁰ RWE-PLA-03

72. Although I have not explicitly addressed the evidence of Mr Watkins on behalf of the Alliance (he did not appear and could not be cross-examined) I will, nonetheless, refer to a useful commentary in paras 50-58 of his Session 2 proof⁵¹ on the ecosystems approach to natural resource management, which is being promoted through the Living Wales programme, and which in turn is being promoted by the Welsh Government. I refer to Mr Watkins' proof for a description of the ecosystems approach. The approach which has been taken to the Carnedd Wen development is entirely consistent with the ecosystems approach to natural resource management, as described in Mr Watkins' proof. Specifically, the development achieves a substantial positive improvement to the landscape and bio-diversity while at the same time playing a part in tackling the adverse effects of climate change. Therefore, to the extent that you give weight to the ecosystems approach, it is supported by the Carnedd Wen development.
73. For all these reasons, it is concluded that the proposed wind farm would be compatible with the presence of the National Park, even before the temporary nature of the wind farm and benefits to Park setting arising from the Carnedd Wen habitat restoration strategy are taken into account. The balance of benefit and disbenefit weighs clearly in favour of the proposals with respect to the National Park in planning terms.

Wind Turbines R23, R26, R28, R29 and R30 ('the Carnedd Wen five')

74. Evidence on the case for retaining or deleting these wind turbines was heard during inquiry session 2. Mr Stevenson pointed out that the removal of the five turbines would result in a 'thinning' of wind turbines in identified viewpoints to the north-east, as opposed to the complete removal of turbines from the view. From a planning perspective the balance to be struck is between the landscape and visual benefit of this 'thinning' and the consequences of losing five turbines that, in other circumstances, would constitute a wind farm in their own right, with a generation capacity of up to 15 MW. As I put to Mr Russell-Vick in XX (he did not accept the point) there would need to be fundamental difficulties with these turbines to warrant their rejection. Mr Russell-Vick confirmed in XX that the concerns of PCC related to Carnedd Wen alone rather than to any cumulative effects.
75. As to the mechanism for any removal of the Carnedd Wen five, this can be achieved by condition. In my view, there is adequate environmental information to support the issue of a consent and permission for a 45 turbine scheme. You have sufficient environmental information to differentiate between the Carnedd Wen five and the remainder of the proposed wind farm.
76. The conflicting positions of PCC and RWE are clear in the evidence before you. There are no methodological differences to resolve between the two

⁵¹ ALL-LAND-POE-WATKINS-SSA-B-03

witnesses. The visual material required to supplement your site visit comprises Mr Stevenson's Session 2 Appendices 4 and 5⁵² and Mr Russell-Vick's Appendix A⁵³ - noting, however, that his photographs PRV 3 and 4 do not include wirelines and (as put to him) do not greatly assist you. However, PRV 5 is a useful aid as it colour codes the Carnedd Wen five wireframes. I think it is agreed between Mr Stevenson and Mr Russell-Vick that the controlling viewpoints for the purposes of your assessment are V and Z within Mr Stevenson's Appendix 4, with some help to be obtained from vpU (found in Mr Russell-Vick's Appendix A and in Mr Stevenson's Appendix 4).

77. The baseline landscape character and visual amenity of PCC's area of concern, the Banwy valley, is well described by both witnesses. There are no material disagreements about the baseline in terms of quality, value or character.
78. It was noted by Mr Russell-Vick that the Carnedd Wen five lie outside the 2008 Arup refined TAN8 boundary, although within the TAN8 boundary itself. In my view limited weight can be attached to this. As I believe is agreed with PCC, it is the TAN8 boundary that matters and, emphatically, the detailed assessments before the inquiry.
79. It is worth drawing to your attention in closing submissions my XX of Mr Russell-Vick concerning the experience of drivers approaching the National Park. By reference to the viewpoints in Mr Stevenson's Appendix 4 views of the Carnedd Wen five will be lost west of vpW. In terms of views from the National Park while on the A458 PCC has no objections. Therefore, the real concern of PCC relates to the views for drivers and passengers along the short stretch of road between vpU and east of vpV, representing a journey time of a couple of minutes. So far as the driving experience is concerned that is the extent of PCC's concerns.
80. As made clear by Mr Stevenson (contrary to the view of Mr Russell-Vick) the impacts about which PCC are concerned are on visual amenity and not landscape character. The two host LANDMAP landscape and visual aspect areas (VSAAs Unit 320 – Banwy Forest – and Unit 571 Pencoed) are attributed low and moderate landscape value respectively. However, these VSAAs are quite distinct from the Llanerfyl Mosaic Farm Lands VSAAs (422) about which Mr Russell-Vick was concerned. Mr Stevenson emphasised his view that, although an important factor, the absence of landscape character effects did not solely relate to the fact of the development being in a different landscape from that hosting the viewpoints of concern, but also to his view that the turbines will simply not be seen as belonging in landscape character terms to the valley floor, but to the uplands. All impacts will be on visual amenity and not landscape character.
81. As to vps U, V and Z (see para. 76 above) I make the following points from the evidence:

⁵² RWE-LAND-POE-APP-STEVENSON-SSA-B

⁵³ OBJ-002-LAND-POE-RUSSELL-APPA1-SSA-B to OBJ-002-LAND-POE-RUSSELL-APPA5-SSA-B

- From no viewpoint do the turbines step outside the moorland landscape context into the landscape of the Banwy valley; and
 - The thinning achieved by the deletion of the Carnedd Wen five would be marginal, not leading to any material reduction in the magnitude of visual effects.
82. The issue of Carnedd Wen five is anticipated by EN-1⁵⁴, paras 5.9.21–23 of which consider the mitigation of landscape and visual effects, noting (*inter alia*) that a reduction in the scale of a development needs to be balanced against the reduction in function, such as a reduced electricity output. Similarly, para. 2.7.51 of EN-3⁵⁵ advises that ‘*It is unlikely that either the number or scale of wind turbines can be changed without significantly affecting the electricity generating output of the wind farm. Therefore, mitigation in the form of reduction in scale may not be feasible*’. In other words, any adverse landscape and visual effects should be balanced against the need for the project.
83. In the current situation, weight should attach to the fact that there would still be wind turbines in the view if the five machines identified by PCC were removed. There would be a substantial loss of generation capacity for very little landscape or visual gain.
84. I note at this point the observation of Mr Carpenter for PCC in para 4.33 of his closing session hearing statement that in respect of the Carnedd Wen five “the matter is finely balanced”⁵⁶. While Mr Carpenter’s judgment is that the overall harm arising from Carnedd Wen clearly outweighs the benefits if the five turbines remain within the scheme, it is clear that, on behalf of PCC, Mr Carpenter feels that there is a fine balance to be struck. In the view of RWE, there needs to be something fundamentally wrong with the Carnedd Wen five to warrant their objection. There is not.

MATTER 5

“The individual and combined impact of construction traffic on the surrounding locality, including transportation access routes and traffic management, taking into account the cumulative impact with other wind farms in Powys area which have already been granted planning permission or where planning permission has been applied for.”

Common Ground

85. Four of PCC’s original reasons for objecting to the Carnedd Wen project related to transport and highways considerations. The objections reflected concerns over cumulative effects, the absence of a strategic Transport Management Plan (sTMP) and alleged non-compliance with

⁵⁴ CD-COM-001

⁵⁵ CD-COM-002

⁵⁶ OBJ-002-PLANNINGBALANCE-POE-CARPENTER

PPW and development plan policy on the need for an acceptable highways access and the environmental effects of construction traffic.

86. Substantial work has been undertaken with the Welsh Government, highways authorities and police to provide the confidence that construction traffic can be properly managed effectively, including abnormal indivisible loads (AILs). This work has paid particular attention to the cumulative effects of more than one wind farm being developed in SSA-B and SSA-C, and includes a sTMP that has Welsh Government approval.
87. In September 2013 RWE, PCC and Welsh Government Transport agreed a statement of common ground⁵⁷ covering matters including the methodology for the transport assessment, site access from the A458, construction traffic estimates and a list of transport planning conditions which, with further refinement, have been submitted.
88. In paras 4.1.1 and 4.1.2 of PCC's Statement of Case for Session 2⁵⁸ of the public inquiry, the Council confirmed that it had no objection in principle to the AIL delivery route proposed for Carnedd Wen and no objection also in relation to general construction traffic. Subject to the implementation of relevant plans and conditions there are no outstanding objections in relation to transport matters from the Welsh Government, PCC or the police. Shropshire CC is maintaining its objection⁵⁹.

Carnedd Wen Alone

89. The detailed outcome of the dialogue between RWE and the highways authorities and other interested bodies is explained in chapter 14 of RWE's 2013 SEI⁶⁰ and evidence presented by Mr Atkinson to public inquiry sessions 2⁶¹ and 4⁶². Whereas the original development proposal envisaged two site accesses from the A458, a single site access from the A458 is now proposed. This has been designed to accord with trunk road standards⁶³ and would be laid out to facilitate the movement of all site clearance and construction traffic. As confirmed in section 14.4.1 and appendix 14.3 of the 2013 SEI, the highway authority responsible for the A458 trunk road, the Welsh Government (Transport), has approved the proposed access arrangements, and a Stage 1 Road Safety Audit has been undertaken (Appendix 1 to Mr Atkinson's evidence to session 2 of the current public inquiry).
90. Mr Atkinson has also demonstrated to the satisfaction of the Welsh Government and PCC (see para 3.61 of the Session 2 proof of Matt

⁵⁷ RWE-PCC-SOCG-TRANS-SSA-B

⁵⁸ OBJ-SOC-SSA-B

⁵⁹ CON-002-004

⁶⁰ AD-RWE-026 to AD-RWE-030

⁶¹ RWE-TRANS-POE-ATKINSON-SSA-B

⁶² RWE-TRANS-POE-ATKINSON-S4

⁶³ CPL-TRA-001

Russell on behalf of PCC⁶⁴) that the approved site access can be optimised at the detail design stage so as to minimise the effects upon existing vegetation (Atkinson proof of evidence for session 2, appendices 2 and 3).

91. In addition, RWE has achieved substantial reductions from previous estimates of overall construction traffic movements upon the adjoining highway network, as a consequence of the sourcing the majority of stone aggregate from on-site borrow pits and a commitment to operate an on-site concrete batching plant.
92. Chapter 14 of the 2013 SEI explains that, with this mitigation in place, the busiest periods for construction traffic (Table 14.6) will occur during Quarters 16 and 22 of the construction programme, amounting to circa 52 and 47 daily movements to and from the site respectively (see Table 14.6 of the 2013 SEI).
93. AIL deliveries are programmed to commence during the last quarter of Year 5 and extend over an eighteen month period. The potential effect upon journey times of the slower moving AIL vehicles, over that of other general construction vehicles, is addressed through the use of 'Passenger Car Units' (PCUs – defined in para. 57 of the 2013 SEI), with AILs attributed 20 PCUs to account for their size and effect upon highway operational capacity, and with other heavy goods vehicles (HGVs) given a value of 2.3 PCUs.
94. It is estimated that, during the busiest period (Table 14.7 of the 2013 SEI), there could be between a 0.05% and 3.88% change to traffic volumes (by direction and expressed as PCUs) along the strategic AIL route from Ellesmere Port to Welshpool and less than 5% through Welshpool town centre. Whilst there would be an increase of approximately 8.66% to 18.25% along the A458 to the west of Welshpool, this increase in absolute terms would only amount to 104 PCUs over a five hour period and can still be regarded as low. It is predicted that there would be less than a 6% change on other parts of the highway network. All of these effects are, of course, short-term.
95. With regard to the evidence of Mr Durgan you will remember that I took Mr Atkinson through this in evidence in chief.⁶⁵ It became clear that there were a number of errors in Mr Durgan's approach which undermined his evidence. Notably:
 - (a) His evidence on alternative traffic estimates was flawed because it did not take account of staff journeys.
 - (b) Mr Durgan asserted that during the summer periods there would be a significant increase in general traffic, although he did not support this assertion with any traffic data. In response Mr Atkinson (oral evidence in chief) took the inquiry to Table

⁶⁴ OBJ-002-TRANS-POE-RUSSELL-SSA-B

⁶⁵ ALL-TRANS-POE-DURGAN-SSA-B

14.6 of 2013 SEI and made it clear that during the third quarter of each year (July-September) volumes of construction traffic would be lower than during other periods of the year, countering effectively the point made by Mr Durgan (but noting again that Mr Durgan produced no figures).

- (c) Contrary to the evidence of Mr Durgan, the PCU conversion factors referred to in para 88 are deliberately higher than reality warrants in order to present worst realistic case. For example, it has been assumed that all loads will be transported to the site in articulated vehicles, whereas in practice a large number of loads will be in two or three axle rigid lorries with a lower PCU conversion factor. As said by Mr Atkinson in evidence in chief a combination of these factors means that a 53% contingency allowance has been built into the traffic estimates.
96. There were other points in Mr Durgan's evidence for sessions 2 and 4⁶⁶ which were effectively rebutted by Mr Atkinson, but my purpose here is not to attack every point that Mr Durgan made. Rather, on the basis of the clarity of Mr Atkinson's evidence, and the errors to which I have drawn attention within Mr Durgan's evidence, it seems to me quite clear that Mr Atkinson's evidence is to be preferred, together with his conclusions.
97. The assessment concludes that, even on the A458 on the approach to the development site where the magnitude of traffic impact would be greatest, the magnitude of change would be regarded as 'negligible'. In terms of significance this would be regarded as 'neutral or slight'. Nonetheless, RWE recognises that traffic management will be an important element of the development's mitigation strategy.

Cumulative Effects

98. I also draw attention in this context to the joint written statement produced on behalf of RWE, RES and Vattenfall in response to the session 4 evidence of Mr Durgan. I commend that joint written statement as an effective rebuttal to the points recorded that Mr Durgan made. During session 4 Mr Atkinson presented evidence on the following transport and traffic effects of the Carnedd Wen project in conjunction with other proposed wind farms in Powys:
- (a) the delivery process and efficient management of transporting wind farm turbine components (AILs);
 - (b) the cumulative effects of and management of other non-AIL construction traffic upon the local and strategic road networks.
99. The Welsh Government (Transport) confirmed in its Statement of Case for Session 4⁶⁷ that Carnedd Wen construction traffic can be managed in

⁶⁶ ALL-TRANS-POE-S4-05

⁶⁷ CON-001-SOC-S4-RWE

accordance with the methodology set out in Sections 1 to 3 of the sTMP and thereby ensure the safety and free flow of trunk road traffic. Accordingly WG(T) has proposed five planning conditions for Carnedd Wen and has requested that these be included with any permission granted by DECC. These requirements are incorporated in substance in the schedule of planning conditions.

100. PCC advised in its Section 5 of its Statement of Case for Session 4⁶⁸ that, in relation to transport:

'PCC judges that the AIL route from Ellesmere Port to the combined sites, set out in the sTMP, is reasonable and appropriate subject to clarifications and Conditions . . . PCC will seek Conditions requiring a common approach to mitigation design and implementation, as well as traffic management, between individual developments utilising the same routes or the same services'.

Planning Conditions

101. RWE acknowledges that the traffic management will be an important element of the proposed development's mitigation strategy (e.g. 2013 SEI, section 14.6, paras. 71-84⁶⁹). The Applicant's proposed strategy focuses upon both the management of general construction traffic at the local level (scheduling, routing and timing of deliveries) and the careful coordination of AIL movements from Ellesmere Port along various trunk roads, through Welshpool town centre and then westwards along the A458.
102. The planning conditions demonstrate how the traffic management strategy would be implemented. They would ensure:
- The submission of design details for the site access from the A458;
 - All AIL movements will be subject to the strategic Transport Management Plan;
 - AIL deliveries will be scheduled and coordinated in accordance with an approved plan;
 - The approval and implementation of highway improvement works before commencement of construction;
 - Surveys of highway structures and necessary works before commencement of construction;
 - A highways condition survey along AIL and other construction traffic haulage routes;

⁶⁸ OBJ-002-SOC-S4

⁶⁹ AD-RWE-026 to AD-RWE-030

- Building condition and structural surveys for properties on the B4381 at Severn Street, Welshpool;
 - The prior approval of a Construction Traffic Management Plan for non-AIL traffic;
 - The prior approval of a Construction Traffic Management Plan for maintenance and decommissioning traffic.
103. At the strategic level, RWE has worked with Renewable UK Cymru and with other wind farm developers in connection with the preparation of the sTMP. All AIL deliveries to the wind farm developments would be co-ordinated and be undertaken with police escorts. This will ensure the movements are made safely, having regard to the interests of other road users and of local communities along the delivery route.
104. At the local level, it is proposed that a site traffic management plan (2013 SEI paragraphs 50, 84 and 91) would be set up and operated by the main contractor. Amongst other things, this would set out the hours of working, the time periods for deliveries and proposed off-site haulage routes. RWE's intention is to control construction traffic and manage deliveries such that they are scheduled to arrive before the morning, or after the evening traffic peaks and generally within the 10:00 – 15:00 period.

Planning Policy

105. The traffic management approach promoted by RWE is consistent with the following policy provisions:
- 105.1 Section 5.13 of EN-1⁷⁰, which addresses the need to undertake a transport assessment in consultation with the highway authorities and to identify appropriate mitigation, including for the construction phase of a project. Para. 5.13.7 highlights the potential to employ planning obligations to mitigate transport impacts and states that, subject to the satisfactory obligations being put in place, *'development consent should not be withheld and appropriately limited weight should be applied to residual effects on the surrounding transport infrastructure'*.
- 105.2 Paras. 2.7.74 – 2.7.82 of EN-3⁷¹, which encourages developers to coordinate AIL deliveries in order to minimise disruption;
- 105.3 Para. 8.7.1 of PPW6⁷², which specifies the matters that should be taken into account when considering development that has transport implications;
- 105.4 The guidance on transport assessment and road access arrangements set out in Part 9 of PPW TAN18: Transport⁷³;

⁷⁰ CD-COM-001

⁷¹ CD-COM-002

⁷² RWE-PLA-03

- 105.5 UDP policy GP1: *development control* of the adopted Powys UDP⁷⁴, parts (A) and (G) of which require development proposals to take into account the needs of all transport users and arrangements for highway access and parking;
- 105.6 UDP policies GP4: highway and parking requirements and T3 transport assessments and travel plans
- 105.7 UDP policy E3: wind power, which states that:

Applications for wind farms including extensions to existing sites and individual wind turbine generators will be approved where ...

5. They do not unacceptably adversely affect the enjoyment and safe use of highways and the public rights of way network, especially bridleways (including during the construction phase).

6. They would be capable of being served by an acceptable means of highway access and any new or improved roads and accesses required would not have unacceptable environmental impacts.

106. It is concluded that the traffic impact of the proposed wind farm at Carnedd Wen is acceptable in planning terms. Appropriate surveys, physical works and traffic management procedures can be secured and implemented by planning conditions or obligations. In planning terms, substantial positive weight should attach to the point that, whether the proposed development takes place in isolation or concurrently with other wind farms, RWE has identified appropriate provisions for the effective management of all construction traffic such that the effects upon the strategic and local highway network will generally be slight or neutral in significance, and temporary in duration. This approach is compliant with relevant planning policy.

MATTERS 6 and 9

“(6) The individual and combined noise generated during construction and from the operation of the proposed developments taking into account the cumulative impact that other wind farms in Powys area which have already been granted planning permission or where planning permission has been applied for.”

“(9) The potential impact of the proposed developments on human health.”

Noise

107. In its original objection to the Carnedd Wen project on 13 March 2012, PCC raised no objection to the noise effects of the proposals.

⁷³ CPL-PLA-013

⁷⁴ CD-CON-003-PLA-013

108. On 4 October 2013 RWE and PCC agreed a statement of common ground in relation to noise matters⁷⁵, which drew the following conclusions:

4.1 Both construction and and operational noise for the Carnedd Wen wind farm can be dealt with by appropriately worded planning conditions. A proposed set of construction noise conditions and an operational noise condition, which is worded in line with the recommendations of the IOA GPG (Institute of Acoustics Good Practice Guide)⁷⁶, are included at Annex A.

4.2 When assessed in accordance with the current best practice methodology, as set out within the IOA GPG, operational noise levels from the Carnedd Wen wind farm are below the relevant noise limits in the proposed noise condition at all times and at all residential dwellings.

4.3. The proposed operational noise limits for Carnedd Wen wind farm have been derived to appropriately account for the potential cumulative effects of noise arising from other wind farms in the region, both existing and proposed, as listed in paragraph 2.7.

109. Evidence was heard during session 4 of the current public inquiry on the need for a safeguarding planning condition on Amplitude Modulation (AM).⁷⁷
110. I refer to the paper submitted for the purposes of the conditions session which discussed the imposition of a condition relating to AM. I also refer to the additional decisions of the Secretary of State in England, sent to you last week – no inquiry document number - in which he has declined to consider the imposition of an AM condition following the approach of the RUK December 2013 recommended condition. For reasons given in the submitted paper, RWE is strongly opposed to the imposition of an AM condition.
111. There are no outstanding objections from statutory bodies in relation to noise.

Conclusions on Evidence

112. RWE's assessment of operational noise has followed the approach recommended in *ETSU-R-97: The Assessment and Rating of Noise from Wind Farms*⁷⁸, in accordance with advice contained in TAN 8⁷⁹ and the National Policy Statement for Renewable Energy Infrastructure (EN-3)⁸⁰. Throughout the noise assessment process, RWE consulted with PCC and secured agreement on all methodologies and noise assessment locations. The assessment included the potential for cumulative noise effects,

⁷⁵ RWE-PCC-SOCG-NOISE-SSA-B

⁷⁶ CPL-NOI-005

⁷⁷ APPLICANTS-NOISE-POE3-BULLMORE-S4

⁷⁸ CPL-NOI-001

⁷⁹ CD-COM-016

⁸⁰ CD-COM-002

taking into account other existing and proposed wind farms in the locality including the proposed Llanbrynmair wind farm.

113. Only the adjacent Llanbrynmair wind farm development was concluded to have potential for cumulative noise impacts with Carnedd Wen. RWE's assessment therefore included the appropriate apportionment of noise limits to properly account for potential cumulative noise effects arising from the Carnedd Wen and Llanbrynmair wind farms.
114. Infrasound, low frequency noise, vibration and health risks have been considered. There is no evidence for health effects caused directly by exposure to the noise and vibration from wind turbines. Government advice reflects the current position on this issue.
115. In my view it is clear that it has been satisfactorily demonstrated that the Carnedd Wen wind farm can be constructed and operated within noise limits derived according to current best practice.

Conditions

116. RWE has proposed a planning condition that would control construction noise in accordance with the relevant British Standard and Code of Practice. A further planning condition and its attached guidance notes address operational noise. It is considered that these planning conditions would provide appropriate protection with respect to noise, and that the conditions meet the relevant tests set out in Welsh Office Circular 35/95.⁸¹ However, for reasons referred to in paragraph 106, RWE does not believe it appropriate to impose a condition to regulate AM.

Planning Policy

117. On the basis of the detailed project-specific and cumulative noise evidence presented to this inquiry by RWE and the extensive common ground agreed with Powys CC on this topic, and subject to the imposition of appropriate planning conditions, it is concluded that the current proposals accord with relevant policy including NPS EN-1⁸² (Part 4 *Assessment Principles* and Section 5.11 *Noise and Vibration*), EN-3 (paras. 2.7.52 - 2.7.62 *Noise and Vibration*), PPW6⁸³ (Section 13.15 *Development management and noise and lighting*), TAN 8 (paras 2.14 – 2.18 *Noise and Low frequency noise*), TAN11: *Noise*⁸⁴ and Powys UDP⁸⁵ policies GP1 *Development Control (part 3 - amenity)*, E3 *Wind Power*, MW6 *Borrow Pits* and MW14 *Noise*.
118. From a planning perspective I believe that substantial weight should be given to Dr Bullmore's conclusion that the proposed Carnedd Wen wind

⁸¹ RWE-PLA-06

⁸² CD-COM-001

⁸³ RWE-PLA-03

⁸⁴ CPL-PLA-012

⁸⁵ CD-CON-003-PLA-013

farm can be constructed and operated fully in accordance with all relevant planning policies, standards and other guidance documents.

Human Health

119. No statutory body is objecting to the Carnedd Wen project on health grounds.
120. Wind farms are a very clean form of electricity generation with no emissions to the atmosphere or water courses under normal operation. Given the general remoteness of the Carnedd Wen site, the potential of the proposed wind farm to affect human health is all the more restricted.
121. However, health concerns are sometimes attributed to adverse effects of wind farms on residential amenity. This should not be a matter for concern in the current context in view of submitted environmental information and Mr Jeff Stevenson’s evidence on the visual component of residential amenity specifically, and of the measures that RWE proposes to protect residential amenity, including:
- 121.1 planning conditions to control construction working hours;
 - 121.2 planning conditions to control wind farm noise (see my submissions on Matter 6);
 - 121.3 a planning condition to control shadow flicker;
 - 121.4 provisions in the Construction Environment Management Plan, proposed by condition, to protect water courses and private water supplies.
122. With these safeguards in place it is concluded that the current project would not give rise to any material effects on human health.

MATTERSs 13, 12 and 7

“(13) The impact of the proposed developments on peat.”

“(12) The impact of the proposed developments on hydrology and hydrogeology, to include impacts on sensitive water features (streams, pond, wetlands); impacts on private water supplies; fisheries and watercourses; and impacts on ground water; and the likely effectiveness of proposed mitigation measures.”

“(7) The individual and cumulative impact of the proposed developments on biodiversity, including the ecological functioning of European Protected Sites e.g. the River Wye Special Area for Conservation (SAC), Berwyn Special Protection Area (SPA) and South Clwyd Mountains (SAC); European Protected Species under the Conservation of Habitats and Species Regulations 2010 (as amended) (“The Habitats Regulations”); and the likely effect of proposed mitigation measures.”

Overview

123. I will deal with matters 13, 12 and 7 in that order. RWE engaged Dr Mills, Mr Edwards, Mr Piper and Dr Lowther as a team in order to address each of these matters, by immediate reference to the objection of NRW dated 16 February 2012. It also utilised the services of Mr Houtmeyers, who has built a number of wind farms for RWE and others. You will remember that each of these witnesses gave evidence at one time in Session 2. RWE has never treated the issues represented in matters 13, 12 and 7 as divisible, partly but not especially because part of the proposed development comprises a very long term (50 years) HRMP. I am convinced that it was the joined up approach of those who became witnesses on these topics which enabled NRW to withdraw its extensive and detailed 2012 objection to the proposed development. That said I deal with the topics individually because they are separate matters for the purposes of your recommendation to the Secretary of State.
124. It is also worth noting that Mr Stevenson was kept closely apprised of all that was happening in terms of the work of Dr Lowther, Mr Edwards, Dr Mills and Mr Piper so that landscape considerations were co-ordinated with peat, hydrological and ecological issues.

MATTER 13 - Peat

Common Ground

125. The survey, interpretation and protection of the site's peat resource has been a particular focus of interest in the Carnedd Wen project, and the subject of extensive technical dialogue with CCW's peat specialists. The 2011 SEI⁸⁶ responded to CCW's original concerns by ensuring that wind turbines would not be sited on peat greater than 1.5m deep and that other infrastructure would, where possible, be placed on peat less than 1.5m deep. Proposed infrastructure was removed entirely from a raised bog at Esgair y Ffordd, and extensive peat probing was undertaken at Ffridd Goch to inform micro-siting.
126. CCW responded to the 2011 SEI in a letter to DECC dated 16 February 2012⁸⁷, objecting to the revised application and raising a number of new concerns in the light of guidance entitled *'Assessing the impact of wind farm developments on peatlands in Wales'*⁸⁸ that CCW had published January 2010. These included the number and spread of peat sampling locations, both over the site as a whole (including the forest); the amount of sampling at infrastructure locations and the representativeness of the peat model for the site. These queries were taken into account during scoping of the SEI 2013 for peat, following further communication with CCW. The 2013 SEI⁸⁹ provided further detail of the methods RWE would apply to protect restore the peatland areas of

⁸⁶ AD-RWE-013 TO AD-RWE-018

⁸⁷ CD-RWE-HYD-10

⁸⁸ CD-CPL-ECO-005

⁸⁹ AD-RWE-026 to AD-RWE-030

Carnedd Wen. Subject to relevant safeguards NRW is no longer sustaining an objection to the Carnedd Wen project on the grounds of its effects on peat.

127. Informed by CCW's earlier concerns PCC's first reason for objection stated that *'The Environment Statement and subsequent Supplementary Environmental Information are unable to demonstrate that significant ecological impacts would not occur from the proposed development and insufficient weight is given to the rising status of peat habitats as a key ecological resource. Effects upon the peat and bog habitats within the site and its environs have not been adequately documented, which has prevented a satisfactory assessment or identification of appropriate mitigation measures'*. Subject again to the safeguards described later in this section, the County Council has now withdrawn this objection.

Conclusions on Evidence

128. Published guidance, survey results, dialogue with consultees and mitigation proposed by RWE are explained in the evidence of Dr Andy Mills⁹⁰, a specialist in peat management. He explains the extent of peat survey work undertaken originally by RWE, and how this was supplemented following discussions with CCW.
129. Dr Mills identifies the relevant industry standards and guidance that were used during the peat survey work. It is noteworthy that RWE also called upon the expertise of its construction managers in Scotland, who offer extensive practical experience of wind farm construction in comparable peatland environments in Scotland. Evidence was presented to session 2 of the current public inquiry by Morgan Houtmeyers of RWE's onshore projects team⁹¹, who demonstrated that the methodologies proposed to construct the wind farm and associated environmental mitigation techniques are practical, appropriate and achievable at Carnedd Wen, and have been demonstrated through wind farms already built.
130. In the light of this experience, the published guidance and CCW's advice, RWE commissioned extensive further peat probing, including samples taken from within the dense Sitka spruce plantations on the site. This probing work increased the total number of sample points within the application boundary from 1,643 to 2,364 (Volume 2 Appendix 12.1 of the SEI 2013). RWE is committed to undertake even more peat-probing post-consent, in order to inform micro-siting.
131. A Peat Management Plan has also been prepared in order to determine the most environmentally responsible way of re-using peat excavated during construction (2013 SEI Volume 4 – Plan 1.5 Peat Management Plan)⁹². In accordance with Scottish best practice, a peat stability assessment was also undertaken to evaluate the potential for peat landslides to occur, based on physical factors associated with

⁹⁰ RWE-PEAT-POE-MILLS-SSA-B

⁹¹ RWE-CONSTRUCTION-POE-HOUTMEYERS-SSA-B

⁹² AD-RWE-029

documented landslides in peatlands. The level of peat slide risk has been defined and mitigation measures were defined in order to protect the peat during construction.

132. The effect of the additional peat depth survey and modelling has been to reduce the estimate of peat excavation volumes at Carnedd Wen from 468,688m³ in 2008, to 252,113m³ in 2011 and 183,842m³ in 2013. This represents a very large reduction in the effects of the wind farm on the peat resource at Carnedd Wen.
133. On the basis of the calculations in the Peat Management Plan, 99.5% of the estimated excavation volume of peat is accounted for in borrow pit restoration, restoration of disused quarries, restoration of forest drains on shallow slopes, shoulder construction on floating roads, landscaping of crane pads and reinstatement around turbine foundations. The residual 0.5% (equivalent to 774m³) could be re-used through restoration of forest drains that have yet to be fully mapped.
134. All of this work was undertaken in close cooperation with RWE's ecology, hydrology, forestry and construction specialists to ensure that the proposed mitigation is practicable and holistic in its approach.

Planning Conditions

135. The measures that RWE proposes to protect and enhance the extensive peat resource of Carnedd Wen need to be viewed in the context of the wider range of environmental management plans that the Applicant is proposing. These are identified in the submitted conditions and include provision for a Habitat Restoration Management Plan⁹³, a Forest Management Plan⁹⁴, a Drainage Management Plan⁹⁵ and a Construction Environmental Management Plan⁹⁶, together with proposed conditions to provide for an Ecological Clerk of Works.
136. The Habitat Restoration Management Plan will incorporate a Peat Management Plan, setting out how peat losses associated with wind farm construction will be minimised and how peat will be used to support the wider habitat restoration and management Plan objectives. As a part of this plan, large areas of peatland on the site which have been degraded by drainage, both directly and through water uptake by trees, will be returned to a more natural function, with higher water tables and better conditions for peat formation.
137. With these plans in place I believe that the peat interest of the site will be well protected.

Planning Policy

⁹³ AD-RWE-029 VOLUME 4 SEI 2013

⁹⁴ AD-RWE-029 VOLUME 4 SEI 2013

⁹⁵ AD-RWE-029 VOLUME 4 SEI 2013

⁹⁶ AD-RWE-029 VOLUME 4 SEI 2013

138. According to para. 2.7.32 of National Policy Statement EN-3⁹⁷:

Onshore wind farm sites within England and Wales may be proposed on peat. Peat is a sensitive habitat that is important for many species of flora and fauna. In some instances, soil disturbance may lead to change in the local hydrological regime which can affect biodiversity. Further, peat is rich in carbon so disturbance of peat can result in a release of carbon stored in soils.

139. In the 2013 SEI, and through the evidence of Dr Mills, RWE has demonstrated how it has embraced these sensitivities. Dr Mills has explained how the peat depth data collected for Carnedd Wen and the peat model derived from it are suitable for the various requirements of this wind farm application. He concludes that the peat is sufficiently dispersed across the site and sufficiently well understood in proximity to proposed infrastructure to determine the most appropriate areas of the site in which wind turbines, tracks and ancillary wind farm infrastructure can be sited.

140. With relevant mitigation in place in the form of the Peat Management Plan, supported by the Peat Model and Peat Stability Assessment, it is my view that the Carnedd Wen project would be compliant with relevant planning policy and guidance including:

140.1 Part 4.3 of EN-1⁹⁸ and part 1.7 of EN-3⁹⁹ concerning compliance with the Conservation of Habitats and Species Regulations 2010¹⁰⁰, which implement the EU Habitats and Birds Directives in England and Wales;

140.2 Para 2.7.36 of EN-3 which advises in respect of peat that *'The assessment should include any effects on biodiversity resulting from the disturbance of important habitats such as peat. Where relevant, the IPC may instruct applicants to provide geotechnical and hydrological information in support of applications, identifying the presence of peat at each site, including the risk of landslide connected to any development work'*.

140.3 Para 5.1.2 of PPW6¹⁰¹, which states that *'The Welsh Government's objectives for the conservation and improvement of the natural heritage are to (inter alia) promote the functions and benefits of soils, and in particular their function as a carbon store'*.

140.4 Planning Policy Wales Technical Advice Note 5: *Nature Conservation and Planning* (2009)¹⁰², including the guidance

⁹⁷ CD-COM-002

⁹⁸ CD-COM-001

⁹⁹ CD-COM-002

¹⁰⁰ CD-CON-003-LEG-001

¹⁰¹ RWE-PLA-03

¹⁰² CD-CON-003-PLA-011

contained in Chapter Four: *Nature conservation in development control: procedures*; and Chapter Six: *Development affecting protected and priority habitats and species*.

140.5 Powys UDP¹⁰³ policy ENV3: *Safeguarding biodiversity and natural habitats*. Although RWE proposes to extract peat only for construction and restoration purposes as opposed to any commercial use of the product, the current proposals are nonetheless consistent with Powys UDP policy MW9: *Peat extraction*, which states that:

Proposals for peat extraction will only be permitted in areas that are already damaged by human activity and where the overall proposal, including the proposed restoration scheme, will lead to an improvement in the site's nature conservation value . . .

141. For these reasons the project also complies with Parts 2 and 7 of Powys UDP Policy E3: Wind Power which requires that:
2. They do not unacceptably adversely affect wild life habitats or species that are of international, national or local importance in accordance with Policies ENV3-7
 7. Applicants are able to demonstrate through land management schemes that there will be adequate mitigation or compensation for any adverse impact on environmental quality, wild life habitats or heritage features.
142. By the means described, RWE aims to restore approximately 459 hectares of blanket bog habitat that currently lies beneath conifer plantation, together with a further 131 hectares that occupies relatively small and often linear areas between plantation blocks. Whether viewed individually or in conjunction with the wider habitat restoration initiative of which peat management forms a part, these are environmental benefits on a national scale of significance that should weigh heavily in favour of the project in the overall planning balance.

MATTER 12 - Hydrology and Hydrogeology

Common Ground

143. Following submission of the ES¹⁰⁴ and SEI 2011¹⁰⁵ CCW objected to the potential effects on peat drainage as a consequence of construction of wind farm infrastructure. CCW also expressed concern over the potential significant effect on the Pen Llyn a'r Sarnau Special Area of Conservation (SAC) as a result of sediment runoff during felling operations, and the potential effects on the freshwater lakes - Llyn Gwyddior and Llyn Coch-hwyad - as a consequence of proposed felling and construction activities.

¹⁰³ CD-CON-003-PLA-013

¹⁰⁴ AD-RWE-003 to AD-RWE-009

¹⁰⁵ AD-RWE-013 to AD-RWE-018

144. Following further dialogue with CCW, RWE responded to these objections in the 2013 SEI¹⁰⁶. NRW has since lifted its objections to the proposed development on ecological and hydrological grounds and confirmed that any potential adverse effects associated with these interests can be addressed through planning conditions and obligations. A Drainage Management Plan and other environmental plans are identified in the planning conditions¹⁰⁷.
145. The first three of PCC's original reasons for objecting to the Carnedd Wen project reflected concern over the effects of the proposal on habitats and alleged shortcomings in the assessment of these effects. Having regard to the 2013 SEI, the environmental plans that RWE proposes to protect and enhance the hydrological characteristics of the site and the amended position of NRW, the County Council is no longer sustaining any objection to the Carnedd Wen on these grounds.

Conclusions on Evidence

146. In his evidence to session 2 of the current public inquiry¹⁰⁸, Dr Alan Edwards explained how he has worked closely with Mr Piper, Dr Lowther and Dr Mills, co-witnesses in specialist areas of forestry, ecology and peat respectively, to assess the potential effects of the proposed development on the site's hydrology and hydrogeology and to identify appropriate mitigation measures to minimise adverse effects. Further forest, habitat restoration, peat and drainage management and mitigation measures were identified and used in the iterative design of the proposed development.
147. Dr Edwards has identified the baseline geological and hydrological conditions on the Carnedd Wen site, noting that the site application boundary straddles the watershed of the River Severn and the Afon Dyfi (River Dovey), which flow to the east and west of the site respectively. The Afon Dyfi flows to the coastal Pen Llyn a'r Sarnau SAC, which is designated for a range of features including estuaries and European otter. The Dyfi Estuary is designated as an SPA for its ornithological interest. The proposed development is wholly outside the Pen Llyn a'r Sarnau SAC and Dyfi Estuary SPA, but three of the five principal catchments draining the site (Afon Dugoed, Afon Tafolog and Afon Cwm) form part of the Afon Dyfi catchment.
148. A detailed review of water resources established that, whilst there are many water abstractions within 3km of the application site boundary, no water abstraction is recorded closer than 500 metres from proposed wind farm infrastructure.
149. With appropriate controls and mitigation measures there would be no significant adverse effect from the proposed development on any surface watercourses. This conclusion includes consideration of flood risk.

¹⁰⁶ AD-RWE-026 to AD-RWE-030

¹⁰⁷ AD-RWE-029 VOLUME 4 PLANS

¹⁰⁸ RWE-HYDRO-POE-EDWARDS-SSA-B

Similarly, the development would have no significant impact on the geology or hydrogeology of the area. Significantly, the proposed habitat restoration works would seek to restore conditions that would have prevailed on the site prior to the planting of the forest and the draining of the peat to that end. These benefits are considered further under Matters 7 and 13.

150. The hydrological and hydrogeological assessment of the Carnedd Wen habitat restoration and wind farm project demonstrates that, with appropriate site procedures and mitigation measures, there would be no significant adverse effect on any surface watercourses that might be potentially affected by runoff, sedimentation and drainage from the wind farm. This includes Pen Llyn a'r Sarnau SAC and the Llyn Gwyddior and Llyn Coch-hwyad lakes.
151. Equally the development would have no significant adverse effects on the geology or hydrogeology of the area, including saturated peat, groundwater, aquifers, local water supplies and geological sites of interest.

Planning Conditions

152. The safeguards that RWE proposes are described under Matter 7. A series of integrated environmental plans are provided in planning conditions, including a Drainage Management Plan and a Peat Management Plan¹⁰⁹.
153. The comprehensive measures that are incorporated to protect private water supplies specifically were considered during session 2 of the public inquiry. Works near to and within watercourses would only be undertaken with prior approval from NRW and where appropriate in accordance with a Flood Defence Consent. Mitigation measures will be enforced by means of a Construction and Environment Management Plan (CEMP). The CEMP would be submitted to PCC for approval prior to development commencing on site¹¹⁰.

Planning Policy

154. A review of Dr Edwards' evidence and the draft environmental plans already identified against relevant policy against relevant policy confirms that the comprehensive approach that RWE has taken to the protection and enhancement of the hydrological and hydrogeological interest of Carnedd Wen is consistent with the following policy requirements:

¹⁰⁹ AD-RWE-029 VOLUME 4 PLANS

¹¹⁰ AD-RWE-029 VOLUME 4 PLANS

- 154.1 Parts 5.3: biodiversity and geological conservation, 5.7: flood risk and 5.15: water quality and resources of EN-1¹¹¹;
- 154.2 Relevant provisions of PPW6¹¹² Chapter 13: Minimising and managing environmental risks and pollution, including section 13.2: Flood risk and climate change; section 13.4: Development Management and Flood Risk and section 13.12: Development management and improving the quality of air and water.
- 154.3 PPW Technical Advice Note (TAN) 15: Development and Flood Risk (2004)¹¹³, including section 7: *Assessing flooding consequences* and section 8: *Surface water run-off from new development*;
- 154.4 The following policies of the Powys UDP¹¹⁴:
- *Policy SP10: Minerals developments* – which defines the circumstances in which mineral extraction would be permitted, including the local interest in such extraction taking place;
 - *Policy SP14: Development in flood risk areas* – concerning the need to avoid development in areas of high risk of flooding;
 - *Policy ENV 3: Safeguarding biodiversity and natural habitats* – including ‘habitats and features that are of importance for wild flora and fauna’;
 - *Policy MW1: Mining and waste disposal* – including parts 5 (protection of watercourses and groundwater), 6 (avoidance of risks to water and soil), 7 (protection of aquifers and groundwater) and 9 (protection of natural watercourse systems);
 - *Policy MW6: Borrow pits* – encouraged as a means of reducing road traffic ,subject to environmental protection provisions including the need for restoration and aftercare;
 - *Policy MW18: Geomorphology, archaeology and history* – ensuring that these aspects of minerals extraction sites are protected;
 - *Policy DC9: Protection of water resources* – ensuring *inter alia* that development is not detrimental to existing water abstractions, fisheries, amenity or nature conservation;
 - *Policy DC11: Non-mains sewage treatment* – which is permissible subject to identified safeguards where connection to mains sewerage is unavailable;

¹¹¹ CD-COM-001

¹¹² RWE-PLA-03

¹¹³ CD-VATT-HYD-001

¹¹⁴ CD-CON-003-PLA-013

- *Policy DC13: Surface water drainage* – including the protection of wetland habitats and the need to avoid unacceptable flooding;
- *Policy DC15: Development on unstable or contaminated land* – including provisions requiring site investigation and measures to prevent ground instability or contamination;
- *Policy E3: Wind power*, of which Part 2 affords protection for wild life habitats and species of acknowledged importance, while Part 7 requires applicants to demonstrate adequate mitigation through land management schemes

155. The restoration of the site’s natural hydrological characteristics is an integral part of RWE’s proposals to restore the habitat of Carnedd Wen. Given the geographical extent of the hydrological restoration works, the detailed implementation plans that RWE has prepared to ensure its delivery and the lack of outstanding objection from local and statutory bodies, it is my view that substantial positive weight should attach to the hydrological benefits of the project in the overall planning balance.

MATTER 7 - Ecology

Common Ground

156. The evidence presented to session 2 of RWE’s ecologist¹¹⁵, Stewart Lowther, explained how RWE maintained an effective dialogue with CCW in order to arrive at an agreed approach to the protection and enhancement of the ecology of the Carnedd Wen site during the construction and operation of the proposed wind farm. As a result, no remaining issues of substance exist between NRW and RWE on ecological matters, provided that the Habitat Restoration Management Plan and other environmental plans identified in planning conditions are secured and implemented as both parties intend.
157. The first three of PCC’s original reasons for objecting to the Carnedd Wen project reflected concern over the ecological effects of the proposal and alleged shortcomings in the assessment of these effects. Having regard to the 2013 SEI, the environmental plans that RWE proposes to protect and enhance ecology and the amended position of NRW, the County Council is no longer sustaining any objection the Carnedd Wen on any of the grounds originally specified.

Conclusions on Evidence

¹¹⁵ RWE-ECOLOGY-POE-LOWTHER-SSA-B

158. In his evidence Mr Lowther explains how the assessment of ecological effects and the accompanying dialogue with CCW evolved, and how this process informed the refinement of the wind farm design and the preparation of SEI. In particular, he describes how RWE responded to the following outstanding concerns raised by CCW following the submission of the 2011 SEI¹¹⁶:
- the likely effects on peatlands and the extent of blanket bog;
 - the effects of forestry felling;
 - effects on freshwater lakes;
 - effects on the Berwyn SPA and the Pen Llŷn a'r Sarnau SAC;
 - the requirement to further the conservation and enhancement of the features for which the Corsydd Llanbrynmair SSSI was designated.
159. An innovative and noteworthy feature of RWE's response has been the integrated approach to the survey and proposed future management of peat beneath the forest canopy, involving the team's ecologists, hydrologists, drainage engineers, forestry consultants and peat specialists. A model of peat distribution across the site has been developed, as explained in the Habitat Restoration and Management Plan (HRMP) that accompanied the SEI 2013¹¹⁷.
160. Upon completion of additional peat probing work in 2012/13, further refinements were made to the layout of the proposed wind farm. These included the micrositing of three turbines, a reduction in the length of access track and the removal of an access track that crossed blanket bog between turbines R48 and R49. A protocol has been agreed with NRW whereby, prior to final micrositing of the wind farm infrastructure, surveys will be undertaken within the micrositing areas and agreement reached with relevant stakeholders to locate infrastructure on the areas of shallowest peat, or those supporting the least sensitive habitats.
161. In addition, a Forestry Management Plan¹¹⁸ was provided to explain how forestry operations will take account of the underlying habitats and their potential for restoration. Planned felling operations will result in a much lower impact than would be the case under the established commercial felling plans for the forest that would continue to be implemented in the absence of a wind farm. I also record agreement with NRW that the previously proposed track between T13 and T15 should be deleted (now recorded in the amended submitted plan Figure 1.2).
162. The means by which any adverse effects on the Llyn Coch-hywad and Llyn Gwyddior freshwater lakes and the plant species they support would

¹¹⁶ AD-RWE-013 to AD-RWE-018

¹¹⁷ AD-RWE-029 VOLUME 4 PLANS

¹¹⁸ AD-RWE-029 VOLUME 4 PLANS

be avoided were also set out in SEI 2013. Having reviewed the SEI 2013 NRW has now withdrawn its objection with regard to the effects on freshwater lakes.

163. In terms of potential effects on the Berwyn SPA NRW advises that an appropriate assessments is required to demonstrate that the project would not have an adverse impact on the integrity of the Berwyn SPA. It further advises that likely significant effects on the Pen Llŷn a'r Sarnau SAC could be avoided if construction work was undertaken in accordance with certain conditions (now submitted).
164. Following a review of the status of black grouse and hen harriers in the area, and considering their absence and the disproportionately large area of the site that was proposed to be managed for them, the habitat restoration plans within Carnedd Wen were re-focused on the restoration of upland habitats and specifically blanket bog. Active blanket bog is a European priority habitat at both the European and national levels. Other target habitats on the site include upland heathland, mires and upland oak woodland, which are habitats of principal importance in Wales. Moreover, in proposing the removal of conifer woodland from the Corsedd Llanbrynmair SSSI, the project will further the conservation and enhancement of the features of special scientific interest.
165. The clearance of forestry in order to facilitate the project would result in an adverse effect on woodland songbird populations, although this is of minor significance and would occur in any event, in the course of normal forestry operations.
166. Mr Lowther concludes that the proposed Outline Habitat Restoration and Management Plan, which would be implemented if the overall scheme gains consent, would deliver significant gains to biodiversity that considerably outweigh any remaining negative effects of the proposals. In view of these benefits, NRW has indicated that it agreeable to the approach promoted by RWE. As noted in relation to Matter 4 the habitat restoration and management strategy will also have landscape and visual benefits that should be taken into account in the overall planning balance.
167. I need to clarify one point from the closing submissions of the Alliance. In para. 14.9 of the submissions there seems to be an acceptance that there are now no black grouse on the site at any time of year. However, in 14.28 the Alliance states that it is now accepted that black grouse are present. Para. 14.28 is incorrect – RWE is in agreement with NRW on this point.

Cumulative Effects

168. Cumulative ecological effects are only likely to arise in the case of bird populations and only in combination with the adjacent proposed

Llanbrynmair wind farm. The prevailing habitats on the two sites, and hence their ornithological interests, differ markedly in general terms. However, both schemes require the permanent removal of conifer plantation that currently supports a woodland songbird population that is of a District level of importance, and which includes a number of UK Biodiversity Action Plan species including dunnock, song thrush, lesser redpoll and bullfinch. This would be a significant, although moderate, negative effect that cannot be mitigated, towards which the Carnedd Wen project would make the greatest contribution.

169. No significant cumulative ecological effects were identified between Carnedd Wen and wind farms proposed in SSA-C.

Habitats Regulations Assessment

170. In paras. 50-52 of his proof of evidence Mr Lowther indicated that¹¹⁹, with suitably worded planning conditions and subject to an Appropriate Assessment, it can be clearly concluded that there would be no adverse effects on the integrity of the Berwyn SPA and Pen Llŷn a'r Sarnau SAC, whether alone or in combination with other projects. Mr Lowther contributed to the drafting of the environmental plans referred to in planning conditions, partly with the aim of ensuring that the integrity of European sites will be protected.

Planning Conditions

171. The submitted planning conditions include provision for a Habitat Restoration Management Plan incorporating a Peat Management Plan, a Forest Management Plan, a Drainage Management Plan and a Construction Environmental Management Plan. Planning conditions are proposed to provide for an Ecological Clerk of Works.
172. The proposed Forestry Management Plan would prevent any adverse effects from felling on the component parts of the Corsedd Llanbrynmair SSSI, and the Habitat Restoration and Management Plan would benefit the features for which this SSSI was designated.
173. It is proposed that an Ecological Clerk of Works (ECoW) would be appointed to ensure that the specific mitigation measures are undertaken. In addition, a geotechnical specialist will be appointed to the project for the period of civil design and construction works.

Planning Policy

174. Mr Lowther confirms that the Carnedd Wen habitat restoration project represents one of the largest schemes to restore blanket bog from plantation woodland in Wales, and would certainly be the largest such project to be undertaken without recourse to public funding. He considers that the proposed HRMP would make a significant contribution towards the achievement of Welsh targets for the restoration and enhancement of

¹¹⁹ RWE-ECOLOGY-POE-LOWTHER-SSA-B

blanket bog, upland oak woodland and upland heathland, and would provide a framework for ongoing monitoring and research.

175. A review of Mr Lowther’s evidence and the draft environmental plans against relevant policy confirms that the comprehensive approach that RWE has taken to the protection and enhancement of the ecological interest of Carnedd Wen is consistent with the following policy requirements:
- 175.1 Part 4.3 of EN-1¹²⁰ and part 1.7 of EN-3¹²¹ concerning compliance with the Conservation of Habitats and Species Regulations 2010, which implement relevant sections of the EU Habitats and Birds Directives in England and Wales;
- 175.2 Part 5.3 of EN-1 and paras. 2.7.30 – 2.7.40 of EN-3 concerning the assessment and protection of sites and interests statutorily designated for their biodiversity and geological conservation value;
- 175.3 Relevant parts of PPW6¹²² Chapter 5: *Conserving and Improving natural heritage and the coast*, including guidance on the protection of biodiversity, statutory and non-statutory sites and assets and trees and woodland;
- 175.4 Planning Policy Wales Technical Advice Note 5: *Nature Conservation and Planning* (2009)¹²³, including the guidance contained in Chapter Four: *Nature conservation in development control: procedures*; Chapter Five: *Development affecting designated sites and habitats*, and Chapter Six: *Development affecting protected and priority habitats and species*. TAN5 was cited in Powys CC’s third reason for objecting to the Carnedd Wen project, an objection now withdrawn;
- 175.5 The following policies of the Powys UDP¹²⁴, two of which (ENV3 and ENV6) were cited in PCC’s third reason for objecting to the Carnedd Wen project, an objection now withdrawn:
- *Policy SP3: natural, historic and built heritage* – which requires development proposals to safeguard features natural heritage importance;
 - *Policy ENV3: safeguarding biodiversity and natural habitats* – which seeks to maintain biodiversity and protect natural habitats from adverse forms of development;

¹²⁰ CD-COM-001

¹²¹ CD-COM-002

¹²² RWE-PLA-03

¹²³ CD-CON-003-PLA-011

¹²⁴ CD-CON-003-PLA-013

- *Policy ENV4: internationally important sites* – which sets conservation objectives for European protected habitats, the relevant sites in the current context being Berwyn SPA or the Pen Llŷn a'r Sarnau SAC;
- *Policy ENV5: nationally important sites* - affording protection for sites such as the Corsedd Llanbrynmair SSSI;
- *Policy ENV6: sites of regional and local importance* – giving protection to features of local nature conservation, geological or geomorphological importance;
- *Policy ENV7: protected species* – reinforcing statutory protection provisions.
- *Policy E3: Wind power*, of which Part 2 affords protection for wild life habitats and species of acknowledged importance, while Part 7 requires applicants to demonstrate adequate mitigation through land management schemes.

176. In proposing the removal of conifer woodland from the Corsedd Llanbrynmair SSSI, the project is in keeping with the requirement, under Section 28G of the Wildlife and Countryside Act as amended¹²⁵, for determining authorities to further the conservation and enhancement of the features by virtue of which the site is of special scientific interest.
177. Habitat restoration is an integral part of RWE's proposals and is included in the description of development. Having regard to the national significance of the habitat restoration programme in terms of its scale and scope, the detailed implementation plans that RWE has prepared to ensure its delivery and the lack of outstanding objection from local and statutory bodies, I conclude that substantial positive weight should attach to the ecological benefits of the project in the overall planning balance.

Matter 10

"The impact of the proposed developments on cultural heritage."

Common Ground

178. Cadw has no objection to the current proposals. In its consultation response to PCC in April 2009 it advised that it was satisfied with the EIA methodology and confirmed that no scheduled ancient monuments, registered parks and gardens or historic landscapes would be affected by the proposals.
179. Having regard to Cadw's advice, PCC raised no concern about the effects of the proposals on cultural heritage grounds in its objection to the

¹²⁵ CD-CPL-LEG-004

Carnedd Wen project on 13 March 2012.¹²⁶ There has been no necessity for common ground to be agreed on this topic.

Conclusions on Evidence

180. The EIA for the Carnedd Wen project took account both the direct and indirect effects on cultural heritage. Chapter 10 of the 2011 SEI¹²⁷ considered direct effects on cultural heritage assets on the site, and Chapter 10B considered the indirect visual effects of the proposed wind farm on statutorily designated sites in and around the development site.
181. For current purposes the effects of the proposed development on individual types of asset will briefly be summarised.

Scheduled Ancient Monuments And Other Archaeological Features

182. Chapter 10 of the 2011 SEI identifies the direct effects of the proposed wind farm on scheduled ancient monuments and other features of archaeological interest. Figure 10.1 in volume 3 of the 2011 SEI maps cultural heritage assets on the site. The study indicates that communities have been using the Carnedd Wen uplands since the Bronze Age. 101 sites and features of cultural heritage interest have been identified within the application boundary for the wind farm. No nationally important archaeological sites have been identified, although there are features of regional and local significance.
183. Potential physical effects have been identified for over 30 sites or features located within 150 metres from proposed works, including assets that might be affected by peat regeneration works. Three cultural heritage assets are potentially of high or moderate value – a medieval building platform, a post-medieval road and an eighteenth century turnpike road. Most features of high or medium value will be avoided at the development stage by careful micro-siting in accordance with the policy preference for *in situ* protection. The remainder would be the subject of specific mitigation measures. With mitigation, the effects of turbine and track construction are predicted to be slight. The potential significance of these effects is also assessed as slight.
184. Having regard to the possibility that unknown features might be presented in wooded areas of the site, and to the known features, a written scheme of investigation is proposed with submitted conditions. Provided that the recommended mitigation measures are applied, the direct effects of the scheme both on known and unknown features of archaeological interest are assessed as small.
185. Chapter 10B of the 2011 SEI considers the indirect effects of the proposed Carnedd Wen wind farm on features of archaeological value. Table 10B.7 identifies the predicted indirect effects of the proposed wind farm on scheduled ancient monuments and their settings within 5 km of

¹²⁶ CD-RWE-LAN-02

¹²⁷ AD-RWE-013 to AD-RWE-018

the proposed wind turbines. 14 such assets are assessed, and in all cases there would be no adverse effect (and thus no harm).

Listed Buildings

186. There are no listed buildings within the application site boundary for the Carnedd Wen project.
187. Table 10B.8 in chapter 10B of the 2011 SEI identifies the predicted effects of the Carnedd Wen wind farm on listed buildings and their settings within 2.5 km of proposed wind turbines. 15 listed buildings are assessed, and in no case would there be a significant adverse effect on setting. No harm to any listed building is anticipated. In terms of the approach to be taken to any determined effects on the setting of a listed building, I can adopt paras. 112-114 of PCC's closing submissions, and delete my less well put draft submission. It is, however, clear on the evidence that no difficulty arises for Carnedd Wen under s.66 of the Planning (Listed Buildings and Conservation Areas) Act 1990 (as recently explored by the Court of Appeal in the Barnwell case addressed in the PCC submissions).

Conservation Areas

188. No conservation areas fall within the application site boundary for the Carnedd Wen project. Accordingly, s.72 of the Planning (Listed Buildings and Conservation Areas) Act 1990, concerning the need to pay special attention to the desirability of preserving or enhancing the character or appearance of a conservation area *is not engaged in* the current context.
189. As explained in para. 88 of Chapter 10B of the 2011 SEI, the closest conservation area is at Llan, a hamlet 5.5 km to the south-west of the southern end of the proposed wind farm, centred on St Mary's church. Para. 88 concludes that the presence of wind turbines in the wider landscape would be peripheral an appreciation of the conservation area. Although potentially visible, the presence of turbines in the distance would not affect the character or the appearance of the Llan conservation area and would fall far beyond its setting. There would be no harm to the setting of the conservation area.

Historic Landscape And Registered Parks and Gardens

190. No registered parks and gardens lie within the application site boundary..
191. There are no designated historic landscapes within a 5km radius of the turbines. The nearest registered park and garden is Plas Machynlleth, approximately 14.5 km west-south-west of the closest proposed turbines. Gregynog (Tregynon) lies approximately 15.5-17.5 km to the south-east of the proposed wind farm. The proposed wind farm would have no material effect on these assets.

Planning Conditions

192. The heritage assessment employed available desk-top sources and a systematic field survey of all open ground within the Development Area. Due to the tree density it was not feasible to conduct systematic ground surveys within the conifer plantations, but appropriate mitigation to compensate for this omission is proposed, as Cadw acknowledged.
193. A planning condition proposes a written scheme of investigation during construction works and the clear marking out of areas of cultural heritage sensitivity to avoid any incidental damage. Table 10.5 on page 17 of Chapter 10 *Direct Impacts on Cultural Heritage* in the 2011 SEI identifies the mitigation works that the proposed archaeological scheme of investigation will include for different phases of the construction process. Providing that the recommended mitigation is applied, the potential effects of the scheme both on known and unknown features was assessed as being small.

Planning Policy

194. Available evidence, including fieldwork and the analysis of aerial photographs of the site taken before afforestation, indicate that the Carnedd Wen site has a relatively low level of cultural heritage value, perhaps reflecting the fact that upland peat bogs have never provided an environment conducive to human habitation. No significant adverse effects would occur on the setting of cultural heritage assets in the wider locality. Nonetheless, appropriate measures are proposed to protect cultural heritage features within the site from harm during the construction and land restoration phases of the project.
195. This approach accords with the following policy provisions:
- 195.1 EN-1¹²⁸ section 5.8: Historic environment;
- 195.2 EN-3¹²⁹ paras. 2.7.41 – 2.7.45 concerning onshore wind farm impacts on the historic environment;
- 195.3 Planning Policy Wales¹³⁰ Chapter 6: *Conserving the historic environment*, including para. 6.5.4 on archaeological watching briefs and provisions for the recording of remains, the requirements of which are reflected in the proposed planning condition, requiring an archaeological scheme of investigation.
- 195.4 Welsh Office Circular 90/96 *Planning and the Historic Environment: Archaeology*, Part 2(B) of which provides advice on the handling of archaeological matters in the planning process.
- 195.5 Powys UDP¹³¹ policy E3(4), the need to avoid unacceptable impacts on any buildings or features of conservation or

¹²⁸ CD-COM-001

¹²⁹ CD-COM-002

¹³⁰ RWE-PLA-03

¹³¹ CD-CON-003-PLA-013

archaeological interest; policy SP3: *Natural, historic and built heritage*, which affirms the need to protect, conserve and where possible enhance sites and assets, heritage; Policy ENV17: *Ancient monuments and archaeological sites*, and policy ENV18 *Development proposals affecting archaeological sites*, which provides for field investigation, *in-situ* preservation wherever possible where archaeological remains of importance are revealed on development sites, or measures to facilitate archaeological mitigation such as site excavation, survey or a watching brief if *in situ* preservation is not practical. Again, these requirements are provided for in the proposed archaeological scheme of investigation.

196. With this policy conformity in mind it is my view that material weight should attach to the fact that the Carnedd Wen site allows the delivery of a large wind farm and habitat restoration development without significant adverse consequences for cultural heritage on the site or on the surrounding area.

MATTER 11

“The individual and combined impact of the proposed developments on aviation.”

197. This matter need receive no attention from me in closing since there were and are not objections to Carnedd Wen on the basis of impacts on aviation interests.

MATTER 14

“The potential for the proposed developments to be connected to the electricity grid network (DECC document ‘The consenting process for onshore generating stations above 50MW in England and Wales: a guidance note on section 36 of the Electricity Act 1989 refers’).”

198. To a substantial extent I have addressed this Matter within submissions on landscape and visual effects. I refer in particular to paras 37-40 and to what I said at the start of these submissions at para 3.
199. A technical assessment of grid connection options for Carnedd Wen and other proposed wind farms in SSA-B and SSA by consulting engineers Mott MacDonald¹³², and an accompanying environmental appraisal by Land Use Consultants¹³³, was submitted as SEI at the end of 2013.
200. For the Carnedd Wen project specifically, the significant conclusion arising from these assessments is that an environmentally acceptable grid connection solution is available under a range of wind farm development scenarios in the two SSAs, subject to the detailed route assessment and design that would normally be undertaken when providing a new grid connection. As noted under Matter 4, SEI prepared

¹³² AD-RWE-031

¹³³ AD-RWE-032

in late 2013 by Mott MacDonald and LUC demonstrates that it is technically and environmentally feasible to connect the Carnedd Wen wind farm to the National Grid in isolation, in conjunction with Llanbrynmair wind farm or with both Llanbrynmair wind farm and an element of new generation capacity in SSA-C, by means of a heavy-duty wood pole connection. This solution would substantially respond to strategic objections from the Alliance and others over the environmental effects of the grid connections, and underlines the practical feasibility of wind farm development in SSA-B.

201. In para. 4.2.3 of its Statement of Case for session 4, Powys CC affirmed that:

PCC considers that the parallel twin 132kV OHL connections From the Llanbrynmair and Carnedd Wen sub-stations (to the proposed sub-station at Cefn Coch and/or beyond to the Oswestry sub-station) could be acceptable in landscape and visual terms, both in its own right and cumulatively, subject to appropriate detailed design and mitigation, including the consideration of undergrounding and alternative designs such as parallel twin 'trident' poles, to reasonably minimise the landscape and visual effects.

202. I note that at the grid hearing session on 25 March 2014 the applicants agreed that there would be no viability constraints to the achievement of a 132 kV grid solution.
203. In my view, therefore, it is clear that there is the potential for Carnedd Wen wind farm to be connected to the grid, both from a technical perspective and in terms of environmental acceptability noting, however, that detailed EIA would be required of any grid connection proposal. Nevertheless, all that Matter 14 specifies is that you should advise the Secretary of State on the potential for developments to be connected to the grid network. Not only can you report (perhaps obviously) that there is such potential, but I believe that you can firmly report that Carnedd Wen can be connected in terms which do not offend the advice given by Minister Griffiths in his July 2011 letter.¹³⁴ On the basis of submissions already made no new pylons will be required to connect the project or a combination of projects including Carnedd Wen.
204. On this basis, I believe that, in the terms of para. 4.9.3 of NPS EN-1¹³⁵, you can be satisfied *'that there are no obvious reasons why the necessary approvals'* for a Carnedd Wen grid connection are likely to be refused. I say this on the basis of the scope of Matter 14 and the environmental information provided by Mott MacDonald and Land Use Consultants in December 2013.

MATTER 8

¹³⁴ CD-COM-020

¹³⁵ CD-COM-001

“ The individual and combined social and economic impact of the proposed developments, including on tourism. ”

Common Ground

205. I refer here to the rebuttal proof of Jill Kibble on behalf of the Alliance submitted for the closing session.¹³⁶ Mr Cradick provided a rebuttal statement¹³⁷ in response to Mrs Kibble’s document which I commend as a very clear exposition of the findings of the recent Regeneris study.¹³⁸ In fact, as made clear by Mr Cradick, the conclusions to the Regeneris study substantially assist the case advanced by him on behalf of RWE. They certainly present no evidence supporting the case of the Alliance in relation to the impacts of wind farms on tourism.
206. In its eighth reason for objection, Powys CC expressed concern about the *‘detrimental effect on tourism and other economic factors both for Powys and the Snowdonia National Park’* arising from the landscape and visual effects of the project. However, neither Powys CC nor the Snowdonia National Park Authority is maintaining an objection to the Carnedd Wen project on the grounds of adverse socio-economic and tourism effects.

Conclusions on Evidence

207. Evidence on the socio-economic and tourism effects of the proposals was presented during session 4 of the inquiry.¹³⁹ It was demonstrated that there is clear acknowledgement in UK and Welsh energy, planning and economic policy of the economic benefits that can accrue from wind farm development. For Carnedd Wen, these benefits have been identified by Regeneris Consulting¹⁴⁰, and would represent a substantial inward investment to the local and Welsh economies. These would be tangible benefits, substantiated by studies of other wind farm developments. RWE is committed to developing local supply chains for goods and services required in connection with the wind farm.
208. RWE proposes measures to enhance the value of the Carnedd Wen site to visitors, including measures that would enhance the amenity and interest of Glyndŵr's Way, whilst seeking to maintain existing recreational uses on the site. No significant adverse cumulative adverse effects on tourism have been identified.
209. The Carnedd Wen wind farm would lie entirely outside of Snowdonia National Park and would have no physical effect on it. Potential effects on the National Park would be indirect, being limited to landscape and visual considerations. In the light of the evidence it is RWE’s position that the proposed Carnedd Wen wind farm would not materially affect those qualities of Snowdonia National Park that make it attractive to visitors. It

¹³⁶ ALL-SOCIOECO-POE-S4-04-ADDENDUM

¹³⁷ RWE-SOCIOECO-REBUTTAL-CRADICK-S4

¹³⁸ ALL-SOCIOECO-POE-ADDENDUM-APP-S4-04

¹³⁹ RWE-SOCIOECO-POE-CRADICK-S4

¹⁴⁰ CD-RWE-ECON-03 Regeneris Report 2012

is worth recording Mr Stevenson's evidence to the effect that SNPA's own promotional material show that the principal promoted attractions within the National Park (including promoted routes for walkers) lie well beyond the range of significant visual effects as determined by Mr Stevenson (see Appendix to the Session 2 proof of Mr Stevenson¹⁴¹).

210. I need to respond to paras. 2.5 and 4.2 of the closing submissions of the Alliance. In 2.5 reference is made to a large rise in unemployment in Carno. However, in 4.2 the point is made that Powys has one of the lowest unemployment rates in Wales. In RWE's view, the evidence supports the Alliance's submission at 4.2 rather than any implications of rising unemployment such as might be concluded from para. 2.5. As stated in the heading to Alliance para 4.2, Powys would appear to have a currently stable economy.

Planning Conditions

211. To secure enhanced public access to the site a planning condition provides for the submission and approval of a public access strategy for the site, including new permissive paths and bridleways.
212. The transport management measures described under Matter 5 are designed to ensure that visitors, amongst others, are not significantly inconvenienced by AIL movements during the construction phase of the project.

Planning Policy

213. From a socio-economic perspective, the Carnedd Wen project was shown in evidence presented to session 4 to accord with UK and Welsh policy and relevant development plan provisions.
214. For the reasons given in this evidence I trust that the Inspector will acknowledge the substantial and tangible socio-economic benefits of the Carnedd Wen development and accord them significant weight in his recommendation to the Secretary of State.

OTHER MATTERS

215. Before turning to matters 1, 2 and 3 and the planning balance I address some further issues, including those on which you have asked to be further advised.

Shared Access

216. In this section I deal with the proposal by PCC that conditions should be imposed upon any deemed planning permission for Carnedd Wen so as to secure the implementation of the project in a way which accommodates the potential for AIL traffic destined for Llanbrynmair Wind Farm to use

¹⁴¹ RWE-LAND-POE-APP-STEVENSON-SSA-B

the access to the Carnedd Wen plateau from the junction with the A458 trunk road.

217. On 19 May I submitted a notice of legal submissions that I would be likely to make. I incorporate below most of the content of that document and then address matters debated orally during this session.
218. The topic of shared AIL access has come into the inquiry in evidence within Session 2 and through a note circulated by PCC to the inquiry on 31 December 2013.¹⁴² At this point I refer to para. 509(a) of the PCC closing submissions. This paragraph criticised RWE for not engaging with RES on shared access prior to February 2014. Not only is this incorrect, but quite clearly it could not reasonably be said that there is a duty on RWE to facilitate an access for Llanbrynmair (beyond perhaps the cooperation which RWE has shown).
219. RWE opposes the imposition of the currently proposed conditions or any condition that regulates the implementation of the Carnedd Wen development by reference to a wish to ensure that AIL traffic serving Llanbrynmair can use the Carnedd Wen access.
220. In support of RWE'S position I make the following primary points, referring as necessary to law and policy:-
- 220.1 For a condition to be lawful it must be necessary, relevant to the development proposed and reasonable¹⁴³.
- 220.2 As a matter of policy¹⁴⁴ a condition will only be valid if it satisfies the tests described in paragraph 6.1 and in addition it is relevant to planning, precise and enforceable. However, I will not be submitting that one or more conditions could not be drafted which satisfy these three tests. The concern of RWE relates to the legal tests set out in the Newbury case referenced in paragraph **217.1**.
- 220.3 The implementation of Carnedd Wen could not prevent Llanbrynmair using the Carnedd Wen access provided that those seeking to implement Llanbrynmair secure the necessary land rights and secure permission for Llanbrynmair on a basis which enables the use of the Carnedd Wen access and the link between Carnedd Wen and Llanbrynmair.
- 220.4 RWE is not concerned about how Llanbrynmair might secure that its section 36 consent and deemed planning permission enabled it to use the Carnedd Wen access. And RWE has not stood and cannot stand in the way of RES securing the necessary land rights. Even if RWE did wish to stand in the way of RES in securing land rights it would ultimately very likely not be able to do so, given that RES can obtain compulsory purchase powers

¹⁴² OBJ-002-PROC-006

¹⁴³ Newbury District Council – v – Secretary of State for the Environment (1981) AC578.

¹⁴⁴ Welsh Office Circular 35/95

with the benefit of a Generation Licence issued under the Electricity Act 1989 (if RES decided to secure a Generation Licence rather than a specific exemption from the requirement to obtain one).

- 220.5 So far as the Carnedd Wen development is concerned AIL deliveries are proposed to be enabled through the strategic Transport Management Plan and the associated proposed Transport Tool. If by that stage Llanbrynmair has secured access for AILs using the Carnedd Wen access then the Transport Management Plan and the Transport Tool will regulate AIL slots. RWE will have no power to stand in RES' way through the allocation of these slots.
- 220.6 RWE would not wish its construction programme to be prejudiced by Llanbrynmair, but ultimately that is a matter beyond its control given the strategic Transport Management Plan and the proposed Transport Tool. No planning condition is required to be imposed on the planning permission for Carnedd Wen in order to achieve the objectives sought by PCC.
- 220.7 Put another way, for the condition proposed by PCC to be lawful and in accordance with policy it would have to be properly predicated on the assumption that the Carnedd Wen consent and deemed planning permission somehow enabled interference with the wish of RES to secure AIL access through Carnedd Wen. As previously noted that cannot be the case.
221. Turning to the oral exchanges in the Conditions Session I need to respond to the observations made by Mr Cosgrove and Mr Fraser. Dealing first with the point made by Mr Cosgrove concerning the need to take a strategic planning view of Area B I don't need to agree or disagree with what he has said. As I made clear in my response nothing that Mr Cosgrove said addressed the submission that I had made concerning the need for condition to be attached to Carnedd Wen to achieve any planning objective. My submissions on necessity remain untouched by any strategic planning point.
222. A second point made by Mr Cosgrove related to the potential for the Carnedd Wen development to be implemented in a way which in fact hampered the use of the Carnedd Wen access by Llanbrynmair for its AIL traffic. In response I said, and maintain, that the layout for Carnedd Wen is fixed subject to micrositing. We have heard no evidence that the micrositing of elements of the Carnedd Wen development would in anyway hamper AIL access for Llanbrynmair.
223. Turning now to what Mr Fraser said in response to my submissions I do not wish or need to repeat what had to be said in response to his point about the attitude of RWE. What both PCC and RES are ignoring is that RWE can do nothing to prevent shared access. Whilst, as I have acknowledged, in the best of all worlds RWE would rather not accommodate AIL traffic from Llanbrynmair for good commercial and

practical reasons, given its complex habitat restoration programme, RWE will not seek to stand in the way of sharing its access.

224. Finally, I need to respond to footnote 667 on page 252 of the PCC closing submissions. This addresses my written legal submissions on the question of shared access. This footnote fails to address two points:

a). it still fails to address the necessity for the imposition of a condition on Carnedd Wen, ignoring the inability of RWE to prevent the use by RES of the Carnedd Wen access; and

b). in circumstances where Llanbrynmair and Carnedd Wen have consent (scenario 1, PCC closing submissions 575(a)), PCC would have control over the shared access issue through its ability to reject implementation plans submitted by RWE which failed to embrace shared access.

Application of Section 38(6) Town and Country Planning Act 1990

225. With my Opening Statement I produced (Appendices A & B) a decision of the High Court¹⁴⁵ and an Opinion of Lord Malcolm¹⁴⁶ which make it clear that section 38(6) of the 1990 Act (according primacy to the development plan in decision making) is not engaged in considering section 36 applications. That is not to say the development plan should not be given appropriate weight, but there is no requirement to accord it primacy.

Generation Licence

226. On 21 February 2014 the Gas & Electricity Markets Authority gave notice under section 6(A)(5) of the Electricity Act 1989 that an electricity generation licence had been granted to Carnedd Wen Wind Farm Limited, a company wholly owned by RWE, authorising it to generate electricity at Carnedd Wen. The fact of the grant of this generation licence is only possibly relevant in the context of:

- the application of para 1(2) of Schedule 9 to the Electricity Act 1989¹⁴⁷; and
- the decisions of the Outer House of the Court of Session in Scotland in the Sustainable Scotland Case 2013) CSOH158) and Trump International Golf Club Scotland Limited -v- Scottish Ministers (2014 CSOH22).

227. The Sustainable Scotland case gave rise to concern when the decision of the Outer House emerged. We now have a distinctly contrary view from the same court in the Trump decision. We still await a decision of the Inner House of the Court of Session in the Sustainable Scotland case. I think that you can entirely duck issues which arise under these cases

¹⁴⁵ CD-COM-030

¹⁴⁶ VATT-PLA-001

¹⁴⁷ CD-COM-023

when reporting to the Secretary of State on the basis that this is a matter for the Secretary of State and not for you under your Minute of Appointment. The only point I need to make now is that a generation licence attaches to the Carnedd Wen project, although you also need to note that it is held by a special project vehicle and not RWE itself. I think that in any event not much will hang on this point.

228. Of more relevance is para 1(2) of Schedule 9 to the 1989 Act. Whilst the generation licence was granted after submission of the section 36 application, and while the generation licence is held by a wholly owned subsidiary of RWE, it is the position of RWE that it has in practice handsomely addressed the provisions of para 1(2), such that if you take the view that this paragraph does apply to RWE no difficulty arises in the case of Carnedd Wen. Notably, no evidence has been given to the inquiry that has been a failure to consider alternative options for any element of the development. In those circumstances, I would doubt that PCC would contend any breach of para 1(2) of Schedule 9 so far as Carnedd Wen is concerned.

Habitats Regulations Assessment

229. I have addressed the Habitats Regulations in relation to Matter 7. NRW has advised that an appropriate assessment will be required of Carnedd Wen in relation to the Berwyn SPA and the Pen Llŷnn a'r Sarnau SAC. On submitted evidence and indeed as agreed by NRW, the implementation of the Carnedd Wen wind farm and habitat restoration project will, subject to implementation in accordance with appropriate conditions, not have an adverse effect on the integrity of either of these European Sites. You will need to report to the Secretary of State on this matter.

Natural Environment and Rural Communities Act 2006

230. In their notice of possible legal submissions at para 11 PCC's Counsel drew attention to section 40 of the Natural Environment and Rural Communities Act 2006.¹⁴⁸ I agree that this section is engaged so far as Carnedd Wen is concerned. In discharging his duty the Secretary of State will no doubt have regard to the substantial bio-diversity benefits of the Carnedd Wen development.

Common Land

231. In September 2013 RWE applied to the Planning Inspectorate Wales under section 38 Commons Act 2006 for consent to construct works on land in the north eastern section of the wind farm site. The common land concerned is in the area of Esgair y Maes, Ffridd Goch and Boncyn y Llwyn.
232. I can be briefer than might normally be the case in my submissions on this issue since the common land is not subject to any grazing or other commons rights. Nevertheless, the public has access to the common

¹⁴⁸ CD-CPL-LEG-012

under the Countryside and Rights of Way Act 2000. Again, section 39 of the 2006 Act identifies that the matters to which you must have regard when considering a section 38 application go beyond the interests of any registered commoners into those of the neighbourhood, the public interest and 'any other matter considered to be relevant'.

233. The 'public interest' referred to in section 39 is further defined in section 39(2) and extends to matters relating to nature conservation, the conservation of the landscape, the protection of public rights of access and the protection of archaeological remains and features of historic interest.
234. Each of the section 39 matters has been covered by RWE in evidence before the inquiry, including the submitted environmental information. Since there is no contested evidence on this topic, I can incorporate without the need to say more paras 4.7 - 4.13 of the February 2014 proof of Mr Cradick on socio-economic considerations and common land.¹⁴⁹ In my view, there are no obstacles to the issue of a section 38 consent in this case.

MATTERS 1-3 and the Planning Balance

"(1) The extent to which the proposed developments are consistent with the objectives of the Government Policy on the energy mix and maintaining a secure and reliable supply of electricity as the UK makes the transition to a low carbon economy, and achieving climate change goals."

"The extent to which the proposed developments are consistent with policies relating to the generation of renewable energy contained within the relevant National Policy Statements for Energy Infrastructure: overarching the National Policy Statement for Energy (EN-1) July 2011 and National Policy Statement for Renewable Energy Infrastructure (EN-3) July 2011."

"(3) The extent to which the proposed developments are consistent with Welsh Government and local policies: including Planning Policy Wales, Edition 4 (2011); Technical Advice Note 8: Planning for Renewable Energy (2005); and Energy Wales: A Low Carbon Transition (2012; and Powys Unitary Development Plan (adopted March 2010)."

¹⁴⁹ RWE-SOCIOECO-POE-CRADICK-S4

235. With regard to Matter 3 I will address PPW Edition 6¹⁵⁰ February 2014 since this has superseded both Edition 4 and Edition 5. With regard to Matter 1 I have taken into account the reference by asterisk to material published by DECC.
236. Relevant planning policies at May 2013 are set out in the Statement of Common Ground agreed between the six applicants.¹⁵¹ Mr Cradick provided an update on planning policy at May 2014 in his closing session Hearing Statement. I commend both documents without the need to rehearse any particular detail within them. I will substantially focus in these submissions on UK and Welsh policy and what I take from them in terms of the need for Carnedd Wen and the planning balance. So far as the development plan is concerned, noting what I have said concerning section 38(6) of the 1990 Act, I commend the evidence of Mr Cradick without the need to go into a lot of detail.
237. It is necessary to say something about evidence from two of the witnesses who gave policy evidence in respect of Carnedd Wen. I refer to the proofs of Mr Minto¹⁵² on behalf of NRW and Dr Constable¹⁵³ on behalf of the Alliance. Mr Minto's proof is an extraordinary document. As formally amended it helps you little if at all. In particular:-
- It inadequately differentiates between the projects on which you have to report.
 - Carnedd Wen is briefly discussed in paragraphs 4.3 – 4.6 along with Llanbrynmair, but Mr Minto's observations are scattergun and fail to begin to address the planning balance as one might expect from a witness from NRW at this stage.
 - The habitat restoration project entirely escapes Mr Minto's attention, as it escaped Mr Champion when he gave evidence.
238. Noting that NRW has already had to correct Mr Minto's proof by email through the submission of an amended document, the information you have from Mr Minto seems to be entirely inadequate in representing the position of the statutory advisor to the Welsh Government on landscape and nature conservation issues. Indeed I would go so far as to say the Mr Minto's proof is difficult to evaluate and lacking in much of the content that might have been expected. I know that this is strong stuff, but you have the right to expect something better from NRW, and RWE have the right to expect that Carnedd Wen would be holistically assessed for its full content rather than that it should be treated simply as a wind farm.
239. I believe that you can give little or no weight to the evidence of Mr Minto. In these circumstances it would be unfair of me to note what he did have to say about the importance of the 2020 obligation on the UK

¹⁵⁰ RWE-PLA-03

¹⁵¹ SOCG-POLICY-001

¹⁵² CON-003-PLANNINGBALANCE-POE-MINTO

¹⁵³ ALL-CLO-POE-01

Government (at least 15% of energy supply etc). I also remain a little confused about NRW's true position in relation to onshore wind, having compared Mr Minto's amended proof with para. 6.1 of NRW's closing submissions, in which an enthusiastic endorsement of the need for new capacity from onshore wind is offered.

240. Turning to the evidence of Dr Constable I am frankly not sure why the Alliance believed that his evidence might be useful. He presented a mass of statistics which take you nowhere. The siren song he sung dances around the realities of meeting the 2020 obligation, and he attempts to seduce you into believing that there are so many applications for onshore wind development in the system that all has to be well and no more is required.
241. The reality is represented within the 2013 Renewable Energy Roadmap update¹⁵⁴ canvassed by Mr Cradick in section 2.6 of his Hearing Statement for Closing Session. That reality I address later, but note for the moment that as at 2012 the UK sourced 4.1% of its energy requirements from renewables. There is a long way to go.
242. I believe that you should regard Dr Constable's evidence as an interesting academic exercise that does not usefully inform the judgements that have to be made here.
243. Against this background I believe that it is quite straightforward to identify the correct policy framework for the Secretary of State's decision.
244. The UK has an obligation to procure "at least 15%" of its energy supplies from renewable sources by 2020. That obligation binds Wales as part of the UK even if, which is not the case, the targets for onshore wind development in SSAs were met. In such circumstances the 15% requirement would still need to be achieved and would still support a need case for Carnedd Wen. It is worth having this backstop need case in mind to counter evidence from Dr Constable and from any source which uses statistics to urge you to believe that the need case for onshore wind is any less compelling now than it has been since and indeed before the coming into effect of the Renewable Energy Directive 2009.¹⁵⁵
245. What I have just said is underpinned by relevant paragraphs of the Renewable Energy Roadmap update of November 2013. Paragraph 2 of the 2013 Update confirms the commitment of the UK Government to achieving the 2020 obligation and refers to challenging targets for the devolved administrations. Paragraph 13 is critical. It records the increase in percentage of energy supplies coming from renewables from 3.8% in 2011 to 4.1% in 2012. That increase of 0.3% must be set against the requirement to achieve a further 11% in the five and half years remaining to 2020. I urge you to keep in mind that that is the reality of the challenge, noting again that renewable electricity have to play a disproportionate role in the steps that need to be made to 2020 since

¹⁵⁴ RWE-PLA-02

¹⁵⁵ CD-COM-021

transport and heat, as recorded by Mr Cradick in his closing session Hearing Statement, is not going to deliver substantially prior to 2020.

246. The need for Carnedd Wen and other developments at an EU and UK level is thus very clear. It finds suitable reflection in National Policy Statements EN-1¹⁵⁶ and EN-3¹⁵⁷. These documents were issued by the current UK Government and with the authority of Parliament. The importance of these documents, and of National Policy Statement EN-5¹⁵⁸ in relation to the grid, are well articulated in the May 2013 Statement of Common Ground. In particular:-
- In the context of the obligation to source at least 15% of energy from renewable sources by 2020, EN-1 states a presumption in favour of granting consents to energy NSIPs. That the presumption is subject to matters including the need for benefits to outweigh impacts does not take away from the fact of the presumption, the first in the UK planning system for many years.
 - The weight to be given to National Policy Statements was articulated by the Secretary of State in the October 2012 decision under section 36 of the 1989 Act in relation to Lostock Power Station. The relevant passage is quoted in paragraph 2.9 of the May 2013 SoCG. Substantial weight was given to the relevant National Policy Statements by the Inspector in his report, and the Secretary of State endorsed the Inspector's approach.
 - The need case for infrastructure projects is set out in section 3.1 of EN-1 (see para 2.12 of the May 2013 SoCG). A paragraph in EN-1 (e.g. para 3.3.10, 3.3.15 and section 3.4) press both the need for more renewable electricity capacity and the urgency of meeting that need (noting particularly paragraph 3.4.5).
247. National Policy Statement EN-3 gives specific advice on onshore wind, but that is adequately canvassed in the May 2013 SoCG, as is advice of relevance to this inquiry within NPS EN-5 concerning grid infrastructure.
248. Turning to the policies of the Welsh Government, I first refer to PPW6¹⁵⁹ issued in February 2014, but add that I find that I can adopt paras. 28-33 of the PCC closing submissions which address both PPW6 and TAN8 and their consistency with UK Government policy statements. The relevant provisions of this document are canvassed by Mr Cradick in his May 2014 Hearing Statement for the Closing Session. I refer particularly to paragraph 12.8.12 of PPW6 which stresses the continued need for delivery of onshore wind projects "in the short to medium term". I also refer to paragraph 12.8.13 which endorses the Welsh Government's

¹⁵⁶ CD-COM-001

¹⁵⁷ CD-COM-002

¹⁵⁸ CD-COM-003

¹⁵⁹ RWE-PLA-003

continued preference for a Strategic Search Area approach to large scale onshore wind developments, with specific reference being made and support given to TAN 8.¹⁶⁰

249. Next in the pecking order of policies is TAN 8 itself. PPW4¹⁶¹ inexplicably deleted paragraph 2.5 and Table 1 from TAN 8. The Alliance argues that this removes the need to achieve any particular onshore targets in Wales. Not only is the Alliance incorrect – see below – but their argument is dangerous in terms of the objectives the Alliance itself wishes to achieve. Absent any onshore energy targets in Wales the focus would solely be on the obligation to deliver at least 15% of energy supplies from renewables by 2020, a much more substantial target bringing with it at least as strong a need case.
250. I am in no doubt that the July 2011 letter from Minister Griffiths¹⁶² restores onshore wind targets to the policy framework, within a specific referenced context (being a 2GW aspiration for onshore wind capacities set out in the March 2010 Energy Policy Statement (“A Low Carbon Revolution”)).¹⁶³ For SSA A & B the July 2011 letter endorses a maximum capacity of 430MW. Current onshore wind (post TAN 8 2005) capacity within Area B totals 43.6MW derived from the consented or under construction capacity at Tir Gwynt and Carno B. If Carnedd Wen contributes up to 150MW and Llanbrynmair achieves its maximum of 90MW total operational wind capacity will still be only roughly 280MW, some 150MW short of Minister Griffiths’ target.
251. You will see that the figures in the previous paragraph are quite different from those on pages 476-477 of the PCC closing submissions. PCC has erroneously included pre-2005 /TAN8 projects in its table. In addition, you will doubtless be cautious in the weight that you give to not yet submitted NSIPs and at-appeal or in local planning T&CPA schemes.
252. With regard to the Interim Development Control Guidelines I adopt para. 36 of the PCC closing submissions.
253. Summarising the position in relation to the need case for Carnedd Wen it is clear that both at a UK level and in terms of July 2011 letter from Minister Griffiths there is a very strong need case for the development. And it is a development which can be achieved without a recourse to a 400KV overhead pylon line.

Conclusions on the Planning Balance

254. At the start of these submissions I said that Carnedd Wen was a remarkable scheme and gave reasons for that view. I believe that I am able to submit that Carnedd Wen ticks every box in terms of:-

¹⁶⁰ CD-COM-016

¹⁶¹ CD-COM-007

¹⁶² CD-COM-020

¹⁶³ CD-COM-009

- Renewable energy generation
- Progress in securing domestic security of energy supplies
- Bringing substantial local economic benefits
- Bringing landscape benefits through the habitat restoration programme
- Bringing biodiversity benefits of significance at a national level
- Bringing benefits in terms of public access to the countryside.

255. Against these benefits there have to be set the visual impacts of the wind turbine element of the development on the Snowdonia National Park and the issue of the Carnedd Wen 5. In this respect I believe that you can fairly conclude that:-

- TAN 8 and the 2012 Aecom study¹⁶⁴ for PCC clearly concluded that the area of Carnedd Wen was appropriate in landscape terms for large scale wind energy development. Landscape and visual impacts on the National Park were taken into account in reaching this conclusion, an important factor in your deliberations.
- The evidence of Mr Stevenson is that there will be no significant offence, if offence there is at all, to the statutory purposes of the National Park as set out in the Environment Act 1995.¹⁶⁵ There is the potential for some effect on Special Quality 5, but again on the evidence of Mr Stevenson such effects do not amount to any significant harm.
- Such benefits as there may be in 'thinning out' the turbines in the north-east part of the proposed wind farm through the removal of the Carnedd Wen five are clearly outweighed by the need for the capacity they represent.

256. Thus in my view Carnedd Wen should present you with no major challenges in terms of recommending that section 36 consent and deemed planning permission should be granted, and I ask you to so recommend to the Secretary of State.

Marcus Trinick QC
Eversheds LLP
29 May 2014

¹⁶⁴ CD-RWE-PLA-001

¹⁶⁵ CD-VATT-LEG-005

ANNEX 5

MID WALES (POWYS) CONJOINED PUBLIC INQUIRY

LLANBRYNMAIR WIND FARM

CLOSING STATEMENT ON BEHALF OF RES UK & IRELAND LTD

Introduction

Structure of these submissions

1. These closing submissions address the matters about which the Secretary of State ("S of S") has asked to be advised and a number of the issues raised by other parties. In dealing with these matters we address many of the points made by the various objectors. However, if a point is not directly addressed it should not be assumed that RES has conceded the point – a degree of judgement has to be exercised as to what to cover in closing submissions, and we acknowledge that it is possible that we may have forgotten to deal expressly with some points. Likewise we do not propose to respond to every point made by others in closing, it should not be assumed that we have accepted a point if we have not commented upon it.
2. These closing submissions largely follow the structure of the S of S's identified issues, to assist the Inspector and S of S in determining the appeal. That inevitably means that RES's case is not presented in the form it would independently choose. In particular certain matters are covered within one or more of the S of S's issues rather than being independently addressed and the order in which matters are addressed is largely dictated by the S of S's structure. It is therefore important that the submissions are

read as a whole. Although we have sought to follow the S of S's structure consideration of the proposal against planning policy (matters 2 and 3) is necessarily informed by consideration of the other matters and accordingly for ease of presentation we address these matters at the end of this closing.

The proposal

3. The application is made by RES UK & Ireland Ltd ("RES") one of the world's leading independent renewable energy project developers with operations across Europe, and worldwide.
4. As a respected British company with over 30 years experience of planning, building and operating renewable energy projects, RES has been an established presence at the forefront of wind energy development since the 1970s and has developed and/or built more than 7.5 GW of wind energy capacity worldwide. This includes projects in the UK, Ireland, France, Scandinavia, and the United States, with a large additional portfolio currently in development. In the UK alone, RES currently has more than 1 GW of wind energy projects either constructed, under construction or consented. In 2013 RES was awarded for the second time, the Queen's Award for Enterprise, on this occasion for International Trade, following recognition in 2005 under the "Sustainable Development" category.
5. In March 2009 RES applied for consent under section 36 Electricity Act 1989 for a wind energy development of up to 43 turbines on land between the villages of Llanbryn-mair and Llanerfyl in Powys. In addition to the wind turbines the proposal would provide for the associated infrastructure including on site tracks, underground cabling, crane hardstandings, a communications mast, a permanent 80 metre high free standing lattice wind monitoring mast, electrical transformers, electrical connection works, a substation and control building. As a result of representations made subsequent to the application the proposal has been

amended so that it comprises 30 turbines and various amendments have been made to the associated infrastructure¹.

6. The proposed wind turbines would comprise a conventional design of three blades and a tapered tubular tower. The overall height to blade tip would not exceed 126.5 metres (415 feet). The ultimate choice of turbine would be subject to a competitive tendering process within the parameters set out. A number of turbines currently on the market would meet all of the relevant criteria for the proposal (including for example noise specifications). The installed capacity of the turbines will depend upon the final turbine choice but can be expected to be within the range of 2 MW to 3 MW which would mean that the proposal would have a total installed capacity of between 60 MW to 90 MW.
7. The wind farm application site is centred on grid reference E294500 N306500. It covers an area of just over 1700 ha (4200 acres) and consists of small to medium sized fields primarily used for grazing sheep and cattle with some fields being cultivated for vegetable crops².
8. In August 2012 the site boundary was revised to incorporate "*the minor access route works from the trunk road network at Llanerfyl*" to the wind farm site³. In accordance with requests from PCC and NRW the red-line boundary for these road works has been conservatively drawn to allow discussions at the detailed design stage to consider appropriate details. This means that the red-line includes more land than will be required; it does not indicate that the scope of the works has increased⁴.
9. In February 2014 the site boundary was further amended to address PCC's proposal for a shared access.
10. The proposal has been subject to extensive environmental appraisal. The original Environmental Statement was produced in

¹ See Section 2 Powys Cabinet Report 25/9/12

² See ES p1 and Section 1 Powys Cabinet Report 25/9/12

³ Powys Cabinet Report 25/9/12 p5

⁴ KM rebuttal para 1.11 – RES-TRANS-REBUTTAL-MARTIN- SSA-B

2008 and as a result of issues raised there were prior to the opening of the inquiry 5 sets of Supplementary Environmental Information⁵. As prefigured at the Pre-Inquiry Meeting further Supplementary Environmental Information has been provided as a result of further issues raised.

11. As the application is made under the Electricity Act 1989 the Secretary of State must have regard to the desirability of preserving natural beauty, conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest⁶.
12. The extent of the powers and duties in respect of applications under section 36 EA 1989 have been the subject of judicial consideration since the opening of the inquiry. The *Sustainable Shetland* case⁷ questioned the established practice and understanding of the application of section 36 and suggested that applications could only be made by licence holders or persons authorised by exemption. However, the *Trump* case has confirmed the established practice that consent under section 36 Electricity Act 1989 can be granted to persons who do not hold a licence under the Act⁸.
13. The *Trump* case further clarifies that the duties imposed by paragraph 1(1) of Schedule 9 to the Electricity Act 1989 do not apply to applicants for consent who are neither licence holders nor authorised by exemption; in such cases whilst the Secretary of State will have regard (under paragraph 1(2)(a)) to the desirability of the matters mentioned in paragraph 1(1)(a) he should proceed

⁵ A summary is set out in Section 3 Powys Cabinet Report 25/9/12

⁶ See section 38 and Schedule 9(2)(a) – SOCG – Policy – 001 para 5.4 – RES Opening Session SOC para 1.3

⁷ *Sustainable Shetland v Scottish Ministers* 2013 SLT 1173

⁸ *Trump International Golf Club Scotland Ltd v The Scottish Ministers* 2014 SLT 406 @ paras 33 – 36 & 45

on the basis that the applicant is not under any duty to comply with paragraph 1(1)⁹.

14. It is important to note that the obligation on the Secretary of State under paragraph 1(2)(a) of Schedule 9 to the Act is to *have regard to the desirability* of the matters mentioned in paragraph 1(1)(a) – it is not a requirement to achieve any of those matters.
15. In the light of PCC's position with respect to the access proposals for Llanbrynmair it will be necessary to return to consider these issues later in these submissions.

Issues in dispute

16. Quite properly the S of S wishes to be informed of numerous matters. It is normal for a large number of issues to be raised and considered at an inquiry of this nature. Despite this at the outset it can be observed that the main issues raised by the various objectors were always more limited and have become even more limited during the course of the inquiry.
17. In essence PCC's only objection to the proposal arises from the use of the Llanerfyl to Talerddig road for deliveries by AILs. It is notable that there is no objection to the details of the wind farm development. Whilst NRW did raise some issues with respect to the wind farm development it became apparent during the course of the inquiry that these matters did not go to the principle of the wind farm development and did not lead to the conclusion that any particular turbines should be removed from the development. Mr Minto's comments in section 4 of his overall balance proof do not reflect the evidence given by NRW and the concessions made in XX (perhaps not surprising as he explained that he had simply based

⁹ *Trump International Golf Club Scotland Ltd v The Scottish Ministers* 2014 SLT 406 @ paras 34 – 36

his evidence on reading the proof without any knowledge of what had occurred at the inquiry) - nor do they make clear what NRW's position is. They sadly reflect the difficulty in getting a clear and consistent position from NRW and its often changing position on the application

Overview

18. In summary whilst the S of S wishes to be informed about a wide number of matters there is no dispute or controversy about most of them so far as the main parties are concerned. In the limited number of matters where a dispute remains the dispute is limited to issues arising with respect to the delivery of AILs rather than the development of the wind farm itself. The fact that there is no objection to the substance of the wind farm development from the two principal objectors and that in essence concerns were restricted to the route for delivery of AILs is an important point to note at the outset. The absence of any substantial objection to the development of these 30 turbines is an important factor in support of these proposals to be weighed against any residual concerns raised with respect to the impacts of the works associated with delivery of AILs to the site.
19. Consideration of the merits of this appeal therefore takes place against the background of there being very limited objection from the local planning authority or any public body or statutory consultee. Against the outstanding objections it is of course necessary to balance the very strong policy support for this form of development in general and the background of the identification of this site in local and regional policy as a suitable site for this form of development in particular.

Need and government policy on energy and climate change
– S of S matter 1

20. The proposal must be viewed against the pressing need to address climate change and improve the country's security of energy supply. There is widespread national and international recognition of the problems arising from climate change, the need to reduce carbon dioxide emissions and provide more electricity from renewable sources. The EU Climate and Energy package (formally agreed April 2009) commits the EU to achieving a reduction in EU greenhouse gas emissions of 20% by 2020 compared to 1990 levels and included a binding renewable target of 20%. The UK's share of this target is to deliver 15% renewable energy by 2020 which compares with a figure of 3.8% in 2011¹⁰. Under EU Decision 406/2009/EC the UK has a binding target of a 16% reduction in greenhouse gas emissions by 2020 compared to 2005 emissions levels. Not surprisingly, the UK Renewable Energy Strategy (UK RES) states that the UK needs to increase radically its use of renewable energy¹¹.
21. As part of this drive towards reducing greenhouse gas emissions and increasing renewable energy production licensed electricity suppliers are subject to legally binding Renewables Obligations (RO). The RO started at 3% in 2002 and increases annually. The target for 2008-9 was 9.1% rising to 15.4% in 2010, but the UK is behind these targets with only 6.8% in 2010. Quite apart from government targets there is therefore a need for additional sources of renewable energy to enable the electricity suppliers to fulfil their legal obligations¹². Further legal requirements are imposed by the Climate Change Act 2008¹³.

¹⁰ See SOCG – Policy – 001 4.1 – 4.5

¹¹ SOCG – Policy – 001 5.11

¹² SOCG – Policy – 001 5.5 – 5.7

¹³ SOCG – Policy – 001 5.9 – 5.10

22. The importance of achieving these aims and the difficulties in achieving them has been reiterated on numerous occasions by the coalition government; for example in the Energy Statements¹⁴, the National Renewable Energy Action Plan for the UK¹⁵, the Carbon Plan¹⁶ and the UK Renewable Energy Roadmap and Updates¹⁷.
23. Although the primary driver of legislation and policy in this area is undoubtedly the importance of tackling climate change and ensuring security of energy supply it is also important to remember that there are significant economic and employment benefits associated with the development of renewable energy as is recognised for example in the UK Renewable Energy Strategy¹⁸.
24. The Secretary of State's policy on these matters is set out in the National Policy Statements (NPSs). These NPSs were presented to Parliament. The NPSs were prepared under the provisions of the Planning Act 2008 and apply directly to NSIP applications determined under the Planning Act 2008. The current proposals are the equivalent of NSIP applications but fall to be determined under the earlier provisions of the Electricity Act 1989 on account of the dates of the applications. Although the NPSs do not apply directly to the applications in the manner that they do to applications under the Planning Act 2008, they clearly form the up to date policy basis for determination of projects of this nature and scale and substantial weight should be attached to them¹⁹ as the Secretary of State has recognised and confirmed²⁰.
25. The NPSs recognise and seek to address the national imperative to deliver further renewable electricity generation. For example they provide –

¹⁴ SOCG – Policy – 001 5.26 – 5.30

¹⁵ SOCG – Policy – 001 5.31 – 5.35

¹⁶ SOCG – Policy – 001 5.37 – 5.48

¹⁷ SOCG – Policy – 001 5.49 – 5.56

¹⁸ SOCG – Policy – 001 – 5.16

¹⁹ RES Opening Session SOC para 1.6 and see for example NPS EN1 paras 1.1.1, 1.2.1, 1.4.1 and 1.5.1 and NPS EN3 paras 1.1.1, 1.2.1, 1.2.3

²⁰ SOCG – Policy 001 2.9

- i) *"...The need for new renewable electricity generation projects is therefore urgent"* (NPS EN 1 at 3.4.5);
- ii) *"As part of the UK's need to diversify and decarbonise electricity generation, the Government is committed to increasing dramatically the amount of renewable generation capacity...In the short to medium term, much of this new capacity is likely to be onshore and offshore wind..."* (NPS EN 1 at 3.3.10);
- iii) *"...it will not be possible to develop the necessary amounts of such infrastructure without some significant residual adverse impacts"* (NPS EN 1 at 3.2.3).

In the context of a proposal of this nature and scale the NPSs make it plain that the need for the development is a given and is not open to challenge or discussion²¹.

26. The need to address these matters must be considered with a proper recognition of the vital role that energy in general and electricity in particular plays in maintaining our current way of life and living standards –

"Energy underpins almost every aspect of our way of life. It enables us to heat and light our homes; to produce and transport food; to travel to work around the country and the world. Our businesses and jobs rely on the use of energy. Energy is essential for the critical services we rely on – from hospitals to traffic lights and cash machines. It is difficult to overestimate the extent to which our quality of life is dependent on adequate energy supplies." (NPS – EN1 para 3.2.1)

27. The Government considers it essential that there should be a step change in the provision of renewable energy and clearly envisages

²¹ RES Opening Session SOC para 1.3(2nd)

that the new NPSs will produce this step change²². Whilst addressing climate change is a very important element of the drive towards the provision of increased renewable energy it is not the only driver. Equally important are the promotion of energy security and also the very significant economic development and employment generation arising from such development²³. The Government seeks large scale deployment of renewables to meet these aims (including large scale schemes such as the current proposals). These aims of improving energy security and promoting economic development are all the more important given the current state of the economy.

28. The Powys CC officer's report correctly categorised the position when advising that if development contributes to meeting the energy need and is in accordance with NPS EN1 consent should be given²⁴. It must further be recognised that development on the scale required to meet the energy needs identified and to satisfy the Government's policy will inevitably have impacts. Indeed NPS EN1 advises that it will not be possible to develop the necessary amounts of infrastructure without some significant residual impacts²⁵. The mere identification of impacts does not establish any conflict with policy. Even in the event the proposal is found to give rise to any residual harm this needs to be weighed against the acknowledged urgent national need to deliver new renewable energy generation capacity²⁶.

29. The need for increased production of renewable energy is also recognised in the Welsh Government's energy and climate change policies. The Welsh Government is under a statutory obligation to promote sustainable development²⁷ and it has recognised the need radically to reduce use of carbon-based energy²⁸ and to revise

²² NPS EN1 para 1.7.2 1st bullet point

²³ NPS EN1 para 3.4.2

²⁴ SOCG – Policy – 001 para 2.17

²⁵ NPS EN1 para 3.2.3

²⁶ SOCG – Policy – 001 para 2.16

²⁷ SOCG – Policy – 001 para 6.4

²⁸ SOCG – Policy – 001 para 6.5

upwards targets for renewable energy²⁹. The Welsh Government's Energy Policy Statement in 2010 evinced an aim to have 4.5 kWh/d/p of installed wind generation capacity by 2015/17 which was to be achieved inter alia by "*optimising the use of the existing strategic search areas set out in Technical Advice Note (TAN 8)*" and providing sensitively designed new grid connections³⁰. The contribution of renewable energy development to the economic revival of Wales is recognised in the Welsh Government report *Economic Revival: a new direction* published in July 2010³¹. These aims are reiterated in the more recent Welsh Government document *Energy Wales: a low carbon transition*³².

30. The urgent importance of addressing climate change and providing for greater renewable energy production is also recognised in planning policy in Wales. The Wales Spatial Plan update 2008 for instance recognises the need to act now and the crucial role that Central Wales has in delivering the necessary renewable energy capacity³³. The land use planning policies of the Welsh Government are set out in Planning Policy Wales (PPW) which states that tackling climate change is a fundamental part of delivering sustainable development based on a scientific imperative to act urgently to reduce greenhouse gas emissions³⁴. Section 12.8 of PPW sets out specific provisions for renewable and low carbon energy. The section provides for a rise from 0.7 GW of onshore wind capacity to 2GW by 2015/17³⁵. It is furthermore important to note that of the 22.5 GW renewable energy sought in this section 12.5 GW is accounted for by tidal and wave technologies which are unlikely to be forthcoming in the required timescales; this places even more importance upon the provision of onshore wind energy

²⁹ SOCG – Policy – 001 paras 6.6 and 6.10

³⁰ SOCG – Policy – 001 para 6.12

³¹ SOCG – Policy – 001 paras 6.14 – 6.17

³² SOCG – Policy – 001 paras 6.20 - 6.21

³³ SOCG – Policy – 001 paras 7.4, 7.6 and 7.9

³⁴ SOCG – Policy – 001 para 7.16

³⁵ SOCG – Policy – 001 para 7.18 this remains the position in PPW 6th Edition

which offers a mature and proven technology which can be delivered in the necessary timescales³⁶.

31. PPW paragraph 12.8.5 provides that local planning authorities, particularly those containing SSAs should take the Welsh Government's *imperative* for renewable energy into account when consulted on applications such as the current proposals. Paragraph 12.8.13 explains that the SSAs are "*areas in Wales which, on the basis of substantial empirical research, are considered to be the most appropriate locations for large scale wind farm development*" whilst paragraph 12.8.14 explains that whilst cumulative impacts within SSAs can be a material consideration, it must be balanced against the need to meet the Welsh Government's renewable energy aspirations. The policy approach taken in Wales has been to identify 7 SSAs that are intended to deliver more than three-quarters of Wales' renewable energy contribution from onshore wind by 2017³⁷.
32. Technical advice to supplement PPW is provided by TAN 8 which is stated to be relevant to determination of applications under the Electricity Act 1989³⁸. This flowed from extensive technical work undertaken by consultants on behalf of the Welsh Government which led to the conclusion that for efficiency and environmental reasons large scale onshore wind farms should be concentrated in defined SSAs³⁹. Each SSA has an indicative target for installed capacity to be built and connected by 2010. These figures are advanced in order to assist the planning process but are not to be seen as the definitive capacity for the areas⁴⁰. The TAN recognises that the construction of new high voltage distribution and transmission lines will be vital to the realisation of the Welsh Government's approach⁴¹

³⁶ SOCG – Policy – 001 paras 7.18 – 7.19

³⁷ SOCG – Policy – 001 para 7.24

³⁸ SOCG – Policy – 001 para 7.27

³⁹ SOCG – Policy – 001 para 7.28

⁴⁰ SOCG – Policy – 001 para 7.29

⁴¹ SOCG – Policy – 001 para 7.33

33. The technical work underpinning the production of TAN 8 had identified a capacity of 1666 MW throughout the 7 SSAs but given that the target for 2010 was an additional 800MW from these areas this was reduced by one-third in TAN 8 to a total of 1120 MW to provide a degree of flexibility at local level⁴². Against these figures the delivery to date can only be described as very disappointing with only some 110.45 MW consented and implemented by 2010⁴³.
34. The position with respect to SSA capacities has now changed since the 2010 target date has passed, with the Energy Minister confirming in a letter in 2011 that the capacity should be taken as that set out in the technical work namely 1666 MW for the 7 SSAs and in the case of SSA B 430 MW⁴⁴. The current position is that only about half of the identified capacity (842 MW) has been consented throughout the SSAs and only 300 MW of that has been constructed (less than one-fifth of the capacity or just over one-quarter of the originally identified TAN 8 figure)⁴⁵. It is also clear that the major under-performance has arisen in areas B, C and D. In area B only 100 MW of the identified 430 MW has to date been consented⁴⁶. Given the imperatives identified above it is critical that development be brought forward within area B without any further delay⁴⁷.
35. The Llanbrynmair proposal falls within SSA B. As such consideration of the proposal must take place not only against the background of the established need for and importance of proposals of this nature but also the prior identification of this area as a suitable and critical location for directing this form of development⁴⁸. Further impetus is provided by the failure to date

⁴² RES Opening Session SOC para 2.4

⁴³ RES Opening Session SOC paras 2.5-2.6

⁴⁴ RES Opening Session SOC para 2.8

⁴⁵ RES Opening Session SOC paras 2.9 – 2.10

⁴⁶ RES Opening Session SOC paras 2.9 – 2.11

⁴⁷ RES Opening Session SOC para 2.11

⁴⁸ RES Opening Session SOC para 1.4(2nd)

to deliver the much needed levels of wind energy development within SSA B.

36. Although much work was undertaken in preparing TAN 8 Powys CC then commissioned ARUP to undertake refinement studies of the SSA. An initial refinement exercise was undertaken in 2006. This resulted in a radical change to the extent of SSA B but it is significant that all of the current proposal for the Llanbrynmair wind farm fell within this reduced area⁴⁹. This refinement exercise was subsequently reviewed in 2008. As a result of the review exercise the proposed areas were revised such that all of the Llanbrynmair wind farm proposal fell within it (including those turbines which no longer form part of the application)⁵⁰. Thus it can be seen that within SSA B the most appropriate areas for development have been considered on 2 occasions by consultants on behalf of Powys CC who have concluded that the area of the Llanbrynmair proposal comes within the most suitable locations for this form of development. Furthermore it is important to remember that these reviews were undertaken at a time when the lower figures for the capacity of SSA B were being used⁵¹.
37. On any view this proposal must be considered against a background of this area having been repeatedly identified as suitable for this form of development and the critical need for this area to contribute towards the pressing need for further renewable energy development. The proposal would make an important contribution to the necessary additional renewable energy development required to enable the Governments (UK and Welsh) to meet their various legal obligations with respect to sustainable development and renewable energy in an area to which such development is directed.
38. As the application is made under the Electricity Act the provisions of section 38 Planning and Compulsory Purchase Act

⁴⁹ RES Opening Session SOC paras 5.2 and 5.3

⁵⁰ RES Opening Session SOC para 5.4

⁵¹ RES Opening Session SOC paras 5.2 – 5.4

2004 do not apply⁵², however, the development plan is a relevant consideration to take into account. In this case the development plan is the Powys UDP adopted on 1st March 2010⁵³. The UDP acknowledges the weight of international, European, UK and Welsh policy and the imperative to promote the use of renewable energy⁵⁴ and considers it to be desirable for the Council to be more pro-active in steering wind power developments to areas that would be most acceptable⁵⁵. In this context the repeated identification of the area within which Llanbrynmair is located as a suitable location for this form of development is particularly significant. UDP policy E3 sets out a number of criteria to be considered in assessing applications for wind farms. Whilst it will be appropriate to consider the issues raised by this policy they are to a large extent matters which would be considered in any event.

39. The proposal is fully consistent with the objectives of Government Policy on the energy mix and maintaining a secure and reliable supply of electricity as the UK makes the transition to a low carbon economy and achieving the Government's climate change goals. This is an important factor in support of the proposal.
40. The proposal is further supported by the various Welsh Government policies. Whilst this application should be determined on the basis of UK Government policies and the Secretary of State is not bound by either, Welsh Government policy, or development plan policy, the support for this development from both those sources, and the need for this development if those other policies are to be fulfilled, lends further support for this proposal.

⁵² See *R (Samuel Smith Old Brewery (Tadcaster)) v SSECC* [2012] EWHC 46 (Admin) [2012] 2 All ER 849

⁵³ SOCG – Policy – 001 para 8.1

⁵⁴ SOCG – Policy – 001 para 8.7

⁵⁵ SOCG – Policy – 001 para 8.6 – UDP para 12.9.1

Individual and combined landscape and visual impact – S of S matter 4

41. The scale of wind turbines is such that they must inevitably have some landscape and visual impact wherever they are located and such impacts always figure large in any consideration of wind farm proposals⁵⁶. Views differ as to whether such impacts are generally positive or negative⁵⁷, but given the inevitability of such impacts the clear national and local policy support for this form of development means that a degree of impact must be acceptable⁵⁸. In this case the starting point for consideration of those impacts is that this is an area repeatedly identified as an area to which such development is directed.
42. The application site comprises both the wind farm site and the local access road. The wind farm site comprises an area of upland grassland with blocks of coniferous woodland on a gently undulating plateau and falls within both the TAN SSA B and the PCC Refined Boundary of Strategic Search Area (SSA B)⁵⁹. The local access road is the existing county highway which runs from Llanerfyl to Talerddig, in part classified as the C2031 and in part the U2319.
43. At the regional level the application site falls within the Cambrian Mountains RCA and at the county level the Dyfnant Forest/Llanbrynmair Moors LCA⁶⁰. The wind farm site spans three LANDMAP Visual and Sensory Aspect Areas, being the Banwy Forest Aspect Area, the Banwy Upland Aspect Area and the Pen Coed Upland Aspect Area⁶¹. The local access road passes through

⁵⁶ MvG 7.18 & 8.9

⁵⁷ MvG 4.3

⁵⁸ MvG 4.6 & 7.3

⁵⁹ MvG 7.1 & CSEI 4.5.3

⁶⁰ MvG 7.4

⁶¹ MvG 7.5

the Llanerfyl Mosaic Visual and Sensory Aspect Area and the Carno Grazing Visual and Sensory Aspect Area⁶².

44. The application site is about 5 km from the southern boundary of Snowdonia National Park. However, the application site does not fall within any national or county level landscape designations. Whilst the area is undoubtedly valued by local people this can probably be said of any open area which may be suitable for this form of development. Important as local views are, in considering this form of proposal it is necessary to consider the area in question in a wider perspective. In this context the absence of national and county level landscape designations indicates that the site is not valued at the national or county level for its landscape or scenic quality⁶³.
45. The proposed wind farm and access proposals have been designed to limit potential landscape effects. Extensive work has been done to reduce the impacts inevitably associated with the development of a wind farm. This has included careful consideration of siting so as to limit impacts, and a reduction in the number of proposed turbines for visual reasons. In addition the length of onsite tracks has been minimised and borrow pits have been located close to tracks to minimise the length of new tracks required⁶⁴. Careful consideration was given to the location and mitigation of the substation which was relocated near to the proposed Carnedd Wen substation at the request of NRW and earth mounding has been designed to blend into the natural contours of the hillside and to provide visual screening of the substation⁶⁵.
46. Technical requirements inevitably affect what can be done with respect to the local highway works, but those works have been guided by very careful consideration of landscape and visual impacts. There have been extensive refinements of the highway design to limit and mitigate any impacts. These include minimising

⁶² MvG 7.6

⁶³ MvG 7.3

⁶⁴ MvG 6.2 & 7.14

⁶⁵ MvG 6.5

loss of landscape features and using grass reinforcement surfacing for road widening and laybys. Where mature trees need to be removed appropriate replacement trees will be planted at a variety of sites to ensure optimum establishment and survival rates. Where hedges are lost replacement hedges will be planted and new hedges will be provided where hedges are currently missing. Stone facing will be used on new retaining structures to blend them into their rural setting and the condition of features will be improved. The landscape edge treatment along the full length of the road will be subject to landscape management subject to a landowner agreement⁶⁶.

47. In common with any windfarm the proposal can be anticipated to have a significant impact upon the application site and immediately adjacent area. It will also have a relatively limited number of visual impacts. This will include impacts arising from highway works to provide access to the site. However, as could be expected from the repeated identification of this area as an area to which such development should be directed the proposal is capable of being appropriately assimilated into the landscape and would not give rise to impacts of a nature to warrant refusal.
48. It can be expected that a proposal of this scale will not satisfy everybody. Some persons are simply opposed to wind farm development others are understandably anxious about possible impacts in their local area. What is notable is that objections with respect to the wind farm itself are comparatively limited, indeed PCC accept that there is no objection to the wind farm and they limit their objections to the impact of the works to the local road whilst NRW's concerns with respect to the wind farm are limited to impact upon the Glyndwr's National Trail and the cumulative impact in association with Carnedd Wen of the proposal upon the National Park. The limited nature of the objections raised is a reflection of the prior identification of this area as a suitable area for this form of development and the care given by the applicant to

⁶⁶ MvG 6.7

limiting and mitigating any impacts. We turn to address the issues raised in particular by NRW and PCC.

NRW concerns with respect to the wind farm site

49. Before considering the specific issues raised by NRW it is appropriate to address some of the further points made by JC in his evidence on behalf of NRW.
50. In places in JC's evidence on behalf of NRW it appeared to be argued that the proposals failed to enhance the quality of the area and that this is a criticism which could be made of the proposals⁶⁷. However, JC accepted in XX that it is not a requirement of policy that proposals of this nature should enhance the quality of the area and that such an approach would be contrary to the express acceptance in NPS that the Government commitment to a dramatic increase in renewable energy, which it considers to be essential⁶⁸, will inevitably have negative impacts⁶⁹. Indeed TAN 8 records that it is an implicit objective to accept a significant change in landscape character from wind turbine development within the SSAs⁷⁰, whilst at the local level PCC has concluded that the accepted consequence of TAN 8 is that the SSAs will become wind farm landscapes⁷¹. JC agreed with these conclusions with the limited qualification that not all of an SSA need become a wind farm landscape. Importantly he confirmed that NRW supports the approach of SSAs in PPW and TAN 8⁷², that he and they take no issue with the identification of SSA B or its boundaries⁷³, and that

⁶⁷ See for example JC 3.20

⁶⁸ NPS EN1 3.3.10, 3.3.11

⁶⁹ See for example NPS EN1 1.7.2, 1.7.11, 3.2.3, 5.9.8, - NPS EN3 2.7.2, 2.7.48

⁷⁰ See JC 3.16 and TAN 8 Annex D

⁷¹ See Interim Development Control Guidance 2008 para 11.1 CD Com 19

⁷² JC 1.7 and XX

⁷³ JC XX

they considered that the SSAs had been identified on the basis of substantial empirical research as the most appropriate locations⁷⁴.

51. JC's references to enhancement arose from a consideration of a number of generic UDP policies. It is of course important to remember that the development plan does not have the same status in applications under the Electricity Act and that the weight to give to the development plan will also be affected by national policy. However, when consideration is given to the UDP there are specific policies which address wind farm development and JC agreed in XX that in so far as it is relevant to assess these proposals against the UDP it is against those specific policies that the assessment should be undertaken – this again reflects PCC's public position⁷⁵. JC agreed in XX that the particularly relevant policy is E3 (p166 CD Com 6) and that the test repeatedly set out in that policy is that the proposal should not unacceptably adversely affect landscape quality and that even then consideration could be given to mitigation.
52. Ultimately JC agreed with MvG that it is not possible for all aspects of the development to complement or enhance the character of the surrounding area and that an implicit objective is to accept landscape change as it was inevitably accepted that this form of development cannot complement or enhance open areas⁷⁶. It is important to note as JC accepted in XX (in agreement with MvG⁷⁷) that even though there is no requirement to complement or enhance the area where it is possible for elements of the development to complement or enhance the character of the area they had been designed to do so and that this included the improvement in quality and increase in the extent of hedgerow, the removal of coniferous forestry plantation and the restoration of open moorland and bog.

⁷⁴ JC XX and see PPW 12.8.13

⁷⁵ See IDCG 2008 para 5.4 CD Com 19

⁷⁶ JC XX and MvG rebuttal 1.20

⁷⁷ See MvG rebuttal 1.21

53. JC did make a surprising mistake with respect to TAN 8, suggesting that at the time of its preparation it would have contemplated smaller turbines so that the impact of modern turbines would be much greater than previously envisaged⁷⁸. In fact TAN 8 expressly addressed turbines up to 145 metres in height⁷⁹. In consequence JC's assessment of impacts inevitably proceeds from a mistaken belief that impacts are greater than they are and/or greater than anticipated in TAN8.
54. NRW's concern with respect to the impact of the development on Glyndwr's Way is limited to those turbines which are said to "straddle" the way. There is some confusion in JC's evidence as to which turbines are said to give rise to this concern. Whilst his proof of evidence refers to a number of turbines⁸⁰ the proof confirmed that the concern was limited to 3 turbines (see JC 3.7); however, in examination in chief he suggested that the turbines about which he was concerned were R14, R15, R16 and R24. The relationship of these turbines to Glyndwr's Way is illustrated in Figure 12.1 of the CSEI. In addition to the turbines JC also raised some concern about the impact of the substation.
55. JC's concern with respect to these turbines appears to be that this part of the trail will pass through what would become a wind farm landscape⁸¹. This is an internally illogical objection given that his evidence was that the inevitable consequence of TAN 8 and the identification of SSA B (which he supports) would be that a wind farm landscape would be created⁸².
56. Furthermore the impact on Glyndwr's Way must be put in context. It is a long distance national trail (135 miles long⁸³) which passes through extensive areas of SSA B. Given its route through SSA B it is inevitable that there will be a degree of impact upon it

⁷⁸ See JC 3.17

⁷⁹ See TAN 8 Annex C Figure 1 and para 2.4 and Annex D para 6.4 and MvG rebuttal 1.24

⁸⁰ See for example JC para 6.8

⁸¹ JC 3.8 & 6.6

⁸² See MvG rebuttal 1.28

⁸³ MvG 8.12

and this must implicitly have been accepted with the designation of SSA B; furthermore the impact in this localised area has to be seen in the context of the overall length and variety of the national trail.⁸⁴ There is no particular character of the trail or any particular importance associated with its passage through the application site in general or the particular length about which JC raised concerns.

57. In addition whilst the experience of this part of the route will change as a result of the wind farm proposal it is important to take a balanced view on this. Whilst some people may not like the presence of the turbines other elements of the experience will be improved by the opening out of views as a result of the associated tree-felling.
58. Whatever view is formed as to the impact of the proposal upon Glyndwr's Way a fundamental factor to keep in mind is that the relevant length of the trail is merely a permissive route. It would be open to the landowner to prevent access to this length of the trail at any time. Given that the route could be closed at any time by the landowner it could not be right or sensible to consider impact upon the route as a reason for resisting these proposals as it would be open to the landowner to address any perceived problem by closing the route.
59. The proximity of the route to the turbines in question has been recognised in the application. There is a bridleway to the north of this section of Glyndwr's Way which connects with Glyndwr's Way to the north-west of turbine 14 and to the east at Neinthirion. A new permissive route is proposed which connects with this bridleway. Use of the new permissive route and the bridleway would provide the opportunity for walkers on Glyndwr's Way to pass through this area whilst maintaining a distance of at least 200 metres from any turbine as shown in Figure 12.1 of the CSEI.
60. The other point raised about the details of the wind farm concerned the substation which again appeared to be related to

⁸⁴ MVG rebuttal 1.30

the views from Glyndwr's Way. JC acknowledged in XX that the location of the substation had been moved in accordance with NRW's request and he stated that the location was acceptable. MvG explained that careful consideration had been given to the location and mitigation of the substation, and the photomontages from viewpoints 1, 2 and 6 demonstrate that there will be very limited visibility of the substation⁸⁵. JC accepted all of this; his point appeared to be that there would be other infrastructure particularly overhead lines as part of the grid connection which would be associated with the substation. Such infrastructure is an inevitable consequence of development of a wind farm anywhere within SSA B (or elsewhere) and in reality it has been implicitly accepted by TAN 8 and all of the supporting policy to which reference has been made. As the substation is suitably designed and screened in a suitable location the presence of the inevitable and necessary grid connection cannot provide any sensible objection to the proposal.

61. JC did not suggest that the wind farm proposal should be rejected as a result of any impact upon Glyndwr's Way. His position essentially was that the opportunity should be taken to limit any impacts. He did not suggest that this required or justified any further reduction in the number of turbines. Indeed he accepted in XX that a requirement to reduce the number of turbines as a result of any impact upon Glyndwr's Way would not accord with the guidance in paragraph 5.9.21 of NPS EN1. He did not suggest that there was any further practical step which could be taken to reduce the impact of the turbines upon Glyndwr's Way. Similarly he did not suggest that any more should be done to reduce any impact associated with the substation.

62. In the circumstances there is no evidence to suggest that the proposal has an unacceptable impact upon Glyndwr's Way or that there is any basis for requiring any further measures to be taken to reduce the impact upon Glyndwr's Way.

⁸⁵ See MvG 6.5, 6.6, 8.6 and rebuttal 1.26

63. The other issue raised by NRW is impact upon the National Park.

64. At the outset it is important to note that there is no suggestion that the Llanbrynmair proposal alone has any impact upon the National Park; the concern is limited to the cumulative impact of Llanbrynmair in combination with Carnedd Wen⁸⁶. However, NRW raise an objection to Carnedd Wen alone because of its impact upon the National Park. The important point to note therefore is that in so far as impacts upon the National Park are a concern it is a problem associated with Carnedd Wen in any event. There is nothing in the evidence to suggest that Llanbrynmair adds materially to the impact of Carnedd Wen. The essential point is that if the concerns about impacts upon the National Park were found to have any merit they would provide a reason for resisting the Carnedd Wen proposal not the Llanbrynmair proposal and in that event in the absence of the Carnedd Wen proposal there would be no cumulative impact in any event. In the circumstances even were there to be a concern about cumulative impact upon the National Park it cannot rationally provide a ground for resisting the Llanbrynmair proposal.

65. There is furthermore no substance in JC's concerns about cumulative impact on the National Park.

66. It can be seen at the outset that JC's concerns about the National Park are founded upon an analysis of the blade-swept area of the turbines⁸⁷. This is surprising given that this approach has been regularly rejected by Inspectors⁸⁸. The blade-swept area does not provide any meaningful information with which to assess the impact of the proposals.

67. The National Park is some 5.8km from the nearest turbine. Whilst the turbines will be visible from the National Park this is an inevitable consequence of wind turbine development anywhere

⁸⁶ JC XX and JC 3.26, 3.28, 5.12 to 5.16 and 5.18

⁸⁷ JC 5.25

⁸⁸ See for example paragraph 21 of the Nuts Grove decision letter – CD/COM/INS/010

within SSA B. The boundaries of the SSA have been set (and twice reviewed by PCC) with full knowledge of their relationship to the National Park. Given that any wind turbine development within the SSA will be seen from the National Park the mere fact that the turbines will be visible cannot be a ground for objection. Similarly given the drawing of the SSA boundaries there can be no in principle objection to their being seen at a distance in the order of 5km.

68. NPS EN1 advises that the fact that a proposed development will be visible from a designated area such as a national park should not in itself be a reason for refusing consent⁸⁹. The advice is that whilst regard must be had to the purposes of national parks when considering applications for projects outside their boundaries which may have impacts within them, the aim should be to avoid compromising the purposes of designation⁹⁰. MvG considered the special qualities of the National Park. It is plain that some of the special qualities are not landscape-related and that this type of proposal could not impact upon them. When consideration is given to the landscape-related special qualities none of them will be affected by this proposal even in combination with Carnedd Wen⁹¹.

69. In summary (i) there is no objection to the impact on the National Park of Llanbrynmair alone, (ii) in so far as an objection is raised with respect to the cumulative impact of Llanbrynmair and Carnedd Wen upon the National Park, it is clear that Carnedd Wen is the source of the alleged impact and there is no evidence that Llanbrynmair adds materially to that impact, (iii) the issue is therefore simply whether Carnedd Wen should be rejected as a result of this impact, (iv) visibility from the National Park does not in itself provide any ground for objection, (v) the relevant test is whether the cumulative impact would compromise the purposes of designation, (vi) there is no evidence that the proposals would compromise the purposes of designation and MvG's analysis

⁸⁹ NPS EN1 para 5.9.13

⁹⁰ NPS EN1 para 5.9.12

⁹¹ See MvG 7.19, 7.21, and rebuttal 1.25, 1.27

establishes that they would not. In the circumstances the impact upon the National Park does not provide a ground for resisting the development.

PCC and NRW concerns with respect to the access road

70. Both PCC and NRW now raise objections to the impact of the necessary highway works to the local access road. Indeed it is the only objection identified by PCC in its Session 2 SSA B statement of case. Given the significance now attached to this point by both PCC and NRW it is important to note how they came to this position.
71. It is self-evident that the turbines would need to be delivered to any site, wherever it might be located within an SSA, and that the deliveries would involve AILs which may be expected to result in requirements for modifications of local roads. This would clearly be in the minds of WG, PCC and NRW (CCW) when the SSAs were considered. The nature of local roads within the area would likewise be known to these bodies and there was (and still is) no requirement that access should only be from trunk roads or similar roads.
72. At the outset RES gave consideration as to how to achieve a satisfactory access to the site. For the reasons explained in the 26th June memo⁹² and 5th July 2013 letter⁹³ it was from an earlier stage concluded that the appropriate way to access the site would be via the Llanerfyl to Talerddig road.
73. Neither PCC nor NRW (CCW) suggested that this was an inappropriate route to take. Indeed NRW (CCW) in its letter of 20th

⁹² DW4

⁹³ DW3

January 2010⁹⁴ objected to Carnedd Wen on the grounds that its proposed access would have an adverse impact upon the National Park and that this could be avoided if it made use of the proposed access on the Llanerfyl to Talerddig road⁹⁵. This letter was supported by advice from JC which stated amongst other things –

"We note that substantial upgrades are being proposed to the minor road through the Nant yr Eira valley between Llanerfyl and Talerddig to access a number of other proposed wind-farms in this SSA including the Llanbrynmair South wind-farm which is adjacent to Carnedd Wenn.

*We consider that the impact of the main access route into the site on the Park could be mitigated by sharing of the Nant yr Eira route by both wind-farms."*⁹⁶

74. It is fair to observe that when consulted upon the Llanbrynmair proposal NRW (CCW) raised concerns that RES and RWE had failed to consider mitigating impacts by using a shared access and the possibility of using the Carnedd Wen access is mentioned⁹⁷. However, this concern was raised against the background of its earlier unresolved objection to the use of the Carnedd Wen access, so whilst reference is made to consideration of use of the Carnedd Wen access there is no suggestion that this would be acceptable. The point apparently being made is that one access would have less impact than two accesses and this should be considered.
75. The position was made clearer by JC's evidence to the inquiry. He explained⁹⁸ that when he first considered these proposals and for a number of years thereafter the use of the Llanerfyl to Talerddig road through the Nant yr Eira valley appeared to be the "preferable option" but that this position changed after the change

⁹⁴ DW1

⁹⁵ See 3rd page 2nd paragraph

⁹⁶ DW1 Annex 1 paragraphs 16 and 17

⁹⁷ See DW2

⁹⁸ In X in chief

in the highway design team for the Llanbryn-mair proposal when the road proposal was redesigned and it became apparent that there would be a larger land take than originally envisaged. At this point he suggested that the balance became “more the other way” so that the Llanerfyl to Talerddig road “was not the preferred access”. The change in design team referred to occurred in January 2013⁹⁹. In XX JC confirmed that if asked during 2012 (at the time when NRW (CCW) were consulted on the Llanbryn-mair proposal and responded in the form of DW2) as to which route should be used to provide shared access for both Llanbryn-mair and Carnedd Wen he would have said it was the Llanbryn-mair proposals using the Llanerfyl to Talerddig road. He further confirmed that even at the point of his giving evidence it was still not clear whether the Carnedd Wen access would be acceptable to him.

76. At times there appears to be a suggestion by NRW/PCC that the proposed access works have been expanded beyond those previously envisaged. This appears to be based upon the argument that the red line boundary is now more extensive than originally envisaged. As already noted this is a misleading and unfair suggestion. As KM explained the red line boundary had been deliberately widely drawn at the request of PCC and NRW to allow discussions at the detailed design stage to consider appropriate details. This means that the red line includes more land than will be required; it does not indicate that the scope of the works has increased¹⁰⁰. It most regrettable that the relevant bodies having sought this approach then seek to use it as justification for their change in position. The reference in the CCW letter of the 20th January 2010 (set out above) to “*substantial upgrades*” can be noted. It is clear that from the outset it was recognised that works of the nature proposed would be involved.

77. Although the possibility of a shared access was raised by NRW (CCW) in 2010, and despite the points raised by NRW (CCW) in its

⁹⁹ See KM 1.1.5

¹⁰⁰ KM rebuttal para 1.11 – RES-TRANS-REBUTTAL-MARTIN- SSA-B

consultation response in respect of Llanbryn-mair in 2012, PCC did not suggest that a shared access should be considered until late in the day in 2013. Furthermore whilst the revised access proposals were being discussed with PCC no suggestion was made to KM that there was some in principle difficulty or objection with the use of the Llanerfyl to Talerddig road and/or that consideration should be given to using the Carnedd Wen access instead. It is notable that there is no such suggestion in PCC's outline statement of case¹⁰¹ and that the earliest point which PCC can suggest that they raised this issue is the revised outline statement of case¹⁰².

78. It can be noted for example that on the 18th April 2013 PCC confirmed by e-mail that the overall strategy of bringing in the AILs from Llanerfyl and the general construction traffic from Talerddig was sensible. The e-mail confirms that *"There are clearly many aspects of your proposal that will need further attention but the general direction being taken appears to be sound"*. These observations were made with full consideration of the impacts of the proposals on the local area and residents, as the e-mail continues, *"I am however very concerned regarding the impact the highway works will themselves have on the local area and its residents. It was clear that you are also aware of these concerns and will be giving further consideration to mitigating the impacts"*¹⁰³. It should be recalled that these proposals had been advanced in consultation with and input from PCC's relevant landscape and planning representatives and also NRW. This was not looking at matters simply from the perspective of technical highway requirements. It is plain from the e-mail that even at this stage PCC was accepting the strategy of using the county road for AIL access and was merely seeking mitigation.

79. NRW's and PCC's positions must be considered in the context that it was always apparent that works would have to be done to the local access road in order to make it suitable for use by AILs

¹⁰¹ OBJ-002-OSOC

¹⁰² OBJ-002-OSOC2

¹⁰³ RES-TRANS-POE-MARTIN-APP-SSA-B Appendix 1

and construction traffic and that the scale of use by AILs and construction traffic would likewise be obvious. This was explicitly recognised in JC's response to the Carnedd Wen proposal on behalf of NRW (CCW) set out above which refers to "*substantial upgrades*" to the road. PR-V agreed in XX that all of this was obvious and that one would not have needed any detailed information from the applicant to establish this. He agreed that it would have been obvious to anybody with experience of wind farm development and that he and those who had previously been acting for PCC and NRW had such experience. He agreed that it would have been obvious that there would be a need to widen the road to provide the ability to manoeuvre AILs and to allow for vehicles to pass. He agreed that it would have been obvious that something needed to be done at Gosen Bridge and Dolwen Isaf bridge. He did claim that it would not have been obvious that there would have been a need to by-pass Neinthirion; this is a surprising claim and a momentary consideration of the position at Neinthirion reveals it as not credible; it is very clear that AILs could not manoeuvre between the existing buildings at Neinthirion. He agreed that it would have been obvious that there would have been tree loss and hedgerows would have to be removed. Indeed whilst the Cabinet report does claim that there is insufficient information on some of these aspects it is quite clearly recognised that there will be impacts of the order (indeed greater than) now being considered. For example the Cabinet report suggests that on one section alone of the road (section 1) there would be around 3km of mature mixed hedges removed and that around 60 mature trees as well as areas of woodland would be lost¹⁰⁴ – in fact that is a greater impact than would occur over all of the road.

80. It can be noted at the outset that PCC's objections to the landscape impact of the highways works is limited to the works between Llanerfyl and site access 4 (i.e. sections 1 and 2 of the

¹⁰⁴ RES Session 2 CD 4 p69

local road) as P R-V confirmed¹⁰⁵. He agreed that the landscape and visual impacts of the highway works to the south of access 4 (i.e. section 3 of the local road) are acceptable¹⁰⁶. He further confirmed that neither he nor PCC raised any issue with respect to any impacts upon residential amenity¹⁰⁷.

81. The landscape proposals and mitigation works for all 3 sections of the local road have been the subject of extensive consultation with PCC and NRW as MvG explained¹⁰⁸. PCC further accept that the design of the works on the minor road has done all that can be done to minimise the impacts of the works¹⁰⁹ and that the landscape and visual impacts have been minimised¹¹⁰. P R-V accepted that other than using a shared access with Carnedd Wen he was not suggesting that any more could be done to minimise the impact of the necessary works to gain access to the site.

82. P R-V explained in XX that his position was that the only alternative access to use of the minor road was access through the Carnedd Wen site. He also stated that if there were no alternative access to the site, the impact of the works to the minor road are such that the Llanbrynmair proposal should be refused. It can be noted that this is not something that he had stated in his proof. He also stated that access to the Llanbrynmair site should be through Carnedd Wen even if Carnedd Wen were not to receive consent, or were not to proceed, although again he had not made any such statements in his proof.

83. The position of P R-V and PCC on this issue is inconsistent and unreasonable: -

- i) It must be noted at the outset that P R-V's position (and that of PCC) that the use of the Carnedd Wen shared access is acceptable whereas use of the

¹⁰⁵ P R-V XX and see para 7.6 of his proof

¹⁰⁶ P R-V XX

¹⁰⁷ P R-V XX

¹⁰⁸ RES-LAND-POE-GRIEKEN-S4 para 7.11

¹⁰⁹ OBJ-002-TRANS-POE-RUSSELL-SSA B para 3.54(f)

¹¹⁰ P R-V XX

minor road is unacceptable is not based upon any assessment of the comparative impacts of the two route let alone any reasoned comparison of the two.

- ii) Furthermore it cannot be assumed that use of the Carnedd Wen route is inevitably better. It must be remembered that for a long period this was not the view expressed by CCW or JC who were advocating until recently that use of the minor road was preferable to use of the Carnedd Wen access.
- iii) P R-V and PCC appear to rely upon the contention that the Carnedd Wen access relies upon use of existing forestry tracks. However, this does not assist them. The forestry tracks will need extensive widening and this in places involves significant earthworks including cutting into the rock face. It is not self-evident that these works must involve less impact than the use, with some widening, of what is already a minor county road (of a significantly higher standard than the forestry track).
- iv) Remarkably in contrast to the detailed points taken with respect to the access road no assessment has been undertaken with respect to the Carnedd Wen access which has essentially just been accepted by PCC and P R-V.
- v) Whilst it is easy to state the proposition that one access will have less impact than two so that use of a shared access will have less impact than use of separate accesses that does not of itself establish (a) which of the accesses is the better to use as a shared access and (b) that use of either of the separate accesses is unacceptable.
- vi) The impacts of the Carnedd Wen access have been balanced against a number of benefits said to arise

from the Carnedd Wen proposal including (a) extensive areas of habitat restoration, (b) landscape improvements arising from forestry clearance and (c) the renewable energy benefits associated with the scheme. These are heavily relied upon by P R-V¹¹¹. If the Carnedd Wen proposal were not to proceed none of these counter-balancing benefits would accrue. In the absence of those benefits it cannot be concluded that it would be better for Llanbrynmair to gain access through Carnedd Wen.

- vii) No consideration has been given to whether Llanbrynmair can achieve access through Carnedd Wen. This is something dependent upon agreement with RWE and the various landowners, which has not to date been forthcoming. It is also dependent upon questions of viability which have not been considered by PCC or P R-V.

84. PCC and P-RV now take the position that even though the Llanbrynmair site can satisfactorily accommodate 30 wind turbines retaining the minor road in its current condition is so important that this should prevent the provision of up to 100MW of renewable energy in an area previously identified for such development¹¹². This is a remarkable position given the absence of any objection to the landscape and visual impact of the road proposals until recently and the absence of any suggestion that there was an in principle objection to use of the minor road because of the inevitable landscape and visual impact arising from the use of the road. It is a conclusion which would require very careful and compelling justification and which would then need to be balanced against all of the other relevant issues.

¹¹¹ See for example OBJ-002-LAND-POE-RUSSELL- para 5.3 and 5.11

¹¹² P R-V XX

85. In fact P R-V's position is not justified on his own evidence and methodology. The careful and compelling justification required for the extreme position taken by P R-V and PCC is simply not there.

86. P R-V's methodology is set out in his proof of evidence and was confirmed in XX –

- i) For an impact to have significant visual effects the receptor has to have at least high sensitivity and the magnitude of change has to be dominant, prominent **and** conspicuous¹¹³ (note the change has to have all three characteristics).
- ii) For a significant landscape effect to occur the special qualities or key characteristics of a particular landscape character have to be substantially altered¹¹⁴.
- iii) Even if there is a significant adverse landscape or visual effect this is not necessarily an unacceptable impact¹¹⁵.
- iv) To be unacceptable an impact, or more likely an accumulation of impacts, has to be so severe or so widespread on a highly valued receiving landscape or range of receptors as to diminish substantially that value¹¹⁶.
- v) The Powys Landscape Character Assessment identifies the special qualities of the area and provides an appropriate base against which to assess the landscape character effects of the application¹¹⁷.
- vi) There is a strong relationship between the Powys Landscape Character Assessment and LANDMAP¹¹⁸.

¹¹³ OBJ-002-LAND-POE-RUSSELL- para 2.9

¹¹⁴ OBJ-002-LAND-POE-RUSSELL- para 2.9

¹¹⁵ OBJ-002-LAND-POE-RUSSELL- para 2.14

¹¹⁶ OBJ-002-LAND-POE-RUSSELL- para 2.14

¹¹⁷ OBJ-002-LAND-POE-RUSSELL- para 3.4

¹¹⁸ OBJ-002-LAND-POE-RUSSELL- para 3.4

- vii) The LANDMAP Guidance Note explains that one should use LANDMAP to inform a thorough understanding¹¹⁹. This is important because LANDMAP involves a uniform assessment over the whole of Wales and is a published document which has not been produced for the purpose of a particular inquiry or to argue a particular case¹²⁰.
- viii) The LANDMAP Guidance Note further explains that LANDMAP describes inter alia the landscape qualities and characteristics and key landscape characteristics¹²¹.
- ix) According to P R-V the contrast between upland moor and forest on the one hand and the partially developed valleys is typical of central Wales and it is this which gives the landscape its particular and special character¹²².

87. Although P R-V accepted that the Powys Landscape Character Assessment and/or LANDMAP were the appropriate basis for any assessment of impacts and that they identified the special qualities and key characteristics of the area, he then proceeded to assess the proposal against a "*finer grain*" than either document¹²³. This is done because he recognised that the highway works would have "*comparatively localised*" impacts within the valley itself rather than impacts upon either the Powys Landscape Character Assessment areas or LANDMAP areas¹²⁴. A number of points follow from this –

- i) Importantly this recognises that any impacts which P R-V identifies are very localised.

¹¹⁹ CD CPL-LAN-008 p2

¹²⁰ P R-V XX

¹²¹ CD-CPL-LAN-008 pp 3/4

¹²² OBJ-002-LAND-POE-RUSSELL- para 3.10

¹²³ OBJ-002-LAND-POE-RUSSELL- para 7.4 and XX

¹²⁴ OBJ-002-LAND-POE-RUSSELL- para 7.4 and XX

- ii) Implicit in the reliance upon a more localised area is the recognition and acceptance that a significant impact cannot be demonstrated against either the Powys Landscape Character Assessment areas or the LANDMAP areas.
- iii) The reliance upon this more localised area does not conform with P R-V's methodology.
- iv) The more localised area is an area identified by P R-V for the purposes of this inquiry after his and PCC's objection had been determined, it is not a separate area identified in any published document. It follows the objection rather than being something that was used to inform an assessment prior to the objection¹²⁵. Effectively it is something made up to support P R-V's case.
- v) No work was done to identify this separate localised area, which is not identified or defined anywhere in any transparent manner¹²⁶.
- vi) This localised area cannot be compared with any other areas as the work needed to enable that to be done has not been undertaken, nor can it be compared with any other analysis¹²⁷.

88. The relevant elements of the Powys Landscape Character Assessment, so far as P R-V is concerned are set out in Appendix G together with his assessment of the impact of the proposals upon them. The relevant LANDMAP VSAA records are also set out in P R-V's Appendix G and in his assessment table within the Appendix he sets out those elements of the VSAA record which he considers it appropriate to assess the proposal against. These comprise extracts from the *Summary Description* and *Justification of overall evaluation* sections of the record. P R-V sets out his assessment of

¹²⁵ P R-V XX

¹²⁶ P R-V XX

¹²⁷ P R-V XX

the impacts set against those elements of the LANDMAP record in this Appendix.

89. The assessment against the Powys Landscape Character Assessment considers 7 LCAs. All 7 areas sustain a degree of impact as a result of the wind farm, but only 1 of the 7 sustains any impact as a result of the works to the minor road. With respect to 5 of the 7 LCAs the impact from the wind farm is assessed as *slight and not significant*. The other two LCAs comprise the *Dyfnant Forest/Llanbrynmair Moors LCA* and the *Tregynon/Llanerfyl LCA*.
90. The *Dyfnant Forest LCA* is affected only by the wind farm. The assessment is that there would be a moderate-substantial and significant effect "*because about half of the LCA (south of the Banwy Valley) would become a wind farm landscape*".
91. The assessment with respect to the *Tregynon/Llanerfyl LCA* reads –
- "The equally prominent characteristics of the wind farm would extend across the whole of the Nant yr Eira Valley part of the LCA. The scale and appearance of wind turbines on the horizon line above this LCA would be out of keeping with the small scale, traditional farmed and highly sensitive character. The local highway improvements would have a substantial impact on the rural character, small scale and unspoilt character of the Nant yr Eira Valley. The moderate-substantial impact of the turbines and substantial impact of the highway proposals would be significant to the wider LCA as a whole."*
92. A number of points about this analysis are immediately apparent –
- i) The Nant yr Eira Valley forms a relatively small part of the LCA as a whole (see for example Figure 4.4 of the CSEI August 2013).

- ii) Any impacts are recognised as limited to the Nant yr Eira Valley. Accordingly any impacts are limited to a relatively small part of the LCA.
- iii) As any impacts are limited to a relatively small part of the LCA there is no rational basis for contending that they are significant to the wider LCA as a whole.
- iv) It is plainly inconsistent to accept the impacts on the adjoining *Dyfnant Forest LCA*, half of which is said to become a wind farm landscape, but conclude that the impact on the *Tregynon/Llanerfyl LCA* is unacceptable when only a relatively small part is affected.
- v) The position is even more illogical when it is noted that the impact of creating a wind farm landscape in half of the adjoining LCA is assessed as *moderate-substantial* whereas the impact of the highway proposals (affecting a small part of the LCA) is judged as *substantial*.
- vi) The position becomes even more extreme when it is noted that the *Tregynon/Llanerfyl LCA* is judged to sustain a *moderate-substantial* impact from the turbines in any event but this is again judged to be acceptable. It must also be accepted in this context that any impact of the turbines would extend over a much wider area than any impact of the local highway works.
- vii) The only reference to impact from the *local highway improvements* refers to impact on *the rural character, small scale and unspoilt character* of the valley.
- viii) Given P R-V's methodology one must therefore turn to see whether any of this involves a substantial

alteration to identified special qualities or key characteristics of a particular landscape character.

- ix) The LCA extract in P R-V's Appendix says "*overall this large area is a well-defined example of a traditionally farmed landscape – generally settled, safe and relatively intimate, except for the broader sweep of the exposed valley of Cwm Nant-yr-Eira, south west of Llanerfyl running up towards the Llanbrynmair Moors.*" It can be noted that that assessment specifically refers to the valley and does not support the conclusion that the landscape is small scale in this location. Furthermore the area is generally settled which means of course that there are signs of development, including roads. There is no suggestion that the character of the highway plays any role in this assessment or that it is considered to be a special quality or key characteristic.
- x) The LCA assessment does not identify any of the elements identified by P R-V to be special qualities or key characteristics.
- xi) Finally, as discussed below P R-V's assessment proceeds on a grossly inflated view of what impacts would arise from the *local highway improvements*.

93. In summary when the matter is considered against the Powys Landscape Character Assessment the claimed impacts do not involve identified key characteristics or special qualities; any impacts arising from the highway works are exaggerated; any impacts arising from the highway works would be very localised and would only affect a small part of the Nant-yr-Eira valley which in turn only represents a small element of the LCA. There is no basis for concluding that the highway works would have a substantial or significant impact on the wider LCA as a whole. The

conclusion that the highway works would have an unacceptable impact upon the LCA whereas the wind farm's impact upon the LCA and the adjoining LCA is acceptable is truly incredible.

94. Consideration of the assessment against the LANDMAP VSAA's reveals a similar situation. The assessment considers 7 LANDMP VSAA's which are affected by the windfarm, but the *Llanerfyl Mosaic Farmlands* is the only VSAA affected by the works to the road. The assessment is effectively identical to that set out for the Powys Landscape Character Assessment LCA. Again the impact of the *local highway improvements* is said to be on *the rural character, small scale and unspoilt character* of the valley. Given P R-V's methodology one must therefore turn to see whether any of this involves a substantial alteration to identified special qualities or key characteristics of a particular landscape character.

95. The relevant elements of the VSAA relied upon by P R-V are –

"Distinct area typical of the mid regions of Montgomeryshire of small scale irregular field patterns with very strongly defined field boundaries typified by overgrown and managed hedgerows with a significant proportion of mature hedgerow trees...A succession of low rolling hills with gently sloping sides and rounded tops underlying a very traditional farming landscape – high aesthetic qualities, settled, domestic setting.

Well defined example of a traditionally farmed landscape, small scale field patterns with a diverse vegetation cover of hedgerow trees, mixed broadleaf woodland parcels. High aesthetic qualities and limited intrusion by modern development."

96. Again there is no suggestion that the character of the highway plays any role in this assessment or that it is considered to be a special quality or key characteristic. The area has a settled domestic setting which means of course that there are signs of development, including roads. It is plain from the description that

the important elements of the VSAA are (i) the small scale irregular field patterns, (ii) strongly defined field boundaries, (iii) succession of rolling hills and (iv) traditional farming landscape. There is no suggestion that the *local highway improvements* would impact upon any of these special qualities or key characteristics.

97. Indeed it is important to keep some perspective on this issue. The Llanerfyl to Talerddig road is by no means the only highway running through this VSAA. For example the A458 runs through parts of it. There is no suggestion that this is a detracting factor through the area even though it is a much more significant structure and would have more impact than the proposed works in this case. Indeed the access road only runs through a small section of the VSAA and has limited impact within the section through which it runs.
98. It is furthermore important to consider the overall description given of the VSAA. It is described as "*typical of the mid regions of Montgomeryshire*" – i.e. it is not particularly special, it is an extensive area¹²⁸. It is a "*very traditional farming landscape*" with a "*settled domestic setting*" – i.e. it is very much a man made landscape with development within it¹²⁹. It is a working landscape with farming characteristic¹³⁰. "*More modern development is common...usually practical*" – i.e. modern utilitarian development is common in the area¹³¹. The Nant yr Eira valley is *settled*, it is clearly not considered to be wild and it has been subject to evolutionary landscape change as road and access requirements have changed¹³².
99. The VSAA record contains guidelines. This seeks to control new development in farms with phased replanting of hedgerows, but there is no suggestion of any restrictions upon road works. The reference to the replanting of hedgerows is recognition that

¹²⁸ P R-V XX

¹²⁹ P R-V XX

¹³⁰ P R-V XX

¹³¹ P R-V XX

¹³² RES-LAND-REBUTTAL-GRIEKEN-SSA B para 1.12

without management the attractive qualities of this landscape will not be maintained. The objectives encourage further use of traditional land management techniques, with hedge laying/coppicing, enriching and strengthening of field boundaries (including the replanting of hedgerows) and ensuring that development is carefully integrated into existing landscape character¹³³. It is accepted that the highway works could be done in a way that is consistent with this¹³⁴. The guidelines and objectives clearly accept further development in the area.

100. In summary when the matter is considered against the LANDMAP VSAA the claimed impacts do not involve identified key characteristics or special qualities; any impacts arising from the highway works are exaggerated; any impacts arising from the highway works would be very localised and would only affect a small part of the Nant-yr-Eira valley which in turn only represents a small element of the VSAA. There is no basis for concluding that the highway works would have a substantial or significant impact on the wider VSAA as a whole. The conclusion that the highway works would have an unacceptable impact upon the VSAA whereas the wind farm's impacts upon the VSAA are acceptable makes no sense.

101. If one turns finally to P R-V's own assessment of the area. It is agreed that the proposal would have no impact upon what he identifies as giving this landscape its particular and special character in paragraph 3.10 of his proof¹³⁵. In paragraphs 7.4 and 7.5 he identifies what he considers to be the characteristics of the particular stretch of the valley upon which he concentrates. Again it can be noted that there is very limited mention of the minor road. In what he terms the upper valley, it is the watercourse, the grazing of the floodplain and the absence of field enclosures which are identified as contributing to local character. The proposals are

¹³³ RES-LAND-POE-GRIEKEN para 7.6

¹³⁴ P R-V XX

¹³⁵ P R-V XX

agreed not to impact upon any of these features¹³⁶. In the other part of the valley it is said –

- i) The watercourse is more deeply set and secretive – this is unaffected by the proposal.
- ii) Fields are hedged with many hedgerow trees and copses – this is unaffected by the proposal
- iii) The narrow lane undulates and turns between the hedged fields – the lane will continue to undulate and turn between hedged fields; whilst there is very limited and localised widening it must be remembered that in most locations there is no requirement to widen the lane i.e. that the lane already has similar widths to those proposed.
- iv) Views out are infrequent – this is unaffected by the proposal.
- v) The valley shares common characteristics with the Banwy Valley, is small scale and of high aesthetic quality – this is an interesting comparison. The Banwy Valley is the route which P R-V and PCC seek to direct the development to use and yet it is said to share common characteristics with this area and to be small scale and of high aesthetic quality. It can be noted that the Banwy Valley is said to have these qualities even though a trunk road runs through it which involves a much more considerable structure than would result from this proposal.

102. It is notable that even when P R-V selects a particularly compact area against which to judge the road proposals, which is essentially limited to the immediate area of the road, he still does not identify key characteristics or special qualities which are significantly affected by the proposed *local highway improvements*.

¹³⁶ P R-V XX

103. P R-V's assessment of the impact of the *local highway improvements* in any event exaggerates the works involved and fails to take into account the mitigation and improvement provided.
104. P R-V suggests that the most notable loss would be the impact to the verges¹³⁷. As MvG explained 92.6% of the highway widening is achieved through the use of grass reinforcement which will appear as grass verges¹³⁸. P R-V acknowledges that they will be "essentially 'green'" but argues that "*the earthworks required and engineering involved, cutting into the adjoining banks or building up adjoining lengths, would mean that the character of the current lane would inevitably be substantially altered and over a very considerable distance.*" He further claims that the appearance would be altered from a "*narrow country lane*" to "*a widened 'engineered' corridor*"¹³⁹.
105. The lack of objectivity in his assessment is shown by his contrasting of the *country lane* with an *engineered corridor*. The current highway is of course just as much an *engineered corridor* as the improved road would be. As MvG explains, and supports by analysis, the improvements would not "radically" alter the road; the lane is a man-made structure, albeit well "bedded" into the existing landscape. The *cutting into adjoining banks* and *building up adjoining lengths* that P R-V refers to will occur in areas that are already *cut-in* or *built up* so the existing bank will often just be moved further back to accommodate the widening, and similar profiles will be replicated¹⁴⁰. In so far as P R-V refers to enclosing features being pushed back, means of enclosure can be provided if this is thought to be beneficial¹⁴¹.

¹³⁷ OBJ-002-LAND-POE-RUSSELL- para 7.8

¹³⁸ RES-LAND-REBUTTAL-GRIEKEN-SSA B para 1.4

¹³⁹ OBJ-002-LAND-POE-RUSSELL- para 7.8

¹⁴⁰ RES-LAND-REBUTTAL-GRIEKEN-SSA B para 1.6

¹⁴¹ RES-LAND-REBUTTAL-GRIEKEN-SSA B para 1.6

106. P R-V claims that it will take replacement planting 20 years to achieve adequate maturity¹⁴². Again as MvG points out this ignores the fact that the majority of the replacement vegetation will be hedgerow which would establish within 5 years¹⁴³.
107. P R-V's assessment of the impact of localised widening on the verges is exaggerated and lacks balance. However, even were it to be accepted as the correct measure of the impact of the proposal it must be acknowledged that this is a very localised impact which is limited to the immediate vicinity of the existing road which is in any event an engineered structure which will inevitably be subject to change over time. In this respect the impact is clearly much more limited than any impact arising from the wind turbines (which of course is considered to be acceptable). The impact cannot sensibly be said to be significant for the valley as a whole (or even the area chosen by P R-V) still less for either the VSAA or LCA.
108. In addition to the impact upon verges P R-V identifies four locations where he claims substantial landscape harm would occur.
109. The first is the Neinthirion Bypass where he claims that the creation of an off-line reinforced grass access track to bypass the hamlet of Neinthirion would have short to medium term landscape and visual impacts which would be substantial and significant for the Nant yr Eira valley as a whole¹⁴⁴. Pausing there it can be noted that this does not amount to impacts upon either the VSAA or LCA as a whole and again this appears to have been ignored by P R-V where he simply conflates localised impacts into much wider impacts. It is also contradicted 6 paragraphs earlier where he states that as a result of "*the comparatively localised nature of the effects of the highway scheme on the valley*" he felt it necessary to look at a more localised area¹⁴⁵

¹⁴² OBJ-002-LAND-POE-RUSSELL- para 7.8

¹⁴³ RES-LAND-REBUTTAL-GRIEKEN-SSA B para 1.7

¹⁴⁴ OBJ-002-LAND-POE-RUSSELL- para 7.9

¹⁴⁵ OBJ-002-LAND-POE-RUSSELL- para 7.3

110. MvG explains that there would be localised significant effects on landscape character and views within the vicinity of the proposed works, but that they would not be experienced across the whole Nant yr Eira valley. The earthworks would be feathered into the existing landform and the line of trees in the area between Glyndwr's Way and the track strengthened to help filter views from the National Trail. The off-line track would be constructed as grass reinforcement, using local grass seed to fit appropriately into the surrounding landscape. MvG's experience is that this would be achieved over a maximum of two growing seasons. The effects will be short lived and localised¹⁴⁶.

111. P R-V identifies *locally significant* landscape and visual impacts at Dolwen Isaf Bridge¹⁴⁷. This categorisation of the impacts can be contrasted with the approach taken to Neinthirion and Gosen Bridge and is an acknowledgment that the impacts would be very localised. It cannot find an objection to the proposal. MvG agrees that there would be locally significant impacts but he explains that the existing bridge is a wide modern concrete structure (recognised by P R-V as "*not a particularly valuable landscape feature*"¹⁴⁸). The widening of the road south of the bridge will require the removal of an area of coniferous forestry plantation which is currently in poor condition. This was acknowledged by NRW and JC welcomed the removal of this plantation¹⁴⁹. The area of grass reinforcement for the overrun and offline works located within the field to the north of the bridge would establish over a maximum of two growing seasons. Accordingly not only would the impacts be localised, they would also be short lived¹⁵⁰.

112. The third location identified is the 350 metre diversion in the vicinity of Gosen which provides a bypass to an unsuitable section of existing vertical alignment. This would have minimal impacts

¹⁴⁶ RES-LAND-REBUTTAL-GRIEKEN-SSA B para 1.8

¹⁴⁷ OBJ-002-LAND-POE-RUSSELL- para 7.10

¹⁴⁸ OBJ-002-LAND-POE-RUSSELL- para 7.10

¹⁴⁹ JC XX

¹⁵⁰ RES-LAND-REBUTTAL-GRIEKEN-SSA B para 1.9

which appears to be recognised by P R-V as he categorises this as "*locally significant*" landscape and visual impacts¹⁵¹. Again such localised impacts cannot be suggested to render the proposal unacceptable.

113. The final location is Gosen Bridge. P R-V's assessment of what would occur at this location proceeds on a mistaken view as to what is proposed. He believed that there would be more tree loss than is necessary to provide for tracks for working. KM explained that an existing track which can be seen on site would be used. P R-V concludes that the bridge is "*important and valuable to the Nant yr Eira valley as a whole*" and that the "*charming appearance of the twisting narrow approach and traditional bridge...would become an engineering feature of A-road proportions and character*". He argues that the "*impact of this aspect of the road improvements would be significant on the character of the Nant yr Eira valley and wholly unacceptable*"¹⁵². It can be noted that this is the only 1 of the 4 locations where he alleges the impact to be *wholly unacceptable*.

114. P R-V's assessment of the impact is plainly exaggerated. The existing bridge is not listed and the crash barriers are a particularly noticeable feature which must be considered to detract from the bridge. Whether or not one concludes that it is a charming feature, P R-V agreed¹⁵³ that its visual contribution is localised, confined to an area of approximately 200 metres along the road and from the public footpath to the north-west of the bridge. Whilst the works will have a localised major effect there are significant landscape reinstatement works and the works will not be seen as an engineering feature. As MvG explained proportions of different road classifications do not follow standard set parameters. In this case the avoidance of kerbs, use of grass reinforcement for over-runs, the use of local stone for cladding of the parapet and other structures, and the reinstatement and addition of trees and

¹⁵¹ OBJ-002-LAND-POE-RUSSELL- para 7.11

¹⁵² OBJ-002-LAND-POE-RUSSELL- para 7.12

¹⁵³ P R-V XX and see RES-LAND-REBUTTAL-GRIEKEN-SSA B para 1.10

hedgerows, as outlined in the proposed mitigation in the CSEI¹⁵⁴ will retain the rural character of the road¹⁵⁵. P R-V confirmed that the bridge design is appropriate¹⁵⁶. Whilst the road will be changed as a result of the proposals, as MvG explained the road will retain a rural appearance and will not have an A-road appearance when compared to the nearby A458 and A470. It is also important to note that east of the bridge the widening comprises mainly grass reinforcement¹⁵⁷.

115. Turning to the issue of visual impacts. It can be recalled that for an impact to have significant impacts the receptor must have at least high sensitivity and the magnitude of change has to be dominant, prominent and conspicuous.

116. The changes cannot sensibly be described as dominant, prominent and conspicuous. They are very localised, confined to the immediate vicinity of the road. They occur in the context of the existing road, which is an engineered structure in its own right and subject to change over time. In most instances they simply replicate the profiles already there.

117. As the change cannot be described as dominant, prominent and conspicuous the visual impacts would not be significant using P R-V's own methodology.

118. Turning to the question of the receptors. These are essentially limited to users of the road which is mainly a small number of local residents and those delivering to them. The majority of receptors will be drivers who are recognised as of medium sensitivity¹⁵⁸ and accordingly any impact upon them would not give rise to a significant impact. In so far as any reliance is placed upon local residents it is important to recall that no issue is taken with impacts upon residential amenity and any residential views would be extremely limited.

¹⁵⁴ CD-RES-BAC-009

¹⁵⁵ RES-LAND-REBUTTAL-GRIEKEN-SSA B para 1.11

¹⁵⁶ P R-V XX and see OBJ-002-LAND-POE-RUSSELL- para 7.12

¹⁵⁷ RES-LAND-REBUTTAL-GRIEKEN-SSA B para 1.11

¹⁵⁸ P R-V XX

119. Essentially P R-V relied upon walkers as the sensitive receptors, but he was unable to give any indication of the number who might be affected.

120. Any visual impacts arising from the road works will be localised and seen in the context of the existing road and the improvement for use of the road which they provide. In practical terms any visual impacts of the road works must be more limited than the visual impacts arising from the wind farm development itself. It is again remarkable that the visual impacts of the road works should be suggested to be greater than those of the wind farm which are in turn considered to be acceptable.

121. It is important in considering this matter to give proper weight to the improvements and benefits arising from the proposal. There will be a net gain in the total length of hedgerow and a greater number of individual trees will be planted than those lost. Furthermore, the replacement and additional hedgerows will be more species diverse and subject to a maintenance and management plan to ensure that they are retained in better condition than the existing hedgerows. The existing hedgerows tend to be maintained by PCC by flailing to open up sight lines along the road, but as a result of the road improvements they can be left to grow larger potentially resulting in greater contribution to landscape character than the existing hedgerows¹⁵⁹. Whilst P R-V does not contest any of these benefits he merely argues that the short term loss (which he exaggerates) would outweigh the longer term mitigation¹⁶⁰. This is a surprising approach which appears to betray a desire to resist the proposal come what may.

122. When the matter is considered overall it is clear that the highway works will not significantly alter the experience of the Nant yr Eira valley. Still less can any impact upon the valley then be conflated into an impact upon the VSAA or LCA as P R-V seeks to do. It is relevant and important to note that there are many

¹⁵⁹ OBJ-002-LAND-POE-RUSSELL- para 7.8

¹⁶⁰ OBJ-002-LAND-POE-RUSSELL- para 7.8

VSAAs that contain minor and major roads of greater significance and which are still considered to retain their “outstanding” scenic quality¹⁶¹.

123. Furthermore the impacts arising from the *local highway improvements* would be experienced in the context of the wind farm development. In practical terms the landscape and visual impact of the wind farm development will be much more significant than the very localised impacts of the *local highway improvements*. It is simply not credible to argue that impacts of the wind farm are acceptable but that those of the *local highway improvements* are unacceptable.

124. JC’s position on this matter was ultimately revealing. Essentially he was concerned that it would be preferable to have one shared access rather than two separate accesses. This is not the appropriate test and it does not provide a proper basis for resisting this much needed development. Similarly his view as to which of the two access routes was “preferable” changed over time. The matter it would appear has always been one of preference rather than any fundamental or in principle objection. A preference for something else is not a basis for resisting a proposal.

Cumulative/combined landscape and visual impact

125. In the case of both Llanbrynmair and Carnedd Wen the greatest potential for cumulative landscape and visual impact arises from the addition of the other proposal given their relative proximity. The only point taken with respect to cumulative impact arising from these two proposals was the NRW concern with respect to cumulative impact upon the National Park which is addressed

¹⁶¹ RES-LAND-REBUTTAL-GRIEKEN-SSA B para 1.13

above. For the reasons considered above this does not provide a ground for resisting the Llanbrynmair proposal.

126. Given the scale of development envisaged for SSA B in TAN 8 a significant cumulative landscape and visual impact is inevitable if the policy is to be fulfilled¹⁶².

127. The contribution which Llanbrynmair might make to the inevitable landscape and visual impact within SSA B was assessed under three different scenarios¹⁶³. Consideration of those various scenarios confirms that Llanbrynmair would not give rise to unacceptable cumulative landscape or visual impacts and that the identified effects are acceptable from a landscape and visual perspective in terms of both national and local policy¹⁶⁴.

128. The proposed turbines of the wind farms within SSA B and SSA C are separated by a minimum distance of 20km. At that distance there is no potential for significant cumulative interaction between SSA B and SSA C¹⁶⁵.

129. The ZTV analysis indicates that combined or successive visibility of the proposed wind farms in SSA B and SSA C is limited¹⁶⁶. Areas where intervisibility is possible between SSA B and SSA C are generally limited to small areas on higher ground between SSA B and SSA C, focussed across two bands of elevated upland hills and plateau. Visibility within valleys that lie between SSA B and SSA C is generally limited to either schemes within SSA B or SSA C¹⁶⁷. The introduction of Llanbrynmair to a baseline of SSA B wind farm developments introduces only limited additional theoretical visibility of wind farm development¹⁶⁸.

130. Eight conjoined cumulative viewpoints were agreed with PCC to illustrate the theoretical combined and successive visibility of wind

¹⁶² RES-LAND-POE-GRIEKEN-S4 para 8.2

¹⁶³ RES-LAND-POE-GRIEKEN-S4 paras 7.5 – 7.7 for landscape and 7.8 – 7.10 for visual

¹⁶⁴ RES-LAND-POE-GRIEKEN-S4 para 8.4

¹⁶⁵ RES-LAND-POE-GRIEKEN-S4 para 7.2

¹⁶⁶ RES-LAND-POE-GRIEKEN-S4 para 7.12

¹⁶⁷ RES-LAND-POE-GRIEKEN-S4 para 7.13

¹⁶⁸ RES-LAND-POE-GRIEKEN-S4 para 7.15

farm development located within the two SSAs. Analysis of the impact from the various viewpoints reveals that the addition of Llanbrynmair has either a negligible or minor impact in all cases¹⁶⁹.

131. Consideration has also been given to the cumulative sequential effect on various routes which were agreed with PCC¹⁷⁰. In each case the addition of Llanbrynmair would result in no more than a negligible cumulative impact¹⁷¹.

132. In addition to the cumulative impacts arising from the combination of Llanbrynmair with other wind farm proposals in SSA B and SSA C consideration has also been given to the impact of the strategic highway works and the necessary grid connections.

133. The landscape and visual impacts of the route provided in the sTMP are assessed in the ES for the sTMP which concludes that no significant landscape and visual effects, including cumulative effects, are identified as a result of the works set out in the sTMP for the proposed transport of component parts from Ellesmere Port¹⁷². Given that the sTMP proposes comparatively minor works to what are already trunk roads this conclusion is to be expected.

134. The grid connection for Llanbrynmair is not something to be determined by this inquiry. There are a number of different potential connection options and the particular method and alignment is a matter ultimately for SP Manweb the local Distribution Network Operator (DNO) and/or National Grid. The potential for connection to the grid is a separate matter identified by the S of S¹⁷³. The final method and alignment selected by the DNO may be affected by what if any combination of proposals receives consent, but the DNO has quite properly explained to the inquiry that there are other considerations (not before this inquiry) which influence how the network should be designed and which will

¹⁶⁹ RES-LAND-POE-GRIEKEN-S4 paras 7.16 – 7.39

¹⁷⁰ RES-LAND-POE-GRIEKEN-S4 para 7.41

¹⁷¹ RES-LAND-POE-GRIEKEN-S4 paras 7.42 – 7.50

¹⁷²

¹⁷³ Matter 14

necessarily influence the DNO's final selection¹⁷⁴. It is furthermore important to keep in mind that whatever the ultimate route and method is selected that will be subject to a detailed consent process and a full EIA which will consider the landscape and visual impacts carefully¹⁷⁵.

135. Given that state of affairs any assessment of the landscape and visual impact of the likely grid connection can necessarily only be undertaken at a high-level and the real issue for consideration is whether there are any grounds for concluding that any landscape and visual impacts must necessarily be unacceptable.

136. The information currently available provides sufficient information to enable a judgment to be made on the overall acceptability of the combined or total cumulative landscape and visual effects from the five wind farm proposals and their likely grid connections¹⁷⁶.

137. At present the most likely grid connection proposal for Llanbrynmair would involve connection to a National Grid "hub" substation at Cefn Coch via a 132kV HDWP OHL and a short section of 132 kV steel tower OHL¹⁷⁷. This would lead to a significant landscape character change to a localised area at the northern end of the Cambrian Mountains RCA as a result of the change to the sense of naturalness¹⁷⁸. The proposed grid connection would cross several LCAs and there would be significant landscape effects along the final route of the grid infrastructure and the immediate surrounding area up to approximately 1 km¹⁷⁹. There would be no additional landscape effects on the National Park or the North Ceredigion Upland Special Landscape Area¹⁸⁰.

¹⁷⁴ See SPM/028 – Response to Statements of Case Session 4

¹⁷⁵ RES-LAND-POE-GRIEKEN-S4 para 6.31

¹⁷⁶ RES-LAND-POE-GRIEKEN-S4 para 6.9

¹⁷⁷ RES-LAND-POE-GRIEKEN-S4 para 6.13

¹⁷⁸ RES-LAND-POE-GRIEKEN-S4 para 6.16

¹⁷⁹ RES-LAND-POE-GRIEKEN-S4 paras 6.17 – 6.18

¹⁸⁰ RES-LAND-POE-GRIEKEN-S4 para 6.20

138. Significant visual effects are not likely to extend beyond 1km from the HDWP OHL or 2.5km from the steel tower OHL¹⁸¹. Views in the vicinity of the Llanbrynmair wind farm would be in the context of the wind farm which would be the key feature in these views. Further afield the route would be back clothed by forestry and where crossing the open moorland plateau the wood pole would be a minor element in the open landscape. Where the poles become steel towers visibility would extend over a wider area but would be in the context of the substation and Tirgwynt¹⁸². Given the distance between SSA B and SSA C the associated grid infrastructure with the different wind farms would not give rise to additional significant cumulative effects¹⁸³.

139. The evidence demonstrates that a grid connection between Llanbrynmair and Cefn Coch can be accommodated without unacceptable landscape and visual effects with or without Carnedd Wen¹⁸⁴.

140. PCC is opposed to any 400kV line as proposed by National Grid but it accepts that both Llanbrynmair and Carnedd Wen can be connected to the network without unacceptable landscape and visual impacts.

141. In summary there are no cumulative landscape and visual impacts which would provide any basis for resisting the Llanbrynmair proposal.

¹⁸¹ RES-LAND-POE-GRIEKEN-S4 para 6.21

¹⁸² RES-LAND-POE-GRIEKEN-S4 para 6.23

¹⁸³ RES-LAND-POE-GRIEKEN-S4 para 6.28

¹⁸⁴ RES-LAND-POE-GRIEKEN-S4 para 6.29

Highway and transportation issues – matter 5

The strategic route

142. The proposal will involve bringing substantial construction traffic into a relatively remote rural area and this has inevitably required careful consideration of the highway implications of the proposal. The identification of the various SSAs inevitably requires access to these areas for construction of the various wind farms required to meet the policy objectives and the fact that in practice a number of proposals will be required to meet these policy objectives further complicates consideration of the highway issues. The highway issues essentially revolve around consideration of the AIL traffic and the general increase in traffic arising out of the construction traffic for the proposals.
143. In accordance with the guidance in NPS EN-3 paragraph 2.7.82 the wind farm industry has responded positively and constructively towards ensuring that the delivery of the large components which will entail AIL traffic can be managed in a co-ordinated way and has produced a strategic Traffic Management Plan (sTMP) for access to SSA B and SSA C¹⁸⁵. The purpose of the sTMP is to establish a protocol, with associated physical works, to prevent and limit the occurrence of potential traffic and transport effects.
144. The turbine component parts will be delivered to Ellesmere Port which is the nearest suitable UK port for access to SSA B and SSA C and which has excellent links to the M53¹⁸⁶. Use of Ellesmere Port as the preferred port of entry complies with the Highway Agency's Water Preferred Policy which requires abnormal loads to be delivered to the port nearest the destination in order to

¹⁸⁵ Strategic Transport Hearing Statement – RES-RWE-CPL-VATT-TRANS STATEMENT S4 – para 2.3

¹⁸⁶ Strategic Transport Hearing Statement – RES-RWE-CPL-VATT-TRANS STATEMENT S4 – para 2.12

minimise road mileage making sure the most appropriate road is used¹⁸⁷.

145. From the M53 the delivery traffic is able to use the trunk road network. The purpose of the trunk road network is to carry major loads over greater distances and it is constructed to higher standards compared to the county road network¹⁸⁸.

146. The common route for both SSAs extends to Welshpool. The ALL traffic for SSA B then travels through Welshpool on the B4381 before taking the A458 to the vicinity of the site¹⁸⁹. The use of the B4381 through Welshpool is appropriate as use of the trunk road would require a right turn at the constrained crossroads from Salop Road onto High Street. Furthermore use of the B4381 reduces the distance that convoys travel through the built up area of Welshpool¹⁹⁰.

147. The abnormal loads will travel in convoys of two abnormal load vehicles of up to 50m long or 4.5m wide, although there is a possibility of convoys of three vehicles if the delivery system is found to work well and this is found to be suitable¹⁹¹.

148. The aim of the traffic management strategy is to limit the delay to the travelling public to a maximum of 10 minutes. North of Oswestry the trunk road network comprises a mix of dual-carriageway and wide high standard single-carriageway roads. South of Oswestry the reduced carriageway width means that there is scope for conflict with oncoming vehicles. South of Oswestry, police motorcyclists will travel ahead of the convoys and hold oncoming traffic wherever the carriageway is wide enough to allow the convoys to pass. A back up network of designated passing places will enable convoys to move from passing place to

¹⁸⁷ Strategic Transport Hearing Statement – RES-RWE-CPL-VATT-TRANS STATEMENT S4 – para 2.14

¹⁸⁸ Strategic Transport Hearing Statement – RES-RWE-CPL-VATT-TRANS STATEMENT S4 – para 2.15

¹⁸⁹ Strategic Transport Hearing Statement – RES-RWE-CPL-VATT-TRANS STATEMENT S4 – paras 2.12 & 2.13

¹⁹⁰ sTMP Section 1 para 3.2.3

¹⁹¹ sTMP Section 1 paras 5.1& 5.2.3

passing place, waiting at each to allow traffic to clear if required. Each passing place will be large enough to hold a single convoy and key passing places will be designated as suitable for longer term storage in the event of an emergency¹⁹². The time taken for the convoys to move between passing places has been calculated assuming an average speed of 30mph on A-class roads and 20mph on minor roads with the exception of specific constraints¹⁹³.

149. Convoys will travel during hours of daylight for safety reasons. Convoys are planned to move through Welshpool between the morning and lunchtime peaks on a weekday with no more than one convoy per day moving through Welshpool between 7am and 7pm on a weekday. Convoys may also be moved through Welshpool before 7am or after 7pm and at weekends¹⁹⁴.

150. Movement of the AILs through Welshpool will involve some very short term traffic management within Welshpool. With the possible exception of 3 parking places to the north of the town centre there is no issue with respect to on-street parking but it will be necessary for any vehicles in non-designated parking places to be moved on by the police for the short period during which the convoy passes through. In addition there is insufficient carriageway width for traffic to pass the convoy on the A458 Raven Street approaching the A490 roundabout which means that for the short period during which the convoy passes through traffic will be diverted down the parallel B4381 Brook Street; this adds an additional 50 metres to any journey¹⁹⁵. It is important to keep in mind that Brook Street will be available at all times for traffic to pass through the town so that there is always an alternative route for any traffic wishing to avoid the convoy.

151. The distance between the last passing place before Welshpool (located on the A483)¹⁹⁶ to the passing place at the Raven

¹⁹² sTMP Section 1 para 6.1

¹⁹³ sTMP Section 1 para 6.2.2

¹⁹⁴ sTMP Section 1 para 7.1

¹⁹⁵ sTMP Section 3 para 3.2.2

¹⁹⁶ Passing place 2-3g see sTMP Section 3 Figure 3-3b

roundabout (i.e. on the other side of Welshpool town centre¹⁹⁷) is some 3.1 km and the time taken to pass between the two passing places is calculated at 9 minutes¹⁹⁸. It is important to note that a considerable length of this section of road is outside Welshpool; the actual distance traversed through Welshpool is only 0.8km and even if it were assumed that the convoy would only average 10mph through the town centre (which is a conservative assumption) this would only take 5 minutes to pass through the town¹⁹⁹. Taking into account the need for the police to prepare the way for the convoy to pass through the town centre the total time during which the convoy might be said to be having an impact upon the town centre would be of the order of 10 minutes²⁰⁰.

152. A public awareness campaign will be undertaken to ensure that local communities understand the nature and timing of the turbine component deliveries into Mid Wales and that the travelling public is informed of the implications of the movements on their journeys²⁰¹. Given that development of the scale provided for in policy will involve a significant number of AIL deliveries it is likely that the public will become well aware of the likely timings of convoys and their impacts and if necessary will adjust travel arrangements to accommodate this.

153. The sTMP has been the subject of widespread consultation with the relevant public bodies and it has been approved by the highway authority. In addition an Agreed Statement has been produced in consultation with the various public bodies addressing the delivery process to ensure that the process satisfactorily addresses the needs of the developers and the public bodies²⁰².

154. An assessment of the cumulative impact of non-AIL construction traffic associated with proposed Mid Wales wind farm schemes has

¹⁹⁷ Passing place 3-3b see sTMP Section 3 Figure 3-3b

¹⁹⁸ sTMP Section 3 Table 3-3

¹⁹⁹ KM and SA – hearing session 18th March 2014

²⁰⁰ KM and SA – hearing session 18th March 2014

²⁰¹ sTMP Section 1 para 8.1

²⁰² Strategic Transport Hearing Statement – RES-RWE-CPL-VATT-TRANS STATEMENT S4 – paras 3.1 – 3.15

been undertaken using a Cumulative Traffic Impact Model and the Institute of Environmental Assessment (IEA) guidelines for the Environmental Assessment of Road Traffic²⁰³. In addition to the five proposals before this inquiry that assessment has included the impact of 9 other schemes²⁰⁴. Some criticism has been raised that there may be other proposals at some time in the future. The cumulative assessment has taken into account all schemes which are currently in the planning process and for which there is accordingly sufficient information to make an accurate assessment; it is neither appropriate nor necessary to consider other schemes which for example have not passed beyond scoping.

155. The model is inter-active allowing the impact of any number of wind farms, including individual developments, to be assessed in terms of strategic road network traffic impact, and allowing assessment of different scenarios²⁰⁵.

156. The IEA Guidelines suggest screening criteria in terms of percentage changes in traffic to establish the need for an assessment of potential significance. The IEA advises that a 30% change in traffic flows represents a reasonable threshold for including a highway link in an assessment of potential significance²⁰⁶. It is important to appreciate that this is a threshold for further investigation. It is not suggested that a 30% increase in traffic will result in a significant effect, merely that below this threshold it can confidently be expected that there will not be a significant impact and therefore there is no need for further investigation. It is also important to note that some environmental impacts are more sensitive to traffic changes than others and the 30% threshold has been set on the basis of the most sensitive

²⁰³ Strategic Transport Hearing Statement – RES-RWE-CPL-VATT-TRANS
STATEMENT S4 – para 4.1

²⁰⁴ Strategic Transport Hearing Statement – RES-RWE-CPL-VATT-TRANS
STATEMENT S4 – para 4.3

²⁰⁵ Strategic Transport Hearing Statement – RES-RWE-CPL-VATT-TRANS
STATEMENT S4 – paras 4.6 & 4.17

²⁰⁶ Strategic Transport Hearing Statement – RES-RWE-CPL-VATT-TRANS
STATEMENT S4 – para 4.7

factors²⁰⁷. It is furthermore important to keep this threshold distinct from other figures which address matters such as road capacity. There is no issue with respect to the capacity of the road to accommodate the levels of traffic proposed²⁰⁸.

157. The cumulative impact assessment on non-AIL construction traffic reveals that the daily cumulative impact of the wind farm proposals does not exceed the threshold identified in the IEA Guidelines and there are no grounds for concern as to the impact of such traffic²⁰⁹. This assessment has effectively been undertaken on a "worst case" basis assuming that many of the proposals are developed at the same time thereby concentrating the impact. In reality it is likely that there will be a greater spread of development and therefore a lesser impact.

158. Delivery of the necessary turbine components will involve a significant number of AIL deliveries which will have a degree of impact upon the local communities. However, this must be put in context. Whilst the AIL convoys may cause an element of delay to road users any disruption and delay has been kept to a minimum with maximum delays of about 10 minutes. Furthermore whilst delivery by convoys will extend over a significant period of time, if all of the proposals are to proceed, there will only be one convoy a day, unless experience shows that a greater number of convoys is acceptable. There are no identified impacts associated with general construction traffic. Any wind energy development inevitably gives rise to the need for AIL deliveries and construction traffic. The identification of the various SSAs inevitably contemplates that there will be highway impacts and works of the nature proposed. The impacts have been kept to a minimum and there is nothing to suggest that such impacts are greater than might be expected or that they are in any way unacceptable. The evidence has

²⁰⁷ KM – hearing session 18th March 2014

²⁰⁸ KM, SA and DT – hearing session 18th March 2014

²⁰⁹ Strategic Transport Hearing Statement – RES-RWE-CPL-VATT-TRANS STATEMENT S4 – para 4.12

established that the highway implications of the proposal have been satisfactorily addressed and accommodated.

The local access

159. At the outset it is important to note that the highway authority accepts that the local access proposals are appropriate in highway safety terms²¹⁰ and raises no issue with the technical highway details. Indeed in answer to the Inspector's question MR confirmed that the proposals would result in a minor improvement to road safety over the existing. Given that this has been identified to be the most important consideration when the question was asked, MR's considered answer to the question is particularly significant.

160. The proposals have been subject to independent road safety audits which concluded that the access route strategy is suitable in road safety terms²¹¹. Both highway authorities have indicated that the audits are satisfactory²¹².

161. PCC has confirmed that the proposals are technically feasible (S of C para 5.1.2) and in highway terms a safe route can be provided²¹³. MR confirmed in XX that there is no need to consider an alternative access for any technical highway reasons. He further confirmed in XX that –

- i) The conclusion that access by AILs using the county road is technically feasible is one that was carefully considered by Mr Williams (the relevant highway officer) and PCC before they accepted it.

²¹⁰ OBJ-002-TRANS-RUSSELL-SSA-B

²¹¹ RES-TRANS-POE-MARTIN-SSA B paras 4.5.1 – 4.5.4 and LTMP Appendix G-1

²¹² RES-TRANS-POE-MARTIN-SSA B para 4.5.4

²¹³ OBJ-002-TRANS-POE-RUSSELL-SSA-B para 3.34 and MR XX

- ii) That conclusion was reached on the basis of the AECOM drawings provided in June 2013 and now found in the CSEI.
- iii) There was no issue raised with whether the works could be carried out within the red line – that is an issue which was highly material to whether the works were technically feasible.
- iv) Similarly no issue was raised with whether the works could be carried out as proposed.
- v) The proposals were supported by a buildability note, and assessments by Colletts and Jones – none of these have ever been questioned – and there had been no request for further clarification.

162. It is clear that there is no highway objection to the proposals as such. The issue really is PCC's preference for a shared access using Carnedd Wen.

163. The original highway proposals were based on access for AILs and construction traffic from the A458 at Llanerfyl to site entrance 4²¹⁴. This approach was reconsidered when KM was instructed and it has led to the current proposals which involve all AILs entering from Llanerfyl but all construction traffic now entering and leaving the county road from the A470 at Talerddig. This diverts construction traffic away from the "more populated" and more environmentally sensitive section of the county road²¹⁵. It also results in less work being required to the county road. As a consequence of the amended proposal the number of passing bays/overrun areas reduces from 99 to 67, with the number within the more constrained section 1 reduced from 73 to 40. In addition the surface treatment has moved from hard asphalt to grass reinforcement which will further minimise the impact of the proposals. The number of passing places for everyday traffic has

²¹⁴ RES-TRANS-POE-MARTIN-SSA B para 4.1.1-4.1.4

²¹⁵ RES-TRANS-POE-MARTIN-SSA B para 4.2.1

increased from 2 to 6 which further reduces the impact on local traffic during AIL deliveries²¹⁶. MR agreed with all of this in XX.

164. The Llanerfyl to Talerddig road is a minor route along the Nant yr Eira valley which links Llanerfyl on the A458 to the north with Talerddig on the A470 to the south. The road is 17.5km in length and is not subject to any speed restrictions²¹⁷. Apart from Llanerfyl, there is limited development on either side of the road with the route mostly servicing small hamlets, forestry sites and agricultural industry. The road is currently used by agricultural traffic, forestry traffic and other vehicles servicing the premises along the road²¹⁸

165. These proposals are the outcome of detailed discussions between KM on behalf of RES and PCC (both highways and landscape) and NRW as KM outlined in his evidence²¹⁹. As KM explains at no time during these discussions did PCC suggest that access via the county road was unsuitable or that a shared access should be considered instead.

166. Consideration has been given to the possibility of using an alternative access. KM explained why the use of the A470 as an access route for AILs would not be appropriate²²⁰, and nobody has suggested use of this route. Use of the A458 for all traffic was previously proposed, but KM has explained why this is less appropriate than the current proposal²²¹. There is no objection from the statutory bodies to the use of the southern section of the county road from the A470 for general construction traffic with the consequent improvements to this section of the road and no suggestion that it would be more appropriate to revert to the strategy of taking all traffic from the A458.

²¹⁶ RES-TRANS-POE-MARTIN-SSA B para 4.2.9-4.2.10

²¹⁷ RES-TRANS-POE-MARTIN-SSA B para 2.6

²¹⁸ RES-TRANS-POE-MARTIN-SSA B para 2.8

²¹⁹ See RES-TRANS-POE-MARTIN-SSA B para 1.3.6 and RES-TRANS-REBUTTAL-MARTIN-SSA B paras 1.3 – 1.8

²²⁰ RES-TRANS-POE-MARTIN-SSA B paras 4.3.2-4.3.4

²²¹ RES-TRANS-POE-MARTIN-SSA B para 4.3.5

167. The possibility of using a shared access with Carnedd Wen was investigated at an early stage (2008/9) with a formal meeting to discuss it held on 2nd February 2009. In the light of the discussions it was concluded that a shared access for both projects was not a viable option for a number of reasons. These included problems associated with the logistical management of two different developments²²².

168. Since then if anything it has become clearer that use of a shared access is not an achievable approach. Carnedd Wen is subject to a multi-year tree felling programme prior to commencement of the construction works, and construction of the necessary tracks is not programmed until later in the programme. Whilst RES has put forward proposals to RWE to try to allow Llanbrynmair to proceed as programmed no agreement has been forthcoming. As KM explained if Llanbrynmair were to be delayed to accommodate the programme for Carnedd Wen the proposal would not be viable. In addition even were Llanbrynmair to be developed the delivery of the renewable energy (planned in policy for 2010) would be delayed by many more years²²³.

169. Use of the county road for construction traffic and AIL deliveries will involve some physical works to the road.

170. The Talerddig A470 junction is to be improved to allow for two HGVs to use the junction simultaneously. Welsh Government, the highway authority for the A470, has indicated that the proposed works incorporate "*significant improvement*" to the junction²²⁴. This is one of a number of highway benefits arising from the proposal.

171. Works on section 3 of the road (Talerddig to Access Point 4) are limited to the provision of a number of intervisible passing bays suitable for HGV passing. The passing bays consist of improving

²²² See OBJ-002-TRANS-POE-RUSSELL-SSA-B App 1 & 2

²²³ RES-TRANS-POE-MARTIN-SSA B para 4.3.9 – 4.3.16 and evidence in chief and OBJ-002-TRANS-POE-RUSSELL-SSA-B App 1 & 2

²²⁴ RES-TRANS-POE-MARTIN-SSA B para 4.9.5

existing passing bays using grass reinforcement or creating new asphalt car-sized passing bays extended to cater for HGV traffic using permeable grass reinforcement²²⁵. PCC raise no concerns with respect to these works and accept that they provide community benefit²²⁶.

172. Turning to the northern section of the road to which PCC raise objection. A new off-road track will be constructed to the east of the existing Llanerfyl A458 junction to provide a suitable means for AILs to join the county road without impacting upon the area around the junction. Works will be undertaken where necessary on the county road to provide a minimum road width of 4.5m with the widening delivered through use of permeable grass reinforcement. Passing places are provided together with structural improvements at four locations²²⁷. PCC's witnesses queried whether 4.5m width of road would be sufficient but Collett and Sons has confirmed that this would be sufficient²²⁸. MR accepted that 4.5m would be sufficient in the light of the e-mail from Collett and Sons²²⁹ and this disposed of many of the points made by PCC's witnesses.

173. A note has been provided on the buildability of the proposals and no issue was taken about this by MR. He accepted that the proposals could be built as suggested²³⁰. Whilst he had made reference to the need for pre-construction surveys he agreed with KM that this was common practice. Furthermore he agreed that the weight of AILs and other construction traffic would not exceed that of a standard HGV which the county road was already designed to accommodate so there was no suggestion that further works beyond those proposed would be needed²³¹.

174. The construction of the highway works will require a number of temporary road closures. The details of these closures were set

²²⁵ RES-TRANS-POE-MARTIN-SSA B para 4.9.5

²²⁶ OBJ-002-TRANS-POE-RUSSELL-SSA-B para 3.43

²²⁷ RES-TRANS-POE-MARTIN-SSA B para 4.9.7

²²⁸ RES/004 and KM

²²⁹ MR XX

²³⁰ MR XX

²³¹ MR XX and see RES-TRANS-REBUTTAL -MARTIN-SSA B para 1.13

out in a note prepared by AECOM and issued to PCC on the 27th August 2013²³². The note is reproduced in Appendix 2 to KM's proof. The note explains that the timeframes are described in proportions of shifts and days. A shift is either the inter-peak period of 9.30-15.30 or 20.00-06.00. It can be noted that there are only 3 locations where any closure would exceed one shift and in most cases any closure would only be for part of a shift whilst tie in was achieved with the road works. KM explained (as is also seen in the note) that road works would not be left in place after a shift (i.e. that traffic controls would not be left in place outside actual working).

175. The note reveals that at worst there would be 15 days affected by temporary road closures during the 9 month highway works construction period. Furthermore such closures would take place outside peak periods so that school and work trips would not be affected²³³. This means that for 95% of the construction period there would be no impact arising from road closures. Even then peak period traffic would be unaffected and also large parts of the route would be unaffected at any one time. There are low levels of traffic which might be affected as a result of any road closures. During the daytime peak up to 10 vehicles per hour might be affected whereas at night it might be 1 vehicle per hour²³⁴.

176. The Note has been considered by Jones Bros a well known contractor with extensive road construction experience in North and Mid Wales and in the construction and improvement of county roads leading to wind farms. They concluded that the Note was "*a good and reasoned representation of the number and duration of temporary closures required*" but they also indicated that "*there would be ample opportunity to reduce the number and impact of closures required*"²³⁵. MR agreed in XX that Jones Bros are very

²³² RES-TRANS-POE-MARTIN-SSA B para 4.9.14

²³³ RES-TRANS-POE-MARTIN-SSA B para 4.9.16-17

²³⁴ RES-TRANS-POE-MARTIN-SSA B para 4.9.15

²³⁵ RES-TRANS-POE-MARTIN-SSA B App 2 and para 4.9.18

experienced in these matters and he did not take issue with their assessment.

177. MR also agreed the following –

- i) The works near to the school would be undertaken during school holidays or at weekends.
- ii) There would be extensive consultation with the local community to establish a travel diary to detail whether there are certain journey requirements that the construction traffic management plan should take account of.
- iii) There will be extensive communication of the temporary closures – press coverage, radio, leaflet drops and the use of signage at either end of the road
- iv) Some people will choose to make their journey on other days such that the traffic numbers affected will be less than the above.
- v) Some of the traffic numbers will not be affected by some of the temporary closures as they only affect part of the road at any one time.

178. In the circumstances the short term duration of the closures, the times of the day proposed and the associated traffic levels at these quieter periods and the alternative routes available combine to establish that this would involve an acceptable short term impact to background traffic²³⁶. It must also be noted that temporary closure of this road from time to time can inevitably be expected arising from highway works irrespective of whether or not this proposal is consented.

179. Consideration has been given to the impact of the traffic associated with the development on the county road. Applying the IEA Guidelines there would be no discernible impact on the most

²³⁶ RES-TRANS-POE-MARTIN-SSA B para 4.9.19

environmentally sensitive and most populated northern section of the road (section 1) with a maximum daily increase in the peak month of just 5.95% (40 vehicles)²³⁷. There would be greater increases on sections 2 and 3 of the road but even then the absolute numbers are modest and would give rise to no more than a slight to moderate impact²³⁸. In practice it is the effect of the use of the road by AILs which has been the source of objection.

180. An average speed of 10mph has been adopted for AILs using the county road with a lower speed of 3mph at Gosen and Dolwen Isaf where this is thought to be appropriate. These times are supported by Collett and Sons Ltd who are experienced in the transport of these components and have undertaken independent validation of the county road works²³⁹. A point was taken by a number of PCC's witnesses as to whether a lower speed would be used at a greater number of locations, but Collet and Sons has confirmed that apart from those two locations a speed of 10mph is appropriate²⁴⁰, and this was accepted by MR in XX.

181. The journey times for AIL deliveries are set out at Table 11 of the LTMP. As can be seen the times between passing places would vary between 20 minutes to 7 minutes²⁴¹.

182. The county road is very lightly trafficked. Indeed MR makes this point in seeking to dismiss the benefits arising from the proposal²⁴². Given the low levels of traffic this would mean that there would be a maximum of between 2 and 3 vehicles waiting at any of these passing places throughout the delivery period with up to 3 to 5 vehicles following the convoy²⁴³. MR agreed that these figures compare favourably with the level of delay to traffic on the A458 which would be involved in using the shared access to

²³⁷ RES-TRANS-POE-MARTIN-SSA B para 4.7.16

²³⁸ RES-TRANS-POE-MARTIN-SSA B para 4.7.16

²³⁹ RES-TRANS-POE-MARTIN-SSA B para 4.8.2

²⁴⁰ See RES/004 and KM in chief

²⁴¹ RES-TRANS-POE-MARTIN-SSA B para 4.8.3

²⁴² See OBJ-002-TRANS-POE-RUSSELL-SSA-B para 3.4 and See OBJ-002-TRANS-RUSSELL-REBUTTAL-SSA-B para 2.28

²⁴³ RES-TRANS-POE-MARTIN-SSA B para 4.8.4

Carnedd Wen²⁴⁴; the figures are set out in STMP 3 of 6 – there would be queues of 15 to 16 vehicles waiting at passing places with a queue of 12 to 13 vehicles following the AIL. Furthermore MR agreed that delays would be less acceptable on a trunk road, where people expect to be able to progress more expeditiously, than on a minor county road such as the Talerddig to Llanerfyl road. He also agreed that this was all the more the case given the role of the A458 as the gateway to the National Park and that there was less opportunity, given the nature of the traffic carried, to warn users of the trunk road about the likelihood and timing of any delays and so enable them to avoid the delays²⁴⁵.

183. It is clear from the evidence that if any point were to be taken about delays arising consequent upon AIL deliveries to the site the use of the county road is in fact better than use of a shared access with Carnedd Wen and the consequent additional delays on the A458.

184. There are a number of significant highway benefits arising from this proposal²⁴⁶ –

- i) The improved A470 Talerddig junction which will benefit all minor road traffic including HGVs.
- ii) The improved passing potential throughout the length of the county road. Indeed PCC requested that they be provided in asphalt as it recognised their long term benefit for the community.
- iii) The widening and improvement of Gosen Bridge which allows two-way traffic movement. Local residents have expressed concern about the current condition of the bridge and the near misses which have arisen through the one-way working on the current bridge.

²⁴⁴ MR XX

²⁴⁵ MR XX

²⁴⁶ Accepted by MR in XX and see RES-TRANS-POE-MARTIN-SSA B para 4.9.20

- iv) Additional safety features at the bridge.
- v) The stabilisation of the existing slopes to the bridge which are showing signs of slippage together with the provision of increased vegetation.
- vi) The improvement of Diosg Bridge together with the provision of a parking area.

185. In conclusion the proposal follows an access strategy which has been recognised by PCC as sensible²⁴⁷. The works have taken into account landscape, visual and ecological issues. They provide for safe access to the site. Any disruption to local people has been kept to a minimum. The proposals provide for long term community benefits. There are no highway related reasons for resisting this development.

Noise impacts – matter 6

186. Noise was not a contentious issue with respect to the SSA B sites and in the event Dr McKenzie's evidence was not subject to any challenge.

187. Dr McKenzie explained that having regard to the background noise measurements²⁴⁸ the operational noise from the turbines would be within both the night-time and day-time limits with a minimum margin of over 3dB at any location²⁴⁹.

188. Dr McKenzie also dealt with the issues of tonal noise, infrasound, low frequency noise and vibration and explained why none of these issues created any problem²⁵⁰.

²⁴⁷ RES-TRANS-POE-MARTIN-SSA B para 9.3

²⁴⁸ As to which see RES-NOISE-POE-MCKENZIE-SSA-B paras 8.2-8.3

²⁴⁹ RES-NOISE-POE-MCKENZIE-SSA-B para 8.7

²⁵⁰ RES-NOISE-POE-MCKENZIE-SSA-B paras 8.9 -8.12

189. The issue of blade swish or amplitude modulation (AM) was addressed in Dr McKenzie's original proof²⁵¹ and his Supplementary Proof of Evidence which considered the outcome of the Renewable UK report²⁵². There has been no Government response to the Renewable UK report²⁵³ and there is no uniformity of response in decisions²⁵⁴. The RUK report reveals that the potential for AM effects is principally caused by wind shear where the installed turbine is susceptible by way of its operational parameters. There are relatively low levels of wind shear at the Llanbrynmair site even at night time and accordingly there is no reason to believe that AM would be an issue at Llanbrynmair²⁵⁵. It is also important to recall that AM is not an issue at the vast majority of wind farm sites²⁵⁶. In the circumstances a condition is not necessary in this case even if one were to apply a rigorous test.

190. Construction activities at Llanbrynmair would be limited to 0700 – 1900 Monday to Saturday except during turbine erections and commissioning. On-site construction noise would be less than the levels identified in BS5228 (the appropriate standard) even when construction traffic noise is included although Saturday afternoon working would be restricted²⁵⁷. There is no issue with respect to traffic noise on the wider road network²⁵⁸.

191. Detailed assessment of the cumulative noise associated with Llanbrynmair and Carnedd Wen shows that the night and upper day-time noise limits are met by a minimum margin of 2.5dB and 1.6dB respectively using conservative assumptions²⁵⁹.

Notwithstanding this assessment the developers of Llanbrynmair and Carnedd Wen have agreed noise limits for their respective

²⁵¹ RES-NOISE-POE-MCKENZIE-SSA-B para 8.8

²⁵² RES-NOISE-POE_MCKENZIE-S4

²⁵³ RES-NOISE-POE_MCKENZIE-S4 para 4

²⁵⁴ See OBJ-002-NOISE-POE-BUFTON-S4

²⁵⁵ RES-NOISE-POE_MCKENZIE-S4 paras 5 and 6 and RES-NOISE-POE-MCKENZIE-SSA-B para 7.19

²⁵⁶ Bullimore and McKenzie – Hearing session 3/4/14

²⁵⁷ RES-NOISE-POE-MCKENZIE-SSA-B paras 8.14-8.15

²⁵⁸ RES-NOISE-POE-MCKENZIE-SSA-B para 8.16

²⁵⁹ RES-NOISE-POE-MCKENZIE-SSA-B paras 9.2 and 9.3

sites which would prevent any exceedance of the appropriate ETSU derived noise limits²⁶⁰.

192. In the circumstances the proposal does not give rise to any noise related ground for objection.

Ecology – matter 7

Introduction

193. The application site does not lie within any protected nature conservation sites but careful consideration has been given to sites in the vicinity of the application site. The only international site which required consideration is the Berwyn SPA which is of particular interest for its breeding populations of harrier, merlin and peregrine and which is also a SAC with its main interest being its blanket bog habitat. There are also a number of SSSI that have been considered. A range of detailed studies have been undertaken with respect to ecological and particularly ornithological interests associated with the wind farm proposal.

194. With respect to ornithological interest the species of particular importance were curlew, black grouse, hen harrier, red kite, and barn owl. The risks associated with development of the site have been assessed in accordance with accepted good practice and these assessments have revealed that there is no likely significant collision risk and no likely significant disturbance risk to any species that could be possibly linked to the Berwyn SPA and no adverse effect on the integrity of the SPA. There would also be no

²⁶⁰ RES-NOISE-POE-MCKENZIE-SSA-B para 9.5

significant effects on any bird population in EIA terms²⁶¹. The evidence establishes that the proposal would not result in any significant ornithological impacts. Indeed it proved unnecessary for Dr Percival to attend at the inquiry.

195. It can be noted that NRW has advised that an Appropriate Assessment is not required with respect to Llanbrynmair²⁶².

196. It is common ground between RES, PCC and NRW that the ecological impacts of the wind turbines are acceptable. Such ecological impacts and the proposed mitigation are considered fully in the CSEI.²⁶³ Such a powerful consensus of professional evidence should be afforded substantial weight by the Secretary of State in the determination of the application. Given the absence of any objection to the ecological impacts of the wind turbines supported by independent, objective and professional assessment, this issue is not considered further in this Closing Submission. It is clear that there is no identifiable conflict with any national or local planning policy, arising from the wind turbines (and associated infrastructure).

197. The sole ecological concern of PCC and NRW is over the impact of the access route required for AIL delivery from Llanerfyl to Talerddig. PCC and NRW essentially raise two issues:²⁶⁴

- i) The adequacy of the ecological assessment in the Environmental Statement (ES);
- ii) In relying on the access between Llanerfyl to Talerddig, the applicant has not done all it reasonably can to mitigate the development's

²⁶¹ RES-ORN-POE-SSA-B para 9.1

²⁶² CON-003-004-Opening session- Rog-comms-II – para 7.2

²⁶³ see SEI Aug 2013 Vol I Ch 5 – Ecology, Ch 6 – Ornithology, Ch 8 – Geology, Hydrology and Hydrogeology, including impact to Peat and the SEI October 2013 concerning the impact to Bats

²⁶⁴ see especially the evidence of DW and PCC Note on Reasons for Considering Llanbrynmair Alternative Access and Practicalities of Implementation

impacts because an access via Carnedd Wen would avoid any such impacts.²⁶⁵

198. In its Note²⁶⁶, PCC submit that there are 3 ways in which the Secretary of State could address the second issue:

- i) The Secretary of State could refuse consent, leaving it to RES to re-formulate the scheme with a fresh application including revised access proposals; or
- ii) The Secretary of State could grant permission for the wind turbines at Llanbrnymair but subject to a condition that the Llanerfyl to Talerddig access is not implemented; or
- iii) The Secretary of State could indicate that he is "minded to" grant permission subject to an alternative access scheme.

199. Since then, entirely without prejudice to the contention that the original access is (and always has been) acceptable, RES has submitted details of an alternative access proposal via Carnedd Wen.²⁶⁷ The alternative access proposal has been the subject of Environmental Impact Assessment and PCC has provided a formal response.²⁶⁸ PCC recognises that the proposed alternative access is substantially similar to the access first promoted by PCC in September 2013 and which formed the basis of PCC's written and oral evidence in Session 2.²⁶⁹ PCC's position is that²⁷⁰ it would have no objection to the route of the alternative access route (noting that the sole difference with their proposal was a slight change to the northern link, which is uncontroversial).²⁷¹ PCC's position is that there are no ecological impacts which could justify refusal of

²⁶⁵ *ibid* para 6

²⁶⁶ *ibid* para 9-13

²⁶⁷ see the SEI Feb 2014

²⁶⁸ See letter from PCC dated 13th March 2014

²⁶⁹ *ibid* para 4

²⁷⁰ *ibid* PCC response to Part 2 of the SEI

²⁷¹ *ibid para 11*

consent.²⁷² Accordingly, PCC's position is that it would have no objection to the Secretary of State granting consent for the development with the revised access proposal. PCC does, however, maintain its objection to the original AIL access proposal.²⁷³

200. Whilst RES has been prepared to consider alternative routes raised at a late stage by PCC it remains concerned about the practical delivery and operation of the wind turbines. In this regard, RES are entirely in accord with national policy (of both England and Wales) which strongly supports the immediate delivery of wind energy generation for which there is an urgent need.²⁷⁴

201. It is in this context that the two main ecological issues will be considered.

(i) *The Adequacy of the ES*

Legal Background

202. The application seeks consent under s.36 EA 1989. The development is EIA development. Accordingly, the Secretary of State shall not grant a s.36 consent unless the requirements of regulation 4 The Electricity Works (EIA)(England Wales) Regulations 2000/1927 have been satisfied (see Reg 3(1)).²⁷⁵

203. There is no statutory provision as to the precise form of an Environmental Statement, even though the term "Environmental Statement" is defined in Reg 2(1). Reg 4(1) requires RES to submit an ES which includes:

²⁷² *ibid paras 14 - 17*

²⁷³ *Ibid para 27*

²⁷⁴ see earlier submissions on the need for the development

²⁷⁵ The 2000 Regs implement Council Directive 85/337/EEC as amended by Council Directive 97/11/EC on the assessment of certain public and private projects on the environment insofar as it relates to applications for consent to construct, extend or operate a generating station under ss.36 and 37 EA 1989

- i) at least the information referred to in Part II of Schedule 4; and
- ii) such of the information referred to in Part I of Schedule 4 as is *reasonably required* to assess the environmental effects of the development and which, having regard in particular to current knowledge and methods of assessment, the applicant can *reasonably be required* to compile, taking into account the terms of any scoping opinion given.

204. RES is therefore required to provide *inter alia*:

- i) at least the data required to identify and assess the main effects which the development is likely to have on the environment (see para 3 Part II Sched 4 Regs); and
- ii) a description of the likely significant effects of the development on the environment, so far as is *reasonably required* to assess the environmental effects of the development (see Para 3 Part I Sched 4).

205. The Secretary of State must not grant consent under s.36 unless (so far as relevant to this decision²⁷⁶):²⁷⁷

- i) He is satisfied that the applicant has complied with his obligations under Reg 4(1); and
- ii) he has taken into consideration the environmental information²⁷⁸ and states in his decision in relation to that consent that he has done so.

206. The Courts have been required to consider the adequacy of environmental statements on a number of occasions in different statutory contexts. A number of relevant principles have emerged

²⁷⁶ no-one alleges a failure to comply with regulations 9, 10(2A), 11, 12, 13, 14 and 14A so Reg 4(2)(c) does not apply

²⁷⁷ Reg 4(2)

²⁷⁸ defined in Reg 2(1)

from the decided cases, which would apply equally to a determination under the 2000 Regs.

207. It is for the Secretary of State to decide on the adequacy of the ES (per Sullivan J in *R v Rochdale MBC ex p Tew, Milne and Garner* [2000] JPL 54). Further, the Secretary of State is not deprived of jurisdiction to grant consent merely because he has decided that the ES is deficient, *unless* the alleged deficiencies in the ES are so serious that the document could not reasonably be described as an ES (as defined by the Regs). In *R (Blewett) v Derbyshire CC* [2003] EWHC 2775, Sullivan J held:

"In the light of the environmental information the local planning authority may conclude that the environmental statement has failed to identify a particular environmental impact, or has wrongly dismissed it as unlikely, or not significant. Or the local planning authority may be persuaded that the mitigation measures proposed by the applicant are inadequate or insufficiently detailed. That does not mean that the document described as an environmental statement falls outwith the definition of an environmental statement within the Regulations so as to deprive the authority of jurisdiction to grant planning permission. The local planning authority may conclude that planning permission should be refused on the merits because the environmental statement has inadequately addressed the environmental implications of the proposed development, but that is a different matter altogether. Once the requirements of Schedule 4 are read in the context of the Regulations as a whole, it is plain that a local planning authority is not deprived of jurisdiction to grant planning permission merely because it concludes that an environmental statement is deficient in a number of respects.

Ground 1 in these proceedings is an example of the unduly legalistic approach to the requirements of Schedule 4 to the

*Regulations that has been adopted on behalf of claimants in a number of applications for judicial review seeking to prevent the implementation of development proposals. The Regulations should be interpreted as a whole and in a common-sense way. The requirement that "an EIA application" (as defined in the Regulations) must be accompanied by an environmental statement is not intended to obstruct such development. As Lord Hoffmann said in **R v North Yorkshire County Council ex parte Brown** [2000] 1 AC 397, at page 404, the purpose is "to ensure that planning decisions which may affect the environment are made on the basis of full information". **In an imperfect world it is an unrealistic counsel of perfection to expect that an applicant's environmental statement will always contain the "full information" about the environmental impact of a project. The Regulations are not based upon such an unrealistic expectation. They recognise that an environmental statement may well be deficient, and make provision through the publicity and consultation processes for any deficiencies to be identified so that the resulting "environmental information" provides the local planning authority with as full a picture as possible. There will be cases where the document purporting to be an environmental statement is so deficient that it could not reasonably be described as an environmental statement as defined by the Regulations (Tew was an example of such a case), but they are likely to be few and far between.***

It would be of no advantage to anyone concerned with the development process – applicants, objectors or local authorities – if environmental statements were drafted on a purely "defensive basis", mentioning every possible scrap

of environmental information just in case someone might consider is significant at a later stage. Such documents would be a hindrance, not an aid to sound decision-making by the local planning authority, since they would obscure the principal issues with a welter of detail.”

208. The judgment of Sullivan J was upheld on Appeal and the above passage was specifically relied upon by the House of Lords in *R (Edwards) v EA and others [2008] UKHL 22*.²⁷⁹

209. Further, the 2000 Regs expressly recognise that the information contained in the ES may be inaccurate, inadequate or incomplete. It is for this reason that the 2000 Regs require the ES to be publicised and consulted upon. This was the view of Sullivan J²⁸⁰ in *R (Blewett) v Derbyshire CC [2003] EWHC 2775*.²⁸¹ Indeed, the Secretary of State, when dealing with a s.36 consent, has a statutory power to require (in writing) the applicant to provide such further information as may be specified concerning any matter which is required to be dealt with in the ES (Reg 13(1)). If²⁸², therefore, the ES is inadequate, the Secretary of State has the power to remedy such inadequacy without resorting to refusing consent – the Secretary of State can simply require further environmental information. It should be noted that, at the time of this Closing Submission, the Inspector (in the light of the evidence of PCC and NRW) has not requested RES to provide any further environmental information or suggested that RES should do so.

210. It is in this context that the alleged inadequacies of the ES must be considered.

The Environmental Information

²⁷⁹ The highlighted section above was quoted by Lord Hoffman with approval at para 38. This decision was taken in the context of the Pollution Prevention and Control (England and Wales) Regs 2000/1973.

²⁸⁰ in the context of the Waste Management Licensing Regs 1994

²⁸¹ See paras 38 and 39

²⁸² which RES strongly dispute

211. The Environmental Information submitted in respect of the AIL access route from Llanerfyl to Talerddig is contained in the Supplementary Environmental SEI, dated August 2013. This SEI superseded the original ES and the 5 subsequent SEIs submitted between 2010 and 2012.²⁸³ It was therefore referred to as the Consolidated SEI (CSEI). Additional information was submitted in October 2013 on bats (the Bat SEI).

212. In an appendix to his written evidence, Dominic Woodfield (DW) submitted a critique of this environmental information (DW 8²⁸⁴). RES responded in detail to DW 8 in written evidence to the Inquiry. A number of errors and omissions were rightly identified by PCC but that is of no consequence. On the contrary, as Sullivan J held, this is one of the purposes of the consultation process (*supra*). RES has not accepted that any of the identified errors and omissions were such as to render the ES legally inadequate. However, entirely without prejudice to that position and in order to avoid any subsequent debate on the issue, RES submitted further environmental information in February 2014. This has been the subject of an audit by PCC, which particularises (at Annex 1) PCC's concerns over the alleged inadequacies of the ES.²⁸⁵ There is no dispute that the environmental information (February 2014) has been submitted and publicised in accordance with the statutory requirements. It is common ground, therefore, that it forms part of the environmental information for the purposes of the decision. This means that DW's criticisms of the ES which have now been addressed are no longer relevant (even though reference is still made to them by PCC in their consultation response).

RES Submissions on the Adequacy of the ES

²⁸³ Which were submitted to address changes in the proposal and to answer requests for further environmental information

²⁸⁴ The latest version of DW 8 was contained in DW's third rebuttal

²⁸⁵ See their formal response from Trystan Mabbitt dated 13th March 2014

213. It is noteworthy that nowhere in their written evidence and/or submissions to the Inquiry have PCC ever made reference to the relevant legal background. No reference is made to the relevant legal tests in PCC's Outline SoC, the SoC for Session 2, the written evidence of DW (in all its rebuttal forms) or the March 2014 response. Such an omission is all the more glaring given the depth to which the relevant legal tests have been addressed in respect of the alternative access. RES submit that it is PCC's failure (and especially DW's failure) to identify the relevant legal tests and to test the alleged inadequacies against such tests which have led them to a fundamentally flawed position.

214. DW fundamentally fails to address *why* the environmental statement is so deficient that it could not reasonably be described as an environmental statement as defined by the Regulations. Rather, DW's evidence adopts the "unduly legalistic approach" expressly deprecated by the Courts and is premised on the basis that *any* alleged deficiency or difference in ecological judgment justifies the conclusion that the ES is legally "inadequate".

215. In DW8²⁸⁶, DW asserts that "a large number" of his points "highlight the lack of transparency and absence of full and objective reporting." Given the very large amount of detail contained in the environmental statement, RES submit that it is impossible for the Secretary of State to conclude that there has been a lack of transparency and/or a lack of reporting. Further or alternatively, this demonstrates the flaw in DW's approach to the ES. There is no legal requirement for there to be "full" reporting and/or total transparency. Rather the legal requirement is for (i) the data required to identify and assess the main effects on the environment and (ii) a description of the likely significant effects of the development so far as is *reasonably* required to assess the environmental effects of the development. Sullivan J expressly recognises that an ES should not contain "every possible scrap of environmental information" as it would then become a hindrance to

²⁸⁶ the version in rebuttal proof 3

decision making. An approach which is proportionate to the significance of the impact is required. It follows that DW and PCC have manifestly followed the wrong legal approach in concluding that the ES is inadequate.

216. The alleged inadequacies in PCC's evidence can conveniently be addressed under 5 headings.

i) *Habitats and Vegetation*

217. PCC's concerns relate to:

- i) The adequacy of the botanical surveys along the access route; and
- ii) The adequacy of the impact assessment on peat (primarily in respect of the Neinthirion Bypass ("the bypass"²⁸⁷)).

Adequacy of the Botanical Surveys

218. The adequacy of the botanical surveys has been raised as a generic point in DW 8. RES responded fully to this criticism in the *Llanbrynmair Access Route – Note on Habitat Surveys*.²⁸⁸ Whilst the note accepts that accidental errors²⁸⁹ were made in App 5.3 CSEI Vol II²⁹⁰, such errors have been addressed by the SEI (Feb 2014) and are of no further relevance.

219. Habitat surveys were carried out in August 2010 and repeated in April 2013, with further visits in May 2013 following minor changes to the physical works proposed. In addition further visits were

²⁸⁷ It should be noted by the Secretary of State that "bypass" is a rather grand and misleading term for a section of the route which will be grassed and less discernible than a farm access track

²⁸⁸ This was a note submitted to the Inquiry by Mick Green

²⁸⁹ For example a summary of Appendix 5.3 was submitted instead of the full version

²⁹⁰ See the note at paras 1.1.4 to 1.1.6

made through October and November 2013 to address specific issues raised in the evidence of PCC and NRW.

220. All sections where works are proposed were visited by an experienced surveyor and the habitats were classified using the categories described in the 'Phase 1 Handbook' (Part 2, Chapter 2). This method is acknowledged as being particularly useful in EIA studies.²⁹¹ It is clearly an appropriate methodology (and the contrary is not argued by PCC in DW's evidence). Indeed, this standard methodology for assessing habitats was used in the 2010 surveys which were included in SEI 2 (2011) and no comments on the methods or results were received from CCW or PCC.

221. All areas where works are proposed were visited and the habitats present were examined. Following close examination the sections of habitat were classified using one of the standard 'Phase 1' categories, and a list of typical species was included where appropriate. The recommended unit for Phase 1 habitat assessment habitat is 0.1 ha or above. In many cases the sections assessed were in smaller units due to the nature of the works being proposed. Any areas of particular interest were noted and typical species were identified.

222. DW 8 suggests that where a single species (regardless of its prevalence) has been identified which is not identified in the survey, the ES is legally flawed. Such an assertion is absurd. The 'Phase 1' methodology aims to assess the habitat overall, and it not intended to be a complete list of all species present. The ES is concerned with significant impacts not any impact. In this case the 'Phase 1' survey method was followed and all sections where works were required were surveyed at least twice. The surveys were carried out by an experienced surveyor with over 20 years' experience of 'Phase 1' surveys in Montgomeryshire. The surveys are demonstrably adequate (judged against the relevant

²⁹¹ Hill et al 2005 Handbook of Biodiversity methods, Cambridge

methodology) and sufficient to allow the potential of the impacts of the proposed works to be properly assessed.

223. The results of the assessment are considered fully in the note.²⁹²

Overall, it is considered that, following re-planting of hedges and with management of hedges and verges, there will be no long-term significant adverse impact on the nature conservation interest of the area. On the contrary, there will be a net benefit/neutral impact in terms of the access route alone. The net ecological benefits are enhanced, when the site of the wind turbines is also considered because of the ecological benefits associated with the Habitat Management Plan and the Peat Management Plan.

Adequacy of the Peat Assessment at Neinthirion

224. Peat probing along the route of the bypass was undertaken by Ecology Matters²⁹³ as part of the wider survey and assessment of the site in February and March 2013. Further habitat assessment was undertaken in May 2013. The peat depth was assessed by probing with a cane as outlined in the CCW guidance note²⁹⁴ and the methodology employed followed that guidance. The need for peat probing was determined by a peat assessment process.²⁹⁵

225. Probes were taken approximately every 10 metres from the existing road along the line of the proposed bypass, where it crosses a section of peat. While the remainder of the access route was assessed for the presence of peat, no further probing took place (outside the route of the Neinthirion bypass) because no peat was found and no further probing was necessary. At Ch 650²⁹⁶ of the bypass, there was a narrow strip of purple moor grass, which

²⁹² See paragraphs 1.3.1 to 1.4.5

²⁹³ A not for profit organisation who work closely with NRW and who have employed methodologies which have been consistently accepted by NRW in the past on other projects

²⁹⁴ CCW (2010) Assessing the impacts of windfarm developments on peatland Guidance Note.

²⁹⁵ This process is set out in the Note submitted by RES on the impact on peat at Neinthirion

²⁹⁶ The reference is to the chainage on the bypass

can be indicative of peat. This was specifically assessed and found to be on mineral soil.

226. The results are set out in the Note. The maximum depth along the access route was 50cm of peat. From the extensive peat probing across the whole of the application site (including the wind farm site), it is clear that peat depths are highly variable and not homogenous. Therefore it is essential to probe within the bypass boundaries to ensure an accurate peat depth is established. Nearby peat probes (outside the boundary of the bypass) may not be accurate in assessing the impact of the bypass because of the lack of homogeneity.

227. The habitat was re-surveyed for NVC classification (in the light of DW's evidence). The habitat along the proposed bypass route currently conforms most closely to U6 *Juncus squarrosus* – *Festuca ovina* grassland. It has probably derived from M17 *Trichophorum cespitosum* – *Eriophorum vaginatum* blanket mire but the original constituents of the vegetation are now at most occasional within the sward. These include rare occurrence of *Sphagnum papillosum*, occasional *Sphagnum fallax* and rare occurrence of cranberry *Vaccinium oxycoccos*. All other species are typical of U6. These include frequent heath rush *Juncus squarrosus*, frequent *Aulacomnium palustre*, frequent *Polytrichum commune* and frequent bilberry *Vaccinium myrtillus*. Purple moor-grass *Molinia caerulea* is also frequent here. The route of the proposed new track crosses the edge of this U6 grassland area, before crossing two small ditches. These ditches support M6d (*Carex echinata* – *Sphagnum fallax/denticulatum* mire; *Juncus acutiflorus* sub-community), dominated by sharp-flowered rush and *Sphagnum fallax*.

228. The wider area of the proposed bypass has been subject to heavy grazing over many years, as characterised by the presence of frequent heath rush. NRW consider the area to still conform to M17. In the light of repeated surveys, part of this area could be classified as M17c. However, this is confined to the central 'core'

of the small peat body, located to the east of the bypass. The vegetation surrounding this core has been modified greatly, due to drainage and heavy grazing. This is indicated by the presence of abundant heath rush and a paucity of bog-moss (i.e. Sphagnum) species. Undoubtedly the area has derived from M17, but it is now degraded to such an extent that it is better and more accurately categorised as U6. This is particularly the case in the immediate area proposed for the bypass, where very few bog species are still present. Species indicative of semi-improved grassland are also present in the vegetation.

229. This classification is not accepted by DW (despite PCC not having undertaken any formal assessment). However, the dispute must be resolved through the exercise of a subjective professional judgment on the basis of a detailed site visit. It is unanswerable that the ES is based on such a professional judgment in the light of repeated site visits and in accordance with an NRW sanctioned methodology. Taken uncritically and at their highest, the criticisms of DW fail to demonstrate that the ES is legally inadequate and/or cannot reasonably be considered to be an ES for the purposes of the 2000 Regulations.

230. Further, DW's evidence fails entirely to place the impact on peat in any context. The central section of the bypass is on 50cm peat (just within the CCW / NRW classification of deep peat). The impact was assessed to be to a volume of peat of 636 m³²⁹⁷ which has been quantified as part of the carbon calculation process.

231. John Ferry has re-assessed the area of peat which is to be impacted by the Neinthirion bypass (in the light of DW's written evidence). On the basis of the two depths of 30cm and two depths of 50cm recorded within the red line of the bypass alignment (a length of 50m in the peat), a bypass width of 6m and peat depth of 0.5m, the development will disturb 150m³ of peat which led to

²⁹⁷ see rebuttal of Mick Green Appendix C

Mr Ferry assessing the volume of peat to be impacted by the bypass to be between 100-200 m³.²⁹⁸

232. Such an impact needs to be considered in the context of a total estimated peat disturbance impact across the application site of 120,000 m³. The volumes do not take account of the likely overestimate of peat depths nor to micro-siting of track and turbines away from peat >0.5m subject to other constraints.
233. The assessment of this impact has a margin for error of 10-15%.²⁹⁹ Accordingly, the impact of the development on peat at Neinthirion is estimated by John Ferry to be less than 0.2% of the total estimated impact and well within the margin for error. Even on the basis of Mr Woodfield's assessment (which is not accepted), the impact (assessed by him to be 1500m³) is 1.25% and well within the margin for error.
234. On this basis the impact on peat at Neinthirion is simply not material. It is for this reason that the peat probing data was not included in the ES or SEI.³⁰⁰ It was not reasonably required to be included because it is not relevant to any significant impact.
235. Indeed, the volume of peat disturbed at Neinthirion can be contrasted with the volume of peat which PCC would be content to see disturbed as part of its alternative access proposals.
236. At this stage of the proposed development, detailed mitigation has not been agreed with NRW. However, there will be a condition requiring such mitigation (see John Ferry in XX). The Habitat Management Plan and Peat Management Plan (appended to Chapter 5 and 8 of the CSEI) propose mitigation measures that will further minimise any impacts from loss of peat habitat, peat excavation and dewatering. They also outline long term habitat restoration and management compensation measures designed to enhance the peat on the site. The area of peat restoration to compensate for the volume of peat dewatered through the

²⁹⁸ see John Ferry in EiC and XX

²⁹⁹ see John Ferry in answer to an Inspector's Question

³⁰⁰ see XX of John Ferry

installation of any windfarm infrastructure is 200 ha for blanket bog and mire restoration and 149 ha of forest on previous peat habitats which will be removed and habitats of conservation importance restored.

237. The consequent peat habitat restoration is substantially greater than the area of peat habitat that will be lost. Therefore, the residual predicted impact of the development (taking into account the non-material impact to peat at Neinthirion) is adequately mitigated and is actually a net gain.

238. This conclusion is not disputed by NRW (the relevant statutory body). It is submitted that substantial weight should be attached to this agreement. Indeed, NRW has independently surveyed the site of the proposed Neinthirion bypass and presented peat probe data (See DWR2-4). Only two probes appear to be on the proposed route. The NRW assessment shows a broad agreement with the probe depths of Ecology Matters. This further supports the RES submission that the assessment has been adequate.

239. Since NRW's survey (believed to be May 2013 but not shared with RES), NRW has specifically withdrawn any objection to the impact of the development on peat and peat habitats on the application site (which includes the route of the proposed bypass).³⁰¹ Such a position has clearly been informed by its own survey. Self-evidently, NRW would not have withdrawn the objection if it considered that the level of assessment (either from RES or itself) was inadequate.

240. Accordingly, it can be concluded that the impact on peat at Neinthirion:

- i) Has been robustly assessed by a competent independent assessor in accordance with a published methodology;

³⁰¹ see NRW email appended to this note on Impact of the Neinthirion Bypass on Peat Appendix 1, which was an email from NRW dated 8th October 2013.

- ii) Has been taken into account in the carbon calculator;
- iii) Has been taken into account in assessing the environmental impact of the development;
- iv) Has been mitigated, such that the net impact is beneficial.

ii) Otters

241. Otter surveys were undertaken in 2010 and 2013 by Mick Green (MG) of Ecology Matters. In 2010, the surveys were undertaken in August over a number of days. In 2013, the otter surveys were undertaken on 10th and 11th May 2013. As otters are active all year, these are appropriate times of year for surveys.

242. Specific otter surveys were undertaken at a number of specific locations.³⁰² At Gosen Bridge³⁰³, the survey covered the area from the minor road bridge to the confluence on both sides of the river, and upstream to 100 m above the bridge. The site was accessed from the minor road bridge and the road immediately south of Gosen Bridge for the main Afon Gam and through the woodland area and from the fields above for the Afon Cledan beneath the bridge. A short section (approximately 20m) immediately upstream of the bridge was not accessible due to fallen tree and river bed conditions, but was surveyed from below within the stream and from above (from the bridge) with binoculars. The use of the binoculars gave clear vision and so the lack of direct access was not an issue.

243. At Dolwen Isaf crossing, surveys were undertaken from SH979074 upstream to SH976307 along the Afon Gam, and from

³⁰² These are particularised in the note on Otters submitted in November 2013

³⁰³ The only area where a concern is raised in respect of otters

confluence to SH975074 upstream along Nant Ffriddycastell towards Dolwen farm including minor watercourse and drainage channel. This includes the bridge at Dolwen Uchaf. At Neinthirion the area of the proposed water crossing and a stretch 100 metres up and down stream were surveyed.

244. Otter surveys were carried out following the methods outlined in *The New Rivers and Wildlife Handbook* (RSPB, NRA & RSNC 1994). The riverbanks and any notable features were searched, mainly by walking the bank. Some wading was necessary to check all areas such as within the Gosen gorge. The main method was to search for spraints but other signs such as footprints and otter "runs" and "slides" were also looked for.

245. In such circumstances, the level and method of assessment was robust and certainly reasonable.

246. DW's criticisms of this assessment fail to realise that the presence of otters along the river was actually assumed in the rivers in the ES. This assumption was based on survey results from the wind farm site and on MG's experience of otters in Montgomeryshire. The purpose of the further surveys was not, therefore, to confirm the presence or absence of otters from the rivers but rather to assess the potential impact of the proposed works on otters.

247. No signs of otter were found during either of the surveys (in 2010 and 2013). There is no evidence from any other party to contest such results. This is an important context for a consideration of the likely impact of the road works on otters.

248. DW has found evidence of spraints at Dolwyn Isaf bridge, which Mick Green has confirmed when he undertook a site visit in November 2013. This area had been specifically surveyed previously. There was, however, no sign of otter at this site in 2010 or at the times of the May 2013 survey. This suggests (to the reasonable assessor) that otters are present in the rivers. However, this is not a new revelation or a deficiency in the ES

because the presence of otters had always been assumed. The presence of a spraint in November 2013 does not mean that the surveys in 2010 and 2013 were inadequate. Rather it suggests that otters move along the river (again: as specifically assumed in the CSEI).

249. DW seeks to present the evidence of the spraint as meaning that MG's surveys had either been undertaken inadequately or incompetently. Yet, this conclusion does not follow from the evidence at all. It is far more likely that the spraint occurred after the May 2013 surveys. This is the most plausible explanation and the only one which is consistent with the evidence. Whilst DW does not seem to accept this, this only serves to re-inforce the impression that he has lost all sense of proportion in his analysis of the evidence submitted by expert, independent ecological consultants.

250. An artificial holt is referred to in the Carnedd Wen ES. However, as MG explained in oral evidence, whilst he deliberately looked for it, he could not locate it. Whilst DW is critical of the ES for failing to consider the artificial holt, he has not located it himself. MG therefore concludes that it is no longer there. On this basis, there is no relevant omission.

251. There is potential for holts and lying up areas in the areas where physical works are proposed. These include the areas of tree roots and fallen trees around Gosen Bridge and the areas of wooded bank immediately up and down stream of Dolwen Isaf Bridge. Such areas have been specifically surveyed. There was no evidence of otters. The works proposed at Dolwen Isaf Bridge involve very little, if any, in-channel work. Therefore it is concluded that there is no possibility of a negative impact on otters. The river will not be blocked and no riverbank will be cleared. Otters will continue to be able to use the river as a transitory habitat without any material adverse impact.

252. The works proposed at Gosen, involving the bank works on the southern bank of the Afon Gam, do have potential to disturb otter if they are using this section of bank at the time of proposed works. There is no evidence of holts, or lie up areas (or any other evidence of otters) on the basis of the surveys. Otter will continue to be able to pass and re-pass the Gosen Bridge. Accordingly, a re-survey will be required prior to any works commencing to ensure that otters are not using this section of bank at the time of the proposed works. In this way, there will be no material adverse impact on otters at Gosen Bridge. Otters are both diurnal and nocturnal. Accordingly, it matters not from this perspective whether working is at day or during the night. This is, in any event, a matter which can be controlled by condition. As no sign of otters has been noted (either in 2010 or 2013 by either MG or DW) it is considered that any adverse impact (from working in either the day or night) is highly unlikely. Working is not precluded therefore by the presence of otters.

253. The proposed crossing for the Neinthirion bypass includes some habitat that is a possible lie up area for otters (based on the November 2013 surveys). This will, therefore, be re-surveyed prior to any works. The minor river and culvert crossings are not considered to have any potential to impact on otters.

254. Mitigation is proposed within the windfarm Habitat Management Plan with streamside planting and installation of artificial otter holts. The outline has been agreed with NRW as the relevant statutory consultee and will be secured by a condition. If otters are present at the time of the proposed works, the proposed mitigation will ensure that there is no material adverse impact upon them.

255. In the circumstances there will not be any material adverse impact on otters as a result of the proposed access route works.

256. In all the circumstances, the level of survey effort was manifestly robust and there is no conceivable evidential basis for

concluding that the ES is inadequate and/or incapable of being described as an ES for the purposes of the Regulations.

iii) Dormice

257. In considering whether the assessment of the impact of the access road on dormice was adequate, it is important for the Secretary of State to note that *no-one* (whether RES, NRW or PCC) has ever detected any signs of the presence of dormice.

258. Further, the evidence of PCC and NRW fails totally to consider the relevant background. Whilst NRW suggest (now) that the survey methodology is not reliable³⁰⁴, such a position is not only inconsistent with NRW Guidance, it is also inconsistent with NRW's previous position on this application. The CCW scoping response of 22nd September 2006 addresses the required surveys for protected species. No reference was made to dormice and there was no requirement for dormice surveys to be undertaken.³⁰⁵

259. This is not a surprise as there are no records for dormice in the vicinity of the application site. CCW's original position was, therefore, that a survey was not even required. Moreover, the first 3km of the access route (from Llanerfyl) has already been proposed as an access to the Mynydd Waun Fawr windfarm in a planning submission in 2007. This required similar works to this section of the county road. No dormice surveys were undertaken along the proposed access route. In response to that application³⁰⁶, CCW did not even raise dormice as an issue (even though they did raise concerns about other protected species).³⁰⁷ CCW was, therefore, quite content for an application along this

³⁰⁴ see e.g. NRW proof at 5.4

³⁰⁵ See page 16 under "other mammals".

³⁰⁶ whilst CCW requested that any hedgerows removed were translocated

³⁰⁷ See Annex A at 3.5 - Mick Green rebuttal App 1.

access route to be determined without a dormice survey (consistent with the scoping position).

260. NRW's current position that the survey is inadequate is wholly inconsistent with its original position and irrational: a survey which is not required cannot be inadequate. NRW has failed to explain (adequately or at all) the reasons behind its change in position.

261. Rather, it was during surveys of the proposed works along the access route that Ecology Matters (not PCC or NRW) considered certain areas to be suitable habitat for Dormouse. RES therefore considered it to be appropriate for surveys to be undertaken (of its own volition).

262. A survey of the access route for dormouse habitat was undertaken in August 2010, with a nut search undertaken in December 2010.³⁰⁸ A desk study was undertaken using the National Biodiversity Network (NBN).³⁰⁹ No dormice records were found for Cwm Eira at all.

263. There was not sufficient habitat to survey 10m x 10m plots, so the alternative survey method of collecting at least 100 nuts was employed. These were then examined using a hand lens to ascertain which species had opened the nut. For those areas considered as possible dormouse habitat an evaluation of the habitat was made and nut searches were undertaken. The results of the nut search were as follows:³¹⁰

- i) At the first two sites identified in the original survey (SJ 024087 and 012076) very little suitable habitat was found after close inspection, and no hazel nuts found.
- ii) At the third site (SJ004081) the hedge was very open and heavily flailed. No nuts were found.

³⁰⁸ see SEI (2) 2011 at 4.1.1 to 4.2.3

³⁰⁹ See SEI (2) at 4.3.3

³¹⁰ This issue is addressed fully in the Rebuttal Note on Dormice submitted by MG in November 2013

- iii) At the final site (SJ004079) a total of 148 gnawed nuts were collected. 148 nuts were collected because they were all that was present. The species responsible were identified as follows: Bank vole – 11; Woodmouse – 5; Squirrel -103; Bird – 28; Unknown – 1.

264. The habitat was considered³¹¹ to be of low quality and no evidence of dormice was found. On the basis of this combined evidence, the assessment was made that dormice were unlikely to be present along the access route and therefore there was no need to undertake a further detailed survey.³¹² There is no contrary survey evidence (from any party) to cast any doubt on this conclusion.

265. As no evidence of dormice was found, SEI (2) therefore concluded that there were no signs of dormice on the sections of potentially suitable habitat, which was to be impacted.

266. In its consultation response of 6th July 2012³¹³, no mention is made of dormice by CCW/NRW. There is no criticism of the assessment methodology, which was (after all) in accordance with NE guidance. If the methodology was really considered to be inadequate, it would have been pointed out at that time.³¹⁴

267. It is in that context that the current concerns of NRW/PCC must be considered.

268. NRW (and CCW before it) has not produced guidance on best practice for dormouse surveys³¹⁵. RES therefore relied on guidance provided in the Dormouse Conservation Handbook which was published by English Nature in 2006 and remains Natural England's publication and advice on the subject. On any rational

³¹¹ see SEI(2)

³¹² See rebuttal proof of MG

³¹³ SEI (3) App 2.1

³¹⁴ The final access route proposals involve work of a similar magnitude to that assessed in SEI 2 and with which CCW expressed no dissatisfaction.

³¹⁵ see PoE of Elisabeth Halliwell at 5.5

basis (and contrary to the position of PCC and NRW) this must be considered to be a reasonable survey method (if not the only survey method).

269. The Introduction to the document explains that it is intended to be a practical guide for specialists and its purpose includes providing guidance for developers whose activities may impinge on dormouse habitat (p9).

270. The Handbook explains that the "best way to establish dormouse presence at a site is to look for gnawed hazel nuts...Although this is obviously impractical where hazel is absent, it is worth searching any adjacent areas with hazel to see if dormice are nearby and thus likely to be present on the site under investigation" (p 23 para 3.2.2). The Guidance explains that: "casual searching for nuts is often sufficient"³¹⁶ but a systematic search makes it easier to be confident that an absence of shells is due to absence of animals rather than an accidental failure to find gnawed nuts. Conducting a systematic search involves selecting an area of heavily fruiting hazel and to search 10m x 10m blocks for 20 minutes. This method has an 80% probability of detecting dormice if present. However, as PCC and NRW fail to realise, there was simply not sufficient potentially suitable habitat for this method to be employed.

271. In such circumstances, the Guidance specifically advises that:

An alternative way of achieving an adequate sampling intensity ... is to collect 100 hazel nuts that have been opened by small rodents (voles and mice...). If this sample contains no nuts that have been opened by dormice, it is highly probably [sic] that dormice are not present. (Our emphasis).

272. In the circumstances the dormouse survey was not only an adequate survey methodology but actually the "best way" to

³¹⁶ 3.2.2

establish the presence or absence of dormouse, applying NE guidance.³¹⁷

273. In the light of this Guidance, there can be no doubt that the surveys were undertaken in accordance not only with an appropriate methodology but also using the most appropriate survey methodology.

274. Elisabeth Halliwell makes no mention of the Dormouse Conservation Handbook (second Edition) in her proof of evidence. Rather, NRW refers to an Interim Advice Note from Natural England. This Advice note is "*interim*" only and has not been formally adopted by NE. It has certainly not been adopted by NRW, whose web-site continues to refer readers to the Dormouse Conservation Handbook, as the authoritative guidance on dormouse surveys. Indeed, the Interim Advice note states that: "the advice note should be read in conjunction with the Dormouse Conservation Handbook (second edition), which explains the actual survey techniques employed in more detail."

275. The *interim* guidance clearly does not, therefore, override the *existing* guidance. The Dormouse Conservation Handbook remains authoritative. The surveys are robust and adequate.

276. NRW has raised a concern over specific sections of hedgerow³¹⁸. NRW has not, however, provided any assessment of them or provided any evidence of dormice. At sections 1.8³¹⁹, 1.9 and 1.12³²⁰ NRW consider that the hedges have the potential to be used by dormice. However, at these locations no substantial works are required with the proposal being for the hedges to be trimmed back if necessary. Potential impact on any species is therefore unlikely as the works proposed are minor. Cutting back will not be of much greater impact than the regular annual flailing that

³¹⁷ See further section 3.3 of the Handbook and the recommendations in Table 6, which set out the recommended approach for surveys. The RES survey complied with this approach – see the rebuttal note on Dormice submitted by Mick Green at 1.1.27

³¹⁸ at 4.4

³¹⁹ Drawing D – 003 rev G, CSEI Vol 2c 2013

³²⁰ Drawing D-004 Rev G

already occurs here. Any works will be carried out using techniques to mitigate any possible impacts. At Sections 1.14³²¹ and 1.15³²², it is agreed that these sections are potential dormouse habitat and they have been surveyed. No signs of dormice were found. In addition, the works proposed do not entail the complete loss of these habitats and re-planting of additional hazel is proposed.

277. Whilst there is (now) disagreement over the surveys undertaken (even though CCW never asked for any to be undertaken), a precautionary approach will be taken to the proposed works to hedgerows.³²³ If this method (to be secured by condition) is followed, there is no potential for impact to dormice. Accordingly, there is no reasonable likelihood of there being any breach of reg. 41 Habitat Regulations 2010.

278. In all the circumstances, therefore, there is no reasonable evidential basis on which it can be concluded that the ES is inadequate and/or cannot reasonably be considered to be an ES for the purposes of the 2000 Regs.

iv) Bats

279. In its SoC for Session 2, PCC states that it will not lead evidence on *inter alia* bats because NRW will be providing evidence on it.³²⁴ Further, in DW 8³²⁵, DW defers to NRW on the impact to bats. It is worth, therefore, considering the final position of NRW on whether the assessment is adequate.

280. In the light of the Bat SEI (Oct 2013), Jean Matthews (JM) proof of evidence (for NRW) concluded³²⁶ that insufficient information

³²¹ Drawing 005 – D, Rev G

³²² Drawing 006, Rev G

³²³ This approach is set out in full in the Dormouse Rebuttal at 1.1.38

³²⁴ See 5.4.2

³²⁵ see the version in Rebuttal proof 2

³²⁶ 4.2.26

had been submitted to demonstrate that there will be no likely detriment to the favourable conservation status of bats. However, this position was caveated on the basis that there was no doubt that “the information can be provided to address NRW’s concerns”³²⁷. The rebuttal proof of Dr Peter Shepherd (PS) therefore sought to address the evidential issues raised by NRW. In the light of that evidence (and discussions between JM and PS), NRW submitted a rebuttal bat proof. In respect of the impact of the access road, NRW concluded:

- (i) The impacts on bat populations would not be significant and could be mitigated (4.1);
- (ii) There are a number of outstanding matters to be resolved by the submission of further information (4.1);
 - (a) Specific details or proposed works and working methods at Gosen Bridge;
 - (b) An agreement between the parties as to the extent of disturbance or damage to trees that may be used by bats for roosting;
- (iii) Additional surveys would be required to inform the proposed works and mitigation in advance of any required licence application (4.2);
- (iv) However, *they do not need to be undertaken prior to the grant of planning permission but rather before the commencement of the development* (4.2);
- (v) Impacts could be acceptably mitigated by timing the works and replacing potential or actual roosting crevices that may be lost, as well as by incorporating additional roosting features into the structure (4.2).

281. Accordingly, NRW’s position (in the teeth of the repeated objections by DW) is firmly that the level of assessment in the ES is adequate for the grant of planning permission but that further

³²⁷ 4.2.26.2

surveys are required prior to the commencement of development. To be clear, RES has always acknowledged the need for there to be updated bat surveys prior to the commencement of development and so this is not (and never has been) a point of dispute.

282. Given that PCC defers to NRW on the issue of bats and that NRW is the statutory consultee of the Secretary of State (charged with “policing” compliance with the Habitat Regs for European Protected Species³²⁸), substantial weight should attach to the agreement between PS and JM. The ES is manifestly adequate for the purposes of the 2000 Regulations and agreed to be so by NRW.

283. DW 8 addresses the issue of bats at 12 locations along the access route.

284. At **Glen Menial Bridge**³²⁹ (Ch 460-590) the underside of the bridge provides no roosting opportunities. The northern arch and parapet wall supports a low roosting potential and the southern arch provides a moderate roosting potential (in the form of cracks and crevices). These have been surveyed by a bat specialist using an endoscope. There can be no question that the bridge has been surveyed and that the assessment is adequate. If necessary, further re-surveys can take place prior to commencement of development, with appropriate mitigation agreed with NRW, such that there will be no impact on bats.

285. At **Diosig Bridge**³³⁰ (Ch 875 – 950), there is no apparent residual concern given the further evidence received from RES.³³¹ At **Ch1950-2000** DW is concerned that a relevant tree has not been surveyed. The oak on the northern side has low bat potential and the ash on the south side has moderate roosting potential. However, as both trees will be retained, there will be no impact on bats, no further surveys are required and the assessment is

³²⁸ See *Morge* below

³²⁹ See Rebuttal Proof of Peter Shepherd at 3.14 for further detail on the impact

³³⁰ *Ibid* 3.23

³³¹ See version of DW 8 in DW Rebuttal 3

adequate. There does not appear to be any residual concern in the final version of DW 8.³³²

286. At **Ch 2800** there is a dispute about the running width. Collett advised that a single tree needs to be removed, however AECOM has confirmed on site that there is not a tree in that location and there appears to be confusion with a telegraph pole (which can be re-aligned without ecological impact). AECOM has confirmed after a re-survey in the light of the evidence of DW that no trees are to be removed at this location and there is no relevant impact on bats in order to achieve a running width of 4.5m. This is not contested by DW³³³ but he is concerned that there may be an impact on the stability of two (unidentified trees). Such a mild disagreement about the extent of engineering works required and any potential impact on the stability of tree cannot conceivably be elevated into an issue which supports a conclusion that the ES is inadequate.

287. At **Ch 3875 – 4090** there is a concern about the adequacy of the emergence survey and the adequacy of the assessment of a tree. RES has confirmed³³⁴ that there is a semi-mature ash tree with a rot hole on the main trunk which was specifically surveyed by emergence surveys with no bats recorded. The adequacy of the survey was addressed in the rebuttal to NRW's proof and (in the light of that evidence) NRW (to whom DW defers) has no extant concern (*supra*).

288. At **Gosen Bridge** both NRW and DW raised concerns about the adequacy of the bat survey. This issue is addressed in detail in the rebuttal of Dr Shepherd,³³⁵ which has addressed the points raised by NRW. DW has nonetheless persisted with a number of issues. The arch of the bridge has very few roosting opportunities and is very solidly built with shallow cracks. A preliminary inspection led to the conclusion that further roost emergence and re-entry surveys should be undertaken. These were considered by Dr

³³² See DW Rebuttal 3

³³³ See DW 8 in Rebuttal 3

³³⁴ See response to DW 8

³³⁵ At 3.15 *et seq*

Shepherd to be appropriate and proportionate to the potential identified during the preliminary survey. Indeed, the emergence surveys were demonstrably adequate as a small pipistrelle roost was identified using the chosen method (undertaken in accordance with the BCT guidelines, which Dr Shepherd co-authored). Observers carrying out the surveys were positioned very close to the arch of the bridge and inspected closely the face and underside of the arch to ascertain where bats were roosting. The roost was a flimsy crevice created by some calcified deposits which were not extensive and (possibly) ephemeral.³³⁶ None of the crevices were found to be deep or substantial (after examination with high powered torches and binoculars). This level of survey work is plainly adequate to support the conclusion that the bridge does not support a significant roost (and NRW agrees). Further, NRW accepts that the widening of Gosen Bridge actually provides an opportunity to build in new roosting structures which will improve the extent and quality of roosting opportunities. On this basis, the assessment is demonstrably adequate.

289. At **Sychtyn Farm** (Ch 5130-5180) the Carnedd Wen ES makes reference to a bat roost. On this basis, DW asserts that a survey should have been undertaken. However, the previous survey identified a single pipistrelle bat entering a farm building in 2006. No buildings will be affected by the development and the additional hedge line in to the Gosen area will actually improve potential bat habitat. No further surveys are therefore required and the assessment cannot conceivably be considered to be inadequate.

290. At **Ch 5430 – 5700** DW raises “uncertainty” about the ability to keep roadside hawthorns. At its highest this concern cannot impugn the adequacy of the ES and yet this is typical of the way in which DW has (without any relevant analysis) elevated a minor discrepancy into a legal objection. In any event, the AECOM re-survey has demonstrated that the hawthorns (which have no bat roost potential) will be retained.

³³⁶ The deposits could easily be dislodged

291. At **Dolwen Isaf Bridge**³³⁷, the underside of the bridge provides no roosting opportunities. Revetment walls and abutment walls provide no roosting opportunities. There are roosting opportunities between the top of the abutments and the underside of the bridge span. These have been inspected by endoscope and no evidence of use by bats has been recorded. However, there remains moderate roosting potential at these locations. There will, therefore, be surveys prior to works commencing and, if necessary, mitigation to address any impact. It should however be noted that the proposed works to the bridge are minor and would not impact on the roost potential of the bats. DW “broadly agrees” with this assessment. NRW considers the assessment to be adequate.³³⁸

292. At **Dolwen Uchaf**³³⁹ the survey revealed low bat roosting potential but the bridge is not impacted and further surveys are not required. This is not contested in the latest version of DW 8. There is no adequacy point in this location and it is unclear why it was ever raised as an issue (beyond making an arid technical point).

293. At **Site Access 1** the absence of a bat survey is raised. However, the culvert close to entrance 1 comprises two 900 mm concrete circular pipe sections cemented into head walls. The inside of the pipes was inspected and they are in good condition with no cracks or crevice for roosting. No further survey is required and there is no residual adequacy point raised.³⁴⁰ Likewise, there is no residual issue at **Ch 9680-9840**.

294. In summary, therefore, an incredible amount of detailed environmental information has been requested and supplied in respect of the assessment of bats on the access route. A comparison of the level of formally submitted environmental

³³⁷ See Dr Shepherd Rebuttal at 3.14 for detailed consideration of this bridge

³³⁸ See DW 8 in DW Rebuttal 3

³³⁹ See Dr Shepherd Rebuttal at 3.14 for detailed consideration of this bridge

³⁴⁰ See final version of DW 8

information with the position in *Tew* could not be more stark. The bat assessment is demonstrably adequate. The Secretary of State cannot rationally conclude that this level of information is inadequate (when that term is properly understood and applied in the correct legal background).

v) *Extent of the Land Take*

295. RES agreed with David Williams (PCC) that the highway works were “technically feasible”. Indeed, this is recorded in the PCC SoC for session 2. So far as RES are concerned, this agreement included the ability to undertake the physical works within the red line. In oral evidence, KM confirmed that AECOM had resurveyed the access route and he was more than satisfied that (i) the extent of the land take was identified on the AECOM drawings and (ii) that the identified works could be undertaken in the red line.

296. A note has been agreed between Kevin Martin (RES) and Matt Russell (PCC) on the area of physical landtake.³⁴¹ Both consultants have derived their quantities from the AECOM drawings. There are differences in the quantification but it is agreed that such differences are not “material”.

297. In such circumstances, there is no relevant *ecological* point here. It is yet another arid technical point. DW fails to identify any relevant point of ecological substance arising from any differences in the quantification of the land take. To the extent that it is raised generally to suggest that the ES has underestimated impacts it is firmly rejected. Firstly, RES submit the AECOM figure is accurate. Secondly, for the reasons given in the ES and the evidence, the assessment is accurate. Finally, the assessment is not primarily driven by a detailed consideration of

³⁴¹ Add reference

the quantities of land take. Rather, RES has examined the impacts within the red line (so far as relevant) and has presented the results in the environmental information. So, for example, where there is to be an impact on a small group of trees, RES has assessed the impact on the group rather than as a specified number of individual trees. Such an approach is entirely usual and has been questioned by no-one but DW. There is nothing in DW's criticisms. Once the relevant ecological assessor has understood the impact of the proposal against the group of trees, it does not matter whether the impact is recorded as being against a group (i.e. an unparticularised number) or against a specified number of trees. This is a distinction without a difference and cannot conceivably support the conclusion that the ES is inadequate. Rather, this is precisely the type of "unduly legalistic" analysis which Sullivan J held (expressly) should not succeed.

iii) Alternative Access and Mitigation

Legal Background

298. A number of the issues raised with respect to PCC's proposal for use of a shared access with Carnedd Wen are not limited to consideration of ecological issues and accordingly this issue is discussed more fully later in these submissions.

299. Much of PCC's case on this matter appears to arise from a mistaken application of the provisions of Schedule 9 to the Electricity Act 1989. For the reasons set out later in these submissions the Schedule does not apply directly to RES in any event. However, even if the Schedule is applied it does not require consideration of alternatives to the proposal before the Secretary

of State and it does not require an application to be rejected even if it is concluded that there is a less harmful alternative.

300. It is common ground that dormice and bats are European Protected Species (EPS).

301. Article 12(1) of the EC Habitats Directive requires Member States to take requisite measures to establish a system of strict protection of certain animal species prohibiting the deterioration or destruction of breeding sites or resting places. Bats and Dormice are so protected. Article 16 provides that:

- i) if there is no satisfactory alternative; and
- ii) the derogation is not detrimental to the maintenance of the populations of the species at a favourable conservation status in their natural range, then:
- iii) Member States may derogate: "*in the interests of public health and public safety or for other imperative reasons of overriding public interest, including those of a social and economic nature and beneficial consequences of primary importance for the environment*" among other reasons.

302. This directive is implemented by the Conservation of Habitats and Species Regulations 2010 (the Habitats Regulations). Reg 9(5) provides that LPA's must "have regard to the requirements of the Habitats Directive so far as they may be affected by the exercise of those functions".

303. The scope of the duty now provided in Reg 9(5) (formerly Reg 3(4)) was established in the case of *R (Morge) v Hampshire CC*³⁴². In the Court of Appeal it had been held that in determining a planning application the decision maker had to consider whether the proposal would breach article 12 and if so permission could only be granted if it were thought likely that a derogation would be granted.

³⁴² [2011] UKSC 2 [2011] 1 WLR 268

304. This approach was rejected in the Supreme Court. In paragraph 29 of his judgment, Lord Brown held:

*"In my judgment this goes too far and puts too great a responsibility on the planning committee [the Secretary of State in this case] whose only obligation under regulation 3(4) is, I repeat, to "have regard to the requirements of the Habitats Directive so far as [those requirements] may be affected by" their decision whether or not to grant a planning permission. Obviously, in the days when the implementation of such a permission provided a defence to the regulation 39 offence of acting contrary to article 12(1), the planning committee, before granting a permission, would have needed to be satisfied either that the development in question would not offend article 12(1) or that a derogation from that article would be permitted and a licence granted. **Now, however, I cannot see why a planning permission** (and, indeed, a full planning permission save only as to conditions necessary to secure any required mitigating measures) **should not ordinarily be granted save only in cases where the planning committee conclude that the proposed development would both (a) be likely to offend article 12(1) and (b) be unlikely to be licensed pursuant to the derogation powers.**³⁴³ After all, even if development permission is given, the criminal sanction against any offending (and unlicensed) activity remains available and it seems to me wrong in principle, when Natural England have the primary responsibility for ensuring compliance with the Directive, also to place a substantial burden on the planning authority in effect to police the fulfilment of Natural England's own duty.*

³⁴³ Emphasis added

305. The relevant legal background was more recently reviewed in *R (Prideaux) v Buckinghamshire CC and FCC UK Ltd*³⁴⁴. Lindblom J held (following the approach of Lord Brown in *Morge*):

" 96. As the final decision in *Morge* makes clear, regulation 9(5) does not require a planning authority to carry out the assessment that Natural England has to make when deciding whether there would be a breach of article 12 of the Habitats Directive or whether a derogation from that provision should be permitted and a licence granted. **If a proposed development is found acceptable when judged on its planning merits, planning permission for it should normally be given unless in the planning authority's view the proposed development would be likely to offend article 12(1) and unlikely to be licensed under the derogation powers** (see paragraph 29 of Lord Brown's judgment in *Morge*).

97. **The majority of the Supreme Court rejected the kind of assessment favoured by the Court of Appeal, which would require a more penetrating enquiry into the prospects of a licence being granted.** In Lord Brown's view, with which Lords Walker and Mance and Baroness Hale all agreed, a planning authority is not expected to supervise the performance by Natural England of its "primary responsibility for ensuring compliance with the Directive", or to take that responsibility upon itself ..."³⁴⁵

306. Further, Lindblom J held that³⁴⁶ it is *not* the law that a derogation may only be licensed if there is no alternative. The relevant proviso in article 16(1) Habitats Directive is that there is no "satisfactory alternative". Accordingly, the Carnedd Wen access can only become relevant if it can be considered to be a

³⁴⁴ [2013] EWHC 1054 (Admin) [2013] Env LR 734

³⁴⁵ Emphasis added

³⁴⁶ Para 111

satisfactory alternative. A number of considerations will be relevant to that judgment. As Lindblom J held:

*"113. As is clear from the European Commission's guidance, other considerations other than the effects of European Protected Species can and will come into play. **Physical, planning and timing constraints are germane to the question. Any or all of these may prove decisive. To be satisfactory an alternative has to be a real option, not merely a theoretical one.** When planning permission for it would likely be refused because, for instance, it would strain the capacity of local roads, or disturb people in their homes, or mar the setting of a listed building, or harm flora or fauna important in a Site of Special Scientific Interest, it may well be reasonable to dismiss it as a "satisfactory alternative". Without the planning permission it would require a hypothetical option of that kind would not be a real alternative; it could not meet the identified need.*

114. Judging what is, or may be, a satisfactory alternative in a particular case requires a focus on what is sought to be achieved through the derogation, and on the likely effects of the works on the species in question..."

Planning Policy Background

307. NPS EN 1 addresses the *Appraisal of Sustainability and Habitat Regulations Assessment* and sets out a number of relevant points (relied on by PCC):

- i) The energy NPSs should speed up the transition to a low carbon economy and thus help to realise UK climate change commitments sooner than continuation under the current planning system.
- ii) The energy NPSs are likely to contribute positively towards improving the vitality and competitiveness of the UK energy market by providing greater clarity

for developers which should improve the UK's security of supply.

- iii) The development of new energy infrastructure, at the scale and speed required to meet the current and future need, is likely to have some negative effects on biodiversity, landscape/visual amenity and cultural heritage. In general, it should be possible to mitigate *satisfactorily* the most significant potential negative effects of new energy infrastructure consented in accordance with the energy NPSs.³⁴⁷

It is important to note that the policy looks towards *satisfactory mitigation* – it does not require use of alternatives and it accepts that some negative effects are likely.

308. As a general principle, EN 1 states that development should aim to avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of *reasonable* alternatives.³⁴⁸ This approach is consistent with the legal approach contained in *Prideaux*. A number of points may be noted –

- i) The policy points towards *mitigation* and consideration of *alternatives*. Plainly it does not seek alternatives in all cases.
- ii) The concern is with avoiding *significant* harm – it does not suggest that all harm must be avoided or that one must take a less harmful alternative if one can be identified.
- iii) It should not suggest, however, that all significant impacts must necessarily be avoided, as EN 1 also provides that where significant harm cannot be

³⁴⁷ See NPS EN 1 at 1.7.2

³⁴⁸ 5.3.7

avoided, appropriate compensation measures should be sought.³⁴⁹

309. In terms of mitigating impacts to biodiversity, EN 1 provides that³⁵⁰ the applicant should include *appropriate* mitigation measures as an integral part of the proposed development. In particular, the applicant should demonstrate that:

- i) during construction, they will seek to ensure that activities will be confined to the minimum areas required for the works;
- ii) during construction and operation best practice will be followed to ensure that risk of disturbance or damage to species or habitats is minimised, including as a consequence of transport access arrangements;
- iii) habitats will, where practicable, be restored after construction works have finished; and
- iv) opportunities will be taken to enhance existing habitats and, where practicable, to create new habitats of value within the site landscaping proposals.

310. UDP Policy E3 is the development specific policy in the development plan and the most appropriate one against which to consider the proposal. With respect to ecological interests it provides that applications for windfarms will be approved where *"they do not unacceptably adversely affect wildlife habitats or species that are of international, national or local importance in accordance with policies ENV 3-7"*. It can be noted again that the policy is concerned with *unacceptable* adverse impacts i.e. it contemplates that a degree of adverse impact may be acceptable.

311. UDP policy ENV 7 concerns protected species and is only engaged where there is a contravention of the protection afforded

³⁴⁹ 5.3.7

³⁵⁰ 5.3.18

to a European protected species. The legal protection afforded by such legislation is set out above and not repeated.

312. In the light of the relevant legal and planning policy background, RES submit that there are 2 issues which require consideration: -

- i) Whether the development would be likely to offend art 12(1) *and* would require licensing (Issue 1); and
- ii) Whether the Carnedd Wen access is a *satisfactory* alternative (Issue 2).

Issue 1

313. In respect of Dormice, the development would not be likely to offend art 12(1) because (as set out above) there is no indication that dormice are present along the route of the access road.

314. In respect of bats, RES acknowledges³⁵¹ that there is the *potential* for a licence to be required for the works at Gosen Bridge. However, it is simply not possible (at this stage of the development process) to determine with any degree of certainty, whether a licence will be required. Dr Shepherd considers³⁵² that a number of factors need to be taken into account: (i) the level of use of the bridge by bats *at the time of the works* (to be resolved through re-surveys at the time), (ii) the timing of the works, (iii) the precise nature of the required works, (iv) the manner in which the works are undertaken. These are practical issues because (as stated above) the roost at Gosen Bridge is considered to be small and ephemeral. Dr Shepherd considers that, on the basis of the evidence before him and taking the relevant matters into account, the required works can be undertaken without any contravention of art 12(1) and without a licence. It would, of course, be prudent for the developer to discuss this matter with NRW prior to the commencement of the relevant works.

³⁵¹ See Dr Shepherd rebuttal proof at 4.1 to 4.3

³⁵² *ibid*

315. It follows that PCC and NRW's apparent position that a licence would be required is premature. It would appear to be motivated more by a pre-determined desire to force RES to use the Carnedd Wen access rather than a considered analysis of the evidence. This conclusion ignores totally the position that may occur at the time the development commences and, therefore, the factors which may influence the decision at the relevant time.

316. Accordingly, Dr Shepherd is clearly correct in his assertion³⁵³ that the Secretary of State is not currently able to conclude that a licence will be required. Accordingly, applying the relevant legal test (in *Morge*), the Secretary of State cannot conclude that a licence would be required and, therefore, that a licence will be refused. In such circumstances, there is no requirement to consider the availability of reasonable alternatives and there is no legal and/or planning policy impediment to the grant of planning permission.

Issue 2

317. As it cannot be concluded at present that a licence would be required (and there is good evidence that it would not be required) there is no need to go on to consider whether shared access with Carnedd Wen represents a reasonable alternative. However, for the reasons which are discussed below the shared access proposal advanced by PCC is not a satisfactory alternative.

Socio-economic impacts including tourism – matter 8

318. There are a number of hidden benefits arising from wind farm development which are often overlooked when considering socio-

³⁵³ At the Ecology round table session

economic issues. These are considered in the CSEI³⁵⁴ and include the “hedge” against future fuel cost inflation, the comparative low decommissioning costs, the avoidance of costs associated with pollution and importantly the contribution they make towards addressing the problems created by climate change.

319. Wherever possible RES tries to use local contractors and employees in all aspects of wind farm development. One post has already been created in Wales by the project during its development. At Llanbrynmair a temporary workforce of up to 40 would be created during the 24 month construction stage and it is anticipated that 80% of these construction jobs would be sourced locally. The wind farm would also create a permanent job in operation and maintenance. The proposal would have an indicative capital cost of £100 million and spending of approximately £13 million on works undertaken by local contractors could benefit the local economy³⁵⁵.

320. The proposal would make a further important local economic contribution in the form of business rates during its lifetime. This could be of the order of £1,575,000 per annum³⁵⁶. The proposal is also an important contributor to rural diversification providing a rental income to the host farms and estates³⁵⁷. Furthermore the proposal would contribute to a community fund. Whilst the community fund is not relied upon as a material consideration in the determination of the application it does contribute to the socio-economic impacts and consequently it is appropriate to take into account in assessing this topic.

321. Concerns about socio-economic impacts of wind farm development, often related to perceived tourism impacts are commonly raised by objectors. It is notable that despite raising initial concerns³⁵⁸ PCC has now confirmed that there is insufficient

³⁵⁴ See August 2013 CSEI (RES/CD/TOU-001) paras 12.4.4 – 12.4.16

³⁵⁵ CSEI paras 12.4.25 – 12.4.27

³⁵⁶ CSEI para 12.4.28

³⁵⁷ CSEI para 12.4.29

³⁵⁸ See OBJ-002-OSOC – 2 para 7.7

evidence that socio-economic effects are likely to arise of such a magnitude as might justify a refusal of consent for any of these projects³⁵⁹. Furthermore no evidence was adduced identifying any adverse socio-economic impacts directly attributable to the Llanbrynmair proposal³⁶⁰.

322. The objectors' evidence on socio-economic and tourist impacts relies heavily upon generalised fears as to what may happen and to a lesser extent upon a misunderstanding of the available evidence on this topic. In fact there is no evidence at all from other parts of the country that the presence of wind farms in open countryside, often with at least local landscape designations, has resulted in harm to the tourist industry in the area³⁶¹. Fears are often expressed in surveys about what the inevitable visual impacts associated with wind farms may do to future tourist interest in the area, but such fears have not translated in practice into loss of visitors in the affected areas once the development has been carried out.

323. Studies into tourism numbers and accommodation providers have shown that visitor numbers in these areas have continued to grow and that adverse reactions from guests have been negligible³⁶². For example, in the most recent statistics published by Visit England for a series of rolling three year averages from 2006 to 2012 in the three Council areas with the highest number of wind farms there has been a continued rise in tourist numbers and spending³⁶³. A further recent study by Visit Scotland provides similar evidence and their Chief Executive has stated in response to the study that they are both reassured and encouraged by the findings of the survey which suggest that the overwhelming

³⁵⁹ OBJ-002-SOC-S4 paras 8.1 – 8.3

³⁶⁰ See RES-TOURISM-POE-STEWART-S4 para 2.1.1

³⁶¹ See RES-TOURISM-POE-STEWART-S4 para 3.1

³⁶² See RES-TOURISM-POE-STEWART-S4 para 3.2

³⁶³ See RES-TOURISM-POE-STEWART-S4 para 3.3 and RES/CD/TOU-016

majority of their customers do not feel that wind farms spoil the look of the countryside³⁶⁴.

324. The various studies undertaken in the past have been reviewed on a number of occasions and again the outcome of those reviews is that with the exception of a couple of anomalous studies the studies demonstrate that the development of wind farms does not have a harmful socio-economic impact nor does it adversely affect tourism. Serious criticisms can be made about the anomalous studies such that no weight can be given to them³⁶⁵.

325. The impact of wind farms upon tourism and other socio-economic impacts are issues considered at a number of wind farm inquiries and the almost universal conclusion in these cases from Inspectors and the various Secretaries of State is that wind farm proposals do not have such adverse socio-economic impacts as would warrant a refusal of permission³⁶⁶.

326. In summary the Llanbrynmair would have a range of positive socio-economic impacts. There is no evidence that wind farms have an adverse impact upon tourism or other adverse socio-economic impacts.

Impacts on human health – matter 9

327. There is no evidence that proposals of the nature before this inquiry will give rise to any harmful impact on human health, still

³⁶⁴ See RES-TOURISM-POE-STEWART-S4 para 3.5

³⁶⁵ See RES-TOURISM-POE-STEWART-S4 para 3.5 and RES-TOURIS-REBUTTAL-STEWART-S4

³⁶⁶ See RES-TOURISM-POE-STEWART-S4 para 5.1 and the various cases in See RES-TOURISM-POE-STEWART-S4 sections 5 and 6

less any evidence that the Llanbrynmair proposal would give rise to any such impact.

328. An issue with respect to the impact of infrasound upon human health has often been raised in objection to wind turbines and as often rejected. Dr McKenzie explained that on the basis of a number of studies and reports there is no robust evidence that low frequency noise (including infrasound) or ground-borne vibration from wind farms has adverse health effects on wind farm neighbours³⁶⁷. Indeed the levels of such components from wind farms are very low and such sources of noise are ubiquitous and often at higher levels than anything generated from wind farms³⁶⁸.

329. This accords with the further guidance on this issue in NPS EN3 paragraph 2.7.60 which concludes that there is no evidence that ground transmitted low frequency noise from wind turbines occurs at a sufficient level to be harmful to human health and therefore it is unlikely that any weight would be given to claims of harm to health arising from grounds transmitted low frequency noise.

330. NPS EN3 also addresses another common source of anxiety that shadow flicker might be harmful to epileptics. Paragraph 2.7.70 explains that shadow flicker frequencies are not within the range which might give rise to symptoms in epileptics.

331. In short there are no reasons for any concern with respect to any possible health impacts arising from this development.

Impacts on cultural heritage – matter 10

³⁶⁷ RES-NOISE-POE-SSA-B para 6.10

³⁶⁸ RES-NOISE-POE-SSA-B para 6.11

332. A thorough and up to date assessment of any potential cultural heritage impacts arising from the proposal is set out in the CSEI. This assessment identifies that the proposed development would not result in any residual effects which would be EIA significant and careful management of the decommissioning phase would ensure that no further adverse impacts would occur³⁶⁹.

333. Construction works within the wind farm site would damage three undesignated assets, an area of peat cutting, an area of clearance cairns and a single cairn. These are adverse effects of no more than Minor Significance. There are no adverse effects arising from the proposed off-site highway works³⁷⁰. Construction works could also damage currently unrecorded sub-surface archaeological features, but this is a potential adverse effect of no more than Moderate Significance and all adverse effects due to construction works would be fully mitigated by an appropriate programme of archaeological excavation and recording³⁷¹.

334. Operation of the wind farm is assessed to have an adverse effect upon the setting of three historic assets. There are a hillfort at Moel Ddolwen (a Schedule Monument), the Church of St Mary, Llan (Listed Grade II*) and Llan Conservation Area. In each case there is predicted to be an adverse effect of Minor Significance³⁷². Any effects would occur for the duration of the operational life of the wind farm but would be fully reversed on decommissioning. Mitigation has been achieved, where possible, through design of the wind farm which minimises the level of harm to the historic assets³⁷³.

335. There are no issues raised with respect to impact on cultural heritage arising out of the Llanbrynmair proposal.

Aviation impacts – matter 11

³⁶⁹ RES-CULTHER-POE-SSA-B paras 7.1 & 7.2

³⁷⁰ RES-CULTHER-POE-SSA-B paras 7.3

³⁷¹ RES-CULTHER-POE-SSA-B paras 7.4

³⁷² RES-CULTHER-POE-SSA-B paras 7.5

³⁷³ RES-CULTHER-POE-SSA-B paras 7.8

336. There is no objection from any of the relevant aviation bodies and no aviation impact arises with respect to the Llanbrynmair proposal.

Hydrology and hydrogeology – matter 12

337. The main issue raised with respect to this matter has been the hydrological/hydrogeological implications for the peat in the area. In so far as issues arise with respect to peat they are considered under matter 13 below.

338. A thorough assessment of the geological, hydrogeological and hydrological effects of the proposal is set out in the CSEI³⁷⁴. This has considered the existing environment, the hydrogeology and hydrology of the area, the presence of designated sites, water quality, water supplies, land uses, and flooding.

339. The assessment identified areas of activity, particularly during the construction operations that have the potential to affect the hydrological and hydrogeological resources of the site³⁷⁵. The magnitude and significance of potential effects were assessed covering sedimentation/erosion, pollution and alteration to natural drainage patterns. Best practice techniques will be used and in addition further mitigation measures and management plans will be provided on the basis of detailed site investigations and design through a Construction Method Statement and Construction Environmental Management Plan. With the proposed mitigation and management plans in place any residual effects of the

³⁷⁴ See Sections 8 & 10 addressing both the wind farm site and the access proposals.

³⁷⁵ CSEI para 8.9.1

proposal on hydrology and hydrogeology will be negligible or at worst minor/moderate³⁷⁶.

Peat – matter 13

340. There is a degree of overlap between this matter and the issues considered with respect to matter 7 (ecology) and matters previously covered are not repeated here.

341. A large proportion of the wind farm site is underlain by a relatively thin and discontinuous layer of peat with areas of blanket bog³⁷⁷. Afforestation and grazing has resulted in modification and damage to some of the peat habitats on the site³⁷⁸.

342. Extensive depth penetration surveys have been undertaken across the site (including access) which include almost 5000 depth penetration probes covering areas of interest identified by NRW and where there are no other absolute constraints³⁷⁹. The probing included a 100m grid across the site where there are no other constraints, a probe at the centre and 10m either side of any track and 9 probes per turbine location with one at the centre and four each at a radius of 25 and 50 metres³⁸⁰.

343. On the basis of the penetration probes 65% of the infrastructure (244,150m²) was estimated to be on peat. The peat depth is less than one metre across 95% of the infrastructure. The peat depth tends to be greatest under mire vegetation or within forestry³⁸¹. However, penetration probing commonly overestimates peat depth as it does not distinguish between overlying peat and underlying glacial clay. Coring work showed that probing overestimated depth

³⁷⁶ CSEI paras 8.9.2-8.9.5

³⁷⁷ RES-PEAT-POE-FERRY-SSA-B para 4.3.2

³⁷⁸ RES-PEAT-POE-FERRY-SSA-B para 4.3.4

³⁷⁹ RES-PEAT-POE-FERRY-SSA-B para 4.4.2

³⁸⁰ RES-PEAT-POE-FERRY-SSA-B para 4.4.3

³⁸¹ RES-PEAT-POE-FERRY-SSA-B para 4.4.4 4.4.5

of peat in 89% of cases on the site³⁸². The coring work demonstrates that peat depths will be shallower than assumed from the probing in many locations across the site. Furthermore the presence of low permeability clay across the site will have positive hydrological implications as there will effectively be no increased drainage of the peat from the underlying layers³⁸³. The coring also established that the average acrotelm thickness is 0.2m³⁸⁴.

344. NRW treat any peat over 0.5m in depth as deep peat. This does not accord with the approach elsewhere and is barely above the minimum depth required to establish peat³⁸⁵. This means that the Llanbrynmair proposal has been judged against a very high standard³⁸⁶. Based on the surveys undertaken across the site 91% of peat depth across the area of infrastructure is estimated to be below 0.5m in depth. Of the remainder 4% is between 0.5m and 1m and 3% between 1m and 1.5m in depth³⁸⁷. It is important to note, however, that the depth of peat is not always related to the quality of the habitat³⁸⁸.

345. The construction and operation of the proposal will have two principal effects on the peat environment –

- i) The excavation of up to 120,900m² of peat for creation of site access tracks, turbine bases, compounds and other infrastructure, and
- ii) The draining (dewatering) of groundwater from the peat to excavated areas. In some cases this will be a permanent effect equivalent to up to 34,700m² of peat as access tracks will remain throughout the operation period, in other cases the effect will be

³⁸² RES-PEAT-POE-FERRY-SSA-B para 4.4.6 and 2.2.6

³⁸³ RES-PEAT-POE-FERRY-SSA-B para 4.4.7

³⁸⁴ RES-PEAT-POE-FERRY-SSA-B para 4.4.8

³⁸⁵ RES-PEAT-POE-FERRY-SSA-B para 2.2.4

³⁸⁶ RES-PEAT-POE-FERRY-SSA-B para 2.2.5

³⁸⁷ RES-PEAT-POE-FERRY-SSA-B para 4.4.9

³⁸⁸ RES-PEAT-POE-FERRY-SSA-B para 4.4.10

temporary and equivalent to up to 18,900m² as excavated areas are backfilled³⁸⁹.

It is important to recognise that these calculations do not take into account the likely overestimate of peat depths explained above nor the scope for micro-siting considered below³⁹⁰. To put this into context it is also important to note that SSA B is a generally peaty area and a “carbon landscape”³⁹¹ with large parts underlain by a combination of deep and shallow peaty soils and soils with peaty pockets³⁹². It is likely that any wind farm development proposal in SSA B will encounter significant areas of peat soils³⁹³.

346. Dewatering will at most affect a maximum of 2% of the peat volume and will almost all be within the acrotelm. As the acrotelm is periodically seasonally depleted this will not be linearly related to any habitat loss³⁹⁴. Again the estimates are very conservative³⁹⁵.

347. Careful consideration has been given to minimising any impacts upon peat. The site was carefully surveyed (taking into account other constraints) to avoid more sensitive areas for peat. The history of the various measures is explained more fully in the CSEI. However, the steps to minimise impact included the removal of a number of turbines to avoid nearby deep peat pockets³⁹⁶ and careful alignment of the access tracks³⁹⁷.

348. As a result of the careful design of the site, only 14 turbines have one or more depth probe reading³⁹⁸ of greater than 0.5m³⁹⁹. Of these 14 turbines 10 can avoid the possible “deep” peat by minor micro-siting⁴⁰⁰. Of the remaining 4 turbines micro-siting may

³⁸⁹ RES-PEAT-POE-FERRY-SSA-B para 5.1.1

³⁹⁰ RES-PEAT-POE-FERRY-SSA-B para 5.2.13

³⁹¹ CD/COM/HYD/08

³⁹² CD/COM/HYD/09

³⁹³ RES-PEAT-POE-FERRY-SSA-B para 5.2.14

³⁹⁴ RES-PEAT-POE-FERRY-SSA-B para 5.3.6

³⁹⁵ RES-PEAT-POE-FERRY-SSA-B para 5.3.7

³⁹⁶ RES-PEAT-POE-FERRY-SSA-B para 5.2.6

³⁹⁷ RES-PEAT-POE-FERRY-SSA-B para 5.2.3

³⁹⁸ (of the 5 readings within or just outside the limits of the footprint of the turbine base)

³⁹⁹ RES-PEAT-POE-FERRY-SSA-B para 5.2.7

⁴⁰⁰ RES-PEAT-POE-FERRY-SSA-B para 5.2.8

also be possible to address this but it has not proved possible to investigate the matter further because of existing forestry⁴⁰¹. Within the limits of other constraints there has been a maximum avoidance and minimisation of “deep” peat consistent with the economic development of the site⁴⁰².

349. A Peat Management Plan has been developed alongside a Habitat Management Plan and these provide for measures to limit and mitigate further any impacts upon peat⁴⁰³. All excavated peat can be reused on site in such a way as to retain a significant proportion of the carbon value of the peat and by minimisation of dissolved carbon run-off and creation of new active peat by ditch, furrow and gully blocking, to add to the carbon stocks⁴⁰⁴.

350. At NRW/CCW's request, the proposal has been assessed using the Scottish Government's Carbon Calculator and this has estimated the payback period of the development at Llanbrynmair to be 1.1 years with a range of -0.1 years to 3.8 years⁴⁰⁵. There are a number of reasons why this again represents a conservative estimate⁴⁰⁶ –

- i) Only 45% of the total carbon losses are attributable to on-site ecological carbon stores. The balance would inevitably arise from the provision of infrastructure and backup for the electricity grid which would be inevitable for any wind farm proposal.
- ii) Within the ecological carbon losses 45.6% is attributable to felling existing forestry which again would happen at some point in any event. Also the losses calculated probably overestimate the level of carbon sequestration in the trees.

⁴⁰¹ RES-PEAT-POE-FERRY-SSA-B para 5.2.9

⁴⁰² RES-PEAT-POE-FERRY-SSA-B 5.2.12

⁴⁰³ RES-PEAT-POE-FERRY-SSA-B paras 6.1.2 – 6.1.6

⁴⁰⁴ RES-PEAT-POE-FERRY-SSA-B para 6.1.5

⁴⁰⁵ RES-PEAT-POE-FERRY-SSA-B para 7.1.5

⁴⁰⁶ RES-PEAT-POE-FERRY-SSA-B paras 7.1.6 to 7.1.16

- iii) Within the ecological carbon losses 47.9% is attributable to losses from peat soils.
- iv) The losses attributable to peat soils are likely to be overestimated because the peat deposit has been overestimated.
- v) The carbon calculator also assumes that 100% of the excavated peat will be lost as atmospheric CO₂ emissions. As all the excavated peat is planned for onsite reuse it is reasonable to expect that a significant proportion of this excavated peat will be re-established and therefore will not be oxidised.
- vi) The land take envelopes used for the calculation are larger than might actually be required to cover the worst case scenario.
- vii) The carbon losses in drained peat are also likely to be overestimated as the carbon calculator uses a simple diagonal representation of the drainage pattern in soils whereas there is more likely to be a cone of drawdown.
- viii) The carbon calculator could be significantly underestimating the soil carbon gains from restoration.
- ix) The gains estimated from site restoration do not include any additional carbon that may be sequestered as a result of restoring the degraded bog and afforested area.

351. Overall the ecological carbon balance is close to neutral and given the points set out above it is likely that there will be an overall net soil carbon benefit due to the existing degraded nature of the habitat and soils and the large area of proposed restoration of felled forestry and degraded bog⁴⁰⁷.

⁴⁰⁷ RES-PEAT-POE-FERRY-SSA-B para 7.1.17

352. In conclusion, the proposal has adequately minimised loss of peat and peatland habitat impacts consistent with other constraints and the need to provide a viable proposal to meet the important policy needs already identified. The proposal avoids impacts upon the better areas of peat habitat. In addition significant mitigations are proposed for peat including reuse of disturbed peat and enhanced habitat management for peat bog restoration. The mitigation measures proposed would more than compensate for any impact on peat arising from the proposed development and would result in a net positive benefit gain with respect to carbon and peat hydrological conditions when habitat enhancement and peat reuse are taken into account.

Potential for grid connection – matter 14

353. RES has an agreement with SP Manweb (the DNO) to connect to their electricity distribution system via a hub-station to be constructed in the location of Cefn Coch from whence a connection is proposed by National Grid to its existing network at Lower Frankton in Shropshire⁴⁰⁸. The potential National Grid connection has generated a considerable degree of adverse comment. Indeed it appears that this is the source of much of the public concern about the individual wind farm proposals. Those grid connection proposals are subject to a separate decision-making process and environmental appraisal. There are no grounds for concluding that they will ultimately prove to be unacceptable.

354. It is furthermore important to keep in mind that the current SP Manweb/National Grid proposals are not the only way in which a

⁴⁰⁸ Section 1 Mott MacDonald report AD-RES-040

connection could be made. The Mott MacDonald report⁴⁰⁹ identifies a number of connection options which might be utilised depending upon what proposals were consented and whether any network upgrades were limited to accommodating the consented proposals. It is significant that whilst PCC raises concerns with respect to the National Grid proposal it accepts that an alternative proposal identified in the Mott MacDonald report would be acceptable⁴¹⁰.

355. The evidence establishes that there are a number of alternative grid connection options and that one can reasonably anticipate that an acceptable option will receive consent

356. A number of objectors have maintained the objection raised at the PIM as to whether there is sufficient information with respect to grid connection to enable the S of S to determine the application and/or whether the ES is adequate in this respect. These matters were addressed in the RES submissions provided prior to the PIM⁴¹¹. We refer to and rely upon those submissions rather than repeating all of the details in this closing. For the reasons set out in those submissions the project to be considered in the ES in each case is properly limited to the proposal the subject of the relevant section 36 application. The grid connection does not form part of the proposal. Whilst it may be appropriate to consider the grid connection as an indirect or secondary effect a developer can only be expected and required to provide such information as is reasonably available to them. An appropriate and sufficient assessment of the grid connection was undertaken in the 2010 SEI⁴¹² and the details were subsequently included in the CSEI⁴¹³. Additional information was provided in December 2013⁴¹⁴. This information provides sufficient information to enable a proper judgment to be made on these matters. It is also all that can practically be expected of or provided by the developer at this

⁴⁰⁹ AD-RES-040

⁴¹⁰ See OBJ-002-SOC-S4 paras 4.2.3 and 4.2.4

⁴¹¹ RES/002

⁴¹² AD/RES/008 and 009

⁴¹³ AD/RES/031 or CS/RES/BAC/009 Vol II A Appendix 4.4

⁴¹⁴ See AD/RES/040 to 042

time. In the circumstances no more can be provided or required than that which has already been provided. There is no deficiency in the ES. No request for further information has been made under regulation 13 and if, contrary to our submissions, it were considered that any further information were required this is a matter which it remains open to the S of S to address by requesting further information on this issue.

Compliance with NPS on renewable energy – matter 2

357. The Llanbrynmair proposal complies with and is strongly supported by NPS EN 1 and NPS EN 3.

358. Reference has already been made under matter 1 above to the recognition within the NPSs of the need for this type of development and the support given for these types of proposals. The Llanbrynmair proposal conforms with and is supported by those general statements.

359. NPS EN 1 recognises that for a variety of reasons it may not always be appropriate or possible to apply for wind farm development and any necessary grid infrastructure at the same time and that an application for all development at the same time may not be the best course in terms of delivery of a project in a timely fashion⁴¹⁵. The reasons why it is appropriate to consider the Llanbrynmair proposal separately from any grid application have been explained. The evidence has established that there is no reason why a grid connection would not be possible, which is the relevant test to consider⁴¹⁶. The proposal accordingly complies with this element of policy.

360. With respect to policy on relevant impacts –

⁴¹⁵ NPS EN 1 para 4.9.2

⁴¹⁶ NPS EN 1 para 4.9.1 and 4.9.3

- i) Proper account has been taken of any ecological impacts. The proposal avoids significant harm to biodiversity interests and meets the requirements set out in NPS EN 1 5.3.
- ii) The wind farm layout and construction methods have been designed to minimise impacts upon peat with minimal disruption to ecology and the release of CO₂. The carbon balance savings of the scheme have been maximised. The proposal accords with the principles set out in NPS EN 3 paragraph 2.7.37.
- iii) Impacts to cultural heritage interests are very limited and comply with the guidance in NPS EN 1 5.8 and NPS EN 3 2.7.41 – 2.7.45
- iv) The wind farm development has been carefully designed to minimise effects on the landscape and visual amenity while meeting technical and operational siting requirements and other constraints. PCC has no objection to the landscape and visual effects of the wind farm proposal but raises concerns instead with respect to the works to the county road to provide access to the site. These matters have been addressed fully above. The proposal accords with NPS EN 3 2.7.48-2.7.51 and NPS EN 1 5.9.
- v) There are no sustainable issues raised with respect to noise and the proposal complies with NPS EN 3 2.7.54 – 2.7.62. and NPS EN 1 5.11.
- vi) There are no issues with respect to shadow flicker. The proposal complies with NPS EN 3 2.7.66 – 2.7.72.
- vii) The traffic and transport impacts of the proposal have been satisfactorily considered and addressed.

The proposal complies with NPS EN 3 2.7.76- 2.7.83 and NPS EN 1 5.13.

- viii) There is no good evidence of adverse socio-economic impacts whereas the proposal will provide socio-economic benefits. The proposal complies with NPS EN 1 5.12

361. Careful consideration has been given to the potential impacts arising from this proposal in accordance with the guidance in NPS EN 1 and NPS EN 3. The nature of the objections to the proposal are comparatively limited. In the light of the evidence to the inquiry it can properly be concluded that the proposal complies with policy in the NPSs.

Compliance with Welsh government and local planning policy – matter 3

362. The Llanbrynmair proposal falls within SSA B as defined in PPW and TAN 8 and the revised boundaries defined locally by PCC. The strong support and need for proposals of this nature within those areas was considered above under matter 1. Those policies recognise an imperative to deliver significant quantities of wind energy development within the identified SSA and it is implicit in the policies that a degree of impact is both inevitable and accepted. Given the failure to deliver the identified targets within the time period originally identified and the continuing failure to deliver significant development within SSA B the proposal derives strong support from these policies.

363. The Powys UDP contains a specific policy E 3 on wind energy development and it is to this policy one should primarily turn to assess the proposal⁴¹⁷. The policy sets out eight criteria against

⁴¹⁷ RES-PLANNINGBALANCE-POE-STEWART para 2.2

which to judge proposals of this nature, and it is notable that in most of those criteria the test posed is avoidance of unacceptable harm. This engages the balancing exercise envisaged in PPW in which the wider benefits of a renewable energy proposal have to be weighed against any harm that may be found to arise⁴¹⁸. However, the policy does not acknowledge the presence of the SSAs and the inevitable need to accept change and impacts that arise from that⁴¹⁹. When considering the issue of whether an impact is unacceptable it is important to keep in mind the need for significant development within the SSA and the acceptance of the inevitable impacts arising from that development⁴²⁰.

364. PCC accepts that the wind farm itself is acceptable in planning terms and satisfies the various criteria set out in policy E 3. The sole remaining issue relates to the access road. The evidence establishes, contrary to PCC's contentions that the impact of the access road is acceptable, particularly in the context of the need for and benefits of the wind farm. There is no requirement in policy to consider any alternatives. The question of PCC's proposed alternative access arrangement is considered below, but even if it were considered (a) that PCC's suggestion is a practical alternative and (b) that it would be preferable to the current access proposals, this would not establish any conflict with the policy. Merely because there may be a better alternative does not render the impacts of the current proposal unacceptable⁴²¹.

365. In the circumstances the proposal complies with the relevant local policies.

Issues with respect to shared access

⁴¹⁸ RES-PLANNINGBALANCE-POE-STEWART para 2.6

⁴¹⁹ RES-PLANNINGBALANCE-POE-STEWART para 4.1

⁴²⁰ RES-PLANNINGBALANCE-POE-STEWART para 4.2

⁴²¹ RES-PLANNINGBALANCE-POE-STEWART para 4.3.2

366. PCC resists this proposal solely on the basis that access should be achieved through Carnedd Wen. This raises the issue of the approach to take to alternatives.

367. The starting point is that an owner of land is entitled to use land for any purpose which is acceptable for planning purposes. The fact that a landowner wanted to develop his land in a particular way should not be frustrated because there was other land which would be more suitable in planning terms for that particular use⁴²².

Consideration of alternative sites is only relevant to a planning application in exceptional circumstances⁴²³.

368. A number of propositions are clearly set out in the authorities –

- i) Objections put forward against a planning application are judged on their merits. If they outweigh the planning benefits of the development applied for, the application will be refused. To introduce into that equation a consideration of a different character, namely whether there would be less disbenefits on another site, could only be justified for some special reason, such as the existence of particularly serious detriments to the public in a case where nevertheless there is a pressing need for the development⁴²⁴.
- ii) The comments of Simon Brown J in the *Trusthouse Forte* case are to be read in context – they apply to cases where there are substantial objections which were on the facts made out⁴²⁵.
- iii) In those exceptional cases where alternative proposals may be relevant, inchoate or vague schemes and/or those that are unlikely or have no

⁴²² *Vale of Glamorgan BC v Sec of State for Wales* [1986] JPL 198, 199, *R(Scott Jones) v North Warwickshire BC* [2001] EWCA Civ 315 @ para 29, *Trusthouse Forte Hotels Ltd v SECRETARY OF STATE* (1986) 53 P&CR 293 @299

⁴²³ *North Warwickshire* @para 30

⁴²⁴ *North Warwickshire* @ para 32

⁴²⁵ *North Warwickshire* @ para 32

real possibility of coming about would not be relevant or, if they were, should be given little or no weight⁴²⁶.

- iv) It would be highly harmful to the efficient and otherwise beneficial working of our system of planning control if decision-makers were required to consider possible alternatives, of which, on the facts before them, there is no likelihood or real possibility of occurrence in the foreseeable future⁴²⁷.
- v) Generally speaking the circumstances in which consideration of alternative sites may be relevant arise where the proposed development, though desirable in itself, involves on the site proposed such conspicuous adverse effects that the possibility of an alternative site lacking such drawbacks necessarily itself becomes, in the mind of a reasonable local authority, a relevant planning consideration upon the application in question⁴²⁸.
- vi) A further situation where consideration of alternative sites can be relevant is where the development plan or policy guidance makes it relevant⁴²⁹.
- vii) There is no general principle that alternative sites need to be or should be considered on wind power applications. In cases involving wind power there are obvious difficulties in considering alternative sites as they will need to be provided in open countryside areas and there will be a need to pursue several

⁴²⁶ *R(Mount Cook Land Ltd) v Westminster CC [2003] EWCA Civ 1346 @ para 30*

⁴²⁷ *R(Mount Cook Land Ltd) v Westminster CC [2003] EWCA Civ 1346 @ para 35*

⁴²⁸ *North Warwickshire @ para 30*

⁴²⁹ *Philips v First S of S [2003] EWHC 245 (Admin) @ para 38*

projects if the national policy objective is to be realised⁴³⁰.

- viii) There is no legal or policy requirement to consider alternatives when considering wind farm proposals. The statutory provisions and policies relating to National Parks and Conservation Areas require special regard to be paid to their protections but they fall short of imposing a positive obligation to consider alternatives which might not have the same effects⁴³¹.

369. The general position is not altered by the provisions of the Electricity Act 1989. The duties set out in paragraph 1(1) of Schedule 9 to the Act apply to licence holders and do not apply to all applicants for consent. In applications where those duties do not apply the Secretary of State is to have regard (under paragraph 1(2)(a)) to the desirability of the matters mentioned in paragraph 1(1)(a) but he should proceed on the basis that the applicant is not under any duty to comply with paragraph 1(1)⁴³².

370. It is furthermore important to note what is provided under paragraph 1(1) in any event.

371. Paragraph 1(1)(a) requires *regard* to be had to the *desirability* of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest. Similarly paragraph 1(2) requires the Secretary of State to have *regard* to the *desirability* of those matters.

372. Whilst the provisions make it clear that the *desirability* of the specified matters are material considerations to which regard

⁴³⁰ *National Wind Power Ltd v SECRETARY OF STATE* Deputy High Court Judge Lockhart-Mummery QC 29th October 1999

⁴³¹ *Derbyshire Dales DC v SSCLG* [2009] EWHC 1729 (Admin) [2010] 1 P&CR 381 @ paras 35 – 37

⁴³² *Trump International Golf Club Scotland Ltd v The Scottish Ministers* 2014 SLT 406 @ paras 34 – 36

should be had, they do not elevate those considerations above any others or give them greater weight than other considerations⁴³³. The use of the terms *regard* and *desirability* make it clear that these are matters which have to be weighed in the balance against other relevant matters and that they do not necessarily have to be achieved.

373. Furthermore the requirement in paragraph 1(2) (when it applies) is to do what the relevant person "*reasonably can to mitigate any effect which the proposals would have*" on the matters set out in paragraph 1(2). A number of important points need to be noted –

- i) The requirement is to take such steps as the person *reasonably can*. It is plainly important to consider what the relevant person can reasonably achieve. The requirement is limited to what is reasonably open to the applicant. If the applicant does not have the power to deliver a particular matter it is not something which the applicant can reasonably do. If a particular matter has particularly deleterious impacts upon a proposal it is not reasonable to require it.
- ii) The relevant steps are steps to *mitigate* effects of the *proposal*. Clearly what is under consideration is the *proposal* before the Secretary of State. There is no requirement to consider some alternative proposal.
- iii) The requirement is to *mitigate* effects there is no requirement to avoid effects all together by using some different proposal.

⁴³³ The provisions can be contrasted with the requirement to have *special regard* under *section 66 Planning (Listed Buildings and Conservation Areas) Act 1990*.

374. There is no additional or separate requirement under the provisions of the Electricity Act 1989 to consider alternatives. The position remains as with planning applications in general.
375. Where issues are raised with respect to the Habitats Directive the Secretary of State is required to have regard to the requirements of the Directive, but he is not under any duty to carry out an assessment as to whether or not any licence will be granted. It is not the law that a licence may only be issued if there is no alternative – the relevant proviso is that there is no *satisfactory alternative*. Issues such as physical, planning and timing constraints are germane to the question and any may prove decisive. To be satisfactory an alternative has to be a real option not merely a theoretical one⁴³⁴.
376. The Secretary of State's policy with respect to alternatives is set out in NPS EN1. He makes it clear that there is no general requirement to consider alternatives⁴³⁵.
377. Specific advice is provided with respect to alternatives in the context of biodiversity⁴³⁶, flood risk⁴³⁷ and landscape and visual impact⁴³⁸. The advice with respect to biodiversity does not add materially to the considerations set out in *Prideaux*. Flood risk is plainly not an issue in this case. With respect to landscape and visual impacts the approach to the relevance of alternatives is important. A clear distinction is drawn between development *within* nationally designated landscapes and those which are merely visible from such landscapes. Development in nationally designated landscapes should be exceptional and subject to inter alia assessment of alternatives⁴³⁹. There is no such requirement with

⁴³⁴ *R(Prideaux) v Buckinghamshire CC [2013] EWHC 1054 (Admin) [2013] Env L.R. 734 @ paras 94-96, 111 & 113*

⁴³⁵ NPS EN1 para 4.4.1

⁴³⁶ NPS EN1 5.3

⁴³⁷ NPS EN1 5.7

⁴³⁸ NPS EN1 5.9

⁴³⁹ NPS EN 1 5.9.10

respect to development outside nationally designated landscapes even if the development is visible from such landscapes⁴⁴⁰.

378. In the exceptional cases where one is required to consider alternatives –

- (i) one needs to consider whether there is a realistic prospect of the alternative delivering the same capacity in the same timescale,
- (ii) an application should not be rejected simply because fewer adverse impacts result from another site,
- (iii) alternatives which are not viable can be ignored,
- (iv) vague or inchoate alternatives can be ignored,
- (v) alternatives should wherever possible be identified before an application is made – where they are put forward after an application is made the onus is on the third party advancing the alternative⁴⁴¹.
- (vi) amending the design may result in a significant operational constraint or reduction in function. Exceptional benefits may warrant a small reduction in function⁴⁴².

379. The primary policy to consider is that of the Secretary of State. However, it can be noted that PPW does not require use of alternatives. Indeed the emphasis throughout is upon maximising and optimising renewable energy generation⁴⁴³. Similarly policy E3 of the UDP refers to proposals not having various unacceptable adverse impacts; there is no requirement to consider alternatives much less to look to preferred approaches.

380. PCC's stance appears to derive from a more general desire for use of shared routes. However, MR agreed in XX that –

⁴⁴⁰ NPS EN 1 5.9.12 – 5.9.17

⁴⁴¹ NPS EN 1 4.4.3

⁴⁴² NPS EN 1 5.9.21

⁴⁴³ See for example PPW 12.8.1, 12.8.2, 12.8.8 and 12.8.9

- i) No policy requires use of shared routes, there is no suggestion that this arises because this is a strategic area and the policies referred to in paragraph 2.5 of his proof say nothing about use of shared routes.
- ii) This is the case even though PCC did consider what policy response it wished to make to TAN 8.
- iii) There is no requirement that all wind farms be accessed from trunk roads – indeed Carnedd Wen is the only one that is⁴⁴⁴.
- iv) PPW and TAN 8 would anticipate that access is not likely to come from a trunk road and would likely involve widening of local roads. The policy certainly could not have known that sites would be capable of being accessed from trunk roads.
- v) Indeed the creation of additional or new accesses from trunk roads can raise additional issues in itself.
- vi) There is no requirement for wind farms to the east to adopt a common access strategy. PCC is merely proposing this should now be considered⁴⁴⁵.
- vii) Access for Tirgwynt involves alterations to 16km of a local road and consent was granted with no details provided. The proposal was considered acceptable with no indication as to the nature of alterations required⁴⁴⁶.
- viii) It is accepted that the proposals are technically feasible (S of C para 5.1.2) and in highway terms a safe route can be provided⁴⁴⁷ and therefore there is no need to consider an alternative access for any technical highway reasons.

⁴⁴⁴ See also OBJ-002-TRANS-POE-RUSSELL-SSA-B para 2.7

⁴⁴⁵ See OBJ-002-TRANS-POE-RUSSELL-SSA-B para 2.8

⁴⁴⁶ See OBJ-002-TRANS-POE-RUSSELL-SSA-B para 2.8 OBJ-002-TRANS-RUSSELL-SSA-B

⁴⁴⁷ See OBJ-002-TRANS-POE-RUSSELL-SSA-B para 3.34

- ix) No requirement was put by PCC or the highway authority to RES during all these years to adopt a common access strategy.
- x) The matter was not raised in the Cabinet report.
- xi) As a matter of fact RES did consider use of Carnedd Wen for access but rejected it and it was not asked by PCC to explain this prior to June 2013.
- xii) RES also considered a joint approach to use of the local road with 3 other potential developments – whilst none are subject to applications at present they have not been abandoned.
- xiii) RES has been prepared to co-operate with others. It comes to a point when a developer has to progress with a particular proposal. These matters have a significant lead in period and policy makes it clear that it is seeking urgent provision of this form of development.

381. PCC's approach is neither founded in a proper legal approach, nor is it supported by any policy.

382. The proposal in this case involves use of the county road for access to the Llanbrynmair site. RES has sought to provide further information to the Secretary of State given the position adopted by PCC and in order to avoid further delay in this matter given the approach taken by PCC RES has incorporated the necessary land to connect with Carnedd Wen. However, the proposal remains to use the county road.

383. For the reasons set out above the impacts arising from use of the county road are not such as to warrant a refusal of consent in this case. There are no grounds for considering any potential alternatives in this case.

384. The argument that it would be preferable to have one shared access rather than two separate accesses does not found a reason

for refusing consent or even a requirement to consider alternatives. Furthermore it must be noted that for many years during the consideration of this application there was no suggestion that the preferred approach on the part of the public bodies would be to use Carnedd Wen as the access to the Llanbrynmair site. Applicants cannot reasonably be expected to keep altering their approach as the preference of public bodies alters. In the light of the history of this matter RES was entitled to proceed with use of the county road as the means of access. A late change in preference on the part of the public bodies is no reason for derailing this process. Indeed given the recognition in policy that the need for projects such as this is urgent⁴⁴⁸, and that it will not be possible to develop the necessary amounts of infrastructure without some significant residual adverse impacts⁴⁴⁹, it would be contrary to policy to delay proposals as a result of late changes in approach from public bodies.

385. Even if it were appropriate to consider alternatives it is then necessary to consider whether there is a satisfactory and practical alternative available.

386. Paragraph 1 of Schedule 3 to the Electricity Act 1989 provides power for the Secretary of State to authorise a licence holder compulsorily to acquire any land required for any purpose connected with the carrying on of the activities which he is authorised by his licence to carry on. However, no order can be made authorising the compulsory purchase of land belonging to another licence holder except with the consent of the Gas and Electricity Markets Authority, and no such consent shall be given if the land is being used by the licence holder to whom it belongs for the purposes of an installation necessary for the carrying on of the activities which he is authorised by his licence to carry on or it appears that it will be so used – paragraph 2 of Schedule 3.

⁴⁴⁸ NPS EN1 para 3.4.5

⁴⁴⁹ NPS EN1 para 3.2.3

387. In practical terms this means that RES (or any other party interested in developing the Llanbrynmair site) has no powers to acquire the necessary land to secure access through Carnedd Wen. Any such access would require the agreement of RWE and the relevant landowners. RES has explained that in 2009 it was effectively told that such an access could not be provided. Despite further considerable efforts made by RES during the course of this inquiry no such agreement has been forthcoming. There is no basis for assuming that this position will change in the future. If agreement has not been possible under the spotlight of the inquiry it cannot be expected to be forthcoming when there is no longer any pressure upon RWE to agree.
388. The position adopted by RWE during the condition session that it has no control over the situation and that any agreement can be reached with the landowners is simply not credible. Taken at face value RWE are suggesting for example that RES could obtain an agreement precluding RWE's use of the access road.
389. Whilst RWE's public position is that it has no objection in principle to use of a shared access it has not in practice been prepared to commit to any such access. Furthermore it has always maintained that any use of the access by Llanbrynmair would have to follow the completion of Carnedd Wen. There is no evidence that any access can be provided through Carnedd Wen in advance of the completion of Carnedd Wen.
390. If a shared access is to be advanced, as PCC and NRW contend, it would be necessary to have provisions in place which requires RWE to co-operate in the provision and use of a shared access. Without effective provisions requiring RWE's co-operation there is at present no available alternative.
391. Furthermore RES has explained that if development of Llanbrynmair were to be delayed waiting for development of Carnedd Wen the project would not be viable. There is no

alternative evidence on this point. An alternative which is not viable is not a satisfactory or practical alternative.

392. In addition any further delay in development of Llanbrynmair entails the significant disbenefit of delaying further the contribution which Llanbrynmair can make to the much needed additional renewable energy provided by this project

393. It is important to recall that there is an urgent need for the Llanbrynmair proposal. The urgent need is identified in national policy⁴⁵⁰. It is also clear in the context of the situation in Wales. The delivery of wind farm proposals in the identified SSAs has lagged considerably behind the dates set, with the problem particularly acute in this area. The original date of 2010 has long passed, and it is clear that provision will not be made for the later date of 2015/17. Carnedd Wen has a very long lead in period because of the extensive site clearance and habitat restoration that is required. Llanbrynmair is a much more straightforward project which can deliver renewable energy much more quickly. It would be contrary to policy to delay delivery of the much needed renewable energy from the Llanbrynmair site until after the completion of the Carnedd Wen site when there is no need for any such delay.

394. There is also the question of what is to happen if Carnedd Wen were not to proceed for any reason or were to be delayed further. The delivery of the much needed Llanbrynmair project cannot sensibly be left dependent upon delivery of another project over which it has no control.

395. In practice these various considerations call for suitably drafted conditions which address the various possible factual permutations which cannot be precisely predicted at this stage. In essence when the various matters are considered and weighed in the balance it is necessary to provide for a suitable "fall back" if shared access is not forthcoming within a reasonable period of time.

⁴⁵⁰ NPS EN1 para 3.4.5

396. The conditions proposed by PCC do not address these fundamental issues. If an alternative means of access were to be considered further in this case it would be necessary to address these particular issues satisfactorily. In practice the only viable solution would be one which provides the option to bring forward development of Llanbrynmair with use of the county road if access through Carnedd Wen is not forthcoming in a timely manner. In addition it would be imperative to have a suitably worded condition imposed upon the Carnedd Wen scheme to ensure that it is brought forward with shared access.

397. Whilst RES does not advance any case that shared access is necessary (for the reasons already given it invites you to conclude that there is no need to consider any alternative access proposal) in order to assist the Secretary of State it has put forward conditions which could potentially address the situation of shared access were the Secretary of State to conclude that it is necessary. In such a situation the Secretary of State would effectively be accepting PCC's case which is that this is a strategic area of search where the question of access should be considered in the context of strategic planning. In that context –

- i) Given that this area has been identified as one where a significant contribution towards renewable energy generation can and should be made, and
- ii) that it is common ground that 30 turbines providing 60-90MW of renewable energy can be acceptably accommodated upon this site, and
- iii) that the only concerns relate to use of the county road for AIL access, but that use of shared access with Carnedd Wen would resolve all of these concerns,

it would plainly be wrong, contrary to the public interest and contrary to good planning for the Llanbrynmair proposal to be sterilised because the necessary access was prevented from

coming forward in a timely manner. The use of conditions to require comprehensive development is nothing new and such conditions serve a proper planning purpose.

398. It is furthermore lawful to impose conditions requiring access to be provided over private land. This much is clear from the case of *Hall & Co Ltd v Shoreham-by-Sea UDC*⁴⁵¹. Whilst it was held in that case that a condition could not be imposed requiring land to be dedicated to public use as a highway, the judges in the Court of Appeal accepted that there was no such objection to a condition requiring a right of access to be given over private land. For example Willmer LJ concluded that merely because a condition might interfere with a landowner's right to prevent other people from passing over his land did not lead to the conclusion that the condition went beyond the powers of the Town and Country Planning Acts given that the whole scheme and purpose of the legislation was to limit the exercise of an owner's property rights and that it forbade the exercise of even more important rights of ownership⁴⁵². Similarly the court rejected the argument that the condition relating to the construction of the ancillary road was not "in connection with the development authorised" on the grounds that when granting a planning permission an authority must necessarily take into consideration the effect of the granting of such permission on the development of adjoining properties⁴⁵³.

399. There is accordingly power under the Town and Country Planning legislation to impose conditions requiring provision of a right of access over adjacent private land. There are in addition powers under the Electricity Act to impose such a condition.

400. It can be noted that RWE contested the imposition of a condition on its consent solely on the basis that it was not necessary because the implementation of the Carnedd Wen proposal could not prevent implementation of Llanbrynmair and that this was all

⁴⁵¹ [1964] 1 WLR 240

⁴⁵² See pp247/8 – see also Harman LJ at p256

⁴⁵³ See Wilmer LJ at p 248 and Harman LJ at p256

simply a matter for negotiation with the relevant landowners. There is no suggestion from RWE that there is no power to impose the type of condition proposed or that it would not be relevant to planning and reasonable, the only issue raised is whether it is necessary. The need for such a condition (if shared access is to be pursued) has been clearly established. Any use of a shared access is critically dependent upon RWE's (or their successors) co-operation both in providing the access route and in co-ordinating use of it. This is a matter which is within RWE's control and to date such co-operation has not been forthcoming. In the absence of an appropriate condition there is no ground for believing that such co-operation might be forthcoming let alone would be forthcoming.

401. If shared access is the route to be followed it is therefore necessary to impose the conditions proposed by RES.

402. In the circumstances, there is no requirement to consider alternative access in this case. Given that the proposal is in an area identified for this form of development and that the development of a 30 turbine wind farm is acceptable it would not be appropriate to prevent this development proceeding merely because of a preference for use of an alternative access route, or simply because it would result in less impact. If, however, the use of the alternative of shared access is to be pursued it would be necessary to impose the conditions proposed by RES including a condition upon any Carnedd Wen consent.

Conclusion

403. The proposal has been extensively tested at this inquiry. The need for the proposal and the benefits flowing from it are clearly established. The proposal is an important step in addressing the pressing needs with respect to climate change and energy security; it makes an important contribution towards meeting the

Government's international commitments and energy policy goals and helping to address the chronic failure to make the planned provision for wind energy development in this sub-region.

404. This proposal does not give rise to any unacceptable impacts. Indeed for its scale it gives rise to remarkably little impact. This reflects the fact that it is located in an area repeatedly identified as a location to which this form of development should be directed and concentrated. Such impacts as arise can be properly addressed by conditions. If it were concluded that the proposal has any adverse impacts they are clearly outweighed by the benefits of this proposal.

405. We would invite you to recommend to the Secretary of State that the consent should be granted subject to appropriate conditions.

VINCENT FRASER QC
GILES CANNOCK

28th May 2014
Kings Chambers,
36, Young Street,
Manchester M3 3FT

ANNEX 6

Mid Wales (Powys) Conjoined Wind Farms Public Inquiry

Application by SP Manweb plc, dated 2 December 2009 for consent under Section 37 of the Electricity Act 1989 to install and keep installed a 132kV overhead electric line connection from the proposed Llandinam Wind Farm to Welshpool Substation (“the Application”)

Closing Statement on behalf of SP Manweb plc

Introduction

1. SP Manweb (“SPM”) is a Distribution Network Operator (“DNO”) and has some 1.5 million electricity customers served by its electrical distribution network within its geographic licence area which covers Cheshire, Merseyside, Shropshire, North and Mid Wales.¹

The proposals

2. The inquiry is very familiar with the background to the proposed development (“the Llandinam Scheme”). CeltPower Ltd (“CeltPower”) is repowering an existing wind farm at Llandinam (“LRWF”) and requires a connection to export the electricity generated from the LRWF to the local distribution network. The Llandinam Scheme provides that connection. It will comprise approximately 35 km of new 132 kV overhead line within a 100m corridor² providing 3-phase single circuit with 124 MVA rated capacity. The conductors will be supported by 382 wood pole structures, ranging in height between 12m and 16m above surrounding ground level. This design is known as the Single Circuit Heavy Duty Flat Formation Overhead Line Design on Wood Poles or OHL-03-132 for short (“HDWP”). It is a design which has been developed and is being used by SPM to provide connections at high altitude and exposed locations. The span

¹ Further information on SPM is provided in the proof of evidence of Eric Leavy (SPM/CPMPANY/POE/LEAVY/002A, §3.1-3.7). On request from the Inspectors a further note to the inquiry was provided which explains the regulatory regime under which SPM operates (SPM/018).

² The Llandinam Scheme includes a 50m tolerance either side of a notional centreline and the EIA process has assessed the environmental effects of the line anywhere within this 100m corridor. The proposed line will run within that corridor, with micro siting to be undertaken prior to construction. It is standard practice in applications for overhead lines to use a corridor to represent a tolerance for development (sometimes known as a limit of deviation). This enables some flexibility with which to implement a consented scheme as matters of precise detail are finalised post-consent.

between poles is dependent on a number of factors, but on average it is about 90m.

3. The Llandinam Scheme would start at the CeltPower's substation at Bryn Dadlau which is situated to the south-west of Newtown on the Waun Ddubarthog Ridge, an elevated plateau lying around 400m AOD. Running eastwards from there, it would cross the main Llandrindod Wells to Newtown road, skirt the prominent ridge of Glog and traverse the southern slopes of the Mule Valley below Kerry Hill. South of the village of Kerry, near Block Wood, it would swing northwards, passing east of the village itself, and then cut across the Mule Valley again, following a course through the undulating and well wooded countryside east of the Severn Valley. It would then pass west of the village of Llandyssl before dropping down to the lower slopes above the Severn Valley near Caerhowel and converging on the Shrewsbury to Machynlleth rail line some 1.5 km to the north west of Montgomery. It would continue to run northwards close to the rail line except to avoid settlement pockets such as Cilcewydd, before connecting into the existing substation on the B4381, approximately 1 km east of Welshpool.³
4. A history of the Application including the development of the Environmental Statement is set out both in the Updated Environmental Statement published in October 2013 ("the Updated ES")⁴ and in Kirsten Berry's ("KB") evidence.⁵ It is not repeated here. It is important to note though in the light of the Alliance's closing statement that KB includes a detailed history of the long and comprehensive consultation the Llandinam Scheme has been subject to. Indeed that process started in July 2008 and continues effectively until the present through the full public participation in this inquiry. As KB states, the consultation undertaken on the Llandinam Scheme has gone well beyond the statutory requirements. Accordingly the Alliance's suggestion that the consultation has in some way been inadequate is wholly rejected.⁶

The main parties' cases

5. Although there are seven matters on which the Secretary of State has asked to be informed,⁷ the areas of disagreement between SPM, Powys County Council ("PCC") and Natural Resources Wales ("NRW") are narrow. The Alliance support both PCC's and NRW's case. Its concerns also extend beyond those of the other two parties and

³ See CD/SPM/ES/001, Vol.6, Figure 1.2 as well as a fuller description of the route in the proof of evidence of Sarah Gibson (SPM/LANDSCAPE/POE/GIBSON/006A, §6.21-6.27).

⁴ CD/SPM/ES/001, Vol.1, §1.4.3.

⁵ SPM/PLANNING/POE/BERRY/011A, §3.5).

⁶ ALL-030, §12.23. Note too the reference to the cover page of the July 2008 Consultation Report at §12.27 of the same document is partial. As Mr Bonfield accepted in XX, the contents (as opposed to the cover) of the document show clearly and accurately the types of support structure proposed.

⁷ CD/COM/011.

cover many aspects of the Llandinam Scheme. For understandable reasons, many of the Alliance's concerns were unsupported by professional evidence which must diminish the weight that can be placed upon them. Furthermore, that the Alliance was not supported in many of their wider concerns by either PCC or NRW is, SPM suggests, indicative that those issues do not merit any significant weight in the decision as to whether or not to grant consent.

6. PCC, the principal objector to the Llandinam Scheme, supports and/or accepts all of the following: the grant of consent for the LRWF; the consequent need to connect the LRWF to the grid; and the network design (namely, the need to connect into the grid at Welshpool). It follows that PCC supports both the start and end points of the Llandinam Scheme. Indeed, subject to undergrounding a section of the line in the Glog/ Kerry Hill area (within what Sarah Gibson ("SG") (SPM's landscape witness) has described as "Section B"), PCC accept that on balance the route is appropriate.⁸
7. The areas of dispute, therefore, between SPM and PCC are very limited. They may be reduced to a single question: is it necessary and/ or appropriate to refuse consent for a section of the proposed line in the Glog/ Kerry Hill area. In effect this would most likely require an underground solution. The answer to that question is a matter of judgment for the decision-maker – informed by clear national policy on the issue.
8. National policy (in the form of the National Policy Statement for energy networks (EN-5)) very deliberately steers away from a presumption in favour of undergrounding nationally significant infrastructure projects ("NSIPs") for electricity infrastructure, having regard to the cost of doing so, the potential, irreversible environmental effects of doing so and the urgent need for the delivery of renewably generated electricity. Whilst the Llandinam Scheme meets the criteria for NSIPs such that EN-5 should be given substantial weight by the Secretary of State in his decision making process, its scale and form is such that it falls at the very lowest end of the spectrum of the projects to which the Government's undergrounding policy for electricity infrastructure applies: if this scale and form of project, in an undesignated landscape, is required to be undergrounded, it is hard to envisage an electricity infrastructure project that would not be required to be undergrounded.
9. In any event, PCC's conclusion is undermined by a flawed approach to policy. As is explained below, PCC mixes inappropriately two distinct policy tests in assessing whether or not to underground part of the Llandinam Scheme and it is this error that infects its conclusions on undergrounding.

⁸ OBJ/002/PLANNING/CARPENTER/OHL, §1.3.

10. NRW's case is focused on the landscape effects of the Llandinam Scheme at the northern end of the line and, in particular, as it passes through the Vale of Montgomery Registered Historic Landscape ("the VMRHL") as well as potential impacts on dormouse, bats and trees. As will be demonstrated below, the landscape concerns at the northern end of the proposed route are overstated. Mr Russell-Vick ("PRV") – PCC's landscape witness – not only did not share Mr Champion's ("JC") views on behalf of NRW but stated that SG had herself overestimated the sensitivity of the landscape at the northern end of the route (the area where NRW's concerns have been focused). The topography and vegetation at that end of the line mean that the Llandinam Scheme would be well assimilated into the landscape there and, moreover, it would not comprise an alien feature – there already exist in the landscape similar structures.
11. NRW's ecological concerns, which principally relate to whether or not there is a sufficiency of information in relation to dormouse and bats, have been raised very late in the day (as was commented on by the Inspectors during Session 3). This is particularly unfortunate given that NRW was consulted upon the methodology for the Updated ES (as well as previous iterations of the ES in 2009 and 2010) and forewent the opportunity of addressing these concerns at that stage.
12. Before turning to the Secretary of State's matters, it is worth setting out briefly the legal and policy framework under which this Application must be determined.

Legal and policy framework

13. Section 37 of the Electricity Act 1989 ("the 1989 Act")⁹ sets out the requirement that an electric line shall not be installed or kept installed above ground except in accordance with a consent granted by the Secretary of State.
14. Dr Andy Beddoes ("AB") and Mr Eric Leavy ("EL") set out the principal legal duties the 1989 Act impose on DNOs.¹⁰ Two key duties are found in sections 9 and 16.
15. Section 16 provides that a DNO is under a duty to make a connection between a distribution system of his and any premises when required to do so by the owner or occupier of the premises or an authorised supplier acting with the consent of the owner or occupier of the premises.
16. Section 9 outlines that it shall be the duty of a DNO to develop and maintain an efficient, co-ordinated and economical system of electricity distribution; and to facilitate competition in the supply and generation of electricity.

⁹ CD/COM/023.

¹⁰ Respectively at SPM/NETWORK/POE/BEDDOES/001A, section 3 and SPM/COMPANY/POE/LEAVY/002A, section 4).

17. Section 9 of the 1989 Act is an important backdrop to the context within which the Secretary of State must consider the Application for the Llandinam Scheme. The duty to develop and maintain an economical system of electricity distribution is an important safeguard for consumers, who ultimately meet the costs of developing distribution network infrastructure.
18. It is against these duties that SPM has to balance its environmental duties under schedule 9 of the 1989 Act. Schedule 9 sets out a specific duty towards the preservation of the environment in both England and Wales. It provides in so far as is relevant:

"(1) In formulating any relevant proposals, a licence holder...

(a) shall have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archeological interest; and

(b) shall do what he reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects.

(2) In considering any relevant proposals for which his consent is required under section 36 or 37 of this Act, the Secretary of State shall have regard to—

(a) the desirability of the matters mentioned in paragraph (a) of subparagraph (1) above; and

(b) the extent to which the person by whom the proposals were formulated has complied with his duty under paragraph (b) of that sub-paragraph."

Licence requirements

19. The statutory duties under which SPM operates are supplemented by a number of standards and conditions which attach to an Electricity Distribution Licence made under the 1989 Act.¹¹ These standards and conditions play a fundamental part in SPM's approach to the design and provision of an electrical connection and have formed an integral part of the design of the Llandinam Scheme.
20. AB describes the relevant standards and conditions in his proof of evidence,¹² two of which are of particular relevance here:

¹¹ See SPM/NETWORK/POE/BEDDOES/001B, App.2.

¹² SPM/NETWORK/POE/BEDDOES/001A, §3.5-3.15.

- a. Condition 12 provides that on receiving a request for connection, the Licensee will enter into an agreement outlining the works required to provide that connection.
- b. Condition 21 requires compliance with the Distribution Code which is designed so as to permit the development, maintenance and operation of an efficient, co-ordinated and economical system for the distribution of electricity.

Policy

21. Although SPM seeks a direction from the Secretary of State under section 90 of the Town and Country Planning Act 1990 ("the 1990 Act"), section 38(6) of the Planning and Compulsory Purchase Act 2004 ("the 2004 Act") is not engaged.
22. In January 2012 the High Court considered exactly this issue in *R (on the application of Samuel Smith Old Brewery (Tadcaster) v Secretary of State for Energy & Climate Change*.¹³ It ruled that section 38(6) of the 2004 Act (which requires determinations to be made in accordance with the development plan unless material considerations indicate otherwise) does not apply in respect of a deemed planning permission associated with a section 37 consent. It was decided that a 'direction' that planning permission be deemed to be granted was not a 'determination' under the 2004 Act. Consequently, there is no duty on the Secretary of State, in determining the Application for section 37 consent for the Llandinam Scheme, to comply with the legislative provision that 'determinations' must be made in accordance with the development plan unless material considerations indicate otherwise.
23. Having said that, it is clear that development plans (in this instance the development plan for Powys) may be a "material consideration" in determining an application under section 37.¹⁴
24. The development plan here comprises the Powys Unitary Development Plan ("the Powys UDP") adopted on 1 March 2010. KB identifies the relevant policies within the Powys UDP in the context of the Secretary of State's first matter and assesses the Llandinam Scheme's compliance with them.¹⁵

¹³ CD/COM/30.

¹⁴ See also SOCG/POLICY/001, §8.3-8.4.

¹⁵ SPM/PLANNING/POE/BERRY/011A, §7.5.1-7.5.23. The principal relevant policies being E3: wind power and DC12: overhead lines and pipelines. KB analyses further Powys UDP policies under topic headings see SPM/PLANNING/POE/BERRY/011A, section 6.

25. It is also important to recognise that this is a project to which EN-1,¹⁶ EN-3¹⁷ and EN-5¹⁸ (all designated under the Planning Act 2008 ("the 2008 Act")) are particularly relevant; indeed these are documents that should be afforded substantial weight¹⁹ (PCC confirmed agreement on this in closing) as they form the primary and most up-to-date expression of UK policy with respect to electricity transmission lines of at least 132kV.
26. As KB explains,²⁰ if the Application for the Llandinam Scheme was made today it would be a NSIP and it would need to be made under the 2008 Act regime. By virtue of section 104 of the 2008 Act, such an application if it were submitted today would fall to be decided in accordance with any relevant NPS except to the extent that, *inter alia*, the adverse impacts of the proposed development would outweigh its benefits. In short, the NPSs are at the heart of the 2008 Act regime which is designed specifically to assess and deal with projects of the nature here proposed. In similar situations, where the project would have been an NSIP but for the timing of the Application, the Secretary of State has applied substantial weight to the NPSs as they represent the most recent expression of Government policy on the national need and urgency for such information.²¹
27. The Inspector at Legacy took a similar approach stating that EN-1 and EN-5 provided important guidance even though the application was not made under the 2008 Act.²²
28. Given all of the above, where there is any conflict between the development plan and the NPSs, it is the NPSs that ought to prevail: this is understood not to be controversial.²³

¹⁶ CD/COM/001.

¹⁷ CD/COM/002.

¹⁸ CD/COM/003.

¹⁹ On which there is no dispute between SPM and PCC. See the proof of evidence of Martin Carpenter (OBJ/002/PLANNING/POE/CARPENTER/OHL), §3.2 where he states that EN-1 and EN-5 comprise "important guidance" on the approach to be taken in considering the Llandinam Scheme. This accords with the position of the applicants generally (see SOCG/POLICY/001 Wales Statement of Common Ground May 2013, §2.10).

²⁰ SPM/PLANNING/POE/BERRY/011A, §9.2.

²¹ See the Secretary of State's decision on the Lostock Sustainable Energy Plant (CD/SPM/LEG/13).

²² CD/SPM/LEG/11, IR, §20.

²³ PCC expressly states that the NPSs should prevail over planning policy where there is conflict – this is done within its Officer's Report on the Carnedd Wen Scheme: see SOCG/POLICY/001, §2.17.

Matter 1: the extent to which SP Manweb’s proposal including any alternatives considered are consistent with Welsh Government and local policies: including Planning Policy Wales, Edition 4 (2011); Technical Advice Note 8: Planning for Renewable Energy (2005); and Energy Wales: A Low Carbon Transition (2012); and Powys Unitary Development Plan (adopted March 2010)

29. KB comprehensively summarises and assesses the Llandinam Scheme against Welsh energy and planning policy²⁴ and against the Secretary of State’s first matter in her proof of evidence.²⁵ This includes a thematic evaluation of the Llandinam Scheme against the relevant landscape and visual, ecology, cultural heritage, transport, socio-economic and other policies. Policy matters are also comprehensively dealt with in the applicants’ Statement of Common Ground (“SOCG”).²⁶
30. As identified above, the issues in dispute between the parties are narrow and (in the main) focus not on the interpretation of policy but on judgments as to the impacts of the Llandinam Scheme on, in particular, the landscape, cultural heritage and ecology of the areas through which the proposed development passes. In the circumstances, there would be little benefit in rehearsing KB’s work on policy in these submissions and these submissions commend sections 5 and 6 of KB’s proof of evidence to the Inspectors and Secretary of State on this issue.
31. For present purposes it is sufficient to record that KB identifies a number of high level themes that permeate Welsh Government and local policies, namely: a requirement to achieve a significant reduction in greenhouse gas emissions and promote a low carbon economy; a focus on new renewable energy infrastructure (both generation and grid infrastructure); and the promotion of environmental balance and undergrounding.
32. The Welsh Government is committed to achieving a substantial reduction in greenhouse gas emissions and a significant rise in renewable energy generation by 2020.²⁷ Indeed it is committed to achieving at least a 40 per cent. reduction in all greenhouse gas emissions in Wales by 2020 (against a 1990 baseline).²⁸ Wales is also expected to make a contribution to the UK’s 15 per cent. renewables target to 2015. Onshore wind power offers the greatest potential for meeting this steep increase in the generation of

²⁴ SPM/PLANNING/POE/BERRY/011A, section 5.

²⁵ SPM/PLANNING/POE/BERRY/011A, section 6.

²⁶ SOCG/POLICY/001.

²⁷ Indeed as KB states, the Welsh Government is one of the few in the world that has a statutory obligation in relation to sustainable development (section 79 of the Government of Wales Act 2006 (CD/COM/024)).

²⁸ CD/CON/003/PLA/010, §4.5.2.

renewable energy. It is this potential that lies behind the allocations of the SSAs in TAN 8.

33. Plainly, once such renewable energy has been generated, it needs to be connected to the distribution network and Welsh policy recognises that additional distribution infrastructure will be required to convey the energy generated to the homes and businesses where it is to be used. Indeed, the lack of grid capacity in Mid Wales is specifically acknowledged.²⁹
34. The Llandinam Scheme will deliver an essential element of new energy infrastructure, supporting that renewable generation infrastructure delivered by the LRWF. In so doing, the Llandinam Scheme will contribute to the UK achieving a low carbon economy and the targets set for significant reduction in greenhouse gas emissions.
35. There is, of course, a balance to be made between environmental protection and delivery of necessary infrastructure, which is recognised in Welsh Government and local policies. It is on this balance that the greater part of these submissions are focused and which is addressed, in particular, under the landscape, cultural heritage, ecology and undergrounding headings of this closing.
36. KB concludes that the Llandinam Scheme complies with and furthers the policy objectives of PPW 5,³⁰ TAN 8³¹ and Energy Wales: A Low Carbon Transition.³²
37. KB further concludes that the Llandinam Scheme is consistent with Welsh national policy, specific topic policies of EN-1 and EN-5, and the Powys UDP. This conclusion is made in the light of the trite proposition³³ that policy must be read and understood as a whole and none of the adverse effects of the Llandinam Scheme are so great as to justify refusal.

²⁹ CD/COM/16, Annex C, §2.13 and see CD/SPM/POL/03.

³⁰ CD/CON/003/PLA/010. Whilst the Secretary of State's matter 1 refers to PPW4, that document has now been superseded and KB, therefore, addresses PPW5 which comprises the up to date policy.

³¹ CD/COM/16.

³² CD/COM/033.

³³ *R v Rochdale MBC, ex parte Milne (No 2)* [2001] Env. LR 22 at [50] makes it clear that compliance with the development plan is to be interpreted as a compliance with the plan as a whole. This compliance is to be judged on the basis of the policies contained in the plan: "*it is enough that the proposal accords with the development plan considered as a whole. It does not have to accord with each and every policy therein*".

Matter 2: the extent to which the proposed development is consistent with the objectives of the Government’s policy on the energy mix and maintaining a secure and reliable supply of electricity as the UK makes the transition to a low carbon economy, and achieving climate change goals

Introduction

38. In many ways the Secretary of State’s second matter is pre-eminently for the other applicants at this inquiry. The applicants’ position in this regard (including SPM’s) is set out in a SOCG.³⁴

Policy

39. KB also sets out the relevant policy in her proof of evidence.³⁵ It is not necessary to rehearse her evidence in any detail here. However, the UK Renewable Energy Strategy, which sets out the means by which the UK can meet the legally binding target of 15 per cent. of energy consumption from renewable sources by 2020, recognises the importance of electricity network infrastructure and the Government wants “*swifter delivery*”³⁶ of grid connections so that “*new renewable and other forms of generation can connect when they need and on the terms they need*”³⁷ because it recognises that “*constraints on access to the electricity grid represent a major challenge for both existing and future renewable generation projects*”³⁸ and that “*transmission access is one of the main barriers to renewable deployment.*”³⁹

40. It is for these reasons that EN-1 states that “*there is an urgent need for new electricity transmission and distribution infrastructure (and in particular for new lines of 132 kV and above) to be provided. The [IPC] should consider that the need for any given proposed new connection or reinforcement has been demonstrated if it represents an efficient and economical means of connecting a new generating station to the transmission or distribution network*”⁴⁰ and EN-5 begins with the following statement: “*The new electricity generating infrastructure that the UK needs to move to a low carbon economy while maintaining security of supply will be heavily dependent on the availability of a fit for purpose and robust electricity network.*”⁴¹

41. It follows that the contribution of electricity infrastructure to the issues encompassed in the Secretary of State’s second matter is expressly recognised.

³⁴ SOCG/POLICY/002.

³⁵ SPM/PLANNING/POE/BERRY/011A, §8.1.

³⁶ CD/COM/004, §3.1 and 3.5.

³⁷ CD/COM/004, §3.6.

³⁸ CD/COM/004, §4.97.

³⁹ CD/COM/004, §4.99.

⁴⁰ CD/COM/01, §3.7.10.

⁴¹ CD/COM/003, §1.1.1.

Assessment

42. The Application for the Llandinam Scheme is not one for an energy generator and therefore does not directly achieve the generation of renewable/ low carbon energy. However, by connecting a renewable generation asset it makes a positive contribution to the supply of renewable energy and consequently the reduction in greenhouse gas emissions which in turn helps achieve climate change objectives as well as security of supply (through diversification and domestic generation); all of which is required by policy. Without this vital piece of energy infrastructure, the renewable electricity generated would not be delivered to the UK consumer.

Conclusion

43. Whilst the Llandinam Scheme would have no direct impact on generation of the energy mix aspired to in Government energy policy, the connection of renewable generation is crucial to the Government achieving its desired energy mix and security of supply. Accordingly, the Llandinam Scheme is compliant with objectives of the Government's policy on the energy mix to be delivered and regarding achieving and maintaining a secure and reliable supply of electricity.

Matter 3: the extent to which the proposed development is consistent with the policies relating to electricity networks infrastructure and also the generation of renewable energy contained within the relevant National Policy Statements for energy infrastructure, Overarching National Policy Statement for Energy (EN-1) July 2011, National Policy Statement for Electricity Networks Infrastructure (EN-5) July 2011 and National Policy Statement for Renewable Energy Infrastructure (EN-3) July 2011

Introduction

44. EN-1, EN-3 and EN-5 are reviewed in detail by KB in her proof of evidence.⁴² Once again, it is not necessary to traverse that ground in closing. Furthermore, it is inevitable that much of the most relevant policy within the NPSs is discussed elsewhere in these submissions. This section, therefore, does not foreshadow submissions made in other parts of these closings.
45. The NPSs are particularly important to the determination of this Application: they provide a clear, comprehensive and up to date policy framework for projects of this nature; they are the principal relevant policy suite (in the event of conflict with the development plan, the NPSs are to prevail); they recognise that significant effects will arise from projects such as the Llandinam Scheme; but nonetheless they set out a presumption in favour as the starting point; and the need case is to be taken as read.

Policy & Assessment

EN-1

46. EN-1 sets out the government's overarching policy relevant to national energy infrastructure. Part 4 (assessment principles) includes a presumption in favour of granting consent to applications for energy NSIPs given the urgency of the need for this type of infrastructure.⁴³
47. EN-1 states that the need for a new connection should be considered to have been demonstrated "*if it represents an efficient and economical means of connecting a new generating station to the transmission or distribution network...and has sufficient capacity...to supply current or anticipated future levels of demand.*"⁴⁴
48. SPM's company witnesses have together explained in detail why the Llandinam Scheme is both economical and efficient. As such, the need for the connection should be considered to have been demonstrated as a matter of policy. In practice, of course, PCC also accepts the need for the Llandinam Scheme exists.

⁴² SPM/PLANNING/POE/BERRY/011A, sections 5 and 9.

⁴³ CD/COM/001, §4.1.2

⁴⁴ CD/COM/001, §3.7.10.

49. Sections 4.2 and 4.3 of EN-1 require submission of an ES and Appropriate Assessment – as relevant in the case of a particular development: that has been done here; an Updated ES has been prepared that addresses each of the matters raised in EN-1, with expert witnesses appearing at this inquiry regarding the various topics, as required. An Appropriate Assessment is not required of the Llandinam Scheme and a report explaining this conclusion has been provided in the Updated ES.⁴⁵
50. It is also important to note that the Llandinam Scheme and the LRWF, although two separate proposals, have been prepared in an integrated way and dealt with together at this inquiry. This accords with the aspiration expressed in EN-1 that wherever possible applications for new generating stations and their related infrastructure should either be contained in a single application or in separate applications submitted in tandem and which have been prepared in an integrated way.⁴⁶
51. EN-1 recognises the potential for some negative effects to arise as a result of the construction and operation of energy infrastructure, but states that in general it should be possible to mitigate those effects that are most significant. The Updated ES demonstrates that the most significant effects arising as a result of the Llandinam Scheme have been avoided and mitigation is proposed where possible for those that remain. KB concludes that the Llandinam Scheme would result in an acceptable level of impact and the relevant provisions of EN-1 have been complied with.

EN-3

52. EN-3 is focused on generation projects and so is less directly relevant to the Llandinam Scheme, albeit the NPS recognises the critical nature of grid infrastructure to the technical and commercial feasibility of generation projects and the delivery of the energy produced to customers and thus for the UK to meet its legal and policy obligations on renewable energy.⁴⁷ Therefore, in so far as applicable, the Llandinam Scheme clearly accords with EN-3.

EN-5

53. EN-5 addresses directly electricity networks infrastructure. It is, therefore, directly relevant to the Llandinam Scheme. Together with EN-1, it “*provides the primary basis for decisions taken by the [Infrastructure Planning Commission] on applications it receives for electricity networks infrastructure.*”⁴⁸
54. Paragraph 2.1.2 refers to the overarching policy set out in EN-1 and confirms that the decision-maker “*should act on the basis that the*

⁴⁵ CD/SPM/ES/01, Vol.3b, App.7a.

⁴⁶ CD/COM/001, §4.9. This addresses the Alliance concern at ALL-030, §12.51.

⁴⁷ CD/COM/002, §2.7.9.

⁴⁸ CD/COM/003, §1.2.1.

need for the infrastructure covered in this NPS has been demonstrated."

55. EN-5 makes it clear that choices with regard to site and route of electricity networks projects are a matter for the applicant, often driven by the location of the generation asset that is being connected and the existing grid infrastructure in the area, with the specific criteria considered and the weight assigned to those criteria varying from project to project.⁴⁹ Route selection is addressed in the context of alternatives in these submissions. Suffice it to say here that the Llandinam Scheme has been developed so as to avoid significant environmental effects as far as possible whilst delivering an economic and efficient connection from a start and end point which is accepted by PCC.
56. Part 2.5 of EN-5 deals with climate change adaptation. The Llandinam Scheme has fully taken this into account by (a) having regard to flood risk in designing the route of the scheme and (b) by the selection of a robust support system particularly designed to be able to cope with exposed terrain.

Conclusion

57. The Llandinam Scheme is wholly compliant with the relevant suite of NPSs. In particular, it benefits from the presumption in favour of granting consent to applications for new energy infrastructure, given the level of urgent and compelling need for such infrastructure, contained in EN-1. It provides what EN-3 recognises is critical infrastructure to the delivery of renewable energy, which itself is key to the Government's legal and policy obligations and objectives in relation to energy and climate change. Finally, it complies with the specific NPS policies contained in EN-5 for electricity infrastructure, as demonstrated in the Updated ES and SPM's evidence before this inquiry and explained further in the alternatives section of this closing. This clear policy support for the Llandinam Scheme found in the NPSs should weigh very heavily in favour of granting consent.

⁴⁹ CD/COM/003, §2.1.1 and 2.2.2.

Matter 4: the relative merits of the proposed development and any alternatives considered, including consideration of undergrounding, in addressing the requirement to maintain a security of supply

Introduction

58. As PRV agreed in XX, there is neither a requirement in statute or policy to establish that a proposal is the “best” option, nor a general requirement for applicants to consider alternatives.⁵⁰ In this case SPM does not argue that alternatives are not material. Alternatives may be material where a proposed development causes significant adverse effects and need is put forward as a reason justifying the development. That situation pertains here. For this reason, SPM has provided a detailed analysis of the alternatives to the Llandinam Scheme that have been considered by SPM in Volume 5 of the Updated ES (“the Alternatives Paper”).⁵¹ Even where alternatives are a material consideration, the key question remains, as always, is the proposed development acceptable?
59. EN-1 provides a series of principles by which the weight to be given to any material alternatives should be determined.⁵² PRV was taken to these principles in XX and agreed by reference to them:
- a. That any consideration of alternatives should be carried out in a proportionate manner;
 - b. Whether or not an alternative can realistically deliver the same infrastructure capacity in the same timescale as the proposed development is an important consideration (a factor on which many of the alternatives considered fall down);
 - c. Where (as in the case of renewables) legislation imposes a specific quantitative target for particular technologies, which PRV agreed applied here, EN-1 states that consent should not be withheld for an application for development on one site simply because fewer adverse impacts would result from developing similar infrastructure on another suitable site;
 - d. That alternatives not amongst the main alternatives studied by the applicant should only be considered to the extent that the decision-maker thinks they are both important and relevant;
 - e. That alternative proposals that are not commercially viable or otherwise deliverable can be excluded on the grounds that they are not important and relevant;

⁵⁰ See CD/COM/001, §4.4.1.

⁵¹ CD/SPM/ES/01, Vol.5 – The Review of Needs Case and Alternatives.

⁵² See CD/COM/001, §4.4.3.

- f. That alternative proposals which are vague or inchoate can be excluded on the grounds that they are not important and relevant; and
- g. Where an alternative is first put forward by a third party after the application has been made, the decision-maker may place the onus on the person proposing the alternative to provide the evidence for its suitability.

Need and network design

60. Section 2 of the Alternatives Paper sets out the need for the connection and the network design proposed under the Llandinam Scheme. AB described the SPM network⁵³ and provides schematic diagrams of the SPM network.⁵⁴ He explained that SPM's distribution network is an interconnected network. SPM is the only UK DNO to run a fully interconnected distribution network, the key benefit of which is its resilience. AB also explained the need for the Llandinam Scheme and the strategic options to meet that need in detail.⁵⁵ His findings in this regard are summarised below.
61. It is important to recall that there is no debate about need for the Llandinam Scheme between PCC and SPM: PCC supports CeltPower's proposals for the LRWF and so accepts the need for the Llandinam Scheme (on the premise that CeltPower's application is granted consent) and, further, PCC accepts in principle the connection at 132kV into Welshpool existing substation.⁵⁶

The statutory need for the connection

62. The first aspect of the case on need could not be more straightforward. As has been identified, section 16 of the 1989 Act provides that an electricity distributor is under a duty to make a connection between a distribution system of his and any premises when required to do so by the owner or occupier of the premises or an authorised supplier acting with the consent of the owner or occupier of the premises.
63. CeltPower has made such a request: specifically for a new standalone connection for the LRWF for up to 90MVA of capacity.⁵⁷

⁵³ SPM/NETWORK/POE/BEDDOES/001A, Section 4.

⁵⁴ SPM/NETWORK/POE/BEDDOES/001B, App.6.

⁵⁵ SPM/NETWORK/POE/BEDDOES/001A.

⁵⁶ OBJ/002/PLANNING/POE/CARPENTER/OHL, §1.2.

⁵⁷ The details of the connection offer and its history is set out in a number of places including in Vol.1 of the Updated ES, §1.3 (CD/SPM/ES/01). It is worth mentioning here the Alliance's allegation that SPM somehow favoured CeltPower by agreeing their connection ahead of those customers to be connected through the Mid Wales Connection Project (see ALL/NEED/POE/01, §3.2 and 3.3). That allegation is wholly false. In XX Mr Bonfield fairly backed off the allegation. He agreed that, having been taken through the relevant connection offer history and to licence condition 12 (for which see SPM/NETWORK/POE/BEDDOES/001B, App.2) which requires a DNO to respond to a connection request within 90 days,

As a result, SPM is under a statutory duty to provide a connection offer. It has done so and there is a connection agreement in place which has a target date of 2017. SPM must use reasonable endeavours to provide a connection by this date.

Network Design

64. As AB explained in evidence, in agreeing connection terms with Celtpower, SPM carried out an assessment of the existing network and the connection options having regard to its duty to design an efficient, economical and co-ordinated network which minimises the effects on the environment in accordance with its statutory duties. AB looked at a number of strategic options before concluding that the Llandinam Scheme as proposed was the optimal network design.⁵⁸ The principal alternatives are set out below: a connection at 33kV and alternative 132kV connections.

Connection at 33kV

65. AB explained that the connection of 90MVA of generation capacity is typically achieved at 132kV rather than 33kV. Nonetheless consideration was given to providing a connection at 33kV. However, given the constraints on the 33kV network, there is simply not the capacity to accommodate the required level of generation. Indeed, to accommodate the additional generation on the 33kV network a further five new 33kV circuits would be needed around Llandinam to connect into the nearest 132kV network at Newtown which is a distance of 12km from the wind farm (i.e. 60km of new 33kV network running in parallel through the Severn Valley). The substations at Llandinam and Newtown would also need to be increased in size to accommodate the new circuits. On top of this, the existing 132kV circuit from Newtown to Oswestry would also need to be rebuilt over its 46km length to accommodate the increase in generation. The total estimated cost of such a solution would be £52.6M. It is plainly not an appropriate solution. It is inefficient and expensive.

Connection at 132kV – the Newton to Oswestry circuit

66. AB explained that there were a number of options as to where a 132kV connection may be made. The nearest 132kV connection points are at Newtown and Carno. The Newtown connection would require a connection from the LRWF to the Newtown substation (12km), a rebuild of the Newtown to Oswestry BU line due to lack of capacity (which, given the strategic importance of the line, would require a separate off-line build) (46km) and an extension to the Newtown Substation. There is a further danger that connecting into this circuit even with the rebuild would require a generation constraint system which – where there are multiple generators – is

that SPM had dealt with connection requests it received chronologically and accepted that he had no proper evidence of favouring CeltPower.

⁵⁸ SPM/NETWORK/POE/BEDDOES/001A, section 5. Network design is also explained in Vol.5 of the Updated ES, §2.3 (CD/SPM/ES/01).

complex, inefficient and undesirable. For these reasons, AB concluded that this would not comprise an efficient and economic solution (it would cost almost £10m more than the Llandinam Scheme).

67. As to the Carno MB line: this would involve; a new line from the LRWF to the Carno MB line, rebuilding the Carno T connection with the Newton to Oswestry BU line and the same rebuild of that line set out above (because whilst there is some capacity on the Carno MB line, it connects into and is, therefore, limited by the Newtown to Oswestry BU line). SPM, therefore, discounted this option as not being economical or efficient.
68. The Alternatives Paper concludes that both of these options would also have greater environmental impacts due in part to the extended distance of the proposed connection (over 58km from the LRWF via Newtown to Oswestry in the case of the Newtown Grid alternative and 83km in the Carno variant).
69. As a result, SPM concluded that these options would not be compliant with its statutory duties to maintain an efficient, co-ordinated and economical system of electricity distribution. Furthermore, it would clearly, given the need for a whole line rebuild, not be able to deliver the required infrastructure in the same timescale as the Llandinam Scheme.

The Llandinam Scheme: a 132kV connection into Welshpool

70. The preferred network solution was a new 132kV circuit connecting into the existing 132kV Welshpool – Oswestry EJ circuit. A number of advantages were identified.
71. First, with the existing 33kV connection for Llandinam removed (a condition of the Connection Agreement), there is sufficient capacity without the need, unlike the options set out above, for the reinforcement or rebuilding of the existing SPM network. Secondly, as AB explained, the solution will provide some spare future capacity.
72. The Llandinam Scheme is, therefore, the most efficient solution in terms of making best use of existing distribution network capacity and ensures the electricity generated by the LRWF would be connected more quickly than the alternative network solutions. The Llandinam Scheme is the option that best met SPM's statutory requirements as set out in section 9 of the 1989 Act of being economical, efficient and coordinated in terms of network design.

The Need for the HDWP Design

73. Having disregarded the use of steel towers on the grounds that such pylons would be likely to have greater landscape and visual effects when compared to a wood pole alternative, SPM considered two wood pole designs. These were the HDWP and the Trident designs.

74. The HDWP design carries four wires, which comprise three conductors and an earth wire incorporating a fibre optic communications circuit. The HDWP design employs twin pole support structures and, as EL explained, was designed specifically to serve renewable generating stations in remote high altitude areas.
75. The Trident design carries a single circuit containing three phase conductors with no earth wire. Generally the Trident is a single pole design (but see below).
76. In 2009, the Trident design was not capable of carrying a communications circuit. As EP explained, this was the main reason that HDWP was selected as the preferred design. It was this design that was assessed in the December 2009 ES, and then in the December 2010 ES.
77. However, improvements in conductor technology have recently led to a conductor that can carry an integrated communications circuit so that the Trident design can now incorporate the communications circuit that it could not at the time the decision to use the HDWP design was taken in 2009.
78. As a result of this technological development and consultation responses to the Application that suggested that the Trident design would have less environmental effects due its predominantly single pole structures, lighter construction and longer span, SPM reviewed the need for the HDWP design and reconsidered the use of Trident again in the Updated ES.
79. As EP described in some detail in his proof of evidence⁵⁹ (and memorably so in his EIC), there are clear technical and safety reasons for selecting the HDWP design. As part of this reconsideration of the appropriate wood pole design, SPM considered the implications of a prospective earth fault current combined with highly resistive ground (as the ground is at the LRWF substation site). Celtpower has confirmed that the substation needs to be sited in its current location.⁶⁰
80. EP explained when a fault current flows through resistive ground, a voltage occurs on the ground surrounding the point of fault which is known as the Rise Of Earth Potential ("ROEP"). The ROEP can be so high that a person (or animal) can be injured due to the voltage developed between their feet or when a person touches a metal object such as a fence or wire or metallic piping.
81. Measurements at the LRWF substation site show the resistivity of the ground is very high and the prospective earth fault current causes an

⁵⁹ SPM/ENGINEERING/POE/PAALMAN/003A, section 5 and, in particular, §5.7-5.21.

⁶⁰ CPL/011.

extremely high ROEP which in turn causes a high risk to public safety: a vital consideration.

82. The substation and associated equipment can be designed to reduce this risk within or at the boundary of the substation compound by increasing the protected area to ensure that all dangerous voltages are controlled within the substation compound.
83. However, in this case, the required extent of the substation compound would be wholly impracticable and would encompass third party buildings. It may not be possible to control the touch and step potentials if the compound area overlaps these buildings and this presents a serious public safety hazard.
84. As EL emphasised, SPM has a duty to design and operate installations that minimise the ROEP and eliminate dangerous touch and step potentials. There are no practical solutions available here either to reduce the ground impedance and so to lower the ROEP values to acceptable limits or to establish a large exclusion zone from the perimeter of the substation earth system. Celtpower produced a note for session 3 which strongly supports this conclusion.⁶¹
85. As such, SPM considers that Trident cannot be used on the grounds of public safety.⁶² The proposed earthed HDWP design otherwise mitigates this risk and is the preferred choice of line design.
86. Further, the environmental benefits of Trident are more apparent than real. As EP made clear, the support structures for the Trident design when placed higher than about 250m above sea level are typically dual wood pole supports.⁶³ This altitude corresponds approximately to the last 13 kilometres of the Llandinam Scheme (at the wind farm end) and includes Section B of the route – the section of most environmental concern. As such, even if the Trident design was used, the need to employ dual pole structures would largely negate any environmental benefits.
87. Further, PCC does not argue that this section (i.e. Section B) should use Trident supports but rather that it should be undergrounded. As to the rest of the line, there is agreement between SPM and PCC that the effects of the HDWP line are acceptable for all sections of the line, other than Section B.

Remote earthing station

88. A question was put to SPM by the Inspectors during Session 3 as to whether it would be possible use part HDWP and part Trident with a transitional point – a remote earthing station (“RES”) – where the

⁶¹ CPL/011.

⁶² And danger to livestock.

⁶³ SPM/ENGINEERING/POE/PAALMAN/003A, §5.6.

resistivity of the ground was such to allow an acceptable ROEP. SPM has produced a detailed note which deals with this question.⁶⁴

89. Whilst a RES solution may be theoretically achievable from an engineering and technical perspective (and SPM does not discern any major difference in cost between such a solution and the Llandinam Scheme subject to the acquisition costs of the land for the RES), SPM considers that there would inevitable delays whilst suitable land was identified (detailed design of a RES could only be concluded when a site location was determined) and secured. In terms of actually acquiring any land for a RES, SP Manweb would need to enter into negotiations with relevant landowners. If no landowners were willing to provide SPM with the relevant rights and interests in land voluntarily, then SPM would need to progress through a compulsory purchase process. This would be likely to take approximately two years. Planning consent would also be required (which, of course, could be refused). In short there is inherent uncertainty in the delivery and timing of this option which led to the conclusion that this solution is not practicable in the context of the Llandinam Scheme and delivering the urgently needed renewable energy generated by the LRWF to the grid in a timely manner. Indeed, EN-1 makes it clear, as set out above, whether or not an alternative can realistically deliver the same infrastructure capacity in the same timescale as the proposed development is an important consideration. Manifestly the RES solution could not so deliver.
90. Perhaps even more significantly, there is very limited environmental benefit to a RES. As the SPM note makes clear, the HDWP would have to be used through the area of greatest environmental concern (Section B). The benefits of the Trident design in environmental terms would not therefore be available at the point of greatest concern (albeit for the reasons set out above these benefits are notional rather than real). The Trident design would therefore be used in the lower sections of the Llandinam Scheme towards Welshpool where PCC accept that the landscape is well able to accommodate the proposed HDWP technology.
91. Given the clear disadvantages (arising principally through delay) and the lack of benefits that such a solution would provide in this instance, SPM submits that no weight should be given to such a possible design in the Secretary of State's decision. That no other party is suggesting this as a solution (and that such a solution has not, as far as SPM is aware, been delivered by any DNO in the country) is, we suggest, revealing. Indeed, PCC has produced a note that confirms that it takes a similar view to that outlined above on the need for a RES.⁶⁵

⁶⁴ SPM/029.

⁶⁵ OBJ/002/015. (This numbering is assumed – the document has yet to be posted on the website).

92. In conclusion, therefore, the HDWP design remains the appropriate design.

Alternatives Considered and Assessed

93. Section 3 of the Alternatives Paper outlines the main alternatives considered.⁶⁶ Alternative 1 is, in fact a reference to the Llandinam Scheme and considers alternative routes to that proposed (as well as partial undergrounding). Undergrounding is dealt with separately below. The other alternatives considered were:
- a. Alternative 2: a connection to the existing Oswestry to Newtown circuit. This alternative has already been addressed in considering network design above and is not mentioned further;⁶⁷
 - b. Alternative 3: an underground cable option for the entire route to the Welshpool Substation (a total of 40km along local roads); and
 - c. Alternative 4: the incorporation of a connection from LRWF into the proposed Mid Wales hub at Cefn Coch.
94. The Alternatives Paper assessed the above alternatives against four (often interconnected) criteria: environmental (particularly, landscape and visual impacts, ecology, the historic environment and flood risk); technical; financial; and future capacity (i.e. the extent to which an alternative might make further capacity available needs to be considered).

Alternative 1 – route selection⁶⁸

95. Routeing is the principal way of avoiding and mitigating the likely environmental impacts of an OHL. It is a matter of balancing multiple considerations: environmental, technical and financial. This much was agreed by PRV in XX. He also agreed that the same principle applies to routeing as other alternatives: there is no requirement to establish that the preferred route is the “best” possible option; rather the question is whether the proposed route is acceptable.

The process

⁶⁶ CD/SPM/ES/01, Vol.5, Table 3.1.

⁶⁷ See also CD/SPM/ES/01, Vol.5, §5.2 and SPM/LANDSCAPE/POE/GIBSON/006A, §11.15 where the landscape and visual effects of this Alternative are assessed.

⁶⁸ The landscape and visual effects of this Alternative are assessed by SG in her proof of evidence: SPM/LANDSCAPE/POE/GIBSON/006A, §11.4-11.5 and 11.11-11.14.

96. SPM's approach to route selection in general and the selection of the route of the Llandinam Scheme is dealt with in some detail by EL,⁶⁹ SG⁷⁰ and KB.⁷¹ SPM adopts an iterative process led by the environmental team with input from the technical team, and from the project delivery team and the business with regards to economic considerations and the overall balance. PCC's thesis in closing is that SPM simply assumes that the connection would be an overhead line as opposed to underground. That is not a fair reflection of EL's explanation of SPM's approach to routing and undergrounding. EN-5 is clear (and we turn to this below) that there is no presumption in favour of undergrounding. Naturally therefore the starting point is to try to find an OHL having regard to the need to produce an economic distribution system, however undergrounding as EL is always considered where the environmental advice to SPM is that it should be. Here the advice received by its professional environmental advisors was that an OHL would be acceptable in the case of route E.
97. SG details the consideration given to Routes C, D and E in 2008 and 2009 and explains the reasons why Route E became the Llandinam Scheme. PCC and the Alliance both criticise the fact that the 2008 Routing Study Report was not published but, as SG said, the results were summarised effectively in the 2008 Consultation Report.
98. In the preliminary stages of route selection, environmental effects were considered at a level appropriate to identify, evaluate and compare potential routes. The objective was to avoid significant adverse effects wherever possible. This approach provided the justification for the selection of a "preferred" route. The preferred route was then subject to consultation and further evaluation. Specific local issues were considered during the detailed design of the line, which also resulted in minor amendments to the route. At this stage, the preferred route became the "proposed" route.
99. The proposed route was subjected to detailed EIA to determine and quantify its likely significant effects on the environment. This is reported in the 2009 ES.⁷² Following submission of the Application, the design was subject to amendments arising from ground surveys and discussions with landowners. This resulted in a number of minor changes to the indicative pole positions within the 100m wide corridor presented in the original submission and in pushing two sections of the route outside that corridor at Forden and Bryn-picca (this was the subject of a variation to the Application in late 2010). This is reported in the 2010 ES Addendum.⁷³ The Updated ES presents some further, minor modifications to the line route

⁶⁹ SPM/COMPANY/POE/LEAVY/002A, §5.2-5.12 (addressing SPM's general approach to routing).

⁷⁰ SPM/LANDSCAPE/POE/GIBSON/006A, section 6 (addressing the approach in general and the specific approach of the Llandinam Scheme).

⁷¹ SPM/PLANNING/POE/BERRY/010A, section 3.3.

⁷² CD/SPM/ES/02, Chpt. 3.

⁷³ CD/SPM/ES/03, Chpt. 3.

(although the route remains within the 100m corridor as varied in 2010).⁷⁴

The assessment against Routes C and D

100. Section 4 of the Alternatives Paper compares the Llandinam Scheme against route Routes C and D, the alternative routes considered. In summary, whilst Routes C and D have costs which are similar to or slightly less than the Llandinam Scheme, the environmental impacts of these routes are considered to be more adverse than the Llandinam Scheme, particularly with regard to residential amenity.
101. Route C⁷⁵ was discounted due to the likely effects on views and visual amenity due to a greater concentration of residential properties and the environmental effects on the Mochdre Dingles SSSI. There were also technical difficulties on Route C, in particular, where the line descended the steep slopes from the LRWF.
102. Route D⁷⁶ also affected more properties and had likely greater effects on trees and woodlands. SG explained in EIC the difficulty in finding a route between the SSSI, the steeply wooded terrain and residential properties.⁷⁷ When asked to comment on PRV's assertion⁷⁸ that it would be possible to route through the residential properties, SG said she had been on site with an engineer and whilst not impossible it was very difficult and would mean "*angle pole after angle pole.*" PCC's claim in closing (paragraph 607) that there is no overriding reason why you could not get a line through is made wholly without evidence, in particular no evidence from an engineer has been put forward by PCC.
103. SPM has concluded that Routes C and D, on balance and accepting that Route C performs better in landscape terms, were less preferable to the Llandinam Scheme.

Criticism of the route selection process

104. Much was made during Session 3 of purported flaws in the route selection process. The principal criticism was that it was assumed that all the proposed wind farms in SSA C would come forward. PRV stated that, for the capacity of the landscape to change materially enough to be able to accept an OHL in it, the landscape would have to be significantly changed and potentially dominated by wind farms

⁷⁴ CD/SPM/ES/01, which identifies (at §3.3.1) that further minor amendments to the line alignment have been undertaken, informed by further environmental assessment and consultation responses. These amendments remain within the 100m corridor as varied in 2010).

⁷⁵ See CD/SPM/ES/01, Vol.5, Table 4.2.

⁷⁶ See CD/SPM/ES/01, Vol.5, Table 4.3.

⁷⁷ She used SPM/013 as an aide.

⁷⁸ OBJ/002/LANDSCAPE/POE/RUSSELLVICK/OHL, §5.9.

and infrastructure and, in 2008, that assumption could not be made.⁷⁹

105. However, three points need to be made in this regard. First, the Powys LCA⁸⁰ (authored by JC) which was published in March 2008 – shortly before the consultation document in July of that year and during the period when SPM was considering routeing options – explicitly contemplates marked landscape changes as a result of the indicative generating capacity for SSA C as indicated in TAN8.⁸¹ Further, TAN-8 itself states that within and immediately adjacent to SSAs the implicit policy objective is to accept significant landscape change.⁸² PRV accepted in XX that Section B of the Llandinam Scheme was immediately adjacent to SSA C. In policy terms, therefore, there exists precisely the expectation that there will be a significant change in landscape and visual terms.
106. Secondly, in light of the criticism of the route selection process contained in the consultation responses, SPM reviewed the route selection process in the Alternatives Paper – setting aside the assumption that had been made in 2008 and in light of the criteria in the NPS. The 2008 results were confirmed without the impugned assumption and the proposed route remained the preferred option.⁸³ The criticism is, therefore, wholly academic and of only historical interest and PCC is simply wrong to say that at no point has SPM considered the removal of this assumption (paragraph 591 PCC closings) or that any changes between assessments in the earlier ES and the Updated ES have not fed into the route selection process (PCC closings paragraph 625) – this was done in the Alternatives Paper.
107. Thirdly, as PRV agreed in XX, PCC had numerous opportunities – both pre and post Application – to raise the issues of route selection but did not do so. The specific point was made in the 2008 Consultation Report and PCC did not then criticise it.⁸⁴ Indeed, the PCC Cabinet Report states that route selection had been adequately addressed and was “*well considered.*”⁸⁵ There was no reference at that stage to Route C being preferable in LVIA terms.⁸⁶ The issue was not raised in either of PCC’s Outline Statements of Case⁸⁷ or its opening statement in June 2013.⁸⁸ The first time a preference for a different route (Route C) was raised was in PCC’s Statements of Case

⁷⁹ OBJ-002/LAND/POE/RUSSELL/OHL, §5.7.

⁸⁰ CD/SPM/ES/01, Vol.3a, App.6b.

⁸¹ CD/SPM/ES/01, Vol.3a, App.6b, p.98.

⁸² CD/COM/016, p.63, §8.4.

⁸³ CD/SPM/ES/01, Vol.5, section 4.

⁸⁴ CD/SPM/ES/01, Vol.3a, App.1, p.7.

⁸⁵ CD/SPM/ES/01, Vol.3a, App.2d, p.14 and 70.

⁸⁶ CD/SPM/ES/01, Vol.3a, App.2d, p.37.

⁸⁷ OBJ/002/0SOC and OBJ/002/0SOC/2.

⁸⁸ OBJ/002/003.

("SOC")⁸⁹ dated 26 November 2013. The first criticism of the route selection methodology was made later in PRV's proof of evidence.

108. As was put to PRV in XX, a responsible local planning authority would not forego numerous opportunities including pre-application opportunities to express such a fundamental concern. In fact, PCC plainly did not harbour these concerns – witness the Cabinet Report and the advise of Capita Symonds within it – until after PRV's instruction. PRV was good enough to admit that he could at least see SPM's frustration in having developed a route in consultation with PCC only to have the local planning authority raise route selection at this very late stage.
109. As to the substance of PCC's notional preference for Route C (we say notional as, subject to undergrounding Section B, PCC accepts the proposed route). First, it should be noted that is not at all clear that AC concludes that Route C is indeed preferable in cultural heritage terms – he seems to prefer Route D albeit he is not categorical about it.⁹⁰
110. Further, as PRV accepted in XX, his approach to this issue was based on LVIA only. However, the selection of an OHL route requires consideration of a wide range of factors beyond the single issue that engaged PRV. He confirmed that PCC had produced no analysis of the technical feasibility of any of alternative routes and accepted that there were technical reasons not to prefer the first section of Route C.⁹¹
111. The short point is that PRV's LVIA judgment does not differ from SG's. The different conclusions regarding the most appropriate route for the Llandinam Scheme to follow arise because his was an LVIA specific approach. SG's and SPM's approach was necessarily broad and balanced: OHL routeing is not determined by landscape alone. SG and SPM took into account all relevant factors and concluded that Route E was the preferred option overall. That conclusion is, SPM submits, sound.
112. However, all of the discussion outlined above as between the potential alternative routes for the Llandinam Scheme is, in all material respects, besides the point. This is because the Secretary of State can be informed that, subject to undergrounding of Section B, PCC accepts the route proposed for the Llandinam Scheme – that is the starting point of the Council's case⁹² and is therefore the effective end point of any useful discussion on alternative routes. It should be noted here too that NRW does not challenge the route selection process as it confirmed in closing.

⁸⁹ OBJ/002/SOC/OHL, §6.2.

⁹⁰ OBJ-002-HISTENV-POE-CROFT-OHL, §5.13-5.14.

⁹¹ OBJ-002/LAND/POE/RUSSELL/OHL, §5.16.

⁹² OBJ/002/PLANNING/POE/CARPENTER/OHL, §1.24.

113. Lastly, it cannot be said, as PCC suggests (paragraph 615), that SPM has failed in its duty to mitigate under schedule 9 with regards to the routing of the Llandinam Scheme. Schedule 9 plainly recognises the need to balance competing factors. All relevant factors were taken into account – it is not suggested otherwise. The outcome is a judgment in the round. There is no route for a scheme of this size which would mitigate all likely significant environmental effects. This is recognised in the Holford Rules and in schedule 9 itself with the caveat that the applicant shall do what he reasonably can to mitigate environmental effects. Plainly, as regards routing, SPM has done so. Furthermore, SPM’s other duties (section 9) also need to be taken into account.

Alternative 3⁹³

114. Alternative 3 comprises a wholly underground cable connection to Welshpool and is addressed below in the section on undergrounding.

Alternative 4⁹⁴

Introduction

115. Alternative 4 is a notional connection from the LRWF to the future proposed Mid Wales National Grid Hub at Cefn Coch as part of the SP Mid Wales Connections Project, the 132kV parts of which are being promoted by SPM under the Planning Act 2008. The new Hub will be linked to the National Grid by a 400kV OHL which is being promoted by National Grid, also under the Planning Act 2008.
116. A number of consultees and objectors, including the Alliance, queried why the LRWF connection could not be developed strategically as part of the SP Mid Wales Connection Project.
117. The current network design for the SP Mid Wales Connections Project is predicated upon the Llandinam Scheme being developed. This is set out in the Third Strategic Optioneering Report September 2013 (a report that has been prepared as part of the pre-application consultations for the SP Mid Wales Connections Project and which is included as an appendix to the Alternatives Paper).⁹⁵
118. It is important to note that the SP Mid Wales Connections Project cannot accommodate the connection to the LRWF without additional distribution infrastructure being required. This would either be by either an upgrade to a steel tower pylon in the southern leg of the project or by adding an additional 132 kV HDWP overhead line into that southern leg in addition to the line that is currently proposed. An amended SP Mid Wales Connection Project would require further transmission infrastructure (an additional 132kV bay and a

⁹³ CD/SPM/ES/01, Vol.5, section 5.

⁹⁴ CD/SPM/ES/01, Vol.5, section 6.

⁹⁵ CD/SPM/ES/01, Vol.5, App.1. The current SP Mid Wales Project is illustrated in CD/SPM/ES/01, Vol.5, Fig.6.1.

400kV/132kV Supergrid Transformer at a Mid-Wales hub). It is not, therefore, simply a case of connecting the LRWF into a proposed 132kV wood pole line that would have the capacity to absorb the additional generation provided by the LRWF. Either a substantial upgrade to the proposed wood pole line or an entire new wood pole line would be needed to facilitate such a connection.

Assessment

119. In order to explain SPM's position on this issue, the Alternatives Paper considers various theoretical options as to how the LRWF might be connected within the SP Mid Wales Connection Project and then compares those options to the status quo of the Llandinam Scheme and the SP Mid Wales Connections Project as both are currently proposed. The options considered were:

- a. Alternative 4a: two 132kV HDWP overhead lines with one in corridor CC1⁹⁶ as currently proposed and a second line in CC2;
- b. Alternative 4b: two 132kV HDWP overhead lines both in CC1;
- c. Alternative 4c: two 132kV HDWP overhead lines both in CC2;
- d. Alternative 4d: a steel tower pylon (double circuit) in CC1;
- e. Alternative 4e: a steel tower pylon (double circuit) in CC2;
- f. Alternative 4f: (assuming SPM is only required to connect 176MVA of generation capacity, an option that PCC requested be considered) a single 132kV HDWP OHL in CC1; and
- g. Alternative 4g: is as for alternative 4f but with the line being located in corridor CC2.

120. These Alternatives are assessed by SG in her proof of evidence⁹⁷ and in section 6 of the Alternatives Paper in great detail and the results are summarised by EL in his proof of evidence.⁹⁸ SG concluded that there was no compelling reason to discount the Llandinam Scheme on environmental grounds. Indeed with the exception of Alternative 4a, the status quo performed better than the other Alternative 4 scenarios.

121. In relation to all alternatives 4a to 4e, the status quo enjoys technical advantages, namely: the status quo minimises the requirement for additional transmission infrastructure; it reduces the system losses inherent in the alternatives considered; and makes use of existing capacity within the current distribution network.

⁹⁶ CC1 and CC2 are names for corridors being considered in the SP Mid Wales Connection Project. CC1 is the preferred corridor.

⁹⁷ SPM/LANDSCAPE/POE/GIBSON/006A, §11.17-11.24.

⁹⁸ SPM/COMPANY/POE/LEAVY/002A, §7.31.1-12.

122. Perhaps most significantly, given the need for renewable energy generation, Alternative 4 would substantially delay both the LRWF connection and the numerous other renewable energy generation projects to be connected via the SP Mid Wales Connection Project. The delay to the SP Mid Wales Connection Project would be brought about by the need to halt the current programme, to amend the project design and to re-consult on that amended design. The Alternatives Paper includes a comparative timetable showing the estimated effects of the delay: a four year delay to the LRWF connection and two years for the SP Mid Wales Connection Project.⁹⁹
123. In addition to this significant delay (in the context of a windfarm application that was made in 2008), there is planning risk attached to the SP Mid Wales Connections Project that is not present in the Llandinam Scheme only Application, due to the Llandinam Scheme connecting into the existing substation at Welshpool (as opposed to a new Hub which itself needs consent) and being a connection for only one wind farm.
124. There is also a degree of commercial risk present in the SP Mid Wales Connections Project: it is dependant on a number of developers working together and sharing project costs between them, with the consequential effect of changes in one scheme adversely impacting on the costs of the others. The current developers involved in the SP Mid Wales Connections Project are aware of and managing this risk. CeltPower does not currently face this risk on the Llandinam Scheme.
125. In conclusion, in relation to Alternative 4a, the status quo performs better in both technical and cost terms but Alternative 4a is marginally better in environmental terms. The Alternatives Paper concludes that the technical and cost considerations outweigh the marginally better environmental performance such that the status quo is preferred.
126. For Alternatives 4b to e, again the status quo performs better both in technical and cost terms. The status quo also performs better environmentally. Again, the status quo is preferred.
127. Alternatives 4f and g were produced purely to address questions raised by PCC. These alternatives would not deliver the capacity SPM is currently contracted to deliver. As such these alternatives would place SPM in breach of its statutory duties and licence obligations. In short, they are not open to SPM on the basis of current contracted generation capacity and should therefore be regarded as purely hypothetical. At paragraph 808, PCC takes issue with SPM's use of this term but SPM has statutory obligations as a consequence of which it must develop schemes on the basis of contracted generation. It cannot prejudge the outcome of the consenting process for individual schemes. To do so would be to usurp the role

⁹⁹ CD/SPM/ES/001, Vol.5, Table 6.1.

of the relevant planning authority and ignore its own statutory obligations.

128. Whilst it is not for SPM to address the SP Mid Wales Connection Project at this inquiry, it is important to bear in mind the conclusions of SPM/28 in relation to the session 4 materials and the Mott McDonald and LUC Reports. It is important to recall – something that does not appear to be well understood by PCC – that the reports consider only the wind farms before this inquiry which is a fraction of the total SP Mid Wales Connection Project (65 per cent. of the contracted generation). It is wholly inappropriate to look at the SP Mid Wales Project in the partial manner PCC has in considering the grid connection alternatives. As to paragraph 889 of PPC’s closing and the tipping point referred to therein: again it is imperative to take account of all the generation and it is wrong to say the 400kV solution is not justified. Mott McDonald concludes that if all five wind farms are consented then the 400/132kV solution would be preferable.
129. As Alternative 4f involves using only the currently proposed HDWP OHL in CC1, the environmental effects of this option are as for CC1.¹⁰⁰ It is also technically compliant and the need for only one OHL has obvious and significant cost savings. Theoretically, this option would be compliant with SPM’s statutory duties if generation capacity was limited to 176MVA.
130. However, at a policy level, Alternative 4f would cause delay to the delivery of urgently needed renewable energy (for the same reasons outlined above).¹⁰¹ As such, SPM takes the view that this alternative would not be compliant with national policy. Delivering this alternative would also introduce significant planning and commercial risk to CeltPower that will not have been factored into its commercial considerations to date.
131. Alternative 4g: this option is identical to alternative 4f above save with the difference that the CC2 corridor performs less well in environmental terms than CC1 and so is not preferred to alternative 4f.

Conclusion

132. As such, the status quo is and remains the preferred outcome from all of the alternatives considered. It meets the needs of the current and future network, properly utilises existing capacity, provides the earliest connection dates for SPM’s customers (both CeltPower and those currently to be connected under the SP Mid Wales Connection Project) and is the solution that best maintains an efficient, co-ordinated and economical system of electricity distribution.

¹⁰⁰ See CD/SPM/ES/01, Vol.5, §6.1.9.

¹⁰¹ See, for example, CD/COM/001, §3.3.15, §3.4.1, §3.4.5, §3.7.10 (expressly with regards to new electricity infrastructure)

Future Capacity

133. In addition to Alternatives 4f and 4g, PCC also asked SPM to consider the potential to fully exploit the Welshpool to Oswestry route to enable only the generation from the SSA C area which is supported by PCC to be transmitted by the Llandinam Scheme or an amended version of it. AB sets out his views on this in Appendix 10 to his proof of evidence.¹⁰²
134. This Appendix 10 scheme is outside SPM's remit at this inquiry. SPM is here simply to promote the Llandinam Scheme and, indeed, there is no such scheme before the inquiry. Furthermore, this option would not meet all the generation capacity SPM is obligated connect in the area and hence SPM would not be meeting its statutory obligations.
135. Nonetheless, AB looked at it in order assist PCC. He concluded that the Llandinam Scheme's capacity could be increased to 160MVA by increasing the conductor size to a 176MVA rated 300mm² conductor. However, this in itself would not permit greater export. That would require a rebuild of the upstream Welshpool to Oswestry EJ line. Together these changes could increase the possible transfer over the Llandinam Scheme by around 70MVA to 160MVA. However, AB makes the key point that larger conductors could not be retro-fitted onto the currently proposed poles and pole locations, due to the heavier weight of a 300mm conductor.
136. AB sets out a detailed analysis of the Appendix 10 scheme against the environmental, technical, financial and future capacity criteria referred to above.
137. In short, this arrangement would cost some £2m more than the combined Llandinam Scheme/ SP Mid Wales Connection project but would provide only 160MVA capacity as compared to the 266MVA that the status quo would deliver. It would provide no room for future capacity. Given that other forms of generation, in addition to wind farm generation, may come forward over the coming decades, providing such limited capacity could be no guarantee that new distribution network infrastructure would not be required in five, ten or fifteen years time to connect solar, biomass, CCGT etc generation assets. As such, it is an expensive solution which takes no account of any future generation capacity coming forward in the area which would in all likelihood trigger a need for the CC1 leg of the Mid Wales Connection Project in any event. PCC is seeking to look at the network frozen in time. That is not a luxury that SPM's experience (or statutory duties) affords it. This more expensive option may

¹⁰² SPM/NETWORK/POE/BEDDOES/001B, App.10. See also SPM/014 in which AB further explains the costs of this scheme.

easily be rendered obsolete by new generation capacity coming forward.

138. Delivering this option could also incur significant delays to the delivery of urgently needed renewable energy generation. The Appendix 10 scheme has not been subject to detailed design and assessment. It is not clear at this stage whether or not further environmental assessment for the Llandinam to Welshpool element would be required having regard to the fact that it would necessitate the use of an increased number of and thicker wooden pole supports. If required, a further review of the ES has potential to cause significant delay. Similarly, it is not clear without further study whether or not the rebuild of the EJ line beyond Welshpool would require express consent (PCC jumps ahead of itself in this regard in paragraph 804 of its closings). Plainly if consent is required, that would also introduce significant delays (which PCC accept are a relevant and serious consideration in the context of the urgent need for renewable energy).
139. In any event, whilst the Secretary of State may be able to condition the use of a 300mm² conductor – albeit he would have to be satisfied that he had sufficient environmental information to do so and that such an amendment to the scheme (with the consequent changes to pole numbers (and positions)) was not unfair to the parties in the *Wheatcroft* sense – he could not, in SPM’s submission, require the rebuild of the EJ line beyond Welshpool, nor preclude the submission of an application for consent for the currently proposed SP Mid-Wales Connection Project.
140. Having reviewed this option, for the reasons explained by AB, SPM remains of the view that the proposed Llandinam Scheme and proposed connection via the CC1 preferred corridor in the SP Mid Wales Connection Project are the schemes that best meet SPM’s statutory duties.

Undergrounding

Introduction

141. There are a number of undergrounding options before the inquiry, namely:
- a. Alternative 3: full undergrounding of the Llandinam Scheme as assessed in the Alternatives Paper and referred to above;
 - b. The partial undergrounding option considered in detail by SPM in its EN-5 paper¹⁰³ (“the SPM Option”);
 - c. PCC’s proposal for a shorter version of the SPM Option shown in green on figure MAC2 (“the SPM Shortened Option”);¹⁰⁴

¹⁰³ CD/SPM/ES/001, Vol.3a, App.5.

¹⁰⁴ OBJ/002/PLANNING/CARPENTER/OHL, App.2.

- d. PCC's preferred option as shown in orange on MAC2 ("the PCC Option") as well as a variant of it developed during the course of the inquiry;¹⁰⁵ and
- e. NRW's proposal for undergrounding that section of the line that passes through the VMRHL all the way up to the Welshpool substation. This option is not shown on any plans or assessed in any detail by NRW but it is alluded to in the proof of evidence of JC (the "NRW Option").¹⁰⁶

142. Before turning to these options, it is important to identify (a) what the Secretary of State's powers are in relation to undergrounding as well as (b) the correct approach to undergrounding as set down in national policy.

The Secretary of State's powers under section 37

143. It is, of course, SPM's case that its Application should be granted in full. However, as a result of various points made during Session 3 of the inquiry by objectors in relation to underground alternatives to all or part of the Llandinam Scheme, SPM undertook to present submissions on the scope of the Secretary of State's powers under section 37 of the 1989 Act.

144. Section 37 of the 1989 Act is, expressly, a consenting procedure for overhead lines and not for underground electric lines. In short, the Secretary of State cannot grant consent under section 37 on the application before him for any length of underground line. However, he could consent an OHL with a gap within it. In effect, this would be a part refusal.

145. The Secretary of State must, of course, exercise his discretion in this regard reasonably and, in particular, must not cause unfairness to any party by what would be an effective amendment to the Application for the proposed development that is before him. In a sense, if the scheme is reduced then there is less capacity to cause unfairness and, of course, if planning permission is required for any aspect of the amended scheme the public will in any event be consulted on any such application.¹⁰⁷

146. SPM is not aware of the Secretary of State ever having granted consent for an OHL with a gap in it. However, this is not to say he

¹⁰⁵ The variant of the PPC Option is shown in red on the Google Earth images at the rear of PRV's EIC materials (OBJ/002/LAN/004). Confusingly on the Google Earth image the PCC Option shown in orange on MAC2 is show in blue. The variant was produced in order to address technical concerns about the orange route expressed by EP and RL (as well as consequent landscape and cultural heritage concerns).

¹⁰⁶ CON/003/LAND/POE/CAMPION, §3.5 and §8.2. SPM do provide a figure showing what it understands the NRW Option to comprise (see SPM/025a).

¹⁰⁷ Consultation was at the heart of the matter in *Bernard Wheatcroft Ltd v Secretary of State for the Environment* [1982] J.P.L. 37.

cannot (or indeed has not). SPM is aware that the Recorder at the Beaulieu Denny inquiry did recommend that the OHL be granted consent with two gaps in that consent, however, in that instance the Minister decided to consent whole line despite the recommendation for part refusal.¹⁰⁸

147. If the Secretary of State were to consider part refusal, the pertinent question in such circumstances would be: what gap? (As opposed to: what elements of the Llandinam Scheme should be undergrounded?)
148. Of course, in answering that question it will be material for the decision-maker to consider how SPM might fill any such gap and what the implications of filling that gap might be.
149. Ultimately, it will be a question for the developer of a particular project as to how any gap is filled. The Secretary of State does not enjoy any express powers to direct, nor does he have any proposal before him to determine as to, how any gap in a consent should be bridged.
150. Two mechanisms exist through which SPM may fill any gap that were imposed in relation to the Llandinam Scheme. Whilst consent would not be required under the 1989 Act for any underground cable, such works are capable of being development requiring planning permission under the Town and Country Planning Act 1990. Consent could be obtained either under the under the GDPO¹⁰⁹ or, in the absence of permitted development rights, by applying for planning permission. Planning permission would be required, for example, by virtue of Article 3(10) of the GDPO, if the development proposed to fill the gap comprised EIA development. If planning permission were required, an application would be made and determined by PCC who may or may not grant planning permission. Of course, any refusal could then be appealed.
151. It is understood from what PCC said at the planning round table session that these points and the Secretary of State's powers are not in (any material) dispute between PCC and SPM.

Policy – general

152. The general policy on alternatives to any proposed development – set out above – is here applicable. In particular, it should be noted that EN-1 advises that, where alternatives are first put forward by a third party after an application has been made, the onus may be placed on the person proposing the alternative to provide the evidence for its suitability and the applicant should not necessarily be expected to have assessed it.¹¹⁰ Despite this, neither PCC nor NRW have produced an assessment of their undergrounding options

¹⁰⁸ The decision is not before the inquiry – it is not necessary that it should be – but it was mentioned by SPM during the planning round table in Session 3.

¹⁰⁹ See Art.3(1), Sch.2, Part 17, Class G of the GDPO.

¹¹⁰ CD/COM/001, §4.4.3, 8th bullet.

against the policy set out in EN-5.¹¹¹ That has been left to SPM who, responding to PCC's and NRW's evidence, undertook its own assessment of the options proposed by PCC and NRW (i.e. SPM Shortened Option, the PCC Option and the NRW Option).¹¹²

Policy – undergrounding

153. The starting point when considering the design for an electricity networks infrastructure is the government's policy (set out in EN-5) that, in general, it should be placed above ground. This is due, principally, to the cost of undergrounding connection assets when compared to installing overhead connection assets. In addition, EN-5 states explicitly that the Government believes that the development of overhead lines is generally compatible with SPM's duties under schedule 9 of the 1989 Act to have regard to amenity and to mitigate impacts.

154. EN-5 is explicit that an applicant needs to consider other feasible means of connection, including undergrounding, only where a proposed OHL would cause "particularly significant" landscape and visual impacts.¹¹³ In arriving at this position the Government expressly considered and rejected a policy that imposed a presumption that electricity lines should be placed underground.¹¹⁴

155. The tests to be considered by an applicant and the Secretary of State in the context of undergrounding are laid down in paragraphs 2.8.8 and 2.8.9 of EN-5 ("the EN-5 test"). Paragraph 2.8.8 states:

"Paragraph 3.7.10 of EN-1 sets out the need for new electricity lines of 132kV and above, including overhead lines. Although Government expects that fulfilling this need through the development of overhead lines will often be appropriate, it recognises that there will be cases where this is not so. Where there are serious concerns about the potential adverse landscape and visual effects of a proposed overhead line, the [IPC] will have to balance these against other relevant factors, including the need for the proposed infrastructure, the availability and cost of alternative sites and routes and methods of installation (including undergrounding)."

156. Paragraph 2.8.9 states:

¹¹¹ Note PCC did respond to SPM/025 (see OBJ/002/012). In its response it states that this point is hollow (see OBJ/002/012, §3). PCC state that §4.4.3 of EN-1 does not absolve the applicant of its responsibility to investigate alternatives. However, SPM has plainly complied with its responsibilities by describing the main alternatives considered. Indeed, it has produced a discreet paper – the EN-5 Paper – expressly to deal with undergrounding. Accordingly, it is PCC's position on this point that is hollow.

¹¹² SPM/025.

¹¹³ CD/COM/003, §2.8.4.

¹¹⁴ CD/COM/003, §1.7.5.

“The impacts and costs of both overhead and underground options vary considerably between individual projects (both in absolute and relative terms). Therefore, each project should be assessed individually on the basis of its specific circumstances and taking account of the fact that Government has not laid down any general rule about when an overhead line should be considered unacceptable. The [IPC] should, however only refuse consent for overhead line proposals in favour of an underground or sub-sea line if it is satisfied that the benefits from the non-overhead line alternative will clearly outweigh any extra economic, social and environmental impacts and the technical difficulties are surmountable. In this context it should consider:

- *the landscape in which the proposed line will be set, (in particular, the impact on residential areas, and those of natural beauty or historic importance such as National Parks, AONBs and the Broads);*
- *the additional cost of any undergrounding or sub-sea cabling (which experience shows is generally significantly more expensive than overhead lines, but varies considerably from project to project depending on a range of factors, including whether the line is buried directly in open agricultural land or whether more complex tunnelling and civil engineering through conurbations and major cities is required. Repair impacts are also significantly higher than for overhead lines as are the costs associated with any uprating); and*
- *the environmental and archaeological consequences (undergrounding a 400kV line may mean disturbing a swathe of ground up to 40 metres across, which can disturb sensitive habitats, have an impact on soils and geology, and damage heritage assets, in many cases more than an overhead line would).”*

157. A number of points should be noted:

- a. As PRV agreed in XX, “serious concerns” as identified in paragraph 2.8.8 is the starting point or trigger for any consideration of whether undergrounding is appropriate.
- b. It is important to note – especially given the approach of PCC – that the trigger relates to landscape and visual effects only. As AC acknowledged in XX, there is no equivalent trigger in EN-5 with regards to cultural heritage impacts. Indeed, AC agreed the only reference to cultural heritage matters is to archaeology as a reason not to underground.¹¹⁵

¹¹⁵ CD/COM/003, §2.8.9, 3rd bullet.

- c. The approach used by SPM in the EN-5 Paper focused on identifying areas of “serious concerns” in relation to landscape and visual effects. In doing so SPM took “serious concerns” to equate to a “major adverse effect” in EIA terms. The logic behind this is simple: the Government accepts (as set out above) that OHLs will generally be appropriate and also expressly recognises that NSIPs, including electricity networks infrastructure projects, will inevitably cause some harm.¹¹⁶ If that is so, “serious concerns” must be pitched at a higher level of harm than would be an ordinary incident of projects of the scale of NSIPs. It is for this reason that EN-5 refers to the need to undertake a very specific exercise to consider alternatives, including undergrounding, only where the landscape and visual effects are particularly significant.¹¹⁷ PRV does not dissent from this approach: he confirmed in XX that he accepted that, for these reasons, “serious concerns” must equate to something more than significant adverse effects.¹¹⁸ This approach is corroborated by the Inspector’s conclusions on the Legacy Scheme. Paragraph 267 of the Inspector’s Report states: *“Furthermore, EN-5, which provides important guidance, sets a high threshold for refusing overhead lines in favour of undergrounding.”* This position was adopted by the Secretary of State in his decision letter in which he explicitly accepts *“the Inspectors’ conclusions and recommendations as set out in paragraphs 210 to 273 of the report.”*¹¹⁹
- d. It should be noted that SPM’s approach is conservative: whilst EN-5 does not refer to cumulative effects in the context of undergrounding, SPM has considered cumulative effects in its EN-5 Paper.
- e. Paragraph 2.8.9 provides direction on what are the key matters to be considered in determining whether the benefits of an underground cable would clearly outweigh the dis-benefits. As to LVIA matters, the policy specifically highlights the need to consider designated landscapes. It is not suggested that these are the only landscapes that are relevant or that undergrounding cannot fall on balance to required outside of those areas but it is plain that designated landscapes are those the Government had at the forefront of its thinking in drafting its undergrounding policy and should attract the most weight in the decision-making process. In any event it should be noted that SG has allocated the Kerry Ridgeway the highest sensitivity value in her methodology and as such it has been ranked on a par with designated landscapes (which addresses PCC

¹¹⁶ See, for example, CD/COM/001, §3.2.3.

¹¹⁷ CD/COM/003, §2.8.4.

¹¹⁸ See also a statement to the same effect in his proof of evidence: OBJ-002/LAND/RUSSELL/OHL, §2.12.

¹¹⁹ OBJ-002/PLANNING/CARPENTER/OHL, App.1.

paragraph 723 final sentence). There is, contrary to PCC's suggestion, no double counting: here the relevant area was given the highest sensitivity so there is no question of the lack of designation counting against it in terms of the assessment of effects – which goes to the question of "serious concerns" and, therefore, undergrounding. It is only, therefore, in the balancing exercise that the point about non-designation is made. There is no double counting.

- f. It follows that paragraphs 2.8.8 and 2.8.9 of EN-5 require the following questions to be answered:
- i. Are there "serious concerns" about potential adverse landscape and visual effects?
 - ii. If so, having regard to the factors set down in paragraph 2.8.9, do the benefits from undergrounding clearly outweigh any extra economic, social and environmental impacts and are any technical difficulties surmountable?
 - iii. If the answer to the second question is in the affirmative, the EN-5 test for undergrounding will be met. If it were in the negative, undergrounding would not be required under EN-5 from the perspective of the landscape and visual trigger.

The EN-5 test and the planning balance

158. It is important to recognise that the EN-5 test, as expressed by the above questions, is not necessarily the end of the matter. Other policy and legal tests apply which could result in the Secretary of State deciding that part of an application for section 37 consent should be refused (thereby effectively requiring an underground or alternative solution to that section of the proposed connection). An example might be where the Secretary of State felt that there was so significant an impact on an ecological or cultural heritage asset that the planning balance weighed in favour of refusing consent for that particular section of a proposed connection but that is a separate exercise from the application of the EN-5 test.
159. There is, therefore, a series of different exercises to go through, giving both consideration to specific tests (such as the EN-5 test), other relevant policy (and legal tests) and, finally, the overall planning balance. Therefore, whilst the EN-5 test certainly does not prevent other concerns being considered, they must be considered in the light of the specific policy relevant to those concerns and the results must be placed, along with the results of the EN-5 test, in the overall balancing exercise.
160. PCC's approach has the effect of conflating individual policy tests. The arch expression of this was in PCC's suggested amendment to the main issue as drafted by the Inspectors for the planning round table in Session 3. The main issue as drafted by the Inspectors, with

which SPM was content, was “*Whether there would be serious concerns in LVIA terms, sufficient to justify the undergrounding of cables in section B of the proposed corridor.*” PCC sought an amendment as follows: “*Whether the benefits of the scheme are wholly exceptionally sufficient to outweigh the serious concerns.*” The words “*wholly exceptionally*” are not to be found in EN-5. Rather they are imported from the cultural heritage policies contained in EN-1. What PCC was doing was seeking to rely on the presumption in favour of heritage assets contained in EN-1 in the specific context of the EN-5 test.¹²⁰ EN-1 is, of course, relevant and contains a number of policy tests that the decision-maker will need to take into account but it is not the proper approach to seek to rewrite the specific test on undergrounding clearly articulated in the NPS on electricity networks infrastructure by reference back to generic energy policy. The consequence is that the individual policies are robbed of their proper application and force. Of course, the NPSs must in the end be applied as a whole but only after the proper assessment of individual policy tests. As KB said in that hearing session, policy documents are carefully drafted and if there had been an intention to draw in concerns other than LVIA into the question of undergrounding in EN-5 it would have expressly done so.

161. As the Inspectors summed up SPM’s position during the planning round table: there are a series of policy and legal tests all of which must be considered and properly applied. Thereafter, the decision-maker must stand back and make an overall decision. It is perfectly possible to conclude that the EN-5 test is not met but that other policy and legal tests are such that taken as a whole there is a need for undergrounding (or more properly stated a need to refuse in part).
162. It should be said that PCC’s desire to shoe horn cultural heritage into EN-5 tests is entirely understandable: the landscape and visual effects in section B (dealt with elsewhere in these closings) are insufficient to justify undergrounding. Perhaps it is PCC’s recognition of this that governs its policy approach. In the end it does not matter because, as these submissions will seek to demonstrate, even if cultural heritage is taken into account, the outcome does not change: undergrounding is not justified.

Other policy on undergrounding

163. As to other policy on undergrounding, TAN8 explicitly states that undergrounding is likely to be justified for only limited lengths of a connection and / or in special circumstances.¹²¹ This policy sits comfortably alongside that contained in EN-5.
164. The same cannot be said with regards to the Powys UDP and policy DC12 in particular – the first sentence of which is wholly at odds with national policy: it lays down a presumption that electric lines will be

¹²⁰ CD/SPM/001, §5.8.14.

¹²¹ CD/COM/016, §2.12.

undergrounded unless there are overriding reasons for them not to be. This is the opposite of the EN-5 approach. The EN-5 approach must be preferred: it is agreed that the NPSs should be afforded significant weight and, as set out above, in drafting EN-5 the Government took an express decision to reject a presumption in favour of undergrounding (to ensure that the UK's electricity infrastructure could be delivered at an acceptable cost to consumers). Furthermore, as already set out, the presumption in favour of the development plan does not apply¹²² such that policy DC12 is, simply, another material consideration. In addition, policy DC12 is internally inconsistent. The second sentence sets out quite a different expectation from the first and one which appears to accord with national policy; namely, that lines should be routed to minimise their impact. For all these reasons policy DC12 should not be given any material weight in the determination of this Application.

Alternative 3 – full undergrounding

165. Full undergrounding of the Llandinam Scheme is in theory a technically viable option: it would serve the contracted generation and, as with the Llandinam Scheme as proposed, could in principle accommodate a further 10MVA of future generation onto the local system. However, as explained by EP, the cost is estimated to be at least more than three times that of an OHL. As such SPM would be failing in its duty to provide an economic and cost effective solution for customers if it implemented this option. Moreover, the benefits are limited: no party suggests full undergrounding is necessary and PCC concludes that the effects of the Llandinam Scheme as proposed are acceptable, aside from Section B. In the circumstances, a fully underground option would not be an appropriate means of providing the connection to the LRWF.

Assessment – introduction

166. In light of PCC's closing the following points should be noted. First, PCC has adduced no technical evidence on the feasibility of its various proposals for undergrounding. Making reference to behind the scenes advice from an engineering adviser is simply not good enough, SPM has had no opportunity to cross examine this person or even see his or her advice, and as such it should be given little weight.

167. Secondly, as PCC accepts, the means of bridging any gap by an underground cable arising from a part refusal would be a matter for SPM. The SPM Option (adjusted at each end given the acceptance of PCC's shortening of that route at its extremities) reflects the considerable experience and expertise that SPM has in developing such infrastructure. Given the lack of any countervailing expertise and the fact that the decision is for SPM, the Secretary of State is asked to give far more weight to SPM's evidence on this issue. In the end, all options developed by PCC seek simply to reduce the cost dis-benefit in the balancing exercise so as to reverse-engineer the

¹²² i.e. section 38(6) of the Planning and Compulsory Purchase Act 2004.

conclusion that it seeks. Note in this regard, PCC's argument (paragraph 762) that EP used the wrong statistics in order to derive the lifetime costs is flawed. EP used the figures based on SPM's own experience and network. The data PCC relies on was for all areas across the country for all DNOs and so is actually less relevant than the numbers EP used. SPM submits that the proper basis for the balancing exercise is the SPM Option shortened at either end.

Assessment – the SPM Option

168. The SPM Option is assessed in the EN-5 Paper¹²³ which was produced when preparing the Updated ES. Previous versions of the ES predated the designation of EN-5 such that the Updated ES was the first opportunity to consider in detail the undergrounding policy in EN-5.
169. The EN-5 Paper sets out a detailed analysis of the landscape and visual effects of the Llandinam Scheme in the context of EN-5 and the "serious concerns" trigger referred to above. It concludes that that no "serious concerns" would arise in respect of the Llandinam Scheme on its own anywhere along the line route. However, with regards to cumulative effects, it concludes that there would be a major adverse effect in landscape and visual terms (and so "serious concerns") in the section near Kerry Hill where the proposed OHL is in close proximity to the Neuadd Goch wind farm, through which the proposed OHL would run.
170. As a result, the EN-5 Paper goes on to consider the balancing exercise set out in paragraph 2.8.9 of EN-5 and, in particular, provides a comprehensive review of: the landscape in which the proposed line will be set; the additional cost of any undergrounding; and the environmental and archaeological consequences of providing an underground solution and undertakes a balancing exercise between all the relevant factors.
171. The EN-5 Paper concludes that the benefits of undergrounding are not persuasive. These benefits must be set in context: this is a landscape that is not designated and, in any event, major adverse effects would remain even if the Llandinam Scheme were undergrounded as a result of wind farm development in SSA C. Against this, the additional costs would be significant (over half the cost of the total scheme as an OHL).
172. On balance, therefore, SPM concludes that the Llandinam Scheme on its own would not require consideration of undergrounding under the EN-5 test whilst the benefits that undergrounding would deliver in the cumulative scenario where major adverse effects may arise, and which would remain even if the Llandinam Scheme was placed

¹²³ CD/SPM/ES/03, Vol.3a, App.05a.

underground, do not clearly outweigh the extra economic impacts of undergrounding.¹²⁴

Assessment – the Shortened SPM Option

173. PCC proposed a variant to the SPM Option that shortens that option by a total of 3.3km. SPM set out its assessment of the Shortened SPM Option in a paper submitted to the inquiry.¹²⁵
174. In SPM's view, the benefits from undergrounding in this option are limited for the same reasons as outlined above.
175. However, the Shortened SPM Option would reduce costs and is technically achievable – subject to overcoming some of the concerns expressed by EP in relation to bridleway section and the footpath section at Upper Ceulanau. Whilst PCC do not accept these difficulties and refer to having taken technical advice, neither that advice nor any other technical evidence has been provided to the inquiry by PCC. As such, EP is the only expert from which the inquiry has heard. His concerns should not therefore be lightly set aside.
176. It should be noted that the Shortened SPM Option does not overcome the significant cultural heritage impact on the Bryn Cwmyrhiwdre barrow, as PCC acknowledges. Furthermore, as DB explained in EIC, any undergrounding along unmade ground, tracks or bridleways requires stripping of soil and excavation which in simple terms creates a greater likelihood of effecting the physical remains of buried cultural heritage assets. He further said that the increased engineering required at the bridleway and footpath which EP said may be required in order to route an underground cable through these sections would only be likely to increase the prospect of archaeological effects. Archaeological assets are a finite and irreplaceable resource. Whilst they may be preserved by record, where the assets are of national importance (see PCC Option below) then it is appropriate to preserve in situ. By contrast an OHL's effects on cultural heritage assets are likely to be indirect and reversible.
177. SPM's overall conclusion remains the same for this option as for the SPM Option taking into account the limited landscape benefits and, in particular, the fact that a major adverse effect would remain even if the Llandinam Scheme was undergrounded.

Assessment – the PCC Option

178. The PCC Option comprises a further shortening of the above options. This option is shown in orange on MAC2. Point B remains the same.

¹²⁴ It should be noted that SPM accepted in the planning round table session in Session 3 that an appropriate starting point for any undergrounding scheme is the start of (i.e. the western end) the PCC Option (referred to during Session 3 as "Point B") as shown in figure MAC2. As a result, SPM Option would be shortened to that extent (0.8km) and as a result the costs reduced. However, this reduction in cost does not effect the overall conclusion on the SPM Option.

¹²⁵ SPM/025.

Point C is drawn in to a point approximately 0.25km east of Black Gate. The total length of undergrounding under this option is 4.2km. Again, SPM set out its assessment of the PPC Option in its paper submitted to the inquiry.¹²⁶

179. The points set out under the above two options largely continue to apply. In addition, as EP described,¹²⁷ there are technical difficulties in laying a cable across the landform under the Kerry Ridgeway. Whilst not insurmountable, overcoming these difficulties may itself cause landscape and visual harm and introduce additional uncertainty (and potential cost) to this option. It is not accepted, as PCC states in its response to SPM's paper,¹²⁸ that PCC has demonstrated that the concerns are exaggerated: PCC has called no expert evidence on this. By contrast both EP and RL were called by SPM. RL sets out in his proof the types of works and working area (7 metres) required for the installation of cables in unmade ground.¹²⁹ Both referred to the possibility of scarring and land-slip. EP'S and RL's descriptions of the techniques that may be required to install a cable along the PCC Option and their consequences cast doubt on the landscape benefits of this option. In addition, this option would not address any landscape concerns to the east of the Two Tumps.
180. As to cultural heritage, the PCC Option is curious a one. As AC agreed in XX, there is no cultural heritage justification for undergrounding at the southern end of this option. There are three assets – all of which are said by PCC to be substantially harmed – at the northern end of this option which are put forward as a justification for undergrounding: MG062 (early medieval cross dyke), MG063 (early medieval cross dyke) and 1896 (the Black Gate Enclosure) (these assets are discussed below). However, as DB suggested, the rich archaeology in this area is, contrary to PCC's view, a good reason not to underground. There is a particular danger with regards to the early medieval cross dykes (which, although scheduled separately, form a single archaeological feature). The PCC Option bisects the termini of the scheduled sections of the Dyke. However, as DB said, if the Dyke does not terminate at the end of the scheduled sections, there is the potential for significant direct effects from undergrounding (it need hardly be said that, by contrast, an OHL would oversail any archaeological remains and any impacts would, in the main, be indirect). As DB described in EIC, there is a further recently discovered section between MG062 and MG063¹³⁰ which he said was very significant in this regard: if further remains were found they may be of national importance (albeit they would not be designated) and remains of national importance should

¹²⁶ SPM/025.

¹²⁷ And described in SPM/025 in detail.

¹²⁸ OBJ/002/012.

¹²⁹ SPM/CONSTRUCTION/POE/LIVINGSTON/004A, §4.50-4.54.

¹³⁰ See CD/SPM/ES/001, Vol.6, Figure 8.2, Asset number 84868.

be preserved in situ and not by record.¹³¹ As PCC pointed out in XX of DB, a documentary record of our past is not as good as retaining a heritage asset and the ability to record should not be a factor in deciding whether or not to consent a project. In a sense PCC are advocating gambling on what cultural heritage assets may be present as opposed to either more safely oversailing these potential assets or accepting the SPM Option in terms of undergrounding. Note that the 1x1m trench referred to by PCC excludes the working area which RL said extends to 7m.

181. As a result, SPM concludes that the overall balancing exercise produces the same results: the benefits do not clearly outweigh the impacts and undergrounding is not justified.

182. As set out above, PCC introduced a variant to this option: the alternate route indicated on the red line in PRV's EIC materials. This was designed to address the technical concerns as to the feasibility and desirability of the orange route east of Black Gate. SPM had with PPC's Option and to ameliorate SPM's consequent landscape and cultural heritage concerns under that option. In short, the variant is better from a technical point of view but, as DB explained in EIC, it does not address all his concerns on archaeology (where the line follows unmade tracks). This variant does not change SPM's overall conclusion on the need for undergrounding.

Assessment – the NRW Option

183. The landscape impacts of the Llandinam Scheme on the VMRHL are discussed elsewhere in these submissions. The EN-5 Paper concludes, having reviewed the LVIA on the VMRHL, that there are no "serious concerns" arising from the Llandinam Scheme in the VMRHL such that the trigger for undergrounding in EN-5 is not met.

184. SPM has provided a specific analysis of the NRW Option in a paper submitted to the inquiry¹³² (which is more than NRW has done despite putting this option forward). This analysis concludes that the benefits from undergrounding in the VMRHL are low, although it would be technically achievable and likely to have limited or no significant impacts in socio-economic, ecological, cultural heritage and landscape terms. The cost of the NRW Option would be substantial (in the order of £18.4m). The balance of cost and limited benefits leads to the conclusion that the NRW Option is not an appropriate solution and would not comply with SPM's statutory duties. Consequently, there is no justification for the NRW Option. Furthermore, SPM submits that the NRW Option, which as mentioned above, is not properly set out or assessed by NRW, is precisely the vague and inchoate scheme that EN-1 advises is of little

¹³¹ DB addresses the Inspectors' question on direction drilling in a note to the inquiry. He concludes that, whilst an underpass would be preferable to an open-cut trench, he would still prefer an OHL the effects of which would be reversible (see SPM/027, §4).

¹³² SPM/025.

importance.¹³³ Consequently, SPM urges the Inspectors and the Secretary of State to place no weight on the NRW Option in their deliberations.

Conclusions

185. A final point needs to be made in the context of the non-NRW options: the Inspectors asked, recognising that it was for SPM to bridge any gap in any consent that may be granted for the Llandinam Scheme, whether Point C should be as far West as possible in order to provide SPM with as much flexibility as possible as to how the gap is bridged (i.e. SPM could join the consented line at a point further East of Point C if there were technical reasons for doing so).
186. PCC was happy with the proposal. SPM is too (in so far as its conclusions on undergrounding are rejected). However, it is important that the Secretary of State recognises that SPM (and other parties) have drawn their conclusions on the basis of the options set out above. If a shorter route were proposed, the balance would change and the Secretary of State will not have the views of the parties on that particular variation.
187. It is not suggested that the Secretary of State need do anything about this, save draw his own conclusions, but he needs to be aware that the only balancing exercises conducted by the parties and set out in evidence are on the options set out above.
188. By way of conclusion on the issue of undergrounding, it is important to stand back and consider what the objectors are asking for here. What is being proposed by SPM is a single electric 132kV OHL, supported by wood poles, in a landscape which is not nationally designated and in circumstances where the proposed OHL would deliver urgently required renewably generated energy with limited residual likely significant environmental effects. It is agreed by all that the EN-5 test (i.e. the test for (partial) refusal) is a high bar – the Government has deliberately set it high in order to help deliver electricity connection infrastructure at a reasonable cost to consumers.
189. If the EN-5 test is satisfied here, as the objectors argue, what would the impact on the delivery of the Secretary of State's energy policy be given the remote and often protected landscapes in which renewable generators frequently must be sited?
190. The Llandinam Scheme is a 200mm² wire on 14m high wood poles that runs through a non-designated landscape. If this section must be undergrounded would not any steel tower scheme or wood pole through highly valued landscape need to be placed underground? Such a decision would effectively reverse the Government's express

¹³³ CD/COM/001, §4.4.3, 7th bullet.

decision not to put in place a presumption in favour of undergrounding.

191. In SPM's view it would set a costly precedent to apply what is designed to be a high threshold policy test in an area that those drafting the policy did not anticipate – a landscape that is not nationally designated – and in such a way as to make the delivery of urgently needed renewable energy in many instances more difficult and certainly more expensive.
192. Finally, it should be noted that in the event of the Neuadd Goch being consented, PRV states (paragraph 5.11 of his proof) that undergrounding of the Llandinam Scheme would not be necessary.

Matter 5: the potential impact of the proposed development on human health

Introduction

193. Whilst the Secretary of State raised the issue of human health as one of the matters on which he wants to be informed, the reality is that it was not at issue between the principal parties. Indeed, PCC confirmed in its SOC that it raised no objection on this ground¹³⁴ and neither NRW nor the Alliance even mentioned health or EMFs in their respective SOC.
194. However, it is an issue that SPM takes extremely seriously and it recognises that members of the public expressed concerns about EMFs and impact on human health and mindful of this, the Secretary of State's matter number 5 and the statement in EN-5 to the effect that: "*Before granting consent to an overhead line application, the IPC should satisfy itself that the proposal is in accordance with the guidelines, considering the evidence provided by the applicant and any other relevant evidence*"¹³⁵ SPM called Dr John Swanson ("JS"), the EMF Scientific Advisor to both National Grid and the Energy Networks Association, to give evidence on the Llandinam Scheme and any potential impacts on human health.
195. JS was the only expert from whom the inquiry heard on health matters (at least in relation to the Llandinam Scheme). What is more JS was not cross-examined or otherwise challenged. It is his evidence that is the relevant evidence to be considered in accordance with the above paragraph of EN-5.¹³⁶

Policy

196. JS explained that whilst there are no statutory regulations in the UK that limit the exposure of people to EMFs, the Government is responsible for implementing appropriate measures for the protection of the public from EMFs. It is advised by Public Health England ("PHE") on this issue. The Government's clear policy is that exposure of the public should comply with the International Commission on Non-Ionizing Radiation Protection ("ICNIRP") (1998) guidelines in the terms of the 1999 EU Recommendation ("the Guidelines") which contain specific exposure limits.¹³⁷ EN-5 requires compliance with the Guidelines.¹³⁸
197. The Government has published a Code of Practice which sets out what will be regarded as an acceptable demonstration of compliance

¹³⁴ OBJ/002/SOC/OHL, §11.1.

¹³⁵ CD/COM/003, §2.10.9.

¹³⁶ CD/COM/003, §2.10.9.

¹³⁷ See SPM/HEALTH/POE/SWANSON/007A, p.10, Table 5.1.

¹³⁸ CD/COM/003, §2.10.9 and 2.10.11.

with the Guidelines.¹³⁹ The Code of Practice provides for certain classes of equipment that are inherently compliant with the exposure limits. The Energy Networks Association keeps a list of types of equipment where the design is such that the equipment is not capable of exceeding the exposure guidelines. Overhead power lines up to and including 132kV are included on that list.

Assessment

198. As a result the Llandinam Scheme complies with the policy and it is not necessary for SPM to calculate the fields to demonstrate compliance.
199. However, JS did perform such calculations for completeness and to provide further comfort for those members of the public concerned with this issue. The maximum fields the Llandinam Scheme would be capable of producing have been calculated as an electric field of 900V/m and a magnetic field of 3.3 μ T. These are considerably less than the relevant exposure limits of 9000V/m and 360 μ T respectively, confirming that the Llandinam Scheme is compliant with policy both as result of technology type and compliance with the exposure limits for calculated fields.
200. The Government also has an optimal phasing policy.¹⁴⁰ However, this policy is not relevant to the Llandinam Scheme which is a single-circuit line such that there is no second circuit with which to optimise the phasing relative to the first circuit. As JS explained, single-circuit lines are automatically compliant with the policy on phasing.
201. As to indirect effects such as microshocks, there is no policy limit, but JS explained that a field of 5000V/m can be taken as a level where further assessment may be needed. The maximum field produced by the Llandinam Scheme is 900V/m. As a consequence, JS concluded that no significant indirect effects are expected.

Cumulative impacts

202. Finally there will be no cumulative impacts with or caused by the Llandinam Scheme. EMFs produced by a source such as the Llandinam Scheme fall rapidly with distance. As a result, individual sources of EMFs tend to act only as localised sources and there is negligible interaction between different sources. Thus, as JS explained, provided each individual source is compliant with the relevant exposure limits, a person's exposure from the totality of sources present can be taken as compliant too. Therefore there will be no cumulative effects from the presence of the Llandinam Scheme.

Conclusions

¹³⁹ SPM/HEALTH/POE/SWANSON/007C, App.6.

¹⁴⁰ For further details of which see CD/COM/003, §2.10.11 and SPM/HEALTH/POE/SWANSON/007A, §5.3 and §6.4.9-6.4.11.

203. The conclusion of the unchallenged evidence of JS is clear: there is no health related issue that should cause consent to be withheld for the Llandinam Scheme. On the contrary, the Llandinam Scheme is wholly compliant with Government policy on this issue.

Matter 6: the social and economic impact of the proposed development, including on tourism

Introduction

204. PCC does not object to the Llandinam Scheme on the basis of the social and economic impact of the proposed development.¹⁴¹ Indeed, PCC expressly concluded after investigation that there was insufficient evidence to support an objection on socio-economic and tourism grounds in relation to any of the projects before this inquiry either individually or cumulatively.¹⁴²
205. Whilst the Alliance suggested in its SOC that “insufficient acknowledgement” was made by SPM of adverse socio-economic and community effects,¹⁴³ the Alliance did not submit evidence on socio-economic matters. Accordingly, the only evidence before the inquiry on this issue in relation to the Llandinam Scheme was SPM’s through Rory Brooke (“RB”).
206. That only SPM adduced evidence on this matter is significant. PCC had well in mind, in deciding not to object on this ground, the advice in EN-1¹⁴⁴ that a decision-maker may conclude that limited weight should be given to assertions of socio-economic impacts that are not supported by evidence, particularly in view of the need for energy infrastructure. That advice should be followed here.

Policy

207. KB and RB identify and set down the relevant socio-economic policy in their respective proofs of evidence.¹⁴⁵ At the national level, there are no specific policies in relation to OHLs and socio-economics (EN-5 does not deal with socio-economic matters explicitly). EN-1, however, recognises that large-scale energy projects may have a socio-economic impact at local and regional levels. As a result, it requires consideration of the topic in the ES.¹⁴⁶ EN-1 also identifies the need to minimise impacts on the best and most versatile

¹⁴¹ Socio-economics form no part of NRW’s case either: CON/003/SOC/OHL.

¹⁴² OBJ/002/OSOC/2/ADD and see also SPM/ECONOMIC/POE/BROOKE/009A, App.1.

¹⁴³ ALL/SOC/SESSION3, §7.1.

¹⁴⁴ CD/COM/001, §5.12.6.

¹⁴⁵ Respectively: SPM/PLANNING/POE/BERRY/011A, §7.6.98-7.6.103 and SPM/ECONOMIC/POE/BROOKE/009A, section 4.

¹⁴⁶ CD/COM/001, §5.12.3. And that has been complied with here. Socio-economic matters were originally scoped out. However, after the designation of EN-1 and having regard to comments in a number of consultation responses, SPM decided to include a chapter on this issue in the Updated ES of 2013.

agricultural land.¹⁴⁷ Local policies focus on the importance of and the need to protect tourism assets.¹⁴⁸

Assessment

208. RB describes in detail the assessment that he and his team carried out in order to write the socio-economic chapter of the Updated ES.¹⁴⁹ The assessment was comprehensive and was made by considering findings from a range of sources concerning impacts on farms/ agricultural land, tourism attractions, tourism accommodation, local community assets, tourism supporting businesses; and other businesses (not captured elsewhere).

Relationship between socio-economic matters and landscape and visual effects generally

209. As RB identified, the concerns raised by objectors in relation to socio-economic matters generally focused on the potential visual impacts on the rural landscape of the area and the implications this could have for both residents and visitors. The quality of the landscape and the tourist economy are clearly linked. However, as RB explained, there is a difference between the LVIA – which focuses on the quality of the landscape – and the assessment of socio-economic effects which is focused on, for example, the number and type of persons experiencing the same LVIA effect and the consequence it has upon their willingness to use visitor attractions, stay in the area and to spend money. In other words, the socio-economics assessment looks at any change of behaviour consequent on the LVIA effect. For example, the fact that a significant landscape and visual effect arises at a particular point along a public right of way does not necessarily mean that users of that public right of way will be put off: their behaviour will relate to their experience of the whole route or section of route walked.¹⁵⁰ This explains why SG can assess the impact on a viewpoint on the Kerry Ridgeway Regional Trail as significant and RB, from the socio-economic viewpoint, as not significant.

Construction and decommissioning phases

210. The assessment determined that no significant socio-economic effects would arise from the construction and decommissioning of the Llandinam Scheme, although both phases would result in a modest amount of employment locally.

Operational phase

211. The Updated ES concludes that the Llandinam Scheme would not have significant impacts upon the local population, economy, local community assets, tourist attractions or tourism during its operational stage.

¹⁴⁷ CD/COM/001, §5.10.8.

¹⁴⁸ See CD/COM/006, paragraph 9.15.2 and policies SP1 and TR2.

¹⁴⁹ SPM/ECONOMIC/POE/BROOKE/009A, section 5.

¹⁵⁰ See SPM/ECONOMIC/POE/BROOKE/009A, §5.16.

212. As to agriculture specifically, consultation with landowners found a general acceptance of the Llandinam Scheme. The expected magnitude of impact is negligible and, as such, all impacts would be not significant. As a result, the EN-1 policy in relation to agriculture is complied with.
213. With regards to Tourism Attractions¹⁵¹ – which include all of the public rights of way encompassed in the Secretary of State’s Matter 7(c)¹⁵² – again, there will be no likely significant adverse effects. The Updated ES concludes that 11 out of 13 tourist attractions are anticipated to experience negligible magnitude impacts – predominantly because of the intervening distance from the resource to the Llandinam Scheme, vegetation cover and the overall perceptibility of the OHL. The Llandinam Scheme will be visible on a number of the public rights of way but, importantly, when the OHL is visible it is so only from a fraction of the route’s length. As a consequence, RB concludes that the presence of the OHL is unlikely to deter use of the public rights of way, including the Kerry Ridgeway Regional Trail, so that there is no overall significant adverse effect on tourist attractions in general or public rights of way in particular.
214. Turning to tourist accommodation, the impacts on 21 of the 22 tourist accommodation resources are assessed as not significant.¹⁵³ The one resource where significant adverse impacts are envisaged is the Tavern Caravan Park. These impacts could result in a small reduction in visitor numbers at this resource. However, visitors have similar accommodation options elsewhere in the area, meaning the local economy is unlikely to be affected by this adverse significant impact and, in any event, if proposed mitigation is carried out (which is subject to reaching agreement with the relevant landowner) then the residual effects at the Tavern Caravan Park would be reduced to not significant.

*Cumulative impacts*¹⁵⁴

215. There are not expected to be any significant cumulative effects under Cumulative Scenario 1.

¹⁵¹ CD/SPM/ES/001, Tables 10.14.

¹⁵² These are: the Kerry Ridgeway, Glyndwr’s Way National Trail, Offa’s Dyke National Trail, Severn Way and Sustrans National Cycle Trail 81. RB addresses each of these public rights of way in his proof of evidence: SPM/ECONOMIC/POE/BROOKE/009A, section 7.

¹⁵³ CD/SPM/ES/001, Tables 10.15. The Alliance asked RB about three further tourism assets which were not assessed in the Updated ES. RB provides an explanation as to why these resources were not assessed in SPM/011.

¹⁵⁴ Cumulative impacts were considered under three scenarios: Cumulative Scenario 1 – Llandinam Scheme + Llandinam Repowering Wind Farm; Cumulative Scenario 2 – Cumulative Scenario 1 + other conjoined inquiry wind farms (SSA B and SSA C); and Cumulative Scenario 3 – Cumulative Scenario 2 + non-inquiry proposed wind farms + Mid Wales development consent order (DCO) connections + Town and Country Planning (TCPA) development (including single turbines). See CD/SPM/ES/001, §10.9.

216. However, under Cumulative Scenarios 2 and 3 there are expected to be moderate beneficial and major beneficial impacts on employment, particularly during the construction phase, respectively.
217. Under Scenario 2 there is expected to be a moderately adverse effect upon the western section of the Kerry Ridgeway and under Scenario 3 there would be significant effects upon the Kerry Ridgeway and the Sustrans National Cycle Trail 81 (these effects arise mainly through the contribution of the other schemes). However, RB concludes that under both these Cumulative Scenarios there would be no significant cumulative effects on tourism overall because the vast majority of tourist attractions and accommodation in the area would experience no significant effects.

Conclusion

218. The evidence before the inquiry plainly shows that no overall significant adverse effects on socio-economic assets would arise from the construction, operation and decommissioning of the Llandinam Scheme. The impacts identified will be minimised where possible and suitably mitigated.
219. As a result of the above, KB concluded that the principal policy requirements in relation to socio-economics have been met. At the national policy level, an assessment has been undertaken and reported on in the Updated ES. The Updated ES concludes that there are no significant adverse effects in relation to agriculture. As to local policies, the relevant Powys UDP policies are met; the Llandinam Scheme will not result in unacceptable adverse impacts on tourism. Whilst it is unlikely to sustain or enhance the social, cultural and linguistic characteristics of the area,¹⁵⁵ it will not unacceptably detract from them and the Llandinam Scheme will provide an element of infrastructure that will contribute to meeting the energy needs of local communities.
220. Accordingly, there is no basis on which to withhold consent on the basis of the Llandinam Scheme's socio-economic impacts.

¹⁵⁵ CD/COM/006, policy SP1 requires regard to be had to the need to sustain or enhance the social, cultural and linguistic characteristics of the area.

Matter 7a: the relative merits of the proposed development, any alternatives considered and likely effectiveness of mitigation measures to address: the landscape and visual impact of the proposed development both individually and cumulatively with existing energy infrastructure and any energy infrastructure which has already been granted planning permission or where planning permission has been applied for, including impact on the Vale of Montgomery Landscape of Outstanding Historic Interest in Wales, Areas of Special Landscape Character and Kerry Ridgeway Regional Path, Severn Way Regional Path and the National Cycle Route near Welshpool Substation;

Introduction

221. The landscape and visual effects of the Llandinam Scheme are assessed in detail in Chapter 6 of the Updated ES¹⁵⁶ as well as by SG in her proof of evidence.¹⁵⁷ PRV agreed in XX that there was no significant divergence between SG and himself on methodology. Indeed, he confirmed in XX that he agreed with the great majority of judgments within Chapter 6 of the Updated ES and was content to describe that chapter as "*a thorough and comprehensive analysis backed by sound judgment.*"
222. SG has been involved in this project since its inception. PCC, whilst not questioning in any way SG's qualifications as a landscape expert, nor her lengthy involvement in the project, suggest (closing paragraph 637) that she fails to understand the landscape. That is wholly unfair and the suggestion is totally undermined by the fact that PRV agrees that SG's field based approach to landscape sensitivity is appropriate and largely agrees with her conclusions. When convenient, PCC sought to place considerable weight on CPAT's lengthy involvement in the scheme (paragraph 683), SG's similar history and involvement with this project is however ignored. In a similar vein, SPM wholly rejects the suggestion that SG skewed her methodology to result only in moderate effects to suit SPM's requirement that this be an OHL scheme (paragraph 652). As explained above, there was no such requirement but, more importantly, the suggestion that SG skewed her evidence is entirely without justification. Rather, it is simply not right (as PCC seems to imply) that it is inevitable that a scheme of this nature would have major effects and only a "skewed" methodology would find otherwise. SG indicated that she regards major affects as likely to arise in the context of the cumulative impact scenarios, thereby illustrating when in her professional view such effects arise in this landscape.
223. A number of questions were raised about the methodology behind the photomontages as well as with respect to individual viewpoints

¹⁵⁶ CD/SPM/ES/003, Chpt.8.

¹⁵⁷ SPM/LANDSCAPE/POE/GIBSON/010A, see, in particular, section 8.

during the course of the inquiry. These queries were addressed in a note to the inquiry and some updated viewpoints were provided as well.¹⁵⁸ Furthermore, as SG explained, the viewpoints were agreed through the consultation process (including the provision of further viewpoints to address areas of concern to the consultees).¹⁵⁹ At paragraph 641 of PCC's closings they say that SG accepted that she had wrongly taken a "letterbox" approach to photomontages. In fairness what she said was that her judgment was made from being in the field without the need for the images and that the images were included only to illustrate her judgment.

224. It is acknowledged that the installation of some 382 wood pole structures into the landscape would give rise to some unavoidable significant landscape and visual effects. As already identified above, the Government expects and acknowledges that NSIPs or equivalent projects will have inevitably have some landscape and visual impacts. Neither SG nor PRV seek to suggest that a significant landscape or visual effect means that the proposed development is unacceptable. PRV states that any significant landscape and visual effect, in order to warrant refusal of the Llandinam Scheme, should be so severe as to substantially diminish value in the longer term.¹⁶⁰
225. SG concludes that, whilst in places the landscape and visual effects of the Llandinam Scheme alone may be moderate adverse (and, therefore, significant) or minor to moderate adverse (and, therefore, borderline significant), such effects would be geographically limited and would diminish rapidly with distance from the wood pole structures.
226. When assessing the landscape and visual impacts of this scheme, it is particularly important to bear in mind its form and scale. The development here proposed is a series of wood poles supporting some wires. It is, as SG said, "visually permeable." That is not to say that one can see through the poles but, as can be seen from RL's illustration of pole types,¹⁶¹ (a) each element of each structure is relatively speaking slight (especially when one considers that the Llandinam Scheme meets the criteria to be a NSIP) and (b) when each support structure is looked at as a whole, one can see through it. Furthermore, at a height of approximately 14m, the Llandinam Scheme is strikingly small when compared to either the wind farms being considered at this inquiry or electricity network infrastructure at 400kV or at 132kV on steel towers.¹⁶²
227. All this means, as Cadw recognises in the context of cultural heritage (which is addressed in more detail below), that the visual effects of the Llandinam Scheme reduce rapidly with distance. SG explained in

¹⁵⁸ SPM/020 and SPM/020a.

¹⁵⁹ See SPM/LANDSCAPE/POE/GIBSON/010A, section 3.

¹⁶⁰ OBJ/002/LAND/POE/RUSSELL/OHL, §2.11.

¹⁶¹ SPM/CONSTRUCTION/POE/LIVINGSTON/004C, App.2.

¹⁶² SPM/CONSTRUCTION/POE/LIVINGSTON/004C, App.1.

EIC that at 1km distance a 14m high wood pole would appear approximately 14mm high in the view.¹⁶³ PRV accepts that the effects diminish rapidly with distance. He sets out his view that high (or in his terms "dominant") visual effects would generally extend only to about 120m away from the scheme but could extend to "*as much as*" 200m in particular circumstances (albeit one of the viewpoints discussed below at which he contends there is a dominant effect is some 630m from the line). In other words, where there are significant landscape and visual effects, those effects are highly localised.

228. In the context of a project of this nature and its importance to the fulfillment of national energy policy imperatives, localised effects are precisely the type of effect that government policy, in the form of EN-1, accepts will arise with the development of nationally significant infrastructure projects.

Landscape effects

229. PRV confirmed in XX that he agreed that SG's subdivision of the proposed route into Sections A to H through her Field Based Landscape and Visual Sensitivity Assessment¹⁶⁴ was appropriate. Indeed, he adopted her approach and agreed with her assessment of Sections A, D, E, F and G. Accordingly, the only material differences between SG and PRV with regards to landscape effects are as follows:

- a. Section B: PRV said that the magnitude of change was underestimated by SG and it should be high rather than medium. However, the overall conclusion is unaffected by substituting PRV's assessment on magnitude: both SG and PRV assess the landscape effects in Section B as significant. Section B is addressed in more detail below;
- b. Section C: again, PRV thought that SG/ the Updated ES had undervalued the magnitude of effect but even substituting PRV's magnitude of change (medium) the resulting landscape effect remains not significant; and
- c. Section H: here, PRV regarded SG/ the Updated ES to have overvalued the landscape sensitivity which he considers to be low. The effect of revising the landscape sensitivity down as PRV suggests is that the effect goes from borderline significant in the Updated ES to not significant.

230. It follows that the only area where there is a material divergence of views between SG and PRV in landscape effects, as PRV confirmed in XX, is within Section B.

¹⁶³ See CD/SPM/ES/001, Vol.1, p.4.

¹⁶⁴ CD/SPM/ES/001, Vol.3a, App.6c

231. It is convenient here to mention JC. He did have some methodological difficulties with SG's field based approach to landscape effects and, in particular, he said that the assessment of landscape character had been undertaken at too coarse a level and this informed his criticism of the boundaries that SG had developed between the sections of the proposed route.
232. JC was alone in raising this concern. His concerns need to be placed in context: first, they relate principally to Sections F, G and H. As set out above, PRV agrees with SG's assessment of F and G and regards her assessment of Section H as too conservative. Secondly, it is unfortunate that NRW through JC raise this issue now. As SG explained in EIC, NRW was consulted on the Field Based Landscape and Visual Sensitivity Assessment. It was sent an outline methodology for the Updated ES in July 2013¹⁶⁵ which included at Annex 3 a full draft of the proposed Field Based Landscape and Visual Sensitivity Assessment. NRW responded to the draft methodology in August 2013 but the response expressed no concern in relation to the boundaries of the sections drawn up in the assessment. It did raise concerns about two judgments on sensitivity saying that Section F which was assessed in the draft as medium ought to be medium to high and something similar in respect of Section H (albeit the letter also said that the assessment was reasonable). SG took this advice on board and revised both up in the final version. NRW did not express concern about the sensitivity analysis of any other section. It is odd now, therefore, to find NRW criticising an assessment which expressly takes account of the only criticisms that NRW raised in August last year (which, as JC confirmed in XX, was after his instruction).
233. Furthermore, descending into more detail would not change SG's analysis. It is clear from the Field Based Landscape and Visual Sensitivity Assessment (and SG confirmed as much in EIC) that she took account of the Outstanding LANDMAP overall evaluation for the historic landscape aspect in Sections F, G and H – whether or not that Outstanding historic landscape aspect, in fact, crosses the railway line at Level 3 (the reason JC wanted Level 4 used was that it did cross the railway line at that greater resolution). In short, in preparing her assessment SG took a point against herself such that a Level 4 analysis does not bring anything new. The other reason that JC wanted Level 4 detail taken into account was that the LANDMAP historic landscape aspect overall evaluation shows the line to pass through an area of High value as opposed to Outstanding value through the majority of these sections (and including through much of the VMRHL). SG accepted this was curious (given the landscape is on the Register) and explained that was why she refers to outstanding values in her Field Based Landscape and Visual Sensitivity Assessment. Again, greater detail would not bring about any significant change in the analysis.¹⁶⁶ SG was sensitive to these

¹⁶⁵ CD/SPM/ADD/L&V/02.

¹⁶⁶ CD/SPM/ES/001, Vol.3a, App.6b, Figure 20.

points in carrying out her assessment. Accordingly, these methodological criticisms are only of academic interest and, given the clear agreement between PCC and SG in this regard, should be afforded very limited weight, if any at all.

Section B

234. The landscape in this section of the Llandinam Scheme is not designated. It has, however, as PRV and SG agree, a high sensitivity.¹⁶⁷ As SG explained, the sensitivity is higher than might be inferred from scenic quality alone because the area is a locally valued historic landscape that contains a cluster of SAMs and is also locally recognised and promoted as a recreational resource due to the Kerry Ridgeway Regional Trail and a number of footpaths, bridleways and Open Access Areas.

235. As PRV agreed in XX, it is correct to take into account a number of features that exist already in the landscape when considering whether or not the Llandinam Scheme would be uncharacteristic in the landscape. PRV acknowledged that all of the following were already present in the landscape: the Llandinam wind farm, turbines at Llwyn Dwr and Esgair Draellwyn and Dolfor, low voltage electricity and telegraph lines supported by wooden poles, areas of commercial forestry (a natural adjunct to which is the felling of trees), roads, farm buildings and other farm infrastructure such as fencing and sheep pens.

236. It is with regard to the magnitude of change in Section B that there is some divergence of views as between PRV and SG. PRV's principal concerns in this regard are the effects of the Llandinam Scheme on trees, tranquility and long views within Section B. He accepts the following key characteristics would not be severely affected: the sense of openness, the scale and the smooth and consistent landcover. PRV also accepts that there would no change to the topographical character of the landscape.

237. Tranquility can be dealt with swiftly, as PRV confirmed in XX, there is no objection to the Llandinam Scheme on the basis on noise. Whilst the visual presence of OHLs can also be regarded as an indicator of loss of tranquillity, the presence of the vertical infrastructure identified above already indicates that this area has experienced a decline in tranquillity.

238. As to trees, PRV identifies a severe effect from the proposed removal of two strips of deciduous plantation in the vicinity of Black Gate and a further strip of coniferous trees.

¹⁶⁷ Although it should be noted that the LANDMAP Kerry Ridgeway Visual and Sensory Aspect Area is valued as high rather than outstanding (OBJ/002/LAND/POE/RUSSELL/APPH/OHL).

239. As to the coniferous trees,¹⁶⁸ PRV accepted in XX that the harm caused by the removal of the trees is less than severe in its own right and he is less concerned about their removal than the deciduous trees. Moreover, it must be recognised, as PRV did accept in XX, that forestry is one of the uses of land in this locality¹⁶⁹ and an ordinary incident of forestry is the felling of trees. The removal of coniferous trees in particular should not, therefore, be regarded as uncharacteristic in this landscape.
240. Turning then to the deciduous trees, the concern expressed in the LANDMAP Kerry Ridgeway Visual and Sensory Aspect Area is the preservation of pockets of woodland associated with watercourses.¹⁷⁰ As PRV accepted in XX, neither of the pockets of deciduous woodland with which he is concerned¹⁷¹ is associated with a watercourse. It is the Black Gate plantation¹⁷² which may be associated with the River Ithon but that group will remain.¹⁷³
241. The effect of the removal of these trees can be seen in VP71.¹⁷⁴ Belts of both coniferous and deciduous trees are plainly visible and form a feature of the landscape. It is important to note that the belts are not continuous. There are breaks. This can be seen clearly in the aerial photograph of the area provided by PRV in EIC.¹⁷⁵ If one looks at the coniferous belt in the distance on the left of the image one sees a break in that belt. The Llandinam Scheme will create another break. The overall effect, therefore, is not a change to the landscape character. In short, as PRV accepted in XX, it is a feature of the existing landscape that both deciduous and coniferous trees are read in distinct groups and this feature would remain after development. It is important to bear this in mind when considering PRV's judgment that these changes are "so severe" in landscape terms that this part of the Application should be refused.
242. As to long views and the sense of historic landscape, this is dealt with in more detail in the context of cultural heritage but the following points should be noted. First, the form and scale of the Llandinam Scheme is such that it is permeable (even if PRV did not like that phrase) and so does not prohibit long views. An example of which is VP50¹⁷⁶ which PRV places at the higher end of his

¹⁶⁸ See CD/SPM/ES/001, Vol.3b, App.7d, TP-18: group 379 (comprising 300 Norway spruce).

¹⁶⁹ See the LANDMAP Kerry Ridgeway Visual and Sensory Aspect Area which identifies forestry as a land use in the area (OBJ/002/LAND/POE/RUSSELL/APPH/OHL).

¹⁷⁰ OBJ/002/LAND/POE/RUSSELL/APPH/OHL.

¹⁷¹ See CD/SPM/ES/001, Vol.3b, App.7d, TP-18: S378 and 372.

¹⁷² See CD/SPM/ES/001, Vol.3b, App.7d, TP-18: the Black Gate plantation is made up of groups S377, S376, S375, S374 and S373.

¹⁷³ Note, though, that four trees from S373 are to be felled but the great majority of the Black Gate Plantation would be unaffected.

¹⁷⁴ SPM/020a (this is one of the viewpoints that was updated during the inquiry).

¹⁷⁵ OBJ/002/LAN/004 (penultimate sheet).

¹⁷⁶ CD/SPM/ES/001, Vol.4, p.58.

significance spectrum in terms of visual effects but in which the Llandinam Scheme plainly does not prohibit or materially affect the long, open views. A further example is VP04¹⁷⁷ (from Two Tumps), at which location the views are long and open and the line is settled unobtrusively in the valley below (indeed, PRV assesses the visual effect here as not significant).¹⁷⁸ This is also clearly shown in DB's sections.¹⁷⁹ These show that the visual links which are identified on MAC2 as important to the creation of a sense of history are not interrupted by the Llandinam Scheme.

243. PRV judges the landscape effects on Section B as so severe as to be unacceptable. It is submitted that this judgment goes too far: the area is not designated, it is not valued as Outstanding in LANDMAP terms, there are a number of man made features in the baseline, PRV's major concern here is trees but their removal is an ordinary part of forestry and, more significantly, both before and after development the relevant feature of the landscape in this context – identifiable groups of woodland – would remain.
244. Moreover, if one reads PRV's detailed assessment of the effects on the landscape in Section B which is contained in his appendices¹⁸⁰ his judgment appears far less severe than that expressed in his proof. The language is much more nuanced and it is submitted that such language is more appropriate to the effects of the Llandinam Scheme in this area. There is no conclusion that the impacts are "so severe" (or indeed even mention of trees). Reading PRV's detailed assessment, it is difficult not to conclude that his view expressed therein is much as SG's own assessment for this section of the Llandinam Scheme – i.e there will be significant effects but not major adverse ones.
245. As SG said in EIC, although there would be localised significant effects in Section B, overall the Llandinam Scheme would not be uncharacteristic in this section, given the existing modern infrastructure (identified above) in the landscape and the fact that the Llandinam Scheme is of a similar scale to other features in the landscape. It should also be recalled that the effects of the Llandinam Scheme, although long term, are reversible.

Visual effects

246. As to visual effects, PRV said in XX that there was "*overwhelming consistency*" with the judgments in the Updated ES on the sensitivity of receptors at viewpoints and a "*high level of agreement*" as to judgments on magnitude (albeit that PRV employs different terms). Again, aside from Section B, there is broad agreement between PRV

¹⁷⁷ CD/SPM/ES/001, Vol.4, p.8.

¹⁷⁸ See OBJ/002/LAND/POE/RUSSELL/APPF/OHL.

¹⁷⁹ SPM/023.

¹⁸⁰ See OBJ/002/LAND/POE/RUSSELL/APPG/OHL.

and SG. PRV confirmed in XX that he considered the effects of the Llandinam Scheme to be acceptable.

247. It is worth touching upon PRV's approach to the assessment of visual effects. He uses the methodology laid down in GLVIA3 for judgments on sensitivity but a different source for judgments on magnitude; the Scottish Natural Heritage document called "Visual assessment of Wind Farms: Best Practice (2002)"¹⁸¹ ("the SNH document").¹⁸² It is from this latter document that PRV derives terms such as "dominant". It is worth recalling that the SNH document is specifically designed for the assessment of wind farms and that it uses the term "dominant" in the context of a 100m turbine in the range of 0-4kms. There is no real basis for comparisons of such turbines to a 14 metre static wood pole which is some seven times smaller. This must be borne in mind when reviewing PRV's judgments.

Section B

248. The Inspectors and the Secretary of State will clearly form their own views on the visual impacts of the Llandinam Scheme. The principal relevant viewpoints are VP3,¹⁸³ VP26,¹⁸⁴ VP27,¹⁸⁵ VP50¹⁸⁶ (addressed above), VP70¹⁸⁷ and VP71¹⁸⁸ (addressed above). It is these viewpoints that PRV assesses as having significant effects (as well as his own viewpoints, but these represent similar views).¹⁸⁹ It is noteworthy that VP26 and VP71 fall outside of the 200m at which PRV suggested views would not be significantly affected. Indeed in the case of VP71, which has already been discussed above, the viewpoint is some 630m from the nearest pole i.e. over three times that distance.

249. It is worth taking two further viewpoints as examples for the purpose of closing: VP3, VP26 and VP70.

250. As to VP3 and PCC's comments in closing (paragraph 647): SG explained that one of the main changes in GLVIA3 was a move away from the formulaic approach and a greater emphasis of professional judgment. It was in this context that SG explained that her overall judgment was that the effect was moderate (and so significant in EIA terms) though the sensitivity and magnitude of change was high. SG said the effect still fell within the moderate range but was higher (albeit within the same range) than in 2009, due to the increased sensitivity of the users of the bridleway. In the end it does not

¹⁸¹ CD/VATT/LAN/003.

¹⁸² See OBJ/002/LAND/POE/RUSSELL/APPB and C/OHL.

¹⁸³ CD/SPM/ES/001, Vol.4, p.6.

¹⁸⁴ CD/SPM/ES/001, Vol.4, p.38.

¹⁸⁵ CD/SPM/ES/001, Vol.4, p.40.

¹⁸⁶ CD/SPM/ES/001, Vol.4, p.58.

¹⁸⁷ CD/SPM/ES/001, Vol.4, p.130.

¹⁸⁸ SPM/020a.

¹⁸⁹ See OBJ/002/LAND/POE/RUSSELL/APPF/OHL.

greatly matter in practical terms whether the effect is moderate or major – as SG considered the effect significant in EIA terms and SPM had considered the justification for undergrounding all or part of the Llandinam Scheme by virtue of the EN-5 Paper and the Alternatives Paper.

251. As to VP26: this is a viewpoint where PRV says the magnitude of change is “prominent” (i.e. lower on the scale than “dominant”). Here, as PRV agreed in XX, the Llandinam Scheme is seen in natural gully, backgrounded by landform and natural features of similar colour. It is well accommodated in the view. There already exists an OHL on wooden poles and post and wire fencing. At a range of 256m, the apparent height of the nearest element of the Llandinam Scheme would be under 7mm. For these reasons, SPM commends the conclusion in the Updated ES that this does not represent a significant effect.
252. VP70 is one which PRV assesses as having a “dominant” magnitude of change. The distance from the nearest pole is 125m (giving an apparent height a little over 14mm). Again, there are telegraph poles, fencing, roads, and the dilapidated sheep pens in the landscape already. Whilst the Llandinam Scheme would be a noticeable man made feature it would be backgrounded by landform and yet PRV applies the very highest category of change in his armoury: his judgment would be the same if the development proposed in the same location was a 100m plus wind turbine (the context in which the term dominant was developed) or even a nuclear power station. In short, PRV has nowhere to go. That cannot be sensible when the development proposed is a 14m high wood pole structure with suspended conductors. No large-scale infrastructure project could have a slighter scale and form.
253. So whilst PCC seeks to attack SG for her failure to assess any previous 132kV projects on which she has worked as having major adverse effects, SG’s judgment sits very comfortably with the scale and form of the development comprised in a 132kV scheme.
254. PCC in closing on a number of occasions characterises SG’s approach as being that if the assessor can envisage infrastructure which would have a greater effect, then the effect cannot be a major impact (see paragraph 650). That is a mischaracterisation of SG’s approach. She neither suggests that the possibility of more harmful development is a material factor in assessing a scheme nor limits the possible magnitude or significance of effects of this particular scheme to moderate. However, the nature of the infrastructure is paramount in applying the magnitude of change criteria in GLVIA3 which are applicable across all types of development. For example, “total loss” has to apply to the nuclear power stations that PCC refers to and permeable wood pole structures. When put like this, it is plain that it is PCC’s point that is bad and SG’s concentration on the form and scale of the development and the consequent landscape and visual impacts of the development proposed is to be preferred. Where SG did compare the Llandinam Scheme with other energy infrastructure,

for example when she explained why she thought the effects of the Neuadd Goch wind turbines on their own would amount to a major effect, this was to illustrate her judgements but was not a driver of them.

VMRHL

255. The impact of the Llandinam Scheme on the VMRHL was raised by both the Alliance¹⁹⁰ and NRW¹⁹¹ in the context of both landscape and visual impact and cultural heritage issues. The cultural heritage effects are discussed below under Secretary of State's matter 7d. The landscape and visual impact of the Llandinam Scheme on the VMRHL is assessed in the Updated ES.¹⁹²
256. SG assessed the VMRHL as having a medium to high sensitivity to the Llandinam Scheme in the Camlad Valley and a medium sensitivity in the rolling farmland to the north based on her Field Based Landscape and Visual Sensitivity Appraisal.¹⁹³
257. The key point in relation to the impact on the VMRHL is that the magnitude of change experienced would vary considerably depending on the distance and direction of the view: more distant views would experience no or negligible change because the proposed OHL would blend in against the backdrop of landform and vegetation, whilst closer views of the OHL would cause more noticeable change, resulting in a moderate effect.¹⁹⁴ Whilst such an effect may be significant, it must be considered in the context of the size of the VMRHL, the great majority of which would be unaffected.
258. PRV confirmed in XX that he thought the impact of the Llandinam Scheme on the VMRHL to be acceptable.¹⁹⁵ It should be noted that the overall evaluation of visual and sensory criteria in the LANDMAP Thematic and Evaluation Maps shows that the great majority of the VRHL is rated as having only medium value¹⁹⁶ and, moreover, the relevant Powys LCA (authored by JC) states that one of the discernible landscape trends is some degree of degradation by modern development including transport infrastructure (much of it linear) and silos.
259. SPM submits, for the above reasons, that there are no landscape and visual effects on the VMRHL that would warrant refusal in whole or part.

Areas of special landscape character

¹⁹⁰ ALL/OHL/POE/03, §5-6.

¹⁹¹ CON/003/LAND/POE/CAMPION/OHL, §6.4-6.7

¹⁹² CD/SPM/ES/001, Vol.1, §6.7.102 and see SPM/LANDSCAPE/POE/GIBSON/006A, §8.50.

¹⁹³ CD/SPM/ES/001, Vol.3a, App.6c (see Sections F and G).

¹⁹⁴ See, for example, CD/SPM/ES/001, Vol.4, p.118, VP19A.

¹⁹⁵ See also OBJ/002/SOC/OHL, §6.1.

¹⁹⁶ CD/SPM/ES/001, Vol.3a, App.6a, Figure 14.

260. As SG explained in her proof of evidence, areas of local or county landscape value in Powys were designated as Special Landscape Areas (“SLAs”) in the superseded Powys County Structure Plan. These designations were not retained in the Powys UDP. Protection of these areas is instead covered by general development plan policy and the use of LANDMAP as a decision making tool.¹⁹⁷

Kerry Ridgeway Regional Path¹⁹⁸

261. From a landscape and visual effects point of view, SG accepts that approximately 500m of the western end of the Kerry Ridgeway Regional Path would experience moderate (and, therefore, significant) landscape and visual effects from the proposed overhead line alone. Moving eastwards along the path, the Llandinam Scheme would gradually drop from view.¹⁹⁹

262. The Kerry Regional Ridgeway Path would be subject to major (and, therefore, significant) landscape and visual effects when seen in combination with the proposed wind farms in SSA C (i.e. under Cumulative Scenario 3 (see below)). SG further explained that these major effects would occur with or without the Llandinam Scheme as a result of proposed wind farm development.

Severn Way Regional Path²⁰⁰

263. Neither PCC nor NRW objected to the Llandinam Scheme on the basis of any impact on the Severn Way Regional Trail. The Trail runs alongside the Montgomery Canal, following the western edge of the study area. At its closest near Garthmyl, it would run just over 1 km from the proposed overhead line. Users of the trail would have easterly views across the River Severn floodplain towards the Llandinam Scheme from a slightly elevated position just above the floodplain. Some views may be possible from the trail, but due to the intervening distance, landform and vegetation, the magnitude of change would be negligible, resulting in an effect of minor significance.²⁰¹ At a distance of 1km and given the nature and form of the proposed development, it is difficult to see how the impact could be anything but insignificant.

National Cycle Route 81

¹⁹⁷ SPM/LANDSCAPE/POE/GIBSON/006A, §7.7.

¹⁹⁸ See SPM/LANDSCAPE/POE/GIBSON/006A, §8.45, CD/SPM/ES/001, Vol.1, §6.7.79 and VP26, 70 and 71, respectively, p.38, 130 and 132 of CD/SPM/ES/001, Vol.4.

¹⁹⁹ As illustrated in VP04 at Two Tumps (CD/SPM/ES/001, Vol.4, p.8).

²⁰⁰ See SPM/LANDSCAPE/POE/GIBSON/006A, §8.48 and CD/SPM/ES/001, Vol.1, §6.7.78.

²⁰¹ CD/SPM/ES/001, Vol.4, p.54, VP40.

264. The Updated ES concluded that likely overall effect on National Cycle Route 81 would be minor and, therefore, not significant.²⁰² This plainly must be right. It is only a very short section of the route that is in any meaningful way affected by the proposed development. This section is right by the Welshpool substation²⁰³ on the B4381. Whilst cyclists would have views of the end of the Llandinam Scheme, including the terminal pole, the duration of that view would be limited, so too would the extent of it, given the screening effect of the existing roadside hedge and, moreover, the cyclists are likely to be focused on what is a busy stretch of road.²⁰⁴ The landscape and views at this point are also already degraded by the presence of the substation and existing OHLs.

265. The effects of the Llandinam Scheme on the National Cycle Route 81 was a particular concern of JC.²⁰⁵ PRV did not object in this regard. JC's concern needs to be placed in context: as he accepted in XX, NRW does not assert that the Welshpool substation is an inappropriate end point for the connection of the LRWF. Moreover, as JC agreed in XX, this section of the cycle route is certainly not one of the reasons why it was designated as such. Given all of this and the need for the Llandinam Scheme and the energy it would deliver, the impact on the National Cycle Route 81 cannot sensibly amount to a reason to refuse this Application.

Residential receptors

266. The Alliance explicitly raises residential receptors in its closing submissions.²⁰⁶ This issue is dealt with comprehensively in the Updated ES and by SG.²⁰⁷ The conclusions are here adopted.

Cumulative landscape and visual effects

267. The cumulative landscape and visual effects in five scenarios²⁰⁸ have been assessed by SG and the results are recorded in her proof of evidence and the Updated ES.²⁰⁹

²⁰² CD/SPM/ES/001, Vol.1, §6.7.80. See also SPM/LANDSCAPE/POE/GIBSON/006A, §8.49.

²⁰³ See VP73 and 74 (CD/SPM/ES/001, Vol.4, p.136 and 138 respectively).

²⁰⁴ Note as explained below the impact would become significant under Cumulative Scenario 3 with the proposed extension to the dairy at Lower Leighton Farm. However, most of this effect would be due to the dairy extension rather than the Llandinam Scheme.

²⁰⁵ See CON/003/LANDSCAPE/POE/CAMPION/OHL, §6.12-6.13.

²⁰⁶ ALL-030, §12.67-12.68.

²⁰⁷ SPM/LANDSCAPE/POE/GIBSON/006A, §8.52 and CD/SPM/ES/001, Vol.1, Table 6.11 and Vol.3a, App.6d.

²⁰⁸ The scenarios are: Cumulative Scenario 1: the Llandinam Scheme + LRWF; Cumulative Scenario 2: the Llandinam Scheme + LRWF + Llanbadarn Fynydd + Llaithddu; Cumulative Scenario 3: the Llandinam Scheme + LRWF + Llanbadarn Fynydd + Llaithddu + Hirddywel + Neuadd Goch + Garreg Lwyd + Bryngydfa + the Mid Wales Connection Project + single turbines + non-energy related development; PCC Cumulative Scenario 1: the Llandinam Scheme + LRWF +

268. SG concluded that in areas where the Llandinam Scheme would be located close to the turbines associated with wind farm development in SSA C, other single turbine planning applications, the proposed Mid Wales Connections Project and the consented dairy extension to Lower Leighton Farm there would be long-term but reversible cumulative landscape and visual effects.
269. As SG explained in EIC, the degree of significance would vary depending on the particular scenario assessed.
270. At the southern end of the Llandinam Scheme, under Cumulative Scenario 3 most of the cumulative landscape and visual effects would be related to the introduction into the landscape of the proposed Llanbadarn Fynydd and Neuadd Goch wind farms. Both of these wind farms would be located east of the A483 in a landscape which is currently largely unaffected by turbines. These effects would impact upon both the landscape around the Glog and Kerry Hill and upon users of the Kerry Ridgeway Regional Trail. However, it should be noted that these effects would arise from the presence of the wind farms alone. The presence of the Llandinam Scheme, although contributing to the overall effect, is not a determining factor in increasing the significance of effect.
271. Also in Cumulative Scenario 3, moderate cumulative landscape and visual effects would potentially arise east of Welshpool from the combined effects of the Llandinam Scheme with the consented dairy extension to Lower Leighton Farm.²¹⁰ These effects would impact upon residential, recreational and transport receptors in the area as well as the valued historic landscape around Leighton Hall estate. However, once again these effects would remain with or without the Llandinam Scheme which on its own was predicted to give rise to minor-moderate adverse effects.
272. PCC expressed concerns about the cumulative effects of sequential views of the Llandinam Scheme and other overhead lines as experienced by people moving around the area on the network of roads and footpaths. It was said that the repetition of views of wood poles and conductors along the proposed route would itself give rise to a cumulative effect.²¹¹ In many views from the local road network, however, the undulating landform, high tree cover and presence of roadside hedgerows would mean that the wood pole structures and conductors would be screened or backgrounded, thereby reducing the prominence of the proposed overhead line. Furthermore, wooden

Llaihddu (whole scheme); and PCC Cumulative Scenario 2: the Llandinam Scheme + LRWF + Llanbadarn Fynydd.

²⁰⁹ See SPM/LANDSCAPE/POE/GIBSON/006A, section 10 and CD/SPM/ES/001, Vol.1, §6.10-6.13.

²¹⁰ See CD/SPM/ES/001, Vol.1, §6.11.47, 6.12.13, 6.12.25, 6.12.45. See also the cumulative viewpoints: CD/SPM/ES/001, Vol.4, p.166 on.

²¹¹ CD/SPM/ES/001, Vol.3a, App.2d, p.40.

poles are a feature of much of the landscape and are in scale with the numerous trees in the area. The robust nature of the hedgerows and their height also means that there are likely to be long time lapses between views. As SG explained in EIC, she concluded for the reasons set out above that there are unlikely to be significant effects on the experience of the wider landscape as people move through it.

Valleys Against Destruction presentation

273. The Alliance's evidence on landscape and visual impacts was presented via the Valleys Against Destruction presentation. The presentation was put together by the Alliance. Neither the production of these materials nor the commentary upon them purported to be the work of an expert in the field. This must limit the weight to be attached to the presentation. SG, who is unquestionably an expert in the field, made the following points in EIC which need to be borne in mind when considering this material:

- a. It does not purport to be a proper LVIA. No reference is made to any recognised guidelines;
- b. No methodology was provided in terms of how the viewpoints were selected or on the technical parameters of the photography (camera type, lens, range, photo-height, GPS co-ordinates, angle of view etc.); and
- c. There are some obvious difficulties with some of the images, for example:
 - i. "s29 D.jpg" is clearly taken above normal eye height providing an unrealistic viewing height. In reality much of this view would be hidden by the intervening hedge. SG also said that this photograph illustrates that a tripod was not used;
 - ii. Some of the photomontages appear to be unrealistic rendered. For example, in "s17 M GE.combined.jpg" the cables appear as a very solid black line and the poles are rendered white which makes them far more prominent than would actually be the case. The photos are also very low resolution;
 - iii. The scale seems inaccurate. Compare the appearance of the poles on "s20 Q1 GE Combined.jpg" with the appearance on "s2 Abergele Lines-24 to 59.jpg". The distance from the ground to the cross beam in each of these images is very different;
 - iv. The background in some of the photographs appears distorted – possibly where images have been stitched together or where Google Earth images have been

combined with photos (see, for example, "s22 Q2 GE combined.jpg").

274. For these reasons, SPM submits that very limited weight should be given to the Valley Against Destruction presentation.

275. Finally, it should be noted that the Alliance referred in closing to the effects of the steel work supporting the conductors:²¹² this is proposed to be addressed by draft condition 4.

Conclusion

276. The residual significant effects are set out in the Updated ES.²¹³ Such effects are inevitable in a scheme of this nature. No areas designated of the highest scenic quality such as Areas of Outstanding Natural Beauty or National Parks would be affected by the Llandinam Scheme. Overall, as SG concludes, the landscape and visual effects of the proposed overhead line are acceptable from a landscape and visual perspective and the Llandinam Scheme could be accommodated within the landscape. Accordingly, there is no reason to refuse on the landscape and visual grounds.

²¹² ALL-030, §12.62.

²¹³ CD/SPM/ES/001, §6.8.11-6.841.

Matter 7b: the impact of the proposed development during construction and operation on biodiversity, including trees and hedgerows and the ecological functioning of protected sites (e.g. the River Wye Special Area of Conservation and Leighton Bats Site of Special Scientific Interest); impacts on European Protected Species under the Conservation of Habitats and Species Regulations 2010 (as amended) (“the Habitats Regulations”)

Introduction

277. The ecological impacts of the Llandinam Scheme have been assessed thoroughly in the Updated ES.²¹⁴ Jeremy James (“JJ”) sets out the relevant legislative and policy context for the consideration of nature conservation matters.²¹⁵ KB also assesses the Llandinam Scheme against the relevant NPS, Welsh and development plan policies.²¹⁶ There is no need to repeat that evidence here; these submissions focus only on the remaining points of dispute between the parties.
278. PCC did not adduce any evidence in relation to ecology on the Llandinam Scheme. Any debate on this topic was confined between SPM, NRW and the Alliance. JJ sets out in his proof of evidence the extent of the ecological issues.²¹⁷ The outstanding issues between these parties are limited to: trees (including veteran trees) (both NRW and the Alliance), protected species (namely, dormice and bats) (NRW) and protected sites (NRW with regards to the Leighton Bat Sites SSSI).
279. Before turning to these issues the following points should be noted. Both legislation and policy require careful routeing and design of projects such as the Llandinam Scheme in order to minimise adverse effects on the nature conservation interests of the area. As to routeing, JJ explains how ecological matters influenced route selection.²¹⁸ Internationally and nationally designated wildlife sites, sensitive habitats and other locations of high conservation value have been avoided altogether where possible as part of the earliest discussions on routeing within SPM.²¹⁹
280. As to design: the use of wood poles avoids the need for large concrete foundations and thus reduces disturbance at the pole sites. It should also be emphasised that these pole sites would have a small footprint and construction at each one would be short lived. Furthermore, the entire approach that underlies the Application – seeking consent for a 100m wide corridor – allows for the micro-

²¹⁴ CD/SPM/ES/001, Chpt.7.

²¹⁵ CD/SPM/ECOLOGY/POE/JAMES/005A, section 4.

²¹⁶ SPM/PLANNING/POE/BERRY/011A, §7.6.38-7.6.63 and §12.1.37-12.1.41.

²¹⁷ CD/SPM/ECOLOGY/POE/JAMES/005A, section 3.

²¹⁸ CD/SPM/ECOLOGY/POE/JAMES/005A, section 5.

²¹⁹ As is illustrated in figures 7.1 and 7.2 of the Updated ES (Vol.6, CD/SPM/ES/001).

siting of poles which provides the flexibility for further avoidance of ecological and other receptors (including trees and veteran trees) if a need arises.

Protected species

Introduction

281. NRW's case is that the survey information in relation to both dormice and bats²²⁰ is insufficient in scope or approach to demonstrate whether or not there is likely to be detriment to the maintenance of the favourable conservation status of these species or to inform the mitigation strategy and thus there has been a failure to comply with legislation and policy. NRW's original concerns were veteran trees and curlew. These have now been addressed (see below with regards to veteran trees) and NRW seems to have shifted the goal posts somewhat, raising very late concerns regarding bats and dormice.

282. The ecological assessment work which is reported in Chapter 7 of the Updated ES is based upon detailed ecological surveys carried out between 2008 and 2010. The survey work in 2013 for the purposes of the Updated ES was targeted work which was expressly designed to meet the concerns that NRW had expressed up to that point regarding veteran trees and curlew in particular (as set out in its letter of October 2012).

NRW's approach

283. Paola Reason ("PR") and Jon Davies ("JD"), who gave evidence in relation to protected species, were only instructed in December 2013 almost 6 months after the inquiry opened. JD confirmed at the round table discussion that he had not visited the site at the time he wrote his proof. Indeed he only did so a week before the ecology hearing session. Importantly, PR and JD had not reviewed the totality of the evidence and, in particular, had not given any consideration to the evidence on construction methods nor did they suggest that any alternative routes would be better from an ecological standpoint.

284. NRW had not raised the issue of either dormice or bats prior to the issue of its SOC in late 2013.²²¹ This is despite the fact that there was extensive consultation with NRW during 2013 with the express aim of reaching agreement on the approach to the Updated ES and the survey work required, having regard to NRW's objections as set out in their letter to PCC dated 24 October 2012.

285. In its limited responses all NRW said was that it was generally happy with the bat SSSI survey method and did not comment significantly

²²⁰ Both European Protected Species: see Reg.40 of the Conservation of Habitats and Species Regulations 2010 (CD/FWL/LEG/002).

²²¹ There was no reference to dormice or bats in the CCW letter dated 6 August 2008 (App.2a, Vol.3, CD/SPM/ES/001) or in the CCW letter dated 24 October 2012 ((appended to the PCC Cabinet Report), App.02c, Vol.3a, CD/SPM/ES/001). These objections related to curlew, trees and the delivery of mitigation.

on other methods save to refer to the need “to follow best practice” (without explaining what that comprises, in its view or acknowledging that guidance is just that). The history of this consultation and the failure of NRW to advertise any of the concerns now raised is detailed in JJ’s proof.²²² It can be of no surprise, therefore, that JJ’s proof does not focus on these issues: he had no warning of them. Happily, he was able to assist at the round table session.

286. It is unfortunate to say the least when a party raises issues at this late stage having had the opportunity to do so over a long period and having been expressly written to on numerous occasions asking for input on the very topics and documents that the NRW now chooses to attack.

287. In closing NRW said (paragraph 2.2) that they have no outstanding objections to the LRWF and, further (paragraph 5.2) that it does not challenge the route selection process. If it accepts the LRWF and the route it cannot put much store by its objections to the impacts along the route of the Llandinam Scheme. Indeed it was noteworthy how lightly the protected species issues were pursued in closing.

Dormouse

288. JJ confirmed at the ecology hearing session, as does the emboldened heading “Desk top survey” in Chapter 7 of the ES, that, contrary to JD’s assumption,²²³ a desk study was carried out as part of the original EIA work.

289. As the Dormouse Survey records, this process did not reveal any previous records of dormice in the Application corridor.²²⁴ It was the PCC Ecologist who, in June 2009, said that a survey for the Newtown bypass had recorded the presence of dormice in hedges and as a result SPM commissioned the dormouse survey. It is surprising therefore, to say the least, that the inquiry is now presented with a more detailed plan showing dormice records from NRW.²²⁵ No adequate attempt has been made to explain why these were not presented at any earlier stage or even mentioned during the extensive 2013 correspondence. JD’s proof of evidence included a simplified version of the NRW dormouse records as an appendix, he was unable to explain the key to this plan showing the NRW records nor explain the relevance now of what is largely historic data.

290. Indeed, JD’s entire approach was – as he said – to gain “as good an understanding as you can.” But as JJ explained, this approach is misplaced. What one needs is sufficient information to identify and understand the likely significant effects and to be able to establish a mitigation strategy. Indeed, as JJ pointed out, Hyder’s own publically

²²² SPM/ECOLOGY/POE/JAMES/005A, §3.3-3.5.

²²³ CON/003/ECOLOGY/POE/DAVIES/OHL, §4.1.1.

²²⁴ CD/SPM/ES/001, App.7h, Vol.3b, §1.

²²⁵ CON/003/ECOLOGY/DAVIES/OHL, App.1.

available publicity literature advocates a “pragmatic” approach where on another linear scheme it was determined by Hyder that a survey and licence was not required and a working method statement would suffice.²²⁶ JD, of the same firm, now advocates a very different approach.

291. It is important to note that JJ was very much having regard to the form and scale of the proposed development when making his assessment, in particular, the short construction period at each pole site and the ability to micro-site within the corridor. These features of the Llandinam Scheme influence what information is reasonably required. As JJ said, if the scheme were a road, he would require much more information.
292. The SPM Dormouse Survey was focused, for obvious reasons, on the areas where there was a known presence: in proximity to Newtown and the Llandinam Scheme route corridor – the suggestion from JD to explore in detail further afield would be without benefit. As JJ explained, the NRW records tend to back up this decision. The hedgerows within the northern section of the Llandinam Scheme route are all heavily managed, making them unsuitable for dormice and the records show no dormice. The southern end is devoid of habitat and again there are no records of dormouse having been recorded as present. The records also appear to show the A483 acting as a barrier, so that the area of potential habitat for dormice is confined to the section to the north of the Kerry Hill area in proximity to Newton. It is on this area that the SPM survey has concentrated.
293. JD makes various criticisms about the survey methods used by SPM. However, it is not necessary to deal with them in detail here because, as JJ explained, not only was there sufficient information on which to determine the likely significant effects and to develop an appropriate mitigation strategy but, moreover, the Updated ES takes a worst case approach and assumes the presence of dormice – recognising the limitations of surveys for this species and that it is often not possible to prove the absence of dormice in suitable habitat.²²⁷

Mitigation

294. The mitigation strategy, which is set out in the Updated ES, is based on this worst-case approach.²²⁸ It includes pre-site surveys, careful timing of works, use of brashing (which provides connectivity between dormouse habitats) and ecological site supervision. JD criticises the mitigation strategy in a number of respects. However, his criticism is misplaced. For example, the criticism that the proposed mitigation measures apply only along a short section of the

²²⁶ SPM/010, p.4.

²²⁷ See CD/SPM/ES/001, Vol.1, §7.6.27 and 7.9.13.

²²⁸ CD/SPM/ES/001, Vol.1, §7.9.13-7.9.15, Table 12.2, EMP 42 and Vol.3b, App.7h, §5.1.

Llandinam Scheme is misplaced.²²⁹ Mitigation focuses on the areas in proximity to Newtown which is where, as described above, suitable habitat and records indicate any dormice are most likely to be. Moreover, it should be remembered that the proposals are subject to a pre-construction surveys. JD further says that there has been a failure to mention seasonal constraints.²³⁰ However, the Dormouse Survey clearly states that where tree and hedge clearance is required it should be undertaken between September and October.²³¹

295. In any event, mitigation is to be agreed with PCC – presumably with input from NRW –under the Environmental Management Plan to be submitted and agreed under draft Condition 6. This will require pre-construction surveys and construction method statements expressly in relation to dormice. Condition 6, therefore, is capable of addressing JD’s concerns.

Licensing

296. NRW’s assertion that a licence will be required on the basis the works could “easily” have an effect on dormice is speculative and not based on any evidence. It ignores the fact that there will be pre-construction surveys which will, in reality, dictate whether or not a license is required. Furthermore, it ignores the patchy distribution of suitable dormouse habitat in the route corridor (cf. the abundant habitat near by but outside the corridor), the low density of the species where it has been found in Powys (only 2-3 per hectare) and, most significantly, the nature of the development proposed in that the likelihood of any one wood pole actually impacting directly upon a dormouse nest or resting place is, as JJ put it, very remote indeed. What is more, the Application for consent is for a corridor: if the pre-construction surveys do reveal a potential impact then the offending pole could be micro-sited to avoid the problem. As result, there is nothing to suggest at this stage that licensing will even be required. No party has suggested with regards to dormouse and bats that if a licence is required it would not be granted.

Bats

297. NRW’s general thesis in relation to bats is similar to that with regards to dormouse; it is a general allegation of insufficiency of information, made at a very late stage in the inquiry process.

298. JJ explained at the ecology round table session that all the surveys were carried out by very experienced bat experts and provide an adequate and comprehensive description of the baseline conditions.

299. Moreover, as indicated above, SPM consulted closely with NRW and had been in correspondence with NRW in July 2013 when NRW said that it was generally happy with the methodology used.

²²⁹ See CON/003/ECOLOGY/POE/DAVIES, §5.2.2.

²³⁰ See CON/003/ECOLOGY/POE/DAVIES, §5.2.3.

²³¹ CD/SPM/ES/001, App.7h, §5.1.

300. NRW only now asks for tree climbing to be included as part of the survey, despite having not raised any concerns on tree roosts in any of the correspondence between NRW and SPM (and indeed NRW accepted tree climbing was not necessary in October 2012). JJ took the view that such a method would be unnecessary, costly and hazardous and noted that his team had only ever found bats twice using tree climbing surveys prior to construction. It was unlikely that bats would be found by this method given their mobility.

Impacts

301. JJ noted that the low number of bats recorded (found over insect hotspots) fitted with the landscape. It was key to appreciate the Llandinam Scheme in the context of the availability of extensive suitable foraging and habitat for bats that exists outside of the route corridor. Meanwhile, the route corridor is heavily farmed, meaning that there is limited food for bats. As such, the survey work undertaken since 2009 and the Llandinam Scheme itself need to be considered in this context.

302. JJ confirmed that there would not be likely significant effects on bats arising as a result of the Llandinam Scheme. There is, however, potential for the loss of mature trees that may support roosting bat species. In this regard, JJ concluded that the loss of a small number of potential roost sites is unlikely to have an effect on the local bat populations given the abundance of potential roosting habitat in the surrounding landscape.

303. With respect to the potential effect of the Llandinam Scheme on bat flight paths, this could occur where poles are located in, or adjacent to, established hedgerows or where construction access requires removal of small sections of hedgerow. However, provided mitigation measures are in place to maintain the continuity of these hedgerows (which is being provided), they are unlikely to be affected by this phase of the development.

Mitigation

304. The proposed mitigation is set out in the Updated ES.²³² Prior to works commencing, further investigations will be carried out to ascertain the extent of bat potential in those trees identified as having the potential to support roosting bats. For any tree identified as having medium or high potential for bat roosting, felling and tree management works will be carried out according to a construction method statement involving careful timing to avoid sensitive seasons for bats and working under an appropriately licensed ecologist. Where a roost is confirmed in pre-works surveys, the works will be carried out under licence and will follow a similar approach to that described in the previous sentence. Where potential bat flight paths are affected, gaps in features will be temporarily bridged using appropriate methods such as fencing, netting or brush piles. Again, mitigation is to be agreed by PCC under condition 6.

²³² CD/SPM/ES/001, Vol.1, §7.9.7-7.9.10 and Table 7.18.

Leighton Bat Roosts SSSI

305. Further information has been provided in respect of how the Llandinam Scheme might impact upon Leighton Bat Roosts SSSI. Surveys undertaken in 2013 assessed the potential impact of the Llandinam Scheme upon Leighton Bat Roosts SSSI. The surveys confirm that the Llandinam Scheme will not impact upon the status of the SSSI.²³³ Temporary flight lines will be installed to mitigate for impacts to bat commuting features until replanting has matured sufficiently.

Protected Sites

306. The Secretary of State's matter 7b explicitly refers to the River Wye SAC and the Leighton Bat Roosts SSSI. The latter is dealt with above. As to the River Wye SAC, this is dealt with in the Updated ES²³⁴ which provides further information that confirms that there will be no likely significant effects on the SAC due to the distance of the Llandinam Scheme from the SAC, the (very) small footprint of the works proposed and the ability to use tried and tested mitigation techniques during construction to avoid pollution. NRW have come to the same conclusion.

307. As to protected sites more generally, the Updated ES concludes that the Llandinam Scheme would not result in any significant effects on any other designated sites.²³⁵

Trees²³⁶

308. JJ began in relation to the impact of the Llandindam Scheme on trees by taking the inquiry to the ecological constraints plan:²³⁷ as JJ explained, this shows frequent stands of ancient woodland scattered widely through the landscape. The areas in between are over-farmed land of low ecological interest with scatterings of other woodland, trees and hedges. Impacts on trees are, in short, inevitable. However, JJ was satisfied that, on balance, the Llandinam Scheme, even with the number of trees it will affect, has been very successful at avoiding woodland and reducing the inevitable effects on trees and hedges that a linear scheme in this area will have. Further, JJ concluded that alternative routes would not result in materially different numbers of trees being lost. The trees to be felled in the case of the Llandinam Scheme are not considered by JJ to be of ecological interest. SPM has confirmed that the Black Poplar can be retained. JJ also confirmed, in an update to his proof, that further

²³³ CD/SPM/ES/001, Vol.1, Table 7.10.

²³⁴ See, in particular, CD/SPM/ES/001, Vol.3b, App.7a.

²³⁵ See CD/SPM/ES/001, Vol.1, Tables 7.10, 7.11, 7.14 and 7.15.

²³⁶ See SPM SPM/ECOLOGY/POE/JAMES/005A, §8.12, 12.3 and 12.4

²³⁷ SPM/ECOLOGY/POE/JAMES/005C, App.1.

work is being carried out by SPM to investigate whether the one remaining veteran tree can be avoided by micro-siting. It is not clear it can be at this stage. But work to date has reduced impacts on veteran trees from over 10 to a single tree.

Mitigation

309. On its projects, SPM reinstates vegetation, trees and hedgerows which are unavoidably removed or displaced during construction operations and also has a policy of discretionary planting as an additional enhancement commitment. This will include replanting with native, broadleaved species where non-native conifers have been felled. Measures may also include the reinforcement of existing hedgerows, new tree planting within hedgerows, tree planting along field boundaries or woodland block planting. Such enhancements are normally delivered through landowner agreements during the wayleaves and easements process.

Conclusion

310. With regard to the key issues raised by NRW and the Alliance in their SOC, it is submitted that: first, the impacts to veteran trees have, as set out, above been almost entirely avoided and, secondly, as JJ explained the information is sufficient to determine there would be no likely significant effects in relation to dormouse and bats and to develop an appropriate mitigation strategy. The suggestion by NRW in closing (paragraph 6.2) that these fundamental requirements have not been fulfilled is plainly wrong for the reasons explained by JJ.

311. In summary, impacts to ecological features are small scale, temporary and largely avoidable (due to the ability to micro-site). In terms of the overall planning balance, JJ concludes that the residual effects upon ecological receptors are negligible. As such, there are no reasons to refuse the Application on ecological grounds.

Matter 7c: the relative merits of the proposed development, any alternatives considered and likely effectiveness of mitigation measures to address: the impact of the proposed development on the use and enjoyment of land in the vicinity, including farming activities and on users of Rights of Way, including the Kerry Ridgeway Regional Path, Severn Way Regional Path and the National Cycle Path near Welshpool

312. The effect on farming activities and the public rights of way identified in this matter have already been addressed under matter 7(a) (landscape) and matter 6 (socio-economics).
313. RB sets out his conclusions on this matter in detail in his proof and that evidence is adopted and not repeated here for the purposes of closing.
314. In short, whilst he identifies the sensitivity of the users of the public rights of way to be generally high, the impacts are sufficiently slight to result in no significant effects. This is principally because the effects of the Llandinam Scheme are high localised and do not impact on the great majority of the route.
315. In closing PCC suggested (paragraph 661) that whilst the users of the Kerry Ridgeway Regional Trail will not experience adverse effects throughout the trail, experiencing effects in the first section is more likely to discourage users. It has no basis on which to make that submission. PCC, whilst indicating in its original SOC that it would call a witness on public rights of way,²³⁸ decided in the end not to do so and did not produce any quantitative evidence on users of the rights of way even though it took RB to task for not doing the same. Contrary to PCC's assertion, RB was plainly right to take into account the consultation responses and his professional judgment is both the only and sound evidence before the inquiry on this matter.

Matter 7d: the relative merits of the proposed development, any alternatives considered and likely effectiveness of mitigation measures to address the impact of the proposed development on cultural heritage

Introduction

316. The impacts of the Llandinam Scheme on cultural heritage assets are assessed in Chapter 8 of the Updated ES²³⁹ as well as by David Bonner ("DB") in his proof of evidence.²⁴⁰
317. As DB explained in EIC, he joined the SPM team in December 2013²⁴¹ following receipt of a letter from the Welsh Government in which it

²³⁸ OBJ/002/SOC/OHL, §9, §12.1.3.

²³⁹ CD/SPM/ES/001, Vol.1, Chpt.8.

²⁴⁰ SPM/HERITAGE/POE/BONNER/010A, see, in particular, section 8.

was reported that Cadw, the Welsh Government advisor on cultural heritage matters, who had previously described the environmental impact assessment work as “*extremely thorough and well considered*”,²⁴² had examined the Updated ES and advised that the impacts on a number of cultural heritage assets had been overestimated.²⁴³ DB’s assessment was not ‘very late’ (PCC’s closing paragraph 681). Rather, it was in response to the Welsh Government letter dated December 2013.

318. In light of this, DB was asked to review Chapter 8 of the Updated ES and to give evidence at the inquiry. DB concluded, much as Cadw had, that a number of judgments in the cultural heritage chapter of the Updated ES were perhaps too conservative, albeit that overall the Updated ES was both robust and comprehensive.

Cadw

319. There is no suggestion from Cadw that the Llandinam Scheme should be refused in whole or part as a result of cultural heritage impacts. The views of Cadw, given its status and purpose, should be accorded very significant weight. Cadw’s comments on individual assets are dealt with below. However, its overall conclusions are worth setting out here.

320. First, Cadw accepts the conclusions of the ASIDOHL2 assessment as set out in the Updated ES and does not have concerns in relation to VMRHL. Secondly, it concludes that the majority of impacts arising as a result of the Llandinam Scheme will be slight. Thirdly and importantly, Cadw recognises that at distances of 200m and more the nature of an OHL mounted on wooden poles is such that it takes the view that it would be unlikely to affect any sense of place or the interpretation of cultural heritage assets.²⁴⁴ It is, therefore, highly significant that, as Cadw points out, only two SAMs are located within the Application corridor and a further one between 100 and 200m from the OHL corridor. Finally, whilst there will be a small number of major adverse impacts that would arise as a result of the Llandinam Scheme, these would be localised and only for the life of the Llandinam Scheme, such that Cadw does not have significant concerns.²⁴⁵

Policy

321. As set out above, there is no specific guidance in EN-5 on cultural heritage or that indicates that undergrounding should be considered

²⁴¹ DB confirmed in Re-X that he had sufficient time and familiarity with the Llandinam Scheme and surrounding area to form his judgment.

²⁴² SPM/026.

²⁴³ CON/001/007.

²⁴⁴ CON/001/007.

²⁴⁵ See SPM/026.

as a result of cultural heritage impacts. However, EN-1 does provide guidance on cultural heritage matters.²⁴⁶ As Andrew Croft ("AC") agreed in XX, the requirement placed on the applicant is to provide a description of the significance of heritage assets affected by a proposed development (in a manner proportionate to the importance of the asset) and to ensure that the extent of the impact of the proposed development on the significance of the assets (including their setting) can be understood. As AC accepted, there is no mention of "substantial harm" in EN-1 in the context of any assessment that an applicant is required to make themselves. What is required is an assessment of significance that will set the scene for the decision-making of the Secretary of State.²⁴⁷ Chapter 8 of the Updated ES, therefore, fulfils precisely the requirements imposed on an applicant by EN-1.

322. The concept of "substantial harm" is introduced under the sub-heading "[IPC] decision making". It is a test for the decision-maker to apply and a different task from establishing the significance of impacts (the task with which DB (and SPM) was tasked). Paragraph 5.8.14 states in so far as material:

"There should be a presumption in favour of the conservation of designated heritage assets and the more significant the designated asset, the greater the presumption in favour of its conservation should be...Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. Loss affecting any designated heritage asset should require clear and convincing justification. Substantial harm to or loss of a grade II listed building park or garden should be exceptional. Substantial harm to or loss of designated assets of the highest significance, including Scheduled Monuments; registered battlefields; grade I and II listed buildings; grade I and II* registered parks and gardens; and World Heritage Sites, should be wholly exceptional."*

323. As AC accepted, "substantial harm" must be a very high level of harm. It is a term which is used in conjunction with total loss – as MHQC put it, in XX of AC, it is an "extreme" form of harm. Moreover, as AC agreed in XX, substantial harm and a major adverse effect in EIA terms are not necessarily one and the same: a major adverse effect can exist without there being "substantial harm". AC said that "substantial harm" lies at the upper end of the spectrum of major adverse effects, which reinforces the conclusion that "substantial harm" is a high level of harm. This much is confirmed by case law (see *Bedford Borough Council v Secretary of State* [2013] EWHC 2847 (Admin) in which the judge said that the term "substantial harm" was not limited to physical harm but "one was looking for an

²⁴⁶ CD/COM/001, §5.8.

²⁴⁷ See CD/COM/001, §5.8.8-5.8.10.

impact which would have such a serious impact on the significance of the asset that its significance was either vitiated altogether or very much reduced."²⁴⁸ In the end whether there will be "substantial harm" is a matter of judgment for the decision-maker on the particular facts.

324. But a decision-maker will need to apply the term consistently. EN-1 applies to all energy infrastructure projects, from nuclear power stations to the wood pole scheme before this inquiry. As AC agreed in XX, the Llandinam Scheme falls right at the bottom end of the spectrum of infrastructure projects to which the NPS suite of documents applies. Indeed, the visual comparison of electrical infrastructure provided by RL²⁴⁹ shows that Llandinam Scheme as a 132kV line on HDWP supports is right at the lower end of the spectrum of electricity infrastructure: the Llandinam Scheme is about 14m tall, which compares to a 46m lattice tower required to carry a 400kV line.
325. AC's assessment provides no scope for the Secretary of State to apply the term consistently when dealing with far larger applications, unless the Secretary of State is simply to underground all larger electrical connection schemes. It is precisely this point that Cadw is getting at in its December 2013 letter, where it suggests some of the effects as assessed in the Updated ES may have been too conservative. In short, it is essential to take into account the scale and form of the development proposed and the wider context in which the policies will apply.
326. In the end, as AC accepted, it is for the decision-maker to place any "substantial harm" in the balancing exercise. For this reason it does not, of itself, require undergrounding – other factors will be at play, as is demonstrated by PCC's conclusions (through MC at this inquiry) that the Llandinam Scheme need not be undergrounded as it passes the Bryn Cwmrhiwdre mound (MG280) despite AC's conclusion that on the basis of cultural heritage impacts alone undergrounding would be warranted.

Significant effects: Section B

Introduction

²⁴⁸ Paragraph 25 of the judgment. As PCC states in its note on legal submissions, that judgment needs to be read in the light of the Court of Appeal decision in *Barnwell Manor Wind Energy Limited v East Northamptonshire District Council* [2014] EWCA Civ 137, in particular, with regards to the application of section 66 of the Planning (Listed Buildings and Conservation Areas) Act 1990. However, there is no adverse comment on the conclusion in *Bedford* in relation to the level of harm to which "substantial harm" refers.

²⁴⁹ SPM/CONSTRUCTION/POE/LIVINGSTON/004C, App.1.

327. AC confirmed his view in XX that outside of Section B (including through the VMRHL) there was no need for undergrounding arising from cultural heritage concerns.²⁵⁰
328. SPM/024 tabulates the results of the assessments of cultural heritage assets within Section B that are contained in the Updated ES and the proofs of evidence of DB and AC. It is only four of these assets that AC assesses as being substantially harmed: MG280 (the Bryn Cwmrhiwdre mound); MG062 (early medieval cross dyke); MG063 (early medieval cross dyke); and 1896 (the Black Gate Enclosure). It is these assets on which these closing submissions focus.
329. PCC have reproduced SPM/024 in its closings (page 316) but missed the oral correction DB made to Black Gate. His assessment was it was minor adverse (not significant). This is reflected in the commentary below on Black Gate.

*Bryn Cwmrhiwdre (MG280)*²⁵¹

330. DB's views on the impact of the Llandinam Scheme on this asset are set out in his proof of evidence.²⁵²

331. MG280 is located at the southern end of Section B where PCC does not ask that the Llandinam Scheme be undergrounded. As a result, PCC accepts "substantial harm" to this asset and consequently that there is no cultural heritage justification for undergrounding at the southern end of the route. Moreover, this means on PCC's own case – and at this location – the Llandinam Scheme meets the "wholly exceptional" test. As we suggest later this is an important concession in the context of the planning balance.

332. DB explains that there are unlikely to be any direct effects on the asset as a result of construction – the OHL will be about 30m away from the centre of the asset and, in any event, the span and length of the poles are more than adequate to clear the barrow – but given its proximity to the OHL, specific mitigation is proposed on a precautionary basis to deal with any potential direct effects.²⁵³ Cadw have expressly said that the mitigation strategy for MG280 is satisfactory.²⁵⁴

333. Inevitably, there will be indirect effects on the asset's setting (and these cannot be mitigated).²⁵⁵ An observer is likely to view the earthwork from the public road to the north, with the proposed OHL passing in between. As DB said, there would be a strong visual intrusion and both he and Cadw agree with the assessment in the

²⁵⁰ See his analysis at OBJ/002/HISTENV/POE/CROFT/OHL, §6.18 which shows level of harm on all the relevant cultural heritage assets as less than substantial.

²⁵¹ See CD/SPM/ES/001, Vol.1, §8.5.64.

²⁵² SPM/HERITAGE/POE/BONNER/010A, §8.12 and 8.36.

²⁵³ See CD/SPM/ES/001, Vol.1, Table 8.16 and CON/001/007.

²⁵⁴ CON/001/007.

²⁵⁵ CD/SPM/ES/001, Vol.4, p.84, VP2.

Updated ES that the indirect effects on MG280 will likely be large/ very large and, therefore, significant. DB agrees with AC's view that there would be substantial harm.

334. However, it is important to recognise, first, that these effects will diminish rapidly with distance as set down in the Cadw letter; second, the visual relationship with the Glog on which AC places some importance is already compromised by vegetation (as AC himself accepts);²⁵⁶ and, third, as AC also recognises,²⁵⁷ two small wind turbines have already further degraded the setting of this asset; fourth, AC states that other important elements of the asset's setting would remain essentially unaffected (views to the east and south).

335. Accordingly, no party suggests that the impacts on MG280 are sufficient to warrant refusal in part.

*Early medieval cross dyke (MG062 and MG063)*²⁵⁸

336. This section contains three scheduled lengths of an early medieval cross dyke of which these assets form two. As DB also explained, there is a further recently discovered section between MG062 and MG063.²⁵⁹ These assets are medieval boundary markers and as such have an important relationship with the landscape but also a very large setting due to the dyke's linear nature.

337. DB explains that there are unlikely to be any direct effects on the asset as a result of construction of the Llandinam Scheme, given the nature of the proposed development and the fact that it oversails an apparent gap in the asset. As such there should be no direct effects but, nonetheless a scheme of precautionary mitigation is proposed with which Cadw are satisfied.²⁶⁰

338. As to the indirect effects on the assets' settings, these are complex and varied due to the dyke's linear nature and the topography it traverses. DB considers these impacts in detail.²⁶¹ Indeed, these assets are examples of where DB concludes that the Updated ES was overly cautious.

339. The indirect effects on these assets will be different depending on the viewpoint. Compare VP26²⁶² – in which the OHL is seen in a broad landscape – with VP84²⁶³ where the effect of the proposed development on the setting of the dyke is much more intimate and, therefore, significant. However, context is important here and the landscape already contains a number of man-made features

²⁵⁶ OBJ/002/HISTENV/POE/CROFT/OHL, §6.28.

²⁵⁷ OBJ/002/HISTENV/POE/CROFT/OHL, §6.27.

²⁵⁸ See CD/SPM/ES/001, Vol.1, §8.5.39.

²⁵⁹ See CD/SPM/ES/001, Vol.6, Figure 8.2, Asset number 84868.

²⁶⁰ See CD/SPM/ES/001, Vol.1, Table 8.16 and CON/001/007.

²⁶¹ SPM/HERITAGE/POE/BONNER/010A, §8.37-8.40.

²⁶² CD/SPM/ES/001, Vol.4, p.86.

²⁶³ CD/SPM/ES/001, Vol.4, p.152.

including a road, fences, poles, dilapidated buildings the metal roofs of which, DB pointed out in EIC, catch the sun as well as the many linear features such a tree breaks/ plantations. But perhaps the most important point is this: as DB said in Re-X when taken to VP71,²⁶⁴ in simple terms the Llandinam Scheme does not materially alter our understanding of the monument – it was a boundary maker and the viewer remains able to understand on which side of the boundary marker he stands. It is too simplistic to say as PCC does (see paragraphs 702 and 706 of PCC’s closing) that the bisection of a linear boundary feature is substantial. There is no physical bisection and the significance of the boundary maker can be well-understood post development. That is the critical point. Importantly too, the effects of the Llandinam Scheme would no longer remain following the decommissioning of the development. Any indirect effects are, therefore, reversible.

340. DB concludes, therefore, that the assessment in the Updated ES is too cautious and the magnitude of effect has been over-estimated such that the effects are not significant. This is as a result of, first, the design in terms of materials and form, secondly, the fact that the Llandinam Scheme is frequently backdropped by land or vegetation in relevant views, thirdly, the linear nature of the monument and its setting, for which there are restricted views on account of landform and vegetation, and, finally, the existing modern intrusions into the landscape as set out above. Whilst DB accepts there may be impacts on these assets that at a localised level are significant, overall given the length and nature of the dyke allied with the form of the proposed development, DB concludes that the harm is not significant. He confirmed in EIC that the harm was less than substantial.

341. If DB’s views are accepted then on AC’s own case these monuments would not justify undergrounding. Moreover, the potential archaeological dis-benefits of undergrounding between these monuments which have been outlined above must not be forgotten.

*Black Gate (1896)*²⁶⁵

342. As DB said in EIC, this asset is difficult to find, is not designated, dated and even its precise nature is uncertain. This is clear from the asset’s description which hesitantly concludes that it is not a ring barrow but a henge.²⁶⁶ Whilst AC states that the visual relationship with the surrounding landscape is important to its setting, the reality is that the enclosure sits in a modern field surrounded by plantations/ windbreaks such that the potential effects of the Llandinam Scheme are not the same as if it were in an open landscape. This can be seen from the aerial photos attached to the description. Moreover, the OHL is back-dropped against trees at this

²⁶⁴ CD/SPM/ES/001, Vol.4, p.132.

²⁶⁵ See CD/SPM/ES/001, Vol.1, §8.5.109.

²⁶⁶ OBJ/002/HIST/007.

location. Given all of this, DB concludes that the effects are not significant and the harm is less than substantial.

Other assets in Section B

343. Whilst it is not necessary to deal with those assets in Section B to which AC attributes less than substantial harm, AC does rely on the general historic nature of the landscape and, in this regard, carefully highlights the lines of sight between certain assets as depicted by blue arrows (labelled "Key Visual Links between Heritage Features") on MAC2.²⁶⁷
344. However, as the five sections produced by DB demonstrate,²⁶⁸ the topography ensures that the proposed development does not intervene in these sight lines and, consequently, cannot possibly be said to add to the case for undergrounding. The lines link the Two Tumps (MG048), the Glog Tumuli (MG121), Crugyn Round Barrows (MG122) and Bryn Cwmyrhiwdre (MG280). AC does not regard the impacts on the first three as substantial (with which DB agrees) and PCC accept the substantial harm to the Bryn Cwmyrhiwdre mound (Nb., there is already a turbine on the line from the Two Tumps to Bryn Cwmyrhiwdre). It is difficult to see, therefore, how these lines can, properly analysed, assist PCC's case.
345. As to the others: MG257 (barrow west of Cae-Betin Wood) is outside of the area which PCC seeks to be undergrounded (and, in any event, AC assesses the effects as less than substantial and DB agrees); and RD250 (Banc Gorddwr round barrow) and MG109 (Crugynau round barrow) are assessed by AC as having less than substantial harm (again, DB agrees) and such a conclusion is plainly right given their distance from the Llandinam Scheme.

Other cultural heritage matters

346. The Alliance raised a number of further cultural heritage issues which are addressed here shortly. However, whilst the Alliance tendered a proof on the subject, it did not tender an expert in cultural heritage. SPM submits that a lay proof cannot be afforded the same weight as that of an expert.

LANDMAP – historic landscape aspect

347. The Alliance placed some importance on the fact that the OHL passes through a number of outstanding LANDMAP historic landscape aspects.²⁶⁹ However, as DB explained in EIC and as is confirmed by the Updated ES,²⁷⁰ LANDMAP is principally a tool for the assessment of LVIA's and all five datasets are designed to be used together for landscape decision-making. LANDMAP is not intended as a tool by which to assess cultural heritage impacts alone.

²⁶⁷ OBJ/002/PLANNING/POE/CARPENTER/OHL, MAC2.

²⁶⁸ SPM/023.

²⁶⁹ ALL/OHL/POE/03, §2-4.

²⁷⁰ CD/SPM/ES/001, §8.4.43.

VMRHL

348. NRW is not pursuing a case in relation to cultural heritage save in so far as the VMRHL falls under this heading.²⁷¹ Indeed, as JC confirmed in XX, cultural heritage matters do not fall either within the remit of his instructions nor NRW's remit. JC confirmed in XX that NRW did not suggest that there would be any direct impacts on cultural heritage assets within the VMRHL. Rather, his concerns arose from indirect impacts on the VMRHL. This issue is also addressed under landscape above.
349. The Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process ("the Good Practice Guide")²⁷² states that RHLs are of national importance. However, as JC agreed in XX, it is important to recognise that the inclusion of an area of land on the Register of Historic Landscapes ("the Register") does not impose statutory controls on it nor does it comprise a designation.²⁷³
350. The Good Practice Guide recognises that landscapes are dynamic, living systems fashioned to meet current, mainly economic, needs and that what exists today is largely produced through human endeavour. As JC agreed in XX, landscapes will continue to change, they need to change and the intention of the Register is not to fossilise them or to prevent them from being altered but rather to manage them in ways that will allow the key historic elements or characteristics from the past to be retained while still meeting modern needs.²⁷⁴
351. Paragraph 6.4.9 of PPW explicitly states that the information on the Register should be taken into account where the proposed development would have a more than local impact on the registered area. Here, what is proposed is a linear project the form of which is, as SG and DB described it, "visually permeable," and the impacts of which, all parties recognise, recede with distance.
352. As a matter of fact the Llandinam Scheme passes through a very small proportion of the VMRHL and does not affect the great majority of the land mass within it. Accordingly, the effects are localised within the VMRHL and the conclusions of SPM, PCC and Cadw are self-evidently correct having regard to policy.
353. Nonetheless, the impacts of the proposed scheme on the VMRHL have been assessed (this is reported in the Updated ES) under the ASIDOHL2 methodology which has been designed to enable an

²⁷¹ See the Natural Resources Body for Wales (Functions) Order 2012 as summarised in JC's proof (CON/003/LAND/POE/CAMPION/OHL, §1.6).

²⁷² CD/CPL/CUL/004.

²⁷³ Indeed, this is expressly said in the Good Practice Guide (CD/CPL/CUL/004, §2.5).

²⁷⁴ CD/CPL/CUL/004, §1.5.

objective assessment.²⁷⁵ Both PCC and Cadw (as already indicated) accept the conclusions of this assessment.

354. What the assessment shows is that the Llandinam Scheme will traverse five of 19 historic landscape character areas ("HLCAs") which make up the VMRHL. A total of eight HLCAs sit within the study area. The overall level of significance of effect was calculated to be "fairly severe" in one instance (the Fflos HLCA), moderate in four and slight in three.
355. It is important to place these findings in context. The relevant scale laid down in the methodology goes up to "very severe". "Fairly severe" is just above the mid point of the scale (requiring a score of 16-20 out of 30 and Fflos scored 16 at the bottom of that range).²⁷⁶ On the basis of the assessment, the significance of the effect on the Vale of Montgomery Registered Historic Landscape as a whole was assessed as moderate (a score of 10-15 out of 30). JC confirmed in XX that he did not seek to attack the conclusions of the ASIDOHL2 assessment and, indeed, NRW in its former guise had had input into the ASIDOHL2 assessment so JC was right not to.²⁷⁷
356. Indeed JC's approach (as indicated in the last sentence of paragraph 5.7 of his proof of evidence) is one which looks to the VMRHL as a whole. Such an approach is not appropriate, especially given the ASIDOHL2 methodology demands that the whole registered historic landscape is subdivided into HLCAs so that the sensitivity of the landscape can be analysed in more detail and, indeed, policy (as set out above) requires the information on the Register to be taken into account where there is more than a local impact. JC agreed in XX that this requires looking at the VMRHL at a more detailed resolution than looking at it as a whole.
357. For these reasons the conclusions of Cadw, AC and DB in cultural heritage terms (and SG and PRV in landscape terms) should be preferred. There is no basis on which to refuse the Llandinam Scheme as a result of impacts on the VMRHL.

Offa's Dyke

358. JC expressed some concern²⁷⁸ about the impact of the Llandinam Scheme on Offa's Dyke as an important element of the VMRHL. It is not a concern shared by DB or AC or SG or PRV. Moreover, the ASIDOHL2 assessment, the results of which both PCC and Cadw accept, takes into account the presence of Offa's Dyke in the registered historic landscape.²⁷⁹

²⁷⁵ CD/SPM/ES/001, Vol.3b, App.8a.

²⁷⁶ CD/SPM/ES/001, Vol.3b, App.8a, Table 37.

²⁷⁷ See SPM/HERITAGE/POE/BONNER/010A.

²⁷⁸ CON/003/LANDSCAPE/POE/CAMPION, §3.4 and 3.9.

²⁷⁹ See, for example, §1.5.12 in relation to the Forden HLCA (CD/SPM/ES/001, Vol.3b, App.8a).

359. An assessment of the visual effects of the OHL on Offa's Dyke is provided in the Updated ES.²⁸⁰ What VP38, VP69 and VP58 demonstrate is that the OHL is a considerable distance from Offa's Dyke – far more than the 200m from which point Cadw considers the effects to be limited due to the nature and form of the proposed development. Indeed, the closest Llandinam Scheme wood pole to Offa's Dyke is some 710m away. Over such distance, the intervening landform and vegetation makes the magnitude of effect negligible and the overall significance minor.

*Leighton Hall complex of buildings*²⁸¹

360. The relationship between this asset and the OHL is analysed in detail by DB in a note submitted to the inquiry and its contents do not need to be repeated here.²⁸² DB records that the Llandinam Scheme will have no direct effect upon the fabric of any buildings in the complex. In terms of indirect effects, DB concludes that as a result of the design and form of the development, allied with the distance between the assets and the Llandinam Scheme, as well as the fact that there is clearly visible modern infrastructure in the landscape (roads, existing poles and wires etc) the effects are not significant in either landscape or visual terms. Indeed, this is a series of assets that DB concludes was assessed too conservatively in the Updated ES.

*The Montgomery – River Severn Military Axis*²⁸³

361. The Alliance expressed concerns in relation to a series of assets near the town of Montgomery:

- a. *Hendomen* (MG013):²⁸⁴ the significance of the effect on this asset was downgraded by Cadw (a point not picked up by NRW in its closings (paragraph 5.5) because of both the distance of the asset from the OHL and the presence of an existing pole mounted power line.²⁸⁵ DB explained in EIC that he agreed with Cadw's judgment and further pointed out that the landform shields views of the line to the north west and west and the line is camouflaged against the railway line as it moves away from Hendomen. Whilst the Llandinam Scheme would cut across the valley, it would not be particularly exposed until a distance of approximately 1km, which is well outside the range at which Cadw state that significant effects might occur.

²⁸⁰ CD/SPM/ES/001, Vol.1, §6.7.86. See also VP38 and VP69, p.12 and 44 respectively of SPM/LANDSCAPE/POE/GIBSON/006C and VP58, CD/SPM/ES/001, Vol.4, p.68.

²⁸¹ See CD/SPM/ES/001, Vol.1, §8.5.73-8.5.79. This is an asset the Alliance raise at ALL/OHL/POE/03, §10. See also CD/SPM/ES/001, Vol.4, p.100, VP065.

²⁸² SPM/027, §5.25-5.37.

²⁸³ ALL/OHL/POE/03, §11.

²⁸⁴ CD/SPM/ES/001, Vol.1, §8.5.24. See also CD/SPM/ES/001, Vol.4, p.85, VP023.

²⁸⁵ CON/001/007.

- b. *Forden Gaer Roman Fort* (MG012):²⁸⁶ again, Cadw has downgraded the impacts as assessed in the Updated ES due to the distance from the Llandinam Scheme and intervening infrastructure (including the railway) and vegetation.²⁸⁷ DB confirmed in EIC that he shared Cadw's view on this asset.
- c. *Rhydwhyman Crossing Cottage* (87275):²⁸⁸ the effect on the setting given the proximity of the OHL is recognised to be significant. Whilst the effects are significant, no party suggests that the effects represent substantial harm.

Caerhowel to Kerry Hill

362. The Alliance lists a number of heritage assets in this section of the Llandinam Scheme in relation to which large impacts have been identified.²⁸⁹ However, as DB, explained in EIC, whilst there may be significant effects at Cilthrew (17306/17307/17308)²⁹⁰ and the Henfron Moated Site (MG220),²⁹¹ in general the impacts on these assets do not warrant refusal or refusal in part of the Llandinam Scheme as a result of its design and the distance from these assets as well as existing modern infrastructure in the landscape. Again, whilst the effects are significant on these assets, no party suggests that the effects represent substantial harm. More generally, DB thought that this was an area where the impacts had been slightly overstated in the Updated ES. Cadw expressly found that the impact on the Great Cloddiau Camp (MG169)²⁹² had been overstated.²⁹³

Cefn Bryntalch Hall and Garden (7714)²⁹⁴

363. DB deals with this in some detail in his note to the inquiry.²⁹⁵ Recognising that there would be no direct effects, the design and the distance between the asset and the proposed development (it would pass 1km to the south east of the Registered Park & Garden) as well as the fact that inter-visibility with key sites would be unaffected by the Llandinam Scheme, DB concluded that the harm would be Slight to Moderate/ Slight and less than substantial in EN-1 terms. Accordingly, there is no basis for refusal as a result of potential impacts on this asset.

Listed buildings

²⁸⁶ CD/SPM/ES/001, Vol.1, §8.5.23.

²⁸⁷ CON/001/007.

²⁸⁸ CD/SPM/ES/001, Vol.1, §8.5.98. See also CD/SPM/ES/001, Vol.4, p.161, VP94.

²⁸⁹ ALL/OHL/POE/03, p.9.

²⁹⁰ CD/SPM/ES/001, Vol.1, §8.5.92.

²⁹¹ CD/SPM/ES/001, Vol.1, §8.5.57.

²⁹² CON/001/007. See also CD/SPM/ES/001, Vol.1, §8.5.53.

²⁹³ Note there is a footnote to the table on p.9 of ALL/OHL/POE/03 which states that the Cuckoo Hill Fort (1822) (see CD/SPM/ES/001, Vol.1, §8.5.108) is a "possible SAM." As DB confirmed this is not a designated asset.

²⁹⁴ CD/SPM/ES/001, Vol.1, §8.5.69. See also CD/SPM/ES/001, Vol.4, p.89, VP36.

²⁹⁵ SPM/027, §5.13-5.18.

364. PCC agree that section 66 of the Planning (Listed Buildings and Conservation Areas) Act 1990 (“the Listed Buildings Act”) does not apply to an application under section 37 of the 1989 Act.
365. The duty under schedule 9 to the 1989 Act is not the same as PCC suggests. The requirement on the Secretary of State under schedule 9 is clear. By virtue of paragraph 2 of Part 1 to schedule 9, he is to have regard to the desirability of preserving buildings and objects of architectural, historic or archaeological interest. This test does not (a) expressly refer to listed buildings and (b), critically, require “special regard” to be paid. It is not appropriate to suggest the “special regard” test applies by reference to case law²⁹⁶ that addresses another provision in another act and which uses a different form of words.
366. That is, of course, not to say that listed buildings are not an important consideration – they clearly are and the Inspectors and Secretary of State have all the information required before them.
367. DB has provided all the relevant listed building descriptions in an appendix to his proof of evidence.²⁹⁷ Furthermore, DB and Chapter 8 of the Updated ES provide an assessment of the impacts on them.²⁹⁸ SG and Chapter 6 of the Updated ES assess some of the more prominent and important listed buildings from an LVIA perspective.²⁹⁹ The Llandinam Scheme will have no direct effects on listed buildings. DB sets out the indirect effects on listed buildings in his proof³⁰⁰ and, as a result of a request from the Inspectors, in a note to the inquiry in relation to a number of particular listed buildings.³⁰¹ Given DB’s conclusions and the test before the Secretary of State, there is no basis to withhold consent due to impacts on listed buildings.

Conclusion

368. For the reasons set out above, whilst a number of significant impacts is inevitable in a linear scheme of some 35km in length, in the case of the Llandinam Scheme all such significant impacts are almost uniformly indirect, reversible and of a localised nature. As such there are no cultural heritage impacts that warrant refusal in whole or part.

²⁹⁶ Namely, the Court of Appeal decision in *Barnwell Manor v East Northamptonshire District Council* [2014] EWCA Civ 137.

²⁹⁷ SPM/HERITAGE/POE/BONNER/001C, App.4. The description for Camlad houses is appended to SPM/027.

²⁹⁸ CD/SPM/ES/001, Vol.1, §8.5.67-8.5.98 and Table 8.14.

²⁹⁹ See CD/SPM/ES/001, Vol.1, §6.7.70-6.7.75.

³⁰⁰ SPM/HERITAGE/POE/BONNER/001A, §8.51-8.56.

³⁰¹ SPM/027.

Matter 8: any other matters that the Inspector considers relevant

369. The Inspectors did not raise any further matters. There are, however, a number of other issues on which comment is required.

Traffic and transport

Introduction

370. Traffic and transport was not one of those issues on which the Secretary of State specifically requested to be informed. However, it is, of course, relevant to the Secretary of State's matter number 1 (the extent to which the Llandinam Scheme is consistent with Welsh Government and local policies). KB sets out the relevant policies in detail in her proof of evidence.³⁰² She concludes, in reliance on the traffic and transport chapter of the Updated ES³⁰³ and the evidence of Alan Davies ("AD"), that the effects of the Llandinam Scheme on traffic and transport have been assessed in line with the current policy framework through the undertaking of a traffic and transport assessment. That study established that there would be no significant effects on highways from construction and operational traffic generated by the Llandinam Scheme and identified no cumulative effects to be assessed.

371. That should be of no surprise given the lack of traffic and transport objections. PCC raised no objection on this ground. Further, there is a detailed SOCG between SPM and the Welsh Government on Transport matters³⁰⁴ which concludes that the Llandinam Scheme will not give rise to any likely significant effects on the trunk road traffic either on its own or cumulatively with other development.³⁰⁵

372. The Alliance did initially raise this issue as an objection. It referred to traffic and transport in its SOC albeit only in relation to cumulative effects and the sufficiency of the Application material on this issue. It also submitted a proof of evidence on Construction Traffic from Mr Geoff Weller³⁰⁶ ("GW") which addressed wider concerns than those raised in the SOC. However, when it came to oral evidence and having heard AD in EIC for SPM address in turn each of GW's concerns as expressed in his proof of evidence, GW decided that it was not necessary for him to give oral evidence – seemingly accepting of the answers AD gave in his oral evidence.

³⁰² SPM/PLANNING/POE/BERRY/011A, §7.6.86-7.6.97. AD also looks at the policy context: SPM/TRANSPORT/POE/DAVIES/008A, section 5.

³⁰³ CD/SPM/ES/001, Vol.1, §11.3. Traffic and transport was considered in the original EIA scoping activities in 2008 and was found not to give rise to any likely significant environmental effects. A decision was taken in the 2009 ES not to make these topics the subject of detailed EIA. However, the issue was reviewed in the Updated ES in 2013 and is reported in Chapter 11.

³⁰⁴ SPM/SOCG/CON/001/TRANS/OHL. See also SPM/TRANSPORT/POE/DAVIES/008C, App.3.

³⁰⁵ SPM/SOCG/CON/001/TRANS/OHL, §5.2.

³⁰⁶ ALL/OHL/POE/05.

373. AD explained the transport characteristics of the Llandinam Scheme.³⁰⁷ From a vehicular movement point of view, the Llandinam Scheme is of a much smaller scale than the wind farm proposals – both in terms of the size of vehicle and the total number of vehicle movements. One of the advantages of using a wood pole design is that it negates the need to install heavy concrete reinforced foundations (as would be required for a steel tower design). Consequently there is no need to construct stone haul roads to accommodate concrete handling equipment (mixers and pumps) and the larger vehicles that would be required.

Construction effects

374. The anticipated construction period is approximately 14 months. However, each local length of 5km along the line would only take a matter of weeks for that section to be constructed.

375. AD explained that the delivery of the wood poles would form the most significant element with regards to transport movements for the Llandinam Scheme. In oral evidence, AD took the inquiry through each layer of the required transport movements at the construction stage; first, deliveries of the required 764 wood poles (382 pole structures) to the temporary storage areas and, secondly, local deliveries of those poles from the temporary storage areas to the individual construction sites.

376. Articulated and rigid HGVs would firstly carry the poles from the manufacturer to the temporary storage areas for the poles. The temporary storage areas will be located in areas with appropriate access to the main highway network.³⁰⁸ Based on the need to deliver approximately 764 individual poles in total, each of the three temporary storage areas would have a maximum of six bulk deliveries (phased 5-10 days apart to ensure the scale of the pole stack at the storage areas does not become visually intrusive).

377. AD illustrated the type of vehicle that will be used to deliver poles to the storage areas.³⁰⁹ None of the loads for the Llandinam Scheme meet the minimum thresholds for notification under the Road Vehicles (Authorisation of Special Types) (General) Order 2003³¹⁰ ("the AIL Rules") or the requirements to be part of the controlled deliveries as set out in the Strategic Traffic Management Plan ("STMP") that has been entered into by various of the other developer parties involved in this conjoined inquiry. The STMP recommendations and load control mechanisms do not, therefore, apply as the deliveries will be by normal road vehicles not subject to

³⁰⁷ SPM/TRANSPORT/POE/DAVIES/008A, section 6 and in EIC.

³⁰⁸ See SPM/TRANSPORT/POE/DAVIES/008C, App.1. The exact sites for the temporary storage areas have yet to be finalised.

³⁰⁹ See SPM/TRANSPORT/POE/DAVIES/008C, App.2.

³¹⁰ See PM/TRANSPORT/POE/DAVIES/008C, App.4. This addresses directly one of GW's concerns (expressed at ALL/OHL/POE/05, §1.5).

any special controls. AD explained that these deliveries would give rise to no highway capacity or safety issues given the very low number of vehicles required.³¹¹

378. Smaller local delivery lorries³¹² will take the poles from the temporary storage areas to the construction sites. AD explained in EIC³¹³ that the access to these sites will in many cases comprise existing farm accesses that will already be 5m+ wide and therefore capable of accommodating the delivery vehicles. The intention is to identify and use such access points, however, if the most appropriate access is not wide enough it will be improved.
379. These delivery vehicles typically carry four poles (2 H-pole sets) and will take out approximately 3 loads per day. Again, as a consequence of the low numbers of vehicles involved, AD was able to confirm that there would be no capacity issues caused.
380. GW raised a number of concerns in his proof that AD dealt with in detail in EIC. It is not necessary to traverse the detail again here. However, two points ought to be mentioned in closing.
381. First, a major concern articulated by GW on behalf of the Alliance related to a perceived need for a significant number of road closures.³¹⁴ AD confirmed that there will be no such road closures. There will be occasions on which traffic will need to be held either while difficult bends are negotiated³¹⁵ or whilst protective netting, if required, is erected over road crossings. These activities can be undertaken with short possessions normally very early in the morning or at weekends. Standard traffic management with stop/go boards and traffic signals will also be used, thus allowing movements to take place with minimal disruption. Further, as a matter of good practice, the local delivery lorries taking poles to the construction sites in an instance where there is a difficult bend or a need for protective netting will generally be accompanied by an advance warning vehicle. Advance signage will be erected to inform local residents that vehicles will be in the local area for a short period of time during identified days with contact numbers to ensure that the works are taken forward in an informed manner. The worst case scenario that AD described for road users would be a 15-20 minute delay whilst poles were maneuvered or protective netting strung. Given the advance warnings, the low road use, the extremely localised nature of the delays, their limited duration as well as the

³¹¹ Thereby addressing one of GW's concerns (see ALL/OHL/POE/05, §1.9).

³¹² A number of different vehicles may be used but AD describes the typical vehicle at SPM/TRANSPORT/POE/DAVIES/008A, §7.2.3 and provides an illustration of the type of 4x4 vehicles that will be used where there is a requirement to drive into a field for access at SPM/021.³¹²

³¹³ He was responding to the concerns expressed by GW in his proof ALL/OHL/POE/05, §1.16.

³¹⁴ See ALL/OHL/POE/05, §1.8 and App.1.

³¹⁵ As AD explained, poles can be placed in a field (with landowner consent) and picked up again or passed between two vehicles.

limited number of instances such action is likely to be necessary, it is submitted that even in the worst case scenario the impact would not be significant.

382. Secondly, GW raised the issue of timber and forestry movements.³¹⁶ AD addressed this in EIC. Individual and small groups of felled trees will often be left on site for the landowner. If the landowner wishes such trees to be removed, this will be done in small forestry vehicles which result in no significant traffic or transport effects. There is a single, large stand of 280 trees due to be felled which will require removal on larger forestry vehicles. But as AD said, this is a normal part of forestry operation (forestry being an activity carried on in the area) and, moreover, removal would give rise to only 10 or so loads, spread across a number of days. At these numbers, there would be no significant adverse effects.

383. Accordingly, no highway improvements will be required to accommodate any of the construction vehicles used in the construction of the Llandinam Scheme and there will be no significant adverse effects arising from the construction of the Llandinam Scheme.

Operational effects

384. The transport impacts of the Llandinam Scheme will comprise routine maintenance. This will be extremely limited and would be far from significant in transport terms.³¹⁷

Cumulative effects

385. The construction periods of each of the proposed wind farms which are the subject of this inquiry have been reviewed. The wind turbine delivery vehicles would require certain A483 improvements to be in place in order to accommodate their swept paths and it is proposed that the Llandinam Scheme would commence construction along this section (which would be completed) before the turbine deliveries requiring these works take place.

386. The advance work for the turbines required for the LRWF would be undertaken by standard construction vehicles for foundation construction. The Llandinam schemes may overlap with these construction activities. However, there is only a low risk of interaction between the HGV movements from the Llandinam Scheme and the other wind farm proposals. Good management can ensure that vehicles do not enter/leave the highway corridor whilst other vehicles are travelling along the route, thus conflicts would not occur and any delay will be minimised.

387. AD concluded that the level of potential interaction between traffic generated by the Llandinam Scheme and the wind farm construction was so small that it can safely be concluded that there will be no

³¹⁶ See ALL/OHL/POE/05, §1.13.

³¹⁷ See SPM/TRANSPORT/POE/DAVIES/008A, §7.2.9-11.

significant adverse cumulative effects without the need for examination of individual routes or junctions.

388. Accordingly, SPM commends the evidence of AD which demonstrates, along with the clear positions of PCC and the Welsh Government on this issue, that there are no highway or transportation reasons to withhold consent for the Llandinam Scheme. The proposed Construction Method Statement, to be secured by condition (the draft of which PCC is content with), includes a Traffic Management Plan which will ensure the proper approach to traffic management is secured.

Land rights

389. SPM's position on land rights is set out in SPM/015.

Conditions

390. The Inspectors have a schedule of conditions that highlights the differences between SPM and PCC as well as the comments of these parties through the conditions session. However, one point is worth making here. PCC stated in closing (paragraph 616) that the condition proposed by SPM in relation to decommissioning opens the possibility of the line having a life in the absence of the LRWF. It is not necessary as PCC suggests for the condition to require consideration at that juncture as to whether the life of the Llandinam Scheme should be extended. Rather, the approach to take should be that the life of the Llandinam Scheme is linked to its utility as a network asset. What this means is that were the LRWF to be decommissioned but were a new generation asset to come forward in the area, then as part of consenting that new generation asset, the decision-maker at that time would have to consider the impact of the Llandinam Scheme continuing to operate as a network asset. It is a poor precedent to set for network infrastructure generally to be tied to anyone particular generating asset, regardless of the network asset's utility several decades hence.

Conclusions and overall planning balance

391. Section 12 of KB's proof of evidence sets out the overall assessment and conclusions of SPM in relation to the Llandinam Scheme and draws all of the SPM team's work and conclusions together under each of the Secretary of State's matters. It is not necessary to repeat those conclusions here but they are adopted as a short summary of SPM's position in relation to each of the Secretary of State's matters.
392. SPM has a number of duties which it must take into account and use to inform its decision making process. It must offer a connection to the owner of premises on request and deliver an economic and efficient system of electricity distribution in a manner which mitigates as far as is reasonable environmental effects.
393. The Llandinam Scheme is a product of the application of these duties. The only dispute as to whether these duties have been successfully applied is in relation to the mitigation of environmental effects, particularly landscape and visual and cultural heritage.
394. It must be remembered how narrow the real issues are. As stated at the start of these submissions, PCC, the principal objector to the Llandinam Scheme, supports and/ or accepts the need to connect the LRWF to the grid, to connect to the grid at Welshpool and, despite lengthy submissions on the route selection process, that, on balance, the route is appropriate subject to undergrounding a single section.
395. It is, of course, inevitable that a scheme some 35km in length should have some significant impacts. National policy expects as much. However, the scale and form of the development proposed is important and has served to limit these impacts, as was always intended by SPM. In short, the Llandinam Scheme is a series of wooden pole support structures, approximately 14m in height, from which conductors would be strung. The footprint of each structure is small and the construction of it fast. In addition, SPM has the ability to micro-site within a 100m corridor to further avoid significant effects.
396. When it comes to the question of undergrounding/partial refusal of the Application which is at the heart of the matters between SPM and PCC, SPM asks, in particular, the following to be taken into account:
- a. With regard to landscape: for the reasons already set out, the judgments of SG on landscape impacts are to be preferred;
 - b. With regard to cultural heritage: PCC on its own case accepts that the Llandinam Scheme meets the "wholly exceptional" test with regards Bryn Cwmyrhiwdre and, importantly, DB's conclusions are that the remaining assets within the PCC Option would be subject to less than substantial harm;

- c. The cost dis-benefit of undergrounding (for all options) is significant;
- d. The appropriate option to weigh in the balance is the SPM Option shortened at either end, given that it would be for SPM to fill any gap left by a partial refusal of the Application and that option is the engineering and technical preference expressed by those with experience. No contrary expert evidence was, in fact, adduced;
- e. The wider industry context: if the proper application of EN-5 leads to this scheme being refused in part, it will lower the bar drastically of what was designed to be a high test. In the scheme of projects that meet the criteria of being NSIPs, it is plainly at the smaller end of the spectrum.

397. The Welsh Government is committed to achieving a substantial reduction in greenhouse gas emissions and a significant rise in renewable energy, expected to be gained principally from onshore wind. The Llandinam Scheme will make the connection from an onshore wind farm in a manner that does not result in unacceptable adverse impacts. The Llandinam Scheme is crucial, therefore, to enabling a key element of the desired energy mix, the supply of renewable energy, to be provided. The merits of the Llandinam Scheme are, therefore, clear: the efficient delivery of renewable energy, both in terms of timescale and energy transmission; contribution to a low carbon economy; and economic and co-ordinated energy supply, all in a manner which does not result in unacceptable adverse impacts.

398. Accordingly, the presumption in favour of granting consent to applications for new nationally significant energy infrastructure, given the level of urgent and compelling need for such infrastructure, contained in EN-1 should, it is submitted, be applied.

399. For the reasons set out above, the Inspectors are asked to recommend and the Secretary of State is asked to grant consent for the Llandinam Scheme in full.

ANNEX 7

**The Mid Wales (Powys) Conjoined Public Inquiry
into 5 Windfarm Proposals and a 132kV overhead
Electric Line Connection**

Closing Session
Alliance Closing Submissions

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Section 1: Introduction and Approach

Introduction and Structure

- (i) In this single document prepared for the Closing Session, the Alliance collects together various Sections which a number of different readers will present by way of a mixture of reading and summarising the written material.
- (ii) The general structure is to set out first a number of Sections raising matters which are recurrent themes so that they need to be read or summarised only once. Subsequent Sections address each application in turn and incorporate by reference relevant parts of those earlier Sections so as to avoid repetition.
- (iii) There is a contents page to aid navigation and, for those inclined to use the function, sections are linked from it by hyperlink in the electronic Word version.
- (iv) Each Section follows a similar format and is headed with a list of the primary Alliance documents relevant to that section, although a full list is attached at the end.

The approach to all the windfarm applications

Alliance Inquiry Documents ¹
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ALL-007, 008, 009, 010, 011 and 012; ALL-SSAC-POE-04, ALL-SSAB-POE-02, ALL-CLO-POE-01, ALL-CLO-POE-01-RESPONSE
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- 1.1. The Alliance has maintained, from the start, that there is a balance to be drawn through this CPI process so that the Secretary of State can ultimately make decisions drawing that balance taking account of
 - i) relevant legislation and policies;together with
 - ii) positive and negative effects of the windfarms and their associated infrastructure and other 'off site' effects such as traffic and highway considerations.²
- 1.2. When construing policies for their meaning and when applying policies to any particular circumstances, it is almost always necessary to have regard to the objectives which underpin and which gave rise to those policies. That can also shed important light on the weight to be attached to policies either in their own right, or in the overall balancing equation at the time of decision-making.

¹ As supplied to the Inspector, main parties, and the Inquiry library

² See ALL-007 §9 and ALL-008 §1.8

1.3. The Alliance also recognises and accepts that the National Policy Statements and their objectives will be at least highly persuasive if not the key parameters which will be followed by the Secretary of State when making a decision for proposals >50MW and associated grid infrastructure. EN-1 makes it clear that there is a balance to be drawn³, but for so long as there is (i) an urgency (ii) for the level of need it describes, there is a presumption in favour of approvals (even to the extent of overriding local policy documents etc) but to be weighed with other material factors⁴. Nevertheless, like any presumption it can be outweighed by other factors and if and to the extent that the urgency or the level of outstanding need (or both) is diminished after the passage of time and in light of progress towards the UK's renewable energy target, the strength of any presumption in the overall balance will also diminish.

1.4. In that connection, EN-1 also makes it plain that:

*"... The Government does not consider it appropriate for planning policy to set targets for or limits on different technologies."*⁵

There are, therefore, no UK planning policy limits or targets for different sectors. That is also a clear indication that UK Government would not expect to give weight to any sectoral targets set by any other body in planning policy (or guidance).

1.5. As TAN 8 itself makes plain,

*"Energy policy is a reserved function that is not devolved to the Assembly Government."*⁶

and as the UK Government reminds us,

*"The Welsh Government does not have devolved renewable energy targets ..."*⁷

yet TAN 8 (a Technical Advice Note) was specifically designed to be (i) a delivery mechanism for delivering (ii) the then WAG's (iii) enumerated onshore wind Energy Policy Target⁸ - and PPW was adjusted by MIPPS 01/2005 to fit TAN 8⁹.

1.6. When turning to the subject of (biomass and) wind projects¹⁰, EN-3 specifically addresses Welsh policy and advice (maintaining but not disaggregating that distinction). At para 2.2.1 it states:

³ EN-1 §§4.1.2 - 4.1.5 [CD/COM/001]

⁴ EN-1 §§4.1.2 - 4.1.5 [CD/COM/001]

⁵ EN-1 §3.1.2

⁶ TAN8 §1.3

⁷ UK Renewable Energy Roadmap Update 2012, p14 [CD/Com/015]

⁸ see eg TAN 8 (2005) §§1.4, 1.5 and 2.4 [ALL-011B Tab 6]

⁹ see eg ALL-009 p17 §3.5

¹⁰ EN-3 §1.8.1 [CD/COM/002]

"... Whether an application conforms to the guidance or the targets [or not¹¹] will not, in itself, be a reason for approving or rejecting the application."¹²

- 1.7. The clear message - as a matter of UK Government policy endorsed by Parliament - is that any Welsh Energy Policy Targets would be nothing to the point in the final analysis for any >50MW onshore wind generation proposal: be they expressed as (or understood as) limits (caps) or as targets to be met. The test to be applied in all cases, according to EN-1, is the balance to which the Alliance refers above - having regard to the extent to which any relevant UK target is or is not likely to be met.
- 1.8. The then WAG was well aware of the emerging UK NPSs when 'the June and July letters' were written¹³. Mr Griffiths specifically referred to it¹⁴. And it is plain from the development of Welsh policy analysed by the Alliance that the then WAG eventually came to recognise that it was no part of WAG's functions to set Energy Policy Targets to be met¹⁵: That is a matter for the UK Government. And that, no doubt, is why the last sentence of EN-3 para 2.2.1 was included, even though by the time that Parliament endorsed the draft NPS, the TAN 8 Energy Policy Targets to be met set out in TAN 8 expressly in order to meet an undevolved Welsh Energy Policy had recently been removed from TAN 8 and PPW¹⁶.
- 1.9. Thus, whilst Mr Rugman¹⁷ (himself also unaware of amendments to TAN 8 in 2011) cautioned against raising any friction between UK and Wales over TAN 8 Energy Policy Targets and their legacy, the point has already been raised, addressed and resolved by the UK Government (and Parliament) in EN-3 §2.2.1 (July 2011).
- 1.10. The need for the point to be addressed more fully at the CPI arises in large measure from the near-universal failure of parties to the CPI to recognise the changes made to TAN 8 and related changes to PPW in their submitted material. As far as the Alliance discovered, every other party who addressed TAN 8 came to this CPI asserting and relying upon the TAN 8 Targets either as targets or as caps (or even as targets with caps)¹⁸ and without any acknowledgement at all of the amendments made to TAN 8 (and PPW) in February 2011¹⁹. Even PCC came to the Opening Session itself expressly relying on para 2.5 and Table 1 of TAN 8 which (amongst other paras²⁰) had already been removed more than two years earlier²¹. It was, of course, para 2.5 and Table 1 which carried the "established" enumerated WAG Energy Policy Target into TAN 8 (and MIPPS and then

¹¹ The Alliance makes this insertion to clarify how it reads the text. The alternative 'or' to be juxtaposed with 'whether' would serve only to bring the emphasis to distinguishing guidance 'or' targets which is an improbable construction.

¹² EN-3 §2.2.1

¹³ ALL-011B Tabs 8 and 9

¹⁴ ALL-011 Tab 9

¹⁵ See ALL-009 and analysis in ALL-012 section 4

¹⁶ See ALL-011B tab 10 and §10 of the 'Dear Colleague letter at ALL-011B, tab 7

¹⁷ OBJ/649/002

¹⁸ See ALL-012 section 5

¹⁹ See ALL-012 section 5, and at §5.17 *et seq* for the promoters' positions

²⁰ See ALL-011B Tabs 7 and 10

²¹ See references cited at ALL-012 §5.7

PPW) and which set out the figures for each SSA in order to deliver that target.

- 1.11. No-one who has read and understood the Alliance material submitted at the beginning of this CPI can be in any doubt: **there are no Welsh Energy Policy Targets to be met.** Unlike successive revisions to PPW, WG has not published a 'consolidated' version of TAN 8 (2011) and did not alert the CPI to the changes (even referring to TAN 8 by reference (only) to its original publication date of 2005 in its letter of January 2013²²). The Alliance tried to assist understanding by providing extracts at the start of the CPI which show the effect of the principal amendments (see ALL-011B, Tab 10) – but that still needs to be read together with the rest of the text at Annex A to the 'Dear Colleague' letter of 28th February 2011 to see the full extent of the changes²³.

TAN 8 and the Sea Change

- 1.12. The Alliance has traced the history and gestation of TAN 8 and this analysis demonstrates the magnitude of the Sea Change which removal of the Energy Policy Target heralded. It is fundamental. The removal of the Target is every bit as fundamental a sea-change as was the creation of TAN 8 in 2005 in order to give effect to and deliver the Target in the first place. Not only has the Target gone, but every element of policy and guidance and any expression of objective or of causal effect which drew from or was a result of the determination to deliver that Welsh Energy Policy Target should now carry no weight. It all needs to be unravelled, and cannot be unravelled without a clear understanding of TAN 8's gestation and subsequent adoption²⁴. Only then can the changes made in order to provide a delivery mechanism for the Target be understood, and then discounted now that there is no Target to be delivered and no delivery mechanism required.
- 1.13. Given the language of EN-3 para 2.2.1, why does the sea change matter? At the first level it matters because the Secretary of State as decision-maker must first (i) know what the policy or guidance he is addressing actually is before then (ii) understanding what it says before he can then (iii) address its relevance before then (iv) deciding whether or not to attach any and if so what weight to it.
- 1.14. At the next level it matters because it will affect the utility of any assistance given to the Secretary of State through the adopted position of other parties, or any judgments or conclusions on the merits which are offered by them. If that assistance has been derived against a backdrop of a misunderstanding of the policy or guidance, or against the backdrop of attributing weight to factors from that policy or guidance, the Secretary of State needs to assess how useful those positions or judgements actually are in light of his conclusions on the matters highlighted above.

²² CON-001-002

²³ ALL-011B, Tab 7 §10 and Annex A

²⁴ See for this generally, ALL-009

- 1.15. The sea change which occurred in PPW and TAN 8 in February 2011 was plainly the result of the then WAG realising (or perhaps having been told by persuasive authority in Cardiff, Whitehall or Westminster) that it, WAG, had no business making Energy Policy, still less Energy Policy Targets to be met: that was and is, a matter for UK government and at a UK level. And, in any event, UK Government policy is that it is not appropriate for planning policy to set targets for or limits on different sectors²⁵: this target brought forward by TAN 8 was, of course, specifically an onshore wind target²⁶.
- 1.16. This realisation is crisply recognised by the WG's response to the Report of the Environment & Sustainability Committee (Energy Policy and Planning in Wales) delivered in October 2012. The Alliance set that out in opening, referred to it again in the last Session, and it is not here repeated, but incorporated by reference²⁷.
- 1.17. The crux of the Alliance submissions on this was set out in Opening but can be restated for convenience²⁸:

TAN 8 (2005), a Technical Advice Note designed to serve existing planning policy, was so fundamentally different from the policy it was supposed to serve that the very policy had to be adjusted (by MIPPS) to make that policy fit the Technical Advice Note. It was designed (it was said) to give effect to a pre-existing Welsh Energy Policy - which was immune from question and beyond debate. It did so by setting

- i) enumerated
- ii) onshore wind sector
- iii) energy policy
- iv) targets
- v) to be met.

And, in order (and only in order) to fulfil each of those elements, vi) SSAs were devised and created.

- 1.18. This last point was emphasised time and again by the applicants as they came to the CPI carrying the message that the SSAs were conceived and devised in order to accommodate the delivery of enumerated Welsh Energy Policy Targets to be met²⁹. The Alliance agrees. That is very much part of the Alliance case on the weight to be attached to the fact (if it be the fact) that any one or more proposal lies within any SSA boundary (where even WG has apparent difficulty over the factual position 'on the ground'³⁰) and the weight to be attached to any policy or guidance which is referable to the Energy Policy Target having been adopted. The essence of the Alliance case on SSAs is distilled at ALL-010 §§(i) - (iv) and made good in the text which follows, and brought together in Opening. The short conclusion is that no weight should be given to

²⁵ EN-1 §3.1.2

²⁶ See the now-deleted TAN 8 §1.4

²⁷ ALL-012 §5.41

²⁸ ALL-012 §2.1

²⁹ See eg refs at ALL-012 §§5.23 (CPL), 5.30 (FWL), 5.32 (RWE), 5.39 (RES)

³⁰ See ALL-009 p21 §11.4

any element of PPW or of TAN 8 which is (directly or indirectly) referable back to the emergence of TAN 8 as a delivery mechanism for delivering enumerated onshore wind Energy Policy Targets in SSAs designed to accommodate it.

- 1.19. The SSAs are just that: devised and devised only in concept and in size, in order to accommodate those sectoral Energy Targets for them – as part of the overall Target to be met. As to location, their selection was dependent upon proximity to existing (or mostly assumed committed) grid or future grid reinforcements connected to the Local Area Network³¹. That fundamental premise has since fallen away³².
- 1.20. Some seek to support the SSAs after the event as carrying some form of constraint on large scale wind turbine development in other areas. There may come a time when, in the context of UK Energy Policy, any suggestion that that would introduce a presumption against wind generators outside SSAs may need to be considered in light of the general presumption in EN-1 (see eg Mr Frampton’s point in the Opening Session discussion). So, too, might questions arise over any sequential test being introduced in that way.
- 1.21. There can be no doubt as to the SSAs’ function. Their function was to be part of the delivery mechanism for a sectoral Energy Target derived outside of WAG competence. The material which led up to TAN 8’s adoption, and which the Alliance analyses, underlines the point. At every turn, the purpose and objective of accommodating the Target is emphasised. Arup’s brief was to ensure that the Target could be met³³, it had been revised specifically so that the Target could be achieved³⁴. The number and size of the SSAs was ultimately driven by the previously adopted Target figure: the brief was explicit

“... in order to provide a map ... that identifies [SSAs] capable of delivering [the Target] ... the search areas will need to accommodate (as a minimum) 800 MW ...”³⁵.

- 1.22. Their location was driven by proximity to existing or already committed grid infrastructure, but in the end that reinforcement was not to be³⁶ (see further the Section addressing Grid matters, below). TAN 8 and the MIPPS which it begat both emphasise the need for the SSAs as a delivery mechanism for delivering the Target³⁷.
- 1.23. Because they were promoted to serve a Target which was to be met, other factors which would hinder that goal were side-lined in the selection process (see above), or marginalised after the event. One example of that,

³¹ ALL-009 p6 §§5.2 and 5.3

³² ALL-009 p6 §§5.2 and 5.3 and Section 8 addressing grid matters below.

³³ ALL-010 p6 §2.2

³⁴ ALL-010 p9 middle of quotation, p10 §2.7

³⁵ ALL-010 p11 §2.9

³⁶ ALL-009 §§5.1 - 5.3

³⁷ TAN 8 §2.5 and MIPPS references set out in ALL-010 p17

fastened onto by the Promoters is in TAN 8 Appendix D (a new appendix, which formed no part of the consultation³⁸). It is a familiar passage:

*"Within (and immediately adjacent to) the SSAs, the implicit objective is to accept landscape change ie a significant change in landscape character from wind turbine development."*³⁹

There are other passages in the same category highlighted in the Alliance material such as the recognition of a degree of cumulative impact being a product of the identification of SSAs of a size sufficient to meet the Target⁴⁰

- 1.24. Passages such as these are directly related to the determination to accommodate the enumerated Welsh Energy Policy Target figure. "Something had to give" if that immutable Target was to be delivered (as expressly recognised in the material leading up to their adoption⁴¹). Apart from there being neither consultation over any such 'objective' (as pointed out in the Alliance material⁴²) that passage falls full square within the category of guidance or policy which is referable back to the delivery mechanism of the undeveloped Energy Policy Target and should carry no weight. Something had to give if the Welsh onshore wind Energy Target was to be delivered, but now that there is none, it does not.
- 1.25. We can illustrate the distinction. If, as a matter of overall balance, the Secretary of State recognises that any one or more of the current proposals would bring about a significant change in landscape character but still, nevertheless in that balance decides to approve it, then that is a matter for the Secretary of State to weigh. But the Secretary of State should not begin the assessment process by giving weight to the premise that significant landscape change within (or immediately adjacent to) the areas should be taken as a given, still less as an objective to which the Secretary of State attaches any weight. The fundamental and only reason for that objective has gone: its shadow should not have any bearing on the Secretary of State's approach to the balance to be drawn.
- 1.26. But that last approach appears to have guided PCC and others (such as NRW), as well of course, as the developers who rely heavily on that claimed 'given'. But it has lead PCC to an approach which appears to be that it (PCC) and the Secretary of State are obliged to accept and deliver a quota in or close to SSAs so that a Welsh Energy Policy target can be met. That is now a false premise.

The June and July 2011 Letters

- 1.27. The Alliance responded to the Inspector's request for an analysis of these in Opening⁴³. The CPI returned to them again in the last Session. Some

³⁸ ALL-009 p11 §6.7

³⁹ TAN 8 Appendix D §8.4

⁴⁰ See eg ALL-009 p8 §5.10 and ALL-010 pp13-14 §§2.13 - 2.15

⁴¹ See the analysis in ALL-009 and ALL-10

⁴² ALL-009 p11 §6.7

⁴³ ALL-012 section 6

call the numbers in the Griffiths letter 'targets' and others call them 'caps'. WG calls them 'maximum capacities'⁴⁴. The Alliance analysis shows that they are the same numbers which were grasped to support the 2GW 'aspiration' which had earlier been brought into PPW instead of an earlier suggestion for a 2.5GW aspiration - derived in an entirely different manner⁴⁵ - and which remains in PPW/6⁴⁶.

- 1.28. The Alliance sees the figures as simply a recitation of what Garrad Hassan produced on the basis of their engineering assessment of theoretical maximum yield if there were (largely) no constraints on what could be installed other than the limited few adopted by Arup in drawing up the draft SSA boundaries which they then gave to GH to work from⁴⁷. GH had simply reviewed Arup's work on the basis of a range of permutations as to presumed broad constraints for a series of different permutations. Arup's work itself had already left factors such as landscape considerations out of account when drawing up the draft SSA boundaries⁴⁸ on which GH then subsequently worked.
- 1.29. The 'Griffiths Letter' of 6th / 7th July 2011 (and the WG letters to the CPI⁴⁹) refer back to and rely on the Garrad Hassan work - with apparent approval and endorsement. The 2005 GH report (not the appendices) was published for the first time in July 2011 in order 'to support' that letter⁵⁰. Factually, the claims made as to GH's role and involvement are in some respects rather wide of the mark⁵¹ (as was the First Minister's reference to transport matters having been taken into account⁵²). Mr Frampton may well be right when he questioned whether or not the Ministers (or the authors) may have been fully briefed⁵³. But in relation to the significance which can be attached to the aspiration of 2GW (or its weight as an aspirational policy within PPW), the GH figures need to be seen in their context. And, given the specific reliance on that work from 2004 and 2005, it needs to be explored in order to gauge the weight which can be placed on any material which draws from it.
- 1.30. First, the GH exercise was based on the then draft SSA boundaries which were themselves larger than those which were later adopted in the published TAN 8⁵⁴.
- 1.31. Second, the draft TAN 8 boundaries to which GH were working were drawn up by Arup and drawn up by Arup leaving the following out of account:
 - (a) Landscape capacity and sensitivity;
 - (b) Historic landscapes;
 - (c) National Trails;

⁴⁴ CON-001-002

⁴⁵ See ALL-012 §6.19

⁴⁶ PPW/6 p169 §12.8.13.

⁴⁷ See eg ALL-009 sections 5 and 7, and ALL-012 section 6

⁴⁸ ALL-009 section 5 and ALL-012 section 6

⁴⁹ ALL-011B Tab 9 and CON-001-002

⁵⁰ ALL-012 p26 §6.20

⁵¹ See ALL-009 section 11

⁵² Written Statement 17 June 2011 2nd page, 3rd para ALL-011B Tab 8

⁵³ Frampton Opening Session discussion

⁵⁴ ALL-009 §7.2(e)

- (d) Landscape quality and character using Landmap, and
- (e) Social issues⁵⁵;
- (f) Peat (except from an engineering stability perspective)⁵⁶ and
- (g) Any assumed failure to deliver the then anticipated grid reinforcement⁵⁷.

1.32. Third, those GH figures for 1,700MW⁵⁸ from the 'Base Case + Noise' parameter, were the result of an exercise whose purpose was to "*elucidate theoretical upper limits to development.*"⁵⁹. They could only be achieved (on GH's analysis) if each of the following inexhaustive list of factors was also left out of account:

- (i) visibility,
- (ii) intervisibility,
- (iii) ornithology,
- (iv) ecology,
- (v) hydrology,
- (vi) detailed noise assessment⁶⁰ (this was listed in error simply as 'noise' in ALL-012⁶¹) and
- (vii) any and all other matters which would be considered within EIA processes.

So, in order to achieve the GH figures, the decision-makers would also have to ignore (if not already ignored)

- (viii) any and all transport or highways issues and effects⁶² and
- (ix) be indifferent to the nature and impact of whatever grid connections were needed irrespective of any environmental effects arising.

And we could add to the list that

- (x) they would also need to ignore any and all socio-economic effects (if not already ignored), and
- (xi) they would also need to be indifferent to any forestry constraints (and their implications) - which had specifically led to different and lower 'technical potentials' expressed in other parts of GH's work⁶³.

1.33. The Alliance confidently expects that no decision-maker would approach matters in that way, and equally confidently concludes that WG must have recognised (i) that its aspiration is nowhere expressed to override each and every one of these potential constraints to delivery and (ii) that the 2GW 'aspiration' was bound to be disappointed to some very significant but unassessed extent. The extent of that disappointment would inevitably

⁵⁵ ALL-009 §4.1

⁵⁶ ALL-009 §6.13

⁵⁷ See ALL-009 §5.2 and TAN8 Appendix C §2.13

⁵⁸ GH Report p13, Table 3.1

⁵⁹ GH Report p6 §2.2.1

⁶⁰ ALL-009 p9 §5.10(g), p14 §7.3, p19 §10.11

⁶¹ ALL-012 p28 §6.23(vi)

⁶² ALL-009 §5.5.

⁶³ ALL-009 section 7 and ALL-012 §6.23.

depend on the operation of the 'softer' environmental and other constraints flagged by Garrad Hassan (and any other relevant factors which had not specifically been flagged by Garrad Hassan - it did not purport to be an exhaustive list). As the CPI has seen, the 'Griffiths Letter' shows that WG is far from indifferent to grid issues.

- 1.34. The GH figures only ever were an expression of the 'theoretical' 'technical potential' enumerated by GH specifically on that basis⁶⁴. They were not subjected to and never have been subjected by WG to any appraisal of what could realistically be expected to be provided after due planning process. There has been no SEA⁶⁵. Nor (as some have described them⁶⁶) were they derived in order to give any expression of the 'environmental' limit for what became the (now smaller) SSAs. These 'raw' GH figures cannot conceivably be described as anything like assessed environmental limits: quite the opposite. For the most part they were unconstrained by environmental factors – as GH stressed. (We can also note, parenthetically, that even TAN 8 para 2.5 noted that the then 1,120MW Target was lower than the 1,700MW GH figure to allow for 'local discretion'. It would follow that the 'Griffiths figures' would take that 'local discretion' away if seen as a target or even as an environmental limit up to which W/F installed capacities could expressly go. The unpublished and unconsulted-upon GH appendices illustrate the sort of effect that that might have⁶⁷.)
- 1.35. The Griffiths figures are, it now appears, what made up the bulk of the 'aspirational' 2GW in PPW and, as such, it can fairly be said to be truly breathtakingly aspirational if it is based on any interpretation of GH's work which suggests that that work demonstrated that 1,700MW was deliverable from the SSAs. (Remember, the 2005 GH material was not published, and then in part only, until the Griffiths letter was published⁶⁸.) The Alliance sees the Griffiths letter as directed essentially to grid and to tipping points. Mr Frampton seems to agree on that score⁶⁹. It carries the hallmarks of a hurried response to the reaction to the First Minister's letter⁷⁰. And, given its terms, Mr Frampton has already wondered about the extent of the briefing which had been given to its author. The Alliance sees the force behind that, too.
- 1.36. In summary, the "Griffiths figures":
 - (a) cannot be targets – they are too fragile and insecure for that; and they
 - (b) cannot be environmental limits – no substantive environmental constraints were engaged in their derivation.
 - (c) They are merely an engineering output from a brief which asked for the 'theoretical' 'technical potential' from larger SSAs than came to

⁶⁴ See ALL-012 section 6.

⁶⁵ ALL-009 p19 §10.8, p21 §12.1.

⁶⁶ Mr Minto for NRW, at the Opening Session, for example.

⁶⁷ ALL-011C Tabs 2b and 2c

⁶⁸ ALL-012 p26 §6.20

⁶⁹ Frampton Opening Session discussion

⁷⁰ ALL-009 p19 §§10.9 - 10.10

be adopted. In a policy context of 'aspiration', the Alliance can fairly describe them as 'ornamental'⁷¹ but a potentially seductive trap for the unwary or under-informed decision-maker addressing specific development proposals.

The Need and the Balance

- 1.37. EN-1 refers to the 15% UK renewables target. The EU target for the UK (transposed as a UK target for the Secretary of State to achieve) for 2020 is "at least 15%". Whilst the obligation is there expressed to be 'at least' 15%, EN-1 para 3.4.1 shows that the UK Government has decided that 15% and not some higher figure should be the actual UK Target for 2020 - as a matter of UK policy. It meets the obligation. EN-1 and all subsequent Roadmaps continue repeatedly to express the UK 2020 target as 15% - not least because that is what it is - and the Treasury's Levy Control Framework, limiting subsidy spending towards meeting the UK target, has been set accordingly⁷².
- 1.38. In energy policy terms, EN-1 sets out what is required in order to "*hit this target*"⁷³. That addresses the quantum. On the timescale, policy calls for new renewables projects which meet that 2020 target to come forward as soon as possible because the need for them to come forward in order to hit that target is "*urgent*"⁷⁴. The urgency relates, clearly, to the timescale but also to the target figure within that timescale.
- 1.39. EN-1 specifically invites consideration of any given proposal's "*contribution*" to meeting the need for energy infrastructure⁷⁵ as part of the appraisal of overall balance. Dr Constable, (director of REF⁷⁶) addresses that for each proposal in his material submitted for Sessions 1 and 2⁷⁷. He addresses the absolute and the proportionate contribution of each generator (individually and collectively) towards electricity's share of the UK renewables target and those figures will be recorded below for each proposal (we describe them as the 'EN-1 contributions'). That work repays careful study and the Secretary of State can note that the Promoters, never slow to rebut or respond to Alliance material, did not so do for that analysis. He expressly recognises that, whilst it is inevitable that any single project will only contribute a small proportion of the whole⁷⁸, the small contributions will mount up. But he quantifies that contribution so that the Secretary of State can measure the benefits (or the "contribution") when weighing what the Alliance sees as very considerable harm from each (and collectively): harm not only from the turbines, but from Grid and other 'offsite' effects such as AIL traffic and works to accommodate AILs.

⁷¹ ALL-012 §6.36

⁷² Constable, ALL-CLO-POE-01-RESPONSE p2 §7.

⁷³ EN-1 §3.4.5

⁷⁴ EN-1 §3.4.5.

⁷⁵ EN-1 §4.1.3.

⁷⁶ Constable ALL-SSAC-POE-03 p22 §62

⁷⁷ Constable ALL-SSAC-POE 03, ALL-SSAB-POE-02

⁷⁸ See eg Constable, ALL-SSAB-POE-2 and ALL-SSAC-POE-03 §§ 3 and 4, although updated now as to the position of the UK in relation to UK targets by ALL-CLO-POE-01-Response.

- 1.40. The quantified EN-1 contributions from each proposal (and collectively) are modest in the scheme of things. As a foretaste, and assuming the promoters' optimism over the figures, all five together would represent about 0.38% of UK's annual electricity consumption, about 1% of the UK target for renewable electricity generation, and save about 0.071% of UK CO₂ emissions (before peat loss etc is factored back into the equation, or any assessment of net CO₂ contributions from installing grid works is taken into account)⁷⁹.
- 1.41. As it happens, the UK is recently confirmed as being on track for meeting its adopted EU renewables Target of 15% by 2020 and ahead of schedule. EN-1 expressed an urgency in making provision for that 2020 Target⁸⁰. That urgency doubtless adds weight to the general presumption for so long as the Target is unfulfilled. The recent material shows that the UK is on target to beat the electricity share and thus the 2020 Target by some margin⁸¹. The measure of any urgency and any need from even these small contributions to the 2020 Target is very substantially diminished, or even now removed. It would be irrational to give further contributions from electricity generation to that 2020 Target any significant weight⁸².
- 1.42. Whilst these small contributions towards longer-term goals after 2020 must still be recognised, the urgency against 2020 has gone. The Government repeatedly stresses its determination to draw from other and different technologies in the overall renewables and energy mix in the years to come⁸³. When appraising progress, the Government has been addressing its ambitions eg for onshore wind towards meeting the 2020 overall Target. It notes that ambition as being 11-13GW from onshore wind by 2020⁸⁴ and that there are 8.8 GW now installed or under construction, with 5.41GW consented (total =14.21GW), with a further 6.5GW in the planning system⁸⁵. So, onshore wind is already playing more than its anticipated part towards the 2020 Target. And, for every addition above the 2020 Target, the closer we are brought to breaching the Levy Control Cap on subsidy⁸⁶.
- 1.43. The Alliance draws from Dr Constable's material and invites the conclusion that, expressed by reference to the UK 2020 Target for renewables, the UK is already well on track for meeting it (with a potential excess of 5%) and a considerable further oversupply of capacity is being brought forward through the planning system⁸⁷.
- 1.44. In the overall balance,
- (i) there are no Welsh energy policy targets to be met;

⁷⁹ See eg Constable, ALL-SSAB-POE-02 p6-7 §§ v(iii) - xv) and ALL-CLO-POE-02

⁸⁰ EN-1 §3.4.5.

⁸¹ Constable, ALL-CLO-POE-01 p3 §9.

⁸² Constable, ALL-CLO-POE-01-Response p2 §8.

⁸³ See eg UK Renewable Energy Roadmap Update 2013 p16 §21 [CD/RWE/PLA/02]

⁸⁴ DECC Electricity Market Reform: Allocation of Contracts for Difference-A Government Response on Competitive Allocation, 13 May 2014 p18 §16 [document submitted with ALL-CLO-POE-01-Response]

⁸⁵ Constable ALL-CLO-POE-01-Response p2 §§9 - 11

⁸⁶ Constable ALL-CLO-POE-01 p3 §10

⁸⁷ Constable ALL-CLO-POE-01 p3 §§9 and 10 and p4 §12

- (ii) the weight to be given to the contribution towards meeting the 2020 UK Target must be very little, if any, and
- (iii) the weight to be given to the UK's longer term renewable energy and decarbonisation goals falls to be balanced with
- (iv) the environmental and other factors affecting mid Wales and the people who live, work and raise families here - as well as those who visit (and potentially the same for Shropshire as well); and
- (v) the decision-maker needs always to be sure to unravel any policy, guidance or expressed objectives which are directly or indirectly related to any aspect of the delivery mechanisms for the delivery of the 800MW of onshore wind nameplate capacity target set out in TAN 8 and PPWs before their amendment to remove the target in 2011.

1.45. A summary of the main points relating to other factors in the balance and about which the CPI has heard so much is summarised in the sections which follow.

Section 2: Community

Introduction

Alliance Inquiry Documents ⁸⁸

ALL-SSAC-POE-01, ALL-SSAC-POE-07, ALL-SSAB-POE-01R, ALL-SSAB-POE-04, ALL-OHL-POE-07, ALL-S4-POE-03, ALL-S4-POE-08

- 2.1 The Alliance has produced evidence about our community, the attitudes, interests and activities of local people as well as considering the real world evidence as to the purported benefit of windfarm developments to the community.
- 2.2 This is to our knowledge the first piece of work that has actually asked local people what they do and what interests them as well as what would affect their quality of life. It is notable that they were pleased to be asked and welcomed the opportunity to give their views.

Community profiles

- 2.3 The Alliance used Office of National Statistics data 2001 and 2011 Censuses⁸⁹. Ten Community Councils are within SSAC, these along with Powys and Welsh national statistics were selected for comparison.
- 2.4 The data does not generally support the contention that communities with wind farms are in any way economically better off than either neighbouring or wider national communities. Indeed, many of the key indicators show that some are significantly worse off than broadly comparable neighbouring areas that have no windfarms.
- 2.5 It is particularly notable that Carno and Llandinam have experienced above average declines in young people, concomitant increases in elderly residents and in Carno's case a very large rise in unemployment.
- 2.6 None of the Alliance's evidence in this section has been contested by any of the developers. No alternative evidence contradicts these findings.

Community surveys

- 2.7 The Alliance appreciates that Planning Inquiries are not decided by plebiscite; however, survey data is used by the wind industry to claim public support, and these claims are used in their applications. The purpose of this evidence is to demonstrate the extent of feelings amongst local residents, and their wish for those feelings to be represented at this Inquiry.
- 2.8 Surveys were carried out by Community and Town Councils; some Community Councils, with internal tensions resulting from Councillors'

⁸⁸ As supplied to the Inspector, main parties, and the Inquiry library

⁸⁹ Census Key Statistics & Quick Statistics Tables

interests in applications, refused to conduct the surveys. In this case local residents have carried out their own survey.

- 2.9 6,441 responses were received⁹⁰ from the 14 community council districts. Of these 5,667 residents object to the windfarm proposals and 5,834 object to National Grid's transmission proposal. This is unsurprising as *development on this scale has never been seen before in Wales, or in most of England*⁹¹.

Community consultation

- 2.10 During one week in July the Alliance ran consultation stalls for a total of ten hours in Newtown and Welshpool to find out what people valued in Mid Wales. The questions and responses are set out in full⁹²; however the salient points are: 77% of those consulted live in Mid Wales or Shropshire; a significant majority put highest value on wildlife, dark skies and open spaces.
- 2.11 The countryside is well used by local people who frequently enjoy walking, particularly in open countryside and wildlife watching. This is of course the same land proposed for windfarm developments.
- 2.12 The consultation results demonstrate clearly that visitors and residents (regardless of how long they have been associated with Mid Wales) value the wildlife and the opportunity to get out into open spaces and appreciate dark skies and tranquillity; this is a rare commodity as can be seen in the satellite image provided⁹³ where mid Wales is shown to be one of the last remaining areas of dark skies. It is evident that the further construction of windfarms and associated works will change Mid Wales and all of the aspects that are valued by the people will be lost or severely diminished.
- 2.13 Throughout this Inquiry local people have attended sessions throughout the weeks, listening attentively and asking pertinent questions along with providing extra information. Hundreds of personal witness statements objecting to the applications have been submitted, with more than 150 local people coming to the Inquiry sessions to read their statements personally.
- 2.14 As you will have seen, courtesy and consideration for others along with tremendous effort has been our way of showing the Inquiry what is important and how much we care about the integrity of our lovely landscapes and the wellbeing and livelihoods of those who live here.

⁹⁰ ALL-SSAB-POE-04 appendix and OBJ/416/002a

⁹¹ ALL-S4-POE-08 #45 §13

⁹² ALL-S4-POE-03

⁹³ ALL-S4-POE-03 Community Consultation p15 §11.3 Fig 9

Section 3: Landscape

General

Alliance Inquiry Documents ⁹⁴

ALL-SSAC-POE-01, ALL-SSAC-POE-04, ALL-SSAB-POE-01R, ALL-SSAB-POE-03, ALL-OHL-POE-02, ALL-OHL-POE-07, ALL-S4-POE-02, ALL-S4-POE-08

- 3.1. The Alliance can bring out a distillation of our Landscape and Visual Evidence as a context for all the applications.
- 3.2. Within mid Wales this landscape is referred to as Mwynder Maldwyn: *'the gentleness of Montgomeryshire'*. It engenders what is locally termed *'hiraeth'* (sense of belonging). Amongst the residents of this area, there is a considerable weight of feeling that their landscape and all that they derive from it is threatened by the applications before this Inquiry⁹⁵.
- 3.3. Furthermore the local residents are convinced that the applications before this Inquiry, even though they are of a scale never before envisaged, are the thin end of a wedge that would see first the desensitisation and then the devastation of the landscape that gives them a sense of place. The Alliance has heard nothing from these proceedings to assuage our fears.
- 3.4. Protections for landscape exist in many forms. In the Alliance's professional landscape evidence, we have presented our case with reference to Policy ENV2 of the Powys UDP⁹⁶ and Articles 1 & 2 of the European Landscape Convention 2000⁹⁷. In evidence from us the 'receptors', we have described as best we can in our own way what the landscape means to us and how these proposals will affect our enjoyment of this wonderful area.
- 3.5. The landscape of Mid Wales is characterised by blocks of raised plateaux intersected by river valleys. Whilst the landforms may not be as dramatic as more mountainous areas, they present a more subtle picture of a variety of valleys opening out into major river systems. The grain of the landscape is horizontal. Vertical structures create discontinuities in the flow of the landscape; vertical structures topped with rotating and distracting blades even more so. The landscape has been affected by existing developments over the centuries; the current proposals represent a brutal step change in the slow evolution of the landscape.
- 3.6. The landscape is appreciated by local residents, whether they be members of families who have lived here for generations, moved here for work or chosen to retire here. Local people value this landscape. We have

⁹⁴ As supplied to the Inspector, main parties, and the Inquiry library

⁹⁵ ALL-SSAB-POE-04 §§ 2.1-2.2

⁹⁶ Powys Unitary Development Plan 2001-2016 Written Statement (Powys County Council, Adopted March 2010) section 4.4.4

⁹⁷ ALL-SSAC-POE-04 §§ 8-12

demonstrated this in our survey work⁹⁸ and in the many letters and appearances at the Inquiry

- 3.7. The landscape has supported human activity for millennia. This is evidenced by the wealth of archaeological sites within the application areas, many of which have a direct relationship with the landscape which can still be appreciated today.
- 3.8. The landscape's form and lack of mineral resources may have left it relatively unspoilt from the effects of the industrial revolution; benign neglect has preserved it. Such areas are becoming increasingly rare in this island, and as urbanisation increases, the value of peaceful, tranquil, havens increases. The amenity value of such natural environments increases.
- 3.9. The landscape's form results in a variety of natural habitats, from the open moor peat lands of the plateaux through the variety of upper valleys into the broad sweep of the major river valleys. Whilst the construction and presence of turbines and their infrastructure affect the upland ecosystems, the grid connections down to the major conduits of the lower valleys contribute a major change to the ecosystem where tree felling is required.
- 3.10. The natural features created by the streams and rivers have historically dictated the course of the area's roads. The transport of parts and materials, with their necessary highway works, removing further trees and hedgerows will affect habitats. These features will also have an association with grid connections.

Conclusions from professional analyses relied on by the Alliance

- 3.11. First, the evidence shows the importance of using what is called an ecosystems approach. It draws together and analyses multiple aspects of the landscape and assists in understanding and protecting it.

The Ecosystems Approach

- 3.12. The Welsh Government's Ecosystems Approach, promoted through NRW, has three principles⁹⁹:
 - i) Understanding and revealing the different (sometimes conflicting) values people hold about ecosystem services within decision making.
 - ii) A concern to cultivate multiple and synergistic patterns of ecosystem service delivery - exploring ways in which the natural environment can be harnessed and adapted for diverse, rather than singular, ends. Effectively this approach encourages the management of landscapes to provide increased multifunctional benefits.
 - iii) Ensuring decisions recognise the need to live within environmental capacity limits and protect nature's functions in order to maintain a sustainable and resilient natural environment.

⁹⁸ ALL-S4-POE-03 Community Consultation Section 6 pp 7-8

⁹⁹ ALL-SSAC-POE-04 § 20

- 3.13. The value of the landscape derives not only through the personal sense of place of the residents but also in the appeal to visitors who generate income for the local economy.
- 3.14. Then there are the professional conclusions drawn. We reproduce them here so that they can be incorporated by reference later for each site and not repeated.

SSA C

- 3.15. Mr Watkins evidence for the 'SSA C' sites follows a close analysis, and he draws conclusions:
Overall, I consider that the scale of the proposed wind farms and their associated infrastructure (including anticipated grid connection lines), individually and cumulatively, would have significant landscape and visual impacts. This would be detrimental to both the quality of the Maldwyn Landscape and also to the amenity of users of the Glyndwr's Way National Trail. The impacts of the proposals would in my view considerably harm the sense of 'Mwynder Maldwyn', the gentle, intimate and distinctive character of the Maldwyn Landscape that is so highly valued by local people for its special qualities and the important cultural services that these provide¹⁰⁰

SSA B

- 3.16. Mr Watkins conclusions for the 'SSA B' sites were:
Overall, I consider that the large scale and design of the proposed wind farms and their associated infrastructure (including site access infrastructure, off-site highways works and anticipated grid connection lines), individually and cumulatively, would have significant adverse landscape and visual effects. These effects would result in substantial changes to landscape character and views within the Snowdonia National Park that would, in my opinion, be detrimental to Special Quality 5 (and indirectly to other special qualities of the Park), and adversely affect the character and amenity of Section 3 Areas of Natural Beauty and also panoramas visible from significant viewpoints in the National Park. Such effects would also be detrimental to the visual and sensory qualities of the Cambrian Mountains landscape, and have a negative impact on the visual amenity of users of the Glyndwr's Way National Trail. The impacts of the proposals would, in my view, considerably harm the distinctive characteristics and qualities of the landscape that are so highly valued by local people for the important cultural services that these provide.¹⁰¹

In landscape and visual terms, I do not consider the proposed wind farms before the Inquiry to be acceptable in principle in the proposed locations. In my view therefore neither of the proposals either fully satisfies or conforms with the requirements for safeguarding the landscape in Policy ENV2 of the Powys UDP. Furthermore, the Carnedd Wen proposal individually, and in combination with the Llanbrynmair proposal, conflict

¹⁰⁰ ALL-SSAC-POE-04 §65

¹⁰¹ ALL-SSAB-POE-03 §134

*with the stated aims, Strategic Policy A and Policy 2 of the Eryri LDP, and also Policy ENV2 of the Powys UDP, to protect the special qualities of the National Park.*¹⁰²

*The proposals also undermine national planning policy with regards to wind energy development and National Parks set out in the overarching NPS for Energy EN1, and fail to meet the implicit objective in PPW to maintain the quality and integrity of the landscape within the National Park.*¹⁰³

SSA C and SSA B cumulatively

- 3.17. Again, Mr Watkins conclusions for the Cumulative Effects Session were: *In my opinion, the landscapes within the area affected by the proposals before the Inquiry contain some of the most distinctive areas of countryside in Wales outside of National Parks and Areas of Outstanding Natural Beauty. National Trails, and other areas of statutorily designated Open Access Land, offer extensive opportunities for local communities and visitors to experience, enjoy and benefit from the natural and cultural assets of the landscapes and their associated distinctive qualities. It was for this reason that the Glyndwr's Way National Trail was designated, which is a major recreational asset that provides an important means for people to access, appreciate and enjoy the distinctive visual and sensory qualities of this landscape.*¹⁰⁴

*It is apparent that an extensive tract of landscape in Mid Wales, and extending into Shropshire, would be affected by the cumulative impact of the proposed wind farms before the Inquiry and their associated grid connections, which I consider to be significant and adverse. The cumulative impact on the character and special qualities of the landscape in Mid Wales would be significantly extended when considered in combination with the large number of proposed, consented and operational commercial scale wind farms. I also consider that there would be a substantial adverse cumulative impact on the visual amenity and experience of users of National and Regional Trails, which I assess as significant. Overall, I consider that the cumulative effects of the wind farm proposals and grid connections would have a significant adverse impact on cultural services that the landscapes in this part of Mid Wales provide in terms of recreation, tourism, spiritual enrichment, inspiration, reflection and employment. The importance of these benefits for local people and visitors are demonstrated by the socio-economic evidence submitted by the Alliance.*ⁱ¹⁰⁵

In landscape and visual terms, I do not consider any combination of the proposed wind farms before the Inquiry and their associated grid connection options to be acceptable in principle. In my view therefore none of the proposals either fully satisfies or conforms with the

¹⁰² ALL-SSAB-POE-03 §135

¹⁰³ ALL-SSAB-POE-03 §136

¹⁰⁴ ALL-S4-POE-02 §36

¹⁰⁵ ALL-S4-POE-02 §37

requirements for safeguarding the landscape in Policy ENV2 of the Powys UDP." ¹⁰⁶

Sequential Cumulative Impact on Receptors (people)

- 3.18. The threads of the overall message given to the CPI by the local people can be summarised in the paragraphs which follow.

Glyndŵr's Way

- 3.19. The integrity of the National Trail, Glyndŵr's Way, is of vital importance; this path has landscape value at its very heart, which conforms directly to the principles and purposes behind the establishment of long distance paths.

These proposals interfere with the enjoyment of Glyndŵr's Way in a number of different ways:

- i) in an intimate sense where the path passes directly through the wind farm sites,
- ii) in an intermediate sense where the traveller emerges from a section of forest or wood to a viewpoint to be confronted by a revealed domination of turbines,
- iii) and in a peripheral sense where the applications frame the forward horizon for considerable distances, in whichever direction the receptor is travelling.

These interactions, as we have stated in our proofs, have significant adverse cumulative, and individual, impacts on the extensive vistas and horizons that characterise these upland landscapes from Glyndŵr's Way ¹⁰⁷.

Ramblers, cyclists, horse riders, motorists and passengers

- 3.20. Sequential cumulative impact would be experienced not only by those travelling along Glyndŵr's Way.
- 3.21. The potential for appreciation of the landscape from the section of ancient path over the Kerry ridge will be compromised.
- 3.22. If for example, the walker/cyclist/horse rider/other follows the part of the drover's road from the designated Blockwood car park, heading west towards the Glog, there will be views of the Llandinam to Welshpool 132 kV grid connection to the north in the upper Mule valley, followed by skyline views of Llandinam redeveloped and Llaithddu to the west and an arc of the Carno Turbines, Carnedd Wen, Llanbrynmair, Tirgwynt and Mynydd Clogau (when we include operating and approved developments). If we included Neuadd-Goch and other proposals the dominant feature would be a "windfarm" or a "TAN 8" landscape ¹⁰⁸.

¹⁰⁶ ALL-S4-POE-02 §38

¹⁰⁷ ALL-SSAB-POE-03 §102

¹⁰⁸ OBJ-415 Valleys Against Destruction

- 3.23. This industrial landscape (alien to Mwynder Maldwyn and *'hiraeth'*) will also feature in the itinerary of those receptors (people) on Glyndŵr's Way as they head towards Knighton; it will not be a shock, the receptor will have seen the effects of SSA C on many occasions for many miles on their progress east from Machynlleth. As we have heard from a representative of the Cross Wales Walk, the climactic rise to the Llandinam Plateau is already spoilt by the Llandinam P&L development; the new prospect from the proposals would be a desecration¹⁰⁹.
- 3.24. Those horse riders on the Prince Llewellyn Ride have made their concerns to the Inquiry, as we have heard in evidence¹¹⁰.
- 3.25. The northern arc of Glyndŵr's Way through SSA B will not escape the impact of the applications in this Inquiry, should they be approved. The area which is associated with the Snowdonia National Park to the North and the Cambrian Mountains to the west has these spectacular features as a backdrop to views from Glyndŵr's Way.
- 3.26. Up to 9 Km of the National Trail will be within the Application boundaries for Carnedd Wen and Llanbrynmair. Views towards Snowdonia and the Cambrian Mountains will have the developments in the foreground from the high places the trail visits in this section.
- 3.27. The developments will be a re-occurring feature on the skyline looking west from the first high ground as the trail climbs from Welshpool until it descends into Llanbrynmair, a distance of 43 miles.

National Cycle Trails

- 3.28. National Route 81 will be affected by the proposed Llandinam to Welshpool 132kV overhead line on its path from Welshpool to Caersws, and further affected by Llandinam redeveloped and Llaithddu on the scenic route from Newtown to Caersws. The 132kv line from SSA C to SSA B will also affect it near Llanidloes.
- 3.29. A promoted series of cycle routes from Montgomery will be considerably affected by the Llandinam line and the routes have been submitted as evidence¹¹¹.

Road users

- 3.30. The Mid Wales Landscape is experienced on the road journeys westwards to and from the Welsh Coast. Two principal roads are the A458 and the A470, both passing through SSA B.
- 3.31. The A458 from Llanerfyl to Foel and beyond to and from the Two Rivers Caravan Park will have a southern aspect sky-lined by Llanbrynmair and

¹⁰⁹ OBJ-649-003 Powys Ramblers Full Written Statement

¹¹⁰ OBJ/086,087/OSOC, OBJ-313 Powys – British Horse Society

¹¹¹ The leaflet 'Montgomery Cycle Rides' submitted as an addition to OBJ-415-LAND-POE-OHL Valleys Against Destruction Proof

Carnedd Wen. The northern aspect of the road is threatened with the potential to be sky-lined by the Dyfnant application.

- 3.32. The A470 already has a southern aspect sky-lined by Carno and Trannon shortly to be opposed by Tirgywnt on its northern flank, with the threat of Mynydd Llest y Graig to come. The western-bound traveller (by car or train) will then see Carnedd Wen and Llanbrynmair to the south.
- 3.33. The A470 south from Newtown to Llanidloes will receive a greater visual impact than it does at the moment from a redeveloped Llandinam.
- 3.34. The A483 from Newtown to Llandrindod Wells will have sequential views of Llandinam redeveloped, Llaithddu, with the potential of Neuadd Goch; followed by Llanbadarn Fynydd, with the potential of Garreg Lwyd Hill, Bryngydfa and Hirddywel turbines.

Summary

- 3.35. The Alliance evidence has shown that the Landscape is not just about cold, clinical analysis of features and 'descriptors'. It is what gives us our sense of place and our sense of well-being from all the senses. It is not just what we, 'the receptors' see: it is what we experience and it shapes our experience. It includes what we see, what we smell, what we hear, what we don't hear, what we spot for the first time or have come to love for its permanence in our lives. We enjoy and appreciate the landscape for its association with wildlife and the generally unspoilt context in which we can engage with nature. We are happy to invite others to share it, and many derive their livelihood from the visitors. It is their landscape too. Any one or more of these proposals will, as our evidence has shown, very seriously harm that overall landscape.

Section 4: Tourism and Economy

Introduction

Alliance Inquiry Documents¹¹²

ALL-SSAC-POE-01, ALL-SSAB-POE-01R, ALL-OHL-POE-07, ALL-S4-POE-04, ALL-S4-POE-08, ALL-SOCIOECO-REBUTTAL-S4-04, ALL-S4-POE-04-ADDENDUM

- 4.1. To avoid repetition the Alliance provided evidence on tourism and the economy in the cumulative session. Each windfarm has its own specific impact on businesses, rides, walks, heritage features and so forth and each additional windfarm escalates the perception of encroaching industrialisation intruding on highly valued landscapes.

The Alliance wishes to draw the attention of the Inspector and the Secretary of State to the following five key points:

A. Powys has a full employment, stable economy unlikely to benefit from a superimposed short term construction project

- 4.2. The Alliance has provided the most recent Powys economic data¹¹³ which refutes implications of a structurally unsound and unsustainable economy. It is not high wage, but at a rate of 1.7% has one of the lowest unemployment rates and one of the highest percentage of people with NVQ level 4 or above. Official figures show Powys with by far the highest number of active enterprises in Wales, at 735 per 10,000 population¹¹⁴. The Powys strategy for economic development is to assist the highly varied and often sector-leading enterprises to maximise profit margins.
- 4.3. The Welsh Index of Multiple Deprivation¹¹⁵ shows there is no significant socio-economic deprivation in North Powys on any indicator except access to public transport. This is a very different economy to other authorities with whom the developers seek to draw parallels such as Rhondda Cynon Taff where there are 42% of the population without qualifications and the highest number of super output areas in Wales in the most deprived 10%¹¹⁶.
- 4.4. Self-employment is 8.4% higher than the Welsh average in part due to the desirability of the area when work is not location specific. Such workers contribute greatly to the local economy and help to keep communities vibrant. There is a real risk that a lengthy construction period and windfarm proliferation would destabilise the economy, deter

¹¹² As supplied to the Inspector, main parties, and the Inquiry library

¹¹³ Data sets from Census 2011 and NOMIS December 2013 provided as core document presentation from Powys Head of Regeneration and Planning February 2014

¹¹⁴ Department of Business, Industry and Skills 2012

<https://statswales.wales.gov.uk/Catalogue/Business-Economy-and-Labour-Market/Businesses/Business-Demography/ActiveBusinessEnterprisesPerPopulation-by-Area-Year>

¹¹⁵ ALL-S4-POE-04

¹¹⁶ Rhondda Cynon Taff LDP to 2021 background information

self-employed workers and inhibit inward investment. As PPW5 acknowledges: *'the quality of the environment is often a factor in business location decisions'*¹¹⁷

- 4.5. A Cardiff University study into the impacts of existing windfarms on the rural Welsh economy¹¹⁸ is instructive. It concludes that there are very few genuine opportunities for the sourcing of goods and services locally and assesses that less than 150 direct jobs will be created across the whole of Wales. With a competitive and well established international onshore turbine construction market any significant additional Welsh manufacture is unlikely. They also found that community benefits show no evidence of being an economic driver as also demonstrated by communities near existing windfarms¹¹⁹.
- 4.6. The astronomical claims of possible employment creation by renewable industry sponsored studies are predicated on a substantial onshore turbine manufacture and export industry. The claims are not borne out by the Cardiff University study or experience in Mid Wales. The 39 turbine Cefn Croes windfarm generated some 100 jobs during the 9 month construction period, very few were local and there are just 4 permanent jobs¹²⁰. The claims are not even substantiated by long experience in Germany which, despite a manufacturing base, has found actual job creation well below expectations.¹²¹
- 4.7. No long term benefit will accrue to local people by the provision of improved services or local infrastructure from any of these proposals.

B. Tourism is a successful and important part of the economy

- 4.8. Tourism provides 13.3% of Welsh GDP, 12% of Powys employment¹²² and brings £615 million pa into the economy of which 58% is from Montgomeryshire.
- 4.9. The Welsh Economic Research Unit considers tourism as *'inordinately important'* to Mid Wales making a high contribution to the local economy, supporting infrastructure and community facilities and having the potential for high value growth¹²³.
- 4.10. Developers have sought to downplay the importance of tourism by limiting their consideration to the immediate environs of the windfarm. This is patently absurd as such massive and incongruously moving structures will impact over a very large area and it is the entirety and integrity of the far

¹¹⁷ ALL-S4-POE-04 § 8.7

¹¹⁸ ALL-S4-POE-04 § 6.16 citing Munday et al Cardiff University and Business School, Journal of Rural Studies 2011

¹¹⁹ ALL-SSAC-POE-07 Community Profiles

¹²⁰ ALL-S4-POE-04 Section 5

¹²¹ ALL-SOCIO-REBUTTAL-S4-04 Additional reference doc. D Economic Impacts from the Promotion of Renewable Energies. The German Experience. Final Report Rheinisch Westphalisches Institute fur Wirtschaftsforschung

¹²² ALL-S4-POE-04 § 1.18 Deloitte and Oxford Economics (2010) and Welsh Tourism Definitive Value Report 2012

¹²³ ALL-S4-POE-04 § 1.18 Tourism Economic Activity in the Sub-Regions of Wales (2010)

reaching, tranquil views that provide our main tourist and day visitor attraction.

- 4.11. It is reasonable to consider businesses within a 15km radius of SSAs C & B. As the Alliance has catalogued¹²⁴, this area has one of the highest concentrations of holiday park homes away from coastal areas with nearly 5,000 homes, many of luxury standard. These popular homes are obviously situated in sheltered, well landscaped locations closer to facilities and not on the moorlands that the visitors nevertheless enjoy. Visit Wales¹²⁵ has calculated that each holiday park home generates some £9,000 per annum for the local economy.
- 4.12. The Alliance has also submitted details of all the accommodation providers and self-catering units within the same area and a calculation based on the Welsh Tourist Board bed space formula of the value of this accommodation¹²⁶.
- 4.13. Even a small decrease in visitors would thus have a marked effect on the local community. As the Regeneris tourism report states, *'businesses (in North Powys) may be sensitive even to small changes in visitor numbers as a result of windfarm development and there may be a particular challenge for them replacing those visitors who are deterred'*¹²⁷.
- 4.14. This Inquiry has heard from visitors and from Holiday Park businesses¹²⁸ where home owners are already departing from sites and there has been a complete absence of sales due entirely to the threat of windfarms and infrastructure as letters provided show. Developers seek to dismiss this as a 'fear factor' but it is nonetheless indicative of the deterrent effect on visitors. Declining business confidence over several years of threatened development followed by many years of construction could well destroy the slim profit margins of these businesses as well as inhibiting investment¹²⁹.
- 4.15. Recent, peer reviewed research¹³⁰ demonstrates a fall in property value for houses even at over 2 kms from windfarms. This reduction is evident from the submission of planning applications, as we have seen in Montgomeryshire, but continues post build. Clearly, windfarms do not become more acceptable as claimed and reactions are not merely due to fear. Whilst property values are themselves not normally a planning matter, they do
 - (i) give an indication of the magnitude of impact on amenity and harm to the living or wider environment, and

¹²⁴ ALL-S4- POE-04 Annex B

¹²⁵ ALL-S4-POE-04 § 1.20 British Holiday and Home Parks Association with Visit Wales. Economic Impact Assessment 2011

¹²⁶ ALL-S4-POE-04 Annex B & C

¹²⁷ ALL-SOCIOECO-POE-S4-04-ADDENDUM para 3.6 quoting Regeneris Report para 8.6

¹²⁸ ALL-S4-POE-04 samples at Annexes F, G & I

¹²⁹ ALL-S4-POE-04 Annex and statement made to this Inquiry by A and P Pryce

¹³⁰ ALL-S4-POE-04 Gibbons (London School of Economics) 2013 cited at § 4.4 and submitted as Alliance reference document ALL-S4-POE-04/10 (v.5 draft) and now available as published doc (April 2014)

- (ii) where reduced values affect the ability of owners to move around for socio-economic reasons or to raise finance for business and enterprise, it clearly is a planning matter.

C. Montgomeryshire exhibits a set of tourism factors that make it particularly susceptible to windfarm development

- 4.16. The Alliance undertook to accurately portray the visitor attraction and demographic and to quantify tourism dependent businesses to provide a sound basis for assessing sensitivity to the proposed developments¹³¹.
- 4.17. Oral and written statements to this Inquiry identify the special and even unique qualities of Montgomeryshire that attract and retain visitors¹³² and how the proposals will affect them.
- 4.18. Walking, cycling and riding are popular pursuits for day and staying visitors. As we show throughout Alliance Proofs the key asset of Glyndwr's Way will be severely affected by most of the individual proposals. Cumulatively, the impact on one of only two Welsh National Trails will be devastating. National Trails have been carefully selected as taking walkers through the very best and most characteristic landscapes and are a considerable marketing tool. In Powys the network of footpaths has been used to create circular walks with Glyndwr's Way thus opening up opportunities for day walkers.
- 4.19. There is little doubt regarding walkers' opinions of windfarms. The recent Scottish Mountaineering Council survey showed 2/3^{rds} of 1,000 respondents stating they would avoid or had not revisited places with windfarms¹³³. We also note Ramblers Cymru's unequivocal policy document¹³⁴ which considers on-shore windfarms as causing '*degradation to the Welsh landscape and walking environment*'. Also the objections of Visit Scotland to windfarms that would impact on the Southern Uplands Way¹³⁵.
- 4.20. Walking day trips alone bring £190 million pa to the Welsh economy and both reduce seasonality and increase sustainability¹³⁶. The effective loss of such assets as Glyndwr's Way, many PRoW and open access land must weigh heavily against these proposals.
- 4.21. Should the landscape be desensitised and a Hub and 400kV distribution system be built as a direct or indirect result of consenting the Inquiry

¹³¹ ALL-S4-POE-04 Section 3 and Annexes

¹³² See for example Alliance Compendium ALL-SSAB-POE-01/26: Forest Free Ride business operator using the Llanbrynmair Moors with clients from around the world who use local accommodation providers, camp sites and restaurants. Carnedd Wen and Llanbrynmair windfarms would completely remove the tranquillity and unspoilt nature of the Moors that attract many repeat visitors. Also ALL-S4-POE-04 Annex I

¹³³ ALL-SOCIOECO-REBUTTAL-S4-04 § 5.13 Additional Reference document C

¹³⁴ ALL-SOCIOECO-REBUTTAL-S4-04 § 5.11 (full relevant text from Ramblers' Cymru Policy on Renewable Energy (2012) § 2

¹³⁵ ALL-SOCIOECO-REBUTTAL-S4-04 § 5.12 eg objections to Glenluce, Drone Hill, Minny Gap and Glenchamber windfarms on the basis of concerns at the cumulative detrimental impact on walkers on the Southern Uplands Way (a long distance path but without National Trail status)

¹³⁶ ALL-S4-POE-04 §3.18

proposals, other applications in the pipeline are more likely to be built to fill the available capacity. The result will devastate Montgomeryshire's outstanding landscape and there will be viewpoints with almost 360 degree views of turbines as can be seen from cumulative wireframes¹³⁷. The effects will extend to Shropshire.

- 4.22. Horse riders and businesses¹³⁸ make extensive use of the upland network of bridleways, parts of Glyndwr's Way and nationally promoted Rides¹³⁹. Riders can be uniquely sensitive to turbines as evidenced by the British Horse Society Wind Turbine Experiences Survey which the Alliance brought to the attention of the Inquiry¹⁴⁰. Given liability and their duty of care, riding businesses would be forced to abandon many spectacular rides.

D. There is evidence to predict there will be adverse economic consequences of a development of this scale in an area with the attributes of North Powys

- 4.23. The Alliance's extensive review of tourism studies is summarised in our Proof¹⁴¹. Many studies are old, lack objectivity and fail to demonstrate academic rigour. Within these limitations there is some assistance in predicting trends and general concepts and clearly:
- a. there is a small but significant reduction in tourism numbers and value;
 - b. impact is area specific depending on the unique tourism characteristics making extrapolation unreliable;
 - c. multiple windfarms in a landscape are very much less acceptable (in the region of 40% less) ;
 - d. the number of tourists stating they believe turbines spoil a landscape and would be deterred from revisiting is increasing;
 - e. visitors who take part in outdoor activities, older people and those who frequently return to an area are more likely to be deterred by windfarm development;
 - f. surveys carried out for the Welsh Tourist Board amongst rural visitors show a consistently greater antipathy towards windfarms than some other areas; and
 - g. there is a disconnect between people's appreciation of technologies and their acceptance of infrastructure such as pylons, phone masts and wind turbines.
- 4.24. Developer Proofs of Evidence and questioning of expert witnesses demonstrated a very limited knowledge of the actual tourist offer or the economy with a reliance on extrapolation from unrelated areas and outdated studies that provide no robust evidence that harm would not be

¹³⁷ Rhiw Porthnant in Vattenfall SEI (2013) View point 1 LVIA 4

¹³⁸ Such as Free Rein and My Horse Adventure Holidays

¹³⁹ Prince Llewellyn's Ride, The Great Dragon Ride and the Cross Wales Ride all pass through the windfarm areas in several cases within very close proximity to turbines at distances well below the BHS Guidelines of 4 x blade height for National Rides and 2 x blade height for bridleways (eg at Llaithddu)

¹⁴⁰ ALL-SOCIOECO-REBUTTAL-S4-04 Additional Reference doc C

¹⁴¹ ALL-S4-POE-04 Section 2

caused. Specific studies carried out demonstrate serious omissions and hence flawed analysis, for example at Llanbrynmair¹⁴²

- 4.25. The Alliance provided a detailed study of the area prior to the release of the delayed Regeneris report¹⁴³. Despite some significant omissions as detailed in our analysis of their North Powys Case study¹⁴⁴, our findings for the area largely agree in substance if not on potential magnitude of impact:
- a. visitors are predominantly higher spending older people or young professionals who enjoy outdoor activities and visit regularly throughout the year. All characteristics deemed as increasing sensitivity to windfarm developments
 - b. the attractions are the far reaching; unspoilt views, tranquillity, cultural heritage, sense of wildness and isolation and opportunities for walking, riding and cycling in more remote areas. All aspects again that turbines and grid infrastructure would adversely impact.

- 4.26. From their study Regeneris assess that:
*'The scale of the development combined with the visitor profile and wildness offer of this study area leave it more sensitive to windfarm development than other parts of Wales ...there may be less potential for replacement of visitors than other areas'*¹⁴⁵.

Even if tourists go elsewhere in Wales and the overall share of tourism across Wales as a whole does not decline, this is of no comfort to those who have built up businesses in Montgomeryshire and will have few other rural employment opportunities. And worse still if their home or business has been devalued so that their prospects of relocating or re-financing are reduced.

- 4.27. Further, Regeneris state that this scale of development, which is much greater than in other SSAs¹⁴⁶, and a *'dense clustering of windfarms'* was considered to *'increase the potential for adverse reaction.'*¹⁴⁷
- 4.28. The lengthy construction period, estimated at some 7 years by Capita Symonds¹⁴⁸, was considered by them as the biggest infrastructure project ever seen in Wales. They did not even factor in the concurrent road widening and strengthening operations, transmission infrastructure installation, clear felling and Llandinam decommissioning if all these schemes were to be consented.

¹⁴² ALL-S4-POE-04 § 2.2.3

¹⁴³ ALL-SOCIOECO-POE-S4-04-ADDENDUM Note on the report prepared for the Welsh Government by Regeneris Consulting and the Tourism Company (2014 delayed report): Study into the Potential Economic Impacts of Windfarms and Associated Grid Infrastructure in the Welsh Tourism Sector

¹⁴⁴ ALL-SOCIOECO-POE-S4-04-ADDENDUM Section 4

¹⁴⁵ Regeneris Tourism Report 7.68 and conclusions ALL-SOCIOECO-POE-S4-04-ADDENDUM

¹⁴⁶ Regeneris Tourism Report tables 3.2 and 3.4 ALL-SOCIOECO-POE-S4-04-ADDENDUM

¹⁴⁷ Regeneris Tourism report p.120 cited in ALL-SOCIOECO-POE-S4-04-ADDENDUM

¹⁴⁸ ALL-S4-POE-04 § 3.33 Capita Symonds access Routes Survey 2008 for Powys CC and the WAG

- 4.29. The Alliance would agree with the Regeneris assessment that given a limited road capacity in the area, any congestion is likely to deter visitors and would add to the difficulties caused to businesses dependent on time sensitive deliveries and agricultural operations.
- 4.30. Regeneris also consider the closures and diversions of walks and rides and noise during construction, the transmission infrastructure and the potential loss of business investment as all increasing the risk factors for North Powys tourism.

E. The proposals are contrary to local and national tourism policy and full consideration needs to be taken of the socio-economic impacts

- 4.31. Strategic Search Areas are not designated development sites; an important but often overlooked distinction. Landscape capacity, quality, character and sensitivity; historic landscapes; National Trails, access and transport were all excluded from considerations in the original identification of SSAs. All are very significant issues for tourism and the wider economy and must attract full weight in the balance.
- 4.32. The Rural Development Committee of the National Assembly speaks of the '*major importance in encouraging tourism activities and conserving and upgrading rural heritage*'¹⁴⁹ and the Welsh Tourism Strategy emphasises the development of walking, riding and cycling. Constructing further windfarms in Montgomeryshire directly conflicts with these strategies.
- 4.33. The Mid Wales and Powys strategy for tourism is to increase the value rather than the volume of tourists to preserve the very special qualities that draw higher spending tourists and generate the outstandingly high level of repeat visitors and all year round tourism.
- 4.34. Decisions at Moorsyde, Pentre Tump and Mynydd Llanllwni are significant here in their recognition of the importance of tourism in the planning balance. In the latter case, the development is in a Strategic Search Area. These are detailed in the separate section below.
- 4.35. In conclusion the Alliance would draw the attention of the Inspector and the SoS to the concept of a tipping point¹⁵⁰ beyond which turbine numbers would impact negatively on tourism. North Powys already has over 250 wind turbines. Any further development will be overwhelmingly prominent and necessitate major Grid infrastructure and provide few benefits to the local economy. The Alliance submits to the Inspector and the Secretary of State that this is the step change that will indeed prove the 'tipping point'.
- 4.36. It may be that one small windfarm may not have an overt effect on tourist numbers. Three, four or more plus transmission infrastructure and the whole protracted construction process in an area sought by those seeking

¹⁴⁹ ALL-S4-POE-04 § 8,1 WG Rural Development Committee into Rural Tourism 2011

¹⁵⁰ eg ALL-S4-POE-04 § 2.1.2 Aitchison (Garreg Lywd Windfarm Tourist Impact Analysis for RES) § 5.1.2 and ALL-SOCIOECO-POE-S4-04-ADDENDUM §§ 5.2 & 2.8 Regeneris Report

unspoilt countryside, far reaching views and tranquillity will have substantial detrimental effects.

- 4.37. Increasingly research is indicating that in an area with the characteristics of the tourism offer and the visitor profile in North Powys there is a high probability the area will lose part of its tourism share and that prospects for bringing in new visitors or for added value growth will be severely curtailed. Evidence from existing windfarms shows that there is little likelihood of significant jobs from windfarms or of any economic boost from community benefits to balance losses elsewhere in the economy.
- 4.38. Unequivocal evidence will only be available when the windfarms are constructed. That could be too late for Montgomeryshire.

Appeal decisions as they relate to this CPI

1. Moorsyde Appeal Decision¹⁵¹

- 4.39. Inspector Mackenzie considered the importance of tourism to the local community in Northumbria. An area considered to have similar characteristics to Montgomeryshire in the Regeneris Tourism Report¹⁵². :

371 *There is, in my view, a fundamental knowledge gap about how a local, as opposed to an overall, tourist economy might fare after a windfarm development has taken place. The available research, none of which relates to north Northumberland, suggests that individual windfarms would be unlikely to have a serious effect on tourist numbers. However, I am less confident about the effect of an accumulation of 3 or possibly 4, windfarms in an area approximately 10kms by 10kms which is a popular tourist destination for those who seek unspoilt countryside, distant horizons and tranquillity.*

- 4.40. Inspector MacKenzie was considering the cumulative impact of small windfarms but the point is clearly made. A windfarm of 6 or 7 turbines in itself may not seriously impact tourism but three windfarms, totalling 20 turbines, could when the tourism attraction is unspoilt countryside, distant horizons and tranquillity.

- 4.41. She goes on to state that creating a 'windfarm landscape' with 20 turbines would have unacceptable landscape and visual effects:

372 *This leads to the view that the same combinations could deter more tourists than they would attract, and that this could have an adverse effect on the local economy. However a lack of empirical evidence about the effect of multiple windfarms makes it difficult to reach a firm conclusion about this. Nevertheless in my view the quadruple and triple combinations described above would fail to **promote** tourism, an objective of RSS policy 16.' (Inspector MacKenzie's emphasis)*

2. Pentre Tump Appeal Decision¹⁵³

- 4.42. In an area of Radnorshire of similar landscape characteristics to upland Montgomeryshire and with a tourism offer largely based on walking and riding, Inspector Nixon's determination significantly included great weight given to the amenity of walkers and riders and their tourism potential¹⁵⁴.

- 4.43. He determined that the site is: '*prominently located in a range of views and vistas from different directions with many upland recreational routes leading in the direction of, or having views of the site. These routes and routes for pony trekking tours, including overnight stays.*'

¹⁵¹ Appeal decision: Catamount Energy Ltd, Moorsyde Windfarm & npower Renewables Ltd Northumberland 2009, Inspector Ruth MacKenzie

¹⁵² ALL-SOCIOECO-POE-S4-04-ADDENDUM § 3.18

¹⁵³ Appeal decision: Land at Pentre Tump New Radnor Powys (Jan 2014), Inspector Nixon

¹⁵⁴ §§ 19 & 22

- 4.44. He goes on to state that '*the turbines would be perceived as prominent, dominant or even overwhelming*' from these routes and '*the level of sensitivity which users of these routes will have to the character of their surroundings.*' He concludes '*that the proposed development would have a seriously adverse effect on the character and appearance of the upland landscape and the amenity of its users.*'
- 4.45. In Montgomeryshire greater weight should be given with a promoted National Trail and a National Ride. That Pentre Tump is outside of an SSA is irrelevant as two of the proposals before this CPI are also outside SSAs and in the case of the others the exclusion of Trails (see 4.31 above) means they have to be given weight in the determination.

3. Bryn Llywelyn Appeal Decision (Mynydd Llanllwni)¹⁵⁵

- 4.46. This recent appeal decision is of considerable relevance to this Inquiry as it relates to a windfarm partly in an SSA (SSA G). The decision was released on 6th May 2014 and was then submitted as an Inquiry document by Powys CC. The reasons for rejection are significant in the weight given to cultural heritage, the tourist economy, public amenity and landscape.
- 4.47. Mynydd Llanllwni has a local Special Landscape Area (SLA) designation as indeed did three areas of Powys under Policy EC3 Structure Plan Replacement 1996:
- i) the Western uplands (Llanbrynmair Moors SSA B)
 - ii) the Border Hills, Kerry Hills and Eastern Montgomeryshire (SSA C)
 - iii) all common land
- 4.48. Powys finally determined not to include any SLA designations in the adopted UDP in consideration of the high quality landscape of the whole county as confirmed in an exchange between Powys and Celt Power¹⁵⁶.
- 4.49. The Alliance would also remind the decision maker that virtually all of upland Montgomeryshire was considered worthy of special designation as a National Park or AONB by Hobhouse in his definitive 1947 Report referred to in ALL-S4-POE-04 and detailed in its Annex A. This gives an indication of the true landscape value of the area which is not always apparent in the statements of the developers' landscape witnesses.
- 4.50. Landscape, cultural heritage and visitor attraction are obviously factors that form an important aspect of the tourism offer. Inspector Jones notes that:
- 584 *Altering a wild, empty and quiet landscape to an upland windfarm landscape would significantly alter such experiences for those using the site and surrounding area for recreation/amenity purposes or seeking to appreciate the SAMs in their wider setting. This would not be in the public interest.*'

¹⁵⁵ Appeal decision: Mynydd Llanllwni and Mynydd Llanfihangel Rhos-y-Corn Commons (2014), Inspector Emyr Jones

¹⁵⁶ Celt Power ES Vol 1 (2008) Ch.6 Landscape and Visual Assessment 6.2.2 item 2 communication with Mike Lloyd 07.03.08

and

584. *Less confident riders would be reluctant to ride within a certain distance of the turbines, although they would not be precluded from doing so. It would also be against the public interest to permit proposals which would effectively discourage some members of the public from enjoying rights of access.'*

- 4.51. Inspector Jones goes on to state that a high proportion of tourists come because of:
553 *landscape, views, peace, quiet, tranquillity and if that is lost or damaged there is no guarantee they would be replaced in the same numbers by those visiting for the first time irrespective of the presence, or because of the windfarm.'*
- 4.52. This effectively refutes the claim made for areas with the characteristics of panoramic landscapes and tranquillity (for example by Aitchison in the RES Tourism Impact Study) that visitors deterred by windfarms will be replaced by others whilst supporting the conclusions of Regeneris Consulting Tourism Study and the Alliance for the North Powys area.
- 4.53. The similarities to the situation being considered here are clear. The CPI has before it unsolicited comments from visitors stating the unequivocal reasons why they come to Montgomeryshire¹⁵⁷ although the Alliance would note that the cumulative impacts in both SSA C and B would be considerably greater given the size of the applications and the infrastructure requirements.
- 4.54. Statements were presented at the Bryn Llywelyn Inquiry as at this CPI from visitors expressing their decisions not to return should the windfarms be constructed and from businesses already suffering financial loss as a result of the proposals (see 2.7 above). Inspector Jones could not have definitive knowledge of positive or negative effects which could only be determined post-construction. However, he considered the balance of probability was such that the risk of impact was too great not to weigh heavily in the balance.

¹⁵⁷ see ALL-S4-POE-04 Annex I

Section 5: Transport

Alliance Inquiry Documents ¹⁵⁸
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ALL-SSAC-POE-01, ALL-SSAC-POE-06, ALL-SSAB-POE-01R, ALL-SSAB-POE-07, ALL-OHL-POE-05, ALL-OHL-POE-07, ALL-S4-POE-05, ALL-S4-POE-05a, ALL-S4-POE-08

Transport of turbine components

- 5.1. The Inquiry has heard many representations from the public, community councils and the Alliance regarding the transportation of the turbine components by AIL. Documented evidence has been submitted by Community Councils¹⁵⁹, and members of the public either directly to the Inquiry or via the Alliance`s Compendium for each session.¹⁶⁰
- 5.2. The Alliance has submitted detailed evidence by a Chartered Engineer (Alliance member) who has long experience of highway matters¹⁶¹.
- 5.3. Although there have been roughly nine years of studies, reports and discussions devoted to this issue it is obvious that there is considerable work still required to finalise the STMP, draw up much more detailed management plans, undertake more comprehensive trial runs, and design and apply for permission for and construct many infrastructure alterations.
- 5.4. Our position remains that due to the concentration of the developments into an area with such totally unsuitable infrastructure the disruption and consequent economic and social damage that will result is a major risk for mid Wales and its inhabitants.

Construction and ancillary traffic

- 5.5. Similarly, evidence has been presented about construction and ancillary traffic, both on-site and on the general road network¹⁶².
- 5.6. Our conclusion from this evidence is again that the inevitable disruption to the local economy and residents, on top of all the other impacts, outweighs the benefits promised.

¹⁵⁸ As supplied to the Inspector, main parties, and the Inquiry library

¹⁵⁹ e.g OBJ-001-157-849-TRANS-POE-S4 from Carreghofha, Llandysilio, Llandrinio and Arddleen Community Councils

¹⁶⁰ ALL-SSAC-POE-01, ALL-SSAB-POE-01R, ALL-OHL-POE-07, ALL-S4-POE-08

¹⁶¹ ALL-TRANS-POE-S4-05

¹⁶² ALL-SSAC-POE-06, AQLL-SSAB-POE-07, ALL-OHL-POE-05, ALL-S4-POE-05a

Section 6: Ecology and Wildlife

Alliance Inquiry Documents¹⁶³

ALL-SSAC-POE-01, ALL-SSAC-POE-02, ALL-SSAB-POE-01R, ALL-SSAB-POE-05, ALL-015, ALL-016, ALL-OHL-POE-04, ALL-OHL-POE-07, ALL-019, ALL-020, ALL-S4-POE-06, ALL-S4-POE-08

- 6.1 The Alliance has demonstrated that the approach taken by the developers in the cumulative session has not, as was intended by the Inquiry, provided an understanding at ecosystem level. Instead it tended to underplay the effects through piecemeal detail. As we responded to the Inspector's question during our submission: *The Inquiry has been given a series of small pieces of a jigsaw; what it has not been given is the full picture.* The ecosystem approach is essential, which is why the Welsh Government has been encouraging it for the past two years¹⁶⁴.
- 6.2 The diagram produced by DECC¹⁶⁵ shows clearly the land take required to produce 26TWh per year. Hinkley Point C takes 430 acres; you will note that following the 250,000 acres that is shown for onshore windfarms a note states that in fact DECC estimates that the land take could be between 160,000 and 490,000 acres.
- 6.3 The Alliance has demonstrated that the incremental destruction of countryside that is of low agricultural value and of low population is destroying our wildlife. The shameful lack of use of the available legislation has decimated the habitats and wildlife that we knew as children.
- 6.4 The State of Nature report¹⁶⁶ and its launch¹⁶⁷ are clear; what has been allowed to happen over the past 50 years is nothing short of a disgrace, which should make many public servants unable to sleep at night. This can change, we can reverse the decline, but only if we make use of the policies and legislation available, now.
- 6.5 Degradation of habitat reduces carrying capacity still further, irrefutably affecting species' ability to survive, damaging the biodiversity of the area, probably permanently. This is in contravention of NERC 2006¹⁶⁸ 'Biodiversity Duty' to habitats and species of principal importance.
- 6.6 The Alliance has drawn attention to the impact on water levels not only within the county, but in Shropshire, Herefordshire, Worcestershire and Gloucestershire. The effect is not just flood risk, but from lack of

¹⁶³ As supplied to the Inspector, main parties, and the Inquiry library

¹⁶⁴ See appendix

¹⁶⁵ ALL-S4-POE-06 §§2 & 3 & diagram

¹⁶⁶ http://www.rspb.org.uk/Images/stateofnature_tcm9-345839.pdf and appended

¹⁶⁷ <https://www.youtube.com/watch?v=FnJQjtvngqA>

¹⁶⁸ NERC section 40 & 42

agricultural water supplies through the drier periods.¹⁶⁹ This is affecting arable and soft fruit production.

- 6.7 Evidence of the effect on aquatic life has been provided, showing the wider impact that the identified pollution of exceptionally pure upland streams, for example Afon Gam, has on a range of species. Salmonids, mayfly and other invertebrates are the first to suffer, but the consequences travel through the food chain with species suffocating, starving to death and some dying out¹⁷⁰.
- 6.8 The Alliance evidence has informed the Inquiry of the particularly high water quality in the Montgomery Canal, which is itself a SAC; unusually it is fed by the Cambrian uplands. Expert advice from Montgomeryshire Wildlife Trust has stated that this will undoubtedly be affected¹⁷¹.
- 6.9 The 5 windfarm applications are in the uplands, and much of the SPM line is, too. Alliance evidence has shown that the carrying capacity of the uplands of Mid Wales is lower than that of Scotland, for example. This means that the wildlife requires more space and more feeding grounds¹⁷² because there has been greater agricultural improvement than in Scotland.
- 6.10 Hen harriers require at least 10 sq km and without this will fail to breed and may die out. Hen harrier are present in this area and are currently breeding successfully; however they appear to be on the verge of extinction in England. Hen harrier is listed on Annex 1 of the EC Birds Directive (2009/147/EC) because it is considered vulnerable within Europe, and is included on the red-list of birds of conservation concern in the UK.¹⁷³
- 6.11 Curlew, the largest European wader¹⁷⁴, is not only particularly shy, it also has a very long nesting season; from the beginning of March to the end of August. Curlew are present on all the proposed sites, and at a number of sites along the route proposed by SPM; although it is noted that Llanbadarn Fynydd's 2007 survey recorded one curlew 575m from the nearest proposed turbine location, beyond the site boundary. They are of Amber status¹⁷⁵ and of conservation concern. Activity where they are known to be, from 1st March to 31st August is impossible; disturbance occurs within 600 metres and is illegal¹⁷⁶.
- 6.12 Grid connections for five of the applications have not been addressed by statutory bodies; however, the Alliance draws the Inquiry's attention to the existing Habitat Management Agreement that is an intrinsic part of the planning permission for Tir Gwynt. Any reduction or change to the HMP

¹⁶⁹ ALL-S4-POE-06 §5.6

¹⁷⁰ ALL- S4-POE-06 §6

¹⁷¹ ALL-S4-POE-06 §15

¹⁷² ALL-S4-POE-06 §7

¹⁷³ [jncc.defra.gov.uk /pdf/jncc441.pdf](http://jncc.defra.gov.uk/pdf/jncc441.pdf)

¹⁷⁴ ALL-OHL-POE-04 §49

¹⁷⁵ Birds of Conservation Concern [www.rspb.org.uk /images/BoCC_tcm9-217852.pdf](http://www.rspb.org.uk/images/BoCC_tcm9-217852.pdf)

¹⁷⁶ ALL-S4-POE-06 §§8,9,10

would require statutory agreement and that would of course have to meet similar legislative requirements. A loss of over 30 acres from that agreement for the proposed sub-station site would be significant on a site that has significant deep peat and is a prime breeding ground for curlew and has more than 80 bird species recorded.

- 6.13 The Alliance draws attention to the value of ancient woodland, for its exceptionally stable habitat and unique ecosystem¹⁷⁷ as well as the number of such sites within the area of concern to this Inquiry¹⁷⁸.
- 6.14 The Alliance supports the statutory bodies' conclusion, that survey work has been inadequate, where they have checked it. However, the Alliance is particularly concerned that little evaluation of the surveys has been done on Llanbrynmair Moor and there has been an acceptance of data on some other sites such as Llandinam.
- 6.15 The Alliance noted that contrary to the assertions given previously Mr Seaton admitted on Thursday 22nd May, that the peat on Llandinam is indeed heavily degraded.
- 6.16 Evidence regarding bats and other protected mammals has been brought by NRW and PCC. The Alliance supports their position, particularly with regard to the lack of knowledge of the impact of windfarms on bats in the UK. This is entirely because the work has not been done here, it has been undertaken in Europe and North America. Evidence there demonstrates adverse impact on bats¹⁷⁹.
- 6.17 The Alliance notes the difference in the number of bat species recorded by RES (at least 5) and RWE (9) and draws the Inquiry's attention to this and the assessment of RES survey effort by PCC and NRW.
- 6.18 It is therefore disappointing that the statutory bodies have not registered strong objection regarding the certainty of bat deaths acknowledged by the developers on Llanbrynmair Moors.
- 6.19 The Alliance sees the proposed developments as the death knell to any attempt to restore the biodiversity of Mid Wales. This Inquiry sits at what could be a turning point, or the thin end of the wedge.
- 6.20 Legislation detailed within Alliance evidence provides the tools to recommend refusal of all these applications. Hair-splitting and a piecemeal approach does not ever benefit ecosystems, biodiversity or ultimately, us.

¹⁷⁷ ALL-S4-POE-06 §12

¹⁷⁸ ALL-S4-POE-06 §18

¹⁷⁹ ALL-S4-POE 06 §14 & appendix 2

Section 7: Health and Noise

Alliance Inquiry Documents ¹⁸⁰
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ALL-SSAC-POE-01, ALL-SSAB-POE-01R, ALL-OHL-POE-04, ALL-OHL-POE-07, ALL-S4-POE-07, ALL-S4-POE-08, ALL-NOISE-NOTE-S4, ALL-NOISE-NOTE-S4-ADDENDUM
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Health effects

7.1 We reproduce below the conclusions from Dr Myhill's proof of evidence for Session 4¹⁸¹.

12. **Conclusions drawn from scientific evidence and previous rulings**

- i) Wind turbines produce at least three types of disturbance namely broadband noise, Amplitude Modulation (AM) (sometimes called OAM) and infrasound.
- ii) Broadband noise, AM and infrasound can cause intolerable distress and damage to human health. The health effects of turbines result from their emission of broadband noise, AM and infrasound. The larger the wind turbine, the more broadband noise, AM and infrasound is produced with potential for damaging health effects which can, in certain topographical situations, extend to several kilometres from turbines.
- iii) Characteristic symptoms and potentially serious health consequences are a reality for some people who live near windfarms. Witness statements and video links are referenced.
- iv) Expert advice to lower wind turbine noise limits and protect residents has been provided to Government.
- v) Some turbines have had to be taken down or switched off because of noise impacting on local people and some of those living close to turbines have been forced to leave their homes. Where they have been able to find a buyer people have suffered a significant loss in property value.
- vi) The potential effects of turbines are causing recommendations to be made on increasing separation distances between turbines and homes. Both variations in topography and turbine height have to be taken into account.
- vii) A growing number of health practitioners, researchers and acousticians have publicly expressed concern regarding wind turbines and health.

¹⁸⁰ As supplied to the Inspector, main parties, and the Inquiry library

¹⁸¹ ALL-S4-POE-07 Noise and Health §§ 12 - 14

13. Taking into account the increasing body of clinical evidence, and for avoidance of future adverse effects, the Alliance believes that should approval for any of the windfarms before this Inquiry be recommended, it should only be given subject to conditions for Amplitude Modulation which are similar to those used in the Den Brook Decision, which drew up protective criteria. The permanent noise monitoring exercise method of Cotton Farm is established and should be used to ensure compliance (see Appendix paragraph 17)
14. The Den Brook Amplitude Modulation (AM) noise condition criteria were designed to ensure:
 - i) Modulation of the noise level as identified within ETSU-R-07 as typical of wind turbines (a peak to trough of 3dB); that occurs for a period of no more than 10 seconds in any 1 minute period; and more than 6 times in an hour (ie a total of 1 minute exposure in an hour) is considered a breach of the condition.
 - ii) The normally applied ETSU derived noise limits are replaced by using a firm scientific basis for assessing claims of unreasonable, unacceptable and intolerable noise impacts from windfarm developments throughout the UK.

The practical objective of the Den Brook AM condition was to give all parties clarity, as well as sparing neighbours and developers the trouble, expense, and uncertainty of private nuisance actions

7.2 Dr Myhill's evidence was not questioned at the Inquiry.

Amplitude Modulation

7.3 We refer the Inquiry to the papers submitted by Mr Weller¹⁸². The careful analysis contained within the first justifies the conclusions he reaches which the Secretary of State is invited to accept.

7.4 The severity of the impact of AM has belatedly been accepted by the wind industry, and in December 2013 the trade body RenewableUK published extensive research into the causes and effects of the phenomenon. ReUK also recognised the need for a planning condition on AM and published a template planning condition. Unfortunately, some aspects of the research and the template planning condition have drawn severe criticism, and the Institute of Acoustics have not been able to endorse the work.

7.5 Mr Weller also provided the Inquiry with papers published by MAS Environmental highlighting the issues with these sorts of effects and one from REF which shows the failings of the RUK condition¹⁸³. There is a potential problem with serious consequences which, just as much as with 'ordinary' noise, needs to be addressed by condition. It is not acceptable to leave the matter open to the unpredictable outcome of public or statutory nuisance proceedings. It is a phenomenon which was skirted

¹⁸² ALL-NOISE-NOTE-S4 (and ALL-NOISE-NOTE-S4-ADDENDUM)

¹⁸³ ALL-NOISE-NOTE-S4

around by the windfarm industry for years but now finally recognised, and it needs to be dealt with.

Section 8: Grid Connections

Alliance Inquiry Documents ¹⁸⁴
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ALL-SSAC-POE-01, ALL-SSAB-POE-01R, ALL-OHL-POE-07, ALL-S4-POE-01, ALL-S4-POE-08

- 8.1. For the four windfarms of Llanbadarn Fynydd, Llaithddu, Llanbryn-mair and Carnedd Wen that are before the inquiry it is necessary for a method of exporting their power to be identified and assessed.

LAN enhancement scheme underpinning TAN 8 SSA selection

- 8.2. As spelt out in the Arup report of 2004 ¹⁸⁵ one of the central criteria for the Strategic Search Areas was that they should be within 10 kilometres of a suitable electrical network system that could take more than 100 MW of new on-shore wind capacity. It was identified that the Local Area Network (LAN) in mid Wales would not be able to accommodate very much more windpower and therefore did not satisfy the above criteria ¹⁸⁶.

- 8.3. However Manweb in 2003/4 were seeking capital funds for a scheme, according to the Arup report (and explained in a further report by AEA Technology Environment) ¹⁸⁷, to enhance the LAN through mid Wales to the western mid Wales area as far as Aberystwyth. This project, according to the Arup report ¹⁸⁸, was used to justify the three SSAs in Mid Wales and as it was an enhancement to the LAN it would have provided more load capability for users of the network as well as allowing more 'embedded' windpower to be built. It is obvious that this is the scheme that is described in TAN 8 Annex C paragraph 2.13 when saying:

'providing a stronger more reliable network for electricity users in the Western mid Wales area'

as it describes the scheme being put forward for capital funding at that time.

- 8.4. The LAN enhancement scheme did not receive approval and a completely different scheme has been worked up by SP Manweb and National Grid that has no relationship whatsoever with the Local Area Network or electricity users in mid Wales. This scheme, which the Inquiry has heard about in outline, is a scheme for exporting electricity. It would take power from the four above windfarms through 132kV lines to a 'hub' near Cefn Coch and then onwards via a 400kV line to a connection to the present UK national grid 400kV line near Lower Frankton in Shropshire. As it would have no connection with the LAN and would only take power out from the windfarms to the UK national grid it can in no way satisfy *'providing a*

¹⁸⁴ As supplied to the Inspector, main parties, and the Inquiry library

¹⁸⁵ ALL-009 p 6 §§5.2, 5.3

¹⁸⁶ ARUP 2004 p 61 §5.3.4

¹⁸⁷ ALL-S4-POE-01 p 7 §10.3

¹⁸⁸ ARUP 2004 p 62 §5.3.4

stronger, more reliable network for electricity users in the western mid Wales area.¹⁸⁹

Alternative connections

- 8.5. At the request of the Inspector the applicants have been tasked with identifying how the power output of their windfarms could be exported if the following wishes of the Welsh Government as expressed in the Griffiths letter¹⁹⁰ were taken into account:
- 'Provided development is limited to the maximum capacities, we do not believe that there is a need for the large, visually intrusive, high voltage grid network infrastructure and associated sub station of the kind proposed within Mid Wales.'*
- 8.6. The response has been the Mott MacDonald and LUC reports¹⁹¹. These have identified options for exporting the power using 132kV systems only and the Alliance has carried out a careful analysis which is summarised below¹⁹². No operator either of windfarms or connections has said at the Inquiry that any of these schemes are likely to be promoted.
- 8.7. Because of the length of transmission required the Mott MacDonald report identifies that there are risks in this approach with respect to voltage regulation, transmission losses (36 times the loss compared to 400kV), dynamic stability and possible operational constraints¹⁹³. It is noteworthy that SP Manweb has dismissed such 132kV schemes in its optioneering assessments (Gary Swaine statement¹⁹⁴) because the losses would be too great. The Alliance has provided evidence to identify those risks, as well as emphasising that the LUC report has undertaken no environmental assessment on the greater part of the options identified and in many instances has gone no further than drawing a route on a map¹⁹⁵.
- 8.8. In order to avoid the 400kV systems the options have replaced it with one or two 132kV lines from the Cefn Coch area to the 400kV national system at Legacy. Once again this system does not form part of the Local Area Network, is not connected to it and only takes power out from the windfarms to the national grid. It therefore cannot satisfy the words in Tan 8 Annex C paragraph 2.13: *'providing a stronger, more reliable network for electricity users in the western mid Wales area'* and which the 'Griffiths letter' reinforces.

¹⁸⁹ ALL-S4-POE-01 p 7 §10.3

¹⁹⁰ ALL-011B Tab 9

¹⁹¹ Mott MacDonald report Inquiry references: SEI/CUMULATIVE/GRID/2, AD/VATT/021, AD/FWLC/052, AD/RES/040 and AD/RWE/031. LUC report ,appendices and figures Inquiry references: SEI/CUMULATIVE/GRID/3, AD/VATT/022(a,b), AD/FWLC/053(a,b), AD/RES/041(a,b), AD/RWE/032(a,b)

¹⁹² ALL-S4-POE-01.

¹⁹³ ALL-S4-POE-01 p 4 §§4.7, 4.8 & 4.9

¹⁹⁴ OBJ-702-02 Gary Swaine Statement Session 4

¹⁹⁵ ALL-S4- POE-01 p 3 §3.4 & §4.2, p 5 §5.1, p 5 §§6.2 & 7.1, p 6 §8.2 and p 6 §9.2

Exporting power from SSA D

- 8.9. The Inspector has asked for clarification in Closings as to whether this system would be able to satisfy the requirements of exporting power from a Nant-y-Moch windfarm in Strategic Search Area D, and also whether or not this would satisfy the above Annex C requirements for electricity users.
- 8.10. The position as regards the actual proposed Nant-y-Moch scheme is, we believe from correspondence that residents who live in the area have received, that it has been withdrawn.
- 8.11. Taking the theoretical case that a scheme could be required to export wind power from that area to Cefn Coch and thence from there to the grid, the losses at 132kV over the entire length would obviously be substantial. The technical issues flagged by Mott MacDonald would be substantial over that length and it would appear that SP Manweb would not consider it if they were worried about the losses on just the much shorter Cefn Coch to Legacy section.
- 8.12. As regards the requirement to satisfy the Annex C electricity users' requirements the scheme fails again as the system is only to take windpower out from the windfarms to the national grid. It has no relationship to the LAN and is not connected to it.
- 8.13. It therefore appears to the Alliance that the 400kV and 132kV schemes cannot satisfy the Welsh Government aim of *'providing a stronger, more reliable network for electricity users in the western mid Wales area'*. The only way to so do is by the original Local Area Network enhancement scheme, as was proposed by Manweb and is spelt out in the Arup and AEA Technology Environment reports, which reached across to the Western Mid Wales area. It however would appear that such a scheme would not attract the necessary approval.
- 8.14. "The Inquiry has been led into an analysis of possible alternative means of making the grid connection. Whilst this may be a productive approach to an examination of the risks warned of in EN1, it is of no assistance at all in meeting the imperative for the provision of sufficient information to meet the Directive and UK Policy. Furthermore the weight to be given to any information gained from these analyses must be so limited as to be unable to form part of the basis for a decision by the Secretary of State on the wind farm applications. For National Grid's Mid Wales Connection an extensive route selection process has been undertaken by National Grid. The matter has been in the public domain for 18 months, and no doubt in the private domain of National Grid for much longer. It has involved widespread consultation on multiple route corridor possibilities covering wide areas of Shropshire and the borders, and even now no firm route has been proposed. By comparison, the analysis of alternative connections

carried out in the Inquiry amounts to no more than the back of an envelope.”¹⁹⁶

Conclusion

- 8.15. The Alliance invites the Secretary of State to share the conclusion drawn in ALL-S4-POE-01¹⁹⁷ that:

“... all the [Mott MacDonald] options (1 - 8a) are not considered to be acceptable, economically feasible, satisfy policy requirements, and/or do not have any information that can possibly satisfy the requirement in EN-1 paragraph 4.9.3 ie *‘and must ensure they provide sufficient information to comply with the EIA directive including the indirect, secondary and cumulative effects, which will encompass information on grid connections.’*”

- 8.16. Even if the Secretary of State is persuaded that he can and has carried out an assessment of their effects as impacts of the current windfarm proposals, he has no material from which he could conclude that there was any realistic prospect of any of those options actually being promoted so that he had actually addressed the likely impacts of the windfarms at all. The Alliance sees that there is a much more realistic prospect that if permissions are given for any one or more of these proposed windfarms, that will lead to them contributing to an overall total which will support the 400kV proposals which are still being worked on. Whilst any 400kV line would support more “EN-1 contributions” that would come with yet more environmental damage from any further windfarms. Thus what would be at least an indirect effect of the windfarms being considered here will have been left out of account in the decision-making process for the windfarms which are under consideration here. As pointed out above, it is this sort of risk which EN-1 sets out to avoid. The Inquiry has some general appreciation of the sort of impacts which a 400kV may bring¹⁹⁸, but no complete assessment. The Secretary of State cannot just assume that there will be no 400kV for the purposes of assessment: and an exercise which starts from that hypothesis takes him no further.

¹⁹⁶ OBJ-009-S4-POE-01A p 5 §11, statement by David Ward (retired Field Principal Planning Inspector in England) as a member of SNAP (part of the Alliance)

¹⁹⁷ ALL-S4-POE-01 p 8 § 11.1

¹⁹⁸ eg OBJ-008-POE-S4-MAP, OBJ-003-GENERAL-POE-S4, OBJ-003-LAND-POE-S4

“SSA C sites”

Section 9 : Llanbadarn Fynydd

Section 10: Llaithddu

Section 11: Llandinam

Section 12: Llandinam 132kV line

Section 9: Llanbadarn Fynydd (VATT)

Introduction

Turbines	Nameplate capacity	Annual output (@ 30% load factor)¹⁹⁹	Grid Connection	Contribution to 15% target²⁰⁰
17	59.5MW ²⁰¹	156,366 MW	None included	0.13%
Alliance Inquiry Documents²⁰²				
ALL-SOC-SSA-C, ALL-SSAC-POE-01 to -07, ALL-014 and all documents tabulated within sections 1 – 8 above				

- 9.1 This scheme application is for 17 turbines. As stated in the footnote below, the application is for a maximum output of 59.5MW which would entail turbines of 3.5MW capacity each. However, the 2007 ES states that the candidate turbine will have a power output of only up to 3MW. It is situated such that it has severe negative effects on many aspects of Powys’s landscape, visual amenity and residents’ wellbeing.

EN-1 Contribution²⁰³

- 9.2 The installed (or ‘nameplate’) capacity of 59.5 MW gives only a first indication of the nature of the potential contribution. Dr Constable sees the load factor relied upon as optimistic, but he works with it for the purposes of assessment, and adopts the Ofgem figure for the purposes of addressing Equivalent Firm Capacity (EFC)²⁰⁴.
- 9.3 Using these parameters, Dr Constable assesses the contribution to the electricity share of the UK 15% Target for 2010 as 0.13%²⁰⁵. And in

¹⁹⁹ Figures from ALL-SSAB-POE-02, Tables 1 and 3 (Dr Constable’s evidence) on the basis of the parameters described

²⁰⁰ Figures from ALL-SSAB-POE-02, Table 6 (Dr Constable’s evidence) on the basis of the parameters described

²⁰¹ The application is for a maximum output of 59.5MW which would entail turbines of 3.5MW capacity each. However, the 2007 ES states that the candidate turbine will have a power output of only up to 3MW (ES 2007 p4 Section 1.3, 3rd §). The Vestas V90 3MW turbine has been used in noise assessments (SEI Feb 2013 Vol I Section 4.4 3rd para)

²⁰² As supplied to the Inspector, main parties, and the Inquiry library

²⁰³ EN-1 §4.1.3

²⁰⁴ Constable, ALL-SSAC-POE-03 p12 §19, p17 §40 *et seq*

²⁰⁵ Constable, ALL-SSAC-POE-03 p16 Table 6

terms of its contribution to security of supply of the GB system, would contribute about 0.02%²⁰⁶. CO2 savings are assessed at about 0.05% of UK national emissions (on the basis of a grid average emissions factor)²⁰⁷.

- 9.4 In a nutshell, that encapsulates the “contribution” from the VATT proposals (before any transmission losses along the Grid or CO2 costs from Grid infrastructure is addressed – there is no grid proposal to assess).
- 9.5 This is to be seen in the context that the UK is on target to beat the electricity share of the 15% Target for 2020 by some margin (see Section 1, above for analysis and references).
- 9.6 The balance which falls to be drawn along with that assessment of the ‘contribution’ needs to address the environmental and other factors arising including factors affecting those who live, work and raise families here – as well as people who visit the area.

Siting of windfarm

- 9.7 The windfarm is positioned on an ‘upland’ area which although mostly above 400m altitude is populated by the small village of Llanbadarn Fynydd and other isolated properties. Although from the altitude one would predict it was remote, the western part of the windfarm would be extremely visible from the A483 Llandrindod Wells to Newtown trunk road. Users of numerous small country roads leading to small villages and isolated properties would also experience significant visual intrusion from the windfarm.
- 9.8 As shown in Alliance documentation²⁰⁸ and the SSA map produced by Enplan²⁰⁹ over half of the turbines are outside of the original TAN 8 SSA C area.
- 9.9 The eastern part of the site is remote and the windfarm visibility from upland areas that are traversed by Glyndwr’s Way National Trail and the promoted Kerry Ridgeway Regional Trail is extensive.

Landscape and Visual Amenity

- 9.10 A good representation of the landscape in which the proposed windfarm would be situated is seen in the photomontage at the high point at Rhiw Porthnant²¹⁰. The landscape witness for VATT was at pains to point out that the landscape of the site is characterised by intensive agriculture, post and rail fences, modern houses and farm buildings. The above photograph fully illustrates that before the installation of turbines the landscape is in no way so characterised but is, as local people and visitors

²⁰⁶ Constable, ALL-SSAC-POE-03 p18 Table 7

²⁰⁷ Constable, ALL-SSAC-POE-03 p20 §§53-56 and Table 8

²⁰⁸ ALL-009 para 11.4

²⁰⁹ CD/002/003

²¹⁰ Llanbadarn Fynydd ES Fig 7.11 (i & ii)

value, dramatic, unspoilt and with far reaching upland and valley panoramic views.

- 9.11 As can be seen in the second illustration with the turbines they are overwhelming and because they are located at many different altitudes conspire to produce a particularly unsightly arrangement at this and other locations. In addition to the effect upon the upland landscape the intimate valley of Cwm Nant Ddu will be overwhelmed by turbines. This valley has a High Landmap Visual and Sensory rating and was rated Outstanding in an earlier classification. A photomontage in the ES ²¹¹ shows that the turbines still appear massive even at a distance of 1.8 kms from the valley (the valley can be seen in the middle distance).
- 9.12 In order to fully appreciate the distinctive landscapes of Mid Wales, Glyndwr's National Trail was devised. As called up in our landscape proof ²¹² the 1990 feasibility study says 'much of the special quality of the Way lies in the extraordinary extensive views it presents to the walker, and in the constant flux of those views.' Llanbadarn Fynydd windfarm would seriously affect this Trail. As the VATT wireframes and photomontages verify, the wind farm will be a prominent feature on the uplands north east of the village of Llanbadarn. For example, the photomontage at Bryn Mawr Cottage ²¹³, 1.6 kms from the nearest turbine, demonstrates how a huge unspoilt landscape will be altered negatively for Glyndwr's Way walkers, and residents alike.
- 9.13 As the Trail drops down to the village of Llanbadarn along Fron Top, the windfarm will dominate the experience as the photomontage at Fron Top shows ²¹⁴.
- 9.14 South of Llanbadarn village on the Trail the windfarm will still be a defining feature from the Moel Dod Hills at 3.3 kms distance as can be seen in the photomontage from there ²¹⁵.
- 9.15 Varying numbers of turbines will be as visible to walkers, as is depicted in these illustrations for some 8 – 9 kms of Glyndwr's Way between Bryn Mawr and Moel Dod ²¹⁶. This will be extremely detrimental to the enjoyment of the Trail for visitors and residents. This serves to demonstrate the impact on valued landscapes more generally and as our landscape expert says 'In my opinion the landscape is characterised by a strong sense of tranquillity and remoteness, and by its distinctive historic character.'²¹⁷

Residents

- 9.16 There are many residents who will experience an effect upon their visual amenity. The developers acknowledge there are 13 properties which

²¹¹ Llanbadarn Fynydd ES Fig. 7.11 (ix & x)

²¹² ALL-SSAC-POE-04 § 32

²¹³ Llanbadarn Fynydd ES Fig. 7.11 (v)

²¹⁴ Llanbadarn Fynydd Fig. 7.11 (viii)

²¹⁵ Llanbadarn Fynydd ES Fig. 7.11 (xv)

²¹⁶ see ZTV map in Llanbadarn Fynydd ES Fig 7.10 (iii)

²¹⁷ ALL-SSAC-POE-04 § 50

would experience a significant effect. However, looking at the wireframes²¹⁸ it appears that in the order of 14 other properties are also significantly affected but the developers do not categorise them as such because of screening by trees or buildings. This 'screening' takes no account of leaf fall or of the right of residents to full use of the curtilage of their properties.

- 9.17 There are 14 properties less than 1km from the closest turbine. Particular note is made of the effect upon residential amenity at Lower Cammant, Lower Foel, Esclair Draenllwyn, Crochan and Bryn Mawr Cottage.
- 9.18 Although the analysis by Nuon on residential properties has been more comprehensive than some, it is of concern that at Lower Foel the projected view direction of the photograph was not towards the windfarm. This error raises concerns as to the accuracy of the analysis of the effect upon properties.
- 9.19 Regarding private water supplies, the Inquiry heard evidence²¹⁹ in questioning of the hydrology expert that the surveying of the private water supply at Fiddlers Green was completely erroneous. As with the analysis of visual amenity we have similar concerns regarding the validity of the water supply surveys. Obviously if the scheme were consented rigorous conditions would be necessary to protect the health of residents.
- 9.20 The increase in local construction traffic with a possible 28% increase in HGV flows²²⁰ on the A 483 is of concern especially considering the very constrained nature of the road between Newtown and Dolfor and its poor safety record.
- 9.21 The application is for a 59.5 MW windfarm consisting of turbines of 3.5 MW capacity. The candidate turbine used for modelling is a 3 MW Vestas V90 machine²²¹ and for the noise assessment is modelled in Mode 3. This Mode gives a lower noise output than the normal Mode 0 operation. The Alliance raised concerns in their Statement of Case²²² that residents could be subjected to higher noise levels when a more powerful 3.5 MW machine running in Mode 0 may be installed. In his evidence²²³ Mr Humpheson, expert witness on noise and health, responded that 'Regardless of the final turbine type and operating Mode, Vattenfall will need to ensure that turbine noise levels meet the agreed noise limits. A condition has been drafted which will require Vattenfall to demonstrate compliance with the noise condition for a range of wind conditions.' The Alliance is adamant that such a condition is required if permission were to be granted to ensure that such a possible change in size of turbine and different noise characteristic is properly agreed before construction.

²¹⁸ Llanbadarn Fynydd ES 2007 Vol 2 App B

²¹⁹ OBJ225_GENERAL-POE-FLANDERS-DDA-C section 4

²²⁰ ALL-SSAC-POE-06 § 31

²²¹ Llanbadarn Fynydd ES Ch.8 Noise p.213

²²² ALL /SOC/SSA-C § 20

²²³ VATT -NOISE-POE-HUMPHESON-SSA-C § 5.20

Cultural Heritage

9.22 The Inquiry has heard of the important 'prehistoric landscapes' that are evident in the SSA C. There are many Scheduled Ancient Monuments (SAMs) of prehistoric date within 5 kms of the windfarm application site.²²⁴ The scale of the proposed turbines means they will affect the setting of a considerable number of these. It is acknowledged that inter-visibility between these various sites is important in understanding their significance. The open expansiveness of this prehistoric landscape is particularly important in permitting this understanding, for example the relationship that involves Two Tumps, Fiddlers Green Barrows and Fowlers Armchair.

9.23 As regards the effect upon particular heritage assets there are three of special concern.

i) **Fiddlers Green Barrows (SAM RD084)**

These three round barrows are located 0.8 kms from the nearest turbine. As can be seen from the photomontage at Rhiw Porthnant (adjacent to the SAM) the setting will be severely affected. The Alliance has shown in evidence²²⁵ that the developer's argument that the effect is not even significant cannot be justified.

ii) **Blaen Nant Ddu Grade II Listed Building**

This building is located near to the Rhiw Porthnant photomontage referred to above. It is only 0.6 kms from the nearest turbine. The wireframe²²⁶ shows that 15 turbines will be extremely visible having a severe effect upon its setting. As the legislation requires, special regard must be taken with regard to listed buildings.

iii) **Two Tumps (SAM MG 048)**

These two round barrows are prominently situated at the end of the Kerry Ridgeway Regional Trail. Although the windfarm is 3.3 kms from here²²⁷ it will significantly affect the setting of this much valued location with its qualities of openness and remoteness that permit quiet contemplation of the SAM's significance. The Trail here is also located on the ancient Kerry Ridgeway track which is reported to be a Drove Road of pre-Iron Age provenance²²⁸. The loss of the special qualities of this location would be of special concern, as has been heard at the Inquiry, to local people.

²²⁴ Llanbadarn Fynydd ES map

²²⁵ ALL-SSAC-POE-05 §§ 15-18

²²⁶ Llanbadarn Fynydd ES p. A37

²²⁷ L/F ES 2007 volume 3 photomontage Fig 7.11 (xvii)

²²⁸ ALL-SSAC-POE-05 § 19 - 22

Section 10: Llaithddu (FWL)

Introduction

Turbines	Nameplate capacity	Annual output (@ 29.8% load factor) ²²⁹	Grid Connection	Contribution to 15% target ²³⁰
27	62.1MW	162,111 MWh	None included	0.14%
Alliance Inquiry Documents ²³¹				
ALL-SOC-SSA-C, ALL-SSAC-POE-01 to -07, ALL-014 and all documents tabulated within sections 1 – 8 above				

10.1 Llaithddu is sited on an upland plateau ridge and consists of a single depth 7.5km long array of 27 turbines making the windfarm peculiarly visible over long distances and in the extent to which it occupies the view. This dominance in isolation would be exacerbated in combination with the proximate Llandinam Repowering and proposed Hirddywel schemes. There is a 1km gap between the northern 12 turbines (nos. 3 to 14) and the southern 15 (nos. 15 to 29). 17 turbines are on Open Access land and turbine 6 is on Common Land.

10.2 Contrary to what is stated in the WG letter to the Inquiry²³², the site is outside the original SSA C area and, as agreed in the Statement of Common Ground between developers and Powys, there is no adopted refined area.

EN-1 Contribution²³³

10.3 The installed (or 'nameplate') capacity of 62.1 MW gives only a first indication of the nature of the potential contribution. Dr Constable sees the load factor relied upon as optimistic, but he works with it for the purposes of assessment, and adopts the Ofgem figure for the purposes of addressing Equivalent Firm Capacity (EFC)²³⁴.

10.4 Using these parameters, Dr Constable assesses the contribution to the electricity share of the UK 15% Target for 2010 as 0.14%²³⁵. And in terms of its contribution to security of supply of the GB system, would contribute

²²⁹ Figures from ALL-SSAB-POE-02, Tables 1 and 3 (Dr Constable's evidence) on the basis of the parameters described

²³⁰ Figures from ALL-SSAB-POE-02, Table 6 (Dr Constable's evidence) on the basis of the parameters described

²³¹ As supplied to the Inspector, main parties, and the Inquiry library

²³² CON-001-002, ALL-09 pp21 §11.4

²³³ EN-1 §4.1.3

²³⁴ Constable, ALL-SSAC-POE-03 p12 §19, p17 §40 *et seq*

²³⁵ Constable, ALL-SSAC-POE-03 p16 Table 6

about 0.02%²³⁶. CO₂ savings are assessed at about 0.05% of UK national emissions (on the basis of a grid average emissions factor)²³⁷.

- 10.5 In a nutshell, that encapsulates the “contribution” from the FWL proposals (before any transmission losses along the Grid or CO₂ costs from Grid infrastructure is addressed – there is no grid proposal to assess).
- 10.6 This is to be seen in the context that the UK is on target to beat the electricity share of the 15% Target for 2020 by some margin (see Section 1, above for analysis and references).
- 10.7 The balance which falls to be drawn along with that assessment of the ‘contribution’ needs to address the environmental and other factors arising including factors affecting those who live, work and raise families here – as well as people who visit the area.

Habitat and Hydrology

- 10.8 The site encompasses areas of blanket bog, acid flush and heath. Although the turbine siting attempts to avoid the deepest areas, the ES admits that installation and access tracks will affect peat. The Northern part in particular affects carbon rich soils where turbines are on peat up to 30 cms depth. This is contrary to the advice of TAN 6 and PPW²³⁸ that states the need to ‘*promote the functions and benefits of soils, and in particular their function as a carbon store*’
- 10.9 Dr Harvey Rodda²³⁹ in a detailed review of the Llaithddu hydrological information concluded that a predictive hydrological model or further data on the baseline environment was essential to a full understanding of the impacts of the proposed construction on this sensitive site. He identified an incomplete analysis of the drainage network; soils and geology; hydrological regimes; ground water quality; flood risk from ordinary water courses and the impact of peat for water quality and storage. Potential changes in hydrology during construction, operation and decommissioning or the impacts of the wide access roads, drainage swales and cable trenches, cannot be confidently arrived at by the Inspector or the Secretary of State.
- 10.10 The impact of removing surface vegetation and 18,689 cu m of peat from a fragile upland habitat has not been properly assessed. There is a risk of sedimentation or acidification of the surrounding areas which are of British Action Plan and European Habitat Directive importance and drain to the Wye SAC and the Severn. Construction can cause silting that is highly damaging to aquatic life. Experience at existing Mid Wales windfarms such as Cefn Croes shows that Management Plans can be ineffective in the protection of such sensitive sites.

²³⁶ Constable, ALL-SSAC-POE-03 p18 Table 7

²³⁷ Constable, ALL-SSAC-POE-03 p120 §§53-56 and Table 8

²³⁸ PPW6 § 5.1.2

²³⁹ Dr Harvey Rodda ALL-SSAC-POE-02

- 10.11 Evidence of the rapid rate at which damaged peat dies back and the slow and uncertain regeneration of peatlands²⁴⁰ is not taken into account when assessing damage to fragile ecosystems; carbon release; loss of carbon capture resource; loss of water storage and release facility and the potential acidification of stream water.
- 10.12 Dr Rodda further comments on the lack of consideration given to the added impacts of hard surface run off and the very large on-site borrow pits. Impermeable concrete areas for turbine and crane pads will be situated on the most exposed, highest altitude areas where, in terms of local weather conditions, there is the most rainfall. This will lead to higher peak flows downstream increasing frequency and severity of flooding. Conversely peat removal and die back will result in streams more likely to dry up under low flow conditions.
- 10.13 Should Llaithddu and Llandinam windfarms both be consented, cumulative effects could impact on the Wye SAC with flood risk heightened by the 103 concrete bases, crane pads and access tracks remaining at the decommissioned Llandinam P & L site.

Wildlife

- 10.14 The area of unspoilt upland represents excellent and diverse habitat. As the NPPF on Biodiversity states²⁴¹ the planning system should contribute to and enhance the natural and local environment. The Alliance would endorse that approach.
- 10.15 FWL recorded 35 species of breeding birds on or adjacent to the site with five of these being on the Red List and eight Amber List species. Hen Harrier and other raptors present are susceptible to turbine blade strike due to their flying height and habits. The Ridge is particularly important for soaring for Red Kite. FWL calculates that Red Kite turbine collisions could be as high as 5.88 per year. No updated figures have been supplied and this significant risk must be weighed in the planning balance.
- 10.16 Five types of bat are present on site including the Noctule whose foraging and flight patterns deem it especially at risk from turbines. Given the difficulties of measuring fatalities post construction appropriate mitigation may not be undertaken.
- 10.17 Following concerns from statutory consultees and the Alliance, FWL undertook to make further surveys and assessments on Red Kite, badgers, Great Crested Newts and bats during 2013 and to issue a new SEI for consultation. Although an Updated Protected Species report was provided belatedly in mid-May, making it difficult to properly assess the detailed information, no SEI has been issued and there is no update on the Red Kite collision figure. It must therefore be assumed that it stays at the high figure of 5.88 collisions per year.

²⁴⁰ ALL-SSAB-POE-05

²⁴¹ NPPF § 109 Biodiversity

Cultural Heritage

- 10.18 The site is particularly important and appreciated for the inter-related archaeological remains and cultural heritage associations of the Brondre Fawr which attracts UK and international visitors.
- 10.19 Earis²⁴² points out that the Brondre Fawr megalithic complex depends upon its landscape setting. The shapes and contours of the north to south ridge, the east, west and south horizons and marker stones were probably used with astronomical observations to mark the passage of time and create part of a wider burial complex and ritual site with Fiddler's Green and Two Tumps barrows²⁴³. The setting of the Bronze Age SAMs, Fowler's Armchair and Cairn, will be completely overpowered by two turbines within 250m²⁴⁴ and the proximate sub-station. This is shown in the southern perspective photomontages brought to the attention of the Inquiry by the Alliance²⁴⁵.
- 10.20 The inter-relationships between ridges is part of the understanding of these sites and would be completely lost. As Earis observes:
'the rarity of these carefully selected prehistoric locations in the modern era, after so much loss of landscape by buildings, roads and forestry, makes the preservation of Brondre Fawr all the more important.'
- 10.21 English Heritage guidance²⁴⁶ is unequivocal in stating that:
'Intentional inter-visibility between historical assets or between heritage assets and natural features can make a particularly important contribution to significance'.
Loss of such a relationship through intervening artificial structures is clearly to be avoided.
- 10.22 Planning Practice Guidance for Renewables²⁴⁷ states unequivocally that:
'Great care should be taken to ensure that heritage assets are conserved in a manner appropriate to their significance, including the impact of proposals on views important to their setting.'
The Alliance would request that the Inspector and the Secretary of State exercise that required care in determining the acceptability of these proposals balanced against the overwhelming loss of heritage value and visitor interest.
- 10.23 Mediaeval house platforms and a Bronze Age cairn are only 30 to 40m away from new access tracks so would be unlikely to escape damage.

²⁴² Irene Earis MA ALL-S4-POE-04 Annex E

²⁴³ Photographic evidence provided to this Inquiry by T. Roper (handed to Inspector at SSAC public meeting.)

²⁴⁴ Figure from scaling off Powys SSA map as no figures provided by developer

²⁴⁵ FWL SEI June 2013 wireframe 10WF35 left and right and photomontage 10PM35 left and right

²⁴⁶ English Heritage 2011 Section 2.3 Views and Settings p.6

²⁴⁷ Planning Practice Guidance for Renewables and Low Carbon Energy 2013 DCLG para 15 cited in ALL-SSAC-POE-05 § 9

- 10.24 That CADW have not maintained an objection is not unusual given they generally monitor actual physical damage to an artefact. As noted by Inspector Jones at the Bryn Llewellyn appeal²⁴⁸, lack of an objection does not necessarily indicate that the proximate siting of a turbine is acceptable to setting and interpretation.
- 10.25 Setting, interpreted as the landscape that can be seen from all directions, was the defining factor in rejecting the Toft Hill windfarm²⁴⁹. Inspector Mackenzie noted the
'extensive and open views to the north, south, west...can only be reached on foot, and the mystery surrounding its raison d'être, combine to give it a very special atmosphere' and that
*'the desirability of preserving a SAM's setting should be a material consideration in planning applications'*²⁵⁰.
- There are marked similarities here with Fowler's Armchair except that the Dudo Stone was 1.7kms from the nearest turbine whilst the Llaithddu SAM is only some 200m.

Visual and Landscape

- 10.26 Using FWL photomontages the Alliance has shown that, far from the assertion that views towards the site will be screened by hedgerows, settlements, buildings and garden vegetation²⁵¹, there is actually a paucity of such features in the area. It is difficult to give credibility to FWL assessments with such obviously inaccurate and misleading statements.
- 10.27 Significant effects will accrue on the Bwlch y Sarnau area and the scattered dwellings along the Llaithddu to Bwlch y Sarnau road and in the David's Well area. Llaithddu will be highly visible from parts of the A483 Llandrindod to Newtown road.
- 10.28 It is the entirety of the landscape that is crucial when considering turbine impact in views of Llaithddu but nonetheless noteworthy that the Landmap site classification is 'High' throughout the site for Visual and Sensory and parts are 'Outstanding' for Geological.
- 10.29 For the Alliance Mr Watkins states that, in his professional opinion, he would strongly dispute the claim that by the presence of Llandinam:
*'the area as a whole has been fundamentally changed to the extent that the entire landscape can be characterised as an existing windfarm landscape'*²⁵².
- He also points out that the landscape impacts of the multiple new and upgraded tracks have not been assessed²⁵³. The Alliance believes these will have a very significant effect on the wider landscape.

²⁴⁸ Inspector Emyr Jones's report dated 16/01/2014, appeal refs APP/M6825/A/12/2189697, APP/M6825/X/13/515763 & APP/M6825/X/13/515764 Powys CC core document

²⁴⁹ Appeal Decision: Catamount Energy, Moorsyde Windfarm, nPower Renewables Ltd Northumberland (2009) Inspector Ruth MacKenzie. Alliance tourism & economy core document

²⁵⁰ ALL-SOCIOECO-REBUTTAL-S4-04 section 8

²⁵¹ Llaithddu NTS p.61

²⁵² ALL-SSAC-POE-04 § 44

- 10.30 Cumulatively, the northern Array will cause significant stacking in conjunction with Llandinam Repowering and this has not been ameliorated in many views by the removal of two turbines. Design good practice dictates that stacking should be avoided as should the exacerbating effect of an 11m turbine height differential.
- 10.31 The southern Array spreads turbines unacceptably right along a pristine ridge intruding visually on much wider vistas and having a potentially desensitising effect for further development.

Recreational Use: Public Rights of Way and National Trails

- 10.32 As TAN16 indicates access to the countryside is important to the rural economy and PPW ²⁵⁴ states:
'Local Authorities should seek to protect and enhance the rights of way network as a recreational and environmental resource.'
- As the Alliance has shown, rights of way for walkers and riders are a key component of the local tourism offer attracting day and staying visitors ²⁵⁵. The National Prince Llewellyn's Ride and National Trail, Glyndwr's Way, are both proximate to the proposed turbines and a network of 25 PRowS traverse the application site.
- 10.33 For users of Prince Llewellyn's Way and the Cross Wales Ride, turbines 17 - 23 are at a separation distance of less than 200m. BHS guidelines state that for a National Ride separation should be at least 4 times the height to blade tip ie450m here. This guidance has been completely ignored. A permissive route is proposed further from the turbines but uncertainty remains as to whether it can be progressed and it is not part of proposed conditions.
- 10.34 Grave concern has been expressed by the local British Horse Society group ²⁵⁶ and Dr Myhill ²⁵⁷ at the impact on the very popular Cross Wales Ride that follows Prince Llewellyn's Way. As the Alliance has shown, the bridleway is well used, particularly by younger and inexperienced Pony Club riders. An extensive National BHS survey ²⁵⁸ provided to the Inquiry demonstrates the concerns of even experienced riders regarding shadow flicker, noise and sudden blade movement and the unique vulnerability of riders to turbines. The 130km ride from the Shropshire Borders to the West Coast of Wales would become less attractive for some riders and more problematic to promote. 'Mitigation' measures such as providing corrals or controlled turbine familiarisation days would be of limited use to most, especially visitors. It is ironic that the Cross Wales Ride route was planned specifically to avoid the Llandinam P & L windfarm.

²⁵³ ALL-SSAC-POE-04 § 47

²⁵⁴ PPW6 § 11.1.13

²⁵⁵ ALL-S4-POE-04 Annex I Brandy House Farm

²⁵⁶ OBJ-313-British Horse -SOC-Llaithddu Mr P Moss

²⁵⁷ OBJ-521-OSOC-2-Long Distance Ride and Note supplied to the Inquiry giving names of regular users of Prince Llewellyn's Ride / Cross Wales Ride

²⁵⁸ ALL-SOCIOECO-REBUTTAL-S4-04 § 5.13 BHS Windturbines Experiences Survey (2012) Additional Reference doc. C

- 10.35 Overall there are 16 turbines less than 100 m away from bridleways, with 4 oversailing and less than 35 m away ²⁵⁹
- 10.36 Glyndwr's Way is considerably affected both in the approach to Bwlch y Sarnau from the South East and on leaving to the West. Walkers would experience extensive windfarm views for some 10kms. This will impact significantly on both long distance and day walkers. As can be seen in the Alliance Landscape Proof of Evidence ²⁶⁰, Glyndwr's Way traverses the proposed Carnedd Wen, Llanbrynmair, Llanbadarn Fynydd and Llandinam windfarms and there is a real possibility that this important Trail could become unusable with each new windfarm built along its route. The importance of Glyndwr's Way to accommodation providers and in promoting Mid Wales is evidenced in detail in Alliance documents ²⁶¹.
- 10.37 Riders and walkers braving the tracks could no longer experience the sense of unspoilt 'wildness' and would lose a considerable area of glorious upland riding, particularly in conjunction with the proposed Llandinam site.
- 10.38 The construction period will mean long hours of noise and disruption for residents, riders and walkers for at least 17 months. None of the suggested mitigation measures will materially improve the situation and visitors will not return.
- 10.39 Given the high sensitivity of users on 'national level' trails and the degree of impact of proximate turbines, sub-stations and transmission line, the Alliance believes the magnitude of change will be high and that FWL have considerably underestimated the impact ²⁶².
- 10.40 The Powys UDP policy E3 on Windpower states:
'Applications for windfarms will be approved where, inter alia, they do not unacceptably affect the enjoyment and safe use of highways and the PRoW network, especially bridleways.'
- The proposal for Llaithddu so obviously impacts on both safety and enjoyment of these users that it is incomprehensible that it should pass this test. It is untenable that Countryside Services have withdrawn objection for a financial consideration of £72,000 ²⁶³.
- 10.41 The recent appeal decision at Pentre Tump ²⁶⁴ cited proximity of turbines to Rights of Way and Bridleways as a major factor in dismissing the appeal. This was a small proposal with fewer PRoWs and bridleways than Llaithddu and no National Trail or Ride but the impact on visitors, tourism and local people was still considered too great.

²⁵⁹ FWL figures given in Note on Recreation FWL-C-011

²⁶⁰ ALL-SSAC-POE-04 Landscape, Glyndwr's Way overlay

²⁶¹ ALL-S4-POE-04 §§ 3.8 – 3.18

²⁶² FWL SEI 2. § 10.1

²⁶³ FWL Note on Recreation FWL C -011

²⁶⁴ Appeal Decision: Land at Pentre Tump, New Radnor, Powys (2014) Inspector Nixon

Transport Route

- 10.42 FWL have identified a route from Newport Docks which, as the Alliance has shown²⁶⁵, has critical pinch points at Wyeside Corner in Builth Wells and at Crossgates Bridge where no reliable assessment of capability has been carried out. For Crossgates Bridge, the Inquiry will have seen that different versions of the TMP are variable with interchanging photographs and legends leaving a very real doubt whether the (untitled) measurement survey carried out by a different team was of A483 or of A44 Crossgates Bridge. Some drawings even refer to both bridges on the same page. The Inspector may also wish to cross-check the grid reference given, which has a remarkable proximity to that for the A44 bridge in the material provided by Celt Power for Llandinam Repowering. The Alliance invites the Secretary of State to conclude that of the two measured surveys, the more recent measurements for Llandinam are more likely to be reliable.
- 10.43 This is important, firstly because FWL claim to be able to transport all their components without bridge or associated highway works. And secondly because the Inspector will note that despite referring to 80m towers elsewhere, the tallest, and widest, tapering tower tested was 75m²⁶⁶. At best it is 'tight' for 75m tower components, but the 80m components have not been tested. The Inspector or Secretary of State cannot be confident of FWL's claim that significant works are not required for delivering turbine components.
- 10.44 There is a requirement for 27 windfarm specific lay-bys on local roads. This considerable excavation will cause loss of biodiversity and visual integrity of the lanes as well as increased hard surface and loss of verges, banks and hedgerows²⁶⁷.
- 10.45 There will be up to 80 construction vehicles per day on these unsuitable local roads. These will also have to use the A483 from Newtown causing additional safety hazard on a road known locally to experience frequent accidents.

Effects on residents

- 10.46 There are 38 residential properties in the area of which 7 are less than 1 km from turbines. Some have pecuniary interest but others must be accorded proper protection from noise, possible EAM and associated health risks as drawn to the attention of the Inquiry in detailed evidence of Mr Weller and Dr Myhill²⁶⁸. This is backed up by oral and written evidence presented to this Inquiry from residents as far as 2 miles from the existing Carno 1 & 2 windfarms²⁶⁹.

²⁶⁵ ALL-TRANS-POE-S4-05 § 62 (critical assessment), §§ 65 - 67 (Cross Gates) § 68 (Builth)

²⁶⁶ ALL-TRANS-POE-S4-05 § 62 (critical assessment), §§ 65 - 67 (Cross Gates) § 68 (Builth)

²⁶⁷ ALL-SSAC-POE-06 §§ 17, 30, 32, 62

²⁶⁸ ALL-S4-POE-07, ALL-NOISE-NOTE-S4

²⁶⁹ Properties 2 miles from Carno windfarm (eg Liz Barnes, Blaenglanhanog) and statement (oral and written) regarding sleep problems following the extension of Carno nearer to her home and retreat business (R. Shovelton Cumulative)

- 10.47 Loss of visual amenity must also be assessed. FWL have failed to provide wireframes or photomontages for any proximate property so residents, the Alliance or the Inspector are unable to make any assessment as to magnitude or acceptability.
- 10.48 Residents, like visitors, enjoy the many local opportunities for walking and riding and will lose their cherished, unspoilt and tranquil landscapes. The entries in the Compendium are clear demonstration of that²⁷⁰.

Tourism and Economy

- 10.49 Walkers and riders are important all year round visitors for the Montgomeryshire economy and both recent surveys detailed in Alliance Proofs²⁷¹ and individual statements leave no doubt as to the reactions of many walkers and riders to windfarms. The special qualities of the astro-archaeology and sense of history that attracts visitors to the Brondre Fawr would be entirely lost. Construction and operation of Llaithddu would inevitably reduce visitors to the area.
- 10.50 A recent study commissioned by the WG²⁷² concluded that the magnitude of impact of windfarms in North Powys will be greater than elsewhere in Wales due to the type and interests of visitors. It was considered that there was a risk that replacement visitors would not materialise given the specific and limited tourism offer. This gives rise to serious concerns for lost income to tourism businesses and the viability of local facilities.
- 10.51 Evidence from operational windfarms²⁷³ and a study by Cardiff University and Business School into the impact of windfarms on rural Wales²⁷⁴ demonstrates that very few jobs will be created and a local construction supply chain is unlikely in a rural area. It is indicative of the inherent difficulties that FWL are unwilling to accept a condition with respect to local employment and training.
- 10.52 There is equally no evidence either from the study or communities near existing Mid Wales windfarms, that community benefits are an economic driver or have enhanced community life. As the Alliance has shown²⁷⁵, the opposite is rather the case.

Grid Connection

- 10.53 FWL have an agreed Grid connection and an indicative route to a Hub near Cefn Coch. The route takes a very sensitive path in terms of landscape, for example across the grain of the Hirddywel Ridge. Given the proximity of the Registered Historic Landscape of the Caersws Basin it would be

²⁷⁰ ALL-SSAC-POE-01

²⁷¹ eg The Mountaineering Council of Scotland survey encompassed long distance walkers and showed that some two thirds were already avoiding or intending to avoid walks with windfarms and that 68% thought turbines spoilt the landscape. See ALL-SOCIOECO-REBUTTAL-S4-04 § 5.7 and Additional Reference B

²⁷² ALL-S4-POE-04-ADDENDUM whole document and quote at § 2.6

²⁷³ ALL-S4-POE-04 § 6.4

²⁷⁴ ALL-S4-POE-04 Munday et al (core document for tourism & economy) § 6.16

²⁷⁵ ALL-SSAC-POE-07

difficult to find a direct route or one acceptable in landscape terms and the Alliance would support Powys in their opposition to such a route.

- 10.54 The alternative is undergrounding to Bryn Dadlau substation at Llandinam and thence to Welshpool but there is no clarity on how the Welshpool connection could be achieved. There is insufficient present capacity at Welshpool sub-station to accept the full output from Llaithddu as well as Llandinam Repowering, should both be consented.
- 10.55 Uncertain energy export is a further example of the unsuitability of this proposal on the grounds of environmental, landscape, cultural heritage, ecology, transport and public amenity considerations.

Llandinam and Llandinam 132kV line

Section 11: Llandinam

Section 12: Llandinam 132kV line

Section 11: Llandinam (CPL)

Introduction

Turbines	Nameplate capacity	Annual output (@ 28% load factor)²⁷⁶	Grid Connection	Contribution to 15% target²⁷⁷
34	102MW	250,186 MWh	132kV: 90MVA connection offer	0.21%
Alliance Inquiry Documents²⁷⁸				
ALL-SOC-SSA-C, ALL-SSAC-POE-01 to -07, ALL-014 and all documents tabulated within sections 1 – 8 above				

- 11.1. CeltPower Ltd (CPL) seek to decommission their existing windfarm at Penrhyddian & Llidiartywaun (known as P& L) comprising 102 wind turbines with plated output of 30.6MW (with a maximum 34MVA connection agreement) and to replace it with a new windfarm, initially for 42 turbines with a proposed plated output of 126MW.
- 11.2. Since then and following various consultation responses the scheme now before this Inquiry comprises 34 turbines (of up to 121.2 metres in overall height) with a proposed plated output of 102MW (with a maximum 90MVA connection agreement).
- 11.3. CPL is equity funded. The equity of the company is held equally by ScottishPower Renewable Energy Limited and Eurus Energy Limited²⁷⁹

EN-1 Contribution²⁸⁰

- 11.4. The installed (or 'nameplate') capacity of 102 MW gives only a first indication of the nature of the potential contribution. Dr Constable sees the load factor relied upon as optimistic, but he works with it for the

²⁷⁶ Figures from ALL-SSAB-POE-02, Tables 1 and 3 (Dr Constable's evidence) on the basis of the parameters described

²⁷⁷ Figures from ALL-SSAB-POE-02, Table 6 (Dr Constable's evidence) on the basis of the parameters described

²⁷⁸ As supplied to the Inspector, main parties, and the Inquiry library

²⁷⁹ CeltPower Limited Audited Accounts year ending 31 December 2013

²⁸⁰ EN-1 §4.1.3

purposes of assessment, and adopts the Ofgem figure for the purposes of addressing Equivalent Firm Capacity (EFC)²⁸¹.

- 11.5. Using these parameters, Dr Constable assesses the contribution to the electricity share of the UK 15% Target for 2010 as 0.21%²⁸². And in terms of its contribution to security of supply of the GB system, would contribute about 0.02% - 0.03%²⁸³. CO₂ savings are assessed at about 0.08% of UK national emissions (on the basis of a grid average emissions factor)²⁸⁴.
- 11.6. This analysis is on the basis of the 102MW proposed: except for the security of supply figures, the figures for the net increment of 71.4MW nameplate capacity has not been calculated, but clearly would be less. Similarly, the figures do not reflect any further constraints down to 90MWA due to the constraints at Welshpool substation.
- 11.7. In a nutshell, that encapsulates the "contribution" from the CPL proposals (before any transmission losses along the Grid or CO₂ costs from Grid infrastructure is addressed).
- 11.8. This is to be seen in the context that the UK is on target to beat the electricity share of the 15% Target for 2020 by some margin (see Section 1, above for analysis and references).
- 11.9. The balance which falls to be drawn along with that assessment of the 'contribution' needs to address the environmental and other factors arising including factors affecting those who live, work and raise families here – as well as people who visit the area.

Proposal

- 11.10. Whilst the current proposal is referred to as a re-powering of the existing windfarm, it is in fact a new windfarm application as with the others being heard within the Conjoined Inquiry. All the towers, all the turbines and all the infrastructure would be new plus 9.8 km of new access tracks.
- 11.11. The new wind farm will incorporate new turbine concrete platforms; new borrow pits, new tracks and the building of a new large sub-station.
- 11.12. The existing windfarm (P&L) commissioned on 1 December 1992 is proposed to be decommissioned due to its age and limited capacity. If any of the turbines failed to operate for six months under the terms of the then planning conditions then they would need to be removed.²⁸⁵
- 11.13. The site lies wholly outside the SSA C boundaries.

²⁸¹ Constable, ALL-SSAC-POE-03 p12 §19, p17 §40 *et seq*

²⁸² Constable, ALL-SSAC-POE-03 p16 Table 6

²⁸³ Constable, ALL-SSAC-POE-03 p18 Table 7

²⁸⁴ Constable, ALL-SSAC-POE-03 p20 §§53-56 and Table 8

²⁸⁵ Montgomeryshire District Council planning permission 1991 condition 8 "*if any wind generator hereby permitted fails to produce electricity supplied to the local grid for a continuous period of six months then, unless otherwise agreed with the local planning authority, the said permitted structure and any ancillary equipment shall be dismantled down to ground level and removed from site and the land restored to permit agricultural grazing.*"

- 11.14. The CPL windfarm is part and parcel of a single project with the Llandinam line proposal which is part and parcel of the impacts of the windfarm (it could, after all, not deliver the small contribution to UK target without it). That, no doubt, is why the then DTI²⁸⁶ called for the LDM windfarm ES to include *“details of the proposed electricity Grid connection with likely impact and mitigation measures”* to be covered by it.²⁸⁷

Landscape

- 11.15. The proposed wind farm will be viewed from the Kerry Ridgeway, a promoted Regional Trail and acknowledged throughout this Inquiry as the equivalent of a National Trail due to its pre-historic landscape and its position commanding views to the west and north.
- 11.16. The proposed development also impacts on Glyndwr’s Way National Trail which passes through the area of proposed developments in Areas C and B and connects Knighton on the English Border, Machynlleth (site of Owain Glyndwr’s Parliament) and Welshpool.
- 11.17. The existing and proposed wind farm stand on the Llandinam plateau and ridge with the highest point at 535 metres (1,755 feet) looking both to the west and the north and will be seen both individually and cumulatively with other wind farm proposals in Areas C and B.
- 11.18. The proposed new windfarm is extended in the northern section 0.75 km further east and about 0.25 km further north. This has the effect of extending the ZTV into the Mochdre area, and as has been heard at the Inquiry, the residents of that area are concerned as to the effect. Despite many requests over the years for a photomontage to illustrate the effect, repeated at the Inquiry, no such request has been satisfied. Those concerns remain.
- 11.19. Despite the removal of turbines to reduce the effect upon the Caersws Basin Historic Landscape the effect at Caersws is, according to the 2013 SEI²⁸⁸, still significant as regards visual amenity, as was confirmed in questioning. This means that the vast majority of the Historic Basin will still be significantly affected as it is north of Caersws and covered by the ZTV.
- 11.20. The Alliance contends that the applicant has not accepted the significant change in the landscape characteristics due to the height of the proposed turbines at max 121.2 metres to blade tip (397 feet) as opposed to the existing turbines at 45.5 metres to tip (149 feet) – therefore the proposed 34 turbines at 121.2 metres to tip are in effect 266% higher – this is a major impact on the landscape both viewed at short, mid and long range.

²⁸⁶ The then responsible authority and ultimate predecessor to DECC

²⁸⁷ Llandinam ES, Technical Appendix p2A-2 of 36

²⁸⁸ Llandinam 2013 SEI NTS § 17

- 11.21. The small number (6) of photomontages in the applicant's April 2013 SEI does not present an accurate visual representation of the turbines and makes it difficult to gain the full appreciation of the landscape impact²⁸⁹.
- 11.22. The Alliance has produced as evidence to the Inquiry a photomontage from RWE's Neuadd Goch ES viewed from Two Tumps²⁹⁰. The top page of this photomontage clearly shows the existing landscape with the current 102 turbines as all but indistinguishable in view. But, the second lower photomontage with the full range of potential turbines in planning demonstrates the massive negative impact on the view from Two Tumps and the impact on its setting and how it is appreciated on the landscape²⁹¹. This shows clearly the impact of the new proposed Celt Power turbines due to their height being over 2½ times higher than the existing turbines.
- 11.23. The response from the applicant's landscape witness was that the existing turbines turned at a quicker speed and that the large new ones would turn slowly and with less of them so the impact in fact would be reduced.
- 11.24. The Alliance produced as evidence ALL-014²⁹². This table, with the mathematical calculations being accepted by the applicant, shows the swept area of the blades of the existing 102 turbines covering 17 acres and the swept area of the blades of the proposed 34 turbines covering 44 acres²⁹³ - an increase of 260% in swept areas resulting in massive visual impact be it short, medium and long range. So, not only over 2½ times higher, but with a generally similar proportionate increase in swept path.
- 11.25. This is just one demonstration of the undeniable and demonstrated negative impacts in the landscape. As the careful evidence presented by the Alliance and its professional advisor shows, this proposal if consented, would very seriously damage the landscape and environment and would substantially outweigh the benefit of any contribution from the net additional 71.4 plated capacity but only 56MVA due to the constraints at Welshpool sub station²⁹⁴. The impacts would not, of course, be limited to the turbines: the CPI has heard and seen evidence relating to the impacts from the proposed 132kV line. Those impacts are just as much impacts of the windfarm as the line itself and further underline the wholly disproportionate adverse effects for such a modest contribution.

²⁸⁹ ALL-SSAC-POE-04 Alliance Proof of Evidence Session One Landscape - note 40

²⁹⁰ ALL-SSAC-POE-05-APP1 Cultural Heritage RWE Neuadd-Goch Bank ES Chapter 13 Two Tumps Figure 13 10A

²⁹¹ Two Tumps –pair of Bronze Age Round Barrows by the side of the Kerry Ridgeway

²⁹² Swept Areas of all five proposed windfarms and existing at Llandinam P&L and Cefn Croes (Ceredigion). Details cover no of turbines, maximum height, blade length, swept areas (sqm), hectares and acres

²⁹³ About 7 and 18 hectares, respectively

²⁹⁴ The existing windfarm on the site already has a plated output of 30.6MW (with a 34MVA connection agreement.) The proposed new windfarm will only produce a maximum plated capacity of 102MW from the 34 wind turbines (with a maximum 90MVA connection agreement). Therefore it is clear that the new proposed windfarm would only provide a net extra plated capacity of 71.4MW but would only allow CPL to transmit an extra 56MVA greater than as at present

Transport

- 11.26. The proposal by CPL is to bring turbine equipment including blades from Newport docks by way of the M4, A470 and A483 to the site south of Dolfor. In Powys the route passes through Builth Wells, Crossgates and Llandrindod Wells. The route was covered in CPL's Supplementary Environmental Information (SEI) dated April 2013.
- 11.27. However the route for HGVs is said to be from the north via the A483 from Newtown through Dolfor to the site via an unclassified road. This is a sensitive route and the draft Traffic Management Plan states the project will create over 89,000 additional traffic movements over the life of the project, possibly around 200+ HGV movements per day representing at its maximum an increase in HGV traffic from Newtown using the A483 identified at 22% (table 9.3.SEI 2011)
- 11.28. For the purpose of the ES and transport assessments CPL selected Siemens SWT 2.3MW turbines with 45m long blades on the premise that 3MW turbines of a similar size are available²⁹⁵ The proposed maximum loaded vehicle length of 49m and maximum height of 4.53m makes it impossible to pass through Builth Wells and pass under the Rail Bridge at Crossgates north of Llandrindod Wells without intervention.
- 11.29. CPL encountered difficulties with its trial run from Newport Docks in May 2010 on a route to bypass both Builth Wells and Llandrindod Wells. However the results of this run showed the route was not viable through the village of Eardisley in Herefordshire. Consequently they now propose a route which will be entirely through Wales.
- 11.30. Under the Strategic Traffic Management Plan (STMP) it is proposed to build a Bailey Bridge 4 miles south of Builth Wells on the A470 over the River Wye to join the B4567 which leads to the A481 and then the A483 to avoid the bridge and tight turning angle in the centre of Builth Wells. The River Wye is a designated Special area of Conservation (SAC).
- 11.31. The Alliance strongly opposes this proposal and the environmental impacts it will have on the Wye but also the impact on the local community during the construction stage and when operational with traffic delays in and around Builth Wells. We understand that the proposal will require separate planning permission. It is unclear how long the Bailey Bridge would remain and what provision would be made if any large component parts needed replacement.
- 11.32. A further major concern is the proposal to lower the road under the Crossgates railway bridge on the A483. When questioned we found that the applicants wish to lower the middle of the road leaving pavements intact. This would result in permanent fixed traffic lights to allow only one way traffic and again this proposal is totally unacceptable with little regard to local people and other users of this main north south route. We find that no trials have been undertaken to assess the impact on the traffic

²⁹⁵ CPL are seeking consent to use turbines up to a given maximum height and rotor size with a maximum output of 3MW

from the north going south from the roundabout with the A44 where traffic will back up in peak periods up to and past the roundabout. The construction work itself would require an extended road closure and lengthy diversions over an extended period of time. This extends the impacts of the windfarm even further afield.

- 11.33. The Alliance position is that if the road under the Crossgates railway bridge is to be lowered it must be the whole area including pavements so that when works have been completed it will continue to allow 2-way traffic as at present.

Tourism and Economy²⁹⁶

- 11.34. The Alliance has provided detailed evidence to show that the tourist attraction is the unspoilt landscapes and tranquillity and the type and interests of the visitor. Well over 70% of tourists return many times demonstrating the accuracy of the Mid Wales Tourism Board tourist strap line: *'So good you won't want to leave'*. The area has some of the best walking, cycling and riding in Britain with Glyndwr's Way, Route 81 NCN, Prince Llewellyn's Ride and both the Cross Wales Walk and the Cross Wales Ride all passing proximate and having views of Llandinam Repowering.
- 11.35. Many repeat visitors have invested considerably in the local economy, purchasing holiday park homes and often visiting six or more times a year providing year round tourism and bringing some £9,000 a year per park home into the local economy. The Inquiry has heard from Holiday Park owners who have been unable to sell one home since these windfarm proposals became public.
- 11.36. Although such parks are carefully sited in sheltered valleys and nearer to local facilities, it is the entirety of the Montgomeryshire uplands that visitors enjoy and they tend to stay within the area. Many enjoy outdoor activities, walking, riding, bird watching, painting and fishing, all activates uniquely sensitive to the intrusion of massive, obtrusively turning vertical structures that for ever draw the eye creating a loss of the sense of peace and visual tranquillity.
- 11.37. Broneirion is a Grade 2 listed house set in landscaped acres. It accommodates 56 people and has conference facilities and a self-catering cottage. Llandinam Repowering will be a dominant feature as guests move around the locality. Businesses such as this provide good local employment opportunities and benefit local suppliers.
- 11.38. The Welsh Government Rural Select Committee considers tourism in real areas to be 'inordinately' important not only to businesses but also to the fabric and infrastructure of community life. Diversification into tourism supports many family farms.
- 11.39. CeltPower have not provided any comprehensive analysis of the Montgomeryshire tourism sector. The prominently situated new scheme

²⁹⁶ ALL-S4-POE-04

will occupy a greater area of land than the Llandinam P&L windfarm as well as being some 2½ times higher and sweeping a much larger area of the sky. The present windfarm can be easily seen over a considerable distance and in many views but the turbines are relatively small. The new Repowering scheme along with the 35 km HDWL to Welshpool will dominate the skyline and be prominently visible as can be seen in photomontages.

- 11.40. Riders and walkers have for many years avoided the bridleways and footpaths that give access to the superb views from the ridge of the present Llandinam scheme. Equestrians in the BHS Survey actually refer to the Llandinam windfarm as a deterrent to their riding. Mr Alec White made a statement to the Inquiry regarding the impact of the scheme on the enjoyment and appreciation of Mid Wales by the 500 or so people who annually complete the Cross Wales Charity Walk.

Conclusion

- 11.41. Despite the obvious efforts to reduce the effect of the proposed development by removing nearly 20% of the proposed turbines, we are still left with the following damage:
- i) A much increased significance of visibility over a greater distance compared with the present scheme.
 - ii) 9.8 km of new track.²⁹⁷
 - iii) Eight new borrow pits.²⁹⁸
 - iv) New footprint for development infrastructure of 28.9 hectares.²⁹⁹
 - v) A completely new 132kv transmission line through 35km of outstanding historic landscape (see next Section).
 - vi) Increased visibility on Glyndwr's Way (eg major/moderate at Grach).³⁰⁰
 - vii) Major effect of local scale on Valley Mire.³⁰¹
 - viii) Six Scheduled monuments within the site, with intervisibility affected.³⁰²
 - ix) Moderate adverse significance from indirect visual impact on the Caersws Basin and Clywedog Valley Registered Historic Landscapes.³⁰³
 - x) Turbines on Access land, and Common Land requiring a Commons application.³⁰⁴

²⁹⁷ Llandinam 2013 SEI NTS § 7

²⁹⁸ Llandinam 2013 SEI NTS section 4 § 2

²⁹⁹ Llandinam 2013 SEI NTS section 4 § 5

³⁰⁰ Llandinam 2013 SEI NTS section 4 § 13

³⁰¹ Llandinam 2013 SEI NTS section 8 § 3

³⁰² Llandinam 2013 SEI NTS section 10 § 2 & 6

³⁰³ Llandinam 2013 SEI NTS section 10 § 8

³⁰⁴ Llandinam 2013 SEI NTS section 13 § 4

- xi) Residents and visitors alike are disappointed that after having lost the amenity of this magnificent site for over 20 years they are threatened with losing it for another 25 years.³⁰⁵
- 11.42. The Alliance asks the Secretary of State to take into account the massive negative impacts on the landscape as a price that cannot be paid and that he refuses both this application and also the associated 132kV overhead electric line application.

³⁰⁵ OBJ-777

Section 12: Llandinam 132kV Line (SPM)

Introduction

380 prs of heavy duty HDWP poles	Plus 2 n^o 4-pole terminal structures	Supporting 192 n^o. 6 metre wide galvanised steel lattice gantry structures	Pole structure heights of up to 15.5m above ground level with a 4-wire circuit	Maximum line capacity 124MVA over its 35km length
Alliance Inquiry Documents ³⁰⁶				
ALL-SOC-OHL, ALL-OHL-POE-01 to -07, ALL-017 to -020 and all documents tabulated within sections 1 – 8 above				
As part of a Llandinam scheme of:				
Turbines	Nameplate capacity	Annual output (@ 28% load factor) ³⁰⁷	Grid Connection	Contribution to 15% target ³⁰⁸
34	102MW	250,186 MWh	132kV: 90MVA connection offer	0.21%

- 12.1. The proposal seeks to install a 4-wire heavy duty wood 132kV overhead power line (SPM line) to transmit a contracted maximum output of 90MVA from CeltPower Ltd's (CPL's) proposed 'repowering' windfarm scheme at Llandinam. This would be over a distance of 35 km from a new substation selected by CPL on a green field forming part of the proposed windfarm site (referred to as Bryn Dadlau substation), to the existing SP Manweb Welshpool substation which is proposed to be upgraded and expanded to accommodate the additional power.
- 12.2. The design of the power line comprises of heavy duty double wooden poles (HDWP) supporting 6 metre wide galvanised steel lattice gantry structures, 3 n^o AAAC 200mm² "POPLAR" phase conductors with a 124MVA summer rating, plus an underslung AACSR/ACS 70mm² "HORSE" equivalent optical ground wire ³⁰⁹.
- 12.3. The most recent revision of the proposed overhead power line comprises of 380 pairs of heavy duty pole supports with a maximum structure height

³⁰⁶ As supplied to the Inspector, main parties, and the Inquiry library

³⁰⁷ Figures from ALL-SSAB-POE-02, Tables 1 and 3 (Dr Constable's evidence) on the basis of the parameters described

³⁰⁸ Figures from ALL-SSAB-POE-02, Table 6 (Dr Constable's evidence) on the basis of the parameters described

³⁰⁹ SPM-ENGINEERING-SPOE-PAALMAN-OHL paras 3.9 to 3.11

of 15.5 metres above ground level, in addition to the 4-pole terminal structures at both ends of the overhead power line.

- 12.4. The Alliance has demonstrated very clearly that what may superficially appear to be a minor intrusion when considered as a line on a map at a 'high level' can result in marked and damaging impacts when scrutinised more carefully after more detailed assessment.
- 12.5. The impacts of the proposed overhead power line cannot be considered in isolation, because they are additional impacts of CeltPower Ltd's Llandinam windfarm repowering project which was considered during Session 1 of this Inquiry. The woodland and ecology impacts of both the windfarm proposal and its grid connection proposal must be considered as two inclusive elements of one larger scheme.
- 12.6. This proposal is not just about the impacts of the poles and wires or about the loss of trees and vegetation and resulting impacts on wildlife, but is also about the cleared/pruned swathe through the landscape's vegetation that will reinforce the visual presence of this temporary over-engineered proposal and thereby affect the public's enjoyment and appreciation of its own landscape.
- 12.7. If the Line is approved it can only be because despite the severe impacts from both the Windfarm and the Line it must be accepted because of the benefits from the Windfarm. If the Line is to be used for different purposes, then those purposes must be tested against a presumption that the Line will be removed and the land reinstated, otherwise any future balance will be skewed against the protection of the valued environment and other important factors. It is for that reason that the Alliance set out the position at paragraph 8.1 of its Statement of Case ³¹⁰.

EN-1 Contribution ³¹¹

- 12.8. As shown in Sections 1 and 11 above, Dr Constable assesses the contribution from the parent windfarm to the electricity share of the UK 15% Target for 2010 as 0.21% ³¹². And in terms of its contribution to security of supply of the GB system, would contribute about 0.02% - 0.03% ³¹³. CO₂ savings are assessed at about 0.08% of UK national emissions (on the basis of a grid average emissions factor) ³¹⁴. The associated impacts arising from the L Line need to be seen in that context.
- 12.9. But also in the context that Dr Constable's figures are 'gross' and do not net off the contribution from the existing turbines, and nor are they reduced to take account of the constraint to 90MW which results from constraints at Welshpool.

³¹⁰ ALL/SOC/Session 3

³¹¹ EN-1 §4.1.3

³¹² Constable, ALL-SSAC-POE-03 p16 Table 6

³¹³ Constable, ALL-SSAC-POE-03 p18 Table 7

³¹⁴ Constable, ALL-SSAC-POE-03 p20 §§53-56 and Table 8

- 12.10. This is to be seen in the context that the UK is on target to beat the electricity share of the 15% Target for 2020 by some margin (see Section 1, above for analysis and references).
- 12.11. The balance which falls to be drawn along with that assessment of the 'contribution' needs to address the environmental and other factors arising including factors affecting those who live, work and raise families here – as well as people who visit the area

Approach

- 12.12. The SPM line is part and parcel of a single project and is as much an impact of the CPL windfarm as the windfarm is an impact 'released' by being able to connect to the Grid via the SPM line (it could, after all, not deliver the small contribution to UK target without it). That, no doubt, is why the then DTI³¹⁵ called for the CPL ES to include "*details of the proposed electricity Grid connection with likely impact and mitigation measures*" to be covered by it³¹⁶.
- 12.13. Early ES material from SPM did illustrate the SPM line together with the CPL windfarm³¹⁷. But that material was removed when replacement material was submitted³¹⁸. But despite taking account of the windfarm, that early ES material proceeded on the wrong basis. It proceeded on the basis that the windfarm was in place and part of the baseline landscape³¹⁹. The early ES material addressing Landscape and Visual also worked forward from an assessment within a baseline context which included not only the CPL proposal, but also VATT, FWL and Garreg Lwyd windfarms³²⁰.
- 12.14. SPM clearly approached the planning and design of route and infrastructure against an assumption that the area would already be (or would soon be) desensitised not only by the CPL repowering, but by a number of other windfarm developments as well.
- 12.15. The first CPL ES itself carried over the then embryonic design parameters settled on by SPM as illustrated by its 'high level routing study'³²¹.

Limited toolkit and cost biased design choices

- 12.16. It is clear that SP Manweb PLC (SPM) only considered the use of the Heavy Duty Wooden Pole overhead power line option (which they have recently deployed in North Wales to connect an off shore wind farm to the grid at Abergele) and failed to give any determined consideration to the use of the less intrusive single pole variant of the Heavy Duty Wooden

³¹⁵ The then responsible authority and ultimate predecessor to DECC.

³¹⁶ CPL ES, Technical Ax p2A-2 of 36

³¹⁷ See eg SPM line ES December 2009 – Viewpoints VP01 and VP02.

³¹⁸ tba

³¹⁹ See eg SPM line ES December 2009 - Viewpoints, p2 §8

³²⁰ See eg 2009 ES assessments of landscape and of visual effects at p57 §6.6.1 and p62 §6.6.104

³²¹ See eg CPL 2008 ES p10 of Ch 4 §4.7.3

Pole or the New Trident design along the lower altitude sections of the route³²².

- 12.17. The option of undergrounding sections of the power line was not properly considered when selecting initial route options as the additional cost to underground was over-estimated and ruled out purely on a cost analysis basis³²³.

Flawed route corridor analysis and selection

- 12.18. Whilst SPM undertook a routing study to identify and evaluate options to connect CPL's chosen windfarm substation to the existing network, SPM chose not to publish this document and therefore denied others the opportunity to challenge their methodology³²⁴.
- 12.19. The conclusions offered in the resultant July 2008 Consultation Report are not convincing; and the reasons given for the rejection of the alternative routes are not justified with sufficient evidence³²⁵.
- 12.20. Many of the routes rejected at this stage could have been diverted in part, and/or partially undergrounded to mitigate environmental and amenity issues, particularly since the power line runs close to or parallel with public highways beneath which the cables could have been located to eliminate their visual and landscape impact. Further reports have shown that reasons for rejection of certain routes at this stage of the process have also been proven to be unfounded.
- 12.21. In choosing the southern part of route E, adverse landscape, cultural and visual impacts were ignored on the presumption that windfarms in SSA C would result in a windfarm landscape which would diminish the impact of the proposed overhead line³²⁶.
- 12.22. The Alliance therefore concludes that the 2008 route selection process was fundamentally flawed; in that it failed to properly consider all possible alternatives, dismissed significant environmental issues, and selected the option that was the easiest and cheapest route within which SPM could construct its preferred option of an overhead 132kV circuit. The iterative nature of design was curtailed from an early stage³²⁷.

Limited and selective public consultation

- 12.23. SPM failed to engage inclusively and adequately with the public during the pre-application stage of the project; and legitimate options to underground sections of the circuit where it would otherwise give rise to significant landscape, amenity, socio-economic, or visual impacts etc. were unreasonably dismissed. The conclusions presented by SPM

³²² ALL-NEED-POE-OHL-01 (Consultation Need and Design) §§1.3 to 1.5

³²³ ALL-NEED-POE-OHL-01 §1.6

³²⁴ ALL-NEED-POE-OHL-01 §§1.7 to 1.8

³²⁵ ALL-NEED-POE-OHL-01 §§ 1.9 to 1.15

³²⁶ ALL-NEED-POE-OHL-01, para 1.15

³²⁷ ALL-OHL-POE-01 p 2 section 1.

regarding public consultation within the numerous ES documents should therefore be given little weight ³²⁸.

Community response

- 12.24. It is clear from the local surveys carried out by numerous Community and Town Councils that the vast majority of local residents responding to those surveys see unacceptable impacts arising from the overhead power line proposal ³²⁹.
- 12.25. The same widespread views are also apparent from the numerous objections forwarded to the inquiry; and was clearly demonstrated during the evening community sessions of the public inquiry held at Dolfor, Banwy, Kerry and Welshpool.

Unhelpful ES information and inadequate surveys

- 12.26. The photomontages do not utilise viewpoints where the true worst case scenario visual and landscape impacts of individual and groups of poles can be assessed, and even select locations where the line is obscured by vegetation and/or structures ³³⁰. In many instances had these viewpoints been taken at different but nearby locations the impact of the proposal would have been demonstrated to be significantly greater.
- 12.27. The July 2008 consultation document by SPM was also misleading as it showed a front cover image of an 11kV circuit crossing a field, not the proposed 132kV circuit ³³¹. That would hardly invite anyone who was unaware of what a 132kV line would look like even to open it up, and the Alliance believes that many people may well still be unaware of the true appearance of the proposed line as there are no double wooden pole and steel lattice gantry HDWP overhead lines in the local area to draw comparison with.
- 12.28. The ES failed to identify the true extent of the impact of the proposal on individual mature trees (including veteran Oak and rare Black Poplar), ancient woodlands, tree groups and hedges which if removed would have a significant detrimental visual and landscape impact ³³². It is the opinion of the Alliance that the impact of the proposal with respect to trees, species and habitats was not properly assessed before selecting the 100 metre wide route corridor. It is clear from the approach in the early ES material that SPM's 'mindset' was one where they were approaching route selection on the basis that they were expecting to provide a Line in an already degraded landscape.
- 12.29. The true visual and landscape impact of the selected support and 4-wire proposals were identified during the Public Inquiry by the Alliance during

³²⁸ ALL-NEED-POE-OHL-01 §§2.1 to 2.11

³²⁹ ALL-COMMUNITY-POE-SSA-B-04, OBJ/416/002a, OBJ/606/002 and OBJ-629-C-SOC-APPA

³³⁰ AD/SPM/033 and AD/SPM/034

³³¹ 2009 ES Appendices, page 28

³³² ALL-OHL-POE-04

accompanied site visits and actual photographs of the same type of design constructed near Abergele³³³.

Woodlands and Ecology

- 12.30. Inaccurate tree surveys were noted by the Alliance³³⁴. SPM stated in the 2009 ES that approximately 300 trees would need to be felled but the true figure is nearer four times that: closer examination of material only summarised in the ES shows that a figure closer to 1,200 trees would be lost³³⁵. These include a rare mature Black Poplar and a 400 year old oak³³⁶ which would need considerable 'micrositing' if they are to be avoided, but with unassessed knock on effects.
- 12.31. The Alliance questioned the number of ancient woodlands of high nature conservation value affected by this proposal³³⁷ using the Ancient Woodland Inventory in Wales.
- 12.32. Cutting a swathe through a rare shelter belt of mature Beech near Two Tumps will result in significant visual impact and will cause wind tunnel effect thereby threatening the life of remaining trees (see the oral evidence of John Champion given at the CPI Session).
- 12.33. Inadequate wildlife surveys have been taken to demonstrate that the proposal will not have an unacceptable detrimental effect on dormice³³⁸. NRW's evidence states that SPM's level of survey effort does not comply with best practice guidance³³⁹. The Alliance supports their opinion.
- 12.34. SPM's bat survey evidence demonstrates that the substantial number of 953 potential bat roost trees would be felled if the SPM line is approved³⁴⁰. The Alliance agrees with NRW's bat expert's concerns that SPM have shown insufficient survey effort regarding bat foraging and roost affects for bats. Best practice has not been followed³⁴¹.
- 12.35. Removal of 96 hedgerow sections and reduction in height to 1.5 to 2 metres will have significant impact on a variety of species, in particular bats³⁴². Hedgerows are used as safe corridors for travel or feeding, and are needed for connectivity³⁴³. The hedgerow removal will also have substantial negative impact on landscape character.
- 12.36. Curlew have a high degree of breeding site fidelity and have been recorded along the line route. Disturbance will considerably reduce the likelihood of them breeding at these previously used sites.

³³³ OBJ-415-LAND-POE-OHL

³³⁴ ALL-OHL-POE-043 § 35 §§

³³⁵ ALL-OHL-POE-04– paragraph 5, p3

³³⁶ ALL-OHL-POE-04 §§ 20, 22

³³⁷ ALL-OHL-POE-04, para 14, p5

³³⁸ ALL-OHL-POE-04 § 52

³³⁹ CON-003-ECOLOGY-POE-DAVIES_OHL, 4.1.2, p5

³⁴⁰ ALL-OHL-POE-04 § 53

³⁴¹ NRW (Paola Reason), 2.1.4 , p2

³⁴² ALL-OHL-POE-04 § 47

³⁴³ ALL-OHL-POE-04 § 51

Inadequate mitigation measures

- 12.37. SPM suggest that the proposal to remove approximately 1,200 trees to construct the proposed overhead line can be mitigated by 2 for 1 tree planting and additional hedge planting³⁴⁴. However, the positive landscape (and wildlife) contribution of existing mature trees, or groups of trees retained as landscape features or wind breaks cannot be replicated by replacement planting of twice as many immature specimens at alternative locations; particularly in instances where the proposal will require the removal of veteran trees and ancient woodland.
- 12.38. The Alliance presented a statement from a horticultural expert and the proprietor of Dingle Nurseries, Mr Andrew Joseph, which demonstrated that SPM's suggested mitigation is totally unsuitable and unacceptable³⁴⁵.
- 12.39. It is also the case that SPM do not have the consent of many of the affected landowners to plant alternatively located trees near to those which would have to be removed; therefore the alternative planting cannot be guaranteed.

Over engineered design and failure to provide strategic grid connection solution

- 12.40. As noted above, SPM approached early assessment on the premise that the area would be degraded by multiple W/Fs. An Overhead DWP design was selected, but with a number of intermediate single poles³⁴⁶. In October 2012, and in recognition of views about the design, SPM circulated a briefing note designed to dissuade PCC Council Members from objecting³⁴⁷. It offered a 'Trident' design. It highlighted the absence of high-level metalwork brackets, it referred to fewer poles being required, how the poles could be sited closer to hedgerows and gave the very clear impression that single poles could be used throughout. The Alliance doubts that such a briefing note would even have been considered, let alone published if SPM was not confident that it could be delivered. The note itself said that this design "could be implemented".
- 12.41. All sorts of reasons why it should not now be provided are now set out by SPM. But the SoS should exercise caution over the claims which are now made.
- 12.42. A full critique of the over-designed nature of the proposed power line is given in the Alliance Construction Design and Need document³⁴⁸. It repays careful reading. Note, in particular, that SPM have now increased the number of double poles compared with earlier proposals³⁴⁹.
- 12.43. By submitting a separate grid connection proposal for the CPL Llandinam windfarm in advance of consideration of the Mid Wales Connection Project,

³⁴⁴ SEI 2013

³⁴⁵ ALL-020

³⁴⁶ ALL OHL-POE-01 p20 §4.14.

³⁴⁷ ALL-OHL-POE-01A² 7.

³⁴⁸ ALL-NEED-POE-OHL-01

³⁴⁹ See eg ALL-OHL-POE-01 p20 §§4.12.- 4.15.

SPM have failed to bring forward an application which might be capable of being a more sustainable and strategic power export solution for any of the windfarms within or close to SSAC which might be approved (after testing impacts).

- 12.44. The theoretical grid connections review by Mott MacDonald³⁵⁰, and the theoretical 160MW single line option promoted by PCC³⁵¹ served by a 176MVA HDWP overhead line to serve the Llandinam and Llaithddu windfarms, both reinforce the argument by the Alliance that a separate Llandinam to Welshpool SPM line should not be consented without first working up a potential strategic grid connection solution which offered different permutations for approvals depending on how many (and which) windfarms in the area are approved so as to avoid ad hoc uncoordinated increments.
- 12.45. None of these theoretical alternative connection strategies can be approved as part of this conjoined public inquiry process, because these alternatives have not been through a formal consultation process; Environmental Statements have yet to be prepared and Strategic Environmental Assessments have not been carried out. However, the exercise to identify possible alternative grid connections has demonstrated that the grid connection proposal before the Inquiry certainly has very substantial impacts which are also the impacts associated with the windfarm itself, and the inappropriate Bryn Dadlau substation location.
- 12.46. During the Inquiry process, it has been demonstrated by SPM³⁵² that it would not be viable to utilise the larger 300mm² "UPAS" conductors with their 176MVA summer rating instead of the proposed 200mm² "POPLAR" conductors with their 124MVA summer rating on the proposed Llandinam to Welshpool circuit, as this would require additional transformer equipment to be constructed at the Llandinam, Welshpool and Oswestry substations (which may perhaps require the purchase of additional land by SPM to accommodate the additional substation components); and a completely new 132kV circuit to be constructed from Welshpool to Oswestry to accommodate larger conductors. Any new circuit between Welshpool and Oswestry would have to be constructed alongside the two existing 132kV circuits to maintain power supply to Welshpool and Newtown substations.
- 12.47. These same documents by SPM also identified that the existing pole schedule and design for the proposed Llandinam to Welshpool circuit would have to be completely redesigned with larger diameter poles, closer pole spacings at different locations along the route corridor, at least a 5% increase in pole numbers, and quite possibly higher poles to achieve a HDWP design capable of accommodating the larger "UPAS" conductors. This redesign would require a revised ES to be prepared and submitted as the impacts of the proposal would be different.

³⁵⁰ Grid Connections Options Review, Mott MacDonald (this document has five Inquiry references: SEI/CUMULATIVE/GRID/2, AD/VATT/021, AD/FWLC/052, AD/RES/040 and AD/RWE/031)

³⁵¹ OBJ-002-SOC-S4

³⁵² SPM-NETWORK-POE-BEDDOES-APP10-OHL Paras 1.10 to 1.18, SPM-014 and SPM-028

- 12.48. The possibility that the route corridor may have to be modified to accommodate "UPAS" conductors on a revised HWDP design cannot be ruled out; in which case the current proposal may have to be withdrawn and a new proposal submitted to the National Infrastructure Planning Inspectorate.
- 12.49. SPM have confirmed³⁵³ that a remote earthing station could feasibly and technically be constructed at some point along the proposed route near to the Bryn Dadlau substation to address the Rise of Earth Potential issue relating to the poor choice of site for the Bryn Dadlau substation. This would permit the less intrusive 3-wire single pole version of the "New Trident" support (as approved for use on the Oswestry to Wrexham additional "Legacy" circuit) to be used at least along two thirds of the length of the circuit below an altitude of 250 metres from Welshpool substation to Cefn-Gwyn woods (just below the Kerry Ridgeway near pole number 230).
- 12.50. Powys County Council have suggested that the time delay to design a remote earthing station is not justifiable because of the urgency of need³⁵⁴, but have failed to acknowledge that a similar delay would be required to redesign the existing circuit proposal to accommodate the larger "UPAS" conductors. But, as Dr Constable has shown, the level of need and its urgency in the context of the UK's 2020 Target is now very much reduced³⁵⁵. It would, in any case, send entirely the wrong message if the ESI sector could bring forward poor designs and then hold local people and even the SoS 'over a barrel' just because the ESI failed to come forward with an acceptable solution in the first place.
- 12.51. The failure of CPL and SPM to work together at the formative or any progressive design refinement stages to identify and select a site for the CeltPower windfarm substation where rise of earth potential does not result in the need for a separate earth wire to be accommodated on the overhead power line, has resulted in the heavy duty wooden pole 4-wire design instead of the simpler and less intrusive new Trident design. The 'Griffiths letter'³⁵⁶ of July 2011 clearly indicates that any new connection from a windfarm substation to the distribution network should be achieved by a standard 3-wire system on wooden poles or by underground lines.
- 12.52. SPM's written assurances to Powys County Council in the October 2012 "Briefing Note 2" that if the proposal was supported by the Council, SPM would redesign the overhead line using the single pole "New Trident" system³⁵⁷ would be consistent with the 'Griffiths expectation'.
- 12.53. SPM have given a preferential advantage to CPL by agreeing to provide them with an early connection to the existing local distribution network,

³⁵³ SPM/029

³⁵⁴ OBJ-002-015

³⁵⁵ ALL-CLO-POE-01 Dr Constable Planning Balance Proof

³⁵⁶ CD/CON/003/PLA/009

³⁵⁷ ALL-NEED-POE-OHL-01 Appendix 7

when all other windfarm developers have been made to wait for the Mid Wales Connection project³⁵⁸.

- 12.54. The overhead line is over engineered and unnecessarily intrusive to accommodate the output from the proposed Llandinam windfarm.
- 12.55. Unlike 132kV circuits which are part of the LAN and provide a security of supply and address the needs of all consumers within the electricity network area (eg the recently approved 132kV Legacy reinforcement circuit); it must be recognised that this separate 132kV overhead power line will do nothing to reinforce the local electricity network (contrary to the then WAG expectations described in Section 8 above). Nor will it improve the security of supply to local businesses or residences currently served by the Oswestry , Welshpool and Newtown substations, As promoted, it will be decommissioned when the CPL windfarm ceases to generate electricity or within 25 years. The environmental impacts of this overhead 132kV electricity circuit must therefore be considered as part of the overall impact of the proposed CPL windfarm proposal. It has been promoted for no other purpose or collateral benefit.
- 12.56. The existing 102 turbine windfarm on the site already has a plated output of 30.6MW (with a maximum 34MVA connection agreement). It has no finite decommissioning date imposed by the existing consents (any turbine which is inactive for 6 months must be removed) The proposed new replacement windfarm and this over-engineered overhead 132kV power line will only produce a capacity for a maximum 102MW from the 34 wind turbines now proposed (with a maximum 90MVA connection agreement). It is therefore clear that the proposal would only provide a net extra plated generating capacity of 71.4MW; and the proposed new circuit would only permit CPL to transmit only 56MVA greater than at present. The negative environmental and socio-economic impacts of the windfarm and its dedicated heavy duty overhead power line must therefore be considered against these rather smaller net increases than otherwise are apparent. Nevertheless, this increased total level of transmission would still require the output from the windfarm to be constrained due to the inadequate capacity of the local grid network at Welshpool substation and the transmission circuits to the north of Welshpool³⁵⁹.

Construction

- 12.57. The full critique of the construction methodology is given in the Alliance Construction and Traffic document³⁶⁰.
- 12.58. It has been established that there are significant sections of the upper part of the route between Hodley and the A483 that will prove to be very difficult to access by construction traffic due to the physical constraints, geometry and topography of the minor public highway and public right of

³⁵⁸ ALL-NEED-POE-OHL-01 §§ 3.2 to 3.4

³⁵⁹ SPM-NETWORK-POE-BEDDOES-OHL

³⁶⁰ ALL-CONSTRUCTION-POE-OHL-05

way networks identified to accommodate the construction and delivery traffic.

- 12.59. Upon cross examination of SPM's witnesses Alan Davies (Development Transport Planning Consultancy) and Richard Livingston (Amey plc) it was established that the construction methodology has been based on desk studies, drive-by and long distance visual assessments; and that no approach has been made to the local highway authority to identify problem areas or engineering solutions which could prove to be very costly, result in negative environmental and landscape impacts; and be disruptive to normal traffic movements and local residents. It is likely that significant engineering operations would be required to secure appropriate access tracks to construct the upper section of the line between Hodley and the A483.
- 12.60. The size of the vehicle that would be used by Amey plc to transport the HDWP poles to their final locations has since been clarified by SPM³⁶¹, which confirms that the movement of the taller poles will necessitate escort vehicles because of the forward or rear load overhang. This would add yet further inconvenience and delay and even encourage 'alternative routing' ('rat-running') on less suitable roads for those familiar with the area - or not.

Landscape and Visual

- 12.61. The Alliance has presented to the inquiry a photograph of an overhead line near Abergele³⁶² of exactly the same design as that proposed for the SPM line. This demonstrates the significant negative effect that such a line can have upon a landscape similar to that experienced in Mid Wales.
- 12.62. The very intrusive metal framework on the top of the poles, and the double pole arrangement with its metal cross bracing ensure that the eye is led along the line and the arrangement does not therefore integrate at all well with the landscape.
- 12.63. Twenty one photographs³⁶³ illustrating the landscape through which the line would pass have been presented at the Inquiry and these show that the countryside is not desensitised at present and the proposed line would have a considerable effect upon the varied topography that is much valued by the local population and visitors.
- 12.64. Six of the photographs were augmented by a photomontage of the line and these examples illustrate the difficulties that are inherent in trying to assimilate the proposed SPM line into this Mid Wales landscape.
- i) Location `A` Leighton Churchyard: The line will be very visible in the Severn valley and detract from the characteristic avenue of trees.
 - ii) Location `F` Near Woodlands: The view across the Camlad valley to Hendomen and Montgomery will be significantly affected with its

³⁶¹ SPM/021

³⁶² OBJ-415-LAND-POE-OHL

³⁶³ OBJ-415-LAND-POE-OHL

important landscape and historical features of Montgomery, Civil War battle site and numerous castles sites.

- iii) Location `J` Llandyssil valley: This area is severely compromised as the photomontage shows with the line crossing the grain of the valley and also skylining from the top of the ridge adjacent to Henfron Moated site (SAM MG 220) across the Goron-ddu hill.
- iv) Location `K` Cefn y Coed Hills: This area is seriously affected with the double pole line standing out starkly against the very attractive landscape and far reaching views.

The lane is particularly valued by walkers and is a local promoted cycle route.

- v) Location `M` Cefn y Coed ridge at Froenheulog: The line very seriously affects the much loved escarpment which is viewed from a large area. In addition, going south, the line skylines along the hill to Glanmule.
- vi) Location `O` Cae-Betin on a footpath linking Kerry with the Ridgeway: The view towards Black Gate shows how seriously the source of the Mule and its infant stream valley would be compromised by the line. This area will also be viewed from the Kerry Ridgeway promoted Regional Trail and the Alliance submitted evidence³⁶⁴ to show that the majority of the Trail from Block Wood car park to the Two Tumps will be affected. The Inquiry heard that this Trail is considered to be equivalent to a National Trail. A further aerial photograph³⁶⁵ was provided as evidence to show that this infant Mule area is very worthy of protection from such a proposed overhead line.

12.65. The Alliance considers that the proposed Llandinam Repowering Wind Farm scheme is unacceptable in landscape and visual terms. The landscape and visual impacts of the Llandinam Link would be sequential and additive to the impacts of the Llandinam Repowering Wind Farm scheme, and together these proposals are considered to be unacceptable in their own right.³⁶⁶

12.66. We consider that the applicant's ES has underestimated the significance of the landscape and visual impact of the proposed Llandinam Link on the highly sensitive landscape in the vicinity of the Glog and Kerry Hill: and that the scheme would have major adverse effects, both individually and cumulatively with applications for proposed windfarms in SSA C, on the character of a landscape that is assessed as being of high landscape value and also on users of local rights of way³⁶⁷.

Residential Visual Amenity

12.67. The Alliance has drawn four locations to the attention of the Inquiry where residential amenity is particularly affected. In three cases, Rhydwyman

³⁶⁴ OBJ/415/LAND/POE/APP9 a-h/OHL

³⁶⁵ ALL-018

³⁶⁶ ALL-OHL-POE-02 Landscape § 18

³⁶⁷ ALL-OHL-POE-02 Landscape § 16

Crossing Cottage, Upper Maenllwyd and Cilthriew, these coincide with listed buildings and the significance upon the setting is rated as large/very large in the 2013 SEI³⁶⁸. We appreciate that there is some difference in the methodology for assessing settings and visual amenity but the rating is certainly indicative of the amenity loss the inhabitants would have to endure.

- 12.68. The other location is at the entrance to Edderton Hall where a line of residences will suffer the line particularly prominently in close views from their windows and rear gardens. The Inspector was able to sample the aspect from one of the residences.

Tourism

- 12.69. Most visitors come from within two hours of their home and the countryside and wildlife is what brings them³⁶⁹. The local landscape is actively enjoyed by residents and visitors alike via lanes, roads and public footpaths.
- 12.70. Landscape impact is not merely an aesthetic consideration. There are potential economic implications of the proposed windfarm developments that will be exacerbated by the inevitable proliferation of transmission infrastructure. The lovely, varied and panoramic landscapes unmarred by incongruous industrial structures are a prime visitor attraction. The SPM line represents a particularly unsightly construction traversing 35kms of predominantly unspoilt country through areas of high and outstanding cultural heritage importance. Detraction from the perceptions and appreciation of the many visitors to the area is inevitable.
- 12.71. There are several static and touring caravan sites, pubs, restaurants, country hotels and other accommodation providers in the vicinity of the Line. The two closest caravan parks, Goetre and Fron Fraith, will be particularly affected by views of the Line but were ignored by SPEN in their impact analysis as shown in cross examination by the Alliance. Both are substantial, long established businesses and Fron Fraith also offers luxury standard self-catering apartments and a fishing lake and promotes local walks in the Cefn y Coed hills where the Line will skyline obtrusively³⁷⁰.
- 12.72. Montgomery is a popular town dependent on visitors and marketed as 'the town that time forgot' with many historic associations including Rhydwyman Ford, Montgomery and Hendomen castles, Battle of Montgomery and Offa's Dyke³⁷¹. There will be intrusive, if sometimes distant, views of the SPM line in the area of all these historic sites.
- 12.73. As the Regeneris Tourism report has identified, in north Powys the requirement for new transmission infrastructure is an additional risk factor for tourism³⁷². This may 'only' be one double pole line but the standard,

³⁶⁸ tba

³⁶⁹ ALL-OHL-POE-04, page 59

³⁷⁰ OBJ-415-LAND-POE-OHL

³⁷¹ ALL-SOCIOECO-POE-S4-04

³⁷² ALL-SOCIOECO-POE-S4-04-ADDENDUM

heavy duty design will be highly obtrusive in unspoilt upland areas such as the Kerry and Cefn y Coed hills. There will be extensive views of the Line from sections of the promoted Kerry Ridgeway regional trail. Should part of the Line be undergrounded this will result in incongruous views of a substantial sealing end compound at the head of the Mule.

- 12.74. In the event of Llanbadarn Fynydd windfarm also being consented, Vattenfall propose a second parallel Heavy Duty line following much the same route. The visual damage in such an area would be entirely unacceptable.
- 12.75. SPEN are clear in evidence³⁷³ that the Line will not produce economic benefit beyond a few temporary construction period jobs and these may not even be local. There would be no economic gain here to counteract losses in the tourism sector resulting from the Mid Wales proposals. Installation of the Line would add to the amount of additional construction traffic for the windfarms and deter visitors from coming into or through Montgomeryshire, a further risk factor for tourism identified by the Regeneris report³⁷⁴.

Cultural Heritage

- 12.76. The Alliance has given evidence³⁷⁵ demonstrating that the SPM line has a serious effect throughout its length upon landscapes, as well as individual assets, that are rated at the highest level of historic value³⁷⁶.

Landmap classification

- 12.77. Analysis of the Landmap overall classifications for Historic Landscape Aspects show that the line passes through 'Outstanding' rating for some 70% of its length and 'High' for 27%³⁷⁷.
- 12.78. The majority of the area rated as 'High' in the Historic Landscape Aspect is, however, rated as 'Outstanding' in the Landmap Cultural Heritage Aspect rating and is part of the Vale of Montgomery Registered Historic Landscape which again is rated as 'Outstanding'³⁷⁸.
- 12.79. Thus the SPM line is almost entirely situated in landscapes which have official recognition as being of the highest possible rating as regards Historic and Cultural Heritage aspects³⁷⁹.
- 12.80. It is important also to note that in those Historic Aspect areas with overall 'Outstanding' rating there are many other Landmap historic criteria that are also 'Outstanding'. These are as follows³⁸⁰

³⁷³ VATT/SOCIOECO/POE/BELL/S4

³⁷⁴ ALL-SOCIOECO-POE-S4-04-ADDENDUM

³⁷⁵ ALL-OHL-POE-03

³⁷⁶ ALL-OHL-POE-03

³⁷⁷ ALL-OHL-POE-03 p3 § 4

³⁷⁸ ALL-OHL-POE-03 p 3&4 § 5

³⁷⁹ ALL-OHL-POE-03 p 4 § 7

³⁸⁰ ALL-OHL-POE-03 p 1,2 & 3 § 3 a-g

- i) Lower Severn Valley - Outstanding rarity, potential and survival criteria.
- ii) Cefn-y-Coed (Caerhowel to Upper Maenllwyd) – Outstanding rarity, potential and survival criteria.
- iii) Upper Mule (Upper Maenllwyd to near Kerry Hill) - Outstanding potential and rarity criteria. In the justification it says that the area is of exceptional interest.
- iv) Kerry Hills (Near Kerry Hill to near Bryn Dadlau) - Outstanding potential and rarity criteria.

12.81. In the Vale of Montgomery Registered Historic Landscape the Cultural Heritage Outstanding overall criteria is backed up by an 'Outstanding' criterion for group value because *'The range of defensive/aggressive works present in the landscape span several millennia, thus contributing to this evaluation of group value.'*³⁸¹

12.82. All the above ratings throughout the SPM line's length signify that it is not a suitable corridor for such an installation and the following brief summary from our evidence of effects on particular historic assets adds greater weight.

Effects on particular assets

12.83. As the Updated ES produced by SPM points out the proposed line produces significant effects upon 28 Scheduled Ancient Monuments, 35 listed buildings, 1 Registered Park and Garden, 3 Conservation Areas and the Vale of Montgomery Registered Historic Landscape³⁸².

12.84. Taking a journey along the line from Welshpool to Bryn Dadlau the significant effects include upon the following assets:

12.85. Leighton Hall and Park area

- i) The Hall which is Grade 1 listed sits in an Historic Park and Garden which is also of the highest rating on the CADW Register. The park also contains a tower of Grade 1 listing and three bridges of Grade 2* rating. The entire area is a Conservation Area.
- ii) Adjacent to this Park is another Conservation Area which is the Leighton Centre model farm consisting of 16 Grade 2* buildings.³⁸³
- iii) Leighton Holy Trinity church which is grade 2* and Offa's Dyke which is a Scheduled Ancient Monument of international importance are also in this area.

The Updated ES shows that all these assets - of the highest importance - all experience significant effects of differing magnitudes³⁸⁴.

³⁸¹ ALL-OHL-POE-03 p 4 § 5

³⁸² ALL-OHL-POE-03 p 4 § 8

³⁸³ ALL-OHL-POE-03 p 5 § 10 a, b, c & d

³⁸⁴ ALL-OHL-POE-03 p 5 § 10 e, f & g

12.86. Vale of Montgomery Registered Historic Landscape

- i) The proposed SPM line passes through the area of the Historic Landscape which has the largest concentration of historic assets that give the area its 'Outstanding' group value in the Landmap Cultural Heritage rating.³⁸⁵
- ii) The significance of effects upon the three forts (all SAMs) of Forden Gaer (Roman), Ffridd Faldwyn (Iron Age) and Hen Domen (Mediaeval) are all rated as large/very large by SP Manweb. In addition the line passes through the gap between Hen Domen fort and Rhydwhyman Ford on the Severn. This Ford was an important meeting place where the English King and the Welsh Prince signed the Treaty of Montgomery. The fort was built to guard this crossing and therefore it is important the relationship is not ruined by the overhead line.³⁸⁶

12.87. Caerhowel to Kerry Domestic focus

- i) This area comprises the Cefn-y-Coed and Upper Mule Landmap Historic Aspect areas which are both rated as 'Outstanding'. The Landmap descriptions show that they are important for the continuum of settlement from prehistoric to recent times. Assets that are affected therefore span the timescale from the Henfron Moated site era to the Victorian Sawmill Conservation area. The Updated ES shows that six assets experience Large / Very Large significant effects and six Moderate/ Large significant effects. These SAMs and listed buildings are summarised in our proof³⁸⁷.

12.88. Kerry Hills Prehistoric Landscape

- i) The description in the Landmap Historic Aspect is of this area being a '*prehistoric landscape*'. Many SAMs are present and expert opinion considers intervisibility between some of the barrows, stone circles and other funerary relics was important for ritual reasons. The bare landforms in this area assist in appreciation of interlinking but equally ensure that the proposed line would have a major effect on settings and views to and from these nationally important SAMs. According to the Updated ES four SAMs would experience a significance of large/very large and five a significance of Moderate/Large³⁸⁸.
- ii) As demonstrated in the landscape section, the Kerry Ridgeway is significantly affected by the proposed line between Cae Betin via the Two Tumps to Cider House Farm. It is important to realise that the Ridgeway carries what is reputed to be the oldest road in Wales and possibly dates back to the Iron Age³⁸⁹.

³⁸⁵ ALL-OHL-POE-03 p 6 § 11a & p 3 & 4 § 5

³⁸⁶ ALL-OHL-POE-03 p 6, 7 & 8, §§ 11 c, d, e & f

³⁸⁷ ALL-OHL-POE-03 p 9

³⁸⁸ ALL-OHL-POE-03 p10 § 13 a & b

³⁸⁹ ALL-OHL-POE-03 p11 §13 f

Conclusion

- 12.89. In conclusion it is impossible for the Alliance to understand how the routing of a line through what is officially recognised as being 'Outstanding' historic landscape throughout can be contemplated. The significant effects upon particular very important assets obviously reinforce that view.
- 12.90. As illustrated through analysing just four of the groupings it is difficult to conceive how an overhead line which is a direct result of the Llandinam windfarm could be located more disastrously for cutting a swathe through such an OUTSTANDING historic canvas.

“SSA B sites”

Section 13: Llanbrynmair

Section 14: Carnedd Wen

Section 13: Llanbrynmair (RES)

Introduction

Turbines	Nameplate capacity	Annual output (@ 30.0% load factor)³⁹⁰	Grid Connection	Contribution to 15% target³⁹¹
30	90 MW	236,520 MWh	None included	0.2%
Alliance Inquiry Documents³⁹²				
ALL-SOC-SSA-B, ALL-SSAB-POE-01 to -07, ALL-014 to -016 and all documents tabulated within sections 1 – 8 above				

13.1 The Llanbrynmair proposed site covers some 1,700Ha and is situated on an extensive plateau known as Llanbrynmair Moors. The RES proposal comprises 30 turbines, 126.5m to blade tip, the site extends from the source of the Afon Gam in the south to Nant Ffridd y Castell in the north, where the proposed turbines will clash visually with those of a greater size proposed for Carnedd Wen. Associated infrastructure includes 27.7 km of access tracks as well and modifications to approximately 18km of existing highways, crane pads, 6 construction compounds, cable circuits and electricity substation, seven borrow pits and 2 control buildings.

EN-1 Contribution³⁹³

13.2 The installed (or ‘nameplate’) capacity of 90 MW gives only a first indication of the nature of the potential contribution. Dr Constable sees the load factor relied upon as optimistic, but he works with it for the purposes of assessment, and adopts the Ofgem figure for the purposes of addressing Equivalent Firm Capacity (EFC)³⁹⁴.

13.3 Using these parameters, Dr Constable assesses the contribution to the electricity share of the UK 15% Target for 2010 as 0.2%³⁹⁵. And in terms of its contribution to security of supply of the GB system, would contribute about 0.02% - 0.03%³⁹⁶. CO2 savings are assessed at about

³⁹⁰ Figures from ALL-SSAB-POE-02, Tables 1 and 3 (Dr Constable’s evidence) on the basis of the parameters described

³⁹¹ Figures from ALL-SSAB-POE-02, Table 6 (Dr Constable’s evidence) on the basis of the parameters described

³⁹² As supplied to the Inspector, main parties, and the Inquiry library

³⁹³ EN-1 §4.1.3

³⁹⁴ Constable, ALL-SSAB-POE-02 p13 §16, p19 §44 *et seq*

³⁹⁵ Constable, ALL-SSAB-POE-02 p18 Table 6

³⁹⁶ Constable, ALL-SSAB-POE-02 p20 Table 7

0.07% of UK national emissions (on the basis of a grid average emissions factor) 397.

- 13.4 In a nutshell, that encapsulates the “contribution” from the RES proposals (before any transmission losses along the Grid or CO2 costs from Grid infrastructure is addressed)
- 13.5 This is to be seen in the context that the UK is on target to beat the electricity share of the 15% Target for 2020 by some margin (see Section 1, above for analysis and references).
- 13.6 The balance which falls to be drawn along with that assessment of the ‘contribution’ needs to address the environmental and other factors arising including factors affecting those who live, work and raise families here – as well as people who visit the area

Habitat and Hydrology

- 13.7 Llanbrynmair Moors were identified in both the Hobhouse report in 1947, and by RSPB as early as the 1960s when they asked NCC to designate the site, as being of exceptionally high quality for landscape and biodiversity. More than 1,000Ha of the application proposal comprise active blanket bog and species rich acid grassland. RES acknowledge that some of this will certainly be destroyed completely ³⁹⁸.
- 13.8 Both NRW and PCC agree that much of the blanket bog is of high quality, contrary to the downgrading offered by RES; much of the blanket bog is National Vegetation Classification (NVC) M19, which is of international importance. More than 1,000Ha comprise active blanket bog and along with the area under consideration for development by RWE this is well in excess of 2,000Ha (5,000 acres) of blanket bog. The mitigation offered by RES does not detract from TAN 6 advice and Planning Policy Wales ³⁹⁹, which states the need to ‘*promote the functions and benefits of soils, and in particular their function as a carbon store*’. The impact of this loss of peat is disguised in the assertion that proposed mitigation and peat restoration will work within the lifetime of the management plan. This Inquiry has received evidence from the Alliance demonstrating that this is a completely unrealistic timespan without the windfarm development and moreover, even in the long-term, peat restoration on windfarms is uncertain ⁴⁰⁰.
- 13.9 Evidence of the rapid rate at which damaged peat dies back ⁴⁰¹ is underestimated and the slow and uncertain regeneration of peatland ⁴⁰² is side- stepped. The ability of the developer and its contractors to undertake this work successfully is overestimated and no existing peat restoration project can support their assertions.

³⁹⁷ Constable, ALL-SSAB-POE-02 p20 §§59-62 and Table 8

³⁹⁸ SEI 2013 Vol 11-B habitats §1.1.13

³⁹⁹ PPW6 p 70 § 5.1.2 [CD-VATT-PLA-018]

⁴⁰⁰ ALL-SSAB-POE-05

⁴⁰¹ Irish Peat Bogs

⁴⁰² ALL-SSAB-POE-05 p13 § 10.2

- 13.10 The Alliance questioned whether the areas of moor not surveyed have been assumed to have a lesser ecological value than is the case. No further evidence has been provided to support the robustness of the assumptions.
- 13.11 Should one or both Llanbrynmair and Carnedd Wen windfarms receive consent there would certainly be cumulative impacts on the blanket bog, and also the Afon Banwy tributaries. The two applications require more than 71km of access tracks in their present form, and should the suggestion of the joining track from the one windfarm to the other be agreed this would increase. The developers have underestimated the effect of the infrastructure on the ecology and hydrology.
- 13.12 Llanbrynmair Moors are indisputably damaged, and much lamented nationally, through inappropriate development driven by financial incentives offered to forestry in the 1970s compounded by reluctance of statutory bodies to provide necessary protection that is well within their powers. It is also indisputable that restoration of habitat inappropriately planted or farmed is far more likely to succeed, than that which has undergone major construction with deposition of inorganic materials installed at depth
- 13.13 The important remnants of SSSI on Corsydd Llanbrynmair give insight into the quality of the moors, damaged by previous approved development. Far greater protection now exists in law and as NPPF on Biodiversity states⁴⁰³ *'the planning system should contribute to and enhance the natural and local environment'*. It is notable that mitigation is not a first option but a last resort.
- 13.14 Uncertainty remains regarding the level of timber extraction. The developers state approximately 150ha timber would be extracted from the site plus a further 30 trees and 1,400 metres of hedgerow would require removal along the access route. The developers assert that future management of the forestry is unknown, should their scheme not be approved; however replanting must comply with regulations that require diversity and softening of boundaries. The developers' assertion that 'we don't know' is disingenuous. We know that Wales has less growing timber than any other country in Europe and that replanting must meet legislative requirements.
- 13.15 PCC concluded that the developer's estimate along the access route is approximately a third of their estimate; PCC has not assessed timber extraction from the site; a similar margin of error is a probability.
- 13.16 The relevance of axiophytes in determining the existing quality and potential for habitat restoration has not been considered and such evaluation has not been undertaken; yet without this methodology any assertion of habitat restoration lacks substance

⁴⁰³ NPPF para 109 Biodiversity

- 13.17 No evidence has been provided that assesses the impact of the development on agricultural water supplies that are currently fed by natural water from the plateau.
- 13.18 There are 18 protected wildlife sites that rely upon Llanbrynmair Moors. The impact on these has not been assessed
- 13.19 The developers have understated the negative impacts of their proposal and are unrealistically optimistic of the benefits for nature conservation, with no real world evidence to support their assertions. Their application fails to meet the guidance in TAN5⁴⁰⁴ (and contravenes Planning Policy Wales 5.1) to '*look for development to provide a net benefit for biodiversity conservation with **no** significant loss of habitats or populations of species, **locally** or nationally*'. [our emphasis]

Peat

- 13.20 As spelt out in the Llanbrynmair SEI over 244,000 sqm. of the infrastructure⁴⁰⁵ (ie 64%) is located on peat.
- 13.21 It is proposed to position four turbines on deep peat and 14 (46.6%) are in the vicinity of deep peat.⁴⁰⁶ This is of consequence because of the dewatering effect of the excavations. The peat that is estimated to be affected by dewatering across the whole site is 53,600 cu.m.⁴⁰⁷
- 13.22 Nineteen out of the twenty track sections are in areas which include deep peat but it is not possible to identify from the SEI what length of track is actually on such peat ie over 0.5 m deep⁴⁰⁸. The total length of new track is 21.25 kms.⁴⁰⁹
- 13.23 The total amount of peat to be excavated is 120,900 cu.m. and although it is identified that the majority of this will be reused it relies upon many strict conditions being adhered to for the peat not to release its carbon. The Alliance has expressed concern in our evidence and at the inquiry regarding the risk of failure with the reuse of peat.⁴¹⁰
- 13.24 The Alliance has raised, in its evidence, particular concern about the effect of the infrastructure upon the north eastern part of the site where the peat and the peatland vegetation, which is of international importance, should not be being put at risk.⁴¹¹
- 13.25 Concern has also been raised in our evidence⁴¹² about the risk of failure of the Habitat Management Plan as like the Carnedd Wen scheme it requires the water table to be raised. The increase in height that has to be

⁴⁰⁴ TAN5 p 4 § 2.1 4th bullet

⁴⁰⁵ Llanbrynmair SEI August 2013 vol 1 chapter 8 page 300 para8.3.50

⁴⁰⁶ ALL-SSAB-POE-05 page 11 para 6.3

⁴⁰⁷ ALL-SSAB-POE-05 page 12 para 8.1

⁴⁰⁸ ALL-SSAB-POE-05 page 12 para 6.4

⁴⁰⁹ Llanbrynmair SEI August 2013 page 42 para 3.3.23

⁴¹⁰ ALL-SSAB-POE-05 page 11 para 6.1 and 6.2

⁴¹¹ ALL-SSAB-POE-05 page 12 para 9.2

⁴¹² ALL-SSAB-POE-05 page 13 para 10.2

achieved and therefore the likely risk cannot be identified as a water table level survey has not been undertaken⁴¹³.

- 13.26 The carbon balance is affected by the management of the peat and forestry resource. The Alliance has provided evidence that needs to be taken into account in ensuring that the calculation of the carbon balance reflects recent learning in this respect.⁴¹⁴

Wildlife

- 13.27 The developer acknowledges the extreme sensitivity of Afon Gam⁴¹⁵; construction can cause silting that is highly damaging to aquatic life in particular the salmonids. The Alliance has made the point that the effect of this silting does not affect just one species or one generation but impacts on the wider aquatic life and thus higher species such as otter, salmon and raptors.
- 13.28 RES recorded 79 bird species in the 2006-2008 surveys of which 15 Red and 21 Amber databook species are included. Hen harrier, curlew and black grouse are particularly susceptible to turbine blade strike. There are also 21 Biodiversity Action Plan species.
- 13.29 Six species of bat were recorded in the 2006-2008 surveys including the Noctule, which because of its foraging and flight patterns is especially at risk from turbines. Statutory consultees have pointed out the inadequacy of survey data; it is six years since the end of the last survey.
- 13.30 The Alliance is very concerned regarding the discussion at this Inquiry about the "acceptable number of bat deaths". This is in contravention of the guidance in TAN5⁴¹⁶ (and PPW) to: '*ensure that the range and population of protected species is sustained*'. It is of particular concern in light of the inadequacy of the survey effort as agreed by statutory consultees.
- 13.31 The otter survey that was carried out 100m up- and down-stream from Neinthirion failed to find the otter holt constructed by the landowner.
- 13.32 The 2013 SEI and previous iterations conclude that there will be negative impact on almost all species and habitats. There is acknowledgement that habitat and thus species will be considerably worse in the short term and the Alliance has demonstrated that the period that it will take for the habitat to be restored to the existing baseline is far longer than that asserted by the developer. This again contravenes PPW.

⁴¹³ ALL-SSAB-POE-05 page 13 para 10.2.1

⁴¹⁴ ALL-CLO-POE-02

⁴¹⁵ 2008 ES § 9.4.35 and § 8.3.114

⁴¹⁶ TAN5 p 5 § 2.4 7th bullet and see PPW6 §§ 5.2.3, 5.5.11 and 5.5.12

Cultural Heritage

- 13.33 Although RES have reduced the effect of the scheme on Heritage Assets by the removal of some turbines the Alliance has presented evidence⁴¹⁷ to show that there are still notable effects, examples are:
- 13.34 *Fridd Cwm y Ffynnon Barrow Cemetery (SAM MG314)* which is situated 1.0km from the nearest Llanbrynmair turbine. 30 turbines would be visible⁴¹⁸ in a 110 degree arc⁴¹⁹. This SAM is very close to Glyndŵr's Way and therefore the setting will be of particular note.
- 13.35 RES do not produce wireframes of the effect upon cultural heritage assets and therefore it is difficult to fully realise. However Carnedd Wen have produced a wireframe, which shows both windfarms⁴²⁰. It must be appreciated though that the 6 closest Llanbrynmair turbines have been removed.
- 13.36 *Moel Ddolwen Hillfort (SAM MG 149)* which although 2.2 km away, experiences the majority of the Llanbrynmair turbines throughout most of the western quadrant.⁴²¹ Again Glyndŵr's Way passes close by and therefore appreciation of the setting is important.
- 13.37 *Abercannon (listed building 17942)* is a traditional longhouse stone building probably of 18th century date and the list description is of 'a well preserved farmhouse which is typical of this area'
- 13.38 Our proof⁴²² used a Carnedd Wen wireframe to show the effect but the residential wireframes produced at the inquiry by RES now give a full appreciation of the very large effect upon this listed building⁴²³.

Visual and Landscape

- 13.39 Mr Van Greiken stated during questioning on 5th November 2013 that landscape assessment was part of the original TAN8. Alliance scrutiny of the Advice Note has found nothing to support this assertion; to date RES has provided nothing to support his assertion.
- 13.40 The effect on the landscape can be well judged by the viewpoint photomontages dealt with in our Glyndŵr's Way section, and our proof,⁴²⁴ as the trail is designed to fully appreciate the outstanding landscape.
- 13.41 However the photomontage at Viewpoint 23 (minor road within Cwm Nant-yr-Eira) that we have raised at the inquiry and included on the Inspector's visit should always be borne in mind when considering the effect of the scheme upon Cwm Nant-yr-Eira, the Llanerfyl Mosaic farmlands and the hills and uplands.

⁴¹⁷ ALL-SSAB-POE-06

⁴¹⁸ Llanbrynmair SEI August 2013 volume 1 page 260 para 7.7.35

⁴¹⁹ Llanbrynmair SEI August 2013 volume 1 page 267 para 7.7.88

⁴²⁰ Carnedd Wen August 2009 SEI volume 2 fig 10 B.15

⁴²¹ Carnedd Wen August 2009 SEI volume 2 fig 10 B.18

⁴²² ALL-SSAB-POE-06

⁴²³ Llanbrynmair SEI August 2013 volume 2A App 4.1 Figs 13c-f

⁴²⁴ ALL-SSAB-POE-03

Recreational Use: Public Rights of Way and National Trails

- 13.42 The proposal intrudes on Glyndŵr's Way National Trail for a distance far greater than when actually surrounded by turbines due to the location and altitude of the proposed site, and as TAN16 indicates access to the countryside is important to the rural economy and PPW⁴²⁵ Powys UDP states: '*Local Authorities should seek to protect and enhance the rights of way network as a recreational and environmental resource.*' The Alliance and local tourism providers have submitted much evidence demonstrating the value of Glyndŵr's Way National Trail, Public Rights or Way, footpaths and bridleways as well as the importance of the open access areas of which a good proportion of the proposed site is open access.
- 13.43 Evidence regarding the value of the tranquillity on the trail as one traverses Llanbrynmair Moors has been described by a number of members of the public; for example Barry Smith⁴²⁶ presented evidence regarding its value to his business and visitors.
- 13.44 Users of Glyndŵr's Way and the access land are by their intention to access such tranquillity, of high sensitivity and RES considerably underestimates the impact that would be felt by those without financial incentive.
- 13.45 Our evidence⁴²⁷ and RES's Aug 2013 SEI⁴²⁸ show that the effect on the Trail will be major.
- 13.46 A sequence of views for over 15 kms running through the viewpoints 24, 6, 4, 5, 1 and 10⁴²⁹ in the SEI demonstrate that the walkers' experience will be dominated by the presence of the turbines.
- 13.47 It even appears that for perhaps 24 months of the construction the walker will have to be accompanied through the site for some considerable distance.
- 13.48 The Trail passes so close to the turbines above Cwmdrwen that, as the Viewpoint 1 photomontages show the effect can perhaps only be described as, without exaggeration, frightening.

Transport Route

- 13.49 Transport from Ellesmere Port is covered elsewhere but the Alliance notes the lack of clarity as to the access route for this proposal. At this stage of the Inquiry local people still do not know whether the developers would bring AILs through Cwm Nant yr Eira or whether they may finally reach agreement and use the Carnedd Wen access track. After four years in the planning system plus one year at Public Inquiry we don't know how the turbines would reach the top of the moors.

⁴²⁵ PPW6 p 155 § 11.1.13

⁴²⁶ ALL-SSAB-POE-01 Individual and Group Statements No 26

⁴²⁷ ALL-SSAB-POE-03

⁴²⁸ Llanbrynmair SEI Aug 2013 volume 1 page 132

⁴²⁹ Llanbrynmair SEI Aug 2013 volume 3 figs 4.25, 4.36, 4.18, 4.16, 4.17, 4.13, 4.22

- 13.50 We do; however, know with certainty that the developers have been refused access at Neinthirion; a matter that has attracted little attention but was stated by the owners of the property, at this Inquiry.
- 13.51 The proposed access route for both AIL and general construction traffic along the 17.5km county road between Talerddig and Llanerfyl is a totally unsuitable proposition. A Chartered Civil engineer (Alliance member) of 40 years experience involving highway design has submitted evidence to the Inquiry on the issues of highway safety at the Talerddig junction, complete unsuitability of the route from Talerddig up to the Moor, engineering difficulties with the proposed alterations from Llanerfyl to the Moor, and the completely unacceptable diversions proposed for local residents⁴³⁰.
- 13.52 Statements were read at the Public Inquiry session at Banwy which illustrated the real hardship local people would suffer with about 30 mile diversions to get from their home to places such as Llanfair Caereinion⁴³¹.
- 13.53 Even if the route through Carnedd Wen were to be utilised for the AIL traffic the Alliance cannot agree that the proposed access for all other construction traffic can be the county road from Talerddig to the Moor. This is for the reasons explained in the proof above.
- 13.54 RES are proposing that night working would be allowed for the substantial alterations proposed at Gosen Bridge, if permission were granted. There are residents extremely close to this bridge and conditions would, as requested at the Inquiry, have to be imposed to prevent such working.

Effects on residents

- 13.55 Residents, as the terminology is expressed, receptors of a high sensitivity.
- 13.56 Evidence has been received from a number of these residents, both in the Inquiry sessions and contained within the Alliance 'Compendium' of statements⁴³². It is notable that only one person, who is not a resident, spoke or submitted evidence in favour of Carnedd Wen or Llanbrynmair applications at any Inquiry session. In contrast more than 30 people who live locally to Llanbrynmair Moors spoke against the proposals and gave a written submission as well.
- 13.57 Members of the Llanbrynmair community undertook a survey of residents; the results were unequivocal: 89% against windfarm proposals, 91% against National Grid's proposals. It is worth noting that this community is already in receipt of community benefits from existing windfarms but remains resolutely opposed to the construction of further turbines (as is Cefn Coch). This demonstrates a) windfarms do not become more acceptable once they are built, or over time and that community benefits

⁴³⁰ ALL-SSAB-SPOE-07 paras 2.4-2.16

⁴³¹ OBJ-965-001

⁴³² ALL-SSAB-POE-01 Individual and Group Statements

are not seen as recompense for loss of visual amenity or as a route to socio-economic advantages.

- 13.58 Residential properties along Cwm Nant-yr-Eira are particularly affected by the Llanbrynmair scheme. The turbines themselves will have an overpowering presence on the valley and this will be augmented by the infrastructure works such as access tracks, sub-station, the 132kV overhead line and the considerable roadwork's required for AIL & HGV traffic.
- 13.59 The residential wireframes were used when they became available at the inquiry to inform residents. Obviously concern has been strongly expressed by them and the Inspector has visited the curtilage of three properties that experience major effects. Those properties are represented in the wireframes as follows:
- Neinthirion, property reference P15⁴³³
Ffridd Fawr, property reference P21⁴³⁴
Castell-y-Gwynt, property reference P22⁴³⁵
- 13.60 Visual amenity would also be affected; recently published impartial research from the London School of Economics⁴³⁶ indicates these residents are likely to suffer financial loss should they need to sell their homes or raise collateral to develop their businesses.
- 13.61 Evidence regarding the impact on homes and small businesses was also highlighted in the case of the owners of Castell yr Gwynt where their nationally renowned kennels are situated, and Ffridd Fawr when the owner informed the Inquiry of her property valuation showing reduction in value of some £50,000.
- 13.62 The Alliance has provided evidence to identify that there is a risk to private water supplies⁴³⁷. The SEI identifies that five properties' water supply could potentially be affected by hydrological issues. It has not been possible to identify any actions in the SEI that are to be implemented to safeguard the properties affected. In order to safeguard public health it is important that conditions are implemented should the development be approved. .

Tourism and Economy

- 13.63 Walkers and riders are important, all year round visitors. The impact of both construction and operation of Llanbrynmair would reduce numbers visiting the area and the tourism economy would suffer as a result.
- 13.64 This gives rise to serious concerns for lost income to tourism businesses and also the support that tourism provides to the rural economy in terms

⁴³³ Llanbrynmair SEI August 2013 Volume 2A Appendix 4.1 Fig 15 c-e

⁴³⁴ Llanbrynmair SEI August 2013 Volume 2A Appendix 4.1 Fig 21 c-f

⁴³⁵ Llanbrynmair SEI August 2013 Volume 2A Appendix 4.1 Fig 22 c-e

⁴³⁶ Gibbons LSE

⁴³⁷ ALL-SSAB-POE-05 page 14 para 12

of local facilities and their viability as identified by the WG Commission on Rural Tourism⁴³⁸. As described by tourism business owners to the Inspector, a reduction in income of 20 % would mean that the business cannot continue.

- 13.65 Evidence provided from operational windfarms⁴³⁹ and research into the impact of windfarms on rural Wales⁴⁴⁰ demonstrates that very few jobs will be created to benefit the local economy and that community benefits are not an economic boost.
- 13.66 RES provided a tourism prediction study⁴⁴¹ that concluded the development of the windfarm would have no impact. However, analysis shows that little weight can be placed on this almost entirely desk based study that relies substantially on the completely unreliable practice of extrapolation from predictive studies in unrelated areas⁴⁴². This is at odds with the recent Welsh Tourism Study, which concludes that in North Powys the impact of windfarms will be of a greater magnitude than elsewhere in Wales given the visitor and sector characteristics⁴⁴³.

The RES Study is unreliable given:

- i) Serious underestimation of actual and potential tourism through using the number of designated tourist attractions as a proxy and using an incomplete inventory of tourism related businesses. The study completely misses the main attractions of expansive, tranquil, unspoilt landscapes, the opportunity for outdoor activities and the absence of honeypot tourist sites. The recent Regeneris Study makes a more accurate assessment and recognises the importance of these factors and the resultant increased sensitivity of North Powys visitors to windfarm development⁴⁴⁴. Successful local businesses, such as Barlings Barn, that have provided statements to this Inquiry⁴⁴⁵, market themselves on these very attributes which the proposed windfarm would destroy.
- ii) The Study is not informed by any visitor interviews but when the views of caravan park visitors were sought as part of the Llanbrynmair community survey⁴⁴⁶, it was evident that the majority of respondents expressed their dismay at the impact the proposals would have on the area.

⁴³⁸ Alliance Proof on tourism

⁴³⁹ Alliance Proof Tourism

⁴⁴⁰ Munday et al cited in Alliance Proof

⁴⁴¹ Prof. C. Aitchison Tourism Impact Analysis. Llanbrynmair Windfarm 2012 for RES UK and Ireland

⁴⁴² Aitchison 3.3.4 '*Major error relates to the interpretation and extrapolation of data where, instead of conducting primary research, conclusions have been drawn by extrapolating data, often in a selective or even biased way, in an attempt to demonstrate that conclusions reached in one study at one time and in one location will not only hold true in other spatial and temporal environments but can be applied to much larger areas.*'

⁴⁴³ See Alliance Proof on tourism quoting from Regeneris Report:

⁴⁴⁴ See Alliance Proof on tourism

⁴⁴⁵ ALL-POE Annexe

⁴⁴⁶ Llanbrynmair Survey. CPI doc

- iii) The Study draws extensively on a Fullabrook survey carried out in 2004⁴⁴⁷. Attitudes to windfarms have changed considerably in the intervening years as has the size of the turbines and the area has a very different tourist offer. This was a single windfarm without cumulative, transport or major infrastructure impacts so it is not possible to make meaningful comparisons.
- iv) The impact on Glyndŵr's Way, one of only two Welsh National Trails, is ignored despite walkers having to pass many miles through, or in sight of, turbines and transmission infrastructure. Walkers' tendency to avoid windfarm areas is increasingly well evidenced⁴⁴⁸ and negative reactions of walkers are clear from oral and written statements to this Inquiry⁴⁴⁹. The potential for a major cumulative impact with Carnedd Wen has not been addressed. Many accommodation providers depend on long distance walkers and the multiplicity of Rights of Way attract day visitors who also contribute significantly to the local economy⁴⁵⁰.
- v) Riders are uniquely impacted by wind turbines and it is evident from BHS surveys that even experienced riders will avoid windfarm areas⁴⁵¹. This increasingly important tourism sector is omitted from consideration.
- vi) The effect of many years of construction traffic is not considered. The A470 through Llanbrynmair and the A458 through Llanerfyl are major, albeit narrow and winding, Cambrian Coast and National Park access routes bringing considerable 'passing trade' to local businesses such as Machinations.
- vii) RES do not assess the disproportionate socio-economic effects of even a small reduction in visitors to a rural economy, where not only tourism businesses but local trades, shops and other facilities are also impacted.

13.67 Cumulative impacts with the juxtaposed Carnedd Wen windfarm or the resultant transmission infrastructure are not considered although visitors would have the impression of a moorland totally dominated by massive, incongruously moving and jumbled structures as can be seen in photomontages⁴⁵².

⁴⁴⁷ Aitchison University of the West of England (2004) Fullabrook for RES

⁴⁴⁸ ALL rebuttal and ALL POE Welsh Tourist Board

⁴⁴⁹ ALL Compendium Bob Wright

⁴⁵⁰ ALL-S4-POE-04

⁴⁵¹ ALL-SOCIOECO-REBUTTAL-S4-04

⁴⁵² tba

Section 14: Carnedd Wen (RWE)

Introduction

Turbines	Nameplate capacity	Annual output (@ 30.0% load factor) ⁴⁵³	Grid Connection	Contribution to 15% target ⁴⁵⁴
50	150 MW	392,100 MWh	None included	0.34%
Alliance Inquiry Documents ⁴⁵⁵				
ALL-SOC-SSA-B, ALL-SSAB-POE-01 to -07, ALL-014 to -016 and all documents tabulated within sections 1 – 8 above				

- 14.1 Carnedd Wen proposed site covers some 1,400Ha and is situated on an extensive plateau known as Llanbrynmair Moors. The RWE proposal comprises 50 turbines, 137m to blade tip. In the north the proposal consumes, Ffridd Goch, Bryn Ysguthan, Carnedd Cylch and Carnedd Wen, and further south Cors Fforchog. For most of its 7km length the proposed turbines would clash visually with those proposed on Llanbrynmair. Associated infrastructure includes 43.98 km of access tracks as well as crane pads, 5 construction compounds, 6 borrow pits and a substation.

EN-1 Contribution⁴⁵⁶

- 14.2 The installed (or 'nameplate') capacity of 150 MW gives only a first indication of the nature of the potential contribution. Dr Constable sees the load factor relied upon as optimistic, but he works with it for the purposes of assessment, and adopts the Ofgem figure for the purposes of addressing Equivalent Firm Capacity (EFC)⁴⁵⁷.
- 14.3 Using these parameters, Dr Constable assesses the contribution to the electricity share of the UK 15% Target for 2010 as 0.34%⁴⁵⁸. And in terms of its contribution to security of supply of the GB system, would contribute about 0.03% - 0.04%⁴⁵⁹. CO₂ savings are assessed at about 0.12% of UK national emissions (on the basis of a grid average emissions factor)⁴⁶⁰.

⁴⁵³ Figures from ALL-SSAB-POE-02, Tables 1 and 3 (Dr Constable's evidence) on the basis of the parameters described, including the note to Table 3

⁴⁵⁴ Figures from ALL-SSAB-POE-02, Table 6 (Dr Constable's evidence) on the basis of the parameters described

⁴⁵⁵ As supplied to the Inspector, main parties, and the Inquiry library

⁴⁵⁶ EN-1 §4.1.3

⁴⁵⁷ Constable, ALL-SSAB-POE-02 p13 §16, p19 §44 *et seq*

⁴⁵⁸ Constable, ALL-SSAB-POE-02 p18 Table 6

⁴⁵⁹ Constable, ALL-SSAB-POE-02 p20 Table 7

⁴⁶⁰ Constable, ALL-SSAB-POE-02 p20 §§59-62 and Table 8

- 14.4 In a nutshell, that encapsulates the “contribution” from the RES proposals (before any transmission losses along the Grid or CO₂ costs from Grid infrastructure is addressed)
- 14.5 This is to be seen in the context that the UK is on target to beat the electricity share of the 15% Target for 2020 by some margin (see Section 1, above for analysis and references).
- 14.6 The balance which falls to be drawn along with that assessment of the ‘contribution’ needs to address the environmental and other factors arising including factors affecting those who live, work and raise families here – as well as people who visit the area

Peat, Habitat and Hydrology

- 14.7 Botanical surveys⁴⁶¹ carried out in the 1970s found that the Moor was a complex mosaic of blanket bog and associated habitats giving rise to high botanical diversity. It was believed to have been one of the best examples of such upland habitat in Wales.
- 14.8 We of course fully understand that RWE are proposing to carry out a massive habitat restoration programme of the area that has been planted with conifer. However we have major concerns, which we have put as evidence⁴⁶² before the inquiry regarding the viability, ecological risks, and carbon balance effects of this habitat restoration, combined with the effects of the windfarm construction.
- 14.9 From 2008 to the publication of the July 2013 SEI, the Habitat Management Plan focussed primarily on the improvement of habitat for Black Grouse and Hen Harrier. As Black Grouse appeared to have left the site the July 2013 SEI re-focussed the plan on habitats in their own right, rather than supporting structures for individual bird species⁴⁶³. The Habitat Management Plan is now referred to as the Habitat Restoration and Management Plan (HRMP).
- 14.10 The preparation of the site for the windfarm and the HRMP requires clearance of parts of the forest and the scale of the operations is quite staggering. The areas of forest to be felled in each of five years are 515 ha, 200 ha, 372 ha and 148 ha⁴⁶⁴. In the Carnedd Wen ES December 2008 UPM Tilhill, the UK’s leading forestry company, said: *‘the scale of the harvesting operation proposed must not be underestimated. Typically, harvesting contracts extend to less than 100 hectares in any one year, here we are proposing operation of up to 400 hectares in one year’*⁴⁶⁵.
- 14.11 Although the total amount of felling in the latest plan has reduced from 1,490ha to 1,235ha the yearly rate of removal as seen above has become even higher in one year, and in every year is considerably higher (148%

⁴⁶¹ Carnedd Wen SEI 2013 Volume 4 Section 1.4 para 8

⁴⁶² All-SSAB-POE-05

⁴⁶³ Carnedd Wen SEI July 2013 Volume 1 Chapter 2 para 61

⁴⁶⁴ Carnedd Wen SEI July 2013 Volume 4 Section 1.3 page 11 Table 3

⁴⁶⁵ Carnedd Wen ES Dec 2008 Volume 2A Appendix 4.1 page 6

to 515%) than the industry leader considers the normal maximum. The effects upon an extremely fragile ecosystem of deep peat beneath forest and the consequent hydrological and ecological effects are difficult to comprehend.

14.12 What is more, during seven years interleaved with forest removal, habitat and peat restoration, and windfarm and access track construction, the following operations will also be being undertaken on this ecologically fragile site:

- i) the blocking of well in excess of 60 kilometres⁴⁶⁶ of forest peat drains;
- ii) the construction of 12.6 kms of new track and 4.3 kms new floated track;
- iii) the major upgrading of 20 kms of track and 6.7 kms of floating track⁴⁶⁷;
- iv) the management of very large quantities of brash and non-marketable timber around the site⁴⁶⁸;
- v) the construction of 50 concrete turbine bases, and crane pads which are 2.8 times the area of the turbine bases⁴⁶⁹;
- vi) the digging of many kms of trenches for cables;
- vii) the excavation of 6 borrow pits (70,281 sq.m.) and installation of construction compounds (13,500 sq. m) and substation (4,875 sq.m.).⁴⁷⁰

14.13 The total amount of peat that RWE estimate will have to be excavated is 183,842 cu.m. Although RWE estimate that nearly all of this can be used for 'restoration' around the site the ecological effect of disturbing such large volumes cannot be discounted as we have demonstrated in our proof.⁴⁷¹

14.14 It has to be realised that all the above is an undertaking of a massive scale to be contemplating in such a fragile ecosystem and which could also have such profound effects upon the surrounding ecosystems.

14.15 RWE maintain that their suite of management plans ie Outline Habitat Restoration and Management Plan, Forestry Management Plan, Peat Management Plan, Draft Drainage Management Plan, and Draft Construction and Environmental Management Plan will control the risks to this fragile environment from this complex operation in an upland area with challenging weather conditions.

⁴⁶⁶ Carnedd Wen Peat Management Plan April 2013 page 43 sections 4.3.2.2 Table 10 and 4.3.2.4

⁴⁶⁷ Carnedd Wen Peat Management Plan April 2013 page 36 Table 6

⁴⁶⁸ Carnedd Wen Forestry Management Plan July 2013 page 115 section 5.4 para 76-83

⁴⁶⁹ Carnedd Wen Peat Management Plan April 2013 Section 4.2

⁴⁷⁰ Carnedd Wen Peat Management Plan April 2013 Section 4.2

⁴⁷¹ ALL-SSAB-POE-05 section 2.2 and 2.4

- 14.16 As we have shown in our evidence⁴⁷², there are significant risks that such a multitude of requirements could not be feasibly implemented in their entirety in such a hostile and fragile environment.
- 14.17 Even RWE themselves in their Peat Management Plan⁴⁷³ state that the guidance regarding construction, as opposed to restoration activities, conflict with each other seasonally. Other seasonal requirements, such as ornithological ones, will obviously add to the complexity.
- 14.18 It must also be pointed out that the proposed Llanbrynmair windfarm is adjacent and interleaved with the Carnedd Wen site and similar construction, habitat, forestry, peat and drainage management interventions will be being undertaken in the same environment at similar times.
- 14.19 As if the above issues were not enough in themselves the following scale of factors must be realised:
- 14.20 Although RWE have undertaken 'mitigation' in order to try and reduce the effect of the scheme upon deep peat (defined as greater than 0.5 m by Natural Resources Wales) the amount of infrastructure on such peat, as our evidence shows⁴⁷⁴, is still considerable:
- i) 37 (ie 74%) of the turbines are located on deep peat and 15 are located on peat deeper than 1.0 metre.⁴⁷⁵
 - ii) Three of the six borrow pits and even three of the five construction compounds are located on deep peat.
 - iii) The construction of the access tracks will require excavation of 65,323 cu.m. of peat and 11 kms of further tracks are 'floated' because of the peat depth being greater than 1.0 metre.
- 14.21 The Habitat Restoration of blanket bog, as we have shown in our evidence⁴⁷⁶, is particularly dependant on raising of the water table to within 10 cm of the ground surface. This is as spelt out in the RWE Habitat Management Plan⁴⁷⁷. The Carnedd Wen SEI 2011 states: *'the target is to ensure that the water table is raised from a likely present depth of 50-60 cms under the trees.'*⁴⁷⁸
- 14.22 Thus a raising of the water table by approximately 40-50cms is required. Our evidence shows⁴⁷⁹ that, even at Black Law and the Welsh EU LIFE Active Blanket Bog project, such a magnitude of change has not been achieved and we have been unable to identify anywhere that such a height change has been achieved.

⁴⁷² ALL-SSAB-POE-05 section 2.2

⁴⁷³ Carnedd Wen Peat Management Plan April 2013 section 5.3.4.6 para 154

⁴⁷⁴ ALL-SSAB-POE-05 para 2.1.2

⁴⁷⁵ Carnedd Wen SEI 2013 Volume 4 Section 1.5 page 30 onwards. Tables 2,3,4,5,6&7

⁴⁷⁶ ALL-SSAB-POE-05 section 3.5.3

⁴⁷⁷ Carnedd Wen Habitat Management Plan Feb 2013 page 11 para 38

⁴⁷⁸ Carnedd Wen SEI Sept 2011 volume 2 appendix 7.2 page 38

⁴⁷⁹ ALL-SSAB-POE-05 paras 3.5.3.2 & 3.5.3.3

- 14.23 We are extremely concerned that the projected habitat restoration of peat and blanket bog will not be achieved. The major operations to install this restoration and the windfarm infrastructure as described above will also lead to significant loss in this fragile, but very important, ecosystem due to the controls not being sufficient and/or impracticable to implement to the necessary degree. On top of this huge risk there will be an acknowledged loss, disturbance, or changing of, as pointed out in our evidence⁴⁸⁰, of 28.7 ha of blanket bog and 14.7 ha of Mire/Flush. The RWE documentation also appears to be silent on the amount of peat affected by dewatering ie the peat that is degraded by the disturbance of the hydrological regime due to track, foundation and crane pad installation⁴⁸¹. This is usually of considerable significance in an area of such extensive and deep peat.
- 14.24 As the above evidence shows there is definite loss to the ecology of the area: the likelihood of the restoration scheme being successful is slight, and the likelihood of the risks from the works leading to considerable damage very high.
- 14.25 Where there is deep peat, the UK Forestry Standard now limits replanting or requires a much more sympathetic scheme. The ecology of the area would most likely be at far less risk with a more gradual transition to a new environment.
- 14.26 As shown in our evidence⁴⁸² the Habitat Restoration has a negative effect upon carbon losses compared with leaving the forest in place. This conclusion is reached from RWE's own figures. These show a 0.9 million tonnes CO₂ loss for the restoration compared with a 0.5 million tonnes CO₂ gain if the forest remained. This leads to the total windfarm and habitat scheme having a poor CO₂ pay back time in RWEs worst case assessment of 6.9 years.⁴⁸³
- 14.27 The Alliance has submitted evidence to show that issues not taken account of in the Carbon Balance will mean that this figure will be significantly optimistic⁴⁸⁴. Obviously, the considerable risk to the fragile ecology of Llanbrynmair Moor and its surroundings is not compensated for by an appropriate carbon balance.

Wildlife

- 14.28 RWE admits that otter are present in the watercourse around the site; run-off from works will affect the water quality and this will undoubtedly have negative impact on the local otter population. Nine species of bats, water voles and badgers, hen harrier, red grouse, as well of course, as is now accepted, black grouse are all present.

⁴⁸⁰ ALL-SSAB-POE-05 paras 2.4.3 and 2.4.4

⁴⁸¹ ALL-SSAB-POE-05 para 2.3.2

⁴⁸² ALL-SSAB-POE-05 para 4.2

⁴⁸³ Carnedd Wen SEI July 2013 Appendix 1.1 page 2 sec7.1 para 3

⁴⁸⁴ Carbon Balance: Considerations of particular concern regarding Conjoined Inquiry schemes

- 14.29 Their conclusion, having undertaken this work is that despite not knowing what level of populations or distribution, and being less than clear on the presence of key species such as black grouse, RWE states that *'there were not likely to be unacceptable impacts on European Species. While there were likely to be some significant negative impacts on other ecological features during the construction work or, in the case of woodland songbirds, the forestry operations'*.
- 14.30 RWE states⁴⁸⁵ that *cumulative ecological impacts are only likely to arise in the case of bird populations and only in combination with the adjacent Llanbrynmair'* application. It is self evident that it would require the adjacent application to create **cumulative** impacts.
- 14.31 Later in the same paragraph RWE identifies *'significant negative impact on a number of UK BAP species including dunnock, song thrush, lesser redpoll and bullfinch'*. The Alliance draws the Inspector's attention to the importance of the avian population as indicator species and the impact of these songbirds in the avian foodchain. RWE accepts that Carnedd Wen would create the greatest damage and that they cannot offer any mitigation⁴⁸⁶. This ignores guidance in TAN5 and contravenes PPW⁴⁸⁷.
- 14.32 The developers have understated the negative impacts of their proposal and are unrealistically optimistic of the benefits for nature conservation, with no real world evidence to support their assertions. Their application fails to meet guidance in TAN5⁴⁸⁸ and contravenes Planning Policy Wales 5.1: *'Look for development to provide a net benefit for biodiversity conservation with **no** significant loss of habitats or populations of species, **locally** or nationally'*. It is important that their duties under sections 40 and 42 of the Natural Environment and Rural Communities (NERC) Act 2006 are fully complied with.

Cultural Heritage

- 14.33 Planning Practice Guidance for Renewables⁴⁸⁹ states that: *'Great care should be taken to ensure that heritage assets are conserved in a manner appropriate to their significance, including the impact of proposals on views important to their setting.'* The Alliance would request that the Inspector and the Secretary of State exercise that required care in determining the acceptability of these proposals balanced against the overwhelming loss of heritage value.
- 14.34 RWE maintain throughout their ES and SEIs that there will be no harm to the settings of cultural heritage assets, and Karl Cradick, in his proof of evidence on planning balance, states that 14 assets within 5 km of the

⁴⁸⁵ Stewart Lowther POE § 62

⁴⁸⁶ Stewart Lowther POE §62

⁴⁸⁷ TAN5 Chapter 2.21 & PPW 5.1

⁴⁸⁸ TAN5 Chapter 2 2.1

⁴⁸⁹ Planning Practice Guidance for Renewables and Low Carbon Energy 2013 DCLG para 15 cited in ALL-SSAC-POE-05 para 9

proposal are assessed, and in all cases there would be no adverse effect⁴⁹⁰.

- 14.35 As we have shown in our evidence⁴⁹¹, with reference to Carnedd Wen wireframes, the reality of the effect upon settings for at least 5 Scheduled Ancient Monuments is very difficult to describe as 'no adverse effect'. This is particularly the case as far as a local resident or visitor would perceive it.
- 14.36 Examples are: Fridd Cwm y Ffynnon Barrow Cemetery, which at 0.7km from the nearest Carnedd Wen turbine is particularly affected by 12 turbines⁴⁹². This SAM is very close to Glyndwr's Way and therefore the setting will be of particular note.
- 14.37 Pencad Cymru Cairn which although at 2.0 km from the turbines is particularly affected by the mass of the 50 Carnedd Wen turbines.⁴⁹³
- 14.38 Moel Ddolwen Hillfort which although 2.7km away, experiences a complete wall of turbines to the west.⁴⁹⁴ Again Glyndwr's Way passes close by and therefore appreciation of the setting is important.
- 14.39 The Alliance is therefore completely unable to agree that the Carnedd Wen development will have no adverse effect upon Cultural Heritage. Should Llanbrynmair also be consented then there would be an additional cumulative impact on all these assets.
- 14.40 That CADW have not maintained an objection is not unusual as their concern is predominantly physical damage to an artefact. As noted by Inspector Jones at Bryn Llewellyn application⁴⁹⁵ the lack of objection does not necessarily indicate that the proximate siting of a turbine is acceptable to the setting and interpretation.

Visual and Landscape

- 14.41 The plateau on which the application would stand, rises to some 500 metres, and added to this the height of the turbines is 137m. This proposal would dominate the skyline from all directions, with the only locations of greater height being Cadair Berwyn to the north and Bryn Coch on the Radnorshire border.
- 14.42 Mr Stevenson stated in his evidence to NRW that, *tranquillity will be much diminished*, should the development be given consent. He also accepted that the developments would *create a windfarm landscape*.

⁴⁹⁰ Hearing Statement, Planning Balance, Planning Conditions and Legal Undertakings, Karl Cradick p58 § 8.9

⁴⁹¹ ALL-SSAB-POE-06

⁴⁹² Carnedd Wen August 2009 SEI volume 2 fig 10B.15

⁴⁹³ Carnedd Wen August 2009 SEI volume 2 fig 10B.16

⁴⁹⁴ Carnedd Wen August 2009 SEI volume 2 fig 10 B.18

⁴⁹⁵ Appeal decision Jones

- 14.43 Should a number of schemes in planning be consented, from certain vantage points, as photomontages before this Inquiry show, ⁴⁹⁶ there will be an unacceptable and virtually unbroken 300 degree cumulative view of turbines, numbering 182 in total ⁴⁹⁷ again contravening good design practice.
- 14.44 The Alliance has submitted detailed evidence⁴⁹⁸ to the Inquiry regarding the effect the scheme will have by itself and in combination with Llanbryn-mair on the special qualities of the Snowdonia National Park. Residents are frankly amazed that such despoliation is even being considered especially when the draft TAN 8 called up a buffer zone⁴⁹⁹ around the National Parks.

Effects on residents

- 14.45 Evidence has been received from a number of residents, in the Inquiry sessions, contained within the Alliance Compendium and independently submitted. It is notable that only one person, who is not a resident, spoke or submitted evidence in favour of Carnedd Wen or Llanbryn-mair applications at any Inquiry session. In contrast more than 30 people who live locally to Llanbryn-mair Moors spoke against the proposals and gave a written submission as well.
- 14.46 Visual amenity would also be affected; recently published impartial research from the London School of Economics ⁵⁰⁰ indicates these residents are likely to suffer financial loss should they need to sell their home.
- 14.47 A number of residents have provided evidence regarding the devaluation of their homes. As the Inspector is aware, when selling a property the vendor is legally obliged to admit to any difficulties or conflicts they have had in their neighbourhood; those who have provided such evidence to this Inquiry have taken immense risk in speaking out. Many have not been so brave but remain trapped in properties they cannot sell nor afford to keep.
- 14.48 Banwy Community Council ⁵⁰¹ undertook a community survey; the results were unequivocal; 70% responded, and of those 72% are opposed to windfarms and 83% are opposed to grid strengthening proposals.
- 14.49 Residents in the Banwy valley are particularly concerned about the visual effect upon their neighbourhood and the evidence submitted by many is exemplified by that of a compendium entry ⁵⁰². Residences on both the

⁴⁹⁶ RWE & RES cumulative1a, 1b, 1c, 1d

⁴⁹⁷ Including Mynydd Waun Fawr, withdrawn, but excluding Mynydd Lluet y Graig , which includes MWF and the site previously known and Rhyd Ddu. Less than 2km from the nearest RES turbine.

⁴⁹⁸ ALL-SSAB-POE-03 paras 79-93

⁴⁹⁹ All-09 para 6.8

⁵⁰⁰ Gibbons LSE (2013 draft/ published 2014) referenced in ALL-S4-POE-04 and supplied as Alliance Core document for tourism and economy

⁵⁰¹ OBJ-816-POE

⁵⁰² ALL-SSAB-POE-01R no 44 1-8

western and eastern side of the valley are affected and the inspector paid site visits to those locations at the request of residents.

- 14.50 Banwy CC also pointed out that the A458 from Shrewsbury to Mallwyd is free of windfarms. They believe this to be the last main route from England to the Welsh coast that is not despoiled by windfarms.
- 14.51 The Alliance has submitted evidence that raises concern about private water supplies⁵⁰³. The SEI July 2013 identifies 45 private water supplies in the vicinity of the development but it gives no information, as far as we can see, as to how they are to be safeguarded. Obviously relevant conditions are required to safeguard public health.

Tourism and Economy

- 14.52 The proposal intrudes on Glyndwr's Way National Trail whenever the trail has open views, due to the location and altitude of the proposed site; as TAN16 indicates access to the countryside is important to the rural economy and PPW⁵⁰⁴ Powys UDP states: '*Local Authorities should seek to protect and enhance the rights of way network as a recreational and environmental resource.*' The Alliance and local tourism providers have submitted considerable evidence that has shown the value of Glyndwr's Way, Great Dragon Trail, Public Rights or Way, footpaths and bridleways as well as the importance of the open access areas occupying a good proportion of the proposed site.
- 14.53 RWE have stated that Glyndwr's Way will remain open throughout construction and ongoing maintenance of the windfarm and well as periods of and high winds. However the effect upon Glyndwr's Way as evidenced in our landscape proof⁵⁰⁵ is severe. Not only will the turbines be the characterising feature over many kilometres of the route, but the way has to pass through an avenue of Carnedd Wen turbines for two kilometres.⁵⁰⁶ The cumulative effect in this area above Cwmdrwen (see our Llanbrynmair section) will be severe.
- 14.54 Evidence regarding the value of the tranquillity on the Trail as one traverses Llanbrynmair Moors has been described by a number of members of the public⁵⁰⁷ presenting evidence regarding its value to businesses and visitors. Users of Glyndwr's Way and the access land are by their intention to reach such tranquillity, of high sensitivity and the ES considerably underestimates the impact that would be felt by those without financial incentive.
- 14.55 The Powys UDP policy E3 on Windpower states: '*Applications for windfarms will be approved where, inter alia, they do not unacceptably affect the enjoyment and safe use of highways and the PRoW network, especially bridleways.*'

⁵⁰³ ALL-SSAB-POE-05 page 11 para 5.1

⁵⁰⁴ PPW 11.1.13

⁵⁰⁵ ALL-SSAB-POE-03 para 96-102

⁵⁰⁶ Enplan map produced by Powys.C.C. for the Inquiry [CD/002/003]

⁵⁰⁷ ALL-SSAB-POE-01 Individual and Group Statements No 26

- 14.56 Walkers' opinions do not necessarily support conclusions reached by Regeneris in their reports⁵⁰⁸ Far from being a significant enhancement to Glyndŵr's Way⁵⁰⁹, walking through miles of brash and felled stumps is not universally enjoyed, neither is an avenue of towering turbines as opposed to the expected natural environment. The commercial forest would be felled in due course and as this is peatland any replanting would have to conform to the new Forestry Guidelines for planting on peat and would not constitute geometric, dense conifer planting; the open landscapes could then be enjoyed by walkers without the intrusion of turbines and infrastructure.
- 14.57 It is further of note that many walkers on long distance paths have a very negative view of windfarms as expressed in the Mountaineering Council of Scotland 2014 survey⁵¹⁰ that evidenced some 2/3rds of walkers and mountaineers avoiding areas with windfarms and 68% believing they spoil the views. Ramblers' Cymru policy is unequivocal in stating⁵¹¹ : *'We are specially concerned about the proliferation of large scale on-shore wind schemes and the degradation to the Welsh landscape and walking environment these are causing'* Similar concern is not expressed regarding forests. In fact a survey by the Welsh Tourist Board showed that less than 30% of visitors to rural Wales actually disliked regimented coniferous forests⁵¹² so the assumption that these are a major deterrent to visitors is unfounded.
- 14.58 RWE's consultants, Regeneris, have produced a report detailing the large number of jobs to be created by the windfarm and habitat restoration project. The figures are predictions only and based on the existence of substantial manufacturing capacity and the availability of local supply chains and extrapolation to proposed windfarm projects in areas with very different socio-economic characteristics. They also conflate on- and off-shore employment figures which is misleading as off-shore can demonstrably provide significant numbers of jobs and the UK has some market advantage.
- 14.59 As the Alliance has demonstrated there is a considerable body of research at UK and European level which questions any overall gain in jobs resulting from on-shore windfarms⁵¹³. There is also no evidence from existing windfarms in Wales of large scale job creation, local jobs at the construction phase or community benefits acting as an economic driver⁵¹⁴. In the absence of any robust evidence the claims for local job creation must be treated with great circumspection.

⁵⁰⁸ Study on Windfarms in Wales and Study for RWE on the Habitat restoration project

⁵⁰⁹ Regeneris report 7.70 All-SOCIOECO-POE-S4-04-ADDENDUM

⁵¹⁰ ALL-SOCIOECO-REBUTTAL-S4-04 §5.7

⁵¹¹ ALL-SOCIOECO-REBUTTAL-S4-04 §5.11

⁵¹² ALL-S4-POE-04 §2.2.2 vi

⁵¹³ ALL-S4-POE-04 Section 6 and ALL-SOCIOECO-REBUTTAL-S4-04 and reference doc D

⁵¹⁴ ALL-S4-POI-04 §6.16 citing Munday et al (Cardiff University 2011) Journal of Rural Studies (Alliance core doc.)

Section 15: Conclusions

- 15.1 You have heard from the community at the Inquiry, at the public meetings, through statements, and through the Alliance.
- 15.2 The Alliance has, we believe, submitted as much grounded evidence that a Section 6 party can be reasonably expected to do with the resources available for a year-long Public Inquiry into six schemes.
- 15.3 The evidence shows that there is no requirement to skew towards targets the proper consideration of all legitimate planning issues in deciding these schemes. Environmental capacity and the concerns of the local people and businesses must be taken fully into consideration.
- 15.4 The population and visitors do not accept the phrase *Within (and immediately adjacent) to the SSAs the implicit objective is to accept landscape change ie a significant change in landscape character from wind turbine development*⁵¹⁵ which was never part of the consultation process of TAN 8, and it was inserted afterwards in Annex D. Any requirement for such biasing of the planning system was only to meet targets which in the case of Wales have gone and in the case of UK 2020 targets are met.
- 15.5 Why have members of the public been so inspired to contribute whatever they could to this Inquiry process?

Perhaps these words out of ‘Caring for Historic Landscapes’⁵¹⁶ sum it up better than we could:

‘The contribution of local landscapes to people’s quality of life and to the economic well-being of local communities should not be underestimated. Recent research amongst individuals and businesses has clearly shown that one of the main reasons why people invest so much of their time and money in Wales is the quality of the local environment and landscape’.

⁵¹⁵ TAN 8 Annex D § 8.4

⁵¹⁶ Caring for Historic Landscapes CADW 2007 CD-002-007

Section 16: Alliance Inquiry Documents

	Reference ⁵¹⁷	Subject	Witness /speaker	Date
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To Pre Inquiry Meeting

1.	ALL-001-001	Comments on location & PI format	Alliance	20 Dec 2012
2.	ALL-OSOC	Outline Statement of Case	Alliance	21 Jan 2013
3.	ALL-002	Alliance Mid Wales Application (Statement for PIM)	Alliance	4 Feb 2013
4.	ALL-003	Skeleton on behalf of the Alliance	Alliance	15 Feb 2013
5.	ALL-004	Speaking Notes for the Alliance's Application	David Smith	18 Feb 2013
6.	ALL-005	PIM letter re topics	Alliance	25 Feb 2013
7.	ALL-006	Alliance re PPS22 guidance para 99 (NB PPS 22 now revoked)	Alliance	27 Feb 2013

Opening Session

8.	ALL-007	Summary Position of the Alliance	Alliance	22 Apr 2013
9.	ALL-008	Statement of Case – Opening Session	David Smith	14 May 2013
10.	ALL-009	TAN 8 Gestation Consultation and Application	Alliance ⁵¹⁸	14 May 2013

⁵¹⁷ The main reference given is that shown on the relevant document. After Session 1 (SSA C) the Inquiry reference system was altered and that alternative different reference is shown in a smaller font

⁵¹⁸ Prepared in accordance with the guidance in ID/6 of 10 April 2013

	Reference	Subject	Witness /speaker	Date
11.	ALL-010	WAG Energy Policy Target TAN 8 and PPW	Alliance ⁵¹⁸	14 May 2013
12.	ALL-011 ⁵¹⁹	Alliance Reference Documents	Alliance	14 May 2013
13.	ALL-012	Alliance Opening Statement	David Smith	4 Jun 2013

Session 1 – SSA C

14.	ALL-SOC-SSA-C	Statement of Case – SSA C	Alliance	9 Jul 2013
15.	ALL-SOC-SSA-C-DOCLIST	Alliance Reference Documents Session 1	Alliance	
16.	ALL-SSAC-POE-01	Individual and Group Statements p1-96	Various	6 Aug 2013
17.	ALL-SSAC-POE-02	Hydrology	Dr Harvey Rodda	6 Aug 2013
18.	ALL-SSAC-POE-03	Overall Need	Dr John Constable	6 Aug 2013
19.	ALL-SSAC-POE-04	Landscape	Dominic Watkins	6 Aug 2013
20.	ALL-SSAC-POE-05 and appendix	Cultural Heritage	Brett Kibble	6 Aug 2013
21.	ALL-SSAC-POE-06	Local Transport Issues	Roger Durgan	6 Aug 2013
22.	ALL-SSAC-POE-07	Community Profiles	Steve Wood	6 Aug 2013
23.	ALL-014	Swept area of blades	Charles Green	4 Oct 2013

Session 2 – SSA B

24.	ALL-SOC-SSA-B	Statement of Case – SSA B	Alliance	10 Sep 2013
25.	ALL-SOC-SSA-B-DOCLIST	Alliance Reference Documents Session 2	Alliance	

⁵¹⁹ Discs containing the reference documents listed in ALL-011 have been supplied to the Inspector, main parties and the Inquiry library

	Reference	Subject	Witness /speaker	Date
26.	ALL-SSAB-POE-01R ALL-GENERAL-POE-SSA-B-01	Individual and Group Statements p1-93	Various	8 Oct 2013
27.	ALL-SSAB-POE-02 ALL-NEED-POE-SSA-B-02	Overall Need	Dr John Constable	8 Oct 2013
28.	ALL-SSAB-POE-03 ALL-LAND-POE-WATKINS- SSA-B-03	Landscape	Dominic Watkins	8 Oct 2013
29.	ALL-SSAB-POE-04 ALL-COMMUNITY-POE-SSA- B-04	Community surveys	Steve Wood	8 Oct 2013
30.	ALL-SSAB-POE-05 ALL-PEAT-POE-SSA-B-05	Effects on Peat	Brett Kibble	8 Oct 2013
31.	ALL-SSAB-POE-06	Cultural Heritage (amended)	Brett Kibble	8 Oct 2013
32.	ALL-SSAB-POE-07 ALL-TRANS-POE-DURGAN- SSA-B-05	Local Transport Issues	Roger Durgan	15 Oct 2013
33.	ALL-SSAB-SPOE-07	Summary Proof and Comments on (Kevin Martin) Rebuttal	Roger Durgan	18 Nov 2013
34.	ALL-015	Restoration of degraded blanket bog	Alliance	18 Nov 2013
35.	ALL-016	Hearing Session - Ecology and Wildlife - Comments	Alison Davies	2 Dec 2013

	Reference	Subject	Witness /speaker	Date
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Session 3 – Llandinam 132kV line

36.	ALL-SOC-Session 3 ALL-SOC-OHL	Statement of Case – Session 3	Alliance	26 Nov 2013
37.	ALL-SOC-OHL-DOCLIST	Alliance Reference Documents Session 3	Alliance	
38.	ALL-OHL-POE-01 ALL-NEED-POE-OHL-01	Consultation Need and Design	Richard Bonfield	24 Dec 2013
39.	ALL-OHL-SPOE-01 ALL-NEED-SPOE-01	Summary - Consultation Need and Design	Richard Bonfield	21 Jan 2014
40.	ALL-OHL-POE-02 ALL-LAND-POE-OHL-02	Landscape	Dominic Watkins	24 Dec 2013
41.	ALL-OHL-POE-03 ALL-CULTHER-POE-OHL-03	Cultural Heritage	Brett Kibble	24 Dec 2013
42.	ALL-OHL-POE-04 ALL-ECOLOGY-POE-OHL	Woodlands and Ecology	Michele Lloyd	24 Dec 2013
43.	ALL-OHL-POE-05 ALL-CONSTRUCTION-POE-OHL-05	Construction Traffic	Geoff Weller	24 Dec 2013
44.	ALL-OHL-POE-06 ALL-DECOMMISSION-POE-OHL-06	Decommissioning	Richard Bonfield	24 Dec 2013
45.	ALL-OHL-POE-07 ALL-GENERAL-POE-OHL-07	Individual Statements pages 1-29	Various	24 Dec 2013

	Reference	Subject	Witness /speaker	Date
46.	ALL-017	Letter from SPM to Messrs GB & TDB Jones 20 Dec 13	Richard Bonfield	24 Jan 2014
47.	ALL-018	Photo of Two Tumps Dyke, Kerry Hills	Brett Kibble	20 Feb 2014
48.	ALL-019	Glanmiheli Pond Clarification	Michele Lloyd	20 Feb 2014
49.	ALL-020	Replacement programme for trees to be felled	Michele Lloyd	15 Jan 2014

Session 4 – Cumulative Effects / Matters in Common

50.	ALL-SOC-S4	Statement of Case – Session 4		28 Jan 2014
51.	ALL-SOC-S4-DOCLIST	Alliance Reference Documents Session 4	Alliance	
52.	ALL-S4-POE-01 ALL-GRID-POE-S4-01	Grid Connections and Transmission	Brett Kibble	25 Feb 2014
53.	ALL-S4-POE-02 ALL-LAND-POE-S4-02	Landscape	Dominic Watkins	25 Feb 2014
54.	ALL-S4-POE-03 ALL-COMMUNITY-POE-S4-03	Community Consultation	Alison Davies	25 Feb 2014
55.	ALL-S4-POE-04 ALL-SOCIOECO-POE-S4-04	Tourism and the Economy	Jill Kibble	25 Feb 2014
56.	ALL-SOCIOECO-REBUTTAL-S4-04	Tourism and the Economy Note on rebuttal by David Stewart	Jill Kibble	1 Apr 2014
57.	ALL-S4-POE-04-ADDENDUM ALL-SOCIOECO-POE-S4-04-ADDENDUM	Tourism and the Economy Note on Regeneris Report	Jill Kibble	14 May 2014

	Reference	Subject	Witness /speaker	Date
58.	ALL-S4-POE-05 ALL-TRANS-POE-S4-05	Overall Transport Issues	Roger Durgan	25 Feb 2014
59.	ALL-S4-POE-05a ALL-TRANS-POE-ADD-S4-05	Construction Traffic including non-AILs	Roger Durgan	10 Mar 2014
60.	ALL-S4-POE-06 ALL-ECOLOGY-POE-S4-06	Wildlife and Ecology	Alison Davies	25 Feb 2014
61.	ALL-S4-POE-07 ALL-HEALTH-POE-S4-07	Noise and Health	Dr Sarah Myhill	25 Feb 2014
62.	ALL-S4-POE-08 ALL-GENERAL-POE-S4-08	Individual and Group Statements p1-114	Various	25 Feb 2014
63.	ALL-NOISE-NOTE-S4	Note on Amplitude Modulation	Geoff Weller	1 Apr 2014
64.	ALL-NOISE-NOTE-S4- ADDENDUM	Note on Amplitude Modulation - Addendum	Geoff Weller	11 May 2014

Closing Session

65.	ALL-CLO-POE-01	Planning Balance	Dr John Constable	6 May 2014
66.	ALL-CLO-POE-02	Planning Balance and Carbon Balance	Brett Kibble	6 May 2014
67.	ALL-CLO-DOCLIST	Alliance Reference Documents Closing Session	Alliance	
68.	ALL-CLO-POE-01-Response	Response to Mr Frampton's Rebuttal	Dr John Constable	19 May 2014
69.	COND-ALL-NOISE	Comments on Amplitude Modulation Conditions	Geoff Weller	12 May 2014
70.	COND-ALL-TRSN	Comments on Further Transport Conditions	Roger Durgan	12 May 2014

	Reference	Subject	Witness /speaker	Date
71.	ALL-021	Response to CPL's note about fire hazard	Alliance	28 May 2014
72.	ALL-022	Response to FWL's Updated Protected Species Survey Report May 2014	Alison Davies	29 May 2014
73.	ALL-023 to -029	Not used		
74.	ALL-030R	Closing Submissions	Alliance	28 May 2014

ANNEX 8

Mid Wales (Powys) Conjoined Wind Farms Public Inquiry

Closing Submissions on behalf of Natural Resources Wales (NRW)

1. Introduction

- 1.1 In opening, I emphasised two aspects of NRW's position at this conjoined inquiry. First that NRW's remit is limited by its role as the statutory advisor to the Welsh Government on sustaining and enhancing the natural resources of Wales. This has meant restricting its involvement to specific areas within that remit, broadly landscape, habitats and species. Second, NRW's main objective was to resolve its objections in these areas with the applicants wherever possible so as to enable development to proceed in a satisfactory manner.
- 1.2 At the start of the inquiry, NRW's specific concerns included the impact of one or more of the proposed schemes on the landscape and visual amenity of the Snowdonia National Park, the Vale of Montgomery Registered Landscape of Outstanding Historic Interest, the Glyndŵr's Way National Trail, Kerry Ridgeway Regional Path and the National Cycle Route 81, together with other more localised landscape and visual impacts, for example in relation to substations and road access modifications. In relation to peat and peatland habitats, there were matters of concern in the Llandinam, Carnedd Wen and Llanbrymair schemes. Individual species, where there were outstanding issues at several sites included curlew, bats and dormouse, the last two being protected at both a European and national level. There was also a requirement to provide advice to the inquiry on the Habitat Regulations Assessment (HRA) regime in relation to the likelihood of impacts on European sites by any of the schemes, either alone or in combination with other projects.
- 1.3 The majority of NRW's concerns of a year ago have now been satisfactorily resolved by the provision of SEI and other additional information, or can be so resolved with the imposition of appropriate conditions. Agreed condition schedules dealing with NRW's ecology, and some landscape, concerns were settled at the end of last week's session and any points of difference noted. Other agreed matters, beyond those detailed conditions, have been dealt with in Statements of Common Ground agreed with the applicants and signed on behalf of NRW in relation to the following sites and topics:-

Llanbadarn Fynydd

- Hydrology and Hydrogeology
- Ecology
- Ornithology

Llaithddu

- Hydrology
- Peat Resource
- Ecology and Ornithology

Llandinam

- Bats
- Peatland
- Birds
- River Wye SAC

Llanbrynmair

- Landscape

Carnedd Wen

- Landscape

In addition, two SoCGs have been completed between PCC and NRW, relating to SSAB

- Landscape and Ecology
- Landscape and Ecology (expanded)

It is not necessary to go through each of these resolved matters in the submissions as they are fully documented in the SOCGs and agreed conditions schedules. I will therefore deal briefly with NRW's final position in relation to SSAC and then outstanding issues on the SSAB sites and 132kV line.

2 **SSA C**

- 2.1 In June last year NRW remained concerned about individual and cumulative impacts on curlew from the Llandinam Repowering and Extension scheme and the Llaithddu scheme and also on peat and peatland habitats in the case of the Llandinam scheme. These concerns were settled as set out in the SoCGs, on the basis of improvements to the proposed Habitat Management Plans for both schemes, some movement of infrastructure and a detailed breeding bird protection plan for Llandinam.
- 2.2 Therefore, in accordance with the various SoCGs for the Llanbadarn Fynydd, Llaithddu and Llandinam schemes above, provided the agreed conditions are imposed to secure the mitigation and improvements contained within the agreed habitat management, protected species, peat

protection and breeding bird protection plans, NRW has no outstanding objections to any of the individual windfarm schemes within SSA C.

3 **SSA B**

Carnedd Wen

- 3.1 NRW maintains its objection to the Carnedd Wen scheme on the basis of its impact on landscape and visual amenity. In particular it remains concerned that there will be significant indirect landscape effects and disturbance to the tranquillity of the Snowdonia National Park. Mr. Campion's professional judgement, as set out in his evidence, was that the close proximity to the National Park boundary, with the nearest Carnedd Wen turbine at 2.7 kilometres, the similar elevations and types of landscape within and outside the National Park in this area and the low capacity of the nearby areas of the National Park to accept landscape change means that there would be significant adverse indirect landscape effects upon the south eastern area of the National Park from the Carnedd Wen proposal. Further, there would be a major level of disturbance to remoteness and tranquillity within the Park in this area, for example from the Foel Dugod viewpoint (at JC appendix 4.2). Mr. Campion's detailed conclusions were specifically endorsed by the letter dated 8/10/2013 (OBJ-621-002) written on behalf of the Snowdonia National Park Authority to the Inquiry.
- 3.2 It is accepted that TAN8 promotes wind energy development within the SSA boundaries with an acceptance of resulting landscape change. However, the implicit objective of Annex D of TAN8 of maintaining the integrity and quality of the National Park landscapes, i.e. "no change in landscape character from wind turbine development", means that schemes must be designed to be sensitive to landscape effects within, and visual impacts on users of, the Snowdonia National Park. In addition, at para 2.4 of TAN8, it is acknowledged that not all parts of an identified SSA would be equally suitable for major wind power proposals. The professional judgment of Mr. Campion, as to the sensitivity and capacity of the neighbouring National Park and landscape to accept visual and landscape change, has been made with the benefit of many years' experience and assessment of the impact of wind turbines and a detailed knowledge of the local landscape together with his involvement in this scheme since 2009. I therefore ask that it be given due weight in considering the potential effects of the Carnedd Wen scheme on the National Park.
- 3.3 There is a fundamental difference between Mr. Campion and Mr. Stevenson in that Mr. Stevenson will not accept that indirect landscape effects will occur within the National Park area as a result of the Carnedd Wen scheme. It is important to note that Mr. van Grieken, in his evidence in relation to the Llanbrynmair scheme (MVG Proof 7.26) accepts the possibility of indirect landscape effects "up to 5km from the site". The main difference between him and Mr. Campion is the distance over which such effects will occur. The GLVIA3 (CD/CPL/LAN/005) glossary provides a wide definition of indirect effects "often occurring away from the site" but

Mr. Stevenson denies that indirect landscape effects occur in this case. He said, in cross examination (XX), that he is "happy to be on his own" on this issue but the views of two other experts together with the GLVIA3 definition must lead to the conclusion that a view from the National Park to a changed landscape beyond must be capable of indirectly affecting the perception of the landscape in between, in addition to the significant visual effects on those viewing that scene. I submit that this, in most people's understanding, would amount to an indirect effect on the landscape of the National Park. Mr. Stevenson, in XX, also made clear a number of other aspects of his approach. He does not, like Mr. van Grieken, assume effects are negative unless otherwise stated, but believes the effects of the Carnedd Wen scheme are positive (with the exception of residential receptors) and that those positive effects arise primarily from the removal of forestry within the Carnedd Wen site. He was therefore clearly predisposed to view any changes effected by the scheme positively.

- 3.4 NRW acknowledges the positive benefits of the forestry clearance and habitat improvement embedded in the Carnedd Wen scheme. However, Mr. Campion's evidence referred to the fact that extensive areas of forestry are not an unusual feature of the National Park and adjacent areas, and should not be regarded as a detracting element as a matter of course. He quoted the Hobhouse Report (CD/CON/003/LAN/011 p91), in describing the Snowdonia area, which noted that "forestry has sometimes enhanced the beauty of a landscape that might otherwise be excessively bare". Habitat improvements within the site must be considered against adverse landscape and visual effects within the National Park and do not amount to a 'trade off' to directly mitigate those off site impacts. Mr. Campion's conclusion was that the "new very large and incongruous" element represented by the Carnedd Wen turbines would have significant adverse indirect landscape effects on the landscape character of the National Park regardless of the forestry removal within the Carnedd Wen scheme.
- 3.5 In relation to the effect on the Special Qualities of the National Park, it was accepted by Mr. Stevenson in XX that both Special Qualities 5 and 9 of the National Park Local Development Plan (CD/CON/003/LAN/009 para 1.29) were relevant. Both involve the concept of the National Park as an area of tranquillity. Nevertheless his contention was that a wind farm can increase tranquillity "because of its link to a sense of wellbeing". This seems to be another example of Mr. Stevenson's very positive view of the visual effects of turbines. He further believes that users of the National Park would tend to look into the Park rather than at the landscape outside it. I submit that this an unsupportable position and that most reasonable people would share Mr. Campion's position that views both from and into the Park are equally relevant and that views of a number of moving, overlapping, rotor blades, potentially rotating out of synchronisation, would be much more likely to disturb a sense of tranquillity than add to it.
- 3.6 There is a limited amount to be gained by detailed examination of the widely different views of Mr. Campion and Mr. Stevenson upon the landscape and visual impacts of the Carnedd Wen scheme in relation to

the National Park. You have all the information, and opportunity by way of the site visits, to draw your own conclusions. NRW's position, supported by the Snowdonia National Park Authority, remains that the direct visual impacts, and indirect landscape impacts, upon the Park from the scheme are significant, adverse and unacceptable and that those impacts should be weighed in the planning balance against the positive benefits of forest removal and habitat improvement within the site.

- 3.7 In relation to the access track to the Carnedd Wen site from the A458, clarification received during the Inquiry has removed many of the original concerns of NRW over potentially adverse landscape and visual effects. It is still necessary to ensure that forestry is retained and replanted as necessary to screen the access road leading up to the plateau and this can be secured by a suitable condition (suggested condition 11).
- 3.8 A further issue with regard to the Carnedd Wen scheme is its contribution to the visual impact upon the Glyndŵr's Way National Trail in combination with the Llanbrynmair scheme. It is acknowledged that the Carnedd Wen scheme is the minority contributor to this effect and that some benefit could be secured by the increased access offered in Mr. Stevenson's appendix 28. However Mr. Stevenson confirmed in XX that there were currently no details as to how all these benefits would be delivered.

4 Llanbrynmair

- 4.1 Mr. Campion was concerned that the assessment of the substation serving the Llanbrynmair scheme was insufficient. Mr. van Grieken agreed in XX that the substation impacts had only been assessed on the basis of then current information which did not include final details, including communication masts, electrical apparatus and grid connection works. He also accepted that, although very large wind farms cannot be concealed, it is possible for infrastructure effects to be mitigated. NRW accepts that impacts from the substation could be reduced to an acceptable level by a detailed scheme responding to the landscape but that the current indicative plan (at 3.26 of the 2013 SEI) does not yet achieve that. This issue is now covered by the agreed Llanbrynmair conditions (suggested condition 25).
- 4.2 In relation to Glyndŵr's Way National Trail, turbine numbers R14, R15, R16 and R24 are all within a range of 70 to 300 metres from the National Trail. These are turbines with a total height of over 126 metres. Mr. van Grieken accepted that these turbines were very close but his view is that the responses of walkers using the Trail would differ. He accepted, however, that some would experience this as an overwhelming effect. His position on the acceptability of these effects was that it would require all or most of the length of the National Trail, or a "defining section of it", to be affected before they became unacceptable. He had not advised repositioning these turbines or diversion of the route of the Trail. I would submit that this is an unreasonable approach and that 126.5 metre turbines within 70 and 80 metres (in the case of R14 and R24 respectively) must create unacceptable visual impacts on users of the Trail irrespective of the length of the entire route. Although these impacts

are reversible after the 25 year operational lifespan of the turbines, so far as many of today's walkers on Glyndŵr's Way are concerned, they are in reality a permanent change. It is possible for walkers to omit this section of the route altogether, but this in itself would amount to an adverse effect. These impacts on Glyndŵr's Way should be considered as negative effects in the planning balance for this scheme. There are, of course, positive habitat management proposals within the Llanbrynmair scheme but these will not directly compensate or mitigate the visual impacts on the National Trail and the loss of amenity of its users.

- 4.3 The most contentious issue in relation to the Llanbrynmair scheme has proved to be the proposed modifications to the minor road between Llanerfyl and Talerddig. NRW expressed its concern relating to the landscape and visual effects and the need for further survey data on dormice and bats. These concerns remain despite the further SEI submitted in August and October 2013 and February 2014.
- 4.4 The key landscape and visual points are the adverse effect on landscape character from the loss of mature tree cover and the widening of the approach to Gosen Bridge, the loss of trees and some adjoining woodland at the Dolwen river crossing and the incongruity in the local landscape of the Neinthirion bypass route. Visual effects will be largely experienced at close range, with the exception of the Gosen Bridge works, which will be more widely visible, but there will be cumulative adverse visual effects along the route in the short and medium terms. Mr. Champion accepted that hedge replacement and maintenance could provide longer term benefits but establishment of hedgerows could take up to 10 years, hence his concern about short and medium term impacts.
- 4.5 In giving evidence, Mr. Champion made it clear that he concurred with Mr. Russell-Vick's evidence in relation to the landscape and visual impacts of the road modifications. Mr. Champion identified his particular concerns as relating to the Gosen Bridge, the Neinthirion bypass and the Dolwen Isaf Bridge. NRW's position is that significant adverse effects from the changes in character to substantial sections of this road could be avoided by joint access arrangements with the Carnedd Wen scheme. PCC have led the detailed evidence on the landscape and visual impacts of the proposed modifications and the benefits of joint access arrangements. I shall therefore defer to PCC's detailed evidential and legal submissions on these topics. NRW have consistently advocated shared access arrangements and NRW supports joint use of the Carnedd Wen route provided potential visual impacts on the National Park from the route from the A458 up to the Carnedd Wen plateau are prevented by maintenance of the forestry screen as noted earlier. NRW's response dated 28/3/2014 (CON-003-014) to the additional SEI submitted by RES in February 2014 makes it clear that a joint access would be welcomed; and that the Carnedd Wen route is the preferred option, subject to landscape and ecological conditions to ensure that impacts of the joint access road are minimised throughout the lifetime of the project. NRW also confirmed in that response that the two road links required for the alternative access route would have minimal effects on landscape, hydrology, peat, habitats, protected species and carbon.

- 4.6 Following submission of the October 2013 SEI on Llanbrynmair, NRW had concerns about the impacts on bats using both the wind farm site and trees and structures along the route of the minor road modifications. Earlier issues relating to breeding curlew on the Llanbrynmair site had been resolved by way of the applicants Habitat Management Plan and Breeding Birds Protection Plan proposals which are secure by the agreed conditions (suggested conditions 48 and 50).
- 4.7 Within the site, NRW consider that a precautionary approach should be adopted and that a Bat Protection Plan can be implemented to monitor and record bat mortality and to recommend and implement remedial action if necessary. Ms. Matthews has provided evidence of the risk to bats from turbines on the site from barotrauma and NRW considers monitoring, and proportionate remediation if necessary, to be a reasonable basis for a condition (suggested condition 51).
- 4.8 Gosen Bridge possibly provides the most favourable structure for bats along the minor road and a Pipistrelle bat roost has been located under the bridge. Additional information provided by the applicants has reassured NRW that there are no risks to favourable conservation status provided mitigation in terms of the timing and method of construction works, informed by further survey work if required, is secured by condition.
- 4.9 With regard to the licensing requirements of Article 16 of the Habitats Directive and Regulation 53 of the Conservation of Habitats and Species Regulations 2010, in relation to works at Gosen Bridge Ms Matthews' view was that a licence in relation to disturbance of bats might be unnecessary but it would be a matter for the applicants to demonstrate that disturbance could be avoided at the appropriate time. NRW does not wish to pre-judge whether a licence application will be required. However, if a licence is required in relation to a European Protected Species, NRW agreed with PCC that a joint Carnedd Wen access provides a "satisfactory alternative" to the Llanerfyl/Talerddig road route on the basis of the evidence before the inquiry. Details of that agreement are set out in the Expanded SoCG between PCC and NRW on SSAB Landscape and Ecology which also makes clear that NRW will deal with any future derogation licence application on its merits and on the basis of information submitted at the time. It is not disputed, in line with the *Prideaux v Buckinghamshire CC* case set out in PCC's legal submissions, that the alternative must be a real option, and not just a theoretical one, to require refusal of a licence on this basis. Ms Matthews, for NRW, also accepted the effect on bats from tree works related to the minor road modifications were capable of being satisfactorily mitigated, again subject to more detailed survey information before felling took place.
- 4.10 In relation to dormouse, the other European Protected Species that could be affected by the road works, NRW is not satisfied that adequate information has been presented to the Inquiry in order to reach a conclusive view on whether favourable conservation status will be affected. You heard Dr. Halliwell's expert views on the need to use survey methods other than just hazelnut surveys, including nest box surveys,

particularly in habitat with very little hazel which is still potentially suitable for dormice. Such habitat includes the scrub, hedgerows and conifer woodlands affected by these works. Dr. Halliwell believes the survey areas were too narrowly drawn and the nut searches alone did not provide a basis for a satisfactory assessment. In order to comply with the Dormouse Conservation Handbook (DCH), the best practice advice on this topic, alternative search methods should have been employed and they were not. Her detailed assessment of how DCH guidance had not been followed, and habitat along the proposed access route not always been adequately assessed in terms of its suitability for dormouse, is set out in her Rebuttal Proof. This is not a question of simply being unable to decide at what point to stop searching for the presence of dormice. That question does not arise if the advice of the best practice guide, the DCH, has not been followed. Until that point I submit that further survey work is essential, rather than simply discretionary. Dr. Halliwell's fear is that there was insufficient information to be reasonably confident that the searches carried out have not produced a false negative. It was suggested on behalf of the applicants that there is a conflict between the DCH and the later Interim Guidance Note issued by English Nature. Dr. Halliwell confirmed that there is no contradiction between the two and there is sufficient guidance in the DCH in any event to establish what a satisfactory dormouse survey should comprise. The absence of sufficient information makes it difficult at this stage to assess what mitigation might be required. Even if a precautionary approach was adopted to mitigation, if dormice were subsequently found and disturbed a licence would be required and that licence would have to be refused (again, subject to the detailed application information submitted at the time) if a satisfactory alternative to the road works, in the form of a joint Carnedd Wen access, was found to be available. The further SEI submitted in February 2014 does not change the above position.

5 Llandinam-Welshpool 132kV Grid Line

- 5.1 NRW's objections to the grid line proposal on landscape and visual grounds remain. These centre on the Vale of Montgomery Registered Landscape of Outstanding Historic Interest (RLOHI) but also relate to the Kerry Ridgeway area and local impacts on the National Cycle Route 81. There were substantial differences between Ms. Gibson and Mr. Campion on sensitivities and landscape and visual effects.
- 5.2 NRW does not seek to challenge the route selection process that led to route corridor E being preferred. It believes, however, that the sensitivity of sections of that route has been undervalued in the work on behalf of SPEN. It is acknowledged that SPEN upgraded two sections of the route to medium high sensitivity following representations from NRW. However, NRW had judged the sensitivity of three sections; F, G and H to be "at least" medium high and differences in sensitivity judgment still remain.
- 5.3 The route in the vicinity of Kerry and the Kerry Ridgeway has been the subject of detailed evidence from PCC and I shall defer to their submissions on the issue. In terms of the Vale of Montgomery, Ms. Gibson's complete omission of the RLOHI in her proof in relation to

landscape designations (paras. 7.6 – 7.8) and her refusal to recognise it as either a designated landscape or as having a non statutory designation (in XX) reflected her approach to the significance of the historic landscape. She did not even refer to the RLOHI in paragraph 7.8 of her proof under “Other Designations”, although she acknowledged in XX that it should have been.

- 5.4 As a RLOHI, the Vale of Montgomery should be treated as a material consideration, in line with Planning Policy Wales, (6th edition, 2014, para 6.5.25) where there is more than a local impact on an area on the Register. Despite Ms. Gibson’s assertion in XX that 6km is “a small area” NRW’s view is that such a length of grid line crossing the Vale must be considered to have more than a local impact. The line and poles, surmounted by their substantial apparatus, will be visible right across this landscape. Furthermore the number of significant designated heritage assets within 2kms of the route (shown on ES2013, Vol. 6, Fig 8.2), including Montgomery Castle, Ffridd Faldwyn, Hen Domen, the Gaer Roman fort and Offa’s Dyke, emphasise the quality of this part of the historic landscape in cultural as well as landscape terms.
- 5.5 Ms. Gibson, in carrying out her assessment used LANDMAP, as advised by GLVIA3 (5.19), but acknowledged that she had only done so down to the third level of detail. Ms. Gibson accepted that the Historic Landscape Character Areas (HCLA’s) identified by the Historic Landscape Characterisation process are the equivalent of a level four assessment. Mr. Champion’s Appendix 3 Fig 3 shows the HCLA’s in the Vale of Montgomery and provides more meaningful information on their extent and boundaries within the registered historic landscape. They show the broad brush nature of the Aspect Area boundaries within level 3 of LANDMAP used by Ms. Gibson and that Mr. Champion’s assessment of the sensitivity of this area should be preferred. Further, Ms Gibson also confirmed in XX that she had not collaborated with the applicants’ cultural assessor in carrying out her assessment, as advised by GLVIA3 (5.9, 5.10), and disagreed with his conclusions on, for example, the major impact of the line in compromising the setting of the Hen Domen SAM (ES Vol. 4 VP23 page 85). This casts further doubt on the reliability of Ms. Gibson’s judgment on the sensitivity of the section of the route within the Vale of Montgomery that particularly concerns NRW, namely section F. The sensitivity appraisal in the 2013 ES, Vol. 3 (a), appendix 6 (c) (CD/SPM/ES/01) does not, in my submission, clearly demonstrate why, in the light of all the information set out in that table, Ms. Gibson has reached her conclusions about the medium high sensitivity of sections F, H and G of the route relative to section B, which she concludes is of high sensitivity.
- 5.6 NRW’s position is that both the sensitivity of the Vale of Montgomery and the scale of the impact upon it from the route have been underestimated by Ms. Gibson. Mr. Champion’s judgment, underpinned by his more detailed analysis at the equivalent of LANDMAP level 4, is that the line would cause significant adverse landscape and visual effects where it crosses the Vale, including visual effects from important viewpoints on the Offa’s Dyke National Trail. The importance of the viewpoints on Offa’s

Dyke was accepted by Ms. Gibson. The openness of the landscape in this area, particularly the Camlad Valley, is amply illustrated in Mr. Champion's figures 6 and 7 (JC appendix 3) as is the absence of significant existing detracting elements. I submit that the impacts on the Vale in landscape and visual terms must be weighed on the negative side of the balancing exercise in this proposal. Further, a 6km line of 14 metre high double wood poles would amount to a major component of the landscape, meaning that significant weight should be given to that negative impact.

5.7 More localised negative effects would occur in section H of the route in relation to the high sensitivity landscape in this area and the visual amenities of users of the National Cycle Route 81 along the B4381, where views of the line by cyclists will not be screened by the field hedgerows. This should also be weighed in the balance.

5.8 It is argued by the applicants that sufficient information on bats and dormouse, potentially affected by the scheme, has been provided. NRW disagrees. The need for survey work across a scheme of this scale should be dictated by the receptors, the possible impacts upon them and the seriousness of the consequences of those impacts. It is difficult to prove the absence of dormouse, particularly given the size of the area, but assessment should not be limited by cost or the difficulty of the work. NRW's view, advised by experts who had reviewed in detail the relevant information, remains that the survey work and mitigation proposed for bats and dormouse does not comply with best practice in the form of the Bats Conservation Trust 2012 good practice guidelines and the Dormouse Conservation Handbook. The details of NRW and Hyder's concerns were set out in the proofs of Ms. Reason and Mr. Davies. They concluded that the survey effort could not be relied upon to provide an understanding of the effects of the project on the conservation status of bat species and dormouse. The advisers to NRW from Hyder Consulting were appointed immediately the SEI was produced and NRW made its concerns on survey adequacy clear in its amended Statement of Case in December 2013.

6 Conclusion

6.1 NRW considers that the UK and Wales Government policy on onshore wind are compatible and that the spatial approach and targets set out in TAN8 are working to meet the objectives of National Policy Statements EN-1 and EN-3. NRW wholly endorses the objectives of both Governments to increase dramatically renewable generation capacity, with much of that new capacity being via onshore and offshore wind in the short to medium term. Equally, NPS recognises that impacts on the environment should be avoided or minimised and that renewable provision should not compromise international and national statutory obligations for designated areas, species and habitats. TAN 8 Annex D sets out environmental issues, including ecology and landscape/visual effects, to be taken account of in development control decisions. The finite environmental capacity of the SSA's is also recognised by the Wales Government First Minister's statement on 11/6/2012 (CD/CON/003/PB/001).

- 6.2 Irrespective of the ability of a wind farm proposal to assist in meeting SSA generating capacity targets there is still the need for environmental impacts to be acceptable if a scheme is to proceed. It is therefore possible for discretion to be used in refusing applications within the SSAs if they produce unacceptably adverse impacts. NRW asks that the adverse landscape and visual impacts referred to above in respect of the Carnedd Wen and Llanbrynmair sites and the 132Kv line route are taken into account, in the context of the overall position on onshore wind provision, and weighed in the balance against the benefits of these schemes in providing capacity to meet renewables targets. NRW has endeavoured to resolve matters of concern wherever possible and does not maintain any of its objections lightly. Due to its limited role NRW cannot weigh all of the matters arguing for, or against, any individual scheme and come to an overall assessment of the merits of each. It regards that analysis to be one which falls on the LPA initially, and ultimately the Secretary of State on the recommendations of the Inspector. It does, however, ask that the objections and concerns of NRW, outlined in these submissions and detailed in its evidence over the Inquiry, be given due weight in carrying out that assessment and in the imposition of appropriate conditions on any schemes ultimately permitted.
- 6.3 In relation to European Protected Species (EPS), I have read the legal propositions submitted on behalf of PCC in relation to the Conservation of Habitats and Species Regulations 2010 and the cases of *Morge v Hampshire CC* (2010) and *Prideaux v Buckinghamshire CC* (2013). I agree with the submissions they set out and will not repeat them. The key issue with regard to those EPS of concern to NRW, i.e. dormouse on the Llanbrynmair access route and bats and dormouse on the 132kV line route, is in terms of inadequate survey information. This means that it is not yet possible to determine whether a breach of the Regulations, as applied in those cases, will occur. The situation is dealt with clearly in 6.2 of TAN5, requiring sufficient information to establish the presence or otherwise of protected species and the extent that they may be affected by the proposed development. Therefore, where there is a reasonable likelihood of EPS, in this case bats and dormice, being present, adequate surveys and all necessary measures to protect these species should be in place before permission for development can be given. The methods, extent and level of survey work undertaken in relation to EPS in these two schemes do not, in NRW's view, satisfy this fundamental requirement with the result that all material considerations cannot be addressed in making the planning decisions and permissions therefore cannot be granted.

ANNEX 9

Mid Wales (Powys) Conjoined Wind Farms Public Inquiry

Electricity Act 1989 (sections 36, 37, 62(3) & schedule 8) Town and Country Planning Act 1990 (section 90)

**CLOSING SUBMISSIONS ON BEHALF OF
POWYS COUNTY COUNCIL**

Mid Wales (Powys) Conjoined Wind Farms Public Inquiry

Electricity Act 1989 (sections 36, 37, 62(3) & schedule 8) Town and Country Planning Act 1990 (section 90)

**CLOSING SUBMISSIONS ON BEHALF OF
POWYS COUNTY COUNCIL**

1. These closing submissions are structured as follows:

- i. General Overview of PCC's case including statutory energy and planning policy, context and required approach (paragraphs 5 - 68, pages 4 - 28)
 - ii. Methodological issues common to all applications (paragraphs 79-114, pages 29-53)
 - iii. SSAC scheme specific and cumulative appraisals (paragraphs 114-301, pages 54-141)
 - iv. SSAB scheme specific and cumulative appraisals (paragraphs 302-583, pages 142-255)
 - v. Session 3 SPM Llandinam scheme appraisal (paragraphs 584-814, pages 256-381)
 - vi. Cumulative and combined considerations for all schemes (paragraphs 815-932, pages 382-444)
 - vii. Scheme specific planning balances (paragraph 934-1042, pages 445-481).
2. The SSAC and B scheme specific appraisals will address the issues relevant to the applications in the following order:
 - a. General issues (where relevant)
 - b. Landscape and visual impact
 - c. Cultural heritage (where relevant)
 - d. Ecology (where relevant)
 - e. Transport
 - f. Noise
3. Consistent with the approach adopted throughout the inquiry, PCC seeks in these closing submissions to avoid duplicating the evidence, material or closing submissions of NRW on ecological issues. Save in relation to the Llanbrynmair scheme, in relation to which PCC has advanced its own ecological case, PCC relies on the advice of NRW on the ecological acceptability of the schemes and the extent to which they need to be conditioned.
4. In these closings, Powys County Council is referred to as PCC and the applicants are referred to by their site name.

SECTION 1: GENERAL OVERVIEW OF PCC'S CASE INCLUDING STATUTORY ENERGY AND PLANNING POLICY, CONTEXT AND REQUIRED APPROACH.

5. PCC fully supports both the UK Government's and Welsh Government's energy policy and its targets for renewable energy reflective of the UK's international obligations¹. To minimise wider environmental harm, it supports the strategic approach to the location of wind farms contained in PPW and TAN8 of identifying strategic search areas (SSA's). PCC further endorse the recognition in the National Planning Policy Statements for Energy (NPS) and PPW that energy provision should be sustainable, as attractive as it can be², seek to avoid or minimise the impact on the environment, and should not compromise international and national statutory obligations for designated areas, species and habitats.
6. This balanced approach reflects the provisions of the Electricity Act 1989 which are the immediate statutory framework for the consideration of each of the applications before the inquiry. The applicant's responsibility is to provide an economic and efficient generation of electricity whilst doing what they reasonably can to mitigate "*any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects*".³ There are of course a host of other statutory duties which the Secretary of State must comply with in reaching a decision on the applications, the principal ones are set out in the annex to PCC's opening statement.
7. The fact that land lies within an SSA (refined or otherwise) does not lessen the responsibility on applicants either to choose acceptable sites or, having done so, to mitigate those impacts capable of mitigation. Whilst the TAN8 SSA approach has considerable merit, it is important not to lose sight of the fact that the identification of the SSAs was the product of a high level, broad brush, largely noise assessment driven process. Such broadly defined areas were never likely to provide an accurate guide as to what is acceptable or unacceptable in the context of individual schemes within the areas. Their importance lies firstly in identifying broad areas within which strategic provision is likely to be *least harmful* and secondly, in providing a broad measure of the likely cumulative environmental capacity of the areas if the "least harmful" objective is to be attained.
8. If anything, the greater impacts of strategic wind farm provision require a closer and earlier attention to the discharge of the duty to mitigate than non-strategic provision. In that context, it was a disappointing start to the inquiry that the applications before it had so many significant outstanding issues to address which bore on the Secretary of State's specific duty to have regard to the extent to which the applicants have complied with their schedule 9 duty.

¹ As set out in the Statements of Common Ground

² EN-1 4.5.3

³ EA [CD/COM/023] sections 4-7 and Schedule 9 paragraph 1(2)

Whilst much progress has been made in addressing the shortcomings, PCC remains of the view that only one of the schemes before the inquiry is now consentable in its current form (the Llandinam scheme) but that even that scheme is dependent upon significant revisions being made to its grid connection proposals.

9. Whilst the parties to this inquiry will have various and differing views on the interpretation, application and weighting to be given to policy at all levels, the essential duty of the Secretary of State in relation to each of the applications before this inquiry is to undertake an overall balance to establish where the advantage lies in the overall public interest.
10. This combined public inquiry has provided an important opportunity for both the individual and cumulative impacts of the proposed developments to be examined⁴. It also provided an opportunity not afforded to earlier consultants to the Council to consider the strategic implications of all the applications in the round⁵. The importance of such considerations to those that live and work in Powys and elsewhere in Mid-Wales and to the future landscape and overall sustainability of the affected areas can hardly be overstated.
11. It is important that the planning system ensures that decisions take account of the views of affected communities and respect the principle of sustainable development⁶.
12. The Secretary of State will also need to assess and consider the implications of the proposals in the context an extensive range of other developments, consents and applications⁷ which are inevitably interlinked by virtue of cumulative impacts and potential power infrastructure requirements.
13. The context requires a strategic approach to be taken to decision making in light of both the acknowledged urgent need for nationally significant renewable energy infrastructure and the finite environmental capacities of the areas in which the proposals lie.
14. The accumulation of, and interrelationship between, effects from the combination of proposals on the environment, economy and community as a whole⁸ will therefore be key considerations to be addressed.

⁴ The matters identified by the S of S provide identify the full range of considerations which need to be addressed.

⁵ A number of the applicants (particularly Llanbadarn Fynydd and Llaithddu) have sought to criticise the Council on the basis of change of position. It should be noted firstly that the Council members have not changed their position, having concluded in relation to both Llanbadarn Fynydd and Llaithddu that there were unacceptable landscape impacts. In relation to previous consultants, they did not have the benefit that this inquiry had of being able to take a strategic overview. The short point is that Philip Russell-Vick's views are clearly correct and that is the important point, not the view taken by previous consultants without the benefit of all of the current information.

⁶ EN-1 2.2.4

⁷ See SPM-016 – Powys Windfarm Scenario – January 2014 SP Manweb Produced.

⁸ The language of EN-1 [CD/COM/001] para 4.2.6

Legal context and the overall balance

15. Each application before the combined inquiry requires consent pursuant to the provisions in either section 36 (wind farms) or 37 (overhead line) of the Electricity Act 1989 (the 'EA') in the context of a range of other statutory provisions⁹ which will also require consideration.

16. The EA provisions which are engaged require the Secretary of State in assessing the overall balance of advantage and disadvantage in the public interest to take into account and apply appropriate weight to relevant material factors which will include energy and planning policy at the national, regional and local level, environmental issues, local issues and the views of relevant authorities, statutory advisers and local people as well as the arguments put forward by the applicants¹⁰.

17. The balance is most usefully summarised in EN-1:

"In considering any proposed development, and in particular when weighing its adverse impacts against its benefits, the IPC should take into account:

- a. Its potential benefits including its contribution to meeting the need for energy infrastructure, job creation and any long-term or wider benefits; and*
- b. Its potential adverse impacts, including any long-term and cumulative adverse impacts, as well as any measures to avoid, reduce or compensate for any adverse impacts"*¹¹.

18. PCC acknowledges that the fact that individual proposals will give rise to significant adverse impacts is not to be equated with the impacts being unacceptable so as to justify the refusal of consent without more. There will, to take one obvious example, almost always be significant landscape and visual impacts resulting from the construction and operation of modern onshore wind turbines¹².

19. However, it is necessary to undertake an overall balance so as to establish where the advantage lies in terms of the overall public interest. It does not follow from national policy that all and any significant landscape impacts are to be accepted. PCC has undertaken an appropriate balance for each scheme.

⁹ Deemed planning permission is required under s.90 TCPA 1990 ; See R (Tadcaster) v SoS [2012] EWHC 46 (Admin) [CD/COM/030] for the correct approach in the context of deemed consent provisions and the relevance of s.38(6) PACPA 2004; Electricity Works (Environmental Impact Assessment) (England and Wales) Regulations 2000/1927 esp at regs 3, 4 and Schedule 4. See further in Powys St of CG [OBJ-002-PLA-SOCG Statement of Common Ground – Policy – Powys CC version – clean copy] at section 5.

¹⁰ The correct approach is set out in the October 2007 DECC guidance for s.36: "The consenting process for onshore generating stations above 50 MW in England and Wales – a guidance note on section 36 of the Electricity Act 1989 – October 2007".

¹¹ See EN-1[CD/COM/001] at para 4.1.3

¹² A point recognised in EN-3 [CD/COM/002], para 2.7.48 and commonly by decision makers. See also EN-1 [CD/COM/001] para 3.2.3

General submissions by way of contextual approach

20. The key issues overall issues with which PCC is concerned may be summarised as follows:
- a. the consistency of the proposals with Government policy on the energy mix with particular reference to its contribution to the mitigation of climate change and maintaining a secure and reliable supply of energy;
 - b. the extent to which the proposals are consistent with NPS EN-1, EN-3 and EN-5;
 - c. the extent to which the proposals are consistent with Welsh Government and local policies, including PPW, TAN 8 and the Powys UDP;
 - d. the individual and cumulative impact of the proposals in terms of landscape and visual impact;
 - e. the implications and requirements for the grid network;
 - f. ecology (upon which NRW will be assessing and providing evidence); and
 - g. the overall balance.
21. The relevant policy considerations are fully rehearsed in the Authorities SOCG and are not repeated in these Closing Submissions but the content of that SOCG should be regarded as being incorporated into them.
22. However, we do address some limited points at the outset which provide a context for the various applications before the inquiry.

Approach to NPSs

23. Powys accepts that the relevant National Policy Statements¹³ should be afforded substantial weight¹⁴. They, along with relevant statutory and other policy provisions and material considerations, provide the context for the decision making.
24. In broad terms each of the wind farm proposals accords with EN-1 and EN-3 in so far as they seek to meet the need for a greater number of electricity generating schemes that utilise onshore wind energy.
25. EN-1 highlights in particular the role of renewable electricity generation in enabling the UK to source 15% of energy consumption from renewable sources by 2020¹⁵ and that the need for new renewable electricity generation projects is urgent¹⁶.
26. It is in that context that EN-1 indicates that the decision maker should start with a *'presumption in favour of granting consent to applications for energy NSIPs'*.
27. Three contextual points must be made in relation to the presumption:

¹³ EN-1[CD/COM/001]; EN-3 CD/COM/002; EN-5 CD/COM/003

¹⁴ Powys st of cg [OBJ-002-PLA-SOCG Statement of Common Ground – Policy – Powys CC version – clean copy], p.6, para 2.1

¹⁵ EN-1 [CD/COM/001] at 3.4.1

¹⁶ EN-1 [CD/COM/001] at 3.4.5

- a. First, the presumption is stated¹⁷ 'to be subject to' considerations set out in EN-1 para 1.1.2. That in turn provides specific reference to matters which include 'adverse impacts outweighing the benefits'. The presumption is, in truth, inevitably circular and its importance is to ensure that the appropriate weight is accorded to the issue of national need rather than to dictate the conclusions of a properly undertaken exercise involving a balance which seeks to establish where the advantage lies in the overall public interest.
- b. Second, we have already referred to the statutory duty for reasonable mitigation in the context of the EA and these applications. The NPSs in fact also emphasise the importance of assessing the steps that have been taken to avoid, reduce or compensate for any adverse impacts as an integral part of weighing matters in the overall balance¹⁸.
- c. Third, whilst substantial weight should be given to the potential contribution of the proposals to securing electricity from renewable sources, in the context of the stated urgency of need, that is tempered by the fact that it has subsequently become clear that the UK is now virtually certain to meet its overall target for installed on-shore wind capacity several years in advance of the target year of 2020¹⁹. There is now every likelihood that the target will be exceeded by some margin even allowing for a considerable attrition rate on the current pipeline. That is not to understate the continued urgency of need, but in terms of weight and balance it indicates there is no justification for accepting poorly located, poorly designed or inadequately mitigated proposals.

The relationship between National and Welsh Policy

28. Welsh national energy policy and in particular the policy and aspirations set out in PPW²⁰ and TAN 8²¹ are consistent with the UK Government policy statements.
29. Indeed, the most recent edition of PPW, which postdates the NPSs, reaffirms the relevance of TAN8²². EN-3 paragraph 2.2.1 emphasises the importance of policy as well as advice issued by the Welsh Government relating to renewables in the contexts of NSIPs. It does so in a textual context²³ which makes it clear that EN-3 has been drafted with Welsh Strategic Search Areas (SSAs) and refinements clearly in mind.

¹⁷ EN-1 [CD/COM/001] 4.1.3

¹⁸ For example, EN-1 [CD/COM/001] para 4.1.3, bullet point 2, para 1.7.2. bullet point 3, para 5.9.8, para 5.9.17, para 5.13.6

¹⁹ As is apparent from the UK renewable energy Roadmap [CD/COM/013], the 2012 update [CD/COM/015] and the latest figures published on the DECC Restats pages. See also <http://restats.decc.gov.uk/app/reporting/decc/datasheet>. Note at EN-1 [CD/COM/001], p.16, footnote 16 it is anticipated that the policy at 3.1 and the weight accorded to it was dependent upon models of outputs that would inevitably change over time. UK Renewable Roadmap 2013 [CD-RWE-PLA-002]

²⁰ PPW 6th Edition [CD-RWE-PLA-003]

²¹ July 2005 [CD/COM/016]

²² PPW 6th Edition [CD-RWE-PLA-003] 12.8.2

²³ EN-3 [CD/COM//002] para 2.2.2

30. Two of the TAN8 SSAs are of particular relevance to the inquiry – B and C. The Welsh Government has indicated in TAN8 that the SSA boundaries are at a ‘*broad brush*’ scale²⁴. It is made clear that not all of the land within such areas is expected to be either technically, economically or environmentally suitable for major wind power proposals²⁵.
31. The prospect of local refinement being undertaken by planning authorities is anticipated by the TAN and in that context reference is made to land outside (but close to) the particular SSA being used for wind farm development if robust evidence exists to suggest the land is suitably unconstrained²⁶.
32. In the context of the broad brush boundaries and in the anticipation of refinement of such areas, TAN 8 provided indicative capacity targets for each SSA²⁷. Those indicative targets were derived from evidence based assessments undertaken by Garrad Hassan in 2005²⁸. For SSA B the capacity was 290MW and for C 70MW. In policy terms, the identified capacities allowed a local discretion in identifying sites to ensure that the most appropriate and sustainable options were identified. TAN 8 in fact specifically envisages that capacity may be more or less than that indicated in policy.
33. In July 2011 the Welsh Government provided clarification on capacity levels in the form of a letter²⁹. It was issued with express reference to the newly issued NPSs (at that stage being considered by Parliament) and, in that context, expected all decision makers to respect the ‘*finite environmental capacity*’ of the SSAs so that output ‘*should not exceed the maximum levels*’. The maximum level for SSA B was stated to be 430MW and for C 98MW³⁰.
34. The Welsh Government’s letter of July 2011 has recently been considered in the Bryn Llywelyn appeal decision.³¹ The Inspector, with whom the Welsh Ministers agreed recommended dismissal of RES’s appeal in relation to 21 wind turbines at Llanllwni, Carmarthenshire, and in doing so addressed the weight to be afforded to the Welsh Ministers July 2011 letter. The Inspector notes that the July 2011 letter expects all decision makers to respect the fact that SSA’s have a finite environmental capacity and output should not exceed the levels identified.³² He went on:

²⁴ TAN 8 [CD/COM/016], para 2.4

²⁵ TAN 8 [CD/COM/016] para 2.5

²⁶ TAN 8 [CD/COM/016] para 2.4

²⁷ Table 1, TAN 8 [CD/COM/016], p.5. Based on the assumption that the majority of technically feasible land for wind turbines in each area is used.

²⁸ The TAN 8 [CD/COM/016] indicative capacity targets (table 1, 2.5) represent a 1/3rd reduction on the Garrad Hassan work (2005) – [CD/COM/031]

²⁹ CD/COM/020

³⁰ Again derived from the Garrad Hassan work as reviewed.

³¹ 6 May 2014 Bryn Llywelyn Decision – Letter, OBJ-002-PLA-006, Bryn Llywelyn Decision – Report, OBJ-002-PLA-006A

³² Inspector’s report para. 541 p.134

*"I conclude that the proposal in combination with other developments would exceed WG's capacity limit of 132 MW for SSAG. Whilst that might not of itself justify dismissal of the appeal, it is supportive of the view that the finite environmental capacity of SSA G would be exceeded."*³³

35. This approach is consistent with the position outlined by PCC in its opening statement and evidence.

The Interim Development Control Guidance ("the IDCG")

36. The status of the IDCG has been raised at the inquiry and it is important that it is seen in its proper context. Between 2006 and 2008 Powys undertook refinement work in relation to SSAs B and C broadly in line with the methodology set out in TAN 8 Annex D. This work formed the basis for the draft Interim Development Control Guidance (IDCG) published in 2008. That IDCG has never been formally adopted. Nor was it incorporated into the 2010 Powys UDP³⁴. Indeed, it has never been the subject of strategic environmental appraisal so it could not lawfully be adopted. The consultation processes were also never completed. Whilst therefore it appears on the Council's website as a document which has been adopted for development management purposes, its utility is limited. In reality it allows for one small crude step of refinement of the SSA B and C boundaries to make them marginally less fuzzy. For the reasons which these submissions will demonstrate, in comparison with the more detailed site specific assessments of schemes which have been presented to this inquiry, the IDCG itself is entitled to no material weight.

37. The application schemes mostly fall within the refined areas B and C³⁵ which resulted from the refinement work.

38. From this context the following flow:

- a. It is clear that the SSAs were designed and created for wind farms of over 25MW in scale and in the context of an identified indicative capacity³⁶ for each area based on environmental considerations and with the intention of allowing local discretion in decision making.
- b. The objective was to secure provision of the *best* sites for wind farms applying a strategically focussed approach i.e. the most appropriate and sustainable sites having regard to all considerations.
- c. The SSAs are a crude but helpful tool in delineation, and TAN 8 necessarily anticipated some 'refinement' so as to allow the identified capacities to be most sustainably achieved. PPW similarly anticipates refinement in the context of its revised 2GW onshore wind ambition³⁷. It is not, nor has it ever been, anticipated by policy that the areas would need

³³ Ibid para. 545 p.135

³⁴ CD/COM/006

³⁵ Enplan/Carpenter statement for opening session [OBJ-002-PLA-SOC-2 Conjoined wind farms PI – Statement of M Carpenter on behalf of PCC May 1], p.34 – table.

³⁶ Each in fact reduced by around 1/3rd from the maximum identified in research

³⁷ PPW [CD/COM/008] para 12.9.4

- to or should accommodate all or any wind farm proposals which the renewable energy industry chooses to propose within them (whether within or beyond the capacity indicators).
- d. The evidence based capacity indicators (TAN 8 and subsequently July 2011 WG) provide a guide from the Welsh Government as to what was and is anticipated by way of capacity in these areas - including the areas as refined having regard to the supporting evidence base. Beyond those capacity levels, the prospect of extensive additional wind farms in or adjoining such strategic areas is simply not anticipated in policy, nor importantly does it have a supporting evidence base to demonstrate that exceedances are sound having regard to the purposes of SSA designation.
 - e. Moreover, the approach as to, for example, landscape change in TAN 8 - which accepts implicitly the likelihood of significant landscape change³⁸ within or immediately adjacent to the SSAs in the context of such identified capacities - cannot credibly be relied upon in policy terms by applicants who seek, at the very same time, to exceed the indicative limits to which the policy relates.
 - f. PCC does not argue that either of the sets of capacity indicators (TAN 8 or Welsh Government July 2011) require the Secretary of State necessarily to dismiss any application or combinations of applications which leads to the capacity levels being breached. Each individual application will require assessment in terms of impact. But equally, it is obvious that the SSAs as originally envisaged (or as subsequently refined) become an increasingly unreliable guide as to what might be acceptable the more the evidence based capacity levels are exceeded.
 - g. The capacity indicators are just that. They are not properly to be viewed as being policy 'targets'³⁹. Rather they are the considered view of the Welsh Government of what the environmental limits of its strategic approach to wind farm provision in Wales are. As such they are important and should be taken into account as envisaged by EN-3 when applicants work up proposals⁴⁰.
 - h. Looked at cumulatively - as this inquiry has done - the extent of the applications before this inquiry (and also awaiting decisions by other persons) is far beyond that anticipated by the TAN. Acceptance of such a cumulative impact would need to be, at the very least, preceded by a wholesale review of the SSAs and consideration of other areas in Wales or beyond to ascertain the soundness of the approach. The SSAs were simply never intended to incorporate the extent of what is now being proposed.
 - i. By way of illustration, if one just considers the extent of what is proposed in Area C by the applications which require a decision from this inquiry it is clear that, taken alone, they would materially exceed the capacity levels indicated by the Welsh Government. Taken together with other applications in the planning system there is some 375MW proposed⁴¹ as against identified capacity levels of 70MW (TAN 8) and 98MW (Welsh Government July 2011).

³⁸ TAN 8 [CD/COM/016] Annex D, para 8.4

³⁹ Which would in any event be inappropriate in terms of 3.1.2 EN-1 CD/COM/001

⁴⁰ At 2.2.1

⁴¹ Enplan/Carpenter statement, [OBJ-002-PLA-SOC-2 Conjoined wind farms PI - Statement of M Carpenter on behalf of PCC May 1] p.34 - table

- j. There is no basis for suggesting that unless all the proposals are allowed the UK or indeed Welsh targets/aspirations for onshore wind development will not be achieved. Quite the opposite. Adhering broadly to the Welsh Government (July 2011) levels would comfortably allow the PPW aspiration for onshore wind in Wales to contribute 2 GW of energy in the context of provision to 2020/2025⁴². And, even if there were a prospect of under delivery, any suggested failure to meet such 'targets' would not provide a reason for approving the schemes in these locations in any event⁴³.

Grid

39. The Secretary of State will need to consider the implications of the developments individually and cumulatively on the Mid Wales connection project⁴⁴. This and the issue of grid connections generally will be important considerations in the decision on the applications.
40. There are two essential reasons why this consideration is required. First, the connection proposals are inextricably linked to the particular wind farm proposals before this inquiry. The connection proposals, at the very least, fall within a description of being '*indirect, secondary*' or, '*cumulative*' effects of the developments proposed so that consideration of them is required as matter of law⁴⁵ to ensure the correct procedures have been adhered to.
41. Second, the implications of such connections are potentially highly significant in terms of their impact on the environment. They are required only because of the wind farm proposals in the Powys area. The Welsh Government take the view⁴⁶ that the connection proposals could vary in nature and extent if the maximum capacities it has identified for Powys are materially exceeded.
42. If consent were to be granted for all or any of the wind farms without proper consideration of the resulting implications for the grid, the applicants for the subsequent grid consents would benefit from an established need without the implications of that established need for the grid having been

⁴² Figure 12.1, p.167PPW [CD/COM/008]

⁴³ EN-3 [CD/COM/002] para 2.2.1, last 2 lines.

⁴⁴ Cefn Coch, via Llansantffraid, to Lower Frankton in Shropshire has been identified as the route corridor option to connect wind farms in Mid Wales to the national electricity network. National Grid are proposing as part of the project overall, if the various wind farms gain consent (i) new local 132,000 volt (132 kV) connections - These will take power from the wind farms to the new substation. These connections are being developed by Scottish Power Energy Networks and SSE Renewables (ii) new Substation - this will be developed by National Grid and is where all the power from the wind farms will be collected and converted to 400 kV (iii) A new national 400,000 volt (400 kV) connection - this will also be developed by National Grid and will take the power from the proposed new substation to an existing 400kV line where it will enter the national electricity network for use in homes and businesses

⁴⁵ Electricity Works (Environmental Impact Assessment) (England and Wales)

Regulations 2000/1927, regulation 4 and Schedule 4, part I

⁴⁶ The Welsh Gov letter July 2011 [CD/COM/020]

questioned and examined i.e. without proper consideration of whether it should in fact be allowed to become "*established*". It is accordingly important that the Secretary of State takes cognisance of the impact of power transmission from the sites⁴⁷ individually and cumulatively.

43. This is needed not just to assess whether or not there are '*obvious reasons*⁴⁸' for subsequent grid approvals to be refused, but more importantly so as to assess the extent of resulting harm resulting from the applications (or a combination of some rather than all of them) as part of the assessment of overall balance inherent in the grant of a s.36 consent. As has become clear, exceeding the TAN8 indicative capacities leads to a number of step changes in environmental effects of which the effect on grid connections is one, and a significant one.

THE APPLICATIONS

44. PCC continues to have objections to each of the applications save the Llandinam scheme (provided NRW are satisfied in relation to ecological effects).

SSA C

Llandinam

45. Llandinam is a scheme that has undergone some significant evolution. It was originally an application for replacement of the existing 102 turbines with 42 turbines. By SEI produced in 2011 this was reduced to 39 turbines by the omission of turbines T22, T23 and T24. By the SEI produced in April 2013 turbines T19, T20, T21, T25 and T26 were removed from the scheme so now the scheme is for 34 turbines. Celtpower has requested that the application be determined on this basis⁴⁹. The existing 102 turbines are of 45.5metres in height, whereas the proposed 34 turbines will be generally up to 121.3m to tip⁵⁰.
46. This evolution has responded to the significant criticisms raised by PCC and NRW of the original landscape impacts of the scheme. In particular the removal of the further five turbines in April 2013 has, PCC accepts, significantly reduced the impact of the scheme on the Caersws Basin historical landscape to the north of the scheme. Of course PCC recognise that this is a repowering so the landscape impacts of the existing Llandinam wind farm need to be borne in mind. In the circumstances PCC consider that the

⁴⁷ See DECC 2007 guidance, p.11 and at para 3.17 – 3.59 esp; EN-1 [CD/COM/001] section 4.9 also refers to the need for information.

⁴⁸ The language in para 4.9.3 EN1 [CD/COM/001]

⁴⁹ PJ Frampton proof of evidence [CPL-PLA-PF-POE] at 1.7.

⁵⁰ PJ Frampton proof of evidence [CPL-PLA-PF-POE] at 1.8, note that T29, T30 and T43 will have a reduced height of 111.2m to tip.

landscape and visual impacts of the Llandinam proposal itself are now acceptable.

47. Within the SSA C the Llandinam proposal as amended is, in itself, the least damaging for the reasons set out above.
48. The scheme would provide very significant generation within SSA C. Whilst it is accepted that the capacities of the existing turbines will need to be deducted for the purposes of this calculation, and whilst different figures have been given in different places for the proposed capacity, PCC consider that at least 70MW of additional installed capacity could be provided through development at the Llandinam site, which goes a significant way to meeting the Welsh Minister's 98MW indicative capacity for the area.
49. Finally in relation to Llandinam, the Secretary of State will need to consider the impact of the necessary grid connection. The Llandinam scheme is of course a little different in that the grid proposal has been before the inquiry. The present SPM proposal for a grid connection, the HDWP to Welshpool is unacceptable but with undergrounding of part of its western section it can be made acceptable. There is no obvious reason why this cannot be achieved so as to enable the wind farm to go ahead.

Llaithddu

50. The position in relation to Llaithddu differs. The proposal as before the inquiry is unacceptable in landscape and visual terms. PCC are satisfied that some further development on the Llandinam ridge is acceptable in landscape terms and take the view that some further development in this area could provide a significant contribution to the indicative capacity limits in TAN 8. However PCC cannot support the development applied for because of the impact of the southern part of this development. The southern array would particularly increase the impact of turbines on Bwlch-y-Sarnau, its valley and a wide sweep of landscape to the south. Given that the indicative capacity limits could (subject to mitigation of other impacts) be reached by development on the northern part of this ridge, PCC have shown that even in the context of the general need for wind farm development these significant impacts should not be accepted.
51. Whilst the northern array of 12 turbines would be acceptable provided that the Llandinam repowering is consented, it is not open to the Secretary of State to condition the removal of the 15 southern turbines as this would reduce the permitted capacity of the scheme to below the 50MW requiring consent under the EA 1989. Consent should therefore be refused but the Secretary of State should give a clear indication of whether he supports PCC's view that the northern array is acceptable which would facilitate a swift grant of consent under the Town and Country Planning Act 1990 for that part of the scheme.

52. This part of the scheme can progress with an upgrade to the Llandinam scheme connection which will minimise its environmental effects. Whilst the full scheme could also be served by the Llandinam grid connection, provided that the overhead line capacity of 160MW is delivered, there is the prospect of consent being granted for the Hirddywell scheme by PCC which, if consented and if combined with the Llandinam and full Llaithddu schemes would trigger the need for an additional 132kV OHL either to Welshpool and beyond or, if National Grid's 400kV scheme progresses, to the Cefn Coch hub. This would be an unacceptable step change in terms of landscape and visual effects and one which supports refusal of consent for the scheme now before the Secretary of State.

Llanbadarn Fynydd

53. In relation to Llanbadarn Fynydd, the landscape and visual impact of the development is unacceptable. There is also the potential for further significant landscape and visual impact in accumulation taking into account the series of other proposals for wind farm development not before this inquiry in this eastern portion of the SSA including Neuadd Goch, Bryngydfa, and Garreg Llywd. In line with the approach set out above PCC have accepted that there will need to be some wind farm development in SSAC in order to meet the capacity guidelines, but that capacity can be achieved (subject to resolution of other issues) on the Llandinam ridge.

54. The Llanbadarn Fynydd Site occupies a separate landscape unit which the Council has shown is of very considerable value. At present it is a feature of that unit that it is untouched by wind farm development. Moving wind farm development to the east will cause very significant landscape harm. Even taking into account the urgent need for wind farm development that we need to accept by virtue of EN-1, this damage to the landscape area to the east is unacceptable. This is an instance where development throughout the SSA would cause unacceptable landscape harm.

55. Inevitably Llanbadarn Fynydd seek to argue that each case must be determined on its merits and that consenting their scheme need not set a precedent for other wind farm development to the east of the Ithon Valley. However, that contention has a very hollow ring given their own evidence which relies, in part, on the desensitising effect of the existing P&L wind farm to justify their scheme and the approach they suggest (albeit misguidedly) that the Secretary of State should apply to the assessment of the cumulative landscape and visual impacts of wind farms. In essence, this leads to the conclusion that the greater the number of wind turbines in a landscape the less likely it is that any cumulative effect will be significant. The prospect of a grant of consent for Llanbadarn Fynydd triggering the roll out of a hugely damaging wind farm landscape over the area to the east of the Ithon valley is a very real one.

SSA B

Llanbrynmair

56. Llanbrynmair have failed to comply with the obligation reasonably to mitigate the harm of their proposals. The significant consideration is the highway impacts. Rather than taking the obvious course (obvious because it is self-evidently avoids carving a heavily engineered feature through a small scale landscape of high scenic value) Llanbrynmair have persisted with their inappropriate access proposals. The proposals will necessitate the removal of considerable lengths of hedgerow, woodland and trees along the route as well as a new access across farmland and other modifications. These works will have significant highways and landscape and visual impacts. Insisting in utilising this approach is simply not compatible with the developers duties under schedule 9 of the Electricity Act 1989 and given the much more sensible alternative should lead to rejection of this proposal.
57. Llanbrynmair has, in continuing to pursue the Llanerfyl to Talerddig local access arrangements as part of the application has not only failed to demonstrate that it has complied with the statutory duty for reasonable mitigation imposed upon it by Schedule 9 of the Electricity Act 1989 it has failed to comply with a range of other policy and legal provisions relevant to the decision making process which emphasise the importance of avoiding, minimising and reducing adverse impacts – especially in the context of available, satisfactory alternatives.
58. Subject to submissions in relation to the recently submitted SEI in February 2014 below, the Secretary of State should proceed in accordance with one of the following:
- a. the Llanbrynmair application should be refused; or alternatively
 - b. consent should be granted subject to a condition that the Llanerfyl to Talerddig access proposals should not be implemented; or alternatively
 - c. the S of S could indicate he is minded to grant consent for the application provided a suitable alternative access scheme is brought forward.

The amended shared access proposal contained in the February 2014 SEI

59. Llanbrynmair has recently (Feb 2014) submitted further SEI containing (in part 2) – as Powys understands it – a formal amendment to the application based on a shared access with the Carnedd Wen application which it wishes the Secretary of State to consider ('the amended shared access proposal'). Assuming the Secretary of State is prepared to accept and consider that material as a formal amendment - and PCC is content for that to happen - PCC makes the following additional outline submissions.
60. This amended shared access proposal is similar to the 'in principle' alternative access considered by PCC in evidence (Session 2), although it

does not in terms encompass the scenario in which Carnedd Wen fails to achieve a consent. However, these recent proposals are only put forward as an alternative to be considered by the Secretary of State in the event that he finds the Llanerfyl to Talerddig access proposals to be unacceptable, and therefore, PCC maintains the position outlined above in relation to those Llanerfyl to Talerddig access proposals.

61. The approach which the Secretary of State is asked take in relation to the Llanbrynmair scheme and its access proposals and the inter-linkage with Carnedd Wen are explained fully in section 4 of these submissions.

Carnedd Wen

62. PCC consider that the 5 north eastern turbines (R23, R26, R28, R29 and R30 – ‘the Carnedd Wen five’ or ‘CW five’’) are unacceptable in landscape and visual terms and in light of the overall balance required to be undertaken PCC the Council invites the Secretary of State to remove these five turbines from any consented scheme.

63. If the Secretary of State concludes that access to a consented Llanbrynmair proposal should be achieved through the sharing of access through Carnedd Wen it will be necessary to ensure that a grant of consent to Carnedd Wen does not prevent that coming forward. PCC have proposed that, in that scenario, relevant conditions are imposed on any Carnedd Wen consent so as to ensure that the sharing of access can take place⁵¹.

Llandinam 132 kV overhead line

64. PCC considers that SPM’s route selection exercise has been seriously deficient and that, as a result, the wrong route has in part been chosen.
65. However, provided the unacceptable harm which the ill-chosen element would give rise to is mitigated by undergrounding, then PCC consider on balance that given the urgency of the need for renewable energy that the proposed route is acceptable.
66. PCC consider that in this case undergrounding is demonstrably justified on the basis of the impact around the Glog on landscape, cultural heritage and on the Kerry Ridgeway regional trail. These are nationally important constraints.
67. The Secretary of State does not need to decide exactly what route undergrounding would take, as with wind farm grid connections more generally, it is sufficient to conclude that there are no obvious reasons why

⁵¹ This issue has been raised for many months, even prior to the February 2014 SEI from Llanbrynmair which proposed an amended scheme with a formal shared access proposal. See PCC note filed in October 2013 on the ‘practicalities of implementation’ of alternative access: OBJ/002/PROC/006.

an underground connection could not be provided. In substance, this requires only being satisfied that there is an undergrounding option that is technically feasible, that will not have impacts of its own which outweigh the advantages of undergrounding and which will be proportionate in cost. PCC has demonstrated that there is such an option.

CONCLUSION

68. Despite the acknowledged urgent need for wind farm development, there is no public interest justification for allowing the scale of development that is before the Secretary of State, let alone the many other proposals due to be considered in the area.
69. There is absolutely no justification for accepting wind farm or grid development that will exceed the environmental capacity of the SSAs, or which has not taken reasonable steps to mitigate the harm it will cause.

SECTION 2 METHODOLOGICAL ISSUES COMMON TO ALL APPLICATIONS

LANDSCAPE

70. Whilst in their submitted written evidence a number of the applicants flirted with the “anything goes” approach to wind farm development in SSAs⁵², when that position has been tested in evidence there has been acceptance of the following:
- a. The mere fact that wind turbine developments always have significant landscape and visual effects by reason of their scale, layout and appearance does not mean that any or all such effects are acceptable;⁵³
 - b. The fact that land might be included within an SSA does not mean that any or all such effects which might arise from its development as a wind farm are acceptable. As TAN 8 makes plain: “*not all of the land within the SSAs may beenvironmentally suitable for major wind power proposals*”;⁵⁴
 - c. The fact that development may be individually acceptable does not mean that any or all combined or cumulative effects with other wind farm developments are acceptable.
71. In terms of the combined effects of wind farm development in the SSAs, it is also agreed that if the Secretary of State concludes that there would be an unacceptable combined landscape or visual impact, he will need to consider whether there is a combination of proposals which is acceptable by disregarding the more harmful options. In this context, the issue of step changes in effects is clearly material, i.e. which proposals or parts thereof would lead to a step change in effects which should be resisted on the grounds of unacceptable landscape and visual impact. It is important not to lose sight of the fact that it is the policy of the Welsh Government that the SSAs have been drawn so as to allow for the optimal solution to be identified.⁵⁵
72. A further issue relevant to the assessment of landscape and visual effects is the time limited nature of the proposals. Each, if permitted would be

⁵² Relying on an incomplete reading of Annex D to TAN8 which whilst recognising the implicit objective to accept landscape change, also recognises the need for thresholds – see Annex D para. 8.6 p.63 CD/COM/16

⁵³ PCC XX Gates Session 1 and Van Grieken Session 4

⁵⁴ Ibid

⁵⁵ TAN8 para. 2.4 p.5 CD/COM/16

subject to condition requiring de-commissioning after 25 years operation. However, that does not mitigate the effects of the development, it simply regulates the period over which they are experienced. It is agreed for the purposes of this inquiry that it is no part of either UK Government or Welsh Government policy that the general populace should tolerate development which is unacceptable simply because it is time limited.⁵⁶

73. It is also necessary by way of preamble to address the issues of *acceptability* and *thresholds*. The applicants have generally avoided addressing either by reference to any transparent criteria. They have left the issue of acceptability to the planning balance. The result is that the Secretary of State is told a lot about what is or is not "*significant*" but very little about how that significance bears on the issue of acceptability. This is again in part due to the "*anything goes*" mindset. However, once it is recognised that that is an inappropriate approach, the issue of what is or is not acceptable in landscape and visual impact terms calls for transparent and robust assessment. This accords with TAN 8 which provides that: "*At the local level, accepted thresholds of change, having regard to nationally developed energy capacity targets, can be established by more detailed assessments*".⁵⁷

74. This reflects the limited landscape and visual impact assessment work underpinning the identification of the SSAs. In so far as there was any landscape input, it was limited to avoiding national environmental constraints; no other landscape and visual issues directly influenced their identification.⁵⁸ Further, all combined/cumulative landscape and visual sensitivity assessment was deferred to more detailed landscape value and sensitivity assessment to be undertaken by local planning authorities.⁵⁹ This inquiry has presented the first opportunity for a robust and comprehensive assessment of the combined landscape and visual effects of wind turbine proposals in SSAs B and C and of the cumulative effects of individual proposals.

75. Whilst some local refinement work was undertaken to establish more detailed SSA boundaries within Powys,⁶⁰ and draft revised SSA boundaries produced, it is important to recognise the limitations of this work.

⁵⁶ Gates XX Session 1

⁵⁷ Para. 8.6 p.63

⁵⁸ See Arup's Final Report – Research Contracts 105/2002 and 269/2003 para. 5.3.1 p.49 [ALL/011C]

⁵⁹ TAN8 Annex D para. 6.3. p.61

⁶⁰ TAN 8 Annex D Study of Strategic Search Areas B (Carno North) and C (Newtown South) 2006 CD/COM/17 and Local refinement of TAN 8 Strategic Search Areas B and C 2008 CD/COM/10A – both reports undertaken by ARUP.

Arup 2004, 2005 and TAN 8

76. Arup's 2002-2004⁶¹ work was founded on a substantive sieve mapping exercise using a Geographic Information System (GIS) to store and map various 'layers' of spatial constraint data, principally environmental designations. At a second stage, strategic search areas were identified capable of delivering the Welsh Assembly Government's Renewable energy target of 4 Terrawatt hours by 2010. The methodology employed is summarised in the Executive Summary to the Final Report as follows:

Arup and its sub-consultants developed further the GIS established during the Stage 1 research contract in accordance with the following methodology:

An initial screening exercise - 'absolute' and 'variable' environmental and practical constraint data were gathered and mapped. To these were added the outputs from a separate study of the capacity of the electric distribution network in Wales to accommodate distributed generation from renewable energy development. The results allowed the elimination of several broad zones of Wales from the available land for strategic areas. Spare electrical capacity sufficient to accommodate large-scale onshore wind energy developments was shown to be scarce and unevenly distributed. Without the implementation of planned improvements to the network by

2010/2015 in mid- and north-Wales, there would not be sufficient grid capacity to allow achievement of the 4 Terrawatt hour target.

A refinement exercise – the areas which 'fell-through' the initial screening exercise were subject to a further more detailed review at 1:50 000 scale in which more site-specific constraints (such as the presence or absence of isolated properties, land availability and access) were considered.

Testing and validation – In order to inform the subsequent debate about the strategic areas arising from the results of a) and b) above, the draft areas were subject to a further review stage. In this, the derived areas were examined with respect to visibility from National Parks/Areas of Outstanding Natural Beauty/National Trails, visibility of other existing (or committed) wind farms, landscapes likely to be 'wild' in character and higher wind speeds. The strategic areas were also subject to a capacity exercise, in which likely scale of developments possible in each was determined (to +/- 50 Megawatts). This was felt to be an important part of conveying the magnitude of development that was required in some areas in order to meet the 2010 target.

77. The work was computer based and did not, as PCC understand it, involve fieldwork. This work informed the revised draft TAN 8 published in July 2004.

⁶¹ Facilitating Planning for renewable Energy in Wales: Meeting the Target (Arup) July 2004 [CD/CPL/MIS/002]

78. In the winter of 2004 Garrad Hassan and Partners carried out a further technical assessment study⁶² of the seven SSAs to provide a view on the capacity of these areas. This work was based on noise limits and was not an assessment of landscape capacity nor did it suggest changes to the boundaries.
79. Arup was commissioned by the Welsh Assembly Government in December 2004 and the study, reported in June 2005⁶³, considered whether the draft SSA boundaries should be amended taking into account matters such as noise and wind speed. This study informed the final TAN 8 of July 2005. The Arup work advised changes to the SSA C draft boundaries, taking into account wind speeds and noise issues at properties. In respect of landscape, visual and cumulative matters the report responded to observations about the lack of reference to LANDMAP and landscape character data and, in particular, that matters of landscape capacity are best dealt with at a regional/local level *“where knowledge and understanding of the areas can be brought to bear”* (paragraph 3.5). An outline methodology was included for consideration by local authorities in this regard.

Arup White 2006

80. The Arup White Study of 2006⁶⁴ was commissioned by PCC as envisaged by Annex D of TAN 8. It was primarily a landscape and visual assessment exercise seeking to identify, what were termed, 'Preferred Areas' within the Strategic Search Areas B and C (SSAs), supported by a range of other technical and environmental data, such as electrical connection information. The report was not consulted upon.
81. LANDMAP Visual and Sensory value data was used as the basis for the landscape character work, from which landscape capacity of the various aspect areas was derived. The methodology employed for this analysis was based upon industry best practice guidance but was apparently essentially a 'simple' conversion of landscape sensitivity, as determined by LANDMAP, into landscape capacity, whereby lower sensitivities became higher capacities and so on. The visual work was based on 3D GIS modelling of zones of visibility with a site visit to the areas to verify the desk study.
82. Ultimately the focus for the study was to determine refined boundaries for the SSAs and to ensure a sufficient yield capacity was available within each SSA, as follows:

⁶² Energy Assessment of TAN 8 Wind Energy Strategic Areas of Search (Garrad Hassan and Partners) April 2005 [CD/COM/031]

⁶³ Facilitating Planning for Renewable Energy in Wales: Meeting the Target (Arup) June 2005 [CD-CPL-MIS-002]

⁶⁴ TAN 8 Annex D Study of Strategic Search Areas B (Carno North) and C (Newtown South): Final Issue Report (Arup) January 2006 [CD/COM/017]

The results of the relative environmental and landscape performance of the zones or sub-areas of SSA are then brought together in the report within a summary matrix which includes the approximate estimated capacities (in MW) for the respective zones. In bringing the data together in the final summary matrix appropriate weight is given to visual effects. In addition the study has considered the "developable capacity" of the defined zones in terms of the amount of Megawatts (MW) of wind energy that may be possible in each, based upon an average yield of 7.5MW per sq. km (typically around 3-5 modern wind turbines) where the areas are not constrained.

83. The executive Summary of the 2006 report concluded:

The study concludes that a land area is required that is slightly larger than the minimum needed to meet the MW indicative capacity figures stipulated in TAN 8; it is therefore recommended that the refined SSA boundaries encompass zones with an estimated cumulative capacity of 125% of the TAN 8 indicative capacity(s). Note that this does not necessarily endorse the ultimate development of the refined SSA boundary to this extent, simply that the TAN indicative capacity figures should be allocated to a slightly enlarged area to offer a greater degree of spatial flexibility in the planning for onshore wind farms for both the local planning authority and developers. This should ultimately greater facilitate achievement of the Welsh Assembly onshore wind target to 2010 whilst minimising local environmental impacts.

TAN 8 contains an indicative target of installed capacity of 290MW for SSA B, Carno North. Therefore sufficient land is needed within SSA B for 290MW x1.25 i.e. 362 MW approx. The implications of the data gathered for this study are that the five environmentally lowest ranked zones within and around SSA B need not be developed.

For SSA C Newtown South, TAN 8 contains an indicative target of installed capacity of 70MW. Therefore following the same arguments as above, sufficient land is within needed within SSA C for 70MW x1.25 i.e. 87.5 MW approx. The implications of the data are that the six environmentally lowest ranked zones within and around SSA C need not be developed.

It is recommended that the SSA boundaries are therefore modified to remove the environmentally worst performing zones.

Arup 2008

84. The 2008⁶⁵ review was commissioned by PCC following the Wern Ddu appeal decision. The brief was as follows:

The brief for this study, agreed in dialogue with PCC, was to undertake a new local refinement of the boundary of the nationally published Strategic Search Areas (SSAs) for SSA B (Carno North) and SSA C (Newtown South). The new local refinement exercise was to follow the principles as set out below:

- It was to comply as far as possible with the guidance contained within TAN 8 Annex D*
- It was not to serve to 'cap' development levels at the TAN 8 indicative capacities (in MW) for each SSA where the data indicated that greater levels of development might be possible i.e. the outcomes were to be driven by the landscape capacity of the area, within the context of an overall national policy objective to allow landscape change.*

85. The study has more landscape and visual focus than the previous work involving a review of the 2006 boundaries with a 5km 'buffer' to focus the further landscape and visual analysis. The work which was again predominantly desk based included further GIS sieve mapping of 'constraints' "similar to that undertaken by all wind farm developers when selecting sites" which, again as with the previous study, identified 'unconstrained' land which could then be tested for its "suitability in landscape and visual terms". Again, with the case of the 2006 report, the various zones for analysis were derived from LANDMAP.
86. The computer based visual assessment work involved some assumptions about the sensitivity of receptors and assumed 4 no. 125m high turbines per 1km square but took no account of the presence of existing wind farms (unlike the 2006 study). The likely significance of visual effects was calibrated to distance using the 2002 SNH guidance as a basis. Nevertheless, this study is essentially an exercise in assessing the extent of visibility and is more a study in establishing quantitative effects than qualitative effects. In consequence, areas which are widely visible perform poorly against those that are more contained. So, for example, the high land of the Kerry Ridgeway, Beacon Down and the Waun Ddubarthog ridge (site of the P&L wind farm and poorest performing zone) compares poorly with the more enclosed landscapes east of the Ithon Valley or even the ridge above Bwlch y Sarnau (which benefits from screening from the higher land to the north).
87. The effects on settlements were addressed in a similar way. Zones which were visible from several or many settlements up to 15km away performed worse than those which are more enclosed. No apparent account is taken of

⁶⁵ Local Refinement of TAN 8 Strategic Research Areas B and C: Review Exercise, (Arup) April 2008 [CD/COM/10A]

the much more substantive qualitative effects that would most likely be experienced by those settlements close by.

88. In as much as this exercise was primarily targeted at refining the 2006 boundaries essentially through extension, not contraction, the additional landscape and visual work undertaken provided a reasonable basis, particularly as the edges of many of the otherwise acceptable zones were ruled out where turbines in these locations would potentially impact substantially on more enclosed adjoining areas. However, it provides no sound basis for assuming that all of the land within the area is similarly suitable for wind farm development. Judgements of this nature must be made on a scheme by scheme and site specific basis. Whilst the TAN 8 policy context presumes significant landscape change across the SSAs, the full implications of this stand to be assessed at this inquiry and at a level of detail beyond that employed by the 2004, 2005, 2006 and 2008 studies.
89. In summary, therefore, the assessment work undertaken prior to the more detailed consideration at this inquiry is relevant, in part useful but it had a number of limitations. Firstly this refinement work was limited in its scope; secondly it was undertaken at a time when the LANDMAP data was still in the process of collection and evaluation and thirdly, it does not begin to compare with the level of detailed assessment necessary to judge the suitability of individual schemes. In particular:
- a. The refinement work was limited to a relative ranking of suitability of wind farm development in the identified zones on the assumption that all and any effects of change were acceptable (individually and cumulatively) within zones without absolute constraints;⁶⁶
 - b. The zones were defined exclusively by reference to only one LANDMAP aspect area, the visual and sensory whereas current guidance advises the use of all five aspect areas;⁶⁷
 - c. In relation to SSAC an inconsistent approach was taken in relation to the existing P&L wind farm as between the 2006 and 2008 studies. In the 2006 work the existing wind farm was logically concluded to increase the capacity of those zones on which its presence had a heavy influence. In the 2008 work, the P&L wind farm was, peculiarly, not treated as part of the baseline, thus presenting an unrealistic assessment of relevant capacity;⁶⁸
 - d. Whilst the ARUP studies used the LANDMAP survey assessments of character and value for the relevant zones, the assessment of sensitivity to wind farm development was based on ARUP's own simplistic approach⁶⁹

⁶⁶ CD/COM/17 para.2.1 p.10 and CD/COM/10A p.20 – in landscape terms only national designations were treated as absolute constraints – see CD/COM/17 Table 1 p.16

⁶⁷ CD/COM/17 para. 3.6 pp21-22. At the date of the exercise, the only LANDMAP aspect layer available which had been the subject of independent quality assurance was the Visual and Sensory Aspect area.

⁶⁸ Compare CD/COM/17 para.4.1 p.30 with CD/COM/10A section 2.4 p.15

⁶⁹ See Annex E to the 2006 report CD/COM/17

which was largely judgemental and not always explained. It was principally a desk based assessment;

- e. Where a defined zone had more than one identified capacity identified by ARUP (due to higher or lower sensitivity at the margins or elsewhere) the report records the landscape sensitivity of the majority of the zone i.e. no allowance is made for local variation;⁷⁰
 - f. Each zone was treated by ARUP as an isolated zone for the purposes of assessing landscape impact and sensitivity; any special or functional relationships between zones identified by LANDMAP or site survey were ignored;⁷¹
 - g. The visual impact assessment is limited to a crudely weighted quantitative assessment which assesses the relative impact by reference to a weighted grid square analysis of the number of receptors affected.⁷² Other than through the crude weighting allowance, the assessment has no qualitative input;
 - h. The acceptability of any specific proposal is deferred to the LVIA process within scheme specific ES's,⁷³ the issue of thresholds of acceptable change is nowhere addressed and the cumulative effects of development are ignored.
90. The background work is thus very much "background" only, in the context of the schemes before the inquiry. It is in part useful but must be approached with caution. To the extent that it is inconsistent with the more detailed assessments before this inquiry, it should be given very little weight.

The PCC Inquiry Assessment

91. PCC has adopted a consistent methodological approach to the landscape and visual impact assessment evidence which accords with the 2nd Edition '*Guidelines for Landscape and Visual Impact Assessment*', as this has been the prime methodology used by the applicants in their LVIA's. Where relevant, reference is made to the revised methods of approach and assessment advocated by the recently published 3rd Edition GLVIA. PCC's methodology uses an example approach provided by the 2nd Edition GLVIA⁷⁴ and uses the terms and criteria used to describe the magnitude of visual effects as advocated by the Scottish Natural Heritage Guidelines for the '*Visual Assessment of Windfarms: Best Practice*' 2002⁷⁵.
92. For landscape character effects, under the umbrella methodology of the GLVIA, PCC's approach follows that advocated by *LANDMAP Information*

⁷⁰ CD/COM/17 section 4.2(b) p.31

⁷¹ Ibid Appx F

⁷² Ibid para. 4.3 p.37 and CD/COM/10A para. 2.4.3 p.23

⁷³ CD/COM/17 para. 5.2.2 p.50

⁷⁴ PRV Proof Appx B OBJ002(PCC)/LAND/APPA-L/RUSSELL-SSA-C

⁷⁵ Ibid Appx C

Guidance Note 3 for the assessment of effects against the LANDMAP criteria⁷⁶. In respect of cumulative impact assessment the approach has been to adopt the principles of the staged approach advocated by the March 2012 guidance issued by Scottish Natural Heritage in *'Assessing the Cumulative Impact of Onshore Wind Energy Developments'*.

93. It is important to note that what constitutes a significant effect, what is the meaning of a significant effect in a broad planning context and what weight should be attached to it, is without specific definition in any related guidance. The GLVIA requires the process of the assessment of significance to be clearly defined for each project and for this to be expressed as transparently as possible. The 2002 SNH Guidance states that in the absence of unequivocal guidance *"best practice requires that the bases for all judgments are made clear and explicit on a case by case basis"*.
94. PCC's approach adopts a 'simple' method in which the effects are either significant or not significant. An effect is significant where it is of sufficient weight to be material to the planning consideration and potentially the decision on a nationally important infrastructure project. In accordance with this approach general significant visual effects will when the receptor is of at least *High* sensitivity and the magnitude of change is *Dominant, Prominent, and Conspicuous*. Significant landscape effects will generally occur when the special qualities or key characteristics of a particular landscape character will be substantially altered and this will include where the wind farm would become the new dominant characteristic or a co-dominant characteristic.
95. This approach has not been challenged by any of the applicants before the Inquiry.
96. For the assessment of landscape effects, PCC's approach adopts that often used in wind farm assessments, whereby a landscape in which the turbines become the dominant characteristic is judged to become a *'wind farm landscape'*. The magnitude of this effect is inevitably substantial because the existing characteristics, although largely retained in wind farm development, are subjugated to the presence of the turbines. The size of the area that becomes a wind farm landscape is determined by the characteristics of the receiving landscape and the size and number of the turbines.
97. Beyond the wind farm landscape a *'landscape with a wind farm sub-type'* is created where the turbines would become a co-dominant or an equally prominent characteristic. The magnitude of this effect is moderate-substantial

⁷⁶ CD/VATT/LAN/005

because although there would not be a total alteration of the key elements of character, the introduction of prominent, large scale elements would be likely to be substantially uncharacteristic.

98. Beyond this area the existing landscape characteristics reassert their dominance over the wind farm where the wind farm would be seen as an object within the landscape, prominent but not dominating or changing overall character. The effects of this change are moderate to moderate-low and unlikely to be significant. Beyond this the wind farm becomes incidental to existing landscape characteristics.
99. This approach means that in seeking to identify the *significant* landscape impacts, rather than *all effects*, the extent of assessment can be refined. Using the methods above the visual and landscape impact assessment of each scheme has identified the extent of significant effects and allowed the landscape impact assessment to be focussed on an area of up to 7.5km from the schemes. This is consistent with the LANDMAP Guidance Note 3 which advocates appropriate study areas of 5 to 15km.
100. The general premise of the methodologies developed and practised by the landscape profession is essentially a test of the degree of change to a particular scene, in which the proposed elements are perceived to be different to the character of the scene and which usually result in an adverse effect where the proposal is not in character with that scene. Typically in rural scenes the general proposition is that new built forms are assessed to be out of keeping with character, thus having an adverse effect. However, the approach adopted by the LVIA chapters of the applicants' ESs, is one where the assessor in expressing the magnitude and significance of the effects, does not express whether the effect would be adverse or beneficial. This is unusual in landscape and visual impact assessment but is a method commonly practised in wind farm assessments. PCC has adopted the approach whereby, on the precautionary basis, the impacts would be adverse unless the contrary is demonstrated. This is consistent with the EIA Regulations require that positive and negative impacts are identified in assessments and also the 3rd Edition GLVIA which now advocates that impacts are adverse or beneficial.

CULTURAL HERITAGE

Policy context and the approach to setting, significance and harm

101. The list of potentially relevant statutory provisions, policy and related guidance is extensive⁷⁷ and helpfully reproduced in the evidence.
102. It is not in dispute that, as set out in PPW section 6.5 and paragraph 10 of Welsh Office Circular 60/96, effects on the settings of scheduled monuments and other designated sites or undesignated sites of national importance are a material consideration in determining a planning application or an application for consent under the provisions in the Electricity Act 1989.
103. At development plan level, the Powys UDP reflects the content in PPW and Welsh Office Circulars, emphasising the importance of settings of ancient monuments and listed buildings in considering whether to refuse a proposal. The relevant UDP heritage policy content is found in policies ENV14, ENV17 and ENV3⁷⁸. ENV3 (points 1 and 4) make particular reference to the importance of assessing the cumulative impacts of several wind farms and only approving applications where turbines do not unacceptably adversely affect landscape and environmental quality or unacceptably impact upon buildings or features of conservation or archaeological interest.
104. The importance of guarding against cumulative impacts on heritage assets has been repeated by government in recent guidance accompanying the NPPF⁷⁹.

⁷⁷ See usefully described in proof of A Croft OBJ002(PCC)-HISTENV-POE-CROFT-SSA-C VOL1 at section 3, p.7 ff -which refers to Ancient Monuments and Archaeological Areas Act 1979; Planning (Listed Buildings and Conservation Areas) Act 1990 (as amended); Welsh Office Circular 61/96: Planning and the Historic Environment: Historic Buildings and Conservation Areas, 1996; Welsh Office Circular 60/96: Planning and the Historic Environment: Archaeology, 1996; Planning Policy Wales: Edition 6, February 2014; EN-1 Overarching National Policy Statement (NPS) for Energy, July 2011; EN-3 National Policy Statement for Renewable Energy Infrastructure, July 2011; Powys Local Plan, 2010; Technical Advice Note (TAN) 8: Planning for Renewable Energy (Wales), 2005; Conservation Principles ,CADW, March 2011; PPS5 Planning for the Historic Environment: Historic Environment Planning Practice Guide, English Heritage, DCMS, DCLG, March 2010. In addition can now be added the recent online National planning practice guidance for renewable and low carbon energy and on Conserving and enhancing the historic environment at <http://planningguidance.planningportal.gov.uk/blog/guidance/conserving-and-enhancing-the-historic-environment/> . This replaces earlier guidance which supported the NPPF.

⁷⁸ Policy text set out in Croft Proof OBJ002(PCC)-HISTENV-POE-CROFT-SSA-C VOL1 at paragraphs 3.30-3.31, pp13-14

⁷⁹ "When assessing any application for development which may affect the setting of a heritage asset, local planning authorities may need to consider the implications of cumulative change" – NPPF practice guidance March 2014, paragraph 013. This is a material consideration as a recent policy statement by a government looking at this issue.

105. As has been explained earlier, the TAN 8 broad brush strategic areas were not arrived at with any consideration of the indirect impacts on the settings and significance of scheduled monuments or other heritage assets at all. Given that, the content of paragraph 24 in TAN 8, which emphasises that not all land within the SSAs may be environmentally suitable for major wind farm proposals is of clear relevance in the context of assessing cultural heritage impacts in the context of settings and significance.

106. Section 5.8 of EN-1 also, in the context of nationally significant infrastructure, highlights the need to take into accounts impacts on the setting and significance of designated and non designated heritage assets and to weigh this against the public benefit of development as part of the decision making balance. Paragraph 5.8.14 provides the main tests in relation to assessing harm and indicates that there should be a presumption in favour of the conservation of heritage assets.

107. The construction and application of the concepts of '*setting*', '*significance*', '*substantial harm*' and '*less than substantial harm*' are of obvious importance.

108. The policy definitions of '*setting*' and '*significance*' are uncontroversial⁸⁰ and have been the subject of useful guidance as to assessment and approach⁸¹ which all experts agreed was relevant in understanding the correct approach in the current context. It is made clear within the wording of such definitions and guidance that:

- a. the setting of a given heritage asset can incorporate extensive surroundings and is not fixed.
- b. The setting of an asset is likely to include a variety of views of, across or including that asset as well as views of the surroundings from or through the asset. Long distant views may intersect with and incorporate the settings of numerous heritage assets.
- c. The setting of an asset must be considered beyond purely visual matters, so as to encompass a rounded consideration of how an asset is experienced and understood in the landscape both now and in the past.

⁸⁰ See as set out in AC proof Croft OBJ002(PCC)-HISTENV-POE-CROFT-SSA-C VOL1 at page 11 – derived from EN-1 and the now replaced PPS5 – see NPPF glossary and the recent related online NPPF guidance referred to above. In EN- 1 section 5.8 para 5.8.2. footnote 118 the footnote refers in terms of definitions for heritage terms used in 5.8 to see PPS5 or any successor. PPS5 is repealed and replaced by NPPS and practice guide.

⁸¹ At the inquiry in evidence reference was made in particular to the October 2012 English Heritage Guidance on setting – VATT-CUL-001. See too the PPS5 Planning Practice Guide (DCMS March 2010) and Cadw '*conservation principles (2011)*' – usefully set out (relev parts) in Croft proof at pages 15-17 OBJ002(PCC)-HISTENV-POE-CROFT-SSA-C VOL1.

- d. The significance of an asset can derive not only from the physical presence of an asset but also from its setting. Moreover, development within an extended setting may well affect significance⁸².
- e. Some views or other aspects of setting may contribute more to the understanding of significance than others. This may be as a result of relationships (visual or otherwise) between the asset and other assets or natural features⁸³.

109. EN-1 requires the decision maker to grapple with the concepts of substantial harm and less than substantial harm⁸⁴ in the context of 'significance'. The policy makes clear that:
- a. Significance can be harmed or lost entirely not only by the physical alteration or destruction of the asset (a direct impact) but also by development within its setting⁸⁵ (an indirect impact).
 - b. 'Harm and 'loss/total loss' are distinct concepts in National Energy Policy⁸⁶.
 - c. Within the overall concept of 'harm', if a proposal leads to 'substantial harm' to the significance of designated heritage assets consent should be refused unless it can be demonstrated that such harm to 'significance' is necessary to deliver substantial public benefits that outweigh the identified harm⁸⁷.
 - d. By contrast, if harm is, properly considered, 'less than substantial' a different weighing exercise is required by policy – one which requires a weighing of negative effects against wider benefits.

110. What amounts to 'substantial' or 'less than substantial harm' in a given case will be, in essence, a matter of judgment for the decision maker informed by an appropriate legal construction as to the ambit of such terms. The terms are not specifically defined in policy.

111. The following submissions are made in relation to approach:
- a. 'Substantial harm' is, as a matter of construction, something less than 'loss' or 'total loss'. Mr Croft set out the approach which informed his judgments on total loss, and substantial/less than substantial harm clearly in his proof⁸⁸. His approach correctly distinguished between the concepts of 'loss' and 'harm' and identified that a finding of substantial harm would require a considerable degree of change to an asset. In the context of indirect impacts he suggested that substantial harm might arise where

⁸² EH guidance *ibid*, at p.4, right hand side, 1st paragraph

⁸³ See esp EH guidance at 2.3, p.6

⁸⁴ See especially EN-1 at 5.8.14-5.8.14.

⁸⁵ EN-1 para 5.8.14

⁸⁶ As construed in, for example, paragraph 5.8.15 of EN-1

⁸⁷ EN-1 paragraph 5.8.15 and see the related guidance in EN-3 at 2.5.34

⁸⁸ At page 20, paragraphs 4.10-4.13.

key aspects of an asset's setting that notably contributed to its significance were removed.

- b. In the context of renewable energy infrastructure is it clear that the government (correctly) anticipates that impacts on the setting of a heritage asset from a single wind turbine may constitute 'substantial harm' to significance⁸⁹.
- c. In the first instance decision of Jay J in Bedford Borough Council v S of S⁹⁰ the judge suggested that, in the context of indirect harm (non-physical harm) and the wording of English Heritage guidance⁹¹ that, the ambit of 'substantial harm' was not limited to physical harm but that '*one was looking for an impact which would have such a serious impact on the significance of the asset that its significance was either vitiated altogether or very much reduced*'⁹². As the judge accepted however, these matters are really ones of judgment for the decision maker in a broad context that the test is a high, but flexible one⁹³.
- d. National planning guidance subsequent to that considered in Bedford indicates the breadth of what is intended by 'substantial harm' by affirming again that even a single turbine might cause substantial harm. The recently published (March 2014) national planning guidance provides:

"In general terms, substantial harm is a high test, so it may not arise in many cases. For example, in determining whether works to a listed building constitute substantial harm, an important consideration would be whether the adverse impact seriously affects a key element of its special architectural or historic interest. It is the degree of harm to the asset's significance rather than the scale of the development that is to be assessed. The harm may arise from works to the asset or from development within its setting." In the context of wind turbines that guidance indicates:

"As the significance of a heritage asset derives not only from its physical presence, but also from its setting, careful consideration should be given to the impact of wind turbines on such assets. Depending on their scale, design and prominence a wind turbine within the setting of a heritage asset may cause substantial harm to the significance of the asset."

- e. As the Court of Appeal have recently indicated, the question whether the harm to setting of a designated asset is substantial is a matter of planning judgment. It cannot be answered by merely asking whether a 'reasonable

⁸⁹ paragraph 34 of the Planning practice guidance for renewable and low carbon energy (July 2103) quoted earlier.

⁹⁰ [2013] EWHC 2847 (Admin) – July 2013. The case in any event now needs to be read in light of the CA Barnwell decision - especially in relation to weight and general approach.

⁹¹ Produced to inform PSS5 – now replaced by the NPPF and recent practice guidance 2014.

⁹² At para 25

⁹³ See at paragraph 26 where Jay J accepted that it would depend on how a decision maker applied the phrase 'something approaching' in guidance.

observer' would know that the turbine array was a modern addition to the landscape, separate from the historic landscape being considered⁹⁴ .

*"If that test was to be the principal basis for deciding whether harm to the setting of a designated heritage asset was substantial, it is difficult to envisage any circumstances, other than those cases where the proposed turbine array would be in the immediate vicinity of the heritage asset, in which it could be said that any harm to the setting of a heritage asset would be substantial: the reasonable observer would always be able to understand the differing functions of the heritage asset and the turbine array, and would always know that the latter was a modern addition to the landscape. Indeed, applying the Inspector's approach, the more obviously modern, large scale and functional the imposition on the landscape forming part of the setting of a heritage asset, the less harm there would be to that setting because the "reasonable observer" would be less likely to be confused about the origins and purpose of the new and the old.*⁹⁵"

- f. By contrast, Mr Croft correctly identified that less than substantial harm would incorporate a broad range of potential harm ranging from minor impacts through to quite notable changes to significance that fall just below the threshold of amounting to 'substantial harm'.
- g. As demonstrated in the recent Secretary of State decision in Asfordby (App ref: APP/Y2430/A/13/2191290)⁹⁶ it may be appropriate, in the context of a range of 'less than substantial' impacts on several heritage assets to consider and weigh in the balance the sum total of the impacts of the various turbines to establish if in fact the overall harm caused is greater than the sum of its parts.

112. The Court of Appeal decision in Barnwell Manor is also of importance in relation to the application of Section 66 of the Planning (Listed Buildings and Conservation Areas) Act 1990 which provides:

"In considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses."

113. The Court of Appeal made it clear that in enacting s.66(1), Parliament had intended that the desirability of preserving the settings of listed buildings

⁹⁴ Barnwell Manor Wind Energy Limited v East Northamptonshire District Council, English Heritage, National Trust, The Secretary of State for Communities and Local Government [2014] EWCA Civ 137 at paragraphs 38-44

⁹⁵ Per Sullivan J, para 44 in Barnwell.

⁹⁶ S of S decision in APP/Y2430/A/13/2191290 : APPLICATION REF: 10/00951/FUL: FORMER ASFORDBY MINE/EXISTING ASFORDBY BUSINESS PARK LE14 3JL, 4th March 2014 at paragraphs 15-17 of the S of S decision letter (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/298203/14-03-04_Asfordby_Melton_Combi__2_.pdf)

should not simply be given careful consideration by the decision-maker for the purpose of deciding whether there would be some harm, but should be given "*considerable importance and weight*" when the decision-maker carried out the balancing exercise⁹⁷.

114. The Court of Appeal also indicated that even in a context where harm to heritage assets was found to be 'less than substantial', the statutory duty could not be ignored. It would still require considerable weight to be given by a decision maker to the desirability of preserving the setting of listed buildings. It is submitted that a similar approach is required in relation to the almost identical language found in Schedule 9 to the Electricity Act 1989, paragraph 1 & 2 which require the Secretary of State to have regard to the desirability of protecting – inter alia – buildings and objects of architectural, historic or archaeological interest.

⁹⁷ See at paragraph 24 per Sullivan LJ applying Bath Society v Secretary of State for the Environment [1991] 1 W.L.R. 1303 applied, South Lakeland DC v Secretary of State for the Environment [1992] 2 A.C. 141 followed.

SECTION 3 SESSION 1 – SSA C SCHEME SPECIFIC, COMBINED AND CUMULATIVE IMPACT APPRAISALS

Outstanding Issues

In relation to Llandinam

115. Subject to the applicant resolving any issues with NRW, PCC is now satisfied that there is no reason why the wind farm itself should not be consented. There are outstanding issues in relation to its grid connection but, subject to undergrounding, there are now no obvious reasons why an acceptable grid connection cannot be made.

In relation to Llaithduu

116. The Llaithddu proposal as advanced before this inquiry is unacceptable on landscape and visual impact grounds. The southern array of the scheme would have an unacceptable effect on the landscape of the Arfon Marteg valley and its visual amenity and it would unacceptably impact on the settlement of Bwlch y Sarnau. Of all the schemes before the inquiry the Llaithddu scheme as proposed has the worst effect on any settlement. The northern array of the scheme would be acceptable in landscape and visual impact terms and could be consented on a Town and Country Planning Act application.

In relation to Llanbadarn Fynydd

117. The Llanbadarn Fynydd scheme is the most harmful of all of the schemes before the inquiry in landscape and visual impact terms. It seeks to introduce development of a nature and scale wholly inappropriate to its landscape context with far reaching and unacceptable visual impacts including on Glyndwr's Way, recognised as having a national draw. Further, it would desensitise the landscape to the east of the Ithon Valley and lead to pressure for further, yet more damaging wind farm development in this landscape of high scenic and heritage value. It would also, cumulatively, have an unacceptable effect on one of the richest cultural heritage landscapes in Wales.

SSAC LANDSCAPE CONTEXT

118. The highly varied topography of this part of central Wales is essentially a high upland plateau, the highest parts of which exceed 500m AOD, which has been deeply eroded into a complex series of plateaux and rolling ridges by sharply incised valleys with narrow, twisting valley floors.⁹⁸ The nucleated rural hamlets, villages and a few small towns are linked by transport

⁹⁸ Fig. PRV1 OBJ 002 (PCC)/LAND/APPA-L/RUSSELL-SSA-C

corridors that run along the valleys. The valley sides are populated by scattered and generally small farmsteads whilst the plateaux and high moorland areas have little or no development. The contrast between upland moor and forest on the one hand and partially developed valleys on the other, is typical of central Wales and gives this landscape its particular and special character. ⁹⁹

119. The distinctive landscape is thus a product of both its striking topography and the mosaic of different land uses. The upland plateaux are a combination of extensive moorlands or large scale forestry comprising commercial conifer species such as spruce and fir. In contrast, the agricultural landscapes of the valley sides are characterised by small to medium sized irregular fields of rough pasture delineated by native hedgerows and stone walls.. Deciduous tree belts and woodland blocks tend to be confined to watercourses, lanes and the valley floors. Whilst there are clear variations in character across the area, the landscape is unified by its dramatic topography, high level of intactness and strong sense of rurality.

120. The upland mass which forms the immediate setting for the three applications is framed in the north by the comparatively broad Severn Valley and by the Wye Valley in the east. To the east the landform continues into Shropshire to form the basis of the AONB, whilst to the south-east the land mass continues to form the Radnor Forest. To the south the topography diminishes down into the lower Ithon Valley. This landform has been carved into by various subsidiary water courses including centrally by the upper section of the River Ithon, which rises north of Llanbadarn Fynydd village, by the River Teme in the east, which marks the break between the Powys mass and the Shropshire Hills, and in the west by the Afon Marteg and Afon Dulas, which feed the Wye and Severn respectively.

121. Within this context the principal ridges and upland areas are as follows:

- a. Firstly, the Llandinam Ridge, at over 500m AOD at its highest. This is a strong north-south aligned feature which is essentially a series of linked rolling hills between the Severn Valley and the Ithon Valley¹⁰⁰ steep and scarp-like on its western face it is more gently inclined on its rolling eastern face. In the north it forms the site of the Llandinam Repowering scheme and the northern array of Llaithddu. To the south the ridge divides west and east; to the east the ridge frames the upper Marteg Valley north of Bwlch y Sarnau and this ridge is the suite of Llaithddu's southern group;

⁹⁹ Russell-Vick Session 1 Proof paras. 3.7 et seq. Pp14-18 OBJ 002 (PCC) LAND-POE-RUSSELL-SSA-C

¹⁰⁰ See PRV2 OBJ-002(PCC)/LAND/APP- A-L/RUSSELL-SSA-C

- b. East of the Ithon Valley the land mass is split into two by the Teme Valley. To the north is Kerry Hill, at over 500m AOD at Two Tumps. This is a west-east aligned, broad and domed ridge. To the south is a heavily undulating plateau of which the highest point is Warren Hill at just over 500m AOD. Llanbadarn Fynydd lies at the north-western edge of this latter area;
- c. South of the Llandinam Ridge, between the Marteg and the Ithon Valleys the upland landform has been more heavily eroded into almost separate areas of rolling hills although these are still high at their peaks, 450m AOD plus;
- d. South-west of the Llandinam Ridge again the landform is complex, more rolling and separated by minor valleys, including the Dulas Valley, although this does rise steadily in the west to the Bryn Titli Ridge (site of the existing Bryn Titli Wind Farm) at up to just under 500m AOD;
- e. West of the Wye Valley the land form rises higher still and open moorland is dominant. At Esgair y Llwyn and Esgair Ychion, the ridge at the edge of the Cambrian Mountains and the borders of Powys with Ceredigion, the landform rises to well over 500m AOD; whilst
- f. North of the Severn Valley the landform is again complex and rolling but rises steadily to the high Carno Ridge at nearly 500m AOD, the location of the Carno A&B and Carno Extension Wind Farms, and to 475m AOD at the Hafren Forest, before rising substantially to the west at the Plynlimon Ridge at over 700m AOD.¹⁰¹

Existing Wind Farms

122. By virtue of a combination of distance and topography, Cefn Croes Wind Farm, just within Ceredigion to the west, and Mynydd Clogau Wind Farm to the north of the Carno Valley, whilst occasionally visible from within the immediate context of the application sites, do not exert any significant effect on the existing landscape appearance, character and quality.

123. The existing wind farms which have some material influence on the character of this landscape are the P&L Wind Farm (the site of the Llandinam Repowering scheme), Bryn Titli Wind Farm to the west by the Wye Valley and the Carno complex to the north-west.

124. Clearly of these, the P&L Wind Farm is the most influential. It consists of 102 turbines of 45.5m high to blade tip, in two groups of tightly spaced

¹⁰¹ Russell-Vick Session 1 proof para. 3.10 pp.15 &16 OBJ 002 (PCC) LAND-POE-RUSSELL-SSA-C

regular rows, running for some 5km along the high west edge and just back down the more gently inclined dip-slope of the Llandinam Ridge. Other than the ridge itself, its prime impact is on the landscape to the west, particularly from the lanes, footpaths (including Glyndŵr's Way) and scattered farmsteads within 2km, in which the turbines are seen to top the distinct ridgeline and dominant topographical feature in the locale. The density of turbines and when in motion their rapid speed of moving (because of their relatively small stature) give rise to a very busy, cluttered and confusing appearance which catches the eye and becomes the dominant individual landscape characteristic within around 1km of the turbines.¹⁰²

125. Beyond this range, to around 2km, and certainly at and beyond the Severn Valley the complex intervening landform often breaks up the long ridgeline array and the turbines become equally prominent features and diminish to less conspicuous than this at distances of over 2km. To the north and due south, because the turbines are set back from the edge of the landform, their impact is limited, including within the Caersws Basin. To the east the undulating nature of the dip-slope also helps to break up the density of turbines and the extent of a dominant influence on character is restricted to around 1km. Further west, from the uplands beyond the Ithon Valley, the wind farm is prominent in views at worst. From within the Shropshire Hills AONB the turbines are inconspicuous.

126. The Bryn Titli Wind Farm lies some 10km to the south-west of Llaithddu on a prominent ridge that forms a distinctive side to the Wye Valley. The Bryn Titli Ridge has a similar form to the Llandinam Ridge in that its western side is a steep scarp-like slope with its eastern flank being a more rolling gently inclined dip-slope. The wind farm lies in an informal grouping at about the centre point of the ridge but is tucked just back from the scarp edge; this helps restrict its impact on the valley (as seen from the valley floor in particular). In views from the east, the turbines are seen in the context of a broad rolling landscape but whilst it is widely visible from the Marteg Valley (i.e. a landscape potentially affected by Llaithddu and Llandinam Repowering) it only exerts a moderate influence on the character of this landscape.¹⁰³

127. The Carno complex lies some 15km to the north-west of the P&L Wind Farm. Whilst there is inter-visibility between the two sites, from the landscape between, due to its relatively low lying nature, opportunities to view both Carno and the P&L site are limited to the higher ground (e.g. Gelli Hill, north-east of Llanidloes). The effect of Carno on the landscape north-east of the site for the Llandinam Repowering scheme is only slight.

¹⁰² Russell-Vick Session 1 proof para.3.13 p.16 OBJ 002 (PCC) LAND-POE-RUSSELL-SSA-C

¹⁰³ Russell-Vick Session 1 proof para 3.14 p.14 OBJ 002 (PCC) LAND-POE-RUSSELL-SSA-C

128. A key characteristic of the effects of the existing wind farms on the landscape relates to their precise location in respect of their host landforms. The nature of the deeply incised valleys and the rolling upland plateaux with domed ridgelines at some edges means that so long as the turbines are set back from the edges of the ridges and plateaux, the impact on the settled valleys and main transport corridors can be limited. Where turbines are set too close to the edges or have locations which have 'spilled over' the edges, then the impacts on the valleys can be substantial, where turbines can be seen at close range on high, prominent ground and can dominate the smaller scale, more domestic character of the valley floors. Moving through the landscape, along the valley transport routes, after many miles of attractive rural landscape, one can come upon turbines in this way and their impact is sudden and acutely jarring.

129. All three existing wind farms break this 'rule' to some degree. For example, the Carno extension impacts quite substantially on the Carno Valley whilst its neighbours Carno A&B are better sited in this regard and the very westernmost turbines at Bryn Titli have a restricted extent of significant impact on the Wye Valley. Therefore, the precise location of turbines on ridgeline sites is critically important to determining the extent of likely significant landscape and visual effects.

130. From the upland plateaux and high ground, unless the viewer is within the immediate vicinity of one of these wind farms, they are seen at a distance, in a large-scale often open landscape, punctuated by huge blocks of forestry. In this context the scale of the landscape is generally absolutely dominant and the wind farms are seen as features within it; alien and sometimes starkly in contrast but not significant detractors. The common thread shared by the three main existing wind farms in this context, is that they all occupy high domed ridgeline sites (at around 500m AOD), in general the highest parts of this landscape, this provides a sense of consistency of approach and an apparent logic to their siting which fits well with their role. Their sites are generally open moorland with some afforested blocks and so in tandem with their highest locations are sited in landscapes of the maximum available scale to best absorb them. Also, importantly, they have maintained a generous separation distance which means their radii of significant influence do not overlap.

131. The two golden rules which PCC draw from this contextual analysis are (a) the need to maintain substantial distances between wind farms and (b) siting the wind farms on the highest, largest scale sites in the landscape.¹⁰⁴

¹⁰⁴ Russell-Vick Session1 proof para.3.17 p.18 OBJ 002 (PCC) LAND-POE-RUSSELL-SSA-C

Published Landscape Character Data and Assessments

132. The relevant published landscape character data and assessments are the LANDMAP data (published by Natural Resources Wales), the Powys Landscape Character Assessment, the Regional Landscape Character Map for Wales (draft 2009) and the Shropshire Landscape Typology (2006) and the Herefordshire Landscape Character Assessment (2004, updated 2009).
133. The LANDMAP data has been and continues to be refined by NRW. The key matters that arise from the LANDMAP information in relation to SSAC are:
- a. All of the LANDMAP Visual and Sensory Aspect Areas (VSAAs) within the immediate landscape context of the three application areas, or sites, have an overall evaluation of *High or Moderate* (there being four categories Outstanding, High, Moderate and Low). Llandinam Repowering would lie entirely within *High*, Llaithddu northern array in *High* and southern array in *Moderate*, and Llanbadarn Fynydd would straddle both evaluations;
 - b. Llandinam Repowering and Llaithddu would both lie entirely within Upland Moorland VSAAs (MNTGMVS443 and MNTGMVS 443/RDNRVS115 respectively). Llanbadarn Fynydd would straddle three VSAA classifications; Upland Moorland (RDNRVS111), Upland Grazing (RDNRVS122) and Open Upland Valleys (RDNRVS128);
 - c. Llanbadarn Fynydd would straddle, but not directly impact upon, a Historic Landscape Aspect Area of *High* evaluation (RDNRHL613) and be less than 1.5km south of an *Outstanding* area (MNTGMHL124). An area of *High* evaluation would lie immediately west of the Llandinam Repowering and Llaithddu sites (MNTGMHL789); and
 - d. Llandinam Repowering and the Llaithddu northern group would lie within a Cultural Landscape Aspect Area of an *Outstanding* evaluation (MNTGMCL017), however, this is principally because of the cultural association with the existing wind farm. The Llaithddu southern array would lie partly within and partly outside a *High* evaluation area (RDNRCL023). Llanbadarn Fynydd would lie wholly outside *High* or *Outstanding* CLAAs.¹⁰⁵
134. The Powys Landscape Character Assessment (PLCA)¹⁰⁶ is drawn from the LANDMAP work. The PLCA identifies 'Special Qualities' (or key landscape characteristics) for each of the character areas and these provide an

¹⁰⁵ Russell-Vick Session 1 proof para. 3.3 OBJ 002 (PCC) LAND-POE-RUSSELL-SSA-C
¹⁰⁶ CD/CPL/LAN/009

appropriate basis against which to assess the landscape character effects of the applications before the inquiry.

135. In accordance with its methodology, PCC has considered those PLCA character areas where it considers there is the likelihood for there to be significant landscape character effects; these being limited to the host landscape character areas and those within 7.5km of the wind farms, both individually and cumulatively. The relevant areas are as follows:

- M32 – Waun Ddubarthog (host for Llandinam Repowering and host for Llaithddu 'north' and partially for 'south')
- R17 – Bwlch y Sarnau Uplands (partial host for Llaithddu south)
- R18 – Ithon Valley Hillsides (partial host for Llanbadarn Fynydd)
- M29 – Kerry Hill (partial host for Llanbadarn Fynydd)
- M31 – Llandinam to Llandyssil Hillsides
- M26 – Caersws Valleys
- M28 – Llawr y Glyn Hillsides
- R16 – Drysgol Uplands
- R12 – Ithon Valley
- R9 – Llanbister-Penybont Uplands
- R11 – Beacon Hill
- R7 – Teme Hillsides¹⁰⁷

Designated Landscapes

136. The nearest point of the Snowdonia National Park lies approximately 30km to the north-west and there is very limited visibility from within the National Park of SSA C. PCC has concluded that there would be no significant effects on the National Park.

137. The Shropshire Hills AONB lies some 5.5km to the east of Llanbadarn Fynydd at its closest point and around 12km from Llaithddu and Llandinam Repowering; there would be some views from the upper western parts of the AONB of all three wind farms. Both Llandinam Repowering and Llaithddu would lie well beyond the limit of potential significant landscape effects individually but there is potential for them to have cumulative effects on the AONB. Llanbadarn Fynydd could have that potential both individually and cumulatively which requires consideration of the effects of Llanbadarn Fynydd on the high western fringes of the AONB, in particular on the High Enclosed Plateau character area, as defined by the Shropshire Landscape Typology.

138. The Ceredigion Uplands Special Landscape Area (CUSLA) lies approximately 17km west of Llandinam Repowering and Llaithddu. The ES ZTVs indicate that there would be very few locations with views of the wind

¹⁰⁷ Russell-Vick proof para. 3.5 OBJ 002 (PCC) LAND-POE-RUSSELL-SSA-C

farms, limited to areas of high ground at the western edge of the area. PCC concludes that the visual effects would be limited, and the impact on the landscape character of the CUSLA negligible.

139. There are four relevant Landscapes of Outstanding or Special Historic Interest; the Caersws Basin, Clywedog Valley, Elan Valley and Upland Ceredigion. A fifth area, the Vale of Montgomery lies to the east but it is accepted so little of the wind farms would be visible from it that there would be no significant effects.¹⁰⁸

LLANDINAM REPOWERING¹⁰⁹

The Proposal

140. The most significant landscape and visual impact issue in relation to the Llandinam Repowering scheme is the change in appearance of the existing wind farm from 102 45.5m to tip turbines, set out in a structured and compact arrangement to 34 122m to tip machines. The layout is more informal, although there is an element of placing the turbines in loose rows of three, west-east, but the density of the layout is certainly considerably reduced.

141. The Llandinam Repowering scheme would be spread out along the north-south axis of the ridge and split into two groups, as per the existing arrangement. The northern group would extend northwards beyond the current group; some three turbines would be beyond the existing footprint and several would be beyond the southern end too. The western turbines would be set back behind the current front line and a little back from the edge of the ridge. To the east the group would spread well beyond the current footprint and back and down the domes ridge. The southern group would sit closer to the current footprint of the existing southern group but would extend a little to the north, south and east, but again, back from the western edge of the ridge edge. Overall Llandinam Repowering would spread out along the ridge for 5.5km in the north-south axis and around 1km, east-west.

Visual Effects

¹⁰⁸ Russell-Vick Session 1 proof paras.3.6 – 3.9 pp 12 & 13 OBJ 002 (PCC) LAND-POE-RUSSELL-SSA-C

¹⁰⁹ Russell-Vick Session 1 proof section 5 pp.25-29 OBJ 002 (PCC) LAND-POE-RUSSELL-SSA-C

142. Celt Power's decision to modify the scheme by removing 5 turbines on the north-western edge is welcomed by PCC. The existing northern edge of the P&L Wind Farm, adheres to the 'rule' of being set back sufficiently from the edge of the ridge so that its visual effect on the Severn Valley is limited, especially so due north at the Caersws Basin, from the valley floor of which, it is barely visible. The Llandinam Repowering scheme as it was amended in 2013 has a considerably reduced visual impact over the 2011 proposal in respect of the effects on the Severn Valley and Caersws Basin.

143. There would remain a residual adverse visual effect on these areas where several of the northernmost turbines would break the skyline of the ridge, this being most noticeable from the northern side of the Caersws Basin. Viewpoints 1 and 25¹¹⁰ illustrate the changing nature of the views as the viewer moves north, where from Viewpoint 1 the turbines would be very largely concealed and the magnitude of visual effect would be *faint adverse*, from Viewpoint 25, the number and extent of turbines in the view would increase and the magnitude of visual effect would increase to *conspicuous adverse* and significant for residents and walkers. Viewpoint 20, from the Severn Valley, illustrates that the northernmost turbines would be occasionally glimpsed by travellers along the A470 but the magnitude of effect would only be *faint adverse*.¹¹¹

144. In views from the west, that is the rolling landscape between Llanidloes and the Llandinam Ridge which is currently significantly affected by the P&L wind farm, the change in appearance from the busyness of the P&L Wind Farm to the larger but more 'open' and graceful appearance of the Llandinam Repowering scheme would be a visual enhancement on the current scene. Viewpoint 7 is representative of a range of available views from within this area of landscape from between 1.5 and 4km of the existing P&L scheme¹¹². At such relatively close distances and with the existing turbines exposed on the skyline, the visual benefits of the repowering scheme would be experienced most. Beyond roughly 4km the effect of the smaller P&L turbines begin to diminish significantly whilst the adverse visual effects of the replacement turbines would be less offset by the benefits of removing the 102 smaller turbines. Thus there would be a progressive change from beneficial visual effects at close range shifting towards adverse visual effects (at the limit of current significant effects of the P&L scheme), before the adverse effects would begin to diminish primarily due to distance.

145. The same pattern would not occur so clearly to the east. Similar visual benefits would be much more limited from areas east of the ridge because of

¹¹⁰ SEI Vol III Dec 2011

¹¹¹ SEI Vol III December 2011

¹¹² Ibid

the presence of afforestation to the south-east and the degree of screening this affords for the P&L turbines, for example at Viewpoint 9¹¹³. The effects at just under 4km would be *apparent adverse*. In more distant views from the east, from beyond the Ithon Valley, as with the comparable views to the west, the degree of effect would rise as the effects of the existing turbines diminish. At Viewpoints 5 and 9¹¹⁴ the magnitude of effect would be *apparent adverse* but the significant threshold.

146. From the south, including the hamlet of Bwlch y Sarnau and the Marteg Valley, the P&L turbines are just visible on the skyline and are relatively inconspicuous. The Llandinam Repowering scheme would be more conspicuous on this skyline due largely to the extra height of the turbines and the visual impact of this change would be *inconspicuous adverse* (see Llandinam Repowering Viewpoints 10, 11 & 14)¹¹⁵.

147. In views from the wider landscape, generally only from the highest ground but from many directions and at distances of circa 10/12km, the visual impact of the taller turbines would be *inconspicuous adverse* but not significant (see Viewpoint 15 at Garreg Llwyd and Viewpoint 21 at the Llyn Clwydog Reservoir popular viewing point but which only offers a partial view)¹¹⁶. Beyond such distances the magnitude of visual effect would fall away to *faint adverse* only (see Viewpoints 6, 8, 12, 19, 22 & 24)¹¹⁷.

148. A comparison of the results of PCC's assessment of the visual effects and that of Celt Power shows there to be a considerable number of these assessments with which PCC disagree. This appears to be because Celt Power's SEI does not properly take account of the presence of the existing P&L turbines as part of the existing scene. This results in an assessment which is too conservative and in PCC's view, unduly unfavourable towards the scheme.

Landscape Effects

149. The P&L Wind Farm is a key characteristic of the Llandinam Ridge and is the dominant feature (wind farm landscape) over an area of up to 1km and it is an equally prominent feature across areas up to a maximum of 2km. To the west this is truncated somewhat in areas because of the steep and

¹¹³ Ibid

¹¹⁴ Ibid

¹¹⁵ Ibid

¹¹⁶ Ibid

¹¹⁷ Ibid

complex topography and to the south-east by forestry. The whole of the Llandinam Repowering scheme would lie within the current wind farm landscape and the repowering proposals would not, therefore, alter this key characteristic.

150. The additional height and partial relocation of the scheme would increase the wind farm landscape to the north and north-east to a distance of around a further 1km, this being limited by the topography. To the south-east the forestry would provide a limit and there would be no meaningful change from the current position. To the west the steep and complex topography of the scarp slope would again truncate the extent of the wind farm landscape and the current area would not be materially extended.

151. The new area of equal prominence, or wind farm landscape sub-type, would extend north, west and south, into areas where the P&L scheme is not currently visible and out beyond the current 2km limit to around a maximum of 5km to the west, but much less to the north and south because of the limited number of turbines in view, beyond which the repowering scheme would be seen as a object in the landscape rather than dominating or being especially prominent within it. This additional landscape impact would constitute a moderate-substantial effect and would be significant but limited to that restricted area only where the change would occur between the extent of effect of the P&L wind farm and the repowering scheme. However, whilst there would be a material change in the landscape character of the area affected up to 5km to the west, the visual impact assessment considers that the change in appearance would be a visual benefit; landscape change with visual enhancement.

152. In terms of the assessment against the criteria of the LANDMAP Visual & Sensory, Cultural Landscape, Historic Aspect Areas, Geological and Landscape Habitat Aspect Areas, the impact to the Aspect Areas would be no greater than Slight adverse and not significant due, in particular, to the presence of the existing P&L wind farm and the positive contribution LANDMAP considers it makes to Visual & Sensory and Cultural aspects, as well as the role this has in limiting the extent and degree of landscape change¹¹⁸.

Conclusions on Llandinam Repowering

153. The Llandinam Repowering scheme is acceptable in landscape and visual terms. It generates some real visual enhancements as seen from the west and would cause limited landscape change. The removal of the five northern turbines has assisted in reducing the worst of the visual impacts on the

¹¹⁸ See Russell-Vick Session 1 Proof Appx E OBJ002(PCC)/LAND/APPA-L/RUSSELL-SSA-C

Caersws Valley and although some adverse visual effects remain here, these have been moderated by the change and the residual impact would not be significant. PCC believe that it is right, in landscape and visual terms, that this now amended scheme proceed and consequently it should be considered to be a substantial influence on landscape and visual judgements about the other two schemes before the inquiry and in due course for the TCPA schemes before PCC.

LLAITHDDU¹¹⁹

The Proposal

154. A key feature of the 27 turbine Llaithddu scheme is its north-south separation into two groups. The northern group of 12 turbines, of 115.5m to tip, would be aligned in two rows broadly north-south. It would be sited to the immediate south of the existing northern group and east of the southern group of the P&L Wind Farm and be read as an extension to the P&L wind farm, although the Llaithddu turbines would be more than twice the height.
155. The southern group of 15 turbines, 99.5m to tip, would be separated from the northern group by 1.5km and sit beyond the Garn Fach plantation. This would also run north-south along the Llandinam Ridge but only in a single row. It is agreed that it will be read as two wind farms in views from the east and higher ground from the north-east.¹²⁰
156. The northern Llaithddu turbines are 115.5m high and less tall than both the Llandinam Repowering and Llanbadarn Fynydd turbines and this is due principally to the original choice of machine in 2006, conceived before the details of the Llandinam Repowering scheme had been disclosed, and presumably therefore, designed to make a better fit with the existing 45.5m high to tip P&L turbines than would circa 125m high turbines. The southern group was lowered by 6m following discussions with PCC and their landscape consultant at that time. In landscape terms, PCC is not especially concerned about the lower height of the northern turbines in relation to the Llandinam Repowering project although the relationship with the P&L turbines would be an uncomfortable one. However, in neither case is the result unacceptable

¹¹⁹ Russell-Vick Session 1 proof section 6 pp. 30-36 OBJ 002 (PCC) LAND-POE-RUSSELL-SSA-C

¹²⁰ Goodrum Session 1 proof paras. 5.3.4 p.35 and 5.4.35 p.53 FWLC-LAND-POE-GOODRUM-SSA-C

157. For the avoidance of doubt, PCC does not support any part of Llaithddu without Llandinam Repowering. In the event that the Llandinam Repowering scheme is consented, PCC supports part only of the Llaithddu scheme.

Visual Effects

158. There is a significant and critical difference between the visual impact of Llaithddu's northern and southern groups. Whilst the northern group is set back from the ridge edge and would be seen in the context of the existing P&L turbines, both greatly reducing the extent and degree of its visual impact, the southern group would be separated from the northern one by a gap of some 1.5km and would extend into an area almost entirely unaffected by wind farms (or "*less characterised*" as the SEI accepts¹²¹).

159. The northern group is generally set about 1km east of the scarp slope edge of the Llandinam Ridge; only in the north where the ridge steps back to the east would the turbines be in close proximity to the edge of the ridge, although the landform is such that there is high ground between the ridge and Severn Valley which would greatly limit the extent of views. Consequently the visual effect on the landscape west of the ridge to Llanidloes is very limited, as the various ZTVs and Viewpoint 8 from near Synchnant Chapel to the south-west illustrate¹²². Although there is an absence in the SEI of viewpoints selected from within the area due west, the visual impact of the northern and westernmost turbines is likely to be limited, especially so in the context of the existing P&L Wind Farm. From the west, the northern group only becomes visible at a considerable distance from further higher ground, for example within the Clywedog Valley (see Viewpoints 13 & 16)¹²³, from where the visual impacts are *Inconspicuous adverse* and not significant.

160. From the south and south-west, the northern group is almost entirely screened by the ridgeline; only from Bwlch y Sarnau and the higher ground above the hamlet to the south would this group be visible above the horizon at the head of the valley but then in the context of the southernmost turbines of the P&L Wind Farm, although these would be less than half the height at 45.5m high as compared to 115.5m (see Viewpoints 4 & 34)¹²⁴. The visual impact on these two views of the northern group would be *inconspicuous* and *apparent adverse* respectively and not significant.

161. The southern array, by contrast, would run in a single line along the ridge which encloses the east side of the upper Marteg Valley. Whilst in views from

¹²¹ FWL SEI Vol 4 Appx 4

¹²² FWL SEI Vol 3 Tab 2 Viewpoint 8

¹²³ Ibid Viewpoints 13 & 16

¹²⁴ FWL SEI Vol 3 Tab 4 Photomontages Figs 10_PM_04 and 10_PM_34

due south, as discussed above, these southern turbines would appear as a continuation of the Llaithddu northern group, they would loom over the valley and be visually dominant. The southern group would contribute almost entirely to this significant visual impact.

162. Llaithddu seek to portray the appearance of the southern array as an attractive composition extending along the ridge top to the south.¹²⁵ However, that is not how this element of the scheme reads. Rather it is threatening, isolated addition to the landscape which comes too close to the settlement of Bwlch y Sarnau. Within this context, it is important to note that Llaithddu do not dispute ARUP's characterisation in their work, of settlements as being the most sensitive receptor to the visual effects of wind farms.¹²⁶ In viewpoints from west of Bwlch y Sarnau, the southern group would appear to become 'detached' from the northern group, to an ever increasing degree the further west the viewpoints are. In all three cases of the viewpoints selected for views from the south-west, excluding Viewpoint 7¹²⁷ which is set on the valley floor at St Harmon, the southern group would not be seen in the context of the northern group at all, or at least not to any material degree. Viewpoint 2¹²⁸ is located only a short distance to the west of the hamlet and the visual impact would be similar to Viewpoints 4 and 34.¹²⁹ Viewpoints 5 and 10 are indicative of the range of these views from 4 to 8km distant¹³⁰. The visual impact on the closer areas would be *conspicuous adverse* and significant. Only at an 8km distance would these diminish to *apparent adverse* and be not significant.

163. Moreover, this part of the Llaithddu scheme would intrude on an area of countryside currently almost entirely visually unaffected by wind farm development (the P&L Wind Farm is not visible) and thus the impact of the southern part would be considerably greater than the northern array when viewed from north to south through the west.

164. From the south-east the northern and southern groups are generally seen together, for example from David's Well and the road from Llanbadarn Fynydd to Bwlch y Sarnau, but here the southern group would contribute to

¹²⁵ See e.g. Goodrum Session 1 proof para. 2.3.3 p.6 FWLC-LAND-POE-GOODRUM-SSA-C

¹²⁶ Goodrum XX PCC and see also CD/COM/18 Table 4 p.15

¹²⁷ FWL SEI Vol.3 Tab 2 10_FWL07 (AD/FWLC/050A-C Supplementary Environmental Information (SEI) Volumes 1-4 June 2013)

¹²⁸ FWL SEI Vol 3 Tab 4 10_PM_02 (AD/FWLC/050A-C Supplementary Environmental Information (SEI) Volumes 1-4 June 2013)

¹²⁹ Goodrum Session 1 proof appx 2 17_CWL_4_L and 17_CW_34_L
FWLC/LAND/APP1&2/GOODRUM/SSA-C

¹³⁰ FWL SEI Vol 3 Tab 4 10_PM_05 and 10_PM_10 (AD/FWLC/050A-C Supplementary Environmental Information (SEI) Volumes 1-4 June 2013)

the significant adverse impact more noticeably than the northern group, due to proximity (see Viewpoint 1)¹³¹.

165. From both near and far viewpoints elsewhere to the east and north-east, both groups would be consistently read as detached from one another, stretched out along the horizon, with the 1.5km gap between consistently noticeable (see Viewpoints 3, 6, 9, 11, 33 & 36)¹³². Distance is a significant determining factor of the magnitude of effect, with the P&L wind farm the other important factor in helping to reduce the impact of the northern group which will read as an extension to P&L wind farm, although this influence also diminishes with distance. The visual impact would be *prominent adverse* and significant at Viewpoint 3 (2.1km). East beyond the Ithon Valley the visual impact would drop to *conspicuous adverse* and significant to around 5.5km (Viewpoint 6 above the Devil's Elbow)¹³³ and *apparent adverse* and not significant at Viewpoints 33 (6.8km)¹³⁴ and 36 (6.5km)¹³⁵. Beyond around 9.0km the visual effects would diminish to *inconspicuous* (Viewpoint 17)¹³⁶ or less.

166. There is no viewpoint within the Llaithddu LVIA information from the Shropshire Hills AONB, but viewpoints from within the Llandinam Repowering and Llanbadarn Fynydd information demonstrate that the visual impact of Llaithddu on the AONB would be limited (see Llandinam Viewpoint 6 and Llanbadarn Fynydd Viewpoint 16)¹³⁷.

167. Overall, the northern group would have some but limited landscape and visual impact. Whilst the landscape west, south and north would be largely protected by the schemes siting in respect of the landform and would be consistent with the pattern of siting of which the P&L Wind Farm is a part, it is only the impact on views from the local landscape to the east (up to 5.5km) where this would be materially harmful and significant.

168. The visual impacts of the southern group stand in contrast to the northern group and are considerably greater. Although not visible from the north and north-west, the southern group would have substantial and significant visual impacts on the upper Marteg Valley, the setting of Bwlch y Sarnau hamlet; a discrete landscape unit almost entirely unaffected by wind farm development.

¹³¹ FWL SEI Vol 3 Tab 4 10_PM_01 (AD/FWLC/050A-C Supplementary Environmental Information (SEI) Volumes 1-4 June 2013)

¹³² Ibid

¹³³ Ibid 10_PM-06

¹³⁴ Ibid 10_PM_33

¹³⁵ Ibid 10_PM_36

¹³⁶ Ibid 10_PM_17

¹³⁷ Llandinam SEI Dec.2011 and LF SEI Feb.2013 ADD/VATT/18c Fig. 3.72

The impact on the hamlet and the amenity of the settlement would also be significantly affected. In addition, a wider area of landscape to the south-east would also be significantly visually affected to distances around 5.5km. The visualisations for Viewpoints 4 and 34¹³⁸, when used in the field in particular, clearly illustrate the overbearing and dominant impact of the turbines marching out along the ridge towards the settlement.

169. Whilst the southern end of the scheme was amended to address the issue of stacking,¹³⁹ the other concern raised in consultation responses, its separate, isolated and overdominant effect were left unaddressed. The threatening arrangement persists and the impact on the visual amenity of people going about their daily lives in this settlement would be unduly affected. It is not assisted by the presence of the single short turbine sited close to the hamlet. This may appear in some views to be part of the wind farm such is the effect of its location and prominence.

170. It is accepted by the Applicant that of all of the existing wind farms in the area within and close to SSA C, and those at this inquiry, no other settlement is or would be as clearly detrimentally affected as would Bwlch y Sarnau.¹⁴⁰

171. In reality, it is only by applying an unduly high threshold of unacceptability of effect of a wind farm on a settlement that Llaithddu can argue that the scheme should be consented. They argue that unless a settlement is so affected that the wind farm defines its character, then it is acceptable. That test has no foundation in any guidance and is an absurdly inappropriate test to apply. It is obvious that unacceptable effects may be experienced well before a settlement effectively becomes part of a wind farm. Here the turbines of the southern array would be visible from roads within and approaching the settlement, the churchyard, the community centre, a small number of dwellings and from public footpaths leading out of the village.¹⁴¹

172. Comparison of PCC's assessment with the applicant's SEI¹⁴² shows a relatively large number of significant impacts. The southern group generates nearly all of these.¹⁴³ Whilst comparing the total of number significant effects cannot be considered as an objective comparison it serves to illustrate the considerable visual impact of Llaithddu's southern array and is a clear indicator that there is some inherent landscape and visual flaw with this part

¹³⁸ FWL SEI Vol 3 Tab 4 10_PM_04 and 10_PM_34

¹³⁹ To address the concerns of PCC's then advisers Capita Symonds – see FWL- LAN-001 – See Goodrum Session 1 proof para. 2.5 11 p.12 FWLC-LAND-POE-GOODRUM-SSA-C

¹⁴⁰ Goodrum XX PCC

¹⁴¹ Goodrum Session 1 proof para. 5.4.8 p.46 FWLC-LAND-GOODRUM-POE-SSA-C

¹⁴² Russell-Vick Appx F OBJ002(PCC)/LAND/APPA-L/RUSSELL-SSA-C

¹⁴³ As is also conceded by FWL Goodrum see Session1 proof Table 1 p.44 FWLC-LAND-POE-GOODRUM-SSA-C

of the proposal. The significant effects include effects on Glyndwr's Way and also on Bridleways LM106, LD756 and AC410.¹⁴⁴ LD756 passes close to Fowler's Arm Chair.¹⁴⁵

Landscape Effects

173. As with Llandinam Repowering, Llaithddu's northern group would lie within the P&L wind farm landscape of up to 1km from the turbines. Similarly, as with Llandinam, the extent of the additional wind farm landscape created by Llaithddu 'north' would be truncated to the east and south by the forestry and by the existing turbines to the north and west. The landscape impact of this would not materially extend beyond the current wind farm landscape. The equally prominent wind farm landscape sub-type area of the northern group would be similarly limited. Overall, the landscape impact of the northern group would be Slight adverse and not significant.

174. The wind farm landscape of the southern group would extend up to 1.5km from the turbines west into the Marteg Valley and north-east towards David's Well. Topography would truncate this area to around 1km to the north and south as fewer of the turbines would be significantly influential. The equally prominent landscape would extend to around 3km to the west and south to include further areas of the Marteg Valley sides, Bwlch y Sarnau south to Upper Esgair Hill, and 4km out into the flat Marteg Valley floor to the south-west. To the east this would be limited to 1.5km by Red Lion Hill and north by Garn Fach. To the north-east it would extend out to around 3.5km.

175. The landscape change caused by the southern group would be substantial, materially harmful to the character of the Marteg Valley and setting of Bwlch y Sarnau, amongst other local landscapes, and this impact would be significant. The upper Marteg Valley has some special landscape values which are worthy of preservation. Whilst it lies within a wider LANDMAP aspect area of Moderate value (Visual & Sensory), it is quite normal that within wider areas, more local areas of value exist. The driver of 'lesser' value when compared to some adjoining landscapes are the large scale forestry plantations around Bwlch y Sarnau.¹⁴⁶ Whilst these do have a degrading effect value, they have less presence in the upper Marteg Valley, are a constantly changing characteristic, and will not in the longer term take away from the underlying values of this landscape, namely, the topographical

¹⁴⁴ Goodrum Session 1 proof para. 5.4.16 p.49 FWLC-LAND-POE-GOODRUM-SSA-C

¹⁴⁵ See FWL SEI Vol.3 tabs 2 and 4 -10_WF_35 and 10_PM_35.

¹⁴⁶ See Goodrum Session 1 proof Appx 8 FWLC-LAND-APP3 to 8-GOODRUM-SSA-C LANDMAP survey sheets- the coniferous forests are said to reduce the claue of the area as a whole because they are not particularly well related to topography and stifle the landscape's underlying characteristics.

variety and drama, and the tranquillity and remoteness, of the valley especially.

176. The upper Marteg Valley is of some considerable value, more than its surrounds, and is worthy of preservation and enhancement.
177. Assessed against the criteria of the LANDMAP Visual & Sensory, Cultural Landscape, Historic Aspect Areas, Geological and Landscape Habitat Aspect Areas, the impact to the Aspect Areas of the northern group would be no greater than Slight adverse and not significant. This is due, in particular, to the presence of the existing P&L wind farm and the relatively positive contribution LANDMAP considers it makes to Visual & Sensory and Cultural aspects, as well as the role this has in limiting the extent and degree of landscape change. In contrast, the southern group would have a substantial and significant impact on three VSAs (RDNRVS125, 115 and 123) classified as moderate quality, all other LANDMAP aspect areas being moderate or slight and not significant¹⁴⁷. The southern group would be responsible for all of these significant effects.¹⁴⁸
178. Assessment of the landscape impact of the scheme in the context of the Powys Landscape Character Assessment results in the same in-principle conclusions. Two of the LCAs, Ithon Valley Hillsides (R18) and Bwylch y Sarnau (R17) would be substantially and significantly affected by the southern group. A substantial change would be brought about to these landscapes by the introduction of the turbines into landscapes currently very largely unaffected by wind farm development.
179. Llaithddu's reliance on the ARUP local refinement exercises to support a conclusion that the southern end of the scheme lies within an area identified as suitable for large scale wind farm development is misplaced. The ARUP work treated the zones under consideration as entirely self-contained (see above). There is no evidence that the impact on the landscape of the Arfon Marteg Valley was given any serious consideration in that work and, to the extent that there was an assessment of visual effects, zone 8 within which five of the turbines are sited¹⁴⁹ fluctuated between being identified as one of the less suitable zones to being the top ranked in the ARUP 2006 and 2008 reports.¹⁵⁰ This improved ranking reflects the crude visibility assessment which is concerned with a quantitative rather than qualitative

¹⁴⁷ Russell Vick Session 1 Proof Appx G OBJ002(PCC)/LAND/APPA-L/RUSSELL-SSA-C

¹⁴⁸ The largest area of visibility of the Llaithddu scheme is to the south west i.e. the Nant y Ffin and Afon Marteg valleys – see Goodrum Session 1 proof 5.3.6 p.36 FWLC-LAND-POE-GOODRUM-SSA-C

¹⁴⁹ See Goodrum Session 1 appx. Figure 22 FWLC/LAND/APP1&2/GOODRUM/SSA-C

¹⁵⁰ See CD/COM/17 Table 10c p.48 and CD/COM/18 Table 7b p.20

analysis. It does not provide a reliable guide to the acceptability of any given scheme.

180. Further, Llaithddu's argument that the southern end of the scheme would serve to strengthen the identified spatial quality of the strong visual influence of the P&L wind farm, is equally misplaced. Whilst that argument is a sound support for the northern array, the separate southern array rather than strengthening the spatial characteristic of the landscape to the north would serve to dilute it and, in doing so would harm the landscape character to the south. This includes the impact on Fowler's Arm Chair which is accepted to be a landscape feature of high sensitivity.¹⁵¹ As is clear from the LANDMAP collector survey for MNTGMVS 443, the objective should not be to encourage the dispersal of wind farm developments but rather "*to limit further windfarm development*" to protect its unique sense of place. This also serves to protect other character areas which include RDNRVS123 where LANDMAP identifies wind farm developments as a major threat.¹⁵²

Conclusions on Llaithddu

181. On its own, the northern group of Llaithddu is acceptable in landscape and visual terms. Its landscape impacts would be no greater than the existing P&L wind farm or Llandinam Repowering. The extent and degree of its visual impact to the east would be similar to Llandinam Repowering and whilst it would not generate visual benefits to the west, it would have relatively restricted visual impacts.

182. However, the scheme comprises both northern and southern groups and the southern group would have significant visual and landscape impacts. Whilst the southern group would comply with the established highest ground and open moorland pattern set by the existing wind farms, the significant impacts on unaffected landscapes would outweigh this compositional landscape fit.

183. The harm to the Marteg Valley landscape and the setting and character of the settlement of Bwlch y Sarnau would be severely detrimental and would not be acceptable in landscape and visual terms and consequently the Llaithddu scheme should not proceed. The Marteg Valley is of some considerable value, although it lies within a wider area considered to be of only moderate quality (by LANDMAP), and it has underlying values worthy of protection and enhancement. The impact of the southern group upon the landscape and upon the visual amenity of Bwlch y Sarnau would be

¹⁵¹ FWL SEI Vol 2 p.41

¹⁵² See Goodrum Session 1 proof appx 8 FWLC-LAND-APP3 TO 8 -GOODRUM-SSA-C

significantly detrimental and an effect quite unlike any other, either currently experience by settlements or would be experienced by settlements in close proximity to proposed wind farms.

LLANBADARN FYNYDD¹⁵³

The Proposal

184. The proposed Llanbadarn Fynydd wind farm consists of 17 turbines with a blade tip height of 126.5m which would generate up to 59.5MW. The principal issues, raised by the Llanbadarn Fynydd proposal are:
- a. the character of the receiving landscape and its appropriateness for wind farm development, relative to other landscapes and the compositional consistency of pattern established by the existing wind farms;
 - b. the separation of this landscape from others currently affected by wind farm development;
 - c. the impacts upon its character and receptors within it; and
 - d. the potential for Llanbadarn Fynydd to desensitise the landscape to the development of further wind farms and, therefore, potentially increase the harm on this part of the mid-Wales landscape and that of the adjoining AONB.

Visual Effects

185. Whilst Llanbadarn Fynydd would succeed in being set back sufficiently from the sides of the Ithon Valley, to be almost entirely screened from the upper valley floor to the east. Where views are possible and when the turbines would be visible they would be seen at relatively close proximity and in the context of a domestic scale landscape¹⁵⁴. By way of example the magnitude of visual impact at this viewpoint would be *prominent adverse* and significant.
186. The unspoilt rural character, scenic value and relative small-scale, domestic intricacy of the landscape is very largely consistent throughout and there is little influence on this landscape of existing wind farms. This distinguishes the landscape from that to the west of the Ithon Valley. Subject to intervening features *dominant adverse* effects would extend to around 2km (e.g. Viewpoints 2 & 6),¹⁵⁵ *prominent adverse* effects to around 4.5km

¹⁵³ Russell-Vick Session 1 proof Section 7 pp.37-42 OBJ002(PCC)-LAND-POE-RUSSELL-SSA-C

¹⁵⁴ See viewpoint 5, LF SEI Feb.2013 Vol 4 Fig. 3.54

¹⁵⁵ Ibid Figs 3.48 & 3.56

(Viewpoints 7, 8 and 10)¹⁵⁶ and *conspicuous adverse* effects to around 6km. In all of these instances the impact on high sensitivity receptors would be significant and significant on medium sensitivity cases in the top two categories.

187. North of this the landform is more broken and the extent of views limited (Viewpoints 14 and 17)¹⁵⁷. West and north of these landscapes the impact of Llanbadarn Fynydd is argued to be nil or negligible.

188. From the east, in most short and mid-distance views from the north-east (e.g. Viewpoint 9 at Two Tumps at 3.3km)¹⁵⁸, through the east (Viewpoints 1 & 3 at 0.9km and 1.6km respectively)¹⁵⁹ and around to the south-east (Viewpoints 4 & 11 at 1.8km and 4.4km),¹⁶⁰ the visual impact and the impacts on open views would all be significant.

189. Whilst the P&L Wind Farm would be visible on the horizon line in many of these views its presence would be inconspicuous and it would not de-sensitise the view to further wind development. In longer distance views from the east, including from within the AONB (Viewpoints 15, 16 & 13 from north to south)¹⁶¹ at around 6-8km, the visual effects would drop off due to distance to *apparent adverse* and would not be significant.

190. Llanbadarn Fynydd would however have a significant adverse impact on a high number of publically accessible locations including Glyndŵr's Way, with recreational receptors sustaining high magnitudes of visual change and significant visual effects.¹⁶² Within a distance of 5km of Glyndwr's Way, the Llanbadarn Fynydd scheme is more visible than either Llandinam or Llaithddu.¹⁶³

191. Overall, with the exception of the Ithon Valley floor, the visual impact of Llanbadarn Fynydd would be significantly adverse across an area of potentially up to 6km, depending on the sensitivity of the receptor, and virtually around the entire compass.

¹⁵⁶ Ibid Figs 3.58, 3.59 & 3.64

¹⁵⁷ Ibid Figs 3.70 & 3.73

¹⁵⁸ Ibid Fig. 3.62

¹⁵⁹ Ibid Figs.3.46 & 3.50

¹⁶⁰ Ibid Figs. 3.52 & 3.67

¹⁶¹ Ibid Figs 3.71, 3.72 & 3.69

¹⁶² 6.4.5 p.83 and see Proof LVIA Appx 6 VATT/LAND/POE/GATES/SSA-C(TXT) & VATT/LANDAPP6/GATES-SSA-C

¹⁶³ Gates Session 1 Rebuttal Figure 5 VATT-REBUTTAL-LAND-GATES-SSA-C

192. This is a greater area of significance than either Llandinam Repowering or Llaithddu. This is reflected in the visual impact assessment table which illustrates a high number of significant effects¹⁶⁴. The selected Llanbadarn Fynydd ES viewpoints demonstrate the high number of publicly accessible locations at close and mid-range from where the Llanbadarn Fynydd scheme would be visible and, moreover, from where it would be visually materially harmful.

Landscape Effects

193. The Llanbadarn Fynydd scheme occupies a physically and distinct landscape 'unit' from that of Llandinam Repowering and Llaithddu, east of the Ithon Valley. This is an area of high rolling hills which wrap around to the north of the deep and secluded upper Teme Valley in the east before rising immediately again; this latter landscape is part of the Shropshire Hills AONB. The Llanbadarn Fynydd landscape unit is of considerable value, as recognised by LANDMAP (although not designated) and shares similar broad characteristics and a comparable intactness and quality to the adjoining AONB. Llandadarn Fynydd accept that there are undoubted similarities at a regional scale as between this landscape unit in Wales and the Clun Forest part of the AONB within Shropshire.¹⁶⁵ However, they seek to distinguish it on two grounds. Firstly, that reference to LANDMAP does not support a claim of high landscape value. Secondly, the lower elevations of the summits, the larger blocks of coniferous woodland, the higher population density and the level of retention of boundary hedgerows all serve to set the Clun Forest AONB apart.¹⁶⁶

194. Neither bear close scrutiny. Looked at as a piece rather than the disaggregated way favoured by Llanbadarn Fynydd, the value of the landscape is supported by LANDMAP when all aspect areas are taken into account.¹⁶⁷ Further, the factors relied upon by Llanbadarn Fynydd to distinguish the Clun Forest part of the AONB would all, save for the issue of hedgerow retention, support the conclusion that the landscape unit in Wales is of higher value. This is most readily demonstrated by reference to Mr Gate's rebuttal proof figures which at Figure 2 shows the view from within the AONB towards Llanbadarn Fynydd in the west. It clearly shows that the area intervening is of higher landscape and visual value.¹⁶⁸

¹⁶⁴ Russell-Vick Session Proof 1 Appx H OBJ002(PCC)/LAND/APPA-L/RUSSELL-SSA-C

¹⁶⁵ Gates Session 1 proof para. 4.3.6 p.53 VATT/LAND/POE/GATES/SSA-C(TXT)

¹⁶⁶ Ibid para 4.3.7 pp.53-54

¹⁶⁷ See LF SEI Vol.4 ADD/VATT/18c Figs. 3.19, 3.22, 3.24, 3.26. The values include both high and outstanding values.

¹⁶⁸ VATT-REBUTTAL-LAND-GATES-SSA-C

195. Critically too, the receiving landscape of this unit is largely unaffected by wind farm development, although the P&L Wind Farm is visible from viewpoints local to Llanbadarn Fynydd but at some 7km distant its influence is limited. There can be little sensible dispute that the landscape to the west of the Ithon Valley is less sensitive to the introduction of wind farm development than that to the east. This is endorsed by the landscape witness for both Llaithddu.¹⁶⁹ Although Llanbadarn Fynydd sought to use the key attributes of the host VSAA's for the inquiry schemes to support a conclusion that the two landscapes were of equivalent value and sensitivity to wind farm development,¹⁷⁰ the analysis demonstrates the opposite. To the extent that the Waun Ddubarthog Ridge is identified as being of high scenic quality and character, it is the uniqueness of the P&L wind farm which is the factor which leads to the high value. In contrast, the landscape to the east of the Ithon Valley, is of high value because of its inherent characteristics. Not only would it not benefit from the introduction of a wind farm, such development is quite alien to those characteristics.

196. The Llanbadarn Fynydd site is not the 'highest ground' at or above 500m AOD and it is not a high domed ridgeline. Rather it is at the edge of a domed plateau which rises steeply from the Ithon Valley but not particularly significantly in height difference, and then undulates notably to the east and centre of the plateau (at around 475m AOD), at which points it rolls over and down into the Teme Valley. Some of the land within the site context is higher open moorland to the north-east for example, but the scheme does not lie within this as such. Rather, it lies in an intact and scenic farmed landscape, interspersed with modest forestry blocks, comprising rolling fields of pasture, where shelterbelts, hedges and copses, farmsteads and cottages are evident and this latter land cover is the overwhelmingly dominant characteristic.¹⁷¹

197. The landscape consequently lacks the drama and 'wildness' of the high open moorland ridges and whilst it has some scale by virtue of a high level of visual openness and has a strong and simple visual consistency, it is simply not as large or as accommodating a scale as that of the high open moorlands to the west.

198. Wind Turbines in this landscape would not fit with the established pattern in this part of mid-Wales and would have a severe impact on a landscape of a character not well suited to absorbing the immensity of a wind farm

¹⁶⁹ See FWL SEI Vol.2 para. 5.6.3 p.74

¹⁷⁰ See VATT/LAN/020

¹⁷¹ Contrary to the views of Mr Gates on behalf of the applicant, the value of the landscape is not materially affected by pastoral grassland (Session 1 proof para. 3.6.11 p.33) VATT/LAN/POE/GATES/SSA-C(TXT)) or scattered residential properties and their outbuildings. These are an integral part of a highly scenic pastoral landscape.

development of this scale and would consequently lead to the severe diminishment of a landscape of quality and value. The base photography of the SEI visualisations capture something of the inherent attractive qualities of this landscape; they are fine photographs of a highly scenic landscape.

199. The extent of this landscape impact would be determined by the extent of the new wind farm landscape and 'equally prominent' wind farm landscape sub-type which would be formed, although this is a complex picture given the intensely undulating nature of the local topography to the Llanbadarn Fynydd site. The wind farm landscape would be restricted to under 1km along to the west and along the well-wooded eastern edge of the Ithon Valley. The equally prominent landscape would extend west beyond the valley, but not include it, to around 2.5km.
200. To the south and south-east the wind farm landscape would extend to around 1.5km, truncated by the undulating topography, and the equally prominent truncated to around the same. However, to the south-west the equally prominent landscape would extend to include the high ground of Moel Dor at around 3km and south-east to around 4km at Warren Hill. In the west the new wind farm landscape would extend across the minor valley of the Gwenlas Brook to around 2km; the equally prominent landscape would extend beyond this to around 3.5km before the landform falls away to the Teme Valley and would not extend across this to the Shropshire Hills AONB. Consequently there would not be a significant landscape impact on the designated landscape from Llanbadarn Fynydd on its own. To the north, the wind farm landscape would be up to 1km, limited by topography, with the equally prominent landscape extending out to Kerry Hill at Two Tumps and Glog Hill, both at around 3.5km.
201. The change that this would cause, would however de-sensitise the landscape to other very nearby wind farm development, particularly where this might be read in the landscape to be in close conjunction to Llanbadarn Fynydd and where this might be perceived to be an extension of Llanbadarn Fynydd. PCC's conclusions on the effects of Llandinam Repowering (and the northern group Llaithddu) demonstrate how this de-sensitisation occurs and how it 'allows' further wind farm development to come forward in close proximity without undue landscape and visual harm.
202. Of the three before PCC as Town & Country Planning Act applications both Neuadd Goch and Garreg Lwyd are both located close to Llanbadarn Fynydd, with Bryngydfa a little more distant but, in any case, conceived in layout as an extension to Garreg Lwyd. All three of these proposals would fall wholly or almost wholly within the new equally prominent landscape that Llanbadarn

Fynydd would create.¹⁷² Llanbadarn Fynydd recognise the potential for such de-sensitisation to occur and have themselves relied upon the P&L wind farm as establishing a precedent through its indirect landscape effect.¹⁷³

203. Wind farm development has at least the potential to affect two of the identified key elements of the Shropshire Hills AONB namely its scenic and environmental quality with the availability of panoramic view and tranquillity.¹⁷⁴ These characteristics are such that the Management Plan for the AONB has concluded that:

*“land within 5km of the AONB is unsuitable for any large scale wind farm development and should be excluded from any search areas”.*¹⁷⁵

204. In this context, the objection of Shropshire Hills Management Board to the Garreg Lwyd proposal is important.¹⁷⁶ Permitting Llanbadarn Fynydd would result in 44% of the AONB within the scheme’s study area being influenced by the presence of the turbines.¹⁷⁷ The de-sensitising effect could lead to the incremental result of a very significant impact on the AONB as shown in Llanbadarn Fynydd’s own illustrative material.¹⁷⁸

205. However, the Llanbadarn Fynydd assessment substantially and without any obvious explanation under-estimates the AONB landscape and visual effects. It records the combined effect of the eastern schemes without Llanbadarn Fynydd as being not significant with a low magnitude of landscape change and a medium visual effect.¹⁷⁹ Given that the Garreg Lwyd’s LVIA identifies a significant individual adverse effect on the AONB, it can be seen that the Llanbadarn Fynydd assessment is unreliable.

206. In terms of the landscape effects of the scheme within Powys, assessed against the criteria of the LANDMAP Visual & Sensory, Cultural Landscape,

¹⁷² See LF LVIA 3 Fig.12

¹⁷³ Gates Session 1 proof para.4.3.4 p.52 and 4.4.3 p.55 VATT/LAND/POE/GATES/SSA-C(TXT)

¹⁷⁴ See Gates Session 1 proof paras. 4.2.2 and 4.2.3 pp.48 & 49

VATT/LAND/POE/GATES/SSA-C(TXT)

¹⁷⁵ Ibid 4.2.5 p.50

¹⁷⁶ 12 July 2013 OBJ-002-LAN-001

¹⁷⁷ Gates Session 1 proof para. 4.3.2 p.51 VATT/LAND/POE/GATES/SSA-C(TXT)

¹⁷⁸ See Gates Rebuttal Proof Figure 4 – Viewpoint 16 Cumulative photomontage from VP 16 VATT-REBUTTAL-LAND-GATES-SSA-C

¹⁷⁹ Gates Session 1 proof Tables 8.1 p.105 and 9.1 p.127 VATT/LAND/POE/GATES/SSA-C(TXT)

Historic Aspect Areas, Geological and Landscape Habitat Aspect Areas, the proposals would be significantly harmful to three VSAs of High quality (MNTGMVS254, RDNRSV111 and 128) and two of Moderate quality (RDNRSV122 and 136) and significantly harmful to one Outstanding Historical Landscape Aspect Area (MNTGMHL124).¹⁸⁰

207. The landscape impact assessment of the scheme in the context of the Powys Landscape Character Assessment draws the same in-principle conclusions¹⁸¹. Four LCAs would be significantly affected. Kerry Hill (M29) and the Ithon Valley Hillsides (R18), both host to turbines, would be directly and substantially affected with the immediately adjoining Ithon Valley (R12) similarly impacted. Beacon Hill LCA (R11) would also lie in close proximity and the impact on much of its northern area would be moderate-substantial and significant.

208. It is important in any assessment that it assesses realistically how the landscape would be read by any objective observer following the development. Within this context, it is important to avoid salami slicing the landscape in a contrived and/or unjustified way not least because such an approach leads to a propensity to ignore special or functional links between adjacent areas and therefore an underestimate of effects.

209. Llanbadarn Fynydd's assessment falls straight into this trap. Whilst it purports to accept criteria drawn up by ARUP for the purposes of assessment of their application,¹⁸² it is only by applying an inappropriate and unjustifiable approach to the landscape impact assessment that conflict with a number of those criteria is avoided. For example, one of those criteria is that severe effects on sensitive local landscape character should be avoided and that this can be achieved by ensuring that wind farms are located in zones with a landscape sensitivity of less than medium-high.

210. In fact, the Llanbadarn Fynydd scheme involves the erection of 2 turbines in V&SAA 128 and 5 turbines in V&SAA 111. V&SAA 128 is of high value (indeed it was originally accorded an outstanding value prior to quality assurance) and is at the top end of the high gradation. V&SAA 111 is also of high value. Any realistic analysis of the effects of the proposal on these two aspect areas would conclude that the effect of the development would be substantially adverse.

¹⁸⁰ Russell-Vick proof Appx I OBJ002(PCC)/LAND/APPA-L/RUSSELL-SSA-C

¹⁸¹ Ibid

¹⁸² See VATT/LAN/015 and Gates Session 1 proof 3.7.6 p.37
VATT/LAND/POE/GATES/SSA-C(TXT)

211. It is noteworthy that V&SAA 128 was *excluded* from the ARUP zones assessed in 2006 and 2008 in order to protect the settings of the Cwm Nant Du and Gwenlas valleys.¹⁸³ It is characterised by small valleys, small pastures and small scale landscape features generally. There are no major detractors and its perceptual and sensory qualities are all highly sensitive to wind farm development. Yet in the Llanbadarn Fynydd scheme it is the host area for two turbines of the scheme, 12 of the 17 are within 1 km and all are within 1.5km.
212. Llanbadarn Fynydd's illustrative material demonstrates how the scheme would dwarf the valleys, the field pattern, the enclosure and the woodland.¹⁸⁴ Whilst they are keen to seek to argue that the siting of turbines 11 and 12¹⁸⁵ should properly be regarded as falling in the lesser value V&SAA 122, that makes no material difference to the scale of the impact which the scheme would still have on this highly scenic landscape of very high quality. This attempt to downplay the value of the affected character areas is then compounded by the overly narrow view as to the area over which effects of high magnitude of landscape change may be experienced.¹⁸⁶
213. It is also worth noting that each of the factors which have persuaded Llanbadarn Fynydd that their scheme should not properly be regarded as being sited within V&SAA 128¹⁸⁷ all existed at the date when the LANDMAP surveys were undertaken and the V&SAA boundaries identified.
214. Similar arguments apply to V&SAA 111. It has a high overall evaluation and a special/functional link with V&SAA 122. The division between the two areas is carefully and logically drawn. The south/south eastern boundary of V&SAA 111 to the north west of Garn is drawn to follow the edge of the improved grassland pastures one field in from the U1298.¹⁸⁸ This boundary line reflects the difference in character which is obvious on site. Llanbadarn Fynydd's argument that the western part of V&SAA 111 reads as part of the less sensitive V&SAA 122 is contradicted by the illustrative material before the inquiry¹⁸⁹ and site inspection. Whilst Llanbadarn Fynydd claim some support for this downgrading from the ARUP 2008 Report,¹⁹⁰ it is noteworthy that the sub-division identified by ARUP is entirely unsupported by their

¹⁸³ See LF SEI Vol 1 Main text para. 3.2.7 p.14 and Goodrum session 1 appendices Fig. 22

¹⁸⁴ See LF SEI Vol 4 figure 3.53

¹⁸⁵ See Gates Session 1 proof Figure 1 VATT/LAND/POE/GATES/SSA-C (TXT)

¹⁸⁶ See Gates Session 1 proof Figure 7 VTT/LAND/POE/GATES/SSA-C (TXT)

¹⁸⁷ Gates Session 1 proof paras. 5.2.24 and 5.2.28 pp.66&67

VATT/LAND/POE/GATES/SSA-C (TXT)

¹⁸⁸ Compare LF SEI Vol. 4 figure 3.18 and Gates Session 1 proof Figure 1

VATT/LAND/POE/GATES/SSA-C (TXT)

¹⁸⁹ See LF SEI Vol.4 figure 3.9a VATT/18c

¹⁹⁰ CD/COM/18

underlying analysis¹⁹¹ and is entirely unreasoned. It does not provide a sound basis for an assessment that siting five turbines can be accommodated without significantly harmful landscape effects.

Conclusions on Llanbadarn Fynydd

215. In respect of TAN 8 the Welsh Government has made clear that the SSA boundaries are “*broad brush*” and the policy makes clear that not all of the land within the boundaries may be “*technically, economically and/or environmentally suitable for major wind farm proposals*”. In 2006 and 2008 Powys undertook the refinement process of these boundaries encouraged by TAN 8 through Annex D. Whilst the studies have usefully considered and refined an indicative boundary for ‘potential’ wind farm development, they do not provide a sound basis for indicating that all of the land within the boundary is suitable for any or every wind farm development that comes forward or indeed that the significant landscape change envisaged by TAN 8 should be considered acceptable in all parts, let alone across the whole area. Having established a broad brush principle, each scheme that comes forward within them must be reviewed afresh against the specific and detailed constraints of site and surrounds and, ultimately, the consequences judged in the context of the need¹⁹².

216. The landscape harm caused by Llanbadarn Fynydd would be so considerable and would lead to the de-sensitising of such a substantial area of landscape to further wind farm development, that the proposal is unacceptable in landscape and visual terms in the context of TAN 8. Its landscape context is in strong contrast to that of Llandinam; the latter occupying a landscape which is much better suited to accepting wind farms and one that fits with the established pattern of wind farms in mid-Wales. The Llanbadarn Fynydd landscape context is more varied, richer, of a smaller scale than the higher, starker upland moorlands but it retains a strong sense of remoteness and considerable tranquillity and has a spiritual and historical layer which adds value, as LANDMAP notes. It is more visually enclosed, as the TAN 8 2008 work identifies, but this does not make it more acceptable for wind farm development. It makes it less so because its hidden qualities make it much more sensitive to change than would a very large scale, highly visible ridgeline. Furthermore, its development would ‘open up’ an area of landscape currently largely unaffected by wind farms and would so greatly affect it that further wind farm development would almost be inevitable; much as Llandinam and Llaithddu north ‘benefit’ from the presence of the P&L turbines.

¹⁹¹ CD/COM/18 ppA43-A45

¹⁹² This paragraph is entirely consistent with the approach of the inspector in Bryn Llewellyn (OBJ-002-PLA-006), see especially paragraphs 495 and 543.

CUMULATIVE AND COMBINED EFFECTS¹⁹³

The Scenarios

217. With the inclusion of the TCPA applications before Powys, there are numerous potential scenarios that could be examined in the cumulative impact assessment and considered by the Inquiry. PCC have focussed on a limited number which it considers to be particularly relevant to the decision making process.
218. The six scenarios assessed are as follows:
- a. Llandinam Repowering;
 - b. Llandinam Repowering plus Llaithddu (northern group only);
 - c. Llandinam Repowering and Llaithddu (whole scheme);
 - d. Llandinam Repowering and Llanbadarn Fynydd;
 - e. Llandinam Repowering, Llaithddu and Llanbadarn Fynydd; and
 - f. Llandinam Repowering, Llaithddu and Llanbadarn Fynydd plus Hirddywel, Neuadd Goch, Garreg Lwyd and Bryngydfa.
219. The PCC assessment has focussed on the **combined** effects of these scenarios and on a comparison of the landscape and visual effects of each. Where relevant it has addressed descriptively the assessment of the **additional** cumulative effects of adding a further scheme to the previous scenario. Sequential effects have also been assessed.
220. The baseline for this cumulative assessment is the current position on the ground, i.e. with the operational P&L and Bryn Titli wind farms, there being no others with planning permission within SSA C or in proximity to SSA C.
221. Of the many viewpoints used in the various ESs and SEIs, PCC has selected nine for the cumulative visual impact assessment (see Viewpoints A to I)¹⁹⁴. Generally these viewpoints have been selected by two or more of the applicants for visualisations. PCC has also assessed the cumulative effects on

¹⁹³ Russell-Vick Session 1 proof section 8 pp.43-47 OBJ002(PCC)-LAND-POE-RUSSELL-SSA-C

¹⁹⁴ Russell Vick Session 1 proof Appx J and Figure 3 OBJ002(PCC)/LAND/APPA-L/RUSSELL-SSA-C

landscape character against the LANDMAP VSAs and the other LANDMAP aspects.¹⁹⁵

222. From the assessment of Llaithddu individually, there is a clear and strong distinction between the landscape and visual effects of the northern and southern groups respectively. This is borne out in that assessment and is borne out when both parts are assessed in combination with Llandinam Repowering. Llaithddu north's additional visual effect over and above Llandinam's is very limited and it is of no consequence in terms of additional or in-combination landscape effects.
223. The last scenario, that is with all of the TCPA schemes, would give rise to very extensive and severe landscape and visual effects across the whole of the SSA and which would extend significant effects well beyond the boundaries of the SSA into neighbouring landscapes, including the Shropshire Hills AONB. This is a wholly unacceptable proposition in landscape terms and would vastly exceed the objectives of TAN 8 which never envisaged such impacts or that effectively the whole SSA would be developed.
224. These effects bear out a fundamental concern with Llanbadarn Fynydd and its potential, if developed, to de-sensitise a whole new landscape unit to wind farm. Hirddywel is different. The P&L wind farm has changed its landscape and its adjoining ones. Llandinam repowering is acceptable broadly because of this. Llaithddu north sits close to Llandinam and is effectively visually enclosed by it such that it would read as part of Llandinam and not extend its influence. Hirddywel would appear as an extension of Llandinam, occupying the same ridgeline, it is modest in scale relative to others (9 turbines), especially to Llandinam. It would slightly extend the landscape and visual influence of Llandinam and it would have impacts on the Marteg Valley but not to the same degree as Llaithddu south (refer to the cumulative visualisations from Bwlch y Sarnau).
225. The more significant considerations and the key comparisons are related to scenarios 3, 4 and 5, specifically Llandinam Repowering with Llaithddu (whole scheme), Llandinam Repowering with Llanbadarn Fynydd and Llandinam Repowering, and Llaithddu with Llanbadarn Fynydd. PCC's cumulative in-combination assessments demonstrate that Llandinam with Llaithddu and Llandinam with Llanbadarn Fynydd have significant effects on some shared but also some different sets of landscapes and visual receptors. The former's spread of effects is more focussed to the south-west of the SSA and beyond, whilst the latter's spread out across the eastern part of the SSA and to the north-east, east and south-east. In PCCs' view, the more precious landscape resource lies to the east and for the same reasons Llanbadarn

¹⁹⁵ Ibid Appx K

Fynydd is unacceptable individually this is significantly more harmful than Llandinam with Llaithddu.

226. The in-combination effects of Llandinam with Llaithddu and Llanbadarn Fynydd would cause significant landscape harm across eight LANDMAP VSAs, of which three have a High evaluation with the remainder Moderate, with impacts which go beyond the boundaries of the SSA. These schemes would greatly exceed the level of significant landscape effects envisaged by TAN 8 in terms of their degree and their extent, and cumulatively the effect of all three would be unacceptable in landscape and visual terms.
227. The sequential visual effects of the various scenarios on the users of the principal roads through and close to the SSA (the A483 and A470) and of the two long distance footpaths (Glyndŵr's Way and the Kerry Ridgeway) have also been assessed by PCC.¹⁹⁶
228. The length of the A483 that would be significantly visually affected by any of the wind farms, individually or cumulatively, would be limited to approximately a 1.5km length travelling south from the Devil's Elbow at the head of the Ithon Valley. The overwhelmingly principal contributors to the significant and close range visual impacts would be the Llanbadarn Fynydd and Neuadd Goch schemes (see Llanbadarn Fynydd Viewpoint 6)¹⁹⁷. From much of the remainder of the A483 there would only be relatively short lengths of exposure to views of single or the upper parts of a few turbines, again of Llanbadarn Fynydd. Sequential views of wind farms from the A480 would be limited to mid-distance views (2-2.5km) of the northernmost Llandinam Repowering turbines but the impacts would not be significant (e.g. Llandinam Repowering Viewpoints 1 and 20)¹⁹⁸.
229. The route of Glyndŵr's Way through the SSA takes a snaking path from Black Mountain in the east to Moelfre in the west. Long lengths of the route would be significantly visually affected and all wind farms would contribute to the visual harm to a greater or lesser degree. If all the wind farms were constructed, as per scenario 6, then more than 50% of the length of the route would be visually affected. Individually, the Llanbadarn Fynydd scheme would have the most visual harm (e.g. Llanbadarn Fynydd's Viewpoints, from east to west, 13, 3, 4, 5, 8 and 12)¹⁹⁹. Llaithddu south would be exposed from a shorter length, but still be significantly visually harmful between

¹⁹⁶ Russell-Vick Session 1 proof Appx L OBJ002(PCC) –LAND—APP A-L- RUSSELL-SSA-C

¹⁹⁷ LF SEI Feb 2013 Vol.4 Fig.3.56 (AD/VATT/018C SEI February 2013 Vol 4 Figures)

¹⁹⁸ Llandinam SEI Vol III Dec.2011 (AD/CPL/011 Supplementary Environmental Information Volume III Landscape and Visual Figures December 2011)

¹⁹⁹ LF SEI Feb.2013 Figs 3.69, 3.51, 3.52, 3.54, 3.60, 3.68 (AD/VATT/018C SEI February 2013 Vol 4 Figures)

Upper Esgair Hill, through Bwlch y Sarnau and across the floor of the Marteg Valley, although intervening forestry would provide intermittent screening (e.g. Llaithddu Viewpoint's 4 and 34)²⁰⁰. Llandinam Repowering would be visible from the route as it passes along the base of the scarp slope across undulating and comparatively well vegetated ground which would break up the duration of exposure (e.g. Llandinam Repowering Viewpoints 13, 16 and 17)²⁰¹ and, as expressed above, in some of these views the individual visual effect would be beneficial.

230. In respect of the cumulative scenarios 1 and 2 would have the least harm on Glyndŵr's Way and these effects would not be significant. Scenario 3, with the whole Llaithddu scheme, would have significant visual effects on the route in the vicinity of Bwlch y Sarnau although this relatively short length of exposure would not amount to significant harm to the whole route. Scenarios involving Llanbadarn Fynydd, i.e. 4, 5 and 6, would all cause significant visual effects to longer lengths of the route, potentially around 15km allowing for locally intervening features, as compared with Llaithddu, potentially around 4km, and these would be harmful to the visual amenity of the route as a whole.

231. The Kerry Ridgeway would be exposed for much shorter lengths than would Glyndŵr's Way. Significant visual effects would be experienced at the western end of the route only, from Two Tumps west (e.g. Llandinam Repowering Viewpoint 5, Llaithddu Viewpoint 11, Llanbadarn Fynydd Viewpoint 9)²⁰² and from further east there would be other short lengths with views but the effect would not be significant (e.g. Llanbadarn Fynydd Viewpoint 15)²⁰³. Whilst the Two Tumps view would be a significant static effect²⁰⁴, this combined with other effects would not amount to a significant sequential visual effect on the route.

SESSION 1 LANDSCAPE AND VISUAL IMPACT CONCLUSIONS

232. The highly varied topography of this part of central Wales is essentially a high upland plateau, the highest parts of which exceed 500m AOD, which has been deeply eroded into a complex series of plateaux and rolling ridges by sharply incised valleys with narrow, twisting valley floors. The contrast between upland moor and forest on the one hand and partially developed

²⁰⁰ FWL SEI Vol.3 TAB4 Figs 10_PM_04 & 10_PM_34 (AD/FWLC/050A-C Supplementary Environmental Information (SEI) Volumes 1-4 June 2013)

²⁰¹ Llandinam SEI Vol III Dec 2011 (AD/CPL/011 Supplementary Environmental Information Volume III Landscape and Visual Figures December 2011)

²⁰² Llandinam SEI Vol III Dec. 2013, FWL SEI Vol.3 TAB4 10_PM-11, LF SEI Feb 2013 Vol 4 Fig 3.59

²⁰³ LF SEI Feb 2013 Vol.4 Fig.3.71

²⁰⁴ Russell-Vick Session 1 Proof Appx G OBJ002(PCC)/LAND/APPA-L/RUSSELL-SSA-C

valleys on the other, is typical of central Wales and gives this landscape its particular and special character.

233. Wind farms are a feature of the existing landscape context and a key characteristic of the effects of the existing wind farms on this landscape relates to their precise location in respect of their host landforms. The nature of the deeply incised valleys and the rolling upland plateaux with domed ridgelines at some edges means that so long as the turbines are set back from the edges of the ridges and plateaux, the impact on the settled valleys and main transport corridors can be limited. Where turbines are set too close to the edges or have locations which have 'spilled over' the edges, then the impacts on the valleys can be substantial. From the upland plateaux and high ground they are generally seen at a distance, in a large-scale often open landscape, punctuated by huge blocks of forestry. In this context the scale of the landscape is generally absolutely dominant and the wind farms are seen as features within it. The common thread shared by the three main existing wind farms in this context is that they all occupy the highest parts of this landscape which provides a sense of consistency of approach and an apparent logic to their siting which fits well with their role. Importantly, they have a generous separation distance which means their radii of significant influence do not overlap. Maintaining substantial distances between wind farms and finding the highest, largest scale sites in the landscape are the twin 'golden rules' which should be applied in this landscape.
234. Whilst the TAN 8 policy context presumes significant landscape change across the SSAs, the full implications of this stand to be assessed at this inquiry and at a level of detail beyond that employed by the Arup studies of 2004, 2005, 2006 and 2008 respectively and by Garrad Hassan in 2005. Throughout its evolution through to the local studies for Powys in 2006 and 2008, the landscape and visual work has been very largely desk based with some field checks. Whilst this work is essentially a reasonable approach for informing the process of identifying indicative boundaries, or a 'target area', it has flaws and weaknesses and is not a sound basis for assuming all of the land within the area is similarly suitable for wind farm development. Judgements of this nature must be made on a scheme by scheme and site specific basis.
235. Turning to the schemes, individually the Llandinam Repowering proposal is acceptable in landscape and visual terms. It generates some real visual enhancements as seen from the west and would cause limited landscape change. It is right in landscape and visual impact terms that this scheme proceed and consequently it should be considered to be a substantial influence on landscape and visual judgements about the other two schemes before the inquiry and in due course for the TCPA schemes before Powys.
236. On its own the northern group of Llaithddu is acceptable in landscape and visual terms. Its landscape impacts would be no greater than the existing P&L wind farm or Llandinam Repowering. The extent and degree of its visual impact to the east would be similar to Llandinam Repowering and whilst it would not generate visual benefits to the west, it would have relatively restricted visual impacts. However, the southern group would have significant visual and landscape impacts. Whilst the southern group would comply with

the established highest ground and open moorland pattern set by the existing wind farms, the significant impacts on unaffected landscapes would outweigh this compositional landscape fit. Harm to the Marteg Valley landscape and the setting and character of the settlement of Bwlch y Sarnau would be severely detrimental and would not be acceptable in landscape and visual terms and consequently the Llaithddu scheme should not proceed.

237. The landscape harm caused by Llanbadarn Fynydd would be considerable and would lead to the de-sensitising of such a substantial area of landscape to further wind farm development, that the Llanbadarn Fynydd proposal is unacceptable in landscape and visual terms in the context of TAN 8. Furthermore, its development would 'open up' an area of landscape currently largely unaffected by wind farms and would so greatly affect it further wind farm development would almost be inevitable; much as in the same way that in PCC's analysis Llandinam and Llaithddu north 'benefit' from the presence of the P&L turbines.

238. In respect of cumulative effects, of the six scenarios, in scenario 2 Llaithddu north's additional visual effect over and above Llandinam's is highly limited and it is of no consequence in terms of additional or in-combination landscape effects. The key comparisons are related to scenarios 3, 4 and 5, specifically Llandinam Repowering with Llaithddu (whole scheme), Llandinam Repowering with Llanbadarn Fynydd and Llandinam Repowering, Llaithddu with Llanbadarn Fynydd. PCC's assessments demonstrate that Llandinam with Llaithddu and Llandinam with Llanbadarn Fynydd have significant effects on some shared but also some different sets of landscapes and visual receptors. The more precious landscape resource lies to the east and for the same reasons that Llanbadarn Fynydd unacceptable individually it is significantly more harmful than Llandinam with Llaithddu. The sixth scenario, with all of the TCPA schemes, would give rise to severe landscape and visual effects across the SSA and would extend significant effects beyond the boundaries of the SSA, including the Shropshire Hills AONB. This is a wholly unacceptable proposition in landscape terms and would vastly exceed the objectives of TAN 8.

CULTURAL HERITAGE EFFECTS OF THE SSAC SCHEMES

Introduction and Overview

239. The development of Llanbadarn Fynydd in conjunction with three other proposals in the east of SSAC (Neuadd-goch Bank, Bryngydfa and Garreg Lwyd²⁰⁵ - (*the four proposals*)) would seriously degrade the setting of a large number of designated and other heritage assets including nationally important scheduled monuments and listed buildings. Their cumulative impact would result in substantial harm occurring to the significance of many

²⁰⁵ See location plan with scheme turbines plotted in the context of designated assets - OBJ/002/005 and the several figures accompanying the Croft proof for session 1 which identify designated and non designated assets in context: OBJ002(PCC)-HISTENV-POE-CROFT-SSA-CVOL2 53-59

heritage assets and would, when weighed in the overall balance, be unacceptable.

240. Consideration of the impact of Llanbadarn Fyndd alone, at least in purely cultural heritage terms, has not resulted in a discrete heritage objection from the Council. But that position is not to be equated with a concession that the development of Llanbadarn Fyndd alone would avoid harmful impacts to heritage assets. It would, if developed quite obviously cause harm to several important heritage assets, albeit falling largely in the policy category of causing '*less than substantial harm*'²⁰⁶. That harm is nevertheless material and must be weighed in the overall decision making balance.

241. The assessment of cumulative impacts in strategic areas has been identified as an important consideration for this conjoined inquiry. In terms of the assessment of cumulative impacts of the four proposals on heritage assets the implications are severe. In light of PCC's cumulative impact assessment²⁰⁷ it is evident that these eastern group of wind farm proposals would fundamentally change the character of a complex interrelated historic landscape, leading to a scale of degradation that would result in 'substantial harm' to the significance of numerous assets.

242. Relevant national policy and guidance recognises the importance of assessing cumulative impacts in the context of decisions being made on individual schemes, particularly in relation to heritage assets and in the specific context of large scale infrastructure projects that straddle historic areas²⁰⁸.

243. Although Neaudd-goch bank, Bryngydfa and Garreg Lwyd are not proposals seeking consent at this inquiry²⁰⁹, if Llanbadran Fyndd is constructed the degradation of the setting of heritage assets caused would change the baseline situation for those assets. This would have the potential of allowing subsequent applicants to argue for consent in the context of the baseline and could lead to other schemes being granted permission on a piecemeal basis, with increasing harm to the historic environment.

²⁰⁶ See Croft proof: OBJ002(PCC)-HISTENV-POE-CROFT-SSA-C VOL1, p.47, para 7.2. In relation to the grade II listed Blaen-nant-du farm AC concludes there will be substantial harm from LF alone – see proof at 7.3, p.48.

²⁰⁷ Produced by A Croft, a heritage expert whose full and extensive qualifications in this field are set out in section 1 of his proof of evidence on the historic environment (September 2013) presented to session 1 of the inquiry: OBJ002(PCC)-HISTENV-POE-CROFT-SSA-C VOL1

²⁰⁸ EN-1 section 5.8; EN-3 2.7.41-45; Welsh Office Circular 60/96 paragraph 10 and PPW 6th Edition section 6.5; EH guidance (2012) on setting and significance, pps 24-25; VATT- CUL-001 on cumulative impacts esp;

²⁰⁹ They fall to be determined under the planning regime as they are below 50MW

244. In relation to the nature and extent of harm caused by turbines on either an individual or cumulative basis, the matter is, in essence, one of judgment.

245. In July 2013, the UK Government acknowledged in the specific context of wind farm development and the setting of heritage assets the potential for substantial harm being caused to significance, stating:

"As the significance of a heritage asset derives not only from its physical presence, but also from its setting, careful consideration should be given to the impact of wind turbines on such assets. Depending on their scale, design and prominence a wind turbine within the setting of a heritage asset may cause substantial harm to the significance of the asset"²¹⁰.

246. That emphasis on balancing harm as against need has been repeated by government since then in the particular context of wind farms²¹¹ and heritage assets.

247. Recent emphasis has also been given to the importance, (in the context of a number of 'less than substantial' impacts on individual heritage assets by turbines) of assessing and weighing in the decision making balance the sum total of the impact of turbines on several heritage assets, to establish if in fact the overall harm caused is greater than the sum of its parts²¹².

²¹⁰ Planning practice guidance for renewable and low carbon energy – DCLG July 2013, paragraph 34

²¹¹ See recently issued, albeit in the context of the NPPF, the online National planning practice guidance for renewable and low carbon energy (6.3.14): *"As the significance of a heritage asset derives not only from its physical presence, but also from its setting, careful consideration should be given to the impact of wind turbines on such assets. Depending on their scale, design and prominence a wind turbine within the setting of a heritage asset may cause substantial harm to the significance of the asset"* (para 019) <http://planningguidance.planningportal.gov.uk/blog/guidance/renewable-and-low-carbon-energy/particular-planning-considerations-for-hydropower-active-solar-technology-solar-farms-and-wind-turbines/>.

See too WRITTEN MINISTERIAL STATEMENT DEPARTMENT FOR COMMUNITIES AND LOCAL GOVERNMENT -9th April 2014 Local Planning and Renewable Energy Developments; ("the need for renewable energy does not automatically override environmental protections and the planning concerns of local communities.") <https://www.gov.uk/government/speeches/local-planning-and-renewable-energy-developments>

²¹² S of S decision in APP/Y2430/A/13/2191290 : APPLICATION REF: 10/00951/FUL: FORMER ASFORDBY MINE/EXISTING ASFORDBY BUSINESS PARK LE14 3JL, 4th March 2014 at paragraphs 15-17 of the S of S decision letter. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/298203/14-03-04_Asfordby_Melton_Combi__2_.pdf

248. Moreover, all this must be considered in the context of the SSAs identified by TAN 8. It is important to note that the process leading to the formulation of the broad brush strategic areas in TAN8 (and indeed as subsequently locally refined through the Arup 2006 and 2008 processes) paid little or no attention to issues concerning the cumulative impacts on the settings and significance of nationally important and other heritage assets.

249. Further, the area to the east of the river Ithon in the broad area of SSAC has had, until now, limited heritage assessment work undertaken in the context of assessment of settings and significance of assets - despite containing a notable concentration of nationally important designated heritage assets.

250. In reality, this inquiry has provided the first substantive opportunity for any strategic let alone detailed cumulative assessment of such large scale 'indirect impacts' on the setting and significance of heritage assets to be undertaken and examined. It is accordingly of crucial importance that this new evidence based work is carefully assessed and the implications of it understood in the context of potentially harmful impacts.

251. Although the evidence presented by Llanbadarn Fyndd on cultural heritage found some measure of factual agreement with that of the Council,²¹³ significant disputes remain as to the predicted effects and the overall assessment of harm.

252. It is agreed that there would be significant adverse cumulative effects on the settings of two scheduled monuments directly as a result of Llanbadarn Fyndd in conjunction with one or more of the other proposals should they going ahead²¹⁴, but the expert evidence remained at odds in relation to key aspects of approach relevant to the identification and extent of setting and significance and in relation to findings of whether there would be substantial or other harm in policy terms to a range of assets.

253. PCC contend that both the approach adopted and evidence produced by Llanbadarn Fyndd is flawed and contradictory in several fundamental regards. That has resulted in a series of unreliable judgments and conclusions. Consistent with their landscape and visual impact evidence, the approach has resulted in a significant understatement of effects.

²¹³ As set out in the S of CG – VATT-HISTENV-SOCG-1 SSAC

²¹⁴ 3.2.2 (second, note para numbering is repeated) *ibid*.

254. As a result, Llanbadarn Fyndd's evidence should be afforded little if any weight. By contrast the evidence of Mr Croft is comprehensive, soundly based and measured.

255. The issues raised will be addressed as follows:

- a. the underlying heritage context and approach
- b. The policy context and in particular the approach to setting, significance and harm
- c. the evidence and assessment of setting, significance and harm
- d. the approach to cumulative assessment in evidence
- e. other matters
- f. Overall conclusions

Heritage context

The Landscape

256. The landscape to the east of the Ithon Valley is physically distinct from that of the area to the west occupied by the proposed Llandinam Repowering and Llaithddu schemes²¹⁵ and is currently largely unaffected by wind farm development.

257. Within this 'eastern area', in addition to the Llanbadarn Fyndd proposal, there are three additional wind farm developments currently seeking consent – Neuadd-goch Bank, Bryngydfa and Garreg Lwyd²¹⁶ ('the four proposals').

258. The development sites for the four proposals lie on the border of Radnorshire and Montgomeryshire in a landscape defined by mountainous ridges and uplands and deep river and stream valleys²¹⁷.

²¹⁵ As described by PRV in his Session 1 proof paragraph 7.9, p39.

²¹⁶ As described in Croft proof for session 1, paragraphs 2.3-2.7; The NGB and GL applications are currently awaiting determination by appeal. See locations on Powys plan OBJ-002-HIST-001

²¹⁷ See Croft Proof appendices OBJ002(PCC)-HISTENV-POE-CROFT-SSA- - Figures 1 and 4.

259. Modern and historic human settlement in the area is centred on the two main valleys. To the immediate east lies the valley of River Teme (Afon Tefeidiad). This has a wide shallow valley bottom with comparatively rich agricultural land. It opens out to the south towards Knighton, to the north after Felindre the valley narrows markedly and runs down a deeply cut valley. The valley of the River Ithon (Afon Ieithlon) forms the western edge of the area. The Ithon rises between the western end of Kerry Hill and the hill of Glog. At source it is narrow but it soon becomes a substantial feature as it snakes southwards down its valley. There is limited grazing on its narrow floodplain and above lie wooded slopes of the valleys side. Further afield the pattern of large ranges of hills divided by deep river and stream valleys is repeated until the larger expanse of the Caersws Basin and the River Severn Valley are reached to the north and west and the broader valley of the River Clun and the gentler topography of western Shropshire are reached to the east. The four proposals fall within an area with a complex historic landscape made up of upland, semi upland and valley sides with evidence of occupation and utilisation from the early prehistoric to modern day.

260. Each of the four proposals lies in one, or more, LANDMAP Historic Character area. These were described in the evidence of Andrew Croft²¹⁸.

The Eastern v Western context

261. From that and other evidence before the inquiry the following contextual submissions are made.

- a. In this 'eastern' area are found a notable concentration of prehistoric monuments of national importance. There are some 26 locations within 5km of the Llanbadarn Fynydd proposals that have been designated as scheduled monuments²¹⁹. Most of these are round barrows of Bronze Age date which have clear relationships with the underlying topography, each other and other known monuments. There are also nationally important iron age remains, early medieval sites and listed buildings too²²⁰.
- b. There has been, currently, little degradation of the designated assets or of the character and integrity of the historic landscape around the four proposal development sites so that the underlying prehistoric and medieval landscape is still readily evident and can be appreciated and understood.
- c. Although Mr Atkinson (expert witness for Llanbadarn Fynydd) sought to suggest that the '*process of nineteenth and twentieth century agricultural improvement*' indicated a landscape in the east that was '*continuing to develop*'²²¹ it is clear, as Mr Croft indicated, the area remained in broad

²¹⁸ OBJ002(PCC)-HISTENV-POE-CROFT-SSA paragraphs 5.9-5.16, pages 23-25 and shown on his Figure 3 in appendices to proof.

²¹⁹ As set out in the statement of Common ground, paragraph 2.3.5 VATT-HISTENV-SOCC-1 -SSAC

²²⁰ See st of cg ibid at 2.3.9; Croft proof paragraphs 5.17-5.40, pps 25-30.

²²¹ Mr Atkinson proof, p.25, 4.3.2

character as it had since prehistoric times – a rural landscape -with parts that had been worked and utilised for thousands of years²²². The current agricultural uses represented a continuation of such a use.

- d. As PCC explained²²³ there are substantial contextual differences in cultural heritage terms in the east from the landscape area to the west of the Ithon valley where the Llandinam/Llaithddu proposals are sited. That proposition is supported by the evidence which indicated:
- i. The heritage assets found in the western area are located in a higher and more remote upland setting. By contrast, the heritage assets (designated and undesignated) in the east are located in a landscape which has been occupied and utilised in an intensive manner since at least the bronze age. As a result, their significance lies not only in their Bronze Age origins but also in their role as visual landmarks, way finders and territorial markers as part of an inhabited landscape.
 - ii. The examples of later habitation such as the scheduled Iron Age hill fort (Castell y Blaidd²²⁴) and deserted scheduled medieval settlements²²⁵ evident in the east are simply not found in the western area and are nationally important.
 - iii. The additional and numerous undesignated assets evident in the east²²⁶ also set the area apart from the west and fall to be considered as material in policy terms,²²⁷ especially in the context of understanding and assessing the significance of assets in the area generally - whether designated or not.
 - iv. The baseline for a heritage assessment in the west is materially different in that there currently exists a large wind farm (Llandinam) in the west, so that the setting of assets there has already been substantially altered²²⁸. Moreover, that existing Llandinam wind farm is not time limited by condition so that there is a real prospect²²⁹ that the west will remain with a large wind farm development in situ any event.
 - v. By contrast, the elevated areas of this eastern landscape are currently generally open in nature with limited vegetation and modern structures and features.

Approach to heritage context

²²² He explained, for example, that the land would have been worked and utilised intensively since medieval times.

²²³ Andrew Croft Evidence in chief on 5.9.13

²²⁴ RD102

²²⁵ For example RD155

²²⁶ Discussed in Croft proof sections 5 & 6. The concept of *undesignated* and *designated* assets as explained in EN-1 at paragraph 5.8.3 ff and at footnote 118 by reference to PPS5 and now in the NPPF

²²⁷ See EN-1 paragraph 5.8.5, p.90 - CD/COM/001; Welsh Circular 60/96, paragraph 10

²²⁸ This is a point accepted by heritage experts called by Llandinam and Llaithddu as wellin their oral and written evidence

²²⁹ The case as presented by Llandinam

262. Llanbadarn Fynydd's approach to heritage context was in several regards, misconceived and flawed from the outset. They relied entirely upon Mr Atkinson for their assessment of cultural heritage impacts²³⁰. It was evident however that Mr Atkinson had not properly or adequately considered key matters in his evidence. In particular:

- a. He had not taken into account any of the undesignated assets in the eastern area in his proof of evidence presented to the inquiry²³¹. In simple terms, they had not formed part of his assessment presented to the inquiry.²³² By contrast, Mr Croft had referred to them in both the text of his proof and identified them in his figures. Such undesignated assets, as we explain below, do in fact require careful consideration in policy terms²³³. The absence of assessment by Mr Atkinson on behalf of the applicant prevented a full understanding and assessment by him of the significance of all assets (designated or not) in the area.
- b. Despite the provision of various lists of assets in this and nearby areas²³⁴, there was in fact no evidence or analysis at all to suggest that the eastern area was in any way 'typical' in terms of assets²³⁵. In truth, as PCC's evidence demonstrated, the deliberate siting and notable number of nationally important monuments - with visual relationships in the landscape to other assets and to the topography - greatly contributed to the setting and significance of such assets in this area and made it of particular value.
- c. These visual relationships and siting of assets in the landscape were central to understanding significance²³⁶. They are exactly the kinds of matters which relevant policy and guidance require to be assessed when determining setting and significance. Mr Atkinson had not - as detailed below - incorporated these important factors into his appraisal of setting and significance.
- d. Mr Atkinson's evidence also proceeded upon the implicit assumption that the location of parts of the eastern area within the TAN 8 SSAC boundaries meant that the eastern area should be treated as having less value in heritage terms than other areas. But the TAN 8 strategic areas were not arrived at with any consideration of the indirect impacts on the settings and significance of scheduled monuments or other assets at all²³⁷

²³⁰ In his evidence and in his work in the relevant ESs and SEIs.

²³¹ SA answers in cross exam to TC on 4.9.13 - he accepted that such assets '*formed no part of his assessment or consideration*'.

²³² Indeed, when challenged on this point, he indicated to the inquiry that he did not know 'what or where they are' - in answers to TC on 4.9.13

²³³ EN1 para 5.8.5; Circular 60/96, paragraph 10.

²³⁴ (late in the day, during the relevant session on heritage) VATT/012-14; As AC pointed out the 'table 3' he was taken to in cross examination in VATT/013, p11 did not in fact contain a list of scheduled assets at all, VATT/14 & 12 served only to illustrate the substantial number of scheduled assets in the eastern area.

²³⁵ - although this was suggested to AC in cross examination.

²³⁶ And see generally section 6 of AC, pps 31-48 of proof, which details aspects of significance in relation to each asset.

²³⁷ As AC explained in evidence and as, in fact, SA accepted when cross examined

that all parties agree are the key material considerations before this inquiry. As the underlying documents relating to the production of TAN8 and the subsequent Powys refinement work reveal, the matters which decision makers are required to consider in the context of harm to the setting and significance of such assets were simply not assessed when the strategic TAN 8 areas were being considered and formulated²³⁸. Those important considerations were deliberately left to be considered at a local level²³⁹ in the context of individual schemes and in the context of whether consent should be withheld to them - no doubt in the overarching context of TAN 8 not anticipating the development of wind farms throughout all parts of the SSAs. It appeared from his answers in cross examination that Mr Atkinson was entirely unaware of such matters;

- e. Mr Atkinson had also relied upon the area not being within a registered landscape of historic interest²⁴⁰ as indicating a lack of historic value to the area generally. That approach was also misconceived. The fact that an area happens not to be within a registered landscape does not mean that it should be treated as having less importance in cultural heritage terms²⁴¹ either as a matter of policy approach or indeed as a matter of common sense. The eastern area is a case in point. It contains numerous nationally important individually designated assets, each with settings and significance requiring assessment, that have in fact not (prior to this inquiry) been assessed in detail – especially in the context of a cumulative impact by proposals upon them. Further, as more recent²⁴² LANDMAP studies have indicated, some of the assets of national importance in the eastern area are in historic landscape aspect areas which fall to be considered as of ‘*outstanding value*’ in cultural heritage terms²⁴³ directly as a result of the existence of the monuments. Mr Atkinson had, rather strangely, not included reference to these evaluations in his evidence;
- f. Mr Atkinson’s chosen ‘*historic environment baseline*’ (upon which it must be assumed his subsequent assessment of significant effects was based upon) was inadequate. He had placed reliance on the October 2006 CPAT study²⁴⁴ as a body of work which he assumed was an ‘*historic landscape characterisation of TAN 8 Strategic Search Areas in Powys*’²⁴⁵. It was no such thing. It in fact related to an area radically different from and much more constrained than either the TAN 8 SSAs or the subsequent refined

²³⁸ See the final report – research contracts 105/2002 and 269/2003 for WAG by Arup [ALL/11C] at p.54 and appdx H; Arup review in 2005 – ALL-/011/C at pps 1-11; Powys refinement work in 2006 [CD/COM/17] and 2008 [CD/COM/18] neither of which considered the historic context.

²³⁹ Arup review in 2005 – ALL-/011/C at p11, paragraph 3.5

²⁴⁰ See his proof at pps 20-21, para 4.2.2

²⁴¹ Andrew Croft in chief and see for example CD-002-007, p.6 – Cadw doc on historic landscapes

²⁴² Such registered landscapes were compiled in the late 1990s

²⁴³ See Landmap historic landscape aspect area MNTGMHL124 – ‘Kerry Hills Historic Area’- evaluated as of ‘*outstanding value*’ as ‘*a prehistoric landscape of key importance containing significant numbers of burial monuments and ritual sites*’

²⁴⁴ FWL-CUL-001 – Oct 2006 study

²⁴⁵ Mr Atkinson proof, paragraph 4.2.2, p 20

boundaries as established in 2008²⁴⁶. The CPAT work looked at the smaller and subsequently abandoned area identified in the 2006 Powys refinement exercise²⁴⁷. As a result, Mr Atkinson's baseline assessment²⁴⁸ relied upon a body of work that did not even consider the setting or existence of a range of key assets such as, for example, Two Tumps (MG048) or the Glog (MG121). Nor could it even begin to characterise, for example, the crucial visual relationships and settings between such assets and the nationally important monuments running southwards along Banc Gorddwr and then towards Warren Hill. It is clear from an examination of the documentation that the CPAT work was not based on any fieldwork at all as a result of lack of resources²⁴⁹ and also subdivided areas in a way that '*cut arbitrarily across various landscape types*'²⁵⁰. To that extent it was in any event artificial in the way it characterised the historic landscape. It was also entirely inadequate in providing a baseline for a proper assessment of significant effects upon settings of assets with visual and physical significance deriving from an understanding of a larger landscape topography.

- g. By contrast, the evidence provided by Mr Croft provides a description of the LANDMAP character areas²⁵¹. That work is accurate and relevant and suitably extensive²⁵².

263. The flawed approaches relied upon by Llanbadarn Fynydd at the initial assessment of context stage of the evidence inevitably infected the subsequent cultural heritage assessments²⁵³. The evidence relied upon by the applicant was accordingly based on an inadequate appreciation and assessment of heritage context.

Setting, significance and harm

The findings

264. The various findings in the Llanbadarn Fyndd ES/SEI as to whether there were, in EIA terms, '*significant effects*' on assets do not provide an answer as

²⁴⁶ See 2008 Arup work – CD/COM/010 – with various differing boundaries at p.35, fig 9 (b)

²⁴⁷ See fig 1, p.131 CPAT – FWL-CUL-001

²⁴⁸ In both his proof and in the ES and subsequent SEI

²⁴⁹ Page 3, 5th paragraph *ibid*.

²⁵⁰ CPAT, p. 6, *ibid*.

²⁵¹ See Andrew Croft proof at paragraph 5.9-5.16, pps 23-25

²⁵² As Simon Atkinson accepted in cross examination

²⁵³ For example, his later assessment of impact by LF on RD251 – which concluded no significant impact on the monument - relied upon the proposition that LF 'would be wholly outside of the Gorddwr historic landscape area SSA Powys 42 in which the monument is located'. This reliance on artificial and inadequate baseline work undermines the conclusions reached by Mr Atkinson.

to whether the impacts amounted to substantial or less than substantial harm in policy terms²⁵⁴, or as to whether the range of other related policy and guidance tests are met. That is because the EIA process and conclusions do not apply the same conceptual tests.

265. Accordingly, it does not follow, for example, that the agreed findings that there would be significant cumulative adverse effects on the settings of RD084 and RD251 from the development sites would equate necessarily with either total loss, less than substantial or substantial harm in policy terms. As a matter of common sense such findings would no doubt inevitably place such impacts in one of those conceptual categories.

266. Mr Croft concluded in his assessment that the cumulative impacts of the four proposals would cause substantial harm and, in some instances, less than substantial harm to a range of designated and undesignated assets²⁵⁵.

267. His evidence demonstrated that the development of the four proposals would degrade the setting of a large number of designated and non designated assets, including scheduled monuments and listed buildings. This is set out in tabular form in his proof²⁵⁶.

Asset	Designation	Summary of Impact	Degree of Harm
Thirteen Scheduled prehistoric barrows on the 'Glog' (MG121 and MG122) and two non-designated barrows (ND1 and ND2)	Scheduled Monuments and related non-designated assets	Fundamental change to the setting of the assets which would degrade the significance of the monuments	Substantial Harm

²⁵⁴ Or as to the related statutory tests in s.66 and the EA as set out above.

²⁵⁵ Summarised in his table at paragraph 6.80, pps 46-47.

²⁵⁶ At pages 46-47, para 6.80

Asset	Designation	Summary of Impact	Degree of Harm
A linear grouping of scheduled and non-designated prehistoric monuments along the high ground at Banc Gorddwr (MG109, RD250, RD251, RD084, ND4-8 inc.)	Scheduled Monuments and related non-designated assets	Fundamental change to the setting of the assets which would degrade the significance of the monuments	Substantial Harm
A linear arrangement of prehistoric barrows running from Bryngydfa to Warren Hill (RD103, RD104, RD105, RD252, ND9-11inc., ND14)	Scheduled Monuments and related non-designated assets	Fundamental change to the setting of the assets which would degrade the significance of the monuments	Substantial Harm
Gors Lydan Barrows (RD 106)	Scheduled Monument	Degradation of visual relationships and impact on expansive views	Substantial Harm
Two Tumps (MG048)	Scheduled Monument	Degradation of visual relationships and impact on expansive views	Substantial Harm
Bryn Cwmrhiwdre Mound (MG280 and ND15)	Scheduled Monument and non-designated asset	Degradation of visual relationships and impact on expansive views	Substantial Harm
Beacon Hill (RD111)	Scheduled Monument	Change to expansive views from monuments	Less than Substantial Harm
Rhos-crug barrow group (RD110)	Scheduled Monument	Change to expansive views from monuments	Less than Substantial Harm

Asset	Designation	Summary of Impact	Degree of Harm
Castell-y-blaidd (RD102)	Scheduled Monument	Major development in proximity. Severe degradation of setting and approaches	Substantial Harm
Scheduled medieval upland settlement near to Castell-y-bliadd (RD155)	Scheduled Monument	Substantive changes to the visual and rural character of the monuments local setting	Substantial Harm
Fron Top Deserted Rural Settlement (RD173)	Scheduled Monument	Substantive changes to the visual and rural character of the monuments local setting	Substantial Harm
Three early Medieval scheduled cross dykes (MG062 and MG063)	Scheduled Monument	Disruption of views and degradation of rural context due to proximity of development	Substantial Harm
Castelltinboeth (RD038)	Scheduled Monument	Extensive views of windfarms in a broad arc around the site affecting important visual and historical connections	Substantial Harm
Blaen-nant-du farmhouse and attached ranges (LB1)	Grade II listed building	Windfarm in proximity of property affecting views of and approaches to farm as well as altering rural context	Substantial Harm
Cwm Yr Hob Farm, Old house and attached range and Cwm Yr Hob Barn (LB2)	Grade II listed building	Windfarms in proximity of property affecting approaches to farm and rural context	Less than Substantial Harm

268. He concluded that the scale of degradation would be such that for many assets Substantial Harm would occur to their significance. In relation to Llanbardarn Fyndd alone he concluded that it would have particular and notable impacts on the setting of:

- a. The scheduled and non-designated prehistoric barrows and scheduled cross dyke on the 'Glog';
- b. The linear grouping of scheduled and on-designated prehistoric barrows along Banc Gorddwr;
- c. The scheduled barrows and cross dykes at Two Tumps;
- d. Castelltinboeth, the scheduled medieval castle; and
- e. The Grade II listed Blaen-nant-du farm.

269. It is a result of the location of the development on the westerly side of the known concentrations of monuments²⁵⁷ that PCC consider that on its own Llanbadarn Fynydd is unlikely to cause Substantial Harm to these assets; and will most probably result in Less than Substantial Harm. However, Less than Substantial Harm is a broad term as we have submitted above.

270. Given the nature of the assets' settings and the nature of impacts, PCC consider that Llanbadarn Fynydd would have notable and significant impacts on the setting and significance of these assets which should be considered to be much closer to Substantial Harm than no harm²⁵⁸.

271. By contrast, Mr Atkinson made no findings of substantial harm at all. Indeed, despite conceding that there would in some instances be '*cumulative adverse effects*' on scheduled monuments his written and oral evidence shied away from making any findings as to harm of whatever kind at all.

272. To that extent Mr Atkinson did not engage with the policy context in a way that provided any substantive assistance to the inquiry.

Flawed approach of Mr Atkinson

273. Mr Atkinson's general conclusion that -in the context of a cumulative assessment - the Llanbadarn Fyndd scheme was '*acceptable*²⁵⁹' was founded on a process that had relied upon a flawed heritage context (as identified above). But it was also based upon a series of further errors as he had proceeded in a number of additional ways that were also misconceived. In particular:

274. Mr Atkinson's approach to setting and significance was contradictory.

- a. He accepted in cross examination²⁶⁰ that many of the nationally important barrows in the eastern area occupied prominent hills or distinctive topographical locations along watersheds, ridgelines or at the heads of passes and that assets were designed to be visible in the wider landscape.

²⁵⁷ See Croft evidence at Figures 2, 5,6 and 7

²⁵⁸ The one exception is the grade II listed Blaen-nant-du farm, where AC concluded that Substantial Harm would occur.

²⁵⁹ Simon Atkinson proof, p.54, 6.3.6

²⁶⁰ By PCC on 4.9.13

He also accepted that such barrows²⁶¹ remain as a visible presence in the landscape, that visual presence can be a key aspect of setting and can often be a vital aspect of the significance of such monuments as had been clearly explained in the relevant EH guidance²⁶².

- i. In particular he accepted that views from, towards, through and across the asset as a person moved through the landscape could contribute to the significance of the assets in question. Indeed, his answers accorded largely with the way that Mr Croft described the importance of setting and the contribution it made to significance in the context of the assets the inquiry examined²⁶³.
- ii. But that oral acceptance in cross examination contrasted with what his proof sought to argue. As the Secretary of State has before him that written evidence, it is important to record the different oral evidence recorded at the inquiry. His written evidence sought to unduly constrain the concept of setting to limited physical areas around the assets, in particular their "*immediate setting*". It ignored the importance and significance of the wider setting. This approach was not consistent with his oral evidence in cross examination. Nor was it consistent with various setting descriptions and assumptions in his earlier ES²⁶⁴ and SEI. For example, whereas his SEI²⁶⁵ assessment of setting had regularly referred to concepts of '*immediate setting*' in relation to assets – so implying the existence of a more extended setting²⁶⁶ as well – the word '*immediate*' had been removed in his proof²⁶⁷ in the context of almost identical text relating to several of the assets.
- iii. This limited and flawed assessment of settings was made worse by reliance upon wireframes in support of his cumulative assessment which only sought to address views '*from*' particular assets²⁶⁸.

²⁶¹ In particular, Two Tumps (MG048), Warren Hill (RD103), the Glog (MG121, 122), monuments on Banc Gorddw (RD250, 251)r, and at Gors Lydan (RD106)

²⁶² VATT-CUL-001 at p.19

²⁶³ Andrew Croft answers in chief and in proof at section 6, p 31ff

²⁶⁴ In the 2008 ES by contrast the assessment methodology employed made it clear that any 'score' in the magnitude of impact tables was on the implicit assumption that such an impact of change related to an aspect of 'setting', with such assessments extending up to the 5km study area.

²⁶⁵ Feb 2013 – Chapter 8 – cultural heritage

²⁶⁶ See on such concepts the EH guidance, *ibid*, at p.4, right hand column, 1st paragraph – where it is made clear that the extended setting may also effect significance..

²⁶⁷ There are numerous examples of this – see e.g. in relation to the Glog where the SEI Feb 2103 refers to the '*immediate setting*' of MG121/122 at p.229, but the word '*immediate*' is then removed in the context of similar language in the proof: see proof at p.28, 4.3.19. See also in relation to RD250, RD084, MG048 and other assets where a similar approach is taken.

²⁶⁸ There was in fact some confusion at the inquiry as to where the wireframes in appendix 2 to the SA proof were taken from. It was explained orally by Patrick Robinson (advocate for Llanbadarn Fynydd) that they were from the assets themselves. This, as stated, would be a similar approach adopted to the production of the cumulative wireframes in the Feb 2013 SEI – although it should be noted that those wireframes appear to be from somewhat different positions and they also included images of other proposed developments - broadly in the western area of SSAC and environs. It is accordingly necessary and useful to consider both sets of wireframes.

- iv. As the EH guidance and related policy makes clear- of key importance in the assessment of impact on setting and significance is a consideration of views as one moves through the landscape as well as views to assets. The wireframes relied upon did not enable the viewer to identify where other assets with key visual connections were in the landscape, nor did they enable consideration of views as one moved through the landscape²⁶⁹ – all of which were fundamental to an assessment of harm to significance especially in a cumulative assessment²⁷⁰.
 - v. Of course such matters can be considered on site, but it became apparent that the limited wireframes appear to have also constrained and underpinned the overall assessment Mr Atkinson produced of impacts – which we address below.
- b. His assessments of significance were unduly constrained and, in key regards, simply wrong.
- i. In relation to nearly all of the assets he used a formulaic description of significance in his proof²⁷¹ which ignored the contribution of the visual setting to the significance of the various assets and was limited to a bald description of the physical/historical nature of the asset.
 - ii. By way of example, despite accepting in cross examination that an aspect of the setting and significance of RD084 was evident from the visual relationship with other assets both from it and as one moved through the landscape, his proof made no such mention of those aspects in the context of either setting or significance²⁷². Again, this written evidence contradicted his oral answers.
 - iii. Similarly in relation to Castell y Blaidd (RD102) the scheduled Iron Age hill fort, he accepted in cross examination that the setting extended into the Gwenlas valley and that this extensive setting contributed to significance. However, no such aspects were mentioned in his written assessment of significance²⁷³ and these omissions clearly informed his subsequent contention that the scheme made no contribution to cumulative impact on significance²⁷⁴.
- c. A further aspect of the contradictory assessment produced by Mr Atkinson in his written proof related to the issue of 'sightlines'.
- i. Despite downplaying the extent of setting and ignoring entirely setting in the context of his written assessment of 'significance' in relation to

²⁶⁹ An example of this was the wireframe relating to RD250 – viewpoint 23 in SA appendix 2 to proof. Although from this wireframe it is evident that setting will in any event be transformed with the immediate landscape dominated by turbines, if the viewer were able to walk a short distance to the higher ground to the south there would be evident – in a baseline scenario prior to turbines – clear views to RD084 and RD251 and further to Warren Hill – all of which formed part of the context, setting and significance of the asset, but remains unappreciated if one relies of the wireframe produced by Simon Atkinson.

²⁷⁰ A point emphasised in the EH guidance VATT-CUL-001 at p.25, left hand column.

²⁷¹ See generally at section 4 of the proof, sub heading of significance in relation to each asset.

²⁷² See at paragraph 4.3.9, p.26

²⁷³ P.33, para 4.3.48

²⁷⁴ Para 5.2.15, p.46

- most of the key assets, Mr Atkinson on a number of occasions mentioned in fact the importance of sightlines between assets.
- ii. This was strange given his written contention that setting was limited and – implicitly – of no significance. It was stranger still because Mr Atkinson referred to sightlines on at least 2 occasions in the context of distinguishing his findings of significant cumulative impact from the concept of ‘substantial harm’.
 - iii. By way of example, in relation to RD084, his proof²⁷⁵ concluded that there would be a significant cumulative effect but ‘*that it would not result in substantial harm to the significance of the monument. This is because there would not be interference in any sight lines.*’. In fact, as was put to Mr Atkinson in cross examination,²⁷⁶ there would be direct interference with sight lines from RD084 to RD105 (Warren Hill) and as between other assets on the ridgeline below.
 - iv. Moreover, this reliance on a visual aspect of setting and significance appeared at odds with his assessments of the significance of that and other assets. When challenged, Mr Atkinson attempted to explain that he had meant to make it clear that there would need to be a total loss of significance for, in his view, the harm to be substantial²⁷⁷. That, of course, was not what his written evidence had said, nor would such an approach accord with the policy, guidance and case law referred to earlier.
- d. His approach to substantial harm was misconceived. His approach to substantial harm (expressed orally at least as defining substantial harm as only achieved where there was a total loss of setting and significance) was also put to Mr Croft cross examination. It was suggested to him that the concepts of total loss and substantial harm as expressed in EN-1 were meant by the draftsman to amount to much the same thing²⁷⁸. That construction is clearly wrong. What constitutes substantial harm are, as set out above, are matters of judgment. But substantial harm is clearly distinct in policy terms from total loss and may – as a matter of judgment – be constituted by something less than a total loss of setting or significance.

275. Llanbadarn Fynydd’s underlying assessment approach does not accord with the guidance and policy. The quantification of harm on the basis that only something equivalent to a total loss of significance to all aspects of setting²⁷⁹ could lead to a finding of substantial harm is wrong. It was only by adopting such an erroneous approach that SA was able to conclude that impacts on certain assets were not to be equated with substantial harm.

²⁷⁵ At p.43, 5.2.3

²⁷⁶ And explained by AC in chief

²⁷⁷ It appeared at one stage that SA was suggesting this concept had to incorporate direct impact/physical loss as well as loss to setting significance, although such a position was drawn back from. He adopted a similar confused position on the application of his assessment to substantial harm in relation to RD251 at paragraph 5.2.13, p.46 of his proof

²⁷⁸ XX of AC by PR on 5.9.13

²⁷⁹ In the context of indirect impacts

Cumulative assessment

276. In addition to the overarching matters dealt with above, the cumulative assessment provided by Mr Atkinson was also flawed for a number of additional reasons. In particular:

- a. The differing assessment terminology²⁸⁰ in the tabular assessments of effects relied upon was as a result of tables seeking to relay judgments of others that Mr Atkinson had, it appeared, taken from assessments/ESs of other proposals and then inserted these into his cumulative assessment exercise. That meant he had not in fact formed his own independent view as to impacts on other schemes.
- b. That approach was obviously less than ideal and resulted in some clear and hard to explain differences within the tabular assessments. As Mr Atkinson accepted, the various and obvious inconsistencies in the assessments were simply not logical²⁸¹. For example in relation to the impact on Two Tumps (MG048) SA's table in the SEI²⁸² concluded that Bryngydfa and Llaithddu²⁸³ had a '*moderate*' magnitude of effect and a '*moderate*' impact on significance whereas Llanbadarn Fynydd (which appeared much closer in the wireframe assessment²⁸⁴) was scored by Mr Atkinson as having a '*low*' magnitude of effect and no impact on significance²⁸⁵ at all. This illustrated not only that his assessment could not be viewed as a cohesive and consistent body of expert work but also that - it appeared - Mr Atkinson's view of the impact of his scheme was markedly inconsistent with the judgments on impacts made by professionals who discerned greater effects on assets from turbines much further away with less prominence on setting and significance in heritage terms.
- c. Despite guidance²⁸⁶ making it clear that a cumulative assessment should assess the '*overall effect*' of a series of discrete developments, Mr Atkinson did not do that. Rather he produced an assessment which only focussed upon the role of Llanbadarn Fynydd within the overall cumulative impacts and only concluded significant impacts would take place if the scheme contributed materially (in his view) to such impacts. That meant that in instances when there would be a significant effect as a result of the proposed developments, but Mr Atkinson felt that Llanbadarn Fynydd

²⁸⁰ Under the headings of magnitude of effect and significance

²⁸¹ Answers in chief

²⁸² Table 8.12, p.239

²⁸³ Some 7.8 km away

²⁸⁴ Viewpoint 11 in appendix 2 of Simon Atkinson proof

²⁸⁵ There were several such discordant assessments – see too in relation to RD084, table 8.11 p.238 in SEI – BR achieves a '*major/mod*' score on magnitude and on significance whereas LF scores '*medium*' with '*NS – not significant*' in relation to a significance score. The result is, at best, bizarre.

²⁸⁶ For example VATT-CUL-001

would not individually contribute, he made no cumulative finding of significant effect²⁸⁷ overall at all.

- d. This approach contrasted with the more comprehensive approach of Mr Croft who had himself assessed properly the cumulative impact of all four schemes.
- e. His cumulative assessment was limited, it appeared, to assessing the views from assets (based on his wireframes) rather than comprehensively assessing the range of experiences as required by a proper approach and assessment of setting and significance.

Other matters

277. In any event, some of the Atkinson judgments were hard to fathom. Some aspects of this were considered in oral evidence. In relation to impact upon Two Tumps (MG048) it was clear that the visual, prominent location of the monument is a fundamental aspect of setting and significance. As Mr Croft explained, key visual relationships existed as between this asset and the Glog and further south towards the scheduled assets on Banc Gorddor and southwards then to Gors Lydon (RD 106) and Warren Hill (RD 105). SA accepted such views to the south were aspects of significance. The Llanbadarn Fynydd photomontage at fig 12a in Folder LVIA 5 accompanying Mr Atkinson's proof demonstrated, even in the context of a snowy scene, the clear and extensive impacts the proposal would have on the setting and significance of these nationally important assets. Yet Mr Atkinson's assessment concluded a lack of significant adverse impact on the basis of an absence of a sense of enclosure²⁸⁸. That conclusion was, no doubt based, on the flawed baseline²⁸⁹, the erroneous approach to setting²⁹⁰ and significance²⁹¹, and the flawed approach to cumulative assessment - but even so appears to be a conclusion contrary to common sense.

Overall Conclusions

278. It is clear that that the evidence and assessments presented on behalf of Llanbadarn Fyndd are based on an approach that is flawed and which does not accord with relevant policy and guidance. By contrast the evidence presented on behalf of PCC is robust and compliant with policy, guidance and caselaw. It should be preferred. The statement of common ground signed as

²⁸⁷ For example in relation to RD103 – Simon Atkison proof at p.47, 5.2.17. Finding of significant cumulative impact in BR and GL but no contribution from LF in SA's view so that there was no recorded overall significant cumulative impact.

²⁸⁸ Simon Atkison proof, para 5.2.9, p.45

²⁸⁹ The area of outstanding Landmap value within which Two Tumps falls was not assessed in evidence by SA

²⁹⁰ His proof did not mention the importance of views to and from the south, despite acceptance in xx

²⁹¹ His characterisation of significance failed to mention setting and views – proof of Simon Atkison at p.30, 4.3.31

between the applicant and CADW and CPAT²⁹² is based upon the flawed results in the ES and SEI and does not in fact conclude on key issues of harm. But to the extent that these bodies have not objected in reliance on such assessments, their views must be treated with caution. Whilst many aspects of judging harm rely upon matters of expert judgment, the disparity in expert conclusions in this instance can be explained by the flawed approach adopted in the cultural heritage evidence relied upon by the applicant.

279. The findings by Mr Croft in relation to the harm caused by Llanbadarn Fynydd alone will require consideration as part of the decision making balance. In so far as those findings indicate less than substantial harm this has not led to a discrete cultural heritage objection from PCC, but the findings remain material considerations as is made clear in policy. The finding of substantial harm in relation to the grade II listed Blaen-nant-du farm will also require consideration in the light of the policy tests identified above.

280. The evidence relating to cumulative impacts demonstrates that substantial harm to the significance of a large number of nationally important assets would occur as result of the degradation of their settings. The scale and extent of harm is such that it is undoubtedly contrary to Welsh and local planning policy set out in Welsh Office Circular 60/96: Planning and the Historic Environment: Archaeology, 1996; Planning Policy Wales; and the Powys Local Plan. It cannot be said that such impacts were anticipated or envisaged by TAN 8.

281. Moreover, the advice in EN1 clearly indicates that substantial public benefits would be required to justify approval of the four proposed schemes given the number of scheduled monuments whose significance would be substantially harmed and the wider degradation that would occur to related non-designated assets. Although three of the developments are not before this inquiry, the cumulative impacts are still an important issue that require consideration, particularly in the context of the related landscape and visual evidence from Mr Russell-Vick and the desensitisation of the landscape which the Llanbadarn Fynydd scheme would give rise to.

282. In the context of heritage impacts this is particularly the case as the degradation of the setting of identified heritage assets caused by Llanbadarn Fynydd would also change the baseline situation for the various assets. This may well have the additional effect of lessening the potential harm caused by other proposed schemes as the setting of those assets would already be degraded. These factors could lead to other schemes being consented on a piecemeal basis with gradually increasing harm to the historic environment. That can be avoided, as can the harm caused to heritage assets by Llanbadarn Fynydd alone, by a refusal of consent.

²⁹² VATT-HISTENV-SOCG-SSA-C

SSA C HIGHWAYS

283. In the light of the evidence now before the Inquiry, PCC no longer maintains an objection to any of the SSAC proposals by reason of their impact on the local road (i.e. county road) network subject to the imposition of satisfactory conditions. The Council's formal position in relation to Llanbadarn Fynydd and Llaithduu is set out in the respective highways statements of common ground.²⁹³ In relation to Llandinam it is contained in PCC's proof of evidence submitted to the Inquiry.²⁹⁴ The position in relation to each of the schemes may be summarised as follows:

Llanbadarn Fynydd

284. Access onto the wind farm site will be gained directly from the A483 trunk road by creating a new private means of access. The development site straddles and uses the C1057 for internal site access and access tracks would also cross the U1298.²⁹⁵

285. The proposed works to the C1057 comprise local verge strengthening to accommodate the AILs, the creation of passing bays to accommodate the additional construction traffic and a number of accesses into the site. The works to the U1298 comprise a single crossing point. Pre-construction surveys will be required along the relevant sections of both roads to identify further strengthening works to be carried out by the applicant prior to the commencement of construction.

286. As with each of the schemes before the Secretary of State, some of the road improvement works will be permanent, others will be temporary for the period of the construction works. The precise details will be a matter for resolution through the section 278 agreement but PCC's present thinking is that new passing bays will be retained as a benefit to traffic generally as will localised road widening which will facilitate any AIL movements to effect repairs and or replacement of components during the lifetime of the wind farm. To ensure that these retained works have the minimum effect on the rural character of the road, the objective will be to construct them using a reinforced grid which will enable grass and wildflower growth but, if ever necessary, allow for the passage of AIL's without further intrusive works. A refined option also being considered is restoration of the verge following construction with retained top soil but leaving the reinforced grid in place. This would discourage vehicles from overrunning the verge but also allow for removal of the top soil should turbine or component replacement require it.

²⁹³ VATT/TRANS/SOCG/SSA-C & FWLC/HIGHWAYS/SSA-C

²⁹⁴ OBJ 002 (PCC) – TRANSPORT-POE-WILLIAMS-SSA-C paras. 34-44 pp8-12

²⁹⁵ Ibid proof Fig.1

287. PCC is confident that an appropriate balance can be struck between the need to preserve the rural character of the roads and the future needs of the wind farm industry. There is an element of compromise involved but it is an acceptable one.

Llaithddu

288. Agreement on in principle designs for the access proposals has been reached following detailed discussions between PCC and the applicant and the submission of outline proposals for works to the county roads numbered C2025 (Pentre Road) and U2835.

289. Access onto the wind farm site will be gained using the C2025 from its junction with the A483 trunk road and the U2835. The U2835 extends into the wind farm site as an un-surfaced stone road.²⁹⁶

290. The proposed works to the C2025 and U2835 which will be secured by means of a section 278 agreement will comprise local verge strengthening to accommodate AILs and the creation of passing bays to accommodate the additional traffic. Preconstruction surveys will be required to both roads to identify further strengthening works to be carried out by the applicant prior to commencements of construction. PCC's aim which it is satisfied can be secured with the imposition of appropriate conditions, is that the rural character of the roads will, as far as is practicable not be affected in the long term by the improvement works.

291. It is important to note however that the Llandinam proposal also proposes to make use of the same access route (for the length up to the Llandinam site access). However, at present the two scheme advance different local road improvements partly because the Llaithddu scheme's turbine size allows for less extensive works to enable AIL access to their site.

292. Subject to the Session 4 grid issues, if Llandinam is consented then its timed grid connection (2016) will mean that it is likely to proceed well in advance of the Llaithddu proposals. Llaithddu have confirmed²⁹⁷ that in these circumstances they can utilise the Llandinam proposals without any further highway works.

293. However, there is always a risk that projects of this kind become delayed and, indeed, if the Secretary of State endorses a strategic approach to the grid connections of any consented schemes which necessitates review of the Manweb scheme, the Llandinam proposal may progress after the Llaithddu proposal should they both be consented in whole or in part.

²⁹⁶ OBJ 002 (PCC) – TRANSPORT-POE-WILLIAMS-SSA-C Fig.1

²⁹⁷ Buchan evidence in chief and PCC XX 3/9/13

294. In these circumstances, it is important that the disruption to traffic on the local roads is minimised and also in the interests of sustainable development that in these circumstances a strategic approach is also taken to the C2025/U2835 improvements by ensuring that only one phase of highway improvements is undertaken capable of meeting the needs of both Llaithddu and Llandinam. That is agreed on behalf of Llandinam²⁹⁸ and is a matter which the Secretary of State will need to address by condition in the event that both schemes are permitted.

295. With PCC's intended approach to a combination of temporary and permanent improvement works, it is satisfied that a difficult but acceptable balance can be struck between preserving the rural character of the roads and any future needs of the wind farm.

Llandinam

296. Outline proposals for the works to the C2025 and U2835 have been submitted by the applicant to PCC.²⁹⁹ Again these will be a matter to be addressed by means of a section 278 agreement with the proposal being that Llandinam will acquire the necessary land to effect the improvements and to dedicate the land as highway.

297. As with Llaithddu, the access to the wind farm site will be gained using the C2025 from its junction with the A483 trunk road and the U2835 up to its junction with the existing Llandinam wind farm access road.

298. The proposed works will comprise some short sections of local realignment, verge strengthening to accommodate AILs and the creation of passing bays to accommodate the additional construction traffic. As with the other schemes, pre-construction surveys will be required along both roads to identify further strengthening works to be carried out by the developer prior to the commencement of construction.

299. A particular concern of PCC on sight of Llandinam's revised local access road proposals has been the effect of the realignment of the U2835 on a locally distinctive stand of mature trees.³⁰⁰ The effect of the proposed realignment of the road by straightening in this location is the loss of between 10-15 mature beech and sycamore trees.³⁰¹ That loss would be wholly undesirable unless no alternative existed. The desirability of avoiding this impact has been accepted by the applicant³⁰² and would ensure appropriate compliance with the schedule 9 duty to mitigate.

300. As with the Llaithddu scheme, the improvement works are likely to involve a combination of permanent and temporary works though, because of the

²⁹⁸ Tucker XX PCC 3/9/13

²⁹⁹ Tucker proof appx 2

³⁰⁰ See for location of the trees Williams proof (OBJ 002 (PCC) – TRANSPORT-POE-WILLIAMS-SSA-C) figure 2; Vol. 1 Llandinam SEI April 2013 Figure A-4-3 Area J

³⁰¹ See Vol 1 SEI April 2013 section 6.6.4.1 pg 8 of Chapter 6 and table 6-4

³⁰² Tucker XX 3/9/2013

larger turbine size, the scale and effects of the works are greater. However, PCC are of the view that, suitably conditioned, a difficult but acceptable balance can be struck between the retaining the rural character of the road and any future needs of the wind farm..

Conclusion on Local Highways Issues for SSA C

301. PCC is satisfied that its objection to the local road proposals of each of the applicants has been satisfactorily resolved by the revised proposals and further information provided and the agreement reached on the appropriate conditions to be attached to the consent. The proposals can be safely accessed, without unacceptable effects on other local road users or on the very rural character of the affected local roads.

SECTION 4: SSAB SCHEME SPECIFIC AND CUMULATIVE APPRAISALS

Introduction

302. Since the opening of this inquiry substantial amounts of new material has been submitted by each of the SSAB applicants. This has allowed agreement to be reached on some, but not all, of the issues. We identify below, by way of summary, the key remaining issues and the case pursued by PCC

Outstanding Issues and PCC case

In relation to Carnedd Wen:

303. The Council consider that the 5 north eastern turbines (R23, R26, R28, R29 and R30 – ‘the Carnedd Wen five’ or ‘CW five’’) are unacceptable in landscape and visual terms and in light of the overall balance required to be undertaken by a decision maker. So as to minimise the impact on the environment the Council invites the Secretary of State to remove these five turbines from any consented scheme.

304. If the Secretary of State concludes that access to a consented Llanbrynmair proposal should be achieved through the sharing of access through Carnedd Wen it will be necessary to ensure that a grant of consent to Carnedd Wen does not prevent that coming forward. PCC have proposed that, in that scenario, relevant conditions are imposed on any Carnedd Wen consent so as to ensure that the sharing of access can take place³⁰³.

In relation to Llanbrynmair:

The Llanerfyl to Talerddig access proposals

305. The proposed local access arrangements which seek to utilise accesses from the Llanerfyl to Talerddig county road would have a severe impact on the Nant yr Eira Valley. They would cause considerable disruption and a range of effects that are unacceptable in landscape and visual terms and which are sufficient to render the whole Llanbrynmair proposal unacceptable when considered in the overall balance. For the avoidance of doubt, if this were the schemes only available access it would remain unacceptable.

306. The Environmental information submitted by the applicant in support of the Llanerfyl to Talerddig access proposals is deficient in a number of respects and fails to provide sufficient information so as to comply with

³⁰³ This issue has been raised for many months, even prior to the February 2014 SEI from Llanbrynmair which proposed an amended scheme with a formal shared access proposal. See PCC note filed in October 2013 on the ‘practicalities of implementation’ of alternative access: OBJ/002/PROC/006.

regulation 4 and schedule 4 of the Electricity Works (EIA) Regulations 2000. In consequence the Secretary of State is precluded in law from granting consent for a proposal which includes, as an element, the Llanerfyl to Talerddig access proposals.

307. The Council has demonstrated in evidence that, in principle, an alternative access could be provided and utilised by the applicant which would avoid the environmental harm inherent in the Llanerfyl to Talerddig access proposals. This 'in principle' alternative access arrangement illustrates that it would be possible to gain access for AILs (at the very least) from the adjacent Carnedd Wen proposed wind site and utilise a single southernmost access off the Llanerfyl to Talerddig road for additional construction traffic. This alternative is feasible whether or not Carnedd Wen achieves a consent.

308. Llanbrynmair has, in continuing to pursue the Llanerfyl to Talerddig local access arrangements as part of the application:

- a. failed to comply with a range of policy and legal provisions relevant to the decision making process which emphasise the importance of avoiding, minimising and reducing adverse impacts – especially in the context of available, satisfactory alternatives.
- b. failed to demonstrate that it has complied with the statutory duty for reasonable mitigation imposed upon it by Schedule 9 of the Electricity Act 1989; and

309. If the Secretary of State accepts the propositions in either paragraph 305 or 306 above then (and subject to submissions in relation to the recently submitted SEI in February 2014 below)

- a. the Llanbrynmair application should be refused; or alternatively
- b. consent should be granted subject to a condition that the Llanerfyl to Talerddig access proposals should not be implemented; or alternatively
- c. the Secretary of State could indicate he is minded to grant consent for the application provided a suitable alternative access scheme is brought forward.

310. In the event of any of the scenarios envisaged above the Secretary of State will need to consider what form of conditions he may need to impose on any consent granted to Carnedd Wen so as to ensure a shared access solution can come forward.

311. Even if the Secretary of State does not consider the impacts of the Llanerfyl to Talerddig access proposals to be such that he is obliged to refuse the scheme, he is still required to consider whether the application should only be permitted with an alternative access. This is because there is a necessity in this case for the decision maker to consider whether an alternative access is a suitable way to achieve a mitigation of harm and in

addition to assess the extent to which the applicant has complied with the duty contained in Schedule 9 of the EA 1989.

The amended shared access proposal contained in the February 2014 SEI

312. Llanbrynmair has recently (Feb 2014) submitted further SEI containing (in part 2) – as Powys understands it – a formal amendment to the application based on a shared access with the Carnedd Wen application which it wishes the Secretary of State to consider ('the amended shared access proposal'). Assuming the Secretary of State is prepared to accept and consider that material as a formal amendment - and PCC is content for that to happen - PCC makes the following additional outline submissions.
313. This amended shared access proposal is similar to the 'in principle' alternative access considered by PCC in evidence (Session 2), although it does not in terms encompass the scenario in which Carnedd Wen fails to achieve a consent. However, these recent proposals are only put forward as an alternative to be considered by the Secretary of State in the event that he finds the Llanerfyl to Talerddig access proposals to be unacceptable, and therefore, PCC maintains the position outlined above in relation to those Llanerfyl to Talerddig access proposals.
314. The February 2014 SEI further demonstrates the feasibility of an alternative access as both an operationally satisfactory and less environmentally damaging alternative to the Llanerfyl to Talerddig access proposals.
315. In the event that the Secretary of State agrees with PCC as to the unacceptability of the Llanerfyl to Talerddig access proposals and/or considers he is precluded in law from granting them consent, or considers that the alternative access arrangements provide reasonable mitigation, then - in the event that Carnedd Wen achieves a consent - PCC considers that Llanbrynmair could be granted consent provided the use of the amended shared access proposals is properly secured.

STRUCTURE OF SUBMISSIONS

316. The detailed submissions below are structured as follows:

SSAB

- a. The Landscape and visual context for the Carnedd Wen and Llanbrynmair applications.

The Carnedd Wen application

- b. The Banwy Valley - the context for the Carnedd Wen five.
c. Landscape and Visual effects of the CW five – the harm caused and the benefits of removal.
d. Policy, summary and conclusions re the CW five and the mechanism for removal.

The Llanbrynmair application

- e. Llanerfyl to Talerddig access proposals – background to consideration by Powys in 2012 and the 'new' Aug 2013 SEI local access proposals.

- f. Landscape and visual context for the access proposals -the Nant yr Eira Valley.
- g. The nature and extent of the works proposed by RES – August 2013 SEI.
- h. The Powys landscape and Visual objection.
- i. Other considerations relating the proposed local access; disruption, highway changes and deliverability.
- j. The proposed alternatives-the demonstration by PCC of 'in principle' viable alternatives and the February 2014 SEI.
- k. Legal and Policy context for the mitigation of harm and consideration of alternatives.
- l. The failure by RES to reasonably mitigate harm and consider alternative access options.
- m. The inadequacy of the submitted Environmental Information relating to the local access proposals.
- n. Llanbrynmair summary.
- o. Practical considerations and options for the Secretary of State.

THE LANDSCAPE AND VISUAL CONTEXT FOR THE CARNEDD WEN AND LLANBRYNMAIR APPLICATIONS.

Approach and partial acceptability

317. PCC has provided a comprehensive and evidence based assessment of the relevant landscape context for SSAB and beyond, identifying relevant published landscape assessments and data³⁰⁴.
318. Other than in respect of the two important areas of landscape/visual objection raised by it³⁰⁵ (and in relation to which detailed submissions are made below) PCC consider that the majority of the turbines of the two schemes are acceptable in landscape and visual terms³⁰⁶, both individually and cumulatively.
319. That is not at all to say that even the 'acceptable' elements of the proposed schemes would avoid a range of significant and adverse long term effects. They would not. However, PCC consider the adverse effects of those elements, on balance, to be acceptable in the particular policy and landscape context given SSAB's characteristics and suitability to wind farm development.

General Landscape Context

320. The upland mass which forms the immediate setting for the two SSAB applications before this inquiry is framed in the north by the Banwy Valley, by

³⁰⁴ OBJ-002-LAND-POE-RUSSELL-SSA-B Proof of Evidence of PRV at section 3, paras 3.1-3.24, pps 12-20. See earlier sections of these submissions which dealt with the approach and methodology employed by PCC in relation to landscape and visual matters.

³⁰⁵ Relating to the five Carnedd Wen turbines and the Llanbrynmair local highway proposals

³⁰⁶ OBJ-002-LAND-POE-RUSSELL-SSA-B Proof of Evidence of PRV at section 5, paras 5.1-5.21, pps 27-34. See also matters agreed in a S of CG with RWE: RWE-PCC-SOCG-LAND-SSA-B with Powys CC – Final.

the Dyfi Valley in the west and by the Carno Valley to the south. To the east, the landform diminishes gradually towards the Severn Valley. It has been carved into by various subsidiary water courses³⁰⁷.

321. The Carnedd Wen/Llanbrynmair Plateau is a large scale, 'simple' landscape with a broad domed landform and a regularised land cover dominated by coniferous plantation blocks with open moorland on the lower slopes. It has almost no settlement. Its substantial scale is its overwhelmingly dominant visual characteristic.
322. If both schemes were to be constructed they would be read together in this landscape as a single, very substantial wind farm spreading over an area of around 8.5km north south, by 4 km, east west³⁰⁸.
323. As the SEIs identify, there would be a range of significant long term visual and landscape effects from the Carnedd Wen and Llanbrynmair turbines. The greatest and most significant visual impacts of the turbines of both schemes would be experienced across the whole of the Nant yr Eira Valley and the Banwy Valley – specifically its valley floor and northern valley side. Both the valleys are wholly or largely landscapes of High overall evaluation and of outstanding scenic quality.
324. In relation to the Nant yr Eira Valley, the Llanbrynmair turbines would have greater effects. In relation to the Banwy Valley, the Carnedd Wen turbines would have the greater magnitude of impact.

Visual effects

325. The visual effects of Carnedd Wen, notwithstanding extensive landscape enhancement, would remain negative overall – even in a residual long term scenario.
326. The visual impact of the Carnedd Wen access proposals on views from Dugoed Valley and high ground from within the National Park would be limited in degree, extent and duration and not significant.
327. There would be a range of significant long term visual effects of the Carnedd Wen and Llanbrynmair turbines³⁰⁹.
328. One of the National Park selected viewpoints in evidence³¹⁰, on the nearest high ground in the park to the proposals, would clearly be significantly affected by the Carnedd Wen scheme. Other views, deeper into the National Park³¹¹, record small to medium magnitude of effects for

³⁰⁷ See Figure PRV1 in appendix A to the PRV proof at : OBJ-002-LAND-POE-RUSSELL-APPA1-SSA-B Appendix A Topography 1

³⁰⁸ PRV proof, OBJ-002-LAND-POE-RUSSELL-SSA-B, at para 5.24, p.32

³⁰⁹ OBJ-002-LAND-POE-RUSSELL-SSA-B Proof of Evidence of PRV at section 5, at para 5.8 esp, p.29

³¹⁰ Carnedd Wen viewpoint L at Foel Dugoed (see AD-RWE-018 Supplementary Environmental Information September 2011 Volume 4, Fig 6.15a-d inclusive)

³¹¹ For example, Llanbrynmair viewpoint 16, AD-RES-034 Supplementary Environmental Information August 2013, Volume 3, Fig 4.28; Carnedd Wen viewpoints M and G

Carnedd Wen and would be on the cusp of being significant in light of the high sensitivity of the receptors at those locations.

329. Individually, Llanbrynmair would not have a significant effect on the National Park.

330. Whilst some high viewpoints in the National Park would experience a significant visual change, neither scheme individually would amount to a significant visual effect on it.

Landscape effects³¹²

331. The landscape of the Nant yr Eira Valley would be characterised by both schemes, especially Llanbrynmair to a distance of c 3km.

332. The presence of the Carnedd Wen turbines, breaking the horizon of the Banwy Valley, would have a characterising effect across its breadth, to a distance of some 3-5km³¹³. As detailed below, elements of this would not be acceptable.

333. The substantial simplicity of the host landscape³¹⁴ is able to accept the turbines with a substantial and significant change.

334. The proposed landscape enhancements³¹⁵ do not wholly outweigh the adverse character impacts of the turbines.

Cumulative effects (within the broad SSAB context)

335. The in-combination cumulative effects of the two schemes together with the existing baseline of all other operational and consented wind farms identified by PCC³¹⁶ would be acceptable in landscape and visual terms.

Supplementary Environmental Information September 2011 Volume 4, Fig 6.16 and 6.12 respectively.

³¹² There was a broad range of agreement as between the assessment undertaken by PRV of landscape character impacts and that of the various SRI assessors: On this see PRV OBJ-002-LAND-POE-RUSSELL-APPs E & G especially for assessments of schemes as against LANDMAP and the PLCA. The Carnedd Wen SEI assessment identifies characterizing effects extending up to a consistent potential 2km from the turbine, whilst Llanbrynmair 2013 SEI gives a distance of some 3km. PRV explained in evidence how the extent of characterising effects is driven by existing character but also by topography and the resultant visibility. As such, the judgments of the CW/Llanbrynmair SEIs appear too simplistic in approach as compared to that of PRV. This was the subject of xx of JS by PCC. The JS (Mr Stevenson) approach – as evidenced particularly in his proof RWE-LAND-POE-STEVENSON-SSA-B Proof of Evidence LANDSCAPE at 6.7 – 6.11 in conjunction with his appendix 14 – was unduly simplistic and in some regards contradictory. This is discussed further below.

³¹³ As detailed in later submissions, to some extent the landscape impact on the Banwy Valley would not be acceptable.

³¹⁴ As supported by the LANDMAP and PLCA assessments for the plateau

³¹⁵ For CW, in essence removing the forestry and replacing with moorland and for Llanbrynmair smaller, but beneficial effects.

³¹⁶ OBJ-002-LAND-POE-RUSSELL-SSA-B Proof of Evidence of PRV at section 5, paras 5.12-5.19, pps 31-33. The relevant baseline of relevant operational and consented wind

336. In incremental cumulative terms, the effects of the 50 turbine Carnedd Wen scheme would be more significant than the 30 turbine Llanbryn-mair scheme. This is not simply because it is larger, but also because it has a significant and unacceptable effect on the Banwy Valley. However, in a scenario which consisted of all of the in planning schemes, plus the operational and consented in combination there are elements of some of the schemes which Powys submit would be significant and unacceptable in landscape and visual terms and which would lead to the overall in combination effect being unacceptable³¹⁷.

CARNEDD WEN

The Banwy Valley - the context for the Carnedd Wen five

337. The Banwy Valley floor and sides, from Llanerfyl west to Foel, has a more settled and less remote and tranquil character than the Nant yr Eira Valley. The A458 runs along it and there are several small villages.

338. Its valley sides are cut into by numerous streams and tributaries of the Afon Banwy. These have produced a complex and varied topography of interlocking, rounded hills and steep-sided valleys. Above all of these, the high moorlands of the Carnedd Wen/Llanbryn-mair Plateau form the ultimate horizon to the south.

339. The combination of the existing high level of intactness of the farmed valley and the upland horizons, rolling topography and attractive villages means that the landscape is of high scenic quality and of considerable value³¹⁸.

340. Analysis of relevant LANDMAP data confirms this³¹⁹. It indicates that, overall, the Banwy Valley is a landscape of value and of considerable landscape sensitivity resulting from identified qualities and scale.

341. The valley is comprised of 4 Visual and Sensory Aspect Areas ('VSSAs'), two of which are of high overall evaluation³²⁰. It is, of course, important when

farms for the cumulative impact assessment of Carnedd Wen and Llanbryn-mair include the existing Cemmaes, Carno A, B and Carno Extension and Mynydd Clogau Wind Farms, together with the consented but as yet not commenced Tirgwynt Wind Farm. Tirgwynt was consented by Powys County Council in 2012.

³¹⁷ As explained by PRV in OBJ-002-LAND-POE-RUSSELL-SSA-B at para 5.20 of proof, p.34

³¹⁸ A proposition accepted in xx of Jeffrey Stevenson by Powys.

³¹⁹ SEE PRV proof at section 3, para 3.1-3.5. See also JS proof of evidence at Appendix 4 - 'landscape and visual considerations updated figures - September 2013', Figures 6.1-6.5.

considering LANDMAP data and especially visual and landscape effects, to consider, where appropriate, effects on broader areas than just those defined by the boundaries of particular aspect areas³²¹. This is of obvious importance in the context of large scale wind farms such as Carnedd Wen.

342. LANDMAP's description of the Llanerfyl Mosaic Farmlands VSSA³²² in fact highlights the special and '*strong visual link with Banwy Forest and rising upland area of Pen Coed to the west.*'³²³ as well as its '*Outstanding*' scenic values³²⁴, intimate scale and enclosed, tranquil characteristics and strong sense of place.

343. The Banwy Forest VSAA³²⁵ is the area within which much of the Carnedd Wen site lies and the Pen Coed Upland VSSA³²⁶ covers an area within which the remaining 3 of the CW five are proposed to be located.

344. The baseline landscape data indicates that, notwithstanding the A458, the Banwy Valley has high aesthetic qualities, a modest scale and a relative absence of intrusive features³²⁷. It is evident that there exists an enclosed and settled quality of the valley floor, which contrast strongly with the high, open moorland hills of Carnedd Wen to the south.

'The Carnedd Wen five'

345. The Council consider that the 5 north eastern turbines (R23, R26, R28, R29 and R30 – 'the CW five') would be unacceptable in landscape and visual terms³²⁸. In essence, the proposed CW five are poorly sited and would cause visual and landscape harm to the Banwy Valley. Their removal would enable, in part, a consented scheme to demonstrate appropriate landscape and visual sensitivity to local context³²⁹ and provide suitable, proportionate mitigation of harm.

346. The five turbines in issue form part of a group of 12 turbines at the north eastern end of the scheme³³⁰. They are sited in the promontory area of forestry (or close to it in moorland) west on the hill Pen Coed. As noted

³²⁰ See Fig 6.5 in appendix 4 of JS proof – 'updated figures, September 2013'. Llanerfyl Mosaics (422) and Pont Llogel Farmlands (278). See too Banwy Floodplain VSSA (119) and Pencoed Upland (571).

³²¹ A point reinforced in relevant LANDMAP guidance – see Guidance note 3, May 2013 at CPL-LAN-008, p.11 of 20.

³²² MNTGMVS422 – see in: OBJ-002-LAND-POE-RUSSELL-APPH-SSA-B Appendix H

³²³ Also noted are the *outstanding* scenic values, high aesthetic qualities and limited intrusion.

³²⁴ The selected viewpoints in OBJ-002-LAND-POE-RUSSELL-APPA3-SSA-B Appendix A PRV 3 and 4 are representative of the *Outstanding* area evaluation.

³²⁵ MNTGMVS320

³²⁶ MNTGMVS571

³²⁷ See PRV proof generally at paragraph 6.8, p.37

³²⁸ See in the statement of cg with RWE where this is identified as an issue at para 5 - RWE-PCC-SOCG-LAND-SSA-B with Powys CC – Final

³²⁹ So as to accord with policy aims described in Planning Policy Wales, 6th Edition 2014 at para 12.8.14

³³⁰ Identified in purple shading in PRV's appendices at: OBJ-002-LAND-POE-RUSSELL-APPA2-SSA-B Appendix A Topography 2 - 'PRV2'.

above, they are located in an area with an identified special visual link to the Llanerfyl Mosaic Farmlands VSAA and the Banwy Valley.

347. They lie (as can be seen from PRV 2³³¹) within the TAN 8 Strategic Search Area identified in 2005, but fall outside of the reviewed refined boundary identified by Arup in 2008³³².

348. The evidence proceeded³³³ upon the settled policy basis that, when considering landscape/visual 'acceptability'³³⁴, it did not follow from the mere fact that turbines are proposed to be sited within the TAN 8 strategic search area boundary that they would have acceptable effects.

Arup work post TAN-8 – refinement of boundary and the CW five

349. PCC's position in relation to the CW five finds some support, as Mr Russell-Vick explained, by the body of work and assessment that had taken place, post TAN-8, by Arup³³⁵. The 2006 Arup White Study³³⁶, which was primarily a landscape and visual assessment exercise seeking to identify 'preferred areas' within SSAB and which had accepted limitations³³⁷, proposed a refined boundary which would now excludes some 12 turbines³³⁸.

350. The 2008 Arup work³³⁹ also had a landscape/visual focus. It is material to observe in this context that the 'refined' TAN 8 boundary it recommended, whilst in fact extending some areas of the TAN 8 boundary in the north east, excluded the land upon which the CW five are proposed³⁴⁰ specifically because of the visual exposure of the Banwy Valley. It was considered that wind farm development in that area would impinge upon the setting of the

³³¹ OBJ-002-LAND-POE-RUSSELL-APPA2-SSA-B Appendix A Topography 2 - 'PRV2'

³³² See generally CD/COM/10A

³³³ Accepted as an approach by Mr Stevenson in xx by Powys

³³⁴ In the context of the landscape and visual impact evidence produced by Mr Stevenson (RWE) and PRV (Powys), the experts limited their assessment, quite properly, to a narrower concept of 'acceptability' than that which embraced the full range of planning and other policy considerations – a point accepted in xx of JS

³³⁵ OBJ-002-LAND-POE-RUSSELL-SSA-B Proof of Evidence, section 4, paras 4.1-4.16

³³⁶ CD/COM/017. It used LANDMAP and visual sensory data as a basis for landscape character work. The method (see sect 2, p. 10ff) was essentially a simple conversion of landscape sensitivity – as determined by LANDMAP –into landscape capacity, whereby lower sensitivities became higher capacities.

³³⁷ See PRV proof at paragraphs 4.8-4.10 especially where deficiencies and limitations are highlighted. We have dealt with general points relating to the Arup work earlier in these submissions.

³³⁸ See plan at p.49 of the study

³³⁹ CD/COM/10A – 'Local Refinement of TAN 8 Strategic Research Areas B & C: Review Exercise April 2008'. We have discussed the study in general terms earlier in these submissions. It was, essentially, an exercise in assessing the extent of visibility and was more a study intent on establishing quantitative effects rather than qualitative ones.

³⁴⁰ See the line of the refined boundary in blue on PRV2 in OBJ-002-LAND-POE-RUSSELL-APPA2-SSA-B Appendix A Topography 2

Banwy Valley and be visible from settlements such as Foel and roads within the valley³⁴¹.

351. Mr Russell-Vick was clear in evidence that the Arup work had limitations³⁴². We have emphasised this earlier in these submissions. That work however, as Mr Stevenson accepted³⁴³, can assist in informing the judgment as to what may or may not be acceptable and in doing so highlights an aspect of the Carnedd Wen proposal which suggests a potential sensitivity.

352. The fact that the proposed location of the CW five lies outside of the 2008 Arup refined TAN 8 boundary³⁴⁴ is also consistent with the *outstanding* scenic value attributed by LANDMAP to the Llanerfyl Mosaics Farmlands VSAA.

Aecom 2012

353. Although Carnedd Wen mentioned the Aecom³⁴⁵ report in its written and oral evidence³⁴⁶, it is in fact a document of little relevance and weight. It has not been adopted or put forward by PCC to be used in the context of development management. It is in fact expressly not intended for use in the assessment of applications for strategic development sites³⁴⁷. Nor is it intended to duplicate the SSA work³⁴⁸. In making assumptions as to the number of turbines that could be installed on land³⁴⁹ it does not take account of the impact on landscape character. Indeed, landscape character is not considered even to be a 'constraint' that could prevent the deployment of wind energy development³⁵⁰.

Landscape and Visual effects of the CW five -the harm caused and the benefits of removal

³⁴¹ See in CD/COM/10A – the study excluded parts of zones 1a, 1b and 6 because of the visual exposure of the Banwy Valley. See Fig 7 (a), p.30 together with descriptive key and cross refer to p.25 for justification.

³⁴² For example as set out in paragraphs 4.14-4.16 of his proof, pages 25-26. He made it clear, as he had done in relation to his evidence relating to SSAC, that the Arup work was not a sound basis for assuming all of the land within the refined area is suitable for wind farm development. The refined boundaries should not be considered absolute but rather as a means to assist in judging what is acceptable. They should yield, where appropriate, to more detailed assessments before the inquiry.

³⁴³ In xx by Powys

³⁴⁴ Identified in blue dotted line in PRV's appendices at: OBJ-002-LAND-POE-RUSSELL-APPA2-SSA-B Appendix A Topography 2 - 'PRV2'.

³⁴⁵ CD/RWE/PLA/001, 2012.

³⁴⁶ RWE-LAND-POE-STEVENSON-SSA-B Proof of Evidence LANDSCAPE -at para 4.7, p.5. In xx by Powys. It was also mentioned by Mr Craddick in his hearing statement for session 4 at paras 3.28-29, p.29

³⁴⁷ P.11 of the Aecom report

³⁴⁸ At p.12 of the Aecom report

³⁴⁹ It proceeded on an assumption of 52MW per 1km² - see p.22 of report.

³⁵⁰ As distinct from being a factor to be mindful of – see p.23 of the report. As is also clear from the report, a number of relevant constraints relevant to wind development were simply not addressed at all – including the practical means of access to a site.

354. The removal of the CW five would reduce considerably the landscape and visual effects of the proposed Carnedd Wen wind farm on the Banwy Valley.
355. PCC do not suggest that the removal of the 5 turbines would reduce all of the effects on the valued characteristics and high aesthetic quality of the Banwy Valley. But, importantly, it would:
- a. remove the turbines which are closest to it.
 - b. Remove the turbines which have the greatest individual effects.
 - c. Help to reinforce a desired perception that the wind farm is contained on a plateau and has not 'spilled over' into the valley.
356. As Mr Russell-Vick explained³⁵¹ – and this was not in dispute as a general proposition - a key characteristic of the effects of the existing wind farms on the landscape relates to their precise location in respect of their host landforms.
357. The nature of the deeply incised valleys and the rolling upland plateaux with domed ridgelines at some edges means that, so long as the turbines are set back from the edges of the ridges and plateaux, the impact on the settled valleys and main transport corridors can be limited.
358. Where turbines are set too close to the edges or have locations which have 'spilled over' the edges, then the impacts on the valleys can be substantial, where turbines can be seen at close range on high, prominent ground and can dominate the smaller scale, more domestic character of the valley floors. When one is moving through the landscape, along the valley transport routes, after many miles of attractive rural landscape, one can come upon turbines in this way and their impact is sudden and acutely jarring.
359. In the particular context of SSAB and the surrounding area:
- a. The CW five represent, as Mr Russell-Vick explained, the five most intrusive turbines in relation to the Banwy Valley.
 - b. As is illustrated in evidence by considering Viewpoint U³⁵² (which is located at the edge of the Banwy Floodplain (VSAA 119) and the Llanerfyl Mosaic Farmpland (VSAA 422)), the removal of the CW five would clearly reduce the '*stacking*' effect of the scheme and the extent of the visual impact on the Banwy Valley.

³⁵¹ Both in oral evidence and in proof at para 3.22, pps 18-19

³⁵² There are several available versions of 'U'. The wireframe and several photomontages might usefully be viewed conjunction, one after the other. See: Wireframe at OBJ-002-LAND-POE-RUSSELL-APPA3-SSA-B Appendix A PRV 5 with the CW five coloured in red; photomontage at CW SEI 2011 fig 6.23a & 6.23c and subsequently in JS proof of evidence at Appendix 4 – 'landscape and visual considerations updated figures – September 2013' at 2013-037, Fig 6.15U. Viewpoint locations generally marked on PRV 2 in appendix A of PRV proof. Note that viewpoint 'W' lies beyond the western limit of the part of the valley most affected and therefore does not fully reveal the extent of visual impacts experienced to the east.

c. Their removal would undoubtedly make a material difference to the magnitude of effects and would constitute more than a mere 'degree of thinning'³⁵³. Without removal of the five, the view is visually messy and intrusive.

360. Viewpoint V³⁵⁴, which is approximately 5.1km from the nearest visible turbine, and located close to Glyndwrs Way on the northern valley side³⁵⁵, illustrates how, from a slightly higher elevation, the CW five appear to 'step forward' off the plateau and down the valley sides – a point that appeared to be accepted by Mr Stevenson in evidence³⁵⁶. They have not been carefully or appropriately sited in relation to the underlying and surrounding landform.

361. This results in what would be a series of significant and unnecessary impacts on the Banwy Valley, creating a visually unbalanced appearance to the proposal contrary to long established design guidance for the siting of turbines³⁵⁷.

362. Wireframe 'Z'³⁵⁸ was requested by PCC to illustrate a typical view from a viewpoint near to PCC viewpoint 4³⁵⁹. It is located above Foel village, with Foel church seen set up on the side of the valley. It is approximately 2.5km away from the nearest turbine³⁶⁰ and falls squarely in the area assessed as having 'Outstanding' scenic quality by LANDMAP³⁶¹. Whilst some 30 turbines remain visible on the horizon line, the removal of the five closest turbines would materially mitigate the visual impact of the proposal by removing those turbines giving rise to the greatest effects.

363. Mr Stevenson felt unable to agree with the overall conclusions of PCC in relation to the 5 turbines. However, he conceded³⁶² that, in relation to viewpoint PCC 4/wireframe Z - 'If you are going to make a point about where the difference in the (removal) of the 5 turbines might be felt... it would be broadly in that area..'.³⁶²

364. PCC's concerns are not limited to visual effects. Whilst there was a broad range of agreement between experts as to the assessment of landscape

³⁵³ Which is the way JS sought to characterise it in his evidence in chief.

³⁵⁴ JS updated appendix 4 from Sept 2013 at 2013-038, Fig 6.15V; wireframe at PRV appendix A, 'PRV6' with the CW five coloured red; also at 2011 CW SEI, Fig 6.24c

³⁵⁵ See location of viewpoint on PRV2 in Appendix A. 'V' falls on the boundary between VSAA 422 and Pont Logel Farmlands VSAA (278) with its *High overall* evaluation.

³⁵⁶ In chief JS indicated that, in visual terms, 'the turbines would be present and would appear to come forwards

³⁵⁷ See VATT-LAN-002: SNH 'Siting and Designing wind farms in the landscape' December 2009, at p.22, para 4.27 and illustrations below.

³⁵⁸ OBJ-002-LAND-POE-RUSSELL-APPA3-SSA-B Appendix A PRV8

³⁵⁹ OBJ-002-LAND-POE-RUSSELL-APPA3-SSA-B Appendix A PRV 4 – containing PCC viewpoints 3 & 4. Viewpoint 4 has the CW five coloured in red. JS accepted in xx by Powys that the wireframe Z, together with the views from PRV 3 & 4 were more central to and more representative of the 'outstanding' evaluation in LANDMAP than the viewpoints U, V & W.

³⁶⁰ A distance accepted by JS in evidence.

³⁶¹ Llanerfyl Mosaics Farmland VSAA

³⁶² XX PCC

character impacts³⁶³, there remained disagreement as to the extent of such effects. Mr Russell-Vick is right to conclude that the extent of characterising effects is driven by character as well as topography and the resultant visibility. Applying his judgment on that basis, Mr Russell-Vick was of the opinion that the presence of the Carnedd Wen turbines breaking the horizon of the Banwy Valley would have a characterising effect in landscape terms across its breadth, to a distance of some 3km. For example, in relation to the area around Foel Church (around 2.5 kms away from the nearest turbine), Mr Russell-Vick was of the firm view that it would be "*well within an area which would be characterised by wind farm development*"³⁶⁴. The contrasting approach to landscape effects espoused by Mr Stevenson was unduly simplistic and not, in this respect consistent, logical³⁶⁵ or realistic.

Policy, summary and conclusions re the CW five and the mechanism for removal

365. The CW five are located on land that is not environmentally suitable in landscape and visual terms to accommodate them. Careful consideration of the landscape and visual context demonstrates that their removal would enable identifiable, serious harm to be minimised so as to provide what is clearly reasonable, possible and appropriate mitigation³⁶⁶.

366. There is no practical reason suggested which would prevent the removal of the CW five. In procedural terms, any consent can simply, by condition, provide that the development shall not include the particular five turbines³⁶⁷. There are no suggested implications for viability or any on the ground issues which would weigh against such a course. There would obviously be a resulting reduction in generation capacity, potentially in the order of 15MW, but the scheme would still be able to generate in the order of 135MW.

³⁶³ As explained by PRV in his proof at p.30, para 5.10 and see too his appendices E & G for his assessments of the schemes as against LANDMAP and the PLCA

³⁶⁴ Answers in chief

³⁶⁵ The PRV approach was more refined than the simplistic approach of JS evidenced particularly in his proof RWE-LAND-POE-STEVENSON-SSA-B Proof of Evidence LANDSCAPE at 6.7 – 6.11 in conjunction with his appendix 14. As put to him in xx, the approach was unduly simplistic and in some regards contradictory. JS appeared to indicate that his 'wind farm landscape' would extend up to c800-900m and his 'wind farm subtype' to 1.5-2.25km. That would mean that the wind farm landscape was contained almost entirely within Banwy Forest (320) with limited extension into the Pen Coed Upland (571) and Banwy Upland (264). It was hard to fathom what JS was saying in his paragraphs 6.8 & 6.9 of his proof. He appeared to accept effects on limited parts of (422), but made no specific reference to the part of (422) to the north. By reference to his appendix 14 he appears to drawing back from large areas of the same character for no obvious reason. At his para 6.16 he appears to be identifying significant landscape character effects in 422 and in the vicinity of Foel – the area in the Banwy Valley affected by the CW five. His apparent reliance on the TAN 8 boundary as some kind of blanket approval, is for the reasons already covered, misplaced. In xx JS argued that there would be landscape effects on parts of 422 – but not the Banwy Valley, which seemed at best, strange.

³⁶⁶ So as to accord with EN-1, para 5.9.8

³⁶⁷ PCC have suggested an appropriate condition to secure that result.

367. EN-1 anticipates, in the context of overall need, reductions in scale of projects to mitigate visual and landscape effects and invites the decision maker to weigh the identified benefits as against any resulting 'significant operational constraint' and reduction in function³⁶⁸.

368. In this case, there would be no significant operational constraint and a relatively minor reduction in generation output. It is a case where mitigation in the form of reduction in scale by removal of the CW five is entirely feasible and should be secured if consent is granted.

369. The balance to be struck by the Secretary of State is between the clear landscape and visual benefit that can be achieved by removal from a consent of the CW five as against the loss of generation capacity of up to 15MW or any other resulting operational constraint. In that regard, the extent of serious landscape and visual harm that can be avoided demonstrably by removing the turbines outweighs the relatively minor reduction of 15MW which is the only identified resulting constraint.

THE LLANBRYNMAIR APPLICATION

Introduction

370. The case pursued by RES in relation to the local access proposals has been characterised by a series of last minute submissions to the statutory objectors and the Secretary of State of substantial amounts of (usually incomplete and inadequate) evidence and environmental information, often containing material amendments to the proposals³⁶⁹.

Llanerfyl to Talerddig access proposals – background to consideration by Powys in 2012 and the 'new' Aug 2013 SEI local access proposals.

371. The details of Llanerfyl to Talerddig access proposals which, RES still promotes, are contained in the RES 2013 SEI³⁷⁰ ['The 2013 SEI'], produced in August 2013. The following initial submissions are made in relation to the production of proposals as detailed therein.

372. The 2013 SEI is described as something which '*supersedes the original Environmental Statement and the five subsequent SEI packages submitted as supporting information between 2010 and 2012. This SEI collates all relevant information from the aforementioned documents whilst incorporating*

³⁶⁸ EN1 at paragraphs 5.9.21-23 (CD/COM/001)

³⁶⁹ See 'Scheme History' in Volume 1, page 5, section 1.7, Table 1.1 of the Supplementary Environmental Information (August 2013) as at August 2013. Since that August 2013 'consolidated SEI', itself submitted just a few weeks prior to Session 2 (SSAB) of the inquiry, there has also been submitted the October 2013 SEI on bats, and the February 2014 SEI assessing an alternative shared access and also providing a range of other new documentation and ecological information relating to the local access arrangements. In addition is the range of other documentation submitted to the inquiry incrementally by RES.

³⁷⁰ [AD/RES/033] Supplementary Environmental Information (August 2013) Volume II – C- Transport Appendices and Figures (Appendix 10.1A).

*additional information subsequently requested by statutory consultees*³⁷¹. Those contentions by RES need to be treated with considerable caution, particularly in relation to the local access proposals.

373. The access proposals produced in the 2013 SEI to the inquiry are more accurately described elsewhere in the 2013 SEI as amounting to '*a wholly new proposal from what was issued at planning*'³⁷². As is detailed below, the 2013 SEI access proposals are far more extensive than had been hitherto presented by RES and do indeed amount to a '*new*' set of proposals.

374. The earlier proposals put before the Council to consider in September 2012³⁷³, and upon which the Council based a particular objection to the application, also sought access from points along the Llanerfyl to Talerddig road. As is set out in the comprehensive report to Cabinet³⁷⁴ dated 25.9.12, those earlier proposals were considered by officers and appointed consultants to be unacceptable for a range of reasons which concerned highway and landscape visual impacts. The Cabinet and officers had been faced, even then, with a number of incremental changes to the proposal and recent SEI³⁷⁵ concerning access. Even so, it was abundantly clear to officers and members that there were a range of points that simply had not been adequately addressed concerning the extent of land required for the extensive works along some 12kms of road, what was actually being proposed at key points (for example at Gosen Bridge), the implications for disruption given the likely scale of the works and the related implications for highway safety³⁷⁶.

375. Not only was the information before Powys inadequate, until the summer of 2012³⁷⁷ it was not even being suggested that the local access proposals would form any part of the s.36 consent application or related applications for deemed permission. It had, until then, been indicated that separate planning applications for the access works would be submitted in the future³⁷⁸.

³⁷¹ 2013 SEI, Volume 1 –Main Document, section 1, para 1.2.4, page 1.

³⁷² 2013 SEI, Volume II-C – Transport Appendices and Figures at Appendix 10.1 – Local Transport Management Plan (LTMP), section 2, para 2.2, 3 paragraphs up from the bottom of the page (the LTMP is not paginated).

³⁷³ And which formed the basis for one of the formal objection grounds put forward by Powys dated the 27th September 2012 - which read: RFO1 "*on the basis of the information submitted, it is considered that the development would have an unacceptable impact on the local highway network.*"

³⁷⁴ CD/RES/BAC/005 report dated 25.9.12 to Cabinet

³⁷⁵ As detailed in sections 2 and 3 of the report, pps 1-6. Some of the information was so recent that officers had not had time to fully assess it, but nevertheless it was abundantly clear that it was in many regards inadequate and lacking relevant detail and in any event clearly unacceptable in terms of what was being proposed.

³⁷⁶ Report at para 4.3, pps 8-10 (response from Powys Highway authority)

³⁷⁷ See p.17 of the report, last paragraph – point 4 -, where there is reference to the earlier 2011 SEI indicating that separate planning applications would be made for the Llanerfyl road site entrances. That position does not appear to have changed until August 2012.

³⁷⁸ It appears that it was not until 'SEI5' (August 2012), the SEI submitted by RES under cover of a letter dated 20.8.12, that a revised red line boundary was proposed which included '*off site land requirements associated*' with the access route works on the Llanerfyl road.

376. Relevant consultees had by then already made it abundantly clear to RES that further consideration of the potential for access roads to be shared with Carnedd Wen needed to be undertaken so as to mitigate ecological and landscape impacts³⁷⁹.

377. The landscape and visual impacts on the Llanerfyl to Talerddig road were assessed as being unacceptable and lacking in clarity, with uncertainty as to the extent of the works and their related impacts on the valley³⁸⁰.

378. The position before the Cabinet in September 2012 so far as the proposed local access arrangements were concerned was that they were wholly unacceptable and in many regards lacking in clarity and detail. In landscape and visual impact terms, even allowing for the numerous failures to indicate what was actually proposed, it was evident that the proposals were considered to be unduly harmful to the valley area.

379. The 'new' proposals contained in the August 2013 SEI for the first time do provide more detail, although they remain fundamentally inadequate. RES have tried to characterise the exercise as merely one of providing '*additional information*', but in truth the exercise has been a root and branch overhaul of earlier proposals.

380. It is also evident that the nature of the proposed highway works means that they are far more extensive in terms of their impact on the landscape and environment than had been previously proposed by RES. The contention by RES in evidence that the new proposals are of a lesser scale³⁸¹ is obviously wrong. In particular:

381. There has been a substantial increase in the red-line boundaries for the site along the valley road in the August 2013 SEI; presumably in an attempt to reflect the extent of the works now proposed, which will be detailed further below³⁸².

382. The nature of the particular works proposed at key locations is now of a much greater scale. To take but one example, at Gosen bridge, whereas before it was unclear if the bridge would even need to be widened³⁸³ and the red line areas were relatively minor, it is now proposed to undertake extensive engineering works, widening the historic bridge and road, involving

³⁷⁹ From as early in fact as 2010 – see report at p.21, 2nd paragraph up from end of page, response from CCW.

³⁸⁰ Cabinet report at pp.67-70 CD/RES/BAC/005

³⁸¹ Kevin Martin proof at pp.16-17. He there undertakes a numerical comparison of the number of passing bays etc. Because of a numerical reduction in those elements he suggests this equates with a lesser scale of works. But that numerical exercise ignores the reality of the real on the ground impact from the much more extensive nature of the works that are now proposed.

³⁸² IF one compares the proposed red lines in either SEI 4 or SEI 5 from 2012 with the August 2013 red line in SEI at Appendix 10.1 A – Transport drawings, the difference is stark. There still however, remain issues about the adequacy of the red lines given the substantial nature of the works now proposed.

³⁸³ See at SEI 4, figure 5 in sheet 6 of 18; or in SEI5 at drawing 1 – site boundary – drwg no.01592D2205-11, sheet 8 of 20

the removal of large numbers of trees and utilising several construction compounds³⁸⁴.

383. Far from allaying any previous concerns the Council had relating to landscape and visual impacts, the new proposals have, if anything, added to them.

384. Equally misleading was the suggestion by Llanbryn-mair in evidence³⁸⁵ that PCC (through their officers) had in some way signed off as acceptable the new local access proposals in the course of a series of meeting during 2013, prior to their formal submission in August 2013. Again, the position was quite different. The following points are made in that regard:

385. Aecom were instructed to progress highway matters in January 2013 following the objection by PCC in September 2012³⁸⁶.

386. During the period January to June 2013 there were a number of meetings³⁸⁷ between officers from PCC and NRW with RES to discuss the emerging 'new' proposals for local access that were being progressed by Aecom on behalf of RES.

387. The nature of the works proposed along the Llanerfyl to Talerddig road have obvious and interrelated implications across a range of areas which require consideration including highway safety, engineering feasibility, landscape and visual impacts associated with highway proposals and effects on ecology. Of course, compliance with one area requiring consideration does not mean others will be adequately addressed. An engineering solution involving the widening of a narrow bridge may, for example, demonstrate that an AIL can be safely transported over it - and in that sense be acceptable in a highways context -but it does not follow that the resulting effects on the landscape or ecology are acceptable. Moreover, if there is an alternative means of access for AIL deliveries that avoids or mitigates harmful impacts that should also be considered.

388. This distinction, rather surprisingly, appears to have been lost on Mr Martin. His evidence to the inquiry suggested that highways officers had agreed the proposals were acceptable in the round³⁸⁸. That was simply not the case. The notes of the various meetings make that clear³⁸⁹.

³⁸⁴ See in LTMP – Aecom drawings at sheet 8 of 14, chainage 4450-4600. See for other examples at Dolwen Isaf bridge or at Neitheirion or at the Gosen bypass now proposed. In the 2012 SEI there was no suggestion at all of any such bypass proposal here.

³⁸⁵ Evident generally as a suggestion in the proof and rebuttal of Kevin Martin for Session 2 (SSAB) [RES-TRANS-REBUTTAL-MARTIN-SSA-B]

³⁸⁶ KM proof :RES-TRANS-POE-MARTIN-SSA-B Proof of Evidence, p.2, para 1.1.5

³⁸⁷ For chronology see LTMP in Appendix 10.1 of the August 2013 SEI, Volume II-C, at section 2.6 and table 1 'Schedule of Consultation'.

³⁸⁸ For example, see Kevin Martin proof RES-TRANS-POE-MARTIN-SSA-B at p.5, point 3 relating to the meeting on the 17/18 April 2013 where he concludes that '*PCC expressed their...satisfaction with it*' [that is the revised access strategy]. To the extent that suggest a wholesale acceptance of the emerging proposals by the council (or officers) this is clearly misleading. As set out below and above officers in fact highlighted at that very meeting the unacceptability of key aspects of what was emerging. A further

389. PCC highway officers attended several of the meetings as it was appropriate to assist the applicant by considering emerging new proposals and relaying views of officers³⁹⁰.

390. Throughout the course of those meetings it was made clear³⁹¹ by officers to the applicant's representatives that there remained unresolved and serious concerns in relation to the newly promoted proposals concerning landscape and visual impact, the failure by RES to consider alternative and less harmful access options and the inadequacy of ecological assessment that had hitherto been provided.

391. In pure highway terms (safety and feasibility of delivery) officers considered that, by the time of the production of the August SEI, sufficient

example is found in KM's rebuttal proof at p.6, para 1.30 where it is stated '*it was only in April (2013) that the Council considered our proposed access strategy for the County Road to be acceptable and the general direction being taken to be sound*'. Again, puts an unfair gloss over the detail of what was being relayed by Council officers at that time. It is simply not the position that officers (as distinct from 'the council') took if it is being suggested that issues of landscape, alternative access etc were being indicated as acceptable. They were not.

³⁸⁹ The notes of discussion are found in Appendix 10.1-B (unpaginated) of the August 2013 SEI, Volume II-C, with additional emails and correspondence attached to the transport proofs and rebuttals of MR and KM. The following points can be noted: (i) In the meeting on 18.4.13 (notes at Appendix 10.1-B) highway officers attended for Powys (Mr. Williams ('DW') and Mr. Boyington). It was recorded (bullet points 1.6 and 1.7) that there remained a landscape objection from Powys and that further information would be required relating to setting and character (bullet 1.9) and that environmental elements needed to be made more clear (1.11). (ii) In a subsequent e-mail from DW to KM dated 18.4.13, (at KM rebuttal proof, appdx 1, p.2) DW made it clear that '*many aspects of your proposals will need further attention*' and noted that he '*was concerned regarding the impact the highway works will themselves have on the local area and its residents*' (iii) At the 2.5.13 meeting/site visit (notes at Appendix 10.1-B) it was again flagged up by Powys and NRW officers that there lacked an overall strategy for landscape works, the red lines were missing, the detail as to tree/hedge loss was inadequate. Further, in May the issue of a lack of consideration of alternative access was very much alive as between the parties in the various statements of case filed before the inquiry. (iv) See various e-mails in appendix 1 of KM's rebuttal between KM and DW on 14th June, 9th July and 16th July 2013. By June 2013, when a further iteration of plans and drwgs had been issued by Aecom (on 7.6.13) – although still not on the form found now in the August SEI – KM indicated to DW in an e-mail sent on the 14.6.13 that the recent revised drawings represented the culmination of a series of meetings and had incorporated various matters and picked up on various points. It was noted that RES had now considered the shared access issue and RES would be issuing correspondence to DW (subsequently a letter dated 5.7.13 was sent from RES on shared access issues – which we deal with below. Letter found at appendix 1 to MR's proof). KM sought an updated position from Powys. Further information was referred to in an e-mail from KM to DW on 9.7.13. In a response from DW on 16.7.13 it was made clear that Powys would need time to consider the newly issued changes – including the recently issued letter from Mr Whitbread relating to shared access matters. Nevertheless it was already clear that there were issues with several aspects of what was being proposed/impacts on the valley and especially issues relating to shared access. It was clear that the proposal had in no way been 'signed off' by DW or Powys.

³⁹⁰ With the normal caveat that any expressed views could and not necessarily be taken to equate with the views of elected members in due course

³⁹¹ See notes to footnote 392 above

detail had been provided to allay concerns that previously existed in that regard. PCC accept that the level of detail provided demonstrates that the proposals can be delivered as a workable highway solution³⁹². But that is quite different from an acceptance that the visual and landscape effects or the level of disruption will be acceptable, or that the issues of alternative access and ecology had been suitably addressed so as to provide an adequate and lawful assessment. Those matters were not indicated as being acceptable to RES by PCC. Quite the opposite.

392. Accordingly, the 'new' highway proposals contained in the August 2013 SEI drawings³⁹³ (referred to hereafter as 'the Aecom drawings') were not considered to be acceptable by PCC. That remains the position.

Landscape and visual context for the access proposals -the Nant yr Eira Valley³⁹⁴

393. The Afon Gam has eroded a broad, gentle valley – the Nant yr Eira Valley – which runs east of the Carnedd Wen/Llanbrynmair Plateau from south-west to north-east towards the Banwy Valley. The Nant yr Eira Valley divides the Carnedd Wen-Llanbrynmair Plateau from the Mynydd Waun Fawr ridgeline to the east and the Esgair Cwmowen uplands to the south east. This valley is a highly unusual landform in this part of upland Mid Wales³⁹⁵.

394. In contrast to the adjoining Carnedd Wen/Llanbrynmair Plateau, the Nant yr Eira Valley is smaller scale and more intimate. It has variety and landscape features of charm and value, including the winding Afon Gam and open grazed areas along its length. It retains a strong sense of remoteness and tranquillity. The valley lies within the Llanerfyl Mosaic Farmlands LANDMAP VSAA 422³⁹⁶. LANDMAP's description of Llanerfyl Mosaic Farmlands notes the strong visual link with the Banwy Forest and Pen Coed (i.e. Carnedd Wen and Llanbrynmair sites), its Outstanding scenic values, as well as its settled domestic setting, its intimate scale, enclosed, harmonious, tranquil, and safe characteristics and its strong sense of place. The description concludes that the VSAA has "*high aesthetic qualities and limited intrusion from modern development*"³⁹⁷. Parts of the north of the valley in fact fall outside of the identified TAN 8 boundaries as well as the areas defined by the subsequent PCC refinement work³⁹⁸.

³⁹² RES-SOCG-LAND-SSA-B, para 34

³⁹³ 2013 SEI, Volume II-C – Transport Appendices and Figures at Appendix 10.1 – 'Proposed Highway Works' at Appendices A-0 through to A-5 containing various drawings

³⁹⁴ See generally as described in evidence by PRV in OBJ-002-LAND-POE-RUSSELL-SSA-B sections 3 and 7 and [OBJ-002-LAN-003]

³⁹⁵ PRV proof at 3.13, p.16. Usually valleys in the area are narrow, steep sided and deeply incised. Within Powys, as PRV noted in chief, the valley is particular worth given the rating of it as being of outstanding scenic value and given how rare the land form is.

³⁹⁶ A copy of the VSAA assessment sheet is found in PRV's proof :OBJ-002-LAND-POE-RUSSELL-SSA-B, appendix H; VSAA area indicated in evidence of JS, appendix 4, Fig 6.1

³⁹⁷ LANDMAP assesses the overall evaluation as 'High'.

³⁹⁸ As is evident from PRV 2 in appendix A or PRV's proof. The Tan 8 boundary does not start until approximately chainage 5050 on the Aecom drawings. The refined Powys

395. The contrast between the northern and southern parts of the valley is of note as Mr Russell-Vick demonstrated in his landscape presentation to the inquiry³⁹⁹ and as will have been evident on site.

396. The northern, lower part of the valley is more deeply enclosed by landform, with grass pastures and richer vegetation including hedgerows⁴⁰⁰. Where Pen Coed hill protrudes into the valley, it takes on a strongly contrasting character between Pen Coed and the Banwy Valley⁴⁰¹. Through its lower section the topography is more complex and undulating, the watercourse is more deeply set into the landscape and secretive with fields that are hedged with many hedgerow trees and copses. The narrow lane undulates and turns between the hedged fields. Views out are infrequent and rely generally on a sharp rise in the ground to provide long views out. In this section the valley shares common characteristics with the Banwy Valley, is small scale and of high aesthetic quality.

397. The southern areas have a more open, upland moorland character. This upper valley area has the character of a broad vale with relatively gently sloping valley sides rising to upland moorlands and forestry to both the east and west⁴⁰². In this southern/upper area, it is the meandering watercourse, the grazing of its floodplain and general absence of field enclosures along the lane which twists and turns along the length of the valley, crossing cattle grids and minor bridges, that gives rise to an attractive local character and a uniqueness which gives the upper valley a special sense of place.

The nature and extent of the works proposed by RES – August 2013 SEI

398. The proposals are defined by the Aecom drawings⁴⁰³ which detail the proposals for works to the county roads from Llanerfyl to Talerddig⁴⁰⁴. The applicant proposes to access the wind farm site via 3 accesses from the Llanerfyl to Talerddig road⁴⁰⁵. The intention is for all AIL traffic to approach

(Arup 2008) boundary does not cover the valley until around chainage 10,150 on the Aecom drawings.

³⁹⁹ OBJ-002-LAN-003

⁴⁰⁰ The LANDMAP assessment notes as a key quality the small scale intimacy of the valley and notes as a justification for the assessment the limited intrusion from modern development.

⁴⁰¹ See viewpoint PCC 6 at Figure PRV 8 in PRV proof OBJ-002-LAND-POE-RUSSELL-SSA-B, appendix A

⁴⁰² See viewpoint PCC 5 at Figure PRV 9 in OBJ-002-LAND-POE-RUSSELL-SSA-B, appendix A

⁴⁰³ 2013 SEI, Volume II-C – Transport Appendices and Figures at Appendix 10.1 – ‘Proposed Highway Works’ at Appendices A-0 through to A-5 containing various drawings [AD-RES-033]

⁴⁰⁴ The Llanerfyl to Talerddig road is numbered C2031 from its junction with the A458 trunk road at Llanerfyl to Neinthirion and U2319 from Neinthirion to its junction with the A470 trunk road at Talerddig.

⁴⁰⁵ The original application comprised of 4 access points however this has been reduced (as described in the SEI August 2013 Volume 1 Main Document at para 10.5.18) to three accesses from this road. Paragraph 4.1 of the Local Transport Management Plan (LTMP) that can be found in Appendix 10.1 of the ‘SEI Volume IIC Transport Appendices and Figures states that the number of accesses was reduced to

the site from the north using the junction between the A458 and C2031 at Llanerfyl. AIL convoys would then proceed in a south westerly direction along the C2031 and U2319 to one of the 3 site access points, as appropriate⁴⁰⁶. Additional construction traffic (other than AIL's) would approach the site from the south using the junction between the A470 and the U2319 at Talerddig. Construction traffic would then proceed in a north easterly direction again to one of the 3 access points, as appropriate.

399. To gain a full appreciation of the true extent of the works proposed it is necessary, as PCC explained in evidence⁴⁰⁷, to consider the Aecom drawings⁴⁰⁸ in detail. Examination of them reveals that:

- a. These proposals would require use of the entire 17.5 km length of road between Llanerfyl and Talerddig – either by AILs from the north or other construction traffic from the south.
- b. As a result, very extensive alterations would be required to the existing highway, along the whole route. The most intrusive alterations would be those needed to cater for AILs, on the section from Llanerfyl to the 3 site accesses proposed, along a section some 12 kms in length (*'the northern section'*). It is in relation to that stretch that PCC maintains an objection⁴⁰⁹.
- c. The works to the northern section will require approximately 7kms of road widening or new construction along the 12km stretch. More than 50% of the route will require widening of some kind.
- d. The position reached in evidence between experts indicated⁴¹⁰ that in relation to the northern route:
 - i. A total area of land of approximately 4.84 hectares would be required along it for the various proposed works⁴¹¹.

minimise environmental impact. Access 3 is accordingly no longer being proposed. The local highway network including the proposed 3 access points to the Llanbrynmair wind farm site are shown in Figure MR02 of Matt Russell's proof: OBJ-002-TRANS-POE-RUSSELL-SSA-B Proof of Evidence.

⁴⁰⁶ The movement strategy for AIL's is detailed in Chapter 7 of the LTMP (Appendix 10.1 of the 'SEI – August 2013 Volume II-C-Transport Appendices and Figures).

⁴⁰⁷ See proof of MR at section 3 for overview of proposed works: OBJ-002-TRANS-POE-RUSSELL-SSA-B Proof of Evidence and proof of PRV, section 7 especially.

⁴⁰⁸ See for a brief overview of locations of works Figure MR03 in OBJ-002-TRANS-POE-RUSSELL-SSA-B Proof of Evidence. A useful overview of locations is found at Aecom drawing 6-283248-D-000, Rev A 'Overall Layout Plan' in the August SEI, Vol II C, transport appendices. But, reference and consideration of the Aecom drawings in the August SEI is also required.

⁴⁰⁹ The works needed to accommodate the construction traffic, from Talerddig to Site Access 4, are considered acceptable on landscape/visual grounds as these works comprise small-scale widening of the highway to form passing bays.

⁴¹⁰ See Van Grieken rebuttal (RES-LAND-REBUTTAL-GRIEKEN-SSA-B), p.2, para 1.4; agreed e-mail/table submitted to inquiry . Figures accepted by MVG in xx by Powys . See OBJ-002-TRA-005 which was a single page document entitled Llanerfyl to Access 4, featured MVG's figures in black and a second set of figures in red text .

- ii. Some 1.5 hectares of that land would be required for new lengths of road at Neinthirion, Dolwen and Gosen to Sychtyn.
- iii. In excess of 2 hectares of that land would be required for highway widening, together with approximately 8, 911 sqm of land for associated earthworks.
- iv. Over and above the 4.84 hectares, an additional 6,663 sqm would be required for use as construction compounds.
- e. There was no agreement as to the exact amount of hedgerow that would be removed, although an estimate of around 1.5km of hedgerow appears reasonable⁴¹². Because the difference between best and worst estimates of total length of hedgerow lost is not vast, Powys is content that a round figure of 1.5km is sufficiently representative for assessment purposes.
- f. The number of trees requiring removal as a result of the RES proposals will run into the hundreds. PCC and RES were unable to agree an exact number at the inquiry⁴¹³. However it quickly became obvious that the figures produced initially by RES in evidence,⁴¹⁴ which suggested the removal of only some 53 trees (or alternatively 43), along the whole of the route (southern and northern sections) were wildly inaccurate. It appears that the RES figures had not taken account of groups of trees. Llanbrynmair conceded⁴¹⁵ that at one location alone on the approach to the Dolwen Isaf bridge⁴¹⁶ there could be as many as 400-500 trees removed. The subsequently proffered explanation that the much lower figures had related to 'specimen' trees (which he defined as trees which were 'a feature in their own right'⁴¹⁷) lacked any credibility at all and was not borne out by an examination of the Aecom drawings⁴¹⁸ or the on the

⁴¹¹ Of which some 20, 025 (over 2 hectares) is for highway widening

⁴¹² Various figures for total loss have been offered by RES, including over 1.5km (Figure of 1532m in Marc Van Grieken proof of evidence (RES-LAND-POE-SSA-B) paragraph 7.12) or under 1.5km (Figure of 1404m in Mick Green rebuttal (RES-ECOLOGY-REBUTTAL-GREEN-SSA-B) paragraph 1.6.11), but the basis of assessing 'loss' remains a point of dispute. RES evidence offered various justifications as to why they have not counted 'translocated hedgerows' in their loss figures, despite an acceptance that successful translocation is far from guaranteed. As DW explained it is almost inevitable that some hedges will be lost during the process of translocation

⁴¹⁴ See the figures at KM proof, appendix 7 which suggested a total of only some 53 trees along the whole section. Also at MVG proof para 7.12, p.31. By contrast Mr Green in his rebuttal for RES at RES-ECOLOGY-REBUTTAL-GREEN-SSA-B, para 7.12 gave a number of 42 to site access 4 from Llanerfyl. It appears the witnesses for RES were confused as to the position on trees.

⁴¹⁵ In xx by Powys

⁴¹⁶ See at Aecom drawing D-011, in coniferous plantation around chainage 7250-7300 to the south of the road where it was clear from the drawings that the wooded slope would need to be cleared.

⁴¹⁷ Answer given in xx by Powys

⁴¹⁸ For example in the location where Marc Van Greiken conceded the potential loss of some 400-500 trees there appeared to be allowed for – in the Kevin Martin appendix 7 table – just 1 tree on the southern area. The inquiry viewed photographs – for example

ground assessment by other experts. Based on a detailed examination of the Aecom drawings and site visits, a conservative but realistic estimate is that around 400 trees would need to be removed with a detailed location by location breakdown of that figure⁴¹⁹. The proposals for replanting fell well short of equivalence in terms of quantitative compensation, before one even considers the clear qualitative shortfall of the proposed provision⁴²⁰.

- i. As well as numerous retaining walls and service diversions, some 14 bridges and culverts are proposed to be extended or rebuilt and a 13 further bridges and culverts would need to be assessed and may require strengthening or protection works⁴²¹.
- ii. There would be extensive loss of verges – mostly as a result of the proposed over-run lengths, which would be almost continual on one or other side of the lane, from Site Access 4 (ch 12300) to around Sychtyn Farm at chainage 5050, around some 7.25km in all, and in shorter isolated lengths thereafter⁴²².

400. On any sensible view, the works proposed are, as a body of engineering works, substantial. The landscape and visual impact, especially when considered in context of this valley, will be significant and unacceptably harmful.

The Powys Landscape and Visual objection

401. PCC objects to the local highway proposals on landscape and visual impact grounds for the length of the works between Llanerfyl to Site Access 4 (CH 12300) (the northern section of around 12kms).

in the Aecom drawings – from which it was simply not possible to discern any one tree that might be considered distinct from the others in that area. Another example of RES failing to note the extent of tree loss relates to the Gosen Bridge area (Chainage 4450-4600; Aecom drawings D-007). The appendix 7 produced by Kevin Martin suggested the loss of around 30, but as DW explained the loss would be many more than this. See on this issue generally the evidence of DW

⁴¹⁹ See DW, para 2.6 of 3rd Supplementary Proof and at appendix DWR3-1 [OBJ-002-ECOLOGY-3rdREBUTTAL-WOODFIELD-SSA-B]

⁴²⁰ The most recent (February 2014) iteration of the SEI describes a loss of '52 individual trees', and 'small areas of woodland and hazel coppice', but that 'there is no major felling at any one point'. This remains at odds with the oral evidence which was that in one group at Dolwyn Isaf 400 to 500 trees would be lost. The 2014 SEI merely notes that "at Dolwyn Isaf a small conifer plantation will be replaced by planting of native species....this is considered to be a net ecological gain " but this is not acknowledging the true extent of tree loss. The only attempt to quantify tree loss is in PCC's work, in Dominic Woodfield's 3rd Supplementary Proof where loss of at least 461 trees (excluding smaller trees and shrubs) is identified, although this could be up to 300 trees more depending on whether the wider overrun at Dolwyn Isaf is needed.

⁴²¹ Figures calculated by Matt Russell in proof (OBJ-002-TRANS-POE-RUSSELL-SSA-B) at para 3.15 and they remained unchallenged.

⁴²² See on Aecom drawings 009 to 022

402. RES, ⁴²³, were not able to suggest that the effects would be anything other than of 'high magnitude' and of 'major significance'⁴²⁴ and that if the road were to be used for AIL access the significant effects would be 'unavoidable'⁴²⁵.

403. RES however maintained that the changes would be 'assimilated successfully into the landscape within 5 years'⁴²⁶ and sought to limit their assessment of effects being of 'major significance' to that period⁴²⁷. That generalised assessment of the timescale of major adverse effects was in truth not based on robust evidence. As PCC explained through Mr Russell-Vick the change in character of the lane would obviously be long term and significantly harmful even allowing for proposed mitigation by replanting.

404. In particular, the proposals would have the following landscape and visual impacts.

- a. They would have a substantial and long term adverse impact on the character of the rural lane between Llanerfyl and Site Access 4. In particular, the loss of existing vegetation and other landscape features, including structures and verges, the widening proposals for the Neinthirion Bypass, the Dolwan Isaf bridge diversion, the Gosen Access Track and the Gosen Bridge and the overall change and harm to the rural character of the lane and the effects of this on the characteristics of the Nant yr Eira valley and the Llanerfyl Mosaic Farmlands VSAA (422)⁴²⁸ would result in a long term substantial impact. They would result in extensive loss of trees and hedgerow as discussed above. The tree removals would not, as Mr Russell-Vick explained, be able to be replaced in a way that can avoid a short to medium term loss of up to around 20 years in the context of this landscape⁴²⁹. Given the nature of many of the trees proposed for removal⁴³⁰ that was a more considered and realistic assessment of time than the suggested 5 years proffered by Mr Van Grieken⁴³¹. As Mr Russell-Vick explained⁴³² it would take that time, especially in the upland areas where growth rates were slower, before adequate and equivalent maturity could be achieved.

⁴²³ Mr Van Grieken

⁴²⁴ See August SEI, Vol 1, Chapter 4, p.83 ff especially at 4.7.7, construction effects (AD-RES-030)

⁴²⁵ MVG proof at para 7.11, p.31 (RES-LAND-POE-GRIEKEN-SSA-B)

⁴²⁶ MVG proof, p.31, para 7.11 (RES-LAND-POE-GRIEKEN-SSA-B)

⁴²⁷ MVG in xx by Powys (RES-LAND-POE-GRIEKEN-SSA-B)

⁴²⁸ It is of note that the applicant chose not to produce any visualisations which were specifically to deal with the landscape/visual assessment of the proposed highway works, particularly in an area assessed as being of outstanding scenic value by LANDMAP.

Accordingly reliance needs to be placed on the Aecom drawings. The visual presentation of 'slides' by PRV in Session 2 identified some of the key existing visual and landscape characteristics of the valley [OBJ-002-LAN-003

⁴²⁹ PRV proof (OBJ-002-LAND-POE-RUSSELL-SSA-B) at 7.8 , p.40 and oral answers in evidence. There would be material implications for ecology as well as a result of the tree and hedge loss – which we address below.

⁴³⁰ For example the oaks at Gosen Bridge

⁴³¹ MVG proof at para 7.11, p.31. MVG accepted in xx by Powys that certain trees would take longer to mature than 5 years especially given the upland location

⁴³² In oral evidence in chief

- b. Even when trees and hedges have grown again then, given the engineering works proposed, the character of the areas would be very different indeed. The changes will not have been 'assimilated' in a way that avoids harm to the existing character. There will undoubtedly be harmful residual landscape change. The extent of such loss would outweigh significantly any longer term mitigation achieved by the planting of trees and hedges.
- c. Whilst the over-run areas would be reinforced grass ('grasscrete') and, therefore, theoretically 'green', the earthworks required and engineering involved, cutting into the adjoining banks or building up adjoining lengths, would mean that the character of the current lane would inevitably be substantially altered over a very considerable distance⁴³³. Further, the proposed use of 'grasscrete' was not, as Mr Russell-Vick explained, a solution that would readily or easily assimilate the works into the existing landscape. For it to work effectively quick growing grass species would be required⁴³⁴ which would not sit comfortably in visual terms with the species at areas such as Neinthirion. Other species would take much longer to establish and all would be vulnerable to the inevitable wear and tear from construction traffic so that the roads would be far from invisible.
- d. From the end of Neinthirion Bypass the whole route up to site access 4⁴³⁵, a distance of nearly 3km, would need to be widened by up to 10m in width. Through most of this section the road is relatively straight and unfenced with animals free to graze up to the road edge. The replacement of roadside verges and grazing with a reinforced gravel running surface will change the character of the road.
- e. The appearance of the northern section would be radically altered from that of a narrow country lane, currently around 4m wide, to a widened 'engineered' corridor of typically around 6m wide, with the enclosing features pushed back beyond the over-run strips. At some bends in the lane the corridor would be as wide as around 12m⁴³⁶.

405. The evidence at the inquiry focussed on four locations at which additional substantial landscape and visual harm would occur.

The proposed Neinthirion Bypass⁴³⁷

406. As the Aecom drawings reveal, a significant new bypass would be required around Neinthirion approximately 1km in length⁴³⁸ and varying between 5.5

⁴³³ A good example is seen at Aecom drawing D-010 around chainages 6100 to 6300 where, on the northern side, there will be several trees lost, the lane will be widened and banked verges lost resulting in a significant change in character.

⁴³⁴ Such as rye grass

⁴³⁵ Aecom Drawing Numbers 60283248 – D-017 to D- 022

⁴³⁶ at chainage 4400 for example

⁴³⁷ Aecom Drawing Numbers 60283248-D-016 to D-017 and D-045; chainage 8900 to 9650

⁴³⁸ It would be surfaced with reinforced grass. It will bypass the hamlet of Neinthirion (refer to the photograph at Figure PRV 10 of PRV proof) measuring in width from 5.5m to up to 12.73m

to 12.73 metres in width. The bypass would be a private haul road and would create another new traffic corridor that would be highly visible within the local area, although not available for public use. The route of this bypass crosses a number of watercourses and areas of clear environmental interest including an area of high quality mire. It would need to be retained as a permanent bypass in order to cater for replacement components.

407. The proposed new access road route would swing out into fields west of Neinthirion requiring the removal and replacement of stone walls, diversion of a channel, two new culverts and one bridge structure plus some considerable embankment earthworks to achieve a suitable vertical alignment. The route of the lane at Neinthirion is part of Glyndŵr's Way and whilst this would not need to be diverted the visual impact of the works on users of the national trail would be significant. The landscape and visual impact of the works in the short to medium term would be substantial and significant for the Nant yr Eira valley as a whole.

Dolwen Isaf Bridge⁴³⁹

408. To achieve a suitable alignment at the Dolwen Isaf Bridge a significant re-alignment is proposed on the approaches. These new alignments would require substantial arcs of new reinforced grass highway to be constructed, up to 17m in width, and for the section south of the Dolwen Isaf Bridge for there to be a 6m deep cutting with a 'harsh' 1:1 profile made to facilitate the alignment. The landscape and visual impact of these works would be locally significant and long term, resulting in a permanent change to the landscape.

Gosen⁴⁴⁰

409. A 350m length of diversion would need to be provided to bypass a section of existing vertical alignment unsuitable for AILs. The diversion would be a 7.5m width of reinforced grass with tarmac lengths at either end to tie-in to the existing highway and would require a cutting likely to be 4m deep⁴⁴¹. The landscape and visual impact of these works would also be locally significant and long term. The new road would not be for public use.

Gosen Bridge⁴⁴²

410. At Gosen there are significant and extensive engineering and construction works proposed⁴⁴³. These works will require substantial excavations of rock and removal of considerable areas of woodland and other vegetation. It is proposed that the bridge be widened in order to enable AILs to pass along.

411. If allowed these proposals would result in a radical change from the narrow, highly rural character of the existing twisting alignment of the lane.

⁴³⁹ chainage 7300 to 7550; Aecom drawing D-012

⁴⁴⁰ chainage 4620 to 4970; Aecom Drawing D-009

⁴⁴¹ As estimated by PRV from the drawings available – see his proof at para 7.11, p.42

⁴⁴² chainage 4350 to 4600

⁴⁴³ Kevin Martin in his rebuttal proof (RES-TRANS-POE-MARTIN-SSA-B) – p.4, para 1.18 -did not accept that the Gosen works could be characterized as 'major', but was prepared to accept that the engineering works could be described as 'significant'.

The traditional stone arch bridge spanning high across a tributary stream and the relationship the two residences have with the crossing of the watercourse⁴⁴⁴ would be dramatically altered. The small scale, wooded character would be destroyed.

412. East of the bridge, the lane would need to be widened from around 4m to a corridor of some 13m width with existing hedgerows on either side requiring removal⁴⁴⁵.
413. At and either side of the bridge the hard surface would need to be widened from around 3.5m to around 8m.
414. The bridge itself would be widened accordingly with a new stone arch structure placed on its northern side.
415. Mature trees both east and west of the bridge would be removed to facilitate construction⁴⁴⁶ as a result of the scale of the works proposed. Three construction compounds are required necessitating the additional removal of numerous trees. As Mr Van Grieken accepted⁴⁴⁷, far in excess of the 30 'specimen' trees identified by RES in evidence will need to be removed⁴⁴⁸. As PCC demonstrated, ⁴⁴⁹, on the southern bank alone as a result of the proposed new 'retaining structure' and associated works some 51 trees will have to be removed.
416. The trees losses to the north east of the bridge will include a range of mature oak trees which lie to the north of the road. These provided further examples of trees that materially contribute to the existing character at Gosen and which could simply not be replaced within 5 years⁴⁵⁰.
417. This is one of the numerous areas where, quite apart from the inaccurate assessment as to numbers of lost trees, the general environmental impact assessment information is in several respects inadequate so that there is uncertainty even now as to the full extent of the losses and effects that will occur.
418. In all, the impact would be severe; the charming appearance of the twisting narrow approach and traditional bridge, a feature which is important and valuable to the Nant yr Eira valley as a whole, would become an engineering feature of A-road proportions and character.

⁴⁴⁴ See the photographs at Figure PRV 10 in PRV proof - especially PCC 8 and see slides 20-25 in PRV landscape presentation OBJ-002-LAN-003

⁴⁴⁵ See Aecom drawing D-007 at approx. chainage 4400

⁴⁴⁶ As is evident from a site visit and the Aecom drawings (at D-007; D-008-001; D-008-002; D-008-003)

⁴⁴⁷ In xx by Powys

⁴⁴⁸ See on tree loss numbers DW's evidence: OBJ-002-ECOLOGY-3rdREBUTTAL-WOODFIELD-SSA-B at Appendix DWR3-3 re chainage 4335-4600 (Gosen)

⁴⁴⁹ OBJ-002-ECOLOGY-3rdREBUTTAL-WOODFIELD-SSA-B at Appendix DWR3-3 re chainage 4335-4600 (Gosen)

⁴⁵⁰ A point accepted by MVG in xx by Powys

419. Whilst the bridge design is an appropriate design approach (i.e. to mimic the existing stone arch), this does not in itself mean the overall proposal is acceptable in landscape terms.

420. The impact of this aspect of the road improvements would be significant on the character of the Nant yr Eira valley and wholly unacceptable.

Conclusions (landscape and visual)

421. The Llanbrynmair local highway proposals would have a severe impact on the small-scale, rural character of the lane and would significantly alter the experience of this part of the Outstanding scenic value of the Llanerfyl Mosaic Farmlands VSAA 422. The replanting of trees and hedges will take many years (20 years or so for the trees) to be established so as to provide any meaningful mitigation. Even then the residual harm will be long term and the proposals will simply not be assimilated into the landscape in a way which avoids a harmful change in character of this valley.

422. As a result the proposals will conflict with development plan policy E3 (1) and (6), relevant parts of EN-1⁴⁵¹ and EN-3.

Other considerations relating the proposed local access; disruption, and unnecessary changes

423. In addition to the points relating to landscape and visual harm there are a number of other points which the Council submit further weigh against the use of the valley for local access:

- a. The construction of required works along the Nant yr Eira valley and subsequent use of the road along it will undoubtedly cause extensive disruption and inconvenience to the area, nearly all of which could be avoided if alternative access arrangements were used. In particular:
- b. As PCC explained in evidence, the suggested construction programme for roadworks of some 9 months⁴⁵² was probably ambitious. It could well take considerably longer. In any event, the extent of the proposed construction works will require extensive road closures.
- c. By way of example, to undertake the proposed works at Gosen is likely to require at least 9 days of road closures and resulting diversions. It is unlikely that these could take place at night because of issues relating to bats. Other areas such as Diosg, Glen Menial, Dolwen and Dolwen Isaf will all require closures of several days as well.
- d. As PCC explained, the proposed diversion routes for drivers will require extensive and lengthy diversions increasing some journeys by up to 33.5km⁴⁵³.

⁴⁵¹ Especially at paragraphs in Part 5, 5.9; 5.9.8, 5.9.14-15; EN-3 para 2.7.46

⁴⁵² Referred to in the LTMP, para 4.3

⁴⁵³ See RES-SOCG-LAND-SSA-B, para 33.

- e. Further, as PCC demonstrated, and as was abundantly clear from the answers Mr Martin gave to the inspector and others, there were a number of locations where it was likely that road closures would be required which the LTMP had not anticipated⁴⁵⁴.
- f. Post construction, the extensive and lengthy use by the road by AILs and other construction traffic over many further months will cause obvious delay and yet further disruption.

424. If the proposals are constructed it would be misleading to characterise them as highway improvements or benefits as the applicant sought to do⁴⁵⁵. For example, Llanbrymair suggested that the widened bridge at Gosen would allow for two way traffic. But that ignores the landscape and visual harm entirely and seeks to solve a problem in highway terms which does not exist. There are no current safety issues to be resolved at Gosen that would require a widened bridge. Elsewhere, the suggested benefit of increased parking spaces at Diosg Bridge is a red herring given that there is no need for any additional parking. No weight should be given the proposition that any of the engineering works result in benefits. Many of the extensive works, for example the bypasses, will not in fact be available for public use at all.

The proposed alternatives – the demonstration by PCC of ‘in principle’ viable alternatives and the February 2014 SEI.

425. The extent of harm which the local access proposals would provide is wholly disproportionate to the benefit of the scheme as a whole and this want of proportionality is reinforced by the fact that there is a straightforward alternative which avoids all of the most harmful effects.

⁴⁵⁴ In particular as Matt Russell explained in his rebuttal proof OBJ-002-TRANS-REBUTTAL-RUSSELL-SSA-B Matt Russell – Rebuttal Evidence at pps 10-11, para 2.39-2.42: at the identified locations of works in section 1 shown in Table 1 attached to the Technical Note (at Appendix 2 of Mr Martin’s proof RES-TRANS-POE-MARTIN-APP-SSA-B Proof of Evidence – Appendices) 29 of the locations require work to be done from the field. At other locations working will be required from the highway and at many of these locations, it is suggested that closures will not be required. MR disagreed. The width of the road at locations identified as 1.2, 1.5, 1.6, 1.9, 1.12, and 1.17 in Table 1 (which can be located by reference to the notes on the Aecom drawings contained in the August 2013 SEI) is in fact such that there will be a greater need for closures where works are carried out within the highway than was estimated by Mr Martin. A 3 metre running lane and a half metre buffer between plant and the running lane is required while works are carried out (see paragraph 6.3.3 of the LTMP included in the August 2013 SEI). If this 3.5 metres is deducted from the width of the road at the various locations in section 1, set out in Table 1 of the Technical Note, there would not be sufficient remaining space left on the highway to carry out work without closure. The remaining road width within which working could be carried out is typically 1 – 1.5 metres. It can be noted that the relevant PCC highways officer of considerable experience, David Williams, also retained concerns about the extent of road closures and disruption when he was asked for his opinion on the Technical Note contained in Appendix 2 of Mr Martin’s evidence, after seeking advice from PCC’s local area road maintenance team (see the email of 30 August 2013 contained in Mr Martin’s Appendix 2).

⁴⁵⁵ See for example the LTMP at para 8.3, p.55

The PCC evidence as to alternatives

426. In the absence of RES having considered alternatives and indeed in the context of RES asserting alternative access was not feasible alternative access proposals were illustrated in evidence by PCC⁴⁵⁶. This was simply to show that an alternative access arrangement is, in principle, feasible and capable of providing an acceptable alternative.

Sharing of access with Carnedd Wen – the Powys evidence

427. Under the PCC 'in principle' arrangement the applicants would use the Carnedd Wen access for AIL deliveries to the Llanbrynmair site⁴⁵⁷. The Llanbrynmair access points 1 and 2 would be deleted leaving access point 4 as the only access from the Llanerfyl to Talerddig road for the remaining construction traffic, which could also be used by Carnedd Wen construction traffic if that were felt appropriate. In place of access points 1 and 2 PCC propose that 2 relatively short sections of access track are constructed to provide inter connections between the Llanbrynmair and Carnedd Wen schemes. These connections are shown in Figure MR 05 of Mr Russell's proof⁴⁵⁸. In this way, AIL movements and construction traffic could access the site without the harmful works proposed by the RES to the northern section of the Llanerfyl to Talerddig Road.

428. As PCC made clear, the precise routes for the interconnecting tracks could be determined when and if a proposal were ever made.

429. Mr Russell-Vick demonstrated in evidence that if this alternative was to be employed, the substantial and unacceptable landscape harm to the Nant yr Eira Valley from the RES local access proposals would be avoided⁴⁵⁹. In particular:

- a. Both the northern and southern links would be located partially in the Low overall evaluation VSAA Banwy Forest (320) with the northern section, where it crosses the Nant Ffriddycastell, in the Moderate value Pen Coed Upland VSAA (571), and the southern link partially in the Moderate value Banwy Upland VSAA (264).
- b. With a proportion of the new access probably aligned through forestry, the principal landscape concern regarding the northern access track would be

⁴⁵⁶ In the evidence from Matt Russell and Dominic Woodfield for Powys

⁴⁵⁷ as well as for some construction traffic if that were required

⁴⁵⁸ The northern link would be via a circa 400m length of track running south from Carnedd Wen turbine 21 to Llanbrynmair turbine 27. The southern link would connect Llanbrynmair turbine 8 to turbine 12 via a section of new track that would intercept the Carnedd Wen access track network, providing a link between the two schemes. In total, it would involve some 585m of existing/upgraded forestry track and around 300m of new track construction. The connection of turbines 8 and 12 would also obviate the need for at least one of the proposed Site Accesses 2 or 4, potentially saving on at least 615m of upgraded and/or new track construction if access 2 is omitted, 900m if access 4 is omitted and over 1.5km if both were no longer required, together with some reduction in the number of new construction site traffic passing bays on between Talerddig and Site Access 4.

⁴⁵⁹ PRV proof (OBJ-002-LAND-POE-RUSSELL-SSA-B) at pps 43-44, paragraph 7.14-7.18

the crossing of the Nant Ffriddycastell and the detail of how this should be achieved in respect of vertical alignment⁴⁶⁰. However, the point of the crossing of the minor valley is not visible from any nearby public rights of way and only visible at long distance from the east side of the Nant yr Eira valley. Given this limited visibility and also that these works would be seen in the context of many other access tracks and wind turbines, the landscape and visual impact is limited and not significant.

- c. The southern access link would also be aligned through forestry for part of its length, this section following the route of an existing track. The new section between turbines 9 and 12 would run along a relatively level bank requiring some earthworks to fit it into the side slope. But again, the location is not widely visible and the impact in the context of the rest of the scheme would be limited and not significant.

430. The PCC alternative would not be entirely without landscape effects, there would be some impact on intrinsic features such as the minor valley, but these would be barely perceptible from the publicly accessible locations within the wider landscape and the visual harm barely perceptible on the VSAs affected and negligible on the High value Llanerfyl Mosaic Farmlands VSA (422), host of the Nant yr Eira valley.

Avoidance of ecological harm

Introduction

431. PCC submit that it is unquestionable that if Llanbrynmair is accessed by an alternative means than the Local Access Solution there will, contrary to what RES claimed in their July 2013 memo and letter, be avoidance of a range of ecological harms caused by RES's local access solution. This is the case whether the solution is a shared access with Carnedd Wen (either as proposed by PCC or in the very slightly different version assessed by RES in their February 2014 SEI) or the solution is access through Carnedd Wen in the circumstances that either Carnedd Wen do not get permission or get permission but for what ever reason do not go ahead. PCC consider that this point can be made under the following headings: peat, habitats, watercourse crossings, hedgerow, trees, dormice, bats, otters, badgers and curlew. Those headings were chosen in particular because they are considered high value ecological receptors⁴⁶¹ in many cases they have particular policy support. As set out above, dormice, bats and otters are European Protected Species. However other types of species and habitats are identified in policy as worthy of particular consideration.

Statutory and policy context

432. Section 40 of the Natural Environment and Rural Communities Act 2006 provides that every public authority (including ministers of the Crown) must in exercising functions, so far as it is consistent with the proper exercise of those functions, have regard to the purpose of conserving biodiversity. By

⁴⁶⁰ See the photograph of this minor valley at Figure PRV 11

⁴⁶¹ Dominic Woodfield Proof 2.1.3 (OBJ-002-ECOLOGY-POE-WOODFIELD-SSA-B Proof Of Evidence – Dominic Woodfield)

virtue of section 42 the Welsh Assembly must publish a list of the living organisms and types of habitat which in the Assembly's opinion are of principal importance for the purpose of conserving biodiversity, and take such steps as appear reasonably practical to further those organisms and habitats, and promote the taking by others of such steps. Things currently on that list of relevance for this inquiry: Barbastelle bat, Otter, Dormouse, Bechstein's bat, Noctule, Common Pipistrelle, Soprano Pipistrelle, Brown long-eared bat, Greater horseshoe bat, Lesser horseshoe bat, Hedgerows, Blanket bog

433. Blanket bogs when they are active are listed in annex 1 of the Habitats Directive as a habitat type of community interest whose conservation requires the designation of special areas of conservation. It is right that being an annex 1 habitat under the Habitats Directive does not directly confer any protection, but it is indicative of a type of habitat identified at European level as being important and worthy of protection. Mr Ferry (peat witness for RES) was absolutely clear in cross examination, for example that blanket bog should be protected.

434. Next, the UK biodiversity action plan should be considered as this identifies priority species and habitats. For these purposes relevant habitats identified include hedgerows and blanket bog. Relevant species identified include the stone and Eurasian curlew, Barbastelle Bat, Otter, Dormouse, Bechstein's Bat, Noctule, Soprano Pipistrelle, Brown Long-eared Bat, Greater Horseshoe Bat, Lesser Horseshoe Bat.

435. The policy imperative to have regard to matters such as the UKBAP is clear. EN-1 at 5.3.5 and 5.3.6- provides that the decision maker should have regard to government's biodiversity strategy, whose aim is to ensure: a halting, and if possible a reversal, of declines in priority habitats and species, with wild species and habitats as part of healthy, functioning ecosystems; and the general acceptance of biodiversity's essential role in enhancing the quality of life, with its conservation becoming a natural consideration in all relevant public, private and non-governmental decisions and policies. However it is right that the decision maker should take this into account in the context of the need to address climate change. It goes on to provide at 5.3.7 that decision making should ensure that appropriate weight is given to (inter alia) protected species. At 5.3.16 and 5.3.17 EN-1 goes on to say that protected species and habitats should be protected from the adverse effects of development using conditions or planning obligations. The IPC should refuse consent where harm to the habitats or species and their habitats would result, unless the benefits (including need) of the development outweigh that harm. In this context the IPC should give substantial weight to any such harm to the detriment of biodiversity features of national or regional importance which it considers may result from a proposed development.

436. PPW 5.5.1 provides that biodiversity and landscape considerations must be taken into account in determining individual applications and contributing to the implementation of specific projects. The effect of a development proposal on the wildlife or landscape of any area can be a material

consideration. In such instances and in the interests of achieving sustainable development it is important to balance conservation objectives with the wider economic needs of local businesses and communities.

437. Against this policy background, PCC turns to look at what the balance of harm is in ecological terms between RES's Local Access Proposals, and the harm that would be caused by either a shared access solution or RES accessing this site through Carnedd Wen in the absence of Carnedd Wen wind farm.

Peat

438. Turning first to peat, when PCC carried out their comparison between RES's Local Access Solution and a Shared Access Solution, they estimated pessimistically that 4900m³ peat would be removed but that should be placed against 850m³ to 1500m² of peat that would be lost due to the works at Neinthron⁴⁶². However RES have done further work on this. They consider that in fact 12,000m²⁴⁶³ of peat would in fact be saved in a shared access solution. PCC presume that this estimate now supersedes a number of arguments that took place during the session about the extent of peat that would be impacted by a shared access solution. It is not clear from the 2014 SEI whether this includes savings of peat from the fact that the bypass at Neinthirion will not need to be built and possible saving of peat from along other parts of the access road. It may be that more peat saving can be achieved even than the 12,000m³ but whether or not that is the case 12,000m² of peat savings is a substantial ecological benefit.

439. Given the work that has now been done by RES on peat in relation to a shared access solution, which identifies a significant reduction in peat in the case of a shared access solution (of 12,000m³)⁴⁶⁴, it is clear that even if Carnedd Wen were not consented, and Llanbrynmair were to use Carnedd Wen as a 'stand alone' solution then the impact on peat would be very similar to RES's local access solution. In such a scenario the saving of about 12,000m³ of peat from using the shared access solution would have to be set against the additional peat that would be excavated in upgrading the forestry access tracks through Carnedd Wen. Carnedd Wen's peat plan identifies that if all of their 5m and 6m track needed to be upgraded they would have to excavate 28,752m² of peat⁴⁶⁵. However this is very much a worst case scenario even for RWE's scheme because it assumes that all the tracks need to be upgraded to 6m⁴⁶⁶ as shown on their 'Revised Scheme Layout for Proposed Carnedd Wen wind farm and habitat restoration project'⁴⁶⁷. As explained by Carnedd Wen this is a conservative assumption⁴⁶⁸ and it was

⁴⁶² Dominic Woodfield proof at table DW1 (OBJ-002-ECOLOGY-POE-WOODFIELD-SSA-B Proof Of Evidence – Dominic Woodfield)

⁴⁶³ AD-RES-043_Llanbynmair SEI February 2014 8.3.8

⁴⁶⁴ AD-RES-043_Llanbynmair SEI February 2014 8.3.8

⁴⁶⁵ AD/RWE/029 CW SEI 2013 Volume 4 – Plans at Peat management plan table 7.

⁴⁶⁶ Which is not the case, as discussed in session 2, see also Carnedd Wen SEI 2013 at 2.2.7 and 2.2.8.

⁴⁶⁷ AD/RWE/028 CW SEI 2013 Volume 3 – Figures, Revised Scheme Layout for Proposed Carnedd Wen wind farm and habitat restoration project

⁴⁶⁸ Andy Mills evidence in chief.

demonstrated in cross examination of NRW's Mr Campion that where detailed design has taken place the width required would be much less than a continual 6m. Further, not all of the Carnedd Wen tracks would be required to be upgraded to get AILs to Llanbrynmair, as a number of tracks go only to Carnedd Wen turbines.

440. Thus it is submitted that a 'shared access solution' along the lines of that presented in RES's February 2014 SEI would represent a saving in peat over Llanbrynmair's Local Access Proposal, and a solution of access through Carnedd Wen in circumstances where Carnedd Wen were not granted permission or did not go ahead would result in a very similar level of impact on peat.

Habitats

441. Turning to habitats, there are a number of different habitats that need to be considered. In relation to peatland habitats (including annex 1 blanket bog habitats), PCC considered that in a shared access solution there would be an impact on less than 500m² of peatland habitats and that the most high quality areas could be avoided⁴⁶⁹. In contrast PCC concluded that there would be the loss of 1500m² of high quality mire habitat at Neinthirion⁴⁷⁰. Initially this conclusion was disputed by RES⁴⁷¹.

442. RES's current position is that in relation to their shared access solution that the southern access track will cross about 130m of species poor M6 and M23 but could avoid areas of M17 and M18 blanket bog which do have conservation value. The northern access track would cross approximately 40m of species poor M25, and a further 60m would include a small section of M17a with conservation interest and an area of species poor M6d with less interest⁴⁷². This needs to be compared with the impact at Neinthirion (which would be avoided in a shared access solution) where RES now accept that at least some of the habitat is M17. PCC and NRW maintain that Neinthirion is an M17a habitat⁴⁷³. Therefore PCC suggest that RES have now moved much closer to PCC's position that a shared access solution would result in a net reduction of high quality mire⁴⁷⁴ affected⁴⁷⁵. PCC are and have been consistently clear that a shared access solution would result in a net reduction of impact on mire habitat, although this is significant in terms of avoiding impacts on high quality mire at Neinthirion⁴⁷⁶.

⁴⁶⁹ Revised table DW1 OBJ-002-ECOLOGY-3ndREBUTTAL-WOODFIELD-SSA-B

⁴⁷⁰ OBJ-002-ECOLOGY-POE-WOODFIELD-SSA-B Proof Of Evidence – Dominic Woodfield DW1.

⁴⁷¹ Mick Green rebuttal appendix C "this currently conforms most closely to U6" RES-ECOLOGY-REBUTTAL-GREEN-APP-SSA-B Rebuttal Evidence Appendix – Mick Green

⁴⁷² AD-RES-043_Llanbrynmair SEI February 2014 at 6.5.1, 6.5.3 and 6.5.5.

⁴⁷³ See the assessment by Dave Reed, Senior Peatland Advisor at appendix DWR2-4 (OBJ-002-ECOLOGY-2NDREBUTTAL-WOODFIELD-SSA-B 2nd Rebuttal Evidence (re: RES Bats SEI)

⁴⁷⁴ The description high quality mire is from Dominic Woodfield's proof (OBJ-002-ECOLOGY-POE-WOODFIELD-SSA-B Proof Of Evidence – Dominic Woodfield_, 5.3.11

⁴⁷⁵ Revised table DW1 OBJ-002-ECOLOGY-3ndREBUTTAL-WOODFIELD-SSA-B

⁴⁷⁶ Revised table DW1 OBJ-002-ECOLOGY-3ndREBUTTAL-WOODFIELD-SSA-B

443. In the scenario where there is sole access through Carnedd Wen, there will be a need to widen the existing forestry access tracks, although as explained by RWE this will not need to be consistent 5m widening throughout and not all of the tracks required by the Carnedd Wen scheme would be required. The widening that is required may cause loss or disturbance to some small part of the 1.4 hectares of flush/mire habitats, and 2.6 hectares of blanket bog assessed as being impacted by the entire Carnedd Wen scheme⁴⁷⁷, although clearly it would only be a very small proportion of the total impact of the Carnedd Wen Scheme. This element of habitat impact would need to be set against that saved at Neinthirion.
444. The next type of habitat that needs to be considered is acid grassland. PCC's assessment was that a shared access solution would impact on some 3600m² of acid grassland, but would avoid up to 1 hectare of impact on acid grassland along the Local Access Route (although this figure was difficult to quantify due to deficiencies in the SEI)⁴⁷⁸. It is fair to say that RES do not accept the impact on acid grassland from the Local Access Route, but PCC say that is firstly because they have inadequately assessed the baseline habitats along the route, as set out above. Secondly it is because they have relied on their view that the use of Geogrid as 'soft widening' will be able to retain existing habitats⁴⁷⁹. PCC cannot share their confidence in this respect. RES do identify some (unquantified) impact on acid grassland in a shared access solution where the shared access track will go east from turbine R8⁴⁸⁰, but they have provided nothing to suggest this is likely to be greater than PCC's estimate of 3600m². Therefore PCC submit that it remains clear that there will be either a similar impact or a net reduction of impact in a shared access solution.
445. The Carnedd Wen SEI does not identify any impact on acid grasslands impacted by their scheme⁴⁸¹, therefore there is no reason to believe that RES gaining sole access through Carnedd Wen would have any impacts over and above those associated with a shared access solution.

Water crossings

446. Turning to water crossings, it has become apparent that a shared access solution would give rise to a substantial reduction in the number of water crossings compared with the Local Access Solution. In PCC's assessment a shared access solution would introduce one water crossing of the Nant Ffriddycastell, but avoid some 20 water crossings⁴⁸². RES have now acknowledged that on the wind farm site itself, a shared access solution would introduce one new watercourse crossing but eliminate a three watercourse crossings through the reduction in on site tracks that this would

⁴⁷⁷ Carnedd Wen 2011 SEI chapter 7 table 7.4

⁴⁷⁸ Revised table DW1 OBJ-002-ECOLOGY-3ndREBUTTAL-WOODFIELD-SSA-B

⁴⁷⁹ AD-RES-043_Llanbynmair SEI February 2014 2.2.14

⁴⁸⁰ This is said to be a mosaic of U5 and U6- AD-RES-043_Llanbynmair SEI February 2014 6.3.2.

⁴⁸¹ The 2013 Carnedd Wen SEI AD-RWE-026 identifies areas of U4, U5 and U6 grassland on the site, but notes that they are "ubiquitous in the Welsh uplands and are generally considered to be of limited botanical interest". (2013 chapter 7 table 7.1).

⁴⁸² Revised table DW1 OBJ-002-ECOLOGY-3ndREBUTTAL-WOODFIELD-SSA-B

enable⁴⁸³. When the roughly 20 water crossings required by the local access proposals are also factored in, it can be seen that a shared access solution results in a significant reduction in watercourse crossings.

447. Access using the Carnedd Wen tracks would entail crossing a number of additional watercourses⁴⁸⁴. The Carnedd Wen SEI assesses that with mitigation by appropriate design of watercourse crossing this impact will be minor⁴⁸⁵, however this assessment would be further reduced because not every watercourse crossing required for Carnedd Wen would be needed in the sole access scenario.

Hedgerows

448. In terms of hedgerows, RES accept that their local access proposals will have a significant impact on hedgerows requiring the removal of 1532 metres of hedgerow⁴⁸⁶. While more hedgerow would be re-planted, it is a matter of agreement between PCC and RES that this will take some time to regain its ecological value, although there remains a dispute as to how long that will take, and PCC maintain that it will take decades to regain. By contrast both PCC and RES agree that there will be no impact on hedgerow in a shared access solution⁴⁸⁷. This is a substantial reduction of impact on hedgerows which as well as being a priority habitat in their own right, provide commuting and foraging routes for other European protected species such as dormice and bats.

449. The Carnedd Wen SEI does not identify any impact on hedges from the Carnedd Wen scheme. Therefore there is no reason to believe that there would be any significant impact on hedges in the case of sole access through Carnedd Wen.

Trees

450. In relation to trees, as identified above there is agreement that RES's local access proposals will have an impact on trees, but there is a substantial difference between PCC and RES as to the extent of that impact. RES accept that their local access proposals will result in the loss of 52 of what they describe as 'individual trees' along with various coppices of hazel and wych elms, an area of woodland comprising immature ash, birch, and hazel and a copse of grey willow with young trees and scrub mainly birch and elder⁴⁸⁸. There will also be a loss of a conifer plantation. While there will be

⁴⁸³ AD-RES-043_Llanbynmair SEI February 2014 table 8.2 and 8.3.

⁴⁸⁴ See Carnedd Wen (2013 AD-RWE-028) SEI local hydrology figure 13.1

⁴⁸⁵ Carnedd Wen SEI 2013 chapter 13, paragraph 92

⁴⁸⁶ AD-RES-043_Llanbynmair SEI February 2014 at 2.2.10

⁴⁸⁷ Revised table DW1 OBJ-002-ECOLOGY-3ndREBUTTAL-WOODFIELD-SSA-B, where hedgerow impact is identified as 'none'. No impact on hedgerow is identified in part 2 of RES's February 2014 SEI.

⁴⁸⁸ AD-RES-043_Llanbynmair SEI February 2014 at 2.2.13

replacement planting RES recognise that this will take time to replace mature trees⁴⁸⁹. As set out above, PCC maintain that this is a significant underestimate of what will be lost. The shared access solution will only impact on existing forestry proposed to be removed by Carnedd Wen in any event⁴⁹⁰ and in circumstances where removal of the forestry is accepted by the main parties as being generally beneficial in terms of removal of a monoculture, and allowing habitat restoration. In the circumstances there can be no doubt that there will be a benefit in a shared access solution compared with RES's local access proposals.

451. In order to widen the existing tracks to allow access in a sole access solution it may be that removal of some of the Carnedd Wen Forestry on either side of the tracks will be required. It has not been suggested that the forestry has any inherent ecological interest. There may be some very small portion of the impacts of tree removal identified in the Carnedd Wen SEI but only a very small amount.

Dormice

452. In relation to dormice, PCC maintain that RES's Local Access proposals have the potential to impact on dormice and that is a potential that cannot be understood due to the assessment failures set out below. If dormice are found during pre-construction surveys or construction, the works may turn out to need a licence, and for all the reasons explained below in relation to bats, a licence is unlikely to be forthcoming because there is a satisfactory alternative. Again both PCC and RES accept that there will be no impact on dormice in a shared access solution⁴⁹¹. Therefore a shared access alternative provides a way of avoiding potentially significant direct and indirect impacts.

453. No impact on dormice has been identified in the Carnedd Wen SEI, therefore there is no reason to believe there would be any additional impacts from a sole access solution over and above a shared access solution on dormice.

Bats

454. PCC also maintain that there is a significant likelihood that RES's Local Access Proposals will impact on bats. It is likely that the works will cause damage to or destruction to a known roost at Gosen. As well as impact on the roost itself, there will be significant tree removal in the area around the known roost thus removing potential foraging and commuting habitat. In addition, features on other bridges effected by works have been identified as having the potential to support roosts, and PCC consider that there are a number of trees that will be both directly and indirectly effected by the works

⁴⁸⁹ *ibid.*

⁴⁹⁰ See AD-RES-043_Llanbynmair SEI February 2014 Figure 4.2 which identifies where the proposed access links would pass through forestry, and compare with Carnedd Wen Revised scheme layout which shows the retained forestry June 2013 SEI volume 2 (AD/RWE/027 CW SEI 2013 Volume 2 – Appendices).

⁴⁹¹ Revised table DW1 OBJ-002-ECOLOGY-3ndREBUTTAL-WOODFIELD-SSA-B, where dormouse impact is identified as 'none' due to lack of suitable habitats. No impact on dormice is identified in part 2 of RES's February 2014 SEI.

that have the potential to support bat roosts. Despite the survey limitations it is clear that RES's Local Access Proposals will have potentially significant direct and indirect impacts on bats. These can be wholly avoided by the use of a shared access solution. It is a matter of agreement that there is no scope for significant effects on bats in the case of a shared access solution⁴⁹².

455. Carnedd Wen identify that from their entire scheme the impact on bats will not be significant because of the lack of known potential roosts within the site, the removal of favoured woodland foraging habitat within 200m of the turbines, the low number of species at high risk from wind turbines, the relatively low level of bat activity that would prevail the site post felling⁴⁹³. Given this assessment there is no reason why the track widening and use that would have to take place in a sole access solution should cause any significant impact on bats.

Otters

456. In relation to otters, PCC maintain that there is potential for impact on otters due to the Local Access Proposals. In particular PCC are concerned about the impacts that are likely to arise from the in channel works around Gosen and the sheer extent of works including the wholesale riverbank change and the potential for nightworking in the Cledan which is accepted as being used by otters. By contrast it is accepted by RES and PCC that there is no potential for significant effects on otters arising from a shared access solution⁴⁹⁴.

457. Carnedd Wen have assessed that for their whole operations there is not likely to be any significant impact on otters⁴⁹⁵. There is no reason to believe that construction or operation of the widened access would cause a significant impact.

Badgers

458. While PCC accept that significant effects on badgers from the Local Access works are unlikely, there remains some potential for impact, some signs of badgers have been found by both RES⁴⁹⁶ and PCC⁴⁹⁷. This limited likelihood of impact, however, is to be contrasted with the position in relation to a shared

⁴⁹² Revised table DW1 OBJ-002-ECOLOGY-3ndREBUTTAL-WOODFIELD-SSA-B, where bat impact is identified as 'no significant scope for effect'. The February 2014 SEI identifies (6.1.3) "it was considered that the proposed link tracks will have no impact on bats and therefore no assessment for bats is required".

⁴⁹³ Carnedd Wen SEI 2011 (AD-RWE-015) chapter 7 para 126

⁴⁹⁴ Revised table DW1 OBJ-002-ECOLOGY-3ndREBUTTAL-WOODFIELD-SSA-B, where otter impact is identified as 'no significant scope for effect' due to lack of suitable habitats. No impact on otters is identified in part 2 of RES's February 2014 SEI. The February 2014 SEI surveyed the Nant Friddycastell for otter and stated "no signs of...otter...were found at the proposed water crossing at Nant Friddycastell or 50 metres up or down stream....This stream was previously surveyed for otter as part of the original site assessment and no signs of otter...were found there." (6.3.4, February SEI)

⁴⁹⁵ Carnedd Wen 2013 SEI, chapter 7, table 7.2b

⁴⁹⁶ AD-RES-043_Llanbynmair SEI February 2014 2.4.3, 2.4.4., 2.4.5.

⁴⁹⁷ Revised table DW1 OBJ-002-ECOLOGY-3ndREBUTTAL-WOODFIELD-SSA-B, "DW has noted badger activity in some areas missed by RES surveyors".

access solution, where there is agreement of there being no significant scope for effect on badgers⁴⁹⁸.

459. Carnedd Wen have assessed that for their whole operations there is not likely to be any significant impact on badgers⁴⁹⁹. Again there is no reason to believe that there would be any additional impacts in a sole access approach on badgers.

Curlew

460. Finally, in relation to impact on curlew, a shared access solution could avoid the need for access along access route 2. This is the area that has shown the most curlew activity (compare 2013 SEI Figure 4.1⁵⁰⁰ showing access 2 as the central of three accesses leading to turbine number 42, and figures 6.3a, 6.3b, 6.3c and 6.3d showing that curlew activity is focussed in the proximity of access route 2). RES acknowledge that "the access tracks do pass through the main curlew area"⁵⁰¹. Pearce Higgins have suggested construction impacts on curlew from wind farms, although the methodology and conclusions of that study are disputed⁵⁰² this strongly suggests that there may be benefit in avoiding taking construction vehicles through Curlew activity areas. While RES do not consider "on the balance of evidence from currently available studies"⁵⁰³ there is likely to be a significant impact on curlew from access along site access 2, they acknowledge it is possible but unlikely that there will be local displacement of curlew. PCC maintain that avoidance of construction vehicles needing to pass through the main curlew area will eliminate the risk of significant impacts on curlew.

461. In relation to access through Carnedd Wen, curlew have not been recorded within the Carnedd Wen site during any of the ornithological surveys carried out on behalf of RWE Nrl⁵⁰⁴. Thus there is no reason to anticipate any additional impacts on curlew from a sole access solution.

Viability – considerations in evidence

462. During the inquiry – and prior to the February 2014 SEI – RES had relied upon a number of issues to argue that an alternative access was not

⁴⁹⁸ Revised table DW1 OBJ-002-ECOLOGY-3ndREBUTTAL-WOODFIELD-SSA-B, where badger impact is identified as 'no significant scope for effect' on the basis of available evidence including site visits. No impact on badgers is identified in part 2 of RES's February 2014 SEI. The February 2014 SEI states no sign of badger were found at either section (6.3.5., February SEI)

⁴⁹⁹ Carnedd Wen 2013 SEI, chapter 7, table 7.2b

⁵⁰⁰ AD/RES/034 Volume 3

⁵⁰¹ AD/RES/030 Volume 1 – Main text at 6.13.47

⁵⁰² Dr Percival (RES-ORN-POE-PERCIVAL-SSA-B Proof of Evidence Ornithology – DR. STEVE M. PERCIVAL), 6.18

⁵⁰³ AD/RES/030 Volume 1 – Main text at 6.13.47

⁵⁰⁴ Carnedd Wen 2013 SEI, chapter 8, paragraph 8

feasible⁵⁰⁵ or viable. In that regard and in light of their change of position the following brief submissions are made:

- a. It is beyond doubt that the alternative access proposals, whether shared with Carnedd Wen or in a 'No Carnedd Wen' scenario are technically feasible⁵⁰⁶.
- b. The northern and southern 'links' can clearly be built out without any engineering difficulty⁵⁰⁷.
- c. The shared Carnedd Wen access from the A458 can readily accommodate additional AIL deliveries and/or other construction traffic⁵⁰⁸ so avoiding the need for them to travel along the county road between Llanerfyl and Talerddig. The same would be true in a scenario without the Carnedd Wen development if access proposals were developed by RES to that end.

463. The suggestion raised at one stage by RES that if access were to be shared there would be a delay of some 3-4 years as a result of the Carnedd Wen felling programme was without basis. This was expressly accepted by Mr Martin on behalf of RES in evidence⁵⁰⁹. Indeed the position could hardly be maintained by RES given that their own earlier SEI had asked for a period of at least 8 years to implement any consent to allow 'off site works' to be undertaken and to allow for grid connections to become available⁵¹⁰.

464. In any event as Mr Russell explained, with suitable co operation between RWE and RES, there is no logical reason why delay should occur to either scheme if access were shared⁵¹¹. Nor, clearly, would there be any obvious reason for delay in a no Carnedd Wen scenario –save for the fact that, as yet

⁵⁰⁵ These derived from the contents of the 5th July letter and June memo referred to in the August 2013 SEI. Matt Russell assessed the points in his evidence – see his proof (OBJ-002-TRANS-POE-RUSSELL-SSA-B) at pps 18-21, paras 3.53-3.54 (a)-(g).

⁵⁰⁶ See SOCG, para 34 with RES [RES-SOCG-TRANS-SSA-B], agreed by KM in xx from Powys re the Powys in principle demonstration and now see the Feb 2014 SEI from RES ⁵⁰⁷ agreed by KM in xx from Powys re the Powys 'in principle' demonstration and now see the Feb 2014 SEI from RES

⁵⁰⁸ See MR evidence (OBJ-002-TRANS-REBUTTAL-RUSSELL-SSA-B). Confirmed by the Welsh Gov in email dated 16.9.13 at appendix 1 to rebuttal proof of MR and see para 12 of the S of CG on transport with RES for session 2 [RES-SOCG-TRANS-SSA-B]; also section 9 of 2014 Feb SEI

⁵⁰⁹ Kevin Martin rebuttal [RES-TRANS-REBUTTAL-MARTIN-SSA-B], para 1.51 and in xx by Powys

⁵¹⁰ August 2013 SEI, Vol 1, p.2 para 1.3.4

⁵¹¹ As MR explained in his evidence – at para 3.54, p19ff - An agreement could easily be reached between the developers to programme the improvement of the Carnedd Wen access track at an earlier date than RWE

currently propose if that were required. The Carnedd Wen access tracks already exist and could be improved in year 1 to provide access for HGVs to harvest the felled trees, whilst access is also given for AIL movements and construction traffic to the Llanbrynmair site . Managing the extraction of timber simultaneously with occasional AIL deliveries and construction traffic would be a very straight forward logistical exercise of a nature and scale carried out routinely on many large construction projects.

RES , have failed to address or promote such a proposal as alternative which would reasonably mitigate harm.

465. None of the evidence before the inquiry from Carnedd Wen which dealt with the various interrelated management plans⁵¹² it proposes to be conditioned to any consent, suggested that a shared access proposal with Llanbrynmair would cause any logistical difficulties or delay at all. Indeed, quite the opposite. The Carnedd Wen witnesses made it clear that there were considerable elements of flexibility built into their proposals which would allow, in principle, for acceleration of construction if that were required⁵¹³.
466. Despite it being clear that there was such flexibility to allow change, PCC's detailed evidence made clear there was in fact no basis to suggest that there would need to be any change in the proposed forestry felling programmes or construction timescales to avoid delay for either development⁵¹⁴ in a shared access scenario. Nor would there be any unacceptable implications for ecology. None of his detailed review of the Carnedd Wen SEI material was challenged by RWE. Had RWE concerns about the concept of a shared access it is clear it would have made that plain to the inquiry. It did not. As PCC explained, the material before the inquiry indicated that any required internal accesses could readily be prepared before or during any felling if that was felt necessary.
467. In addition, with the additional use of proposed access 4 from the south for non AIL traffic there would be the clear opportunity to commence works in advance of access works to the north.
468. As the February SEI indicates, the shared access option is likely to result in a reduction in the total infrastructure footprint of the RES scheme with consequential benefits in terms of avoidance of impacts on peat.
469. The suggestion that the works to the Llanerfyl to Talerddig road were needed for other future projects was also unfounded. As Mr Russell explained any future schemes could and should adopt a strategic approach and either also share a Carnedd Wen access from the A548, or alternatively use a different and less harmful route which was available in principle⁵¹⁵.

⁵¹² See at CW SEI 2013 (AD-RWE-026), Vol 1, P.9

⁵¹³ In particular the oral evidence from Dr Piper and Dr Edwards made this clear.

⁵¹⁴ DW main proof (OBJ-002-ECOLOGY-POE-WOODFIELD-SSA-B), pps 35-39 and xx of KM by Powys

⁵¹⁵ See MR proof at pps 3-4, para 2.8. For the proposed strategic sites to the east of Llanbrynmair including Tir Gwynt, Esgair Cwmowen, Mynydd Waun Fawr, Rhydd Ddu and the Cefn Coch substation, PCC consider that a common access strategy should be prepared. At present one of these developments Tirgwynt has planning permission. The developer is planning to transport AILs along the STMP route from Ellesmere Port to the A458 near Llanfair Caereinion. From there the developer is planning to use and alter approximately 16km of local roads. The Tirgwynt development is broadly central to the proposed strategic sites. PCC officers at least considered that this route was acceptable that the access road for Tir Gwynt should be used for all sites in the area, in the event that they are consented, with internal links through sites where required in order to mitigate impacts. In principle at

470. It is important to note that there was no expert evidence put before the inquiry by RES relating to the economic viability⁵¹⁶. There is as a result no evidence at all which could support a suggestion from RES that either sharing an access with Carnedd Wen or pursuing an alternative access in a 'no Carnedd Wen' scenario would be, in economic terms, unviable. Indeed, as a matter of common sense and given the scale and expense that would inevitably be involved in undertaking the substantial works proposed along the Talerddig to Llanerfyl road it is hard to see how sharing an access or achieving access across that area could be anything other than preferable in economic terms. It is also important to note that there is simply no economic viability (or other) evidence to support the imposition of a condition suggested by Llanbrynmair which allows the developer to revert back to use of the initially proposed access arrangements after a certain date. Even if there had been, EN-1 makes it clear that " If an applicant suggests that the costs of meeting any obligations or requirements would make the proposal economically unviable this should not in itself justify the relaxation by the IPC of any obligations or requirements needed to secure the mitigation"⁵¹⁷.

471. Finally, Carnedd Wen have indicated to the inquiry that 'RWE is agnostic on whether or not RES ensures that its section 36 consent and deemed planning permission enable it to use the Carnedd Wen access. And RWE will not stand in the way of RES securing the necessary land rights'⁵¹⁸. That is a welcome indication. But, as we make clear below, it is in the hands of the Secretary of State to require, by suitably worded consents, that the two wind farm proposals share access and the terms and timescales upon which they share access.

Legal and Policy context for the mitigation of harm and consideration of alternatives

472. As a matter of law and as a matter of policy, it is necessary to consider alternatives to the Local Access Proposals. The most obvious reason why that

least and subject to detailed consideration Powys submit this seems a sensible strategic solution that minimizes environmental impacts.

⁵¹⁶ In his examination in chief Kevin Martin (a transport witness not a specialist witness in assessing the viability of schemes) produced a draft timetable for shared access produced by his client and stated that "it is my understanding [that the scheme] as our forward to Carnedd Wen would be economically viable". He was then asked what would happen if there was further delay and he stated "the client has indicated that if Llanbrynmair had to follow the Carnedd Wen Scheme [it] would not be economically viable". He clearly was not and could not be giving evidence on this point-he was simply passing on his client's comments. In cross examination Kevin Martin was asked by PCC "[you have] no evidence [to] present relating to financial viability, no detailed evidence" to which he replied "no, [I am] only passing on information [I have been] provided with". PCC then asked "[you are] relaying something told, no evidence" to which he replied "no other documents". As foreshadowed in that exchange no documents were provided to support Kevin Martin's instructions at session 2, and nothing has subsequently been presented to the inquiry.

⁵¹⁷ Para 5.13.12

⁵¹⁸ Legal submissions to the inquiry submitted on 19.5.14 (no inquiry number).

is so is that, as PCC clearly demonstrated in session 2 and have set out in these closings submissions, utilisation of the Local Access Proposals is unacceptable in planning terms. Given that, PCC could simply invite the Secretary of State to dismiss this application so long as the Local Access Proposals remain part of it. However, PCC acknowledge that there is strong policy support for the early delivery of wind energy development, and that the turbines proposed by RES in planning terms are acceptable. Therefore even if the Secretary of State is with PCC on this primary submission, it is appropriate to consider alternative access specifically a shared access with Carnedd Wen or access through Carnedd Wen. It can be noted that even Llanbrynmair now urges the Secretary of State to consider an alternative shared access proposal in the event that its primary access proposals are considered to be unacceptable⁵¹⁹.

473. In any event PCC maintain that it is necessary to consider alternative access for a variety of other legal and policy reasons.

Consideration of alternatives as a matter of law

474. First, as a matter of law, consideration is required. The approach to consideration of alternatives in law is well established.⁵²⁰ Whether and to what extent there is a requirement to have regard to alternatives is always fact sensitive. In this case, the factual context self evidently requires the alternative access issue to be considered. That is not least because:

- a. there are clear and fully argued objections to development in relation to the proposed access arrangements in the Nant yr Eira valley meaning it is important for the decision maker to consider if a more appropriate access can be achieved;
- b. the proposed engineering works to enable the access proposals in the Nant yr Eira valley will, by common consent have significant adverse effects which could readily be avoided by use of an alternative access. It is accordingly to the public advantage to consider alternative access.
- c. the use of an alternative access has been raised with the applicant for a considerable period of time as an obvious way of avoiding serious harm to the environment and the public. It is not a new proposition.
- d. the alternative access has been demonstrated to be feasible by PCC. As, Llanbrynmair have now formally proposed a shared access arrangement it can hardly claim to be prejudiced by consideration of it.

475. In those circumstances, there is a clear imperative for the decision maker to consider alternative access arrangements which will avoid and mitigate identified harm.

Policy

⁵¹⁹ The February 2014 SEI (AD-RES-043)

⁵²⁰ *Trusthouse Forte Hotels Ltd v SSE* (1987) 53 P & CR 293. Relevant passages from the judgment of Simon Brown J (as was) are set out in submissions below concerning session 3.

476. Second, relevant policy emphasises the relevance of considering alternatives. Whilst the relevance to the decision making process remains a matter of law, EN-1 emphasises that as a matter of policy, the decision maker should consider the importance, feasibility and suitability of the alternatives⁵²¹. Given the avoidance of harm inherent in the alternative access options before this inquiry, consideration of them also accords with the policy aim of minimising landscape and visual harm by providing reasonable mitigation where possible and appropriate⁵²². PPW⁵²³ also makes clear the need, in the context of onshore wind proposals, to undertake careful consideration to avoid and where possible minimise their impact. The similar and equally important policy requirement to ensure that harm to ecology is effectively mitigated also demonstrates that there is a need to consider if there is an alternative that can avoid harm. Identification of all policies that require avoidance of harm would be a lengthy exercise, but the following shows the strong policy emphasis on ensuring that harms on ecology are minimised. EN-1 provides at 5.3.4. that a developer should show how the project has taken the opportunity to conserve and enhance biodiversity and geological conservation interests. Very significantly for these purposes it sets out at 5.3.7 that as a general principle, and subject to the specific policies below, development should aim to avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives; where significant harm cannot be avoided, then appropriate compensation measures should be sought. At 5.3.18 EN-1 provides that a developer should include mitigation to demonstrate that (inter alia) during construction and operation best practice will be followed to ensure that risk of disturbance or damage to species or habitats is minimised, including as a consequence of transport access arrangements.

477. PPW picks up this theme at 5.5.1. saying where development does occur it is important to ensure that all reasonable steps are taken to safeguard or enhance the environmental quality of land. At 5.5.2 it states that when considering any development proposal (including on land allocated for development in a development plan) local planning authorities should consider environmental impact, so as to avoid, wherever possible, adverse effects on the environment. Where other material considerations outweigh the potential adverse environmental effects, authorities should seek to minimise those effects and should, where possible, retain and, where practicable, enhance features of conservation importance.

478. Thus it is clear that as a matter of law and policy a developer has a duty to mitigate harm on the ecological environment. It is well established that the correct way to go about doing this is firstly to seek to avoid the harm, and if the harm cannot be avoided to put in place compensation measures.

Schedule 9

⁵²¹ See bullet points at 4.4.3 generally

⁵²² See EN-1. In 5.3, the reference to mitigation is found at 5.9.8

⁵²³ 6th Edition Feb 2014, section 12.8.12 (CD-RWE-PLA-003)

479. Third, Schedule 9 of the Act contains material provisions. Schedule 9 provides as follows (as relevant):

1.—

(1) *In formulating any relevant proposals, a licence holder or a person authorised by exemption to generate, distribute, supply or participate in the transmission of electricity —*

(a) *shall have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest; and*

(b) *shall do what he reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects.*

(2) *In considering any relevant proposals for which his consent is required under section 36 or 37 of this Act, the Secretary of State shall have regard to—*

(a) *the desirability of the matters mentioned in paragraph (a) of sub-paragraph (1) above; and*

(b) *the extent to which the person by whom the proposals were formulated has complied with his duty under paragraph (b) of that sub-paragraph.*

480. PCC note that on a strict reading of the case of Sustainable Shetland [2013] CSOH 158 it is arguable that the duty to mitigate would not bite on Llanbrynmair as they are not yet licence holders. However if that reading holds true then the Secretary of State would not be able to grant the applications in this case (save for Carnedd Wen).⁵²⁴ PCC understand that the position of the Secretary of State is that the inquiry should continue pending an appeal against the Sustainable Shetland case, the appeal having been heard (it is believed) earlier this year but apparently without a judgment handed down, and possibly pending legislative intervention.

481. PCC note the differing approach to the construction of the Act taken recently by the Outer House in Trump International Golf Club Limited v The Scottish Ministers [2014] CSOH 22. To the extent the judgment therein indicates that the provisions in Schedule 9 do not apply to an applicant in the position of Llanbrynmair, PCC submit the court is wrong.

482. PCC do not think that it can be properly argued that Parliament intended that the requirements of Schedule 9 as to protection of amenity can be avoided by the expedient of making an application without a licence in the context of the Act read as a whole. PCC maintain that Llanbrynmair is subject to the duty to mitigate in Schedule 9.

483. In any event, the Secretary of State, even on the interpretation put forward in Trump, is still required (by virtue of Schedule 9, paragraph 2 (a)) to have regard to *the desirability of ... preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special*

⁵²⁴ Which now holds a generating licence

interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest.

484. To the extent that Llanbrynmair assert that it is not under a duty to mitigate harm pursuant to Schedule 9, this may go some way to explain the obvious failure by it to consider and implement a feasible and far less harmful alternative. It is wrong to assert that it is not subject to the Schedule 9 duty, but even if that submission held true, the requirement for the Secretary of State to consider alternative access and the extent to which harm can be avoided remains for the variety of legal and policy based reasons discussed in these submissions.

485. Pursuant to the Schedule 9 provisions the Secretary of State has a statutory obligation to consider the extent to which the RES has complied with its duty to do what it reasonably can to mitigate impact on, inter alia, the natural beauty of the countryside, flora and fauna. The Secretary of State should conclude that in devising a proposal that requires such substantial work with such a substantial impact on a significant portion of the Llanerfyl to Talerddig Road, the applicant has not done all that it reasonably can to mitigate the scheme's impacts. Having regard to that and the desirability of 'preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest' it is clearly relevant for the Secretary of State to consider whether there is an available and feasible alternative access which will avoid all of the impacts from the Local Access Works.

European protected species

486. Fourthly, PCC maintain that as a matter of law there is also a requirement to give consideration to the alternatives because of the effects of the Local Access Work on European Protected Species, especially bats⁵²⁵. This submission falls into two parts. First PCC say that the works to Gosen Bridge are likely to require a licence. Secondly, PCC say that if this is right, RES will not be able to obtain a licence because there is a satisfactory alternative.

Likely to require a licence

487. Turning to the first part of the submission, that works along the road but particularly the substantial works that are required to Gosen Bridge, are likely to require a licence. Bats, dormice and otters are defined as European

⁵²⁵ PCC accept that the submission is most clear in relation to bats because a bat roost has been found at Gosen Bridge. However, given that PCC say inadequate work has been done to identify other species, it may be that following further surveys this point could also apply to other species potentially present along the road, or to bats at other locations along the road.

protected species⁵²⁶ by regulation 40 and schedule 2 of the Conservation of Habitats and Species Regulations 2010/490⁵²⁷. Under those regulations it is an offence to destroy or damage the resting place of a European protected species⁵²⁸ (regulation 41 (1) (d)). It is also an offence to deliberately disturb wild animals of a European Protected Species (regulation 41 (1) (b)).

Destroying or damaging a resting place

488. In relation to the offence of destroying or damaging a resting place, the Guidance Document on the Strict Protection of animal species of Community interest under the Habitats Directive⁵²⁹ points out that a resting place does not have to be continually occupied to constitute a 'resting site', but : *such breeding sites and resting places also need to be protected when they are not being used, but where there is a reasonably high probability that the species concerned will return to these sites and places. If for example a certain cave is used every year by a number of bats for hibernation (because the species has the habit of returning to the same winter roost every year), the functionality of this cave as a hibernating site should be protected in summer as well so that the bats can re-use it in winter. On the other hand, if a certain cave is used only occasionally for breeding or resting purposes, it is very likely that the site does not qualify as a breeding site or resting place.*⁵³⁰

489. The Guidance also says that there will not be a breach of the Directive where a project can be carried out while ensuring continued ecological functionality of a resting/breeding site. However there will be a need to apply the precautionary principle to considering whether the measures will succeed:

*CEF⁵³¹ measures may be an option when an activity can affect parts of a breeding site or resting place. If the breeding site or resting place, as a result of such measures, will still remain at least the same size (or greater) and retain the same quality (or better) for the species in question, there will be no deterioration in the function, quality or integrity of the site and the activity can be undertaken with no need for a derogation under Article 16⁵³². It is crucial that the continued ecological functionality of the site is maintained or improved.*⁵³³

In accordance with the precautionary principle, if the measures proposed do not guarantee the continued ecological functionality of a site, they should not

⁵²⁶ So called because their protection is derived from EU Directive the Habitats Directive, which has been implemented in domestic law by the 2010 Regulations.

⁵²⁷ CD/CON/003/ LEG/001 – Conservation of Habitats and Species regulations 2010 (as amended)

⁵²⁸ 2010 Regulations CD/CON/003/ LEG/001

⁵²⁹ Guidance referred to in the Court of Appeal in Morge, see

http://ec.europa.eu/environment/nature/conservation/species/guidance/pdf/guidance_en.pdf for full document.

⁵³⁰ EC guidance at pg 41 (II.3.4.b) (54)

⁵³¹ Continued Ecological Function

⁵³² In domestic terms no need for a licence because there is no breach of the regulations in the first place

⁵³³ EC guidance pg 47 II.3.4.d, paragraph, 75

be considered under Article 12(1)(d)⁵³⁴. There must be a high degree of certainty that the measures are sufficient to avoid any deterioration or destruction. The assessment of the probability of success must be made on the basis of objective information and in the light of the characteristics and specific environmental conditions of the site concerned⁵³⁵.

490. The correct approach to this provision⁵³⁶ was considered by the Court of Appeal in Morge v Hampshire CC [2010] EWCA Civ 608. The case went to the Supreme Court but the following paragraphs were not disturbed:

- a. The provision does not cover potential breeding or resting sites [58]
- b. The act of destruction or damage does not need to be deliberate [46].
- c. No distinction is drawn in relation to this provision between direct and indirect effects [53].

Deliberately disturbing

491. The second provision of the Regulations under consideration is that, as set out above, it is an offence to deliberately disturb wild animals of a European Protected Species. This is further defined in the regulations to include impairing their ability to survive, reproduce, rear or nurture young, hibernate or migrate, or affect significantly the local distribution or abundance of species to which they belong⁵³⁷. This provision was considered in the case of Morge when it went to the Supreme Court⁵³⁸, who said that the difficult question for the Court is what is meant by 'disturbance' for the purpose of this Regulation [14]. They noted that certain broad considerations govern the approach to this question[19]:

- a. First, that it is an article affording protection specifically to species and not to habitats, although obviously, as here, disturbance of habitats can also indirectly impact on species. [19]
- b. Secondly, and perhaps more importantly, the prohibition encompassed in... [regulation 14 ((1) (b))..... relates to the protection of "species", not the protection of "specimens of these species"[19]
- c. Thirdly, whilst it is true that the word "significant" is omitted from [regulation 14 ((1) (b)).....that cannot preclude an assessment of the nature and extent of the negative impact of the activity in question upon the species and, ultimately, a judgment as to whether that is sufficient to constitute a "disturbance" of the species. [19]

⁵³⁴ Equivalent to domestic regulation 41 (1) (d)

⁵³⁵ EC guidance pg 47 II.3.4.d, paragraph, 76

⁵³⁶ Strictly a predecessor of this provision but no point turns on the re-enactment of the Regulations.

⁵³⁷ CD/CON/003/ LEG/001 – Conservation of Habitats and Species regulations 2010 (as amended), Regulation 41 (2).

⁵³⁸ CD-CPL-JUD-005 Morge v Hampshire County Council 2011 WL 1599

d. Fourthly.....activity during the period of breeding, rearing, hibernation and migration is more likely to have a sufficient negative impact on the species to constitute prohibited "disturbance" than activity at other times. [19]

492. The Supreme Court therefore disagreed that for there to be disturbance, an activity needed to have a detrimental impact so as to affect conservation status of species at population level [21]. Instead they said that case by case consideration is needed. A decision maker has to give consideration to rarity and conservation status of species and impact of disturbance on local population [22].

493. In light of the above law, PCC say it is clear that it is likely that the works at Gosen Bridge would be in breach of the regulations and as such would be likely to require a licence⁵³⁹. NRW signed up to a statement of common ground to this effect⁵⁴⁰. Given the scale of the works at Gosen Bridge in the vicinity of the known roost, PCC simply do not understand how it could be considered anything other than likely that there will be destruction or damage to the known roost at Gosen. RES consider that if a licence is required that it would most likely be due to the damage or destruction of the roost⁵⁴¹ however they make the entirely unsupported assertion that "I consider it likely that the widening of Gosen Bridge can be undertaken in such a manner as to avoid the loss or damage to the current roost..."⁵⁴². Given the extent of the work that will be undertaken to the bridge very clear evidence would be required before it could be suggested that that can be done without damage to or destruction of the roost. It should be noted at this juncture that RES have done none of the surveys that they would be required to do in order to suggest that this roost is not a resting or breeding place for the purposes of the directive. The Bat Survey Good Practice Guidelines at 8.4 describe the sort of roost characterisation study that would need to take place before any such suggestion could be made, and that has not been done here.

Satisfactory alternative

494. That works would be in breach of the Regulations does not necessarily prevent them taking place. However if they are to take place RES-assuming it wishes to avoid committing a criminal offence-will require a licence under Regulation 53. In order to obtain such a licence they will need to convince NRW that (inter alia) the licence is for 'preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment'⁵⁴³. However RES will face a further hurdle, and one that makes the point especially relevant to this section on legal

⁵³⁹ OBJ-002-ECOLOGY-REBUTTAL-WOODFIELD-SSA-B Rebuttal Evidence – Dominic Woodfield at 3.6

⁵⁴⁰ SOCG-LAND-PCC-NRW-SSA-B at paragraph 12

⁵⁴¹ Dr Shepherd rebuttal at 4.2 (RES-BATS-REBUTTAL-SHEPHERD-SSA-B Rebuttal Evidence – Dr Peter Shepherd)

⁵⁴² Dr Shepherd rebuttal at 4.2 (RES-BATS-REBUTTAL-SHEPHERD-SSA-B Rebuttal Evidence – Dr Peter Shepherd)

⁵⁴³ CD/CON/003/ LEG/001 – Conservation of Habitats and Species regulations 2010 (as amended), Regulation 53 (2) (e)

reasons to consider alternative accesses. The additional reason is that NRW will not be able to grant a licence unless they are satisfied (inter alia) that there is no satisfactory alternative⁵⁴⁴.

495. What is meant by the requirement that there is no satisfactory alternative was considered by the High Court in R. (on the application of Prideaux) v Buckinghamshire CC [2013] EWHC 1054 (Admin)⁵⁴⁵. In that case Lindblom J said:

- a. In deciding whether any particular alternatives constitutes satisfactory alternatives, if none of the alternatives were acceptable (on other planning grounds) it was not necessary to compare their potential impacts (if any) on European Protected Species [109].
- b. It is not the case that licence can only be granted if there is no alternative, a licence can only be granted if no 'satisfactory' alternative exists [111].
- c. It is not necessary to do a comparative assessment of the possible effects of each suggested alternative on European Protected Species, and a decision maker is not required to refuse a licence if an alternative has no foreseeable impact on European Protected Species, or a less harmful impact [112].
- d. Considerations other than effects on European Protected Species come into play-physical, planning and timing constraints are germane and may prove decisive. The alternative would have to be a real option rather than a theoretical one [113].
- e. Judging what is a satisfactory alternative requires focus on what is sought to be achieved through the derogation and the likely effects of the work on the species in question [114].

496. It is submitted that it is clear in this instance that access through Carnedd Wen constitutes a 'satisfactory alternative'. Elsewhere in these closing submissions PCC have demonstrated that access through Carnedd Wen (whether or not Carnedd Wen exists) would cause the same or significantly less impact on all other relevant planning matters including landscape and visual impacts, cultural heritage impacts, transport impacts and ecological impacts. No adequate evidence has been provided by RES to show that there is any practical reason why access through Carnedd Wen cannot be obtained. Faced with a licence application to enable RES to carry out this work NRW would be likely to be required to refuse this licence on the basis of there being a satisfactory alternative, as they confirmed in paragraph 13 of their Statement of Common Ground with PCC⁵⁴⁶

497. The question then is how this translates to the planning/Electricity Act 1989 decision. TAN 5 covers this at 6.2.2 and 6.3.4. to 6.3.7. TAN 5 reflects

⁵⁴⁴ CD/CON/003/ LEG/001 – Conservation of Habitats and Species regulations 2010 (as amended), Regulation 53 (9) (a)

⁵⁴⁵ OBJ-002-ECO-002

⁵⁴⁶ SOCG-LAND-PCC-NRW-SSA-B-EXPANDED

regulation 9 (3) of the 2010 Regulations which provides that, a competent authority in exercising any of their functions, must have regard to the requirements of the Directives so far as they may be affected by the exercise of those functions. TAN 5, however, predates consideration of the effect this point by the Supreme Court in Morge. In Morge the position was:

- a. It goes too far to say that if planning committee [or other decision maker] is satisfied there will be a breach of the Regulations it should consider whether a licence will be granted and refuse permission if they conclude a licence will not be granted and only grant permission if a licence will be granted [28] [29].
- b. Permission can ordinarily be granted save where a planning committee consider a development would be likely to breach [regulation 40] and would be unlikely to be licenced [29].

498. Where Natural England [or Natural Resources Wales] express the view that the proposed development will be compliant with [Regulation 40], the planning authority [or decision maker] are entitled to assume will be so [30].

499. The position was further considered in Prideaux, where it was said:

- a. It is the function of Natural England (NRW) to enforce compliance with the directive [94].
- b. A planning authority does not have to carry out the assessment that Natural England [NRW] has to make in deciding whether there would be a breach of Regulation 40 and whether derogation would be permitted [96].
- c. It repeated that permission should normally be granted unless the development is likely to offend Regulation 40 and is unlikely to be licensed.
- d. It is not necessary for Natural England [NRW] to say that the derogations were going to be licensed or likely to be- the planning committee entitled to assume this from the lack of objection [117].

500. EN-1 provides at 5.3.20 that the decision maker will need to take account of what mitigation measures may have been agreed between the applicant and NRW and whether NRW has granted or refused or intends to grant or refuse, any relevant licences, including protected species mitigation licences.

501. PPW says at 5.5.11 that the presence of a species protected under European or UK legislation is a material consideration when a local planning authority is considering a development proposal which, if carried out, would be likely to result in disturbance or harm to the species or its habitat. Local planning authorities should advise anyone submitting a planning application that they must conform with any statutory species protection provisions affecting the site concerned, and should consult CCW before granting permission. An ecological survey to confirm whether a protected species is present and an assessment of the likely impact of the development on a

protected species may be required in order to inform the planning decision. It goes on at 5.5.12 to explain the European Protected Species licences then says that Local planning authorities are under a duty to have regard to the requirements of the Habitats Directive in exercising their functions. To avoid developments with planning permission subsequently not being granted derogations in relation to European protected species, planning authorities should take the above three requirements for derogation into account when considering development proposals where a European protected species is present.

502. The simple point is that PCC have demonstrated that it is both likely that a licence will be required for the works at Gosen Bridge and that it is unlikely that it will be obtained. NRW agree. On the authority of Morge and Prideaux this is a highly relevant matter that strongly militates against the grant of consent.

503. It is pursuant to these legal and policy obligations (and to the under the Habitats Regulations to obtain a licence) that PCC say RES was (and the Secretary of State is) obliged to consider whether there is an alternative that can avoid the ecological impacts caused by their Local Access Proposals.

The failure by RES to reasonably mitigate harm and consider alternative access option

Factual background

504. The following points are made in relation to the background context on this issue:

- a. The proposition that RES should consider an alternative access arrangement has been raised with it for a considerable period of time. The contrary suggestion by RES to the inquiry that this solution has only been raised with it recently⁵⁴⁷ is simply wrong. In particular it can be noted that:
 - i. CCW⁵⁴⁸, in their capacity as a statutory authority have been raising exactly that point since at least 2010 and referred to it specifically in a consultation response to DECC in October 2012⁵⁴⁹.
 - ii. The Council made its position clear to the inquiry as long ago as May 2013 in the updated outline statement to the inquiry⁵⁵⁰ at a time when RES was providing, for the first time, detail of the emerging 'new' local

⁵⁴⁷ For example at RES-SOC-SSA-B para 67

⁵⁴⁸ As it then was. Now 'NRW'

⁵⁴⁹ Letter dated 12.10.12 at appendix DW2 to the main proof of Dominic Woodfield. See at p.4, para 10; p.12, para 78 (referring to the November 2011 response); p.28, para 13 (conditions).

⁵⁵⁰ OBJ/002/OSOC/2 AT para 7.1.2: "...The Council asks the Secretary of State to consider the extent to which the significant impacts of the Applicant's proposed access route could be mitigated by alternative routes, for example shared use of the Carnedd Wen site access and whether the current proposals comply with the Applicants' duties to preserve amenity under schedule 9 of the Electricity Act 1989."

access proposals⁵⁵¹. It was also a position made clear in the opening statement by Powys to the Inquiry on the 4th June 2013⁵⁵².

iii. The evidence put to the inquiry by Mr Martin which asserted that the Council had only indicated an alternative access route would have merit in July 2013 is wrong⁵⁵³.

- b. Despite efforts to get RES to consider the issue adequately, the first attempt to demonstrate that they have engaged with this issue is in their August 2013 SEI where it is stated that "*The shared access route with Carnedd Wen has been discounted. The reasoning for this decision was detailed in correspondence to PCC and NRW in July 2013*"⁵⁵⁴.
- c. The correspondence referred to can be found as an appendix to the Local Traffic Management Plan submitted as Appendix 10.1 to the August 2013 SEI⁵⁵⁵. In that regard there is also an earlier memo (dated 26 June 2013) setting out effectively the same reasoning for discounting a shared access solution and which was also submitted as a separate part of the transport appendices in RES's August 2013 SEI⁵⁵⁶.
- d. Both the 5th July 2013 letter to NRW and PCC and the June 2013 memo contain the following statement:

"RES and RWE Npower explored the possibility of sharing an access track during late 2008 and early 2009, prior to the submission of the Llanbrynmair Wind Farm application. A formal meeting was arranged on the 2nd February 2009 between RES and RWE Npower in Swindon to discuss the proposal. In light of discussions at that meeting, it was concluded that a shared access track for both projects would not be a viable option."

⁵⁵¹ As referred to earlier, Mr Williams, a Powys Highways officer, had also been raising the issue in e-mails with KM during the spring of 2013.

⁵⁵² 4th June 2013, para 64: "*Council will still be seeking a recommendation for refusal in relation to Llanbrynmair because they consider that the obligation to mitigate harm has clearly not been complied with. The most significant consideration is the highway impacts. Their concern is the decision made by the developer not to seek to share an access route with Carnedd Wen but instead to seek to access the site through the road from Llanerfyl. This is a very narrow attractive road passing through land evaluated as outstanding for scenic quality50. The proposals will necessitate the removal of considerable lengths of hedgerow, woodland and trees along the route as well as a new access across farmland and other modifications. These works will have significant highways and landscape and visual impacts. Insisting in utilising this approach is simply not compatible with the developers duties under schedule 9 of the Electricity Act 1989 and given the much more sensible alternative should lead to rejection of this proposal."*

⁵⁵³ Kevin Martin rebuttal proof – SSAB – paras 1.4 & 1.5, p.1 [RES-TRANS-REBUTTAL-MARTIN-SSA-B]

⁵⁵⁴ LB August 2013 SEI Appendices Volume I – Main Text para 10.5.9, p.388. Repeated in LTMP in same SEI, Vol II-C-, Appendix 10.1, para 5.2.1.1 in section 5 (AD-RES-033)

⁵⁵⁵ Also copied, at appendix DW3 of Mr Woodfield's main proof (OBJ-002-ECOLOGY-POE-WOODFIELD-SSA-B)

⁵⁵⁶ LB August 2013 SEI Appendices Volume II – C; Appendix 10.1 (B) 'Transport Consultation'. For convenience also at DW4 of Woodfield's main proof.

505. It appears that there has been no consideration at all by RES since 2009 prior to the 2013 correspondence referred to above. Given the requirements of the EIA regulations to set out the main alternatives considered, it is to say the least surprising that the process described in this correspondence was not referenced in the original Llanbrynmair ES, nor indeed in any supplementary material up to at least 2012⁵⁵⁷.

506. There is a similar absence of any reference to joint consideration of shared access in the Carnedd Wen EIA documentation. In fact, the Carnedd Wen material suggests that such joint working as occurred was much more restricted in scope than is claimed by Llanbrynmair⁵⁵⁸.

507. The first and only concrete reference in the submitted environmental information to a shared access arrangement being considered between the parties therefore appears to be in the form of the letter and memo correspondence appended to Llanbrynmair's August 2013 SEI. There remains no such reference in the submitted environmental information for Carnedd Wen.

508. Mr Martin also confirmed in his oral evidence that although he was instructed to review the local access arrangements in January 2013 by RES, he (or Aecom generally) had not been instructed to consider alternative access options or raise the issue at meetings. Rather he indicated that he '*had been informed by my client that this had been reviewed by them and concluded not to be a viable option*'⁵⁵⁹.

509. It is clear from the above that:

- a. The environmental information submitted in support of Carnedd Wen and Llanbrynmair prior to February 2014 demonstrates that the two applicants have been perfectly capable of engaging with certain issues raised by the proximity of the two sites, but not, it seems, when it comes to the matter of access.
- b. There is no indication that RES sought to engage meaningfully with Carnedd Wen on the possibility of a shared access solution as a means to reduce the significant environmental effects arising from their access road proposals.

⁵⁵⁷ In SEI 4 (14.8.12) (AD-RES-019) there is brief reference at p.10, section 4 to RES and NPower having identified that '*it would not be feasible to access Llanbrynmair wind farm through the Carnedd Wen site*'

⁵⁵⁸ For example, under Chapter 3 section 3.4.4 of the 2008 Carnedd Wen ES12 (paragraph 43) it is stated: "*The design of CW had to take into account a neighbouring wind farm proposal known as Llanbrynmair. The two potential wind farms have approximately 25 km of shared boundary. It was necessary to agree turbine spacing along the boundary so that turbines were not placed in a position such that the turbines from one project might adversely affect the turbines of the other. There are 24 turbines within the CW proposal that could potentially 'interact' with turbines on the Llanbrynmair proposal, but through careful design, both layouts would be compatible options.*"

⁵⁵⁹ Answers to xx by Powys in Session 2

- c. This is despite the option of sharing access being repeatedly raised by statutory consultees, and despite the statutory and policy obligations to consider less damaging alternatives.

The February 2014 SEI from RES⁵⁶⁰

510. The SEI proposal is based on 'shared access' with the adjoining Carnedd Wen wind farm. This is proposed to be achieved by means of two sections of new track linking the proposed Llanbrynmair wind farm to that site. The two links closely mirror the indicative links first put forward by PCC in September 2013 and which formed the basis of PCC's case in written and oral submissions to the inquiry that a much less environmentally damaging alternative to the proposed highways improvements along the Talerddig Road and the Nant yr Eira was available.
511. As explained in the PCC response of the 13th March 2014⁵⁶¹ PCC welcomes the work that has at last been done by RES on exploring and assessing the option of linking the Llanbrynmair site to the existing forest track network within the Carnedd Wen site, in support of the formal proposal it now puts forward to the Secretary of State.
512. PCC notes that while the 'southern link' remains the same as that already advanced by PCC on an in-principle basis, a slight change has been made to the northern link. Having reviewed the implications of this minor change, as set out in part 2 of the SEI, PCC has no objection to this alternative means of realising the 'northern link'.
513. The submission by RES further demonstrates the feasibility of the shared access option as both operationally satisfactory and a less environmentally damaging alternative to their original – and indeed still maintained – access proposals.

The inadequacy of the submitted Environmental Information relating to the local access proposals

514. Independently of its position on the merits of the local access proposals, the submitted Environmental Information remains so inadequate that the Secretary of State may not lawfully grant consent for a proposal involving them. In relation to ecological matters the environmental information provided by RES for their Llanerfyl to Talerddig AIL access proposals ("the Local Access Proposals") is inadequate such that Regulation 4 of the Electricity Works (Environmental Impact Assessment) (England and Wales) Regulations 2000/1927⁵⁶² has not been complied with. Regulation 3 of the Regulations provides that:

The Secretary of State shall not grant a section 36 consent or a section 37 consent which relates to EIA development unless the requirements of regulation 4 have been satisfied

⁵⁶⁰ AD-RES-043

⁵⁶¹ OBJ-002-011 Response to Llanbrynmair Feb 14 SEI – Shared Access

⁵⁶² CD/002/002

515. Thus PCC's position is that, due to failure to comply with regulation 4 of the 2000 Regulations, the Secretary of State is precluded in law from granting a consent for the Llanbrynmair scheme, so long as it contains the Local Access Proposals. To be clear, if the Secretary of State were to grant access to RES through Carnedd Wen⁵⁶³, or were to grant permission for RES's turbines only⁵⁶⁴, then PCC are content that adequate environmental information has been provided.

516. There is no dispute in this case that the Llandbrynmair Scheme is EIA development and thus is required to comply with Regulation 4. In order to understand why PCC say RES have not complied it is necessary to understand the Scheme of the Regulations. By virtue of Regulation 4 an applicant must provide an environmental statement including the information in Part II of Schedule 4 and such of the information referred to in Part I of Schedule 4 as *"is reasonably required to assess the environmental effects of the development and which, having regard in particular to current knowledge and methods of assessment, the applicant can reasonably be required to compile, taking into account the terms of any scoping opinion given."*⁵⁶⁵

517. Part II of Schedule 1 of Regulations therefore sets out those matters that must be included within the Environmental Statement and which are not subject to the requirements of reasonableness or the terms of the scoping opinion (if any)

- a. A description of the development comprising information on the site, design and size of the development⁵⁶⁶
- b. A description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects⁵⁶⁷
- c. The data required to identify and assess the main effects which the development is likely to have on the environment⁵⁶⁸.
- d. An outline of the main alternatives studied by the applicant and an indication of the main reasons for his choice, taking into account the environmental effects.⁵⁶⁹

518. Part I of the schedule requires the applicant to identify (so far as is reasonably required) the environmental impacts of the development the following information (relevant parts only):

⁵⁶³ As considered by RES in their February 2014 SEI (AD-RES-043 Llanbrynmair SEI February 2014)

⁵⁶⁴ This is considered in the Powys Document "Note on reasons for considering Llanbrynmair alternative access and practicalities of implementation":OBJ/002/PROC/006, filed with inquiry on 31.10.13

⁵⁶⁵ 2000 Regulations [OBJ-002-LEG-002] Regulation 4 (1) (a) and (b)

⁵⁶⁶ 2000 Regulations [OBJ-002-LEG-002] Schedule 4 Part II Paragraph 1.

⁵⁶⁷ 2000 Regulations [OBJ-002-LEG-002] Schedule 4 Part II Paragraph 2

⁵⁶⁸ 2000 Regulations [OBJ-002-LEG-002] Schedule 4 Part II Paragraph 3

⁵⁶⁹ 2000 Regulations [OBJ-002-LEG-002] Schedule 4 Part II Paragraph 4

- a. Description of the development, including in particular–(a) a description of the physical characteristics of the whole development and the land-use requirements during the construction and operational phases⁵⁷⁰;
- b. A description of the aspects of the environment likely to be significantly affected by the development, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the inter-relationship between the above factors⁵⁷¹
- c. A description of the likely significant effects of the development on the environment, which should cover the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the development, resulting from–(a) the existence of the development;... and a description by the applicant of the forecasting methods used to assess the effects on the environment⁵⁷².
- d. A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment⁵⁷³.
- e. An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the applicant in compiling the required information⁵⁷⁴.

519. In deciding whether sufficient information has been provided to describe the 'likely significant effects' it needs to be borne in mind that 'likely' means 'possible'⁵⁷⁵. This reflects the need to take a precautionary approach to the question of likely significant impacts. Authorities cannot postpone consideration of the environmental impact until conditions stage⁵⁷⁶. If further surveys have been identified as necessary they have to be done prior to consent (although of course that does not prevent update surveys being carried out shortly before development to check for change in conditions, so long as sufficient work has been done prior to the grant of consent to understand whether there are likely to be significant impacts).

520. Although obviously the statutory requirement is the fundamental requirement, EN1 also provides at 4.2.1 that EIA development must be accompanied by an ES, describing aspects of the environment likely to be significantly affected by the development, including flora fauna and soil, and at 4.2.4. that when considering a proposal the decision maker should satisfy itself that the likely significant effects, including any significant residual effects taking account of any proposed mitigation measures or any adverse effects of those measures, have been adequately assessed. If the decision maker is not satisfied it should request any further information necessary to

⁵⁷⁰ 2000 Regulations [OBJ-002-LEG-002] Schedule 4 Part I Paragraph 1

⁵⁷¹ 2000 Regulations [OBJ-002-LEG-002] Schedule 4 Part I Paragraph 2

⁵⁷² 2000 Regulations [OBJ-002-LEG-002] Schedule 4 Part I Paragraph 3

⁵⁷³ 2000 Regulations [OBJ-002-LEG-002] Schedule 4 Part I Paragraph 4

⁵⁷⁴ 2000 Regulations [OBJ-002-LEG-002] Schedule 4 Part I Paragraph 6

⁵⁷⁵ Bowen-West v SSCLG [2012] EWCA Civ 321

⁵⁷⁶ R. v Cornwall CC Ex p. Hardy [2001] Env. L.R. 25; [2001] J.P.L. 786, para 71

ensure compliance with EIA directive. Finally it notes at 5.3.3. that where the development is subject to EIA the applicant should ensure that the ES clearly sets out any effects on internationally, nationally and locally designated sites of ecological or geological conservation importance, on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity.

521. TAN 5 provides, at 4.3.2., that to facilitate the efficient and timely processing of planning applications developers should ensure that applications are carefully prepared with all relevant information included and all material considerations addressed in the layout, design and related access, drainage and infrastructure. Landscaping proposals should be included together with any measures designed to avoid, mitigate or compensate for potential adverse effects on nature conservation. Any proposals for enhancement of nature conservation interests should also be included. These matters should not normally be left for later submission under conditions imposed on any permission given, because they will be material to the determination of whether planning permission should be granted. It does accept at 4.3.4 that the information submitted with the planning application should be proportional to the likelihood of effects on nature conservation interests and to their potential significance.

522. At 4.5.1 TAN 5 notes that EIA is a process intended to identify and assess the likely significant environmental effects of a proposed development, in order to inform decision-making. It should identify at an early stage the nature conservation interests likely to be affected by an EIA development. It should ensure that the impacts of projects likely to have a significant effect on the environment are thoroughly investigated, understood and considered before deciding whether or not to grant consent.

523. In respect of protected species TAN 5 sets out at 6.2.1 that the presence of a protected species is a material consideration when a local planning authority is considering a development proposal that, if carried out, would be likely to result in disturbance or harm to the species or its habitat, and goes on to state at 6.2.2. that it is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision. It is considered best practice that such a survey is carried out before planning application is submitted. Planning permission should not be granted subject to a condition that protected species surveys are carried out and, in the event that protected species are found to be present, mitigation measures are submitted for approval. However, bearing in mind the delay and cost that may be involved, developers should not be required to undertake surveys for protected species unless there is a reasonable likelihood of them being present.

524. Interestingly in light of the way the debate, particularly about dormice, proceeded at the inquiry, TAN5 points out that, the level of likelihood that should trigger a requirement for developers to undertake surveys should be low where there is a possibility that European protected species might be present.

525. Guidance provided by the Institute of Ecology and Environmental Management on carrying out Ecological Impact Assessment⁵⁷⁷ (which is a key component of carrying out EIAs⁵⁷⁸) makes it clear that the correct approach to carrying out an EIA is to decide with justification which impacts to scope in and out and then for those that are scoped in to describe the changes to the baseline condition⁵⁷⁹.

526. Thus it is abundantly clear that as a matter of law and policy RES are obliged to identify and report likely significant effects on flora and fauna, there being a particular compunction to do so where there is a possibility of the development affecting protected species. PCC (and NRW) consider that they have failed in this obligation.

527. The reason PCC initially became involved in this particular topic, whereas elsewhere NRW have pursued ecological issues, is because one of the reasons given by RES for rejecting access through Carnedd Wen was that such an access would have impacts on ecology in particular peat⁵⁸⁰. As a result PCC instructed an ecologist to investigate this claim⁵⁸¹. In order to advise the Council about the comparative ecological impacts of the Local Access Arrangements as compared with access through Carnedd Wen, it was necessary to carefully consider the environmental information provided by RES in relation to their local access arrangements. PCC were advised that the work done did not satisfy the requirements of the EIA Regulations, and the Council reported this to the inquiry on the 3th October 2013⁵⁸².

528. This conclusion should not have come as a particular surprise to RES. In 2012 prior to the Council's consideration of this application CCW advised DECC⁵⁸³ *"we also consider that the ES is deficient in some areas and so does not fully consider all significant impacts of the proposal in accordance with the Environmental Impact Assessment Regulations, particularly: -the environmental impacts of works to upgrade proposed off site transport routes on the 12km of road between Llanerfyl and the four site entrances."*

529. Subsequent to that substantial further SEI was produced in August 2013. As discussed earlier that amounted to, in truth, a wholly new proposal. However as set out in PCC's 3rd October letter that SEI failed to appropriately assess the significant impacts of the Local Access Proposals. NRW have agreed the general thrust of this letter⁵⁸⁴.

⁵⁷⁷ CD-RES-BAT-004, note that this guidance was endorsed by (inter alia) CCW.

⁵⁷⁸ CD-RES-BAT-004 at 1.2

⁵⁷⁹ CD-RES-BAT-004 at 4.2

⁵⁸⁰ AD/RES/036 Appendix 10.1 Transport at Appendix B-10 , and Appendix DW3 (OBJ-002-ECOLOGY-POE-WOODFIELD-APP-SSA-B Appendices to Proof)

⁵⁸¹ Dominic Woodfield first proof (OBJ-002-ECOLOGY-POE-WOODFIELD-SSA-B Proof Of Evidence – Dominic Woodfield) at 1.7

⁵⁸² OBJ-002-010 Letter to inspector enclosing comparison table for Llanbrynmair access OBJ-002-010a Access Route Comparison of submitted Env Information – for Inspector

⁵⁸³ CON-003-OSOC-5-APP Llanbrynmair – CCW letter to DECC

⁵⁸⁴ Letter found at OBJ-002-ECO-001, statement of common ground at SOCG-LAND-PCC-NRW-SSA-B-EXPANDED

530. Before setting out the particular impacts that PCC say remain unassessed, it is important to make a preliminary point. From PCC's original table showing missing information in October 2013 there has been what can only be described as a drip feed of further information provided by RES⁵⁸⁵. However this drip feed has not been sufficient to allay all of PCC's concerns. In their response to the 2014 SEI PCC say⁵⁸⁶:

The continued inadequacy of the EIA material in respect of the Llanerfyl to Talerddig Road access option remains a real and significant concern. Statements in the latest SEI such as "the SEI submitted in August 2013 superseded the original Environmental Statement and subsequent SEI packages" (paragraph 1.1.2) fail to inform the reader that the inquiry proceedings have exposed significant issues with the adequacy of that document, ranging from a failure to 'carry over' or otherwise make reference to significant ecological effects identified in earlier SEI iterations, to wholesale omission of other information capable of being a substantive material consideration. It has already been conceded several times by RES in evidence to the inquiry (and in fact a further example is given at paragraph 2.1.3 of this latest SEI), that relevant material has been omitted. This important background to the purpose of Part 1 of this latest SEI is not clear from the way the introductory section is written. PCC feels that this chronology does need to be clear.

In any event, and as explained below and in Annex 1 to this letter, the material submitted since the August 2013 SEI and the October 2013 'Bat SEI' has for various reasons still not remedied the failings which concern PCC (and also NRW). The EIA material before the Secretary of State therefore remains inadequate in PCC's view."

531. Thus PCC will not set out in this section such concerns as they had which have now been resolved through the provision of further information. It should be noted, however, that in many cases where further information has belatedly been provided, this has resulted in it becoming evident that there will be further impacts from the Local Access Proposals. PCC draw attention to those below when discussing the balance of harms between the Local Access Proposals.

Trees & hedges

⁵⁸⁵ This can be followed through by looking at the original table provided by PCC [OBJ-002-010 Letter to inspector enclosing comparison table for Llanbrynmair access], the response to it this in Mick Green rebuttal proof appendix C [RES-ECOLOGY-REBUTTAL-GREEN-APP-SSA-B Rebuttal Evidence Appendix – Mick Green appendix C], Dominic Woodfield second supplementary proof appendix DWR2- [OBJ-002-ECOLOGY-2NDREBUTTAL-WOODFIELD-SSA-B 2nd Rebuttal Evidence (re: RES Bats SEI)], RES note submitted 26 November entitled "Response to Dominic Woodfield DW8" [RES-012 Response to Dominic Woodfield], Dominic Woodfield's response to the 26 November note [OBJ-002-ECOLOGY-3ndREBUTTAL-WOODFIELD-SSA-B], RES's February 2014 SEI [AD-RES-043_Llanbynmair SEI February 2014] and PCC's response to RES's February 2014 SEI [OBJ-002-011 Response to Llanbrynmair Feb 14 SEI – Shared Access [OBJ-002-011 Response to Llanbrynmair Feb 14 SEI – Shared Access]

⁵⁸⁶ OBJ-002-011 Response to Llanbrynmair Feb 14 SEI – Shared Access

532. The first reason why PCC consider that there has been a failure to adequately assess the environmental impacts of this development is that, as discussed earlier, there has been a serious failure to properly describe and assess the extent of tree loss.

533. Further, PCC maintain that there are a number of trees which will not be able to be retained in practice which have not been assessed or considered by RES because RES wrongly consider that they can be maintained. This point in general arises where there will be work in the root zone of the tree or where the trees are shown under an earthworks envelope or a temporary construction area on a drawing. PCC estimate that 96 trees are at risk due to being within temporary construction areas or under an earthwork envelope, and 56 trees are at risk of indirect loss for example because of work within their root zone. One clear example of this is close to the Disog Bridge⁵⁸⁷ where there is an ash tree to the north of the road that RES acknowledge "supports dense ivy and a number of rot holes in the main trunk and as such has a high potential for roosting bats⁵⁸⁸", however no further consideration of this tree is made because the tree is to remain. The difficulty for RES's argument is that they acknowledged that the required width for AILs at this location is 5.1metres⁵⁸⁹. While there is 5.4metres width available at the moment this includes 1.3metres of existing verge at least half of which raises near-vertically from the asphalt surface (see photographs in appendix). Excavating into this elevated area to create the necessary running width may impact on the root system of this tree, and taking the precautionary approach required by EIA the risk of loss of this tree should have been considered. This is just given by way of example. There are many further similar instances as set out above. Thus PCC consider that the baseline understanding of tree loss caused by this proposal remains flawed.

534. Further in relation to hedgerows, RES now acknowledge a removal of 1532metres of hedgerow, and that this is a significant impact⁵⁹⁰, but replacement of hedgerow is relied on. Hedgerows are a priority habitat under section 42 of the NERC Act⁵⁹¹, as discussed further below. While PCC now accept that the loss of hedgerow is sufficiently accurately described for the purposes of an EIA, that is not the totality of RES's duties. As set out above, RES rely on replacement of hedgerows as mitigation. The obligation on an applicant is to describe the mitigation measures. Removal of hedgerows still leaves a significant qualitative shortfall in ecological terms while replacements are being planted⁵⁹². The February 2014 SEI states that "the new hedgerows will be functioning as hedgerow habitat within 5 years and will continue to improve with continuing management"⁵⁹³. However that statement, unsupported by evidence, fails to go anywhere near understanding and describing how long it will take for these priority habitats

⁵⁸⁷ AD/RES/036 Appendix 10.1 Transport at Appendix A sheet 2 of 14 note 1.4 and 1.5

⁵⁸⁸ OBJ-002-ECOLOGY-3rd REBUTTAL-WOODFIELD-SSA-B at DWR3-3, note 5. Note that the text in black is RES's text and the text in red is PCC's response.

⁵⁸⁹ OBJ-002-ECOLOGY-3rd REBUTTAL-WOODFIELD-SSA-B at DWR3-3, note 5

⁵⁹⁰ AD-RES-043_Llanbynmair SEI February 2014 at 2.2.10

⁵⁹¹ AD-RES-043_Llanbynmair SEI February 2014 at 2.2.11.

⁵⁹² OBJ-002-ECOLOGY-POE-WOODFIELD-SSA-B Proof Of Evidence – Dominic Woodfield 5.3.17 third bullet.

⁵⁹³ AD-RES-043_Llanbynmair SEI February 2014 at 2.2.12

to re-establish. PCC's evidence is that such planting "While in landscape terms can put some back something, in ecological terms, reinstating ecological function takes much much longer. Species rich hedges are long established. Some are hundreds of years old. Some are on earth and stone banks. They generate their own flora. They cannot be put back overnight. There is a special set of conditions. In terms of the role of replacement planting in providing equivalence, to get back to anything like what is being lost, will take decades and decades."⁵⁹⁴ It will be recalled as well as this being a significant loss in itself not acknowledged in the SEI, hedgerows are important both for dormice and bats.

Dormice

535. The second reason is in relation to dormice. The evidence on dormice was primarily given by NRW⁵⁹⁵. Dormice are a European Protected Species. PCC maintain that the work done on dormice is demonstrably short of best practice⁵⁹⁶. The position reported in the February 2014 SEI is that RES consider there is no possibility of having direct effects on Dormice ("it is considered that by employing the [mitigation] methods above, there is no possibility of deliberately killing or disturbing dormouse even if they were to be present"⁵⁹⁷). There is an absence of any further survey work from that produced prior to the ecology hearing session (ie the survey work in 2010) and criticised by NRW and PCC. The simple point is that the survey effort is demonstrably short of best practice therefore there can be no confidence in the assertion in the SEI that dormice are absent so are unlikely to suffer direct effects as reported. RES's arguments are undermined significantly by the fact that they have repeatedly maintained that the habitat along the access road has limited suitability for dormice⁵⁹⁸. However in assessing habitats that may be suitable for dormice, RES have relied on too narrow a definition of suitable habitat⁵⁹⁹. Dormice have been found more recently in much more 'non-traditional' habitat, including close by in 2011 by those surveying the access to the wind farm at Dyfnant Forest⁶⁰⁰, that habitat being similar to the one along the Nant yr Eira valley⁶⁰¹. Thus RES's survey effort which led to the SEI's conclusions was not soundly based. .

⁵⁹⁴ Dominic Woodfield in first ecology hearing session at session 2.

⁵⁹⁵ CON-003-DORMICE-POE- HALLIWELL-SSA-B – Proof of Evidence – Dormice

⁵⁹⁶ OBJ-002-ECOLOGY-POE-WOODFIELD-SSA-B Proof Of Evidence – Dominic Woodfield 5.3.15

⁵⁹⁷ AD-RES-043_Llanbynmair SEI February 2014 at 2.5.13

⁵⁹⁸ Mick Green rebuttal evidence on dormice at 1.1.6 "the habitat was considered to be of low quality" [RES-ECOLOGY-REBUTTAL-GREEN-SSA-B Rebuttal Evidence – Mick Green]. February 2013 SEI "No further sections of high potential dormice habitat were identified in surveys following changes to designs in Spring 2013. The habitat was considered to be of low quality...." [AD-RES-043_Llanbynmair SEI February 2014 at 2.5.6]

⁵⁹⁹ Elisabeth Halliwell (dormice expert for NRW) hearing session.

⁶⁰⁰ See Elisabeth Halliwell's rebuttal proof at paragraph 7 which shows that in 2011 dormice in nest tubes were found just 2.8km from Llanerfyl (CON-003-DORMICE-REBUTTAL-HALLIWELL-SSA-B). Point about 'non-traditional habitat' made by Elisabeth Halliwell in hearing session.

⁶⁰¹ Elisabeth Halliwell in hearing session

536. More fundamentally, having started off on the wrong foot, RES then took the wrong survey approach. The Dormouse Handbook⁶⁰² makes it clear that "surveys should normally be undertaken to detect actual presence or demonstrate likely absence"⁶⁰³ The only survey effort undertaken for dormice was to search for gnawed hazelnuts⁶⁰⁴, in which survey 148 gnawed nuts were found of which 103 had been gnawed by squirrels⁶⁰⁵. While (as reported in the SEI) the Dormouse Handbook notes that the best way to establish presence is nut searches⁶⁰⁶, it also notes that heavy nut consumption by squirrels can result in false negatives⁶⁰⁷. The point is put more strongly in Natural England Advice Note 'Dormouse surveys for mitigation licensing – best practice and common misconceptions' *'nut searches can be a useful additional tool in heavily fruiting areas of hazel, but there are very few sites where this technique alone should be applied and there is a significant risk of false negatives, especially where low densities of dormice occur. Nut searches should not be used as evidence of likely absence of dormouse on any site'*⁶⁰⁸. Simply, nest tubes should have been used given to ensure that the nut survey was not giving false negatives. It is highly notable that this was the survey approach which found dormice in non-traditional habitat less than three kilometres from Llanerfyl.

537. It is simply not enough to say that the dormice may be there and propose mitigation on that basis. Good practice must be followed in searching for European protected species prior to the grant of consent in order to understand whether there will be a likely significant impact on dormice, and that has not been done here. The use of nest tubes is an inexpensive step⁶⁰⁹ and should have been carried out to ensure that the SEI can accurately report whether there is likely to be a significant impact on dormice by these proposals. Given the inadequate baseline understanding the SEI cannot accurately describe either direct or indirect effects on this European Protected Species, because they have not taken the steps suggested by the guidance to understand whether those species are present.

Bats

538. The third reason relates to bats. Bats are a European Protected Species. SEI purporting to address the impact on bats from the August 2013 Aecom Drawings was first provided in October 2013⁶¹⁰. PCC identified a substantial number of concerns about the adequacy of that work⁶¹¹. Since then some

⁶⁰² CD-CON-003-ECO-003

⁶⁰³ Dormouse handbook 3.2.

⁶⁰⁴ AD-RES-043_Llanbynmair SEI February 2014 at 2.5.1. The point made in the SEI that no criticism was made of the survey effort at the time by NRW is a bad one. As discussed elsewhere the access works only became part of this application in 2012, and the full extent of the works required only became clear in August 2013.

⁶⁰⁵ AD-RES-043_Llanbynmair SEI February 2014 at 2.5.5

⁶⁰⁶ Dormouse Handbook 3.2.2.

⁶⁰⁷ Dormouse Handbook 3.2.2.

⁶⁰⁸ [CD-CON-003-ECO-001]

⁶⁰⁹ Dormouse handbook.

⁶¹⁰ AD/RES/037 Vol I and II Bat SEI NTS and Main Text October 2013

⁶¹¹ The main points are summarised in Dominic Woodfield's supplementary/rebuttal evidence (OBJ-002-ECOLOGY-REBUTTAL-WOODFIELD-SSA-B Rebuttal Evidence –

further survey work has been done and presented in the February SEI⁶¹². PCC retains concerns about the adequacy of that survey work, as presented in their response to that SEI⁶¹³. The main points of concern about the adequacy of the total survey effort are as follows. The first relates to the possibility of directly killing bats or damaging or destroying their roosts through work at their roost sites. One roost at Gosen Bridge was identified⁶¹⁴ when two bats were seen emerging from under the north-east side of the bridge. Gosen Bridge is to be very substantially widened which requires very significant amounts of work⁶¹⁵. The SEI does acknowledge that "without mitigation....there is a potential for an effect on the bats that roost at Gosen Bridge through bridge widening works that may lead to the roost being damaged or destroyed and individual bats being killed. Such an effect would be adverse and significant at the level of the site⁶¹⁶". The only mitigation measures mentioned are "if bats are found to be roosting then NRW should be contacted prior to this work taking place to discuss the requirement or otherwise to carry out the mitigation measures under an EPS licence"⁶¹⁷. Despite the absence of any substantive mitigation measures being mooted the SEI concludes "it is considered that if these measures are in place the significance of any residual effect on roosting bats will be negligible and this assessment is made with a high level of confidence⁶¹⁸". PCC cannot understand how that assertion can be made if no mitigation measures are identified, and cannot understand in any event how such substantial works to or in the proximity of a known roost could lead to negligible residual effects. As such there is a failure to describe relevant mitigation measures in the SEI, and to describe residual effects after those mitigation measures.

539. PCC's concerns are wider than the known bat roost at Gosen, however. PCC are very concerned that inadequate survey effort has been put into considering other potential bat roosts which will be either directly or indirectly affected by the road works. In terms of bridges, it was not possible to complete a full inspection of Gosen Bridge⁶¹⁹. Where this is the position the Bat Surveys Good Practice Handbook⁶²⁰ advises that different methods may be required⁶²¹. Techniques suggested include use of lifting equipment or scaffolding, and use of endoscopes torches or mirrors⁶²², which was not done. Alternatively the guidance indicates that 'presence/absence survey effort may need to be significantly increased if it has not been possible to undertake

Dominic Woodfield) at section 2, but full details are given in PCC's formal response to that SEI [NEED A DOCUMENT NUMBER]

⁶¹² AD-RES-043_Llanbrynmair SEI February 2014

⁶¹³ OBJ-002-011 Response to Llanbrynmair Feb 14 SEI – Shared Access

⁶¹⁴ AD/RES/037 Vol I and II Bat SEI NTS and Main Text October 2013 6.5.15

⁶¹⁵ See AD/RES/036 Appendix 10.1 Transport at Appendix A sheet 8 of 14 (drawings 60283248-D-008-001G, and 60283248-D-008-002 A). The width of the bridge will almost double.

⁶¹⁶ AD/RES/037 Vol I and II Bat SEI NTS and Main Text October 2013 8.5.6

⁶¹⁷ AD/RES/037 Vol I and II Bat SEI NTS and Main Text October 2013 8.8.7.

⁶¹⁸ AD/RES/037 Vol I and II Bat SEI NTS and Main Text October 2013 8.8.7.

⁶¹⁹ AD/RES/037 Vol I and II Bat SEI NTS and Main Text October 2013 at 5.8.6.

⁶²⁰ FWLC –BAT-001

⁶²¹ Bat Surveys Good Practice Handbook at 8.2

⁶²² Bat Surveys Good Practice Handbook at 8.2.3.

an...adequate external inspection of a potential roost⁶²³. While an emergence/re-entry survey did take place at Gosen⁶²⁴ PCC has raised a number of concerns about both the methodology of that study and the reporting of it in the SEI⁶²⁵.

540. In their February 2014 SEI RES have belatedly surveyed two further bridges along the route which will be impacted by the works (Glen Menial and Diosg Bridge⁶²⁶). It is asserted in relation to these bridges that cracks and crevices on them do not support significant roosts, and are only likely to support transient roosts⁶²⁷. PCC do not consider the level of survey effort is such that a conclusion such as this can be drawn. There are clearly cracks in both bridges that it is accepted are capable of supporting bat roosts.

541. As well as concerns about bridges, PCC retain concerns about trees along the access route that have the capability of supporting roosting bats and which have not been assessed or have been inadequately assessed. RES's approach to assessment of trees has been to assess trees that they considered would be affected by the scheme⁶²⁸. The notes of that assessment have never been published as SEI or made available to the inquiry so it is not possible to understand how various trees were scoped out⁶²⁹, contrary to the guidance set out above. Trees previously scoped out have now been accepted as having some roosting potential⁶³⁰ which shows the need for methodological clarity. The trees identified by the scheme were then assessed using table 8.4 of the Bat Surveys Good Practice Handbook⁶³¹, despite that fact that Handbook points out that the table is used for trees affected by arboriculture works and that "it is not considered appropriate for trees affected by proposed development. Here more intensive survey work is likely to be required in order to assess the value of trees"⁶³².

542. As well as methodological concerns, there are some trees that have not been assessed because RES have taken a restrictive approach to considering what trees are likely to be affected by the development. In a number of instances this is because there is a debate as to whether the works will impact on the tree. An example of this is given above in relation to an ash tree close to Diosg Bridge. A further clear example is an oak tree described by RES as being to the south of the haul road at Gosen⁶³³, which PCC maintain is clearly within the red line of the haul road (and that if there is any uncertainty on the point the tree should have been surveyed). This tree was scoped out because it was considered to be outside the working area despite

⁶²³ Bat Surveys Good Practice Handbook at 8.4.3.

⁶²⁴ AD/RES/037 Vol I and II Bat SEI NTS and Main Text October 2013 at 5.8.11

⁶²⁵ See PCC response to bat SEI (OBJ-002-BAT-001)

⁶²⁶ AD-RES-043_Llanbynmair SEI February 2014 at 3.2.1.

⁶²⁷ AD-RES-043_Llanbynmair SEI February 2014 at 3.2.6. and 3.2.17

⁶²⁸ AD-RES-043_Llanbynmair SEI February 2014 at 3.3.1.

⁶²⁹ See response to this paragraph in appendix 1 of PCC's response to this SEI [OBJ-002-011 Response to Llanbrynymair Feb 14 SEI – Shared Access]

⁶³⁰ eg the mature Rowan at chainage 9680 to 9840 discussed at 3.3.8. of the February 2014 SEI

⁶³¹ FWLC –BAT-001

⁶³² FWLC –BAT-001 at 8.2.5.

⁶³³ AD-RES-043_Llanbynmair SEI February 2014 at 3.3.6.

having a split with apparently potential for roosting bats which made it a category 1 tree.

543. Finally PCC consider that the survey effort was insufficient in respect of risks of impact to commuting and foraging bats. In the October 2013 Bat SEI it was stated that there would be no significant impact on foraging or community⁶³⁴. This position is maintained without any change in the February 2014 SEI⁶³⁵, despite significantly more being known about the presence of bats in the area (for example cognisance being given to the roosts or potential roost identified in the Carnedd Wen SEI at 3.3.9 to 3.3.15). PCC maintain that given this additional information it is clear that the survey effort was insufficient. For example driven transects were used⁶³⁶ "to determine the activity of bats along the access route" despite the fact that the Bat Surveys Good Practice Handbook says that these should be used to "supplement walked transits and provide additional survey data when surveying for proposed road widening schemes or on large sites..."⁶³⁷. It is clear that other survey methods should have been used (eg walked transits). In the circumstances, RES have not adequately understood the baseline situation so the SEI necessarily cannot describe the impact of their development on the baseline situation for bats⁶³⁸.

Otters

544. The fourth reason relates to otters. Otters are a European protected species. There is no dispute that otters use all of the rivers in the Nant yr Eira valley and crossed by bridges on which work is proposed to take place⁶³⁹. This includes the Cledan which is crossed by Gosen Bridge. Following additional survey effort by RES due to concerns raised by PCC, PCC now accept that the potential for direct effect to holts has been assessed by RES. PCC retain concerns, however, about the assessment of indirect impacts on otters. The works in the Cledan at Gosen Bridge are very substantial and involve putting temporary foundations in the river and a crash deck⁶⁴⁰. RES assert that "the crash deck will be raised above the bank to allow passage of otter beneath it along the existing river bank. Otter will be able to pass along the rivers"⁶⁴¹. PCC cannot see that there is any basis for an assertion that otters will simply pass underneath the crash barrier given the extent of works proposed at Gosen, and therefore that there can be any confidence in the assertion that that there will be no material adverse impact on otters. Again

⁶³⁴ AD/RES/037 Vol I and II Bat SEI NTS and Main Text October 2013 8.5.4.

⁶³⁵ AD-RES-043_Llanbynmair SEI February 2014 3.5

⁶³⁶ AD/RES/037 Vol I and II Bat SEI NTS and Main Text October 2013 5.8.3.

⁶³⁷ FWLC -BAT-001 at 7.6.3.

⁶³⁸ Dominic Woodfield first rebuttal (OBJ-002-ECOLOGY-REBUTTAL-WOODFIELD-SSA-B Rebuttal Evidence – Dominic Woodfield) at 3.2 "I also consider that evidential support for Dr Shepherd's conclusions regarding bat use of the habitats along the adjoining access road is compromised by the decision to adopt a reduced effort and non-standard survey method to assess the bat activity and species assemblage along it".

⁶³⁹ Discussion with Inspector in the hearing session.

⁶⁴⁰ See AD/RES/036 Appendix 10.1 Transport at Appendix A sheet 8 of 14 (drawings 60283248-D-008-001G, and 60283248-D-008-002 A).

⁶⁴¹ AD-RES-043_Llanbynmair SEI February 2014 2.3.14

therefore there is a failure to understand and therefore to describe potential adverse effects on a valued wildlife resource.

Habitats

545. The fifth reason relates to habitats. Since the ecology hearing there has been some progress in this respect. It is now accepted by RES that there is an area of peat habitat and blanket bog at Neinthirion that will be significantly affected⁶⁴², as argued by PCC at the hearing. However PCC still consider that other habitats along the route have been consistently misclassified which has led to them being undervalued⁶⁴³, and therefore to RES being not being in a position to assess whether there will be any significant impact on those habitats. While PCC do not consider it is their role to undertake a 'competing' habitat survey, where they have done such work they have discovered undervaluing of the habitat which in many cases has been acknowledged by RES⁶⁴⁴. However errors have not been identified and corrected in all cases. By way of example, PCC identified location 2.8 and 2.9 as an area of acid grassland and U4 grassland (a section 42 habitat)⁶⁴⁵, RES having failed to identify or report a number of indicator species. This omission has not been corrected in RES's most recent habitat survey⁶⁴⁶.

Peat

546. The sixth reason relates to peat. PCC examined the 2013 SEI and concluded that "impacts on peat resources along the route have been inadequately assessed"⁶⁴⁷. Given the importance of peat as a sequester of carbon, there is a requirement to avoid and/or minimise peat loss wherever possible. In context of the Llanbrynmair project as a whole, PCC accept that peat losses occasioned by the proposed highways works are not a significant proportion of the whole, but a proper understanding of the quantum involved is an important part of assessing the environmental acceptability of alternatives. This does not occur in RES's SEI. Firstly there have been varied assessments of the amount of peat to be lost at Neinthirion by the bypass⁶⁴⁸. PCC consider that RES's estimates all underestimate the amount of peat to be removed, for example they only assess peat removal across a 6m⁶⁴⁹ wide area whereas PCC consider it is likely that a much wider area will be

⁶⁴² AD-RES-043_Llanbrynmair SEI February 2014 2.2.18

⁶⁴³ Dominic Woodfield third rebuttal at 2.14 (OBJ-002-ECOLOGY-3rdREBUTTAL-WOODFIELD-SSA-B)

⁶⁴⁴ eg acceptance by RES of the mire habitat at Neinthirion, acceptance that assessment of a verge has not been reported at Dolwen Isaf-chainage 7259-7300 (RES-012 Response to Dominic Woodfield at 38 c). However they have not acknowledged this in every case.

⁶⁴⁵ OBJ-002-ECOLOGY-3rd REBUTTAL-WOODFIELD-SSA-B at DWR3-3, note 56. Note that the text in black is RES's text and the text in red is PCC's response.

⁶⁴⁶ AD-RES-043_Llanbrynmair SEI February 2014, appendix 2.1, location 2.8 and 2.9

⁶⁴⁷ OBJ-002-ECOLOGY-POE-WOODFIELD-SSA-B Proof Of Evidence – Dominic Woodfield 5.3.12

⁶⁴⁸ Mr Green assessed 636m³ (RES-ECOLOGY-REBUTTAL-GREEN-APP-SSA-B Rebuttal Evidence Appendix – Mick Green appendix c), whereas Mr Ferry assessed a much more modest 100-200m³ (RES-009 Note on Impact on Peat by the Neithirion Bypass para 11).

⁶⁴⁹ RES-009 Note on Impact on Peat by the Neithirion Bypass

impacted⁶⁵⁰. Further PCC were concerned that there was no consideration of impacts on peat deposits where 'boggy' and 'peaty' ground had been explicitly identified in previous versions of the SEI. Although it was asserted by RES that there had been peat probing along other parts of the route, this is not reported in the SEI⁶⁵¹, either in terms of its methodology or results.

547. In all the circumstances it is plain that RES have not done sufficient work to identify whether there will be significant impacts arising from their local access proposals and if so whether proposed mitigation will be able to avoid those impacts. This has resulted in a defective EIA, which cannot form the basis of a lawful permission.

LLANBRYNMAIR SUMMARY

548. Recently and belatedly, in February 2014⁶⁵² RES has sought to amend the application again and now proposes an alternative AIL access route that shares access with the adjoining Carnedd Wen scheme. However, it still maintains that the Secretary of State should consider the Llanerfyl to Talerddig access proposals it submitted during the inquiry in August 2013 to be acceptable⁶⁵³.

549. According to that latest iteration of the RES local access case to this inquiry⁶⁵⁴, as PCC understands it, it is only in circumstances where the Llanerfyl to Talerddig access proposals are considered by the Secretary of State to be 'unacceptable' that RES now promotes a 'shared access' arrangement with Carnedd Wen⁶⁵⁵.

550. Those access proposals, as the evidence examined in Session 2 clearly demonstrated, are ill conceived, poorly prepared and obviously unacceptable when the issue is considered as part of the decision making balance.

551. Even now, the lack of adequate information required in relation to key environmental impacts make it, quite apart from issues of balance and acceptability, unlawful for the Secretary of State to grant consent for those local access proposals. This issue and the relevant legal context is considered further below.

552. It remains patently obvious, quite apart from the existence of statutory and policy imperatives requiring the consideration of alternative, less harmful access arrangements, that RES should have pursued and investigated thoroughly alternative means of access prior to the start of the inquiry and indeed for some years before. They did not.

⁶⁵⁰ Dominic Woodfield third rebuttal at 2.12 (OBJ-002-ECOLOGY-3ndREBUTTAL-WOODFIELD-SSA-B)

⁶⁵¹ John Ferry cross examination.

⁶⁵² It can be noted that this was after the relevant Inquiry session examining evidence on local arrangements – Session 2 (SSAB) had been completed during 2013

⁶⁵³ These have also been the subject to a number of changes, the most recent version is as described in the August 2013 SEI.

⁶⁵⁴ RES SEI AD/RES/043

⁶⁵⁵ This is derived from the way matters are put in the RES Feb 2014 SEI (AD-RES-043), Vol II, section 1 at paragraph 1.3.4, p.5.

553. An examination of both SSAB wind farm proposals before this inquiry and a working knowledge of the landscape coupled with a degree of common sense provides a useful starting point for the various considerations.

554. In a scenario where both the Carnedd Wen and LLanbrynmair turbines were to exist, it is agreed that they would be read together in the landscape as a single, substantial 80 turbine wind farm⁶⁵⁶. This results in large part from the fact that the turbines are sited in many instances so as to sit side by side on the plateau - often within a matter of metres of each other. A hypothetical future observer of the landscape in which both schemes existed would not readily appreciate that they were separately owned and promoted wind farms. That observer, perhaps familiar with the valley in the past, would no doubt be disturbed to see a landscape in which access for AILs to some, but not all, of the turbines had resulted in removal of large tracts of long established hedgerows and trees together with the range of significant other works and the associated and significant long term impacts along 12 or so kilometres of a valley that had previously been evaluated as outstanding for scenic quality. Why, the observer might think, was any of this necessary when other adjacent turbines were delivered through the access off the main A458? The A458 after all forms part of the trunk road network identified in the Strategic Traffic Management Plan for Mid Wales Wind farms as the route to wind farm sites in SSAB (North).

555. If in fact a scheme was being promoted and developed by one applicant/owner as an 80 turbine wind farm it is obvious that there should not need to be, unless wholly unavoidable, two discrete proposals for AIL/construction traffic access using and developing entirely different areas with all the consequential landscape and visual effects and disruption to everyday lives.

556. Where, as here, it is feasible, PCC consider that access to a strategic wind farm site should be gained from the trunk road network rather than widening unsuitable local roads. The position should be no different with different applicants developing different parts of a plateau, provided those respective applicants behave in a way that accords with good strategic and sensible planning rather than purely commercial self-interest.

557. It is not satisfactory for applicants to adopt a blinkered approach to the development of proposals which is limited to considering merely their own local access arrangements, but that it appears is exactly what RES did⁶⁵⁷.

558. Until the formal submission of the February 2014 SEI it appears that there had been little if any apparent consideration by RES of an overall strategy for gaining local access into the strategic areas so as to mitigate the effects of proposals. That was despite the issue and possibility of a shared or alternative access arrangement being flagged up by relevant statutory consultees over a considerable period of time.

⁶⁵⁶ Accepted by the landscape experts – see for Powys, PRV proof for Session 2 (SSAB) [OBJ-002-LAND-POE-RUSSELL-SSA-B] at paragraph 5.14, p. 32

⁶⁵⁷ See the recent Stewart proof (May 2014) [RES-PLANNINGBALANCE-POE-STEWART] at para 3.8

559. In light of the range of statutory requirements and policy advice to mitigate significant environmental effects⁶⁵⁸ and the clear absence of meaningful consideration by applicants being disclosed to the Council, Powys has demonstrated that an alternative access arrangement(s) is, in principle, feasible and capable of providing an acceptable, less harmful alternative.
560. This was expressly not a formally assessed 'proposal'. Rather it was a body of evidence that demonstrated the kind of options that should have been assessed by those promoting the schemes to mitigate harm and which are readily feasible.
561. In truth, since that evidence has been produced, there has been no credible challenge to the in principle acceptability, feasibility and deliverability of a shared access arrangement utilising the Carnedd Wen main access for AIL deliveries together (or an access without Carnedd Wen utilising access across that site) with two short sections of new track linking the two wind farms on the plateau. No relevant highway consultee has suggested otherwise. Indeed, the Welsh Government has confirmed the acceptability of a shared access proposal to it⁶⁵⁹.
562. NRW also agree with PCC and have been asking for consideration of a shared access for several years. There has been no expert evidence put before the inquiry to show that a shared access arrangement would make either proposal unviable.
563. Significantly, Carnedd Wen (RWE) have offered no objection at all to the inquiry to the principle of such a shared access arrangement, nor to the detailed assessment of it provided in the RES February 2014 SEI. Neither have RWE sought to challenge a single aspect of the PCC's evidence relating to a potential shared access solution utilising its access tracks which had demonstrated the feasibility of alternative access arrangements.
564. Indeed, even RES now accept the feasibility of it, and belatedly promote it by way of amendment to their application as an option they wish the Secretary of State to consider.
565. Coupled with the substantial reduction in harm to the environment and consequential reduction of disruption to the public it is obvious, before one even considers the legal or policy context, that if there is a way that access arrangements can be planned and shared in a strategically sound way, they should be.

⁶⁵⁸ For example, found in schedule 9 of the Electricity Act 1989 , relevant European legislation, SI 200/1927 regulatory requirements, and the policy advice relating to mitigating significant environmental effects enshrined in National Policy Statement EN-1 (sections 1.7.2 third bullet, 4.1.3, 4.2.2, 4.5.3, 5.3.7, 5.3.18, 5.9, 5.9.8, 5.9.17 and 5.9.21), Planning Policy Wales (para 12.10.1 and generally at Chapter 4) and TAN 5 (paras 2.4 and 4.1.1) and Policy E3 of the PCC UDP. We discuss these in more detail below.

⁶⁵⁹ OBJ-002-TRANS-REBUTTAL-RUSSELL-SSA-B, Appendix 1

566. The Secretary of State, by convening this strategic inquiry, has enabled such matters to be considered in the round and in the context of the strategic delivery of large scale infrastructure in a strategic area. He accordingly has the ability to secure strategically suitable access arrangements by granting of consents that limit proposals accordingly, imposing conditions where required or by the refusing of consent with a firm indication to the relevant parties that they ensure that appropriate access which minimises harm is secured in order to secure consent.

567. As it happens and happily, the obvious common sense 'strategic' approach to delivery of these schemes argued for by PCC, finds support in policy and law. As we set out below, applicants are required to consider alternative access arrangements; as is the decision maker.

568. As recently as September 2013 RES were, rather surprisingly, claiming that there was *'no legal and/or planning policy requirement for [RES] to assess alternative access routes, given the acceptability of the proposed access'* and that *'An access for AIL's via Carnedd Wen....could not take place inside the application site'*⁶⁶⁰. Those contentions have always been without any basis in law, policy or evidence. They have also been devoid of common sense in the context of strategic planning.

569. To the extent that, in the ensuing period, RES have now conceded the feasibility of a shared access proposal with Carnedd Wen⁶⁶¹ and indeed now promote it as a fully assessed potential alternative⁶⁶² it is to be hoped that it now accepts the untenable nature of its initial, contrary position.

The 'No Carnedd Wen Scenario'

570. As PCC explained⁶⁶³ in a scenario where the Llanbrynmair scheme proceeds but the Carnedd Wen scheme does not proceed, RES would no doubt need to upgrade and extend some of the existing Carnedd Wen forestry tracks. There is no reason in principle why that could not be done. Furthermore, if the applicant was unable to negotiate suitable access arrangements with the Carnedd Wen landowners (although there is no evidence that this would be problematic any more than there is evidence that the requirement for RES to gain access over land they require for works in the valley for their proposed access works there will be problematic) then it might be appropriate to use statutory powers to seek to acquire the necessary access arrangements. But there is no suggestion before the Secretary of State that this would be required.

571. Mr Russell-Vick confirmed in evidence that, in this scenario, gaining access across the land from the A458 and using/upgrading forestry tracks

⁶⁶⁰ Paragraphs 66 & 67 of the RES Session 2 (SSAB) statement of case [RES-SOC-SSA-B], p.17

⁶⁶¹ RES-SOCG-TRANS-SSA-B para 46 pp 9 (dated 15.11.13)

⁶⁶² RES FEB 2014 SEI (AD-RES-043)

⁶⁶³ Proof (OBJ-002-TRANS-POE-RUSSELL-SSA-B) page 21, para 3.54 (g)

would still be far more preferable than the use of the valley for access in landscape and visual impact terms⁶⁶⁴.

572. Indeed, it is obvious that this scenario would be equally operationally satisfactory and less environmentally damaging than the Llanerfyl to Talerddig access proposals. The environmental implications of such a scenario have already been assessed as part of the Carnedd Wen scheme because the access upgrades that would be required to allow AIL and construction traffic to access Llanbrynmair through the Carnedd Wen site form part of the Carnedd Wen proposals. The full information needed to come to a view on the impacts on such an expanded proposal is accordingly before the Secretary of State in the form of the Carnedd Wen Environmental Statement and the subsequent SEI submissions, together with the evidence from Powys in session 2. For ease of reference Powys have provided⁶⁶⁵ a tabular breakdown of the locations within the Carnedd Wen ES and subsequent SEI submissions where impacts arising from the track construction are considered.

573. This evidence demonstrates that in the 'No Carnedd Wen scenario' (as with the shared access scenario) there is substantially reduced scope for significant environmental effects when compared with the proposals for access using the Llanerfyl to Talerddig road. Regardless of whether or not Carnedd Wen gains consent, there remains a suitable and less harmful alternative access for RES to use. The difficulty for RES is that they have not formally proposed such a solution or made an application for it.

574. As a result, in the event that the Secretary of State considers it is not appropriate to allow RES to obtain access along the Llanerfyl to Talerddig road and Carnedd Wen does not obtain consent, PCC maintain that the options open to the Secretary of State are those explained in the note submitted.

PRACTICAL OPTIONS FOR THE SECRETARY OF STATE

575. In light of all of the foregoing PCC have tried to identify what possible conclusions the Secretary of State may come to in respect of Carnedd Wen and Llanbrynmair, and what PCC say are the practical consequences of those conclusions. The possible conclusions are:

- a. 'Scenario 1'-the Secretary of State considers both the Llanbrynmair turbines and the Carnedd Wen scheme to be acceptable⁶⁶⁶, but considers that the Nant yr Eira access is unacceptable, or should not be permitted when there is a much less harmful alternative.
- b. 'Scenario 2'-the Secretary of State considers that Llanbrynmair turbines are acceptable but considers that the Nant yr Eira access is unacceptable,

⁶⁶⁴ In a series of answers to RES in xx

⁶⁶⁵ In Annex 2 to their response to the RES February 2014 SEI – the Powys letter dated 13th March 2014 [OBJ-002-011]

⁶⁶⁶ PCC's case is that this should be subject to finding that the five Carnedd Wen turbines are unacceptable but the conclusion reached on this point does not impact on the practical consequences of this scenario.

or should not be permitted when there is a much less harmful alternative. Contrary to PCC's case the Secretary of State considers the whole of Carnedd Wen scheme should be refused.

- c. 'Scenario 3'-the Secretary of State considers that the whole Llanbrynmair scheme is acceptable and does not consider (contrary to PCC's case but in line with Llanbrynmair's case) that there is any reason to consider any alternative to the Nant yr Eira access.

576. In the case of scenario 1 (both Carnedd Wen and Llanbrynmair considered acceptable subject to alternatives to the Nant yr Eira access) the practical solution in respect of Carnedd Wen would be to grant Carnedd Wen subject to ensuring that all of Carnedd Wen's conditions would permit Llanbrynmair access through Carnedd Wen. For example in relation to the construction management plan to be put forward by Carnedd Wen, the condition would require that scheme took into account the provision of shared access.. Such conditions, which merely seeks to prevent the development of Carnedd Wen in such a way that would prevent the development of Llanbrynmair as well, is entirely lawful and necessary to ensure comprehensive mitigated development within the strategic search area⁶⁶⁷.

⁶⁶⁷ Contrary to the legal submissions made on behalf of RWE, such conditions would be and are entirely lawful. There are two routes under which the conditions could be imposed, as conditions on the section 36 consent imposed under section 36(5) or as conditions on the deemed planning permission under section 90 TCPA 1990. In relation to planning conditions as a matter of policy and law conditions must be necessary, relevant to the proposed development and reasonable. No such policy or legal tests apply in relation to section 36 conditions and there is no case that has directly considered permissible scope of conditions under section 36. PCC accept that while the power is wide it is not unfettered. PCC submit that whether under the TCPA or under section 36 the imposition of such a condition is lawful. RWE in their legal submissions argue that such a condition is not necessary because they argue that the STMP could be used to allow RES delivery slots through Carnedd Wen. This misses the point. There are two issues. Firstly, whether as a matter of principle are conditions such as those sought by PCC necessary, and secondly could the matter simply be resolved through the STMP. Turning to the first point PCC maintain that the conditions would be necessary because ensuring that RES can obtain access through Carnedd Wen is necessary to ensure the comprehensive development of the area. This approach is well established, for example if there is a large development area being developed by a number of different developers they can properly be expected to be required to work together to ensure that the area is developed and not sterilised. Permission could properly be refused if any one developer were seeking to develop in a way which would sterilise the remainder of the area. Given that there is strong policy support for renewable energy and that the Welsh Government has made it clear (TAN8 para 2.4) that the parts of the SSAs considered capable environmentally capable of supporting turbines should be used optimally, it would be contrary to good planning if Carnedd Wen were allowed to develop in such a way that would sterilise the use of Llanbrynmair. As such the condition is necessary and relevant to RWE's use of their land. It cannot be resolved through the STMP as indicated in RWE's note. RWE have put forward a number of plans that impact on how they will develop their site (eg how they will go about doing the forestry, constructing access tracks and turbines and so forth). The evidence given by RWE's witnesses was that those plans were entirely flexible and thus PCC say could be changed as necessary to accommodate access through the site for RES's AILs. Equally those plans could be devised in such a way that access through the site for RES's AILs could not be accommodated, or could

577. The practical consequence of scenario 1 for Llanbrynmair would be that the Secretary of State should grant permission encompassing the February 2014 SEI, and that the consent should be subject to the condition that the Nant yr Eira access is not used. In those circumstances Llanbrynmair would have a permission which allowed them to use the shared access that they have assessed in the February 2014 SEI.

578. Turning to scenario 2 (Carnedd Wen refused, Llanbrynmair granted subject to alternatives to the Nant yr Eira access). In these circumstances the issue of conditions enabling shared access to be imposed on Carnedd Wen does not arise. In relation to Llanbrynmair PCC consider that the Secretary of State would have three options. The first is to grant permission for Llanbrynmair's turbines but subject to a condition that the Nant yr Eira Access is not used. Llanbrynmair could then make an application for permission to use a suitable alternative access. The second is to refuse permission but to indicate that the Secretary of State would be 'minded to' grant permission if Llanbrynmair were to come back with an appropriate access. The third would be to simply refuse permission, and then it would be a matter for Llanbrynmair to consider whether they wish to resubmit the scheme with a suitable alternative access.

579. Finally, in relation to scenario 3 (considering that Llanbrynmair is acceptable and that there is no reason to look for alternatives to the Nant yr Eira access). In these circumstances there would be no need to impose any shared access conditions on either Carnedd Wen or Llanbrynmair.

OVERALL CONCLUSIONS

580. PCC consider that the portion of SSAB occupied by the proposed Carnedd Wen and Llanbrynmair wind turbines is, in landscape and visual terms, capable of accommodating large scale wind energy development, due to its height, form and the visual benefits arising from removal of existing commercial forestry. However that does not mean that any or all wind farm development in this area will be acceptable, and both statute and policy are clear that wind farm developers must do all they reasonably can to mitigate the impacts of their schemes.

581. PCC say that Carnedd Wen has not yet done all it reasonably can to mitigate the impact of their scheme because they have retained the five north eastern turbines which have an unacceptable impact on the Banwy Valley, causing the scheme to 'spill over' into the valley. Fortunately PCC consider that these unacceptable impacts can easily be resolved by the Secretary of State granting permission for the scheme without the five turbines. When the generating capacity that would be lost by the excision of the five unacceptable turbines is balanced against the landscape and visual impacts of those turbines PCC consider that grant of permission subject to

not be accommodated within a timetable consistent with the urgent need for renewable energy. These conditions are necessary to ensure that that Carnedd Wen is developed in a way consistent with the strong policy support for early comprehensive development of the area, and relate to Carnedd Wen for the same reasons. Given their relationship with important planning objectives it cannot be said the conditions are unreasonable.

removal of the five turbines is the correct balance for the Secretary of State to draw.

582. In relation to Llanbrynmair, the position is that they have put forwards a wholly unacceptable access proposal which will cause substantial landscape and visual harm to the attractive Nant yr Eira valley. This access is so harmful that PCC consider it would justify refusal of the whole scheme, however that is not the choice facing the Secretary of State. It is now clear that there is a feasible alternative access through Carnedd Wen which if taken would avoid the landscape and visual, and ecological harms associated with the Nant yr Eira access. This holds true whether or not the Carnedd Wen scheme is built out.

583. Llanbrynmair have sought to argue that there is no obligation to look at alternative access. As a matter of law and policy PCC consider this is wrong. In relation to a strategic wind farm area where the applicants are understandably seeking to rely on the policy benefits of being in a strategic search area it cannot be right that the Secretary of State should ignore the clear fact that a strategic approach to access can avoid significant (and Powys say unacceptable) impacts. There is simply no need to cause such comprehensive damage to the Nant yr Eira valley in order to obtain the benefits of renewable energy from the Llanbrynmair site. Therefore PCC maintain that the Secretary of State should conclude that any permission for Llanbrynmair must ensure that it only comes forwards with access through Carnedd Wen. It has identified various lawful mechanisms for doing so above.

SECTION 5 SESSION 3 SPM LLANDINAM SCHEME APPRAISAL

INTRODUCTION

584. PCC's case in relation to SPM's application has a number of elements:
- a. The starting position is that following scheme modification it accepts that the Llandinam wind farm can be accommodated within the environmental capacity of the area. That is considered above.
 - b. On the assumption that the Secretary of State agrees, it follows that there would need to be grid infrastructure to link the wind farm to the grid. However, it remains necessary to establish whether there is an acceptable way of providing a connection within the context of a strategic overview of SSA wind farm provision. This is essential to ensure that impacts are minimised and grid infrastructure does not proliferate.
 - c. PCC considers that SPM's route selection exercise has been seriously deficient and that, as a result, the wrong route has in part been chosen.
 - d. However, provided the unacceptable harm which the ill-chosen element would give rise to is mitigated by undergrounding, then PCC consider on balance that given the urgency of the need for renewable energy that the proposed route is acceptable.
 - e. Powys consider that in this case undergrounding is demonstrably justified on the basis of the impact around the Glog on landscape, cultural heritage and on the Kerry Ridgeway regional trail. These are nationally important constraints.
 - f. The Secretary of State does not need to decide exactly what route undergrounding would take, as with wind farm grid connections more generally, it is sufficient to conclude that there are no obvious reasons why an underground connection could not be provided. In substance, this requires only being satisfied that there is an undergrounding option that is technically feasible, that will not have impacts of its own which outweigh the advantages of undergrounding and which will be proportionate in cost. PCC has demonstrated that there is such an option.

ROUTEING SELECTION

585. The starting point is the routeing selection exercise. This is important for two reasons. Firstly, if for some reason the Secretary of State does not accept PCC's evidence on undergrounding, their position is that the only alternative that does not cause unacceptable harm is to reject the scheme altogether. As part of this submission it is important for the Secretary of State to understand that were he to reject the scheme it would be possible to find a less harmful alternative. The second reason for addressing route

selection is because SPM rely heavily on their routing selection exercise to say that they have mitigated harm in this case. As PCC have demonstrated that exercise has been seriously inadequate and in consequence SPM cannot rely on it as fulfilling their duty to mitigate harm.

586. The evidence has shown that the route selection exercise in this case was a seriously deficient piece of work and has led to the selection of the wrong route, i.e. it has selected a route in reliance on unsound reasoning and which does not minimise the environmental impacts of the project so far as possible. In particular, the application route (described in SPM's route selection process as 'route E') is the '*most harmful to the landscape resource*'⁶⁶⁸ of all the routes proposed and the '*route selection process has resulted in a compromised option which has greater landscape and visual effects than any of the alternatives*'⁶⁶⁹. Similarly '*Route E, the Applicant's preferred route, is undoubtedly the poorest performing of the three routes in terms of its impact on the historic environment*'⁶⁷⁰.

Route options

587. There were three routes that have, since the outset of this scheme, been identified as the main route options. Broadly these route options were⁶⁷¹:

Route Option C (the orange alignment on the consultation plans⁶⁷²) would descend from the Bryn Dadlau Substation on the plateau and down to Newtown, via Mochdre, before running along the Severn Valley, very largely following the line of the existing 132kV line to the Welshpool Substation;

Route Option D (green alignment) would descend via Dolfor and the Vastre, passing north of Kerry, would cross The Mule valley north of Hodley, before crossing the minor valley west of Llandyssil, passing over Goron-ddu to cross the Camlad valley at Fflo□s, largely parallel with the railway and then running through the undulating landscape around Forden to Cilcewydd and finally descending onto the edge of the Severn floodplain west of Leighton. A minor variant of Route Options C and D was indicated whereby the western line of D would join with C north of Kerry;

Route Option E (purple alignment) was a variant of D at the western end in which the route would pass due east across the head of the Ithon Valley, south of the Glog, north of the Kerry Hill ridgeway and passing east of Kerry, joining Route Option D at Hodley.

2008 study

588. In terms of understanding how the wrong route came to be selected, there is a difficulty. SPM have declined to produce their 2008 Routing Study

⁶⁶⁸ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 5.16

⁶⁶⁹ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 5.16

⁶⁷⁰ Andrew Croft proof at 7.1 (OBJ-002-HISTENV-POE-CROFT-OHL – Historic

Environment Proof of Evidence)

⁶⁷¹ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 5.3

⁶⁷² See figure 2 of AD/SPM/031 Volume 3a – Llandinam Updated ES – Appendices appendix 1A

Report ⁶⁷³, to enable those concerned with the route selection process to see in transparent form why certain key decisions, some difficult to understand given the local context, were taken. However those parts of the 2008 study that have been released into the public domain show that the approach taken contained serious flaws.

589. A crucial error in route selection was the assumption that the baseline for route selection included all those wind farm proposals within SSAC at application stage (i.e. all SSAC proposals). On this flawed assumption, it was concluded that there would be significant and harmful landscape change in SSAC in any event which would limit the adverse landscape impacts of route E. There is an extract from the 2008 routing study in the 2009 ES⁶⁷⁴ and it says:

"From a landscape character perspective, Route D is generally sympathetic to the character of the landscape, passing through small scale, undulating terrain in which an overhead line could be relatively easily assimilated... By contrast, the southern half of Route E, passes through an open, highly rural landscape with few trees, where there is less potential to assimilate an overhead line. This is reflected in the LANDMAP capacity study, where only 20% of the line passes through a landscape of moderate or moderately high capacity. Based on the current landscape character of the area, Route D is the preferred choice as this protects the open, highly rural and attractive landscape around the Kerry Ridgeway. This also reflects the view expressed in preliminary local consultations, where there is a desire to preserve views into and out from the Kerry Ridgeway. Notwithstanding the effect Route D may have on a few isolated properties, based on the above considerations, Route D is considered slightly preferable to Route E. This is primarily because of the weight attached to the desire to protect the open attractive landscape of Kerry Hill and the setting of the Ridgeway. However, as noted in Section 6.4, when considering route options, there is a need to take into account the implications of other potential wind farm developments and associated grid connections as these may have a bearing on the decisions being taken in respect of the Llandinam scheme. This is an issue also raised in early consultations with CCW.

A number of developers have applied for planning permission or for connection agreements to connect into the SP Manweb grid. It is reasonable, therefore, to assume that in the near future, there will be other wind farms within or near to the Llandinam study area and that these will have an effect both on views and on the landscape character of the Kerry Hill area. the proposed wind farms ... all lie reasonably close to Kerry Hill and will potentially have an adverse effect on its character and on views, thereby increasing its capacity to accommodate overhead lines. This potential landscape change has to be taken into account when comparing Routes D and E.

Compared to Route D, the main disbenefit of Route E is the potential effect it will have on the attractive rural landscape of Kerry Hill and views from the

⁶⁷³ See 2009 ES (AD-SPM-019) at 3.3.3.

⁶⁷⁴ AD-SPM-019- Table 3.3

road (B4355) leading up to the Ridgeway. However, in the light of the landscape change, which is likely to occur as a result of other wind farm developments, this potential effect becomes reduced as the area itself will experience a significant degree of change in its landscape character and a new overhead line will be less intrusive as it might otherwise be without the wind farm developments.

On balance, therefore, **Route E is preferred over Route D.**

590. The error of this approach will be self-evident. It is simply wrong to assume that this large-scale landscape change would occur. Although the area in question lies within the original TAN8 boundaries for SSAC, TAN8 makes it abundantly clear that *“not all of the land within the SSAs may be technically, economically and/or environmentally suitable for major wind farm proposals.”*⁶⁷⁵. In the Powys refinement exercises the boundary was drawn back in the area of route E as it was recognised to be an area that was sensitive to wind farm development⁶⁷⁶, and is identified by LANDMAP as high landscape quality (and outstanding in cultural heritage terms). It is noteworthy that the sensitivity of the landscape to the OHL was recognised by SPM *only after they had selected their route*⁶⁷⁷.

591. PCC has demonstrated that that part of SSAC to the east of the Ithon Valley is unsuitable to accommodate large scale wind farm development. It follows that the consideration that apparently ‘tipped the balance’ between routes D and E, the assumption of large scale landscape change, is incorrect. However, at no point have SPM considered what effect removal of this assumption would have on the original ‘on balance’ recommendation.

592. PCC have considered that⁶⁷⁸ and concluded that the scheme is unacceptable. Further, PCC do not accept that, even were some wind farm development to take place to the east of the Ithon Valley (contrary to its case) that this would render the SPM acceptable in landscape and visual terms. For example, if Llanbadarn Fynydd (one of the closer wind farms) were built, that would not justify the landscape change caused by route E. The characterising effects of Llanbadarn Fynydd would extend to the Glog and Kerry Hill, although this effect would be close to or at its limit across the

⁶⁷⁵ TAN8 (CD/COM/016) at 2.4

⁶⁷⁶ In the 2006 refinement exercise (CD/COM/017) the Kerry Hill area was considered to have the joint lowest landscape capacity in SSAC (table 5b), both the Kerry Hill area and the Bank Gorddwr ranked poorly (showing they had the least landscape capacity) in the summary visual and landscape rankings for SSAC-table 9b. It was recommended that the SSA boundaries be refined to remove both Bank Gorddwr and Kerry Hills area-see 5.2.1. when read with table 10c. In the 2008 refinement exercise (CD/COM/018) the Kerry Hill area remained excluded and part of the Bank Gorddwr area remained excluded-see table 8b.

⁶⁷⁷ 2013 ES volume 3a (AD/SPM/031) appendix 06C which concluded that the sensitivity of the area around Kerry Hill was ‘high’ “partly because it is an attractive rural landscape, but more because it is a highly valued historic landscape”.

⁶⁷⁸ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 5.7, see also his discussion at 7.21

area affected by the Llandinam Scheme. Although there would be some desensitising effects of the landscape south of the Glog, there would be none to the north of Kerry Hill, and these effects would not be so great as to render the landscape and visual effects of the Llandinam Scheme notably less; they would remain significant and unacceptable⁶⁷⁹.

593. Thus the route selection process was based upon an assumption of large scale change in circumstances where the only wind farm proposal close enough to the line to desensitise it to the OHL (Neuadd-goch Bank) is, in the PCC's view, clearly unacceptable in landscape and visual terms.

2008 public consultation

594. This and other errors of approach remained once the route selection process moved into the public domain. In July 2008 a public consultation was issued⁶⁸⁰. Route C identified as '*occup[ying] a corridor already affected by the 132kV overhead line*' and '*generally less obtrusive*' was at this time discounted because of technical difficulties in constructing a line down steep slopes and its proximity to a high number of properties and its location within the flood plain⁶⁸¹. In relation to routes D and E the consultation report confirms that both are technically feasible (although route D presented greater technical challenges and required more angle poles), and that they are '*fairly evenly balanced*'⁶⁸². It later says "*notwithstanding the effect route D might have on a few isolated properties, based on the above considerations route D would appear to be slightly preferable to Route E, primarily because of the desire to protect the open attractive landscape of Kerry Hill and the setting of the Kerry Ridgeway*".

595. However, even at this stage, there remained a failure properly to understand the relative landscape merits and demerits of the options. There is a failure in relation to route C to give a full explanation or understanding of '*what appears to be its apparent landscape and visual benefits over other alignments*'⁶⁸³. In relation to the comparison between routes D and E, rather than the difference being slight, it should have been clearly evident that the difference is distinct and that the harm to the higher value landscape to the south of the Glog should have been considered to be significantly greater.

596. The sight preference expressed for route D, is again infected by the inappropriately selected baseline: :

.....Given that a number of other wind farm developments within or in proximity to the Newtown South SSA C are either in planning or scoping stage, it is reasonable to assume that in the near future, there will be other

⁶⁷⁹ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 5.7

⁶⁸⁰ AD/SPM/031 Volume 3a – Llandinam Updated ES – Appendices appendix 1A

⁶⁸¹ AD/SPM/031 Volume 3a – Llandinam Updated ES – Appendices appendix 1A, page 7

⁶⁸² AD/SPM/031 Volume 3a – Llandinam Updated ES – Appendices appendix 1A, page 7

⁶⁸³ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 5.4

wind farms within the area and that these will have an effect both on views and on landscape character.....it can be noted that they all lie close enough to Kerry Hill to have an adverse impact on its character and on views from the Kerry Ridgeway, thereby increasing the capacity of the area to accommodate overhead lines.....Because the main disadvantage of Route E compared to Route D is the potential effect it may have on the attractive landscape of Kerry Hill.....when taking into account the future landscape change, which will occur when these wind farms come forward for construction, this becomes less of an issue. On balance, therefore, Route E is preferred over Route D."

597. The only response to the clear flaw in the basis of assessment by SPM was provided through Ms Gibson who stated that criticism had not previously been raised of this assumption, and that her 2013 ES was drawn on the assumption of no development. Some reliance was also placed on a comment in the Powys County Council Landscape Character Assessment⁶⁸⁴. But this misses the point. It is for SPM to carry out an appropriate route selection process, they should not rely on others to do so. The impact of the route on the area around the Glog was clearly flagged up by the Council's former landscape architects (Capita Symonds)⁶⁸⁵. The 2013 ES is no answer to the poor route selection because it too is flawed and, subliminally or otherwise, is at best a retrofitting exercise in the context of the offending length of the route. Finally reliance on the LCA is inapt. The LCA appears at appendix 06b⁶⁸⁶ and the relevant quotation from the section of 'discernible landscape trends' provides in full:

"The wind farms at Waun Ddubarthog may be the beginning of an expansion of wind energy schemes in this locality. LCA29 lies parties within Strategic Search Area (SSA) C....the indicative generating capacity target for SSAB [sic] is listed in TAN8 as being 70MW. It is therefore very likely that the character of this LCA will change markedly with the construction of significant numbers of wind turbines, if the indicative generating capacity target is reached or exceeded. The SSA's within Powys are currently the subject of a study to determine refined boundaries for each area."

598. This caveated reference did not absolve SPM from undertaking a routeing study using a proper baseline. The LCA indicates that at the time a review of the boundaries was being undertaken. This reinforced rather than lessened the requirement to adopt an appropriate baseline.

2013 review

⁶⁸⁴ Sarah Gibson examination in chief.

⁶⁸⁵ AD/SPM/031 Volume 3a – Llandinam Updated ES – Appendices, appendix 02d, page 40

⁶⁸⁶ AD/SPM/031 Volume 3a – Llandinam Updated ES – Appendices, appendix 06b, page 97 to 98

599. In their 2013 review of needs cases and alternatives⁶⁸⁷ route C was considered to “perform better than the Llandinam Scheme in landscape terms due to the latter’s potential effects on the Kerry Ridgeway”⁶⁸⁸. Thus belatedly the landscape benefits of route C were recognised. However it was considered:

*it performed less well than the Llandinam Scheme due to its effects on the well wooded and populated landscape around Mochdre / Stepside and potential significant effects on Mochdre Dingles SSSI, a nationally important designated site. Route C performed less well than the Llandinam Scheme due to the visual effects of the developing wirescape in association with the existing 132 kV line and its proximity to a higher number of properties, particularly to the south of Newtown. It also performed poorly due to technical difficulties both as the line descended the steep slopes below the wind farm and due to its location within the River Severn Floodplain from the east of Abermule to Welshpool*⁶⁸⁹.

600. Thus route C was rejected because “*effects on views and ecology as outlined above are considered to marginally outweigh the landscape effects.*”

601. The reasons for rejecting Route D despite an acknowledgment it would cause fewer landscape effects⁶⁹⁰ were the greater concentration of residential properties within Route D whose views and visual amenity may be affected and the proximity of the Mochdre Dingles SSSI. Crucially there was no mention of the point that had tipped the balance from route D to route E in relation to the route selection process in 2008, namely the assumption of large scale landscape change. This absence is significant. Were SPM no longer relying on this flawed concept? If so, why did route E remain the chosen option? Given that Ms Gibson claimed that the tables in ES 2013 Volume 5 are a summary of the piece of work she undertook in 2008⁶⁹¹ the omission is striking. It undermines the weight that can be placed on the much vaunted iterative route selection process.

602. Ultimately, only two reasons are given in the 2013 work for selecting route E over route D—the impact on properties and the impact on the Mochdre Dingles SSSI. The impact on properties is curious given that in the 2008 work this was described as being *the effect Route D may have on a few isolated properties*, yet by 2013 the possible impact on these ‘few isolated properties’ appears to have become a crucial consideration. SPM have never clearly identified where those few properties are that justify the damage to the area around the Glog and the Kerry Ridgeway. SPM-013 was produced with the apparent intention of showing this⁶⁹². This document appears to be a

⁶⁸⁷ AD/SPM/035

⁶⁸⁸ AD/SPM/035 at table 4.2

⁶⁸⁹ AD/SPM/035 at table 4.2

⁶⁹⁰ AD/SPM/035, at 4.5.4 and 4.5.5.

⁶⁹¹ Sarah Gibson examination in chief.

⁶⁹² SPM-013 – Routes D & E-& Newtown Bypass & Properties

comparison⁶⁹³ between properties affected by route E and route D. Unfortunately route E is incorrectly mapped⁶⁹⁴. In any event it appeared to show only 6 more properties affected by route D than route E⁶⁹⁵. While there was extensive assessment of the impact on properties for the proposed route, no equivalent exercise was done for route D⁶⁹⁶. Ms Gibson was simply unable to bring any qualitative evidence of unacceptable effect on residential amenity in route D⁶⁹⁷. Of course, were there any properties where there was a significant impact, it is at least possible that could be avoided by undergrounding. Ms Gibson agreed she may give advice to that effect⁶⁹⁸. That never seems to have been considered for the astonishing reason that *Ms Gibson was told at the outset by her client that this was an overhead scheme*⁶⁹⁹. The Secretary of State can note that the OHL design of the scheme is an input into the design process rather than an output which should properly have been the case. Therefore there is simply no evidence of any serious risk to residential amenity at any properties along route D.

603. If those few properties are not the crucial consideration, that leaves the Mochdre Dingles SSSI, as the only other consideration relied on in relation to the decision to prefer route E over D in 2013. This too is a bad point. SPM's ecology evidence states that⁷⁰⁰:

*"in general, in terms of overall ecological impacts all of the routes considered traverse a similar range of habitats and **thus ecological impacts are likely to be of a similar magnitude for each corridor.**"*

604. It appears that SPM are no longer relying on any ecological reasons to justify one route over another. Thus all of the various reasons for preferring route E over the other routes, but in particular route D, have been shown to be flawed.

605. In his proof⁷⁰¹ Mr Leavy appeared to be attempting to widen this stating that the environmental impacts of routes C and D are considered to be more adverse than the Llandinam scheme. However he did not specifically identify any further effects other than those identified in the document.⁷⁰²

⁶⁹³ Although in fairness Sarah Gibson denied in cross examination it was so intended.

⁶⁹⁴ Agreed by Sarah Gibson in cross examination. Her explanation is that it showed an earlier version of the route.

⁶⁹⁵ Put to Sarah Gibson in cross examination. She agreed.

⁶⁹⁶ Confirmed by Sarah Gibson in cross examination.

⁶⁹⁷ Sarah Gibson cross examination. All she was able to rely on was her experience.

⁶⁹⁸ Sarah Gibson cross examination.

⁶⁹⁹ Sarah Gibson cross examination, considered further below.

⁷⁰⁰ SPM-ECOLOGY-POE-JAMES-OHL – Proof of Evidence on Ecology by Jeremy James, at 11.3

⁷⁰¹ SPM/COMPANY/POE/LEAVY/002A, paragraph 7.16

⁷⁰² Eric Leavy cross examination.

606. In her oral evidence Ms Gibson argued for the first time that there were technical problems getting route D through due to steep slopes and woodland⁷⁰³. To be clear, in none of SPM's previous assessments has it ever been asserted that there are any unresolvable technical issues with this area. In cross-examination Ms Gibson first argued that she was not here to give evidence on technical compliance, and then admitted it was technically compliant⁷⁰⁴. Given that SPM's formal technical position (i.e. all routes were technically feasible) was stated in Volume 5 of their ES 2013, no significant weight can be attached to Ms Gibsons belated attempt to rescue her route selection process.

607. PCC has demonstrated that there is no overriding reason why you could not get a line through⁷⁰⁵. There may be changes in angle required but given it would be set down in the valley enclosed with trees, the impacts of the extra equipment would be pretty well concealed. This may be contrasted with the area south of the Glog. There may be some local effects, possibly even significant effects and it is challenging but no more challenging than some parts of the existing route⁷⁰⁶. If there were EN-5 "serious concerns" there are likely to be undergrounding options provided, not least, through use of the many lanes in the area⁷⁰⁷.

Cultural heritage

608. Cultural heritage did not feature heavily in SPM's work as a basis for distinguishing between different route options. For example its cultural heritage consultants CPAT were not instructed until after the initial route selection exercise in 2008, and their cultural heritage witness had not seen any cultural heritage input into route selection⁷⁰⁸. It is identified for route E that 'effects on the historic environment include key sites at Crugyn Bank Dyke, Leighton and the Vale of Montgomery Historic Environment'⁷⁰⁹. In relation to option D, the only heritage effects identified are at Leighton Hall, and the Vale of Montgomery Historic Landscape⁷¹⁰. Importantly, the work does not acknowledge that one advantage of route D over route E would be avoidance of impacts on the Crugyn Bank Dyke, despite the fact that those effects were identified for route E.

609. In light of the above, PCC has carried out a high level exercise looking at the cultural heritage impacts of various routes. Its conclusions are that Route D would have resulted in fewer impacts on the historic environment when

⁷⁰³ Sarah Gibson examination in chief

⁷⁰⁴ Sarah Gibson cross examination

⁷⁰⁵ Philip Russell Vick examination in chief

⁷⁰⁶ Philip Russell Vick cross examination.

⁷⁰⁷ Philip Russell Vick examination in chief session3.

⁷⁰⁸ David Bonner cross examination.

⁷⁰⁹ AD/SPM/035 Volume 5 – Llandinam Updated ES – The Review Of Needs Case And Alternatives at 4.1.4.

⁷¹⁰ AD/SPM/035 Volume 5 – Llandinam Updated ES – The Review Of Needs Case And Alternatives table 4.3

compared to Route E. It avoided known concentrations of scheduled monuments and listed buildings. Like Route E however it would have had adverse effects on the Montgomery Registered Historic Landscape and other designated assets around its northern extent. On balance, and based on this high level analysis, Route D would have been preferred in historic environment terms over Route E.⁷¹¹

610. SPM agreed that route D would avoid impacts to the monuments in section B (around the Glog) of the route, and therefore accepted it would cause less harm in cultural heritage terms⁷¹². Dr Bonner eventually conceded it would be 'significantly less' harm (which clearly follows from his finding that in at least some respects route E has 'significant' impacts in this area). He also agreed that the reference in his proof to the 'establishment of the preferred route for Llandinam scheme reducing substantially the number of designated and undesignated assets that might be affected'⁷¹³ was factually incorrect. Route D would have achieved that objective⁷¹⁴.

611. This is a further significant advantage to route D which was not properly weighed into the balance by SPM in their route selection process, so far as that route selection process has been published.

Route selection conclusions

612. The fact that SPM's inconsistent, flawed route selection process, has resulted in the 'wrong' route is significant. PCC could simply have invited the Secretary of State in light of all the above to require SPM to start again and come back with a route selected appropriately. However PCC had to balance against that the fact that the Llandinam scheme can contribute to the early provision of renewable energy from the Llandinam repowering scheme. Therefore PCC turned their attention to the question of whether SPM's flawed route could be made acceptable. They concluded it could, but only if it was undergrounded around the most sensitive area. It follows that, if the Secretary of State concludes that undergrounding is not technically feasible, that the balance changes and the alternatives should be considered. The next section of these submissions explains why, in the absence of undergrounding, this route is unacceptable.

613. The failed route selection process has another important effect. Route selection is something relied on heavily by SPM as part of their compliance with their overall duties. Thus Ms Gibson says at⁷¹⁵:

⁷¹¹ OBJ-002-HISTENV-POE-CROFT-OHL – Historic Environment Proof of Evidence, at 5.11

⁷¹² David Bonner cross examination.

⁷¹³ David Bonner proof (SPM-CULTHER-POE-BONNER-OHL_) at 3.16

⁷¹⁴ David Bonner cross examination.

⁷¹⁵ SPM-LAND-POE-GIBSON-OHL – Landscape & Visual Proof of Evidence at 6.6

the main strategy for minimising adverse landscape and visual effects of the proposed overhead line has been avoidance through careful planning, design and routeing

614. Given that there are difficulties carrying out secondary mitigation (planting) in the area, in this case choosing the correct route is even more important.⁷¹⁶
615. As there has been a failure to route adequately, it follows that there has been a failure to minimise adverse landscape and visual effects, and it follows a failure to comply with SPM's obligations under Schedule 9 of the Electricity Act 1989. This is another matter to weigh into the balance when considering whether undergrounding is justified in this case.

UNACCEPTABILITY OF THE NON-UNDERGROUNDED ROUTE

Context

616. There are a number of points that are worth making at the outset. The first is in relation to the length of time that the infrastructure will be present. SPM have been resistant to a permission that would require the line to be removed after 25 years. Mr Leavy's evidence was that if there was no need for the line it would be taken down, but if another use could be found it would be reused⁷¹⁷. The condition that is proposed by SPM in relation to decommissioning is not adequate nor is it acceptable to PCC. It leads to the possibility of the line having a life in the absence of the wind farm and potentially not being removed at the end of the life of the wind farm. That would be wholly inappropriate as it would be permitted in reliance on a balance of need and disadvantage which might be quite different in the future. Any condition must allow for this balance to be refreshed when the *raison d'être* for the line ceases to exist.
617. If the Secretary of State is minded, as PCC say he should be, to impose a decommissioning condition in the terms PCC suggest then it will of course be necessary to consider that even a 25 year presence of the infrastructure is a long time, the equivalent of one generation's experience of the area.

⁷¹⁶ Sarah Gibson cross examination.

⁷¹⁷ Eric Leavy examination in chief (21.1.14), also clear from his proof SPM/COMPANY/POE/LEAVY/002A, at paragraph 6.16.

618. SPM have placed too great a reliance on claimed reversibility and insufficient weight on longevity. When it was put to Ms Gibson that the effects of the OHL would be long term she relied the limited lifetime of the wind farm as demonstrating why she considered this could not be the case⁷¹⁸. This showed a misunderstanding of SPM's true position that, once constructed there is every likelihood that it will remain and a failure to appreciate that even 25 years is a generation's experience. She did eventually concede it was 'reasonably long term' but it is clear from her first answer that part of her view of the scheme is coloured by its reversibility⁷¹⁹.

619. It is also important to understand the nature of the infrastructure that SPM are proposing to install along this route. The application is for a Heavy Duty Wooden Pole 132 kV line. While this does enable the line to be put on a "wooden pole," HDWPs are "*not a slender or lightweight structure. They are still clearly a substantial piece of engineering...Not something that is readily absorbed at a local level.*"⁷²⁰. Reference to SPM's diagram of pole types⁷²¹, and the HDWP's in place in Rhyll⁷²² demonstrate their true nature and character.

LANDSCAPE

620. There can be no question but that the Llandinam scheme involves the introduction into an essentially rural landscape of a development most people would consider discordant and harmful⁷²³.

Landscape context

621. In order to understand why, despite the fact that SPM propose the same infrastructure throughout the route unacceptable landscape and visual effects are only caused in one part of the route, it is necessary to have an understanding of the landscape context and how it changes along this 30km route.⁷²⁴ A number of general points can be made:

- a. The varied landscape and topography of this part of central Wales, between the Waun Ddubarthog ridge and Welshpool, is dominated by a high upland plateau in the western third of the study area in the south-

⁷¹⁸ Sarah Gibson Cross examination

⁷¹⁹ See Sarah Gibson proof (SPM-LAND-POE-GIBSON-OHL – Landscape & Visual Proof of Evidence) at 5.10, last sentence.

⁷²⁰ Philip Russell-Vick, session 4 evidence, examination in chief.

⁷²¹ AD/SPM/036 Volume 6 – Llandinam Updated ES – Figures

⁷²² OBJ-415-LAND-POE-OHL- the document headed S2 abergele.

⁷²³ This was put to Sarah Gibson in cross examination. She did not significantly demure from it, although she did assert that there are other lines in the area.

⁷²⁴ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 3.9 to 3.19

west with the remainder characterised principally by the valley of the River Severn and its tributaries in the north-east.⁷²⁵

- b. In relation to the western third of the study area the distinctive landscape of this upland mass is a product of both its striking topography and the mosaic of different land uses. The upland plateaux are a combination of extensive moorlands or large-scale forestry comprising commercial conifer species such as spruce and fir. In contrast, the agricultural landscapes of the valley sides are characterised by small to medium sized irregular fields of rough pasture delineated by native hedgerows and stone walls. Deciduous tree belts and woodland blocks tend to be confined to watercourses, lanes and the valley floors. Whilst there are clear variations in character across the area, the landscape is unified by its dramatic topography, high level of intactness and strong sense of rurality⁷²⁶.
- c. By contrast the valley floor is settled with the towns of Newtown and Welshpool, various villages, including Abermule and Berriew, and numerous farmsteads and more isolated residential properties. The valley is a significant transport corridor within this part of mid-Wales⁷²⁷.
- d. The valley already contains substantial overhead lines. There is one principal existing overhead 132kV line through this area. This runs along the valley floor of the Severn Valley from Oswestry, past the Welshpool Substation at Leighton to the Newton Substation at the Dyffryn Industrial Estate. Although at Abermule this line crosses the railway and out of the floodplain, its alignment remains close to the railway along its eastern side. It appears to be of a similar construction as the proposed Llandinam Scheme with twin wooden poles at around 14m high but with steel lattice towers at changes in direction. A second 132kV line enters the Welshpool Substation from the north along the Severn Valley floor. There are many other lesser 7m high single pole overhead lines (triple, double and single conductors) throughout the valley serving the various settlements, scattered properties and farms. Generally the more settlement and property present the more overhead lines are evident but there is a broad pattern of lines running along or parallel with the Severn Valley with its transport routes and the main settlement in the area⁷²⁸.
- e. By contrast the rolling valley side to the south and the rising edge of the Kerry Hill ridge and the plateau itself are much less settled and consequently the presence of single overhead lines are much less evident than on the valley floor and nearby, whilst up on the plateau they can be entirely absent from areas altogether, notably south of the Glog. Between the A483 and Black Gate there are no overhead lines present. At Black Gate there are two overhead single pole lines, one with a single conductor beside the road and a twin-conductor line just to the east of the road⁷²⁹.

622. It will be clear from this that there are very substantial differences in the ability of the landscape of this route to absorb the proposal both in terms of the characteristics of the landscape itself and in the terms of the presence of

⁷²⁵ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 3.9

⁷²⁶ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 3.11

⁷²⁷ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 3.13

⁷²⁸ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 3.17

and 3.18

⁷²⁹ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 3.19

infrastructure within that landscape. This factor is crucial in understanding why PCC have concluded that much of the route could absorb the line without unacceptable effects, but one area could not.

Landscape capacity

623. By the time of their 2013 ES, the need for a reasonably fine grained assessment of the landscape’s capacity to absorb this line was accepted for the first time by SPM⁷³⁰. This work broke the route down into 8 sections. It considered them against the criteria of landform, landcover and landscape pattern, settlement pattern, scenic quality, scale, human influence, perceptual aspects, condition, skylines and settings, visibility and views, comparative landscape value based on considerations of LANDMAP outstanding evaluations and opportunities and implications for routing. The following table amalgamates the identified parts of the route, SPM’s conclusions, and PCC’s comments on those conclusions.

Portion of the route⁷³¹	SPM Field Based landscape sensitivity conclusion⁷³²	PCC’s comment.
A: Llandinam Wind Farm to A483 near Old Neuadd Bank	Medium-low due to man-made influences, scale and condition of this upland fringe landscape with views of existing wind farms, including Llandinam.	Agreed ⁷³³
B: A483 near Old Neuadd Bank to Cae - betin Wood	High partly because it is an attractive rural landscape, but more because it is a highly valued historic landscape that is locally recognised and promoted as a recreational resource due to the Kerry Ridgeway Regional Trail.	Agreed ⁷³⁴

⁷³⁰ In their introduction to their field based landscape sensitivity appraisal at appendix 06C of AD/SPM/032 Volume 3b – Llandinam Updated ES – Appendices, SPM write “SPM considers that a more detailed field-based landscape sensitivity appraisal of the proposed Llandinam 132kV line would assist in the preparation of the Updated Llandinam ES”.

⁷³¹ These can be seen Figure 1 of 06C of AD/SPM/032 Volume 3b – Llandinam Updated ES – Appendices

⁷³² This is set out in 06C of AD/SPM/032 Volume 3b, at the table.

⁷³³ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 6.3

⁷³⁴ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 6.4

C: Cae-betin Wood to the B4368 near Pentre	Medium because, although there is scope for screening, the line would have to route across higher ground in places where it will potentially be more visible. It would also unavoidably cross the grain of the landscape.	Agreed.
D: B4368 near Pentre to Upper Maenllwyd	Medium due to the potential discordance with the grain of the landscape. There would be views of the line as it crossed the farmland of the Mule Valley near Glanmule and Upper Maenllywdd.	Agreed ⁷³⁵
E: Upper Maenllwyd to Court Calmore near the B4385	Medium-high due to the potential discordance with the grain of the landscape, scenic quality, few intrusive landscape features and potential visibility from the Severn Valley and Llandyssil Valley.	Agreed ⁷³⁶
F: Court Calmore near B4385 to the B4386 near Woodlands	Medium-high due to the combination of the scenic quality of the farmland as well as the influence of historical features on the landscape which is recognised by its inclusion within the Vale of Montgomery Registered Historic Landscape. Offa's Dyke National Trail lies within 1 km of the line. There would potentially be views of the line as it crossed the Camlad Valley and rose up the valley sides.	Agreed ⁷³⁷
G: The B4386 near	Medium due to potential effect on views from	Agreed ⁷³⁸

⁷³⁵ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 6.3

⁷³⁶ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 6.3

⁷³⁷ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 6.3

⁷³⁸ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 6.3

Woodlands to Cilcewydd	properties and the more rural pockets of landscape. Although this area forms part of the Vale of Montgomery Registered Historic Landscape, the area has more overt man-made influences including settlement and also provides more scope for sensitive routeing due to the rolling landform and high prevalence of hedgerows and trees.	
H: Cilcewydd to Welshpool Grid Substation	Medium-high because although there is scope for screening, the presence of the culturally and historically important Powis Castle and Leighton Estates, Sustrans National Cycle Route 81 and the Severn Valley Way locally increase the sensitivity.	Not agreed. The ES has overvalued the landscape sensitivity, which is Low, because of the nature of the low-lying valley topography and presence of a number of similar installations, including the existing twin pole 132kV overhead line ⁷³⁹ .

624. Thus there is a considerable amount of agreement between SPM and PCC that by virtue of many factors, there is substantial variety in the ability of the landscape through the route to accept this infrastructure in landscape and visual terms. One forensic point arises here. In their 2013 landscape capacity assessment, set out above, SPM identified for the first time that part of the landscape of their chosen route, was of high sensitivity to the sort of infrastructure they were proposing. Yet this conclusion does not appear to have caused any reconsideration of whether this route remained appropriate nor indeed any questioning of the instruction from SPM that this was to be an OHL scheme.

625. There have been other methodological changes that have not resulted in any change in assessment outcome when it is abundantly clear that they should have. Visual impact assessment is another example where there have been two significant shifts in approach between 2008 and 2013, yet there does not appear to have been any consequential re-appraisal of route. Firstly in the 2009 ES all users of rights of way (other than the Kerry Ridgeway) were graded as medium⁷⁴⁰. In 2013 SPM made a decision that they had underestimated the sensitivity of public rights of way and upgraded them to high. Despite yet another very important change in methodology, this

⁷³⁹ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 6.6

appears to have made no difference to the route selection process. Secondly in 2009 other wind farms such as Llanbadarn Fynydd were assumed as part of the baseline in assessing both the predicted view and the magnitude of change⁷⁴¹. Again the incorrectness of this approach was recognised and corrected in 2013 but it does not appear to have led to any fundamental re-appraisal of route.

Landscape effects

626. PCC therefore consider that while there will undoubtedly be landscape and visual impacts in route areas A, C, D, E, F, G, and H, these effects cannot be considered to be unacceptable. In relation to landscape effects PCC consider that the correct conclusions in relation to the areas of the route other than the Glog are as follows:

Portion of the route⁷⁴²	SPM landscape sensitivity⁷⁴³	SPM predicted magnitude of change⁷⁴⁴	SPM predicted significance of effect⁷⁴⁵	PCC's comment.
A: Llandinam Wind Farm to A483 near Old Neuadd Bank	Low-medium	low	Minor	Agreed ⁷⁴⁶
B: A483 near Old Neuadd Bank to Cae - betin Wood	High	Medium	Moderate	Landscape sensitivity as High agreed. Landscape magnitude of change not agreed. It is High (as detailed in the following section) and, furthermore, the significance of that effect is of significance (and major significance

⁷⁴² These can be seen Figure 1 of 06C of AD/SPM/032 Volume 3b – Llandinam Updated ES – Appendices

⁷⁴³ See ES volume 1 (AD-SPM-019), table 6.7

⁷⁴⁴ See ES volume 1 (AD-SPM-019), table 6.7

⁷⁴⁵ See ES volume 1 (AD-SPM-019), table 6.7

⁷⁴⁶ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 6.3

				in the terms expressed in the ES). ⁷⁴⁷
C: Caebetin Wood to the B4368 near Pentre	Medium	Low	Minor	Not agreed. The ES has undervalued the magnitude of effect. The change to this undulating, rural landscape, relatively unaffected by similar infrastructure, would be Medium, although this finding does not alter the assessment of significance as stated in the ES (i.e. not significant) ⁷⁴⁸ .
D: B4368 near Pentre to Upper Maenllwyd	Medium	Low	Minor	Agreed ⁷⁴⁹
E: Upper Maenllwyd to Court Calmore near the B4385	Medium-high	Low	Minor	Agreed ⁷⁵⁰
	Medium-high (Llandyssil Valley)	Medium	Minor to moderate (borderline significant)	
627. F: Court Calm	628. Medium-high	629. Low	630. Minor to moderate	631. Agreed ⁷⁵¹

⁷⁴⁷ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 6.4

⁷⁴⁸ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 6.5

⁷⁴⁹ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 6.3

⁷⁵⁰ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 6.3

⁷⁵¹ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 6.3

ore near B438 5 to the B438 6 near Woodlands			te (border line significant)	
G: The B4386 near Woodlands to Cilcewydd	Medium	Low	Minor	Agreed ⁷⁵²
H: Cilcewydd to Welshpool Grid Substation	Medium-high	Low	Minor to moderate (borderline significant)	Not agreed. The ES has overvalued the landscape sensitivity, which PCC consider to be Low, because of the nature of the low-lying valley topography and presence of a number of similar installations, including the existing twin pole 132kV overhead line All of which lead to an effect that would not be significant ⁷⁵³ .

Visual effects

632. In relation to visual effects, save in relation to Section B of the route, PCC broadly agrees with the ES visual impact assessment.⁷⁵⁴

⁷⁵² Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 6.3

⁷⁵³ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 6.6

⁷⁵⁴ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 6.9

What distinguishes Section B?

633. While there will clearly be impacts from the remaining sections of the line, those impacts will not be unacceptable. What then distinguishes Section B?

634. The landscape of Section B is a particularly special part of the Kerry Ridgeway VSAA. The topography of the Glog is especially distinct and its 'bumpy' profile unique in the context of the rounded ridgelines of the mid-Wales area, whilst the high ridge of Kerry Hill at Two Tumps is massive and a significant landscape marker, providing a notable start to the Kerry Ridgeway Regional Trail. The openness of this high landscape provides long and dramatic rural views across this area (e.g. from the Glog to the Kerry Hill and vice versa) and out to other landscapes, giving this landscape a sense of considerable scale, although not the largest. The smooth, consistent land cover of almost continual grassland, contrasting with the rough moorland of the highest ground, and intersected south of the Glog with the long sweeping lines of mixed deciduous plantations (mainly beech) and conifer plantations, combine with the topography to produce a 'simple' and legible aesthetic which is highly attractive and of particular scenic value. The area has a moderate to high sense of tranquillity and remoteness, is in good condition and largely uncluttered with built or intrusive elements. The sense of specialness of its scenic quality is heightened by the presence of visible pre-historic earthworks which lend an air of ancient landscape. The area is also crossed by footpaths, bridleways and the Kerry Ridgeway with its small car park at Cider House, meaning this landscape is also a highly accessible resource for informal recreation. In PCC's judgement the landscape value of the Glog and Kerry Hill and their immediate surroundings is markedly higher than the great majority of the VSAA and its scenic quality is as high as any other area of this part of northern Powys, including some of those areas with outstanding scenic quality, and of regional importance⁷⁵⁵. It is outstanding in PCC's view and equally as outstanding as other parts of Powys. Those characteristics all heightened by strong cultural heritage character. It contributes to the feel of this landscape as having ancient qualities. That can be seen very clearly. How the landscape was used in pre-historic and early medieval times can be read and interpreted. This contributes to its particular spirituality.⁷⁵⁶

635. This assessment of the quality of the landscape is of course reflected in the conclusion of SPM that its sensitivity is high. It is also reflected in the LANDMAP assessment contained in the LANDMAP datasheet for the Kerry Ridgeway Visual and Sensory Aspect Area⁷⁵⁷. Important parts of the assessment are as follows:

<i>Summary Description</i>	<i>An open and broad expanse of upland grazing with dominant open skies and wind exposure. Occasional attractive views available over the</i>
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⁷⁵⁵ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 7.5

⁷⁵⁶ Philip Russell Vick examination in chief

⁷⁵⁷ Philip Russell Vick proof for session 3 (OBJ-002-LAND-POE-RUSSELL-APPH-OHL) at appendix H

	<i>Church Stoke farmland and rolling lowland farmland to the north and dramatic upland grazing views to the south. Tranquil/spiritual setting derived from the historical drove route along the ridgeway, Offas Dyke path and the infrequent passage of traffic.</i>
<i>There are attractive views...</i>	<i>...both in and out (broad dramatic views to upland to the south and rolling farmland to the north)</i>
<i>There are detractive views...</i>	<i>..neither in or out</i>
<i>Perceptual and Other Sensory Qualities</i>	<i>Attractive Tranquil Exposed Spiritual (Close links spiritually with the historical land use of the area particular reference to Offa's Dyke and the Kerry Ridgeway drove road) Remote (Lack of human traffic and tranquillity of the area combined with the proximity of further upland to the south lends the area a remote aspect)</i>
<i>Scenic Quality</i>	<i>High</i>
<i>Integrity</i>	<i>High</i>
<i>Character</i>	<i>High</i>
<i>Rarity</i>	<i>High</i>
<i>Overall Evaluation:</i>	<i>High</i>
<i>Justification of overall evaluation</i>	<i>A network of grazed upland farmland running along the distinct topographical feature of the Kerry Ridgeway forming a transitional area between the rolling upland and higher ground in Shropshire to the south and the drop down into the rolling mosaic farmland and valley bottom leading to Church Stoke. The proximity of upland on the Shropshire boundary lends the area a distinct character of being on the edge of the wilds = High.</i>

636. The 'lay' perspective of the landscape around the Kerry Ridgeway reflects this high sensitivity. Two of SPM's engineering witnesses (Eric Paalman and Richard Livingstone) volunteered their lay appreciation of the landscape in the area. Eric Paalman commented in examination in chief that he would like to go back to the area around Black Gate because it was a 'nice area' and Richard Livingstone volunteered in examination in chief that he had walked the area around the Kerry Ridgeway and it is 'very beautiful'.

637. This understanding of how the landscape reads and is appreciated is sadly lacking in SPM's professional LVIA which does not display either rigour or true understanding. A simple example of that is the screen planting proposal contained in the SEI.⁷⁵⁸ It was only when the obvious inappropriateness of such planting was pointed out by PCC's evidence that Ms Gibson appreciated their unacceptability. She was persuaded by the openness of the landscape, but she rightly agreed the landscape had not become more open since initially proposing the mitigation. This is an example of failing to understand the landscape.

PCC's assessment

638. PCC's LVIA methodology is as described in the introduction. In terms of the sensitivity of the landscape to the proposed 132kV OHL, it takes the sensible precaution of assuming that all effects are negative⁷⁵⁹.

639. That precaution is well justified in the area around the Glog which is particularly sensitive to this type of development. It is highly susceptible to major infrastructure and, specifically, overhead line development. The landscape is very lightly settled with few buildings evident. Only occasional barns punctuate the scene, and it is crossed by few relatively lightly trafficked roads. The area is almost entirely free from overhead lines and there is nothing of the nature or scale of a 14m high twin wood pole 132kV line present. The presence of the P&L Wind Farm is too distant to be a characterising effect and the twin 35m high turbines at Cwmyrhiwdre are seen only from part of the Section B area and only perceived as objects in the landscape rather than as co-dominant or characterising elements. The important features and characteristics which are susceptible to change from overhead lines include the integrity of the plantations, especially the deciduous ones, and the impact on the perception of tranquillity, remoteness and scenic value through the introduction of a new built linear element crossing through the heart of this landscape area⁷⁶⁰.

640. PCC accepts that there are elements of some manmade features in some parts of this area (including roads, farm buildings, fences, sheep pens, and elements of commercial forestry), but moving around the landscape one is

⁷⁵⁸ Page 41, AD/SPM/036 Volume 6 – Llandinam Updated ES – Figures, showing additional planting in the Glog area.

⁷⁵⁹ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 2.10

⁷⁶⁰ OBJ-002/LAND/POE/RUSSELL/OHL, at paragraph 7.6 on page 32

not left with the impression of lots of man-made features⁷⁶¹. There is a pair of single turbines that are visible but the overwhelming impression is openness and absence of settlement. There are relatively few buildings, a consistency of grassland, sweeping dramatic views and an air of ancient landscape⁷⁶².

641. In relation to landscape effects in section B, PCC rejects SPM's assessment that the change is medium. The impact will be high, giving a significant effect. There is major alteration to key characteristics of the baseline landscape which will be totally uncharacteristic when set in the attributes of the receiving landscape because⁷⁶³:

- a. There would be loss of a two strips of deciduous plantation and a cutting through of a strip of conifer plantation⁷⁶⁴ which would draw the eye. These effects are well illustrated by viewpoints 71 and 70⁷⁶⁵, although care needs to be taken with use of all of SPM's photomontages because Ms Gibson accepted that she has wrongly adopted a 'letterbox' approach in relation to these⁷⁶⁶. While changes to forestry are of course a normal incident of forestry these sort of gaps leaving behind a 'curious clump' are not.⁷⁶⁷
- b. There would be a severe change to the sense of tranquillity⁷⁶⁸, remoteness, the air of being an ancient landscape, the long views and dramatic rural views and the scenic quality through the introduction of an uncharacteristic feature.
- c. Although not all key features⁷⁶⁹ would be severely affected such a finding is not necessary to reach a 'high' on this methodology.

642. PCC's conclusion of 'severe' effects is the key difference between PCC and SPM. Ms Gibson at worst has concluded that the magnitude of effects of the HDWP was medium. There is not a single major effect on any part of this OHL. Her only explanation as to why she did not think that the effects are severe was:

*"There are man made features there already. Single turbines. Views of Llandinam. Run down farm features. Roads. I don't think it is totally out of character with that landscape. As a feature in the landscape it is wood poles with big gaps. Permeable. [I] can still appreciate the landscape. [I] do not think it represents a complete change. [I] can think of other developments that would be more severe in that location."*⁷⁷⁰

⁷⁶¹ Philip Russell Vick cross examination.

⁷⁶² Philip Russell Vick cross examination

⁷⁶³ This is the definition of high, see Philip Russell Vick proof for session 3, appendix D OBJ-002-LAND-POE-RUSSELL-APPD-OHL

⁷⁶⁴ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 7.7

⁷⁶⁵ AD/SPM/033 Volume 4a – Llandinam Updated ES – Viewpoints

⁷⁶⁶ Sarah Gibson, examination in chief, response to Inspector (Emyr Jones) questions.

⁷⁶⁷ Philip Russell Vick cross examination.

⁷⁶⁸ This is not a noise point as Philip Russell Vick said in cross examination.

⁷⁶⁹ Effected, but not severely so, would be the sense of openness, the sale of the landscape, the smooth and consistent landcover. There would be no change to the topographical character of the landscape.

⁷⁷⁰ Sarah Gibson, examination in chief.

643. The important parts of the landscape here, as agreed by Ms Gibson, are that it is very unsettled (ie has an absence of settlement) and enclosure is limited. The Crugyn Bank Dyke is part of this landscape that has to be looked at as a whole. The Dyke is a feature that is aligned northwest/southeast, similarly to the shelterbelts that run north/south⁷⁷¹. A linear East/West orientated feature can only follow the grain of the landscape to a degree; it will inevitably cut across the woodlands and the Crugyn Bank Dyke. SPM appears to accept that the cutting through the existing linear woodland features would cause significant harm to characteristic features. However, somewhat perversely, Ms Gibson did not accept the same point in relation to the Crugyn Bank Dyke. Her reasons for rejecting this point were that this was a matter for the cultural heritage assessment, that the line was not a solid structure, views could be obtained beyond it, and it would go through a gap in the dyke. These points are not convincing. The Dyke is an important historical landscape feature. The HDWP OHL is a major physical intrusion which will bisect a SAM and both physically and visually carve through the landscape. Viewpoint 84 where SPM's heritage adviser, Dr Sylvester assessed a major visual impact is telling in this regard⁷⁷².

644. Underlying the SPM assessment is Ms Gibson's assessment of the HDWP structures as essentially permeable, that the view or feature beyond/behind may still be obtained and that other forms of infrastructure could have a more harmful effect. PCC rejects the notion of permeability. The OHL would be a series of structures, and whilst features can be seen beyond them they draw the eye and detract from the view⁷⁷³. The fact that it is possible to contemplate a more harmful development than the one being assessed is not a factor which is relevant to the magnitude of effects of the scheme in fact being assessed.⁷⁷⁴

Number	Receptor	SEI ⁷⁷⁵ sensitivity	SEI Magnitude ⁷⁷⁶	SEI conclusion ⁷⁷⁷	PRV sensitivity ⁷⁷⁸	PRV magnitude	PRV Conclusion
3	PRoW, bridleway just off A483 near Gwynant	High	High	Moderate (significant)	High	Dominant	Significant

⁷⁷¹ Sarah Gibson cross examination.

⁷⁷² AD/SPM/033 Volume 4a – Llandinam Updated ES – Viewpoints

⁷⁷³ Philip Russell-Vick cross examination.

⁷⁷⁴ Confirmed by Goodrum in XX by PCC in Session 4. As a Fellow of the Landscape Institute, this was not an approach he was prepared to endorse.

⁷⁷⁵ SEI volume 1, AD/SPM/029 Volume 1 – Llandinam Updated ES, table 6.10

⁷⁷⁶ SEI volume 1, AD/SPM/029 Volume 1 – Llandinam Updated ES, table 6.10

⁷⁷⁷ SEI volume 1, AD/SPM/029 Volume 1 – Llandinam Updated ES, table 6.10

⁷⁷⁸ This is the definition of high, see Philip Russell Vick proof for session 3, appendix F OBJ-002-LAND-POE-RUSSELL-APPF-OHL

4	PRoW, Kerry Ridgeway at Two Tumps (promoted Viewpoint)	High	None	None	High	None	Not significant
25	PH, A483 north of Camnant	Medium	Medium	Moderate (significant)	Medium	Conspicuous	Not significant
26	PH, B4355 at Crugyn Bank dyke	High	Medium	Moderate (significant)	High	Prominent	Significant
27	PRoW, bridleway south of the Glog	High	Medium	Moderate (significant)	High	Dominant	Significant
50	PRoW, bridleway near Caebetin Woo	High	High	Moderate (significant)	High	Dominant	Significant
70	PRoW, bridleway intersection with B4355 at Black Gate	High	Medium	Moderate (significant)	High	Dominant	Significant
71	PRoW, Kerry Ridgeway	High	Low-medium	Moderate (significant)	High	Conspicuous	Significant
PRV 1	PRoW, bridleway east of A483				High	Dominant	Significant

PRV 2	PRoW, bridleway west of viewpoint 27				High	Dominant	Significant
PRV 3	PRoW, bridleway below Banc Crugyn				High	Dominant	Significant
PRV 4	PRoW, bridleway on Banc Crugyn				High	Prominent	Significant
PRV 5	PRoW, footpath south of Kerry Ridgeway				High	Prominent	Significant
PRV 6	PRoW, footpath at Caebetin Wood				High	Dominant	Significant

645. The additional viewpoints were provided by PCC to illustrate the walk along the bridleway. It is very important to understand these sequentially as this is how people enjoy the landscape⁷⁷⁹.

646. One conclusion Ms Gibson specifically took issue with was viewpoint 26. This is a useful one for understanding the difference in approach between the witnesses. She assesses the magnitude of effects as moderate, and relies on the fact that the line was backdropped, on the presence of other telegraph posts, a not well maintained fence line and a road to say that the effect could not be major⁷⁸⁰. In relation to viewpoint 70 again Ms Gibson took issue saying it illustrates that there are other man-made features in the landscape, and you can still see the hill.⁷⁸¹

647. Viewpoint 3 is a very good way of testing the validity of Ms Gibson's judgments. It is taken from a bridleway and she agreed that the line would oversail the viewpoint. She also agreed that you would see the line stretching

⁷⁷⁹ Philip Russell Vick, examination in chief.

⁷⁸⁰ Sarah Gibson, examination in chief.

⁷⁸¹ Sarah Gibson, examination in chief.

out in front of you and it would be a dominant feature in that view. From that position you would effectively walk along the line when walking along the bridleway. Her assessment is that the sensitivity is high and the extent of change is high yet the outcome is only a moderate effect. That is very difficult to understand, particularly given that in 2009 when the bridleway was only accorded a medium sensitivity and Llanbadarn Fynydd was taken into account the same outcome was reached⁷⁸². The only explanation she gave in cross examination was the appearance in the meantime of two masts, however Ms Gibson appeared unaware they are anemometer masts for one of the proposed wind farms.

648. This flaw can be seen in many of Ms Gibson's assessments. Despite the fact that she agreed you would expect to see the changes wrought by the upgrading of sensitivity and the taking of other wind farms out of the assessment reflected in the conclusion⁷⁸³, they simply are not. Of the viewpoints listed above the following compares 2009 and 2013:

Number	Receptor	SEI 2009 sensitivity ⁷⁸⁴	SEI 2009 magnitude ⁷⁸⁵	SEI 2009 conclusion ⁷⁸⁶	SEI 2013 sensitivity ⁷⁸⁷	SEI 2013 Magnitude ⁷⁸⁸	SEI 2013 conclusion ⁷⁸⁹
3	PRoW, bridleway just off A483 near Gwynant	medium	High	Moderate (significant)	High	High	Moderate (significant)
4	PRoW, Kerry Ridgeway at Two Tumps (promoted Viewpoint)	High	none	none	High	None	None
25	PH, A483	Medi	Medi	Moderat	Medi	Mediu	Moderate

⁷⁸² 2009 ES (AD-SPM-019: Llandinam Environmental Statement) table 6.10

⁷⁸³ Sarah Gibson cross examination

⁷⁸⁴ 2009 ES (AD-SPM-019: Llandinam Environmental Statement) table 6.10

⁷⁸⁵ 2009 ES (AD-SPM-019: Llandinam Environmental Statement) table 6.10

⁷⁸⁶ 2009 ES (AD-SPM-019: Llandinam Environmental Statement) table 6.10

⁷⁸⁷ SEI volume 1, AD/SPM/029 Volume 1 – Llandinam Updated ES, table 6.10

⁷⁸⁸ SEI volume 1, AD/SPM/029 Volume 1 – Llandinam Updated ES, table 6.10

⁷⁸⁹ SEI volume 1, AD/SPM/029 Volume 1 – Llandinam Updated ES, table 6.10

	north of Camnant	um	um	e (significant)	um	m	(significant)
26	PH, B4355 at Crugyn Bank dyke	Medium	Medium	Moderate (significant)	High	Medium	Moderate (significant)
27	PRoW, bridleway south of the Glog	Medium	Medium	Moderate (significant)	High	Medium	Moderate (significant)
50	PRoW, bridleway near Caebetin Woo	Medium	High	Moderate (significant)	High	High	Moderate (significant)

649. Ms Gibson’s only answer to this extraordinary coherence of conclusions despite the significant and material change to the inputs was that ‘the category of moderate is very broad, and could raise within moderate’⁷⁹⁰. If her methodology really does produce such a broad concept of moderate then it is not a helpful methodology in terms of understanding and differentiating between the extent of impacts. Further the GVLIA 3rd edition guidelines require that maintaining a moderate assessment in these circumstances is clearly explained⁷⁹¹, and there was no such explanation in Ms Gibson’s assessment.

650. The width of Ms Gibson’s moderate category can be seen from the fact that she has not identified a single major effect from 132kV overhead line⁷⁹². In explaining why she had never identified a major effect she claimed that this was because of careful routeing, and because of the nature of the

⁷⁹⁰ Sarah Gibson cross examination.

⁷⁹¹ CD-CPL-LAN-005 – Landscape Institute, Guidelines for Landscape and Visual Impact Assessment 3rd Edition, 17 April 2013. There are a number of references, but 3.29 says “combining judgments should be as transparent as possible”. 3.36 says “there should be more emphasis on narrative text describing the landscape and visual effects and the judgments about their significance...tables and matrices should be used to support and summarise descriptive text, not to replace it.”. The summary on good practice at 3.45 states “assessing the significance of landscape and visual effects is a matter of judgement. It is vital that the basis of such judgements is transparent and understandable, so that the underlying assumptions and reasoning can be examined by others.....the contribution of judgements about the individual criteria contributing to sensitivity and magnitude should be clear, and the approach to combining all the judgements to reach an overall judgement of significance should be as transparent as possible”.

⁷⁹² SPM/020 – RESPONSE OF MRS GIBSON TO VARIOUS QUERIES at 1.6

infrastructure (wood poles as compared with a wind turbine). In relation to whether careful routeing has been carried out in this case, see above at paragraphs 586 to 616. However the second part of Ms Gibson's response (relying on the nature of the infrastructure) is interesting because it reflects yet another flawed aspect of her approach, touched on above, which appears to be that if the appraiser can envisage infrastructure which would have a greater effect, the effect cannot be a major impact. That must be wrong. On a basic level it does not work as a methodology. It is virtually always possible to think of something worse that could be put into a landscape. If this approach were right, a wind turbine would not give rise to major impacts because a nuclear power station would be worse, and a nuclear power station would not give rise to major impacts because two nuclear power stations would be worse.

651. More fundamentally it does not work here, because it is a matter of agreement between SPM and PCC that a 132kV wood pole line is capable of giving rise to impacts which justify undergrounding⁷⁹³. If that is right it must be capable of giving rise to a major impact.

652. Another matter to be taken into account when judging whether Sarah Gibson's 'medium' category is unjustifiably wide and has thus prevented her finding effects which would justify undergrounding is that when she was challenged as to why Dr Sylvester had assessed various viewpoints as experiencing major visual effects, her main answer for the difference was that visual impact is 'very' subjective. This was qualified in re-examination to say that it was very dependent on professional judgment and it should be supported by justified reasoning. However, the problem for Ms Gibson and SPM is that no such reasoning exists and the clear impression left from her evidence is that methodology is skewed in favour of "medium only" effects in order to suit SPM's requirement *that this is to be an OHL scheme*.

653. It is, however, a matter of agreement that the landscape in section B is sufficiently different to justify different treatment of that section. Thus Ms Gibson says in her proof:

*I am of the opinion however, that even where a moderate effect arises from a pole in close proximity to a viewer, the effect will be very localised and in most instances will diminish fairly rapidly with distance due to the appreciable screening and backdrop afforded by the generally well-wooded landscape through which the proposed route passes. The exception is at the southern end of the proposed overhead line, where the landscape around Glog and Kerry Hill is more open and adverse visual effects would potentially be experienced across a wider area.*⁷⁹⁴

⁷⁹³ Sarah Gibson cross examination.

⁷⁹⁴ SPM-LAND-POE-GIBSON-OHL – Landscape & Visual Proof of Evidencecat 8.40

654. As can be seen, both assessments concur that there are a significant number of significant visual impacts. This enables Philip Russell Vick on behalf of PCC to conclude that *“this cluster of significant visual effects on widely ranging highly sensitive public viewpoints, including Public Rights of Way and a Regional Trail, in a landscape setting with particularly special qualities is highly unusual and a direct consequence of a flawed route selection process..... these conclusions lead me to consider that the significance of the visual effects, taken together with the landscape effects, would be so significant to be unacceptable”*⁷⁹⁵”

655. By contrast, Ms Gibson places inappropriate reliance on the claim that the effects of the scheme are in some sense “not unexpected”. As an example, the final paragraph of her proof states⁷⁹⁶:

No areas designated of the highest scenic quality such as Areas of Outstanding Natural Beauty or National Parks would be affected by the Llandinam Scheme. I note that significant landscape and visual effects are not an unusual or unexpected consequence of overhead line development and that they are reversible effects. Overall, therefore, I conclude that the landscape and visual effects of the proposed overhead line alone are acceptable from a landscape and visual perspective and that the Llandinam Scheme could be accommodated within the landscape.

656. Feeding back in that ‘significant landscape and visual effects are not an unusual or unexpected consequence of overhead line developments,’ is simply wrong. Ms Gibson agreed in cross examination that “the fact that there are inevitable effects from infrastructure development” does not lessen the weight to be attached to that effect in the balance⁷⁹⁷. To rely on that factor in the balance is therefore wrong. Given that from her cross examination it appears that she expects a moderate effect from a 132kV OHL scheme, her conclusion that there are no major or unacceptable effects from a line becomes a completely self-fulfilling prophecy, rather than a realistic or helpful prediction of visual impacts.

657. The difference matters because on her methodology it is necessary to have a ‘major’ concern to give rise to a need to consider undergrounding (PCC generally agrees, on Mr Russell Vick’s methodology such a need arises at the top end of significance⁷⁹⁸), and none of her effects are identified in major. In examination in chief she described this as being *“concerns over and above what you would expect for an overhead line with wooden poles.”*⁷⁹⁹.

⁷⁹⁵ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 7.19

⁷⁹⁶ SPM-LAND-POE-GIBSON-OHL – Landscape & Visual Proof of Evidence at 13.23

⁷⁹⁷ Sarah Gibson cross examination.

⁷⁹⁸ Philip Russell Vick cross examination.

⁷⁹⁹ Sarah Gibson examination in chief.

658. Thus it is clear that Ms Gibson's visual impact assessment is inherently flawed and that of PCC is eminently to be preferred.

THE KERRY RIDGEWAY

659. There will be an unacceptable impact on the Kerry Ridgeway route unless the line is undergrounded in line with PCC's suggested options.

660. The evidence produced by PCC, concurs with the conclusions of the SEI that the line will have significant visual effects on the most westerly part of the Kerry Ridgeway regional trail⁸⁰⁰. Both Mr Russell Vick and Ms Gibson (who authored the chapter of the SEI) considered that the users of the Kerry Ridgeway regional trail were of high sensitivity.

661. Particular weight should be placed on the effects on the regional trail because of the particular point at which the line will influence the trail. The significant visual effect of the line is on the first portion of the trail a walker from the western end would walk, which is the section leading from the car park at the western end of the route (the Cider House car park), where there is an information and interpretation board. This is a clear natural starting point for visitors to the trail. While they may not experience effects from the line throughout the trail, experiencing effects in the first section is more likely to discourage users (particularly tourists unfamiliar with the area who do not know that the significant visual effects only occur on the first part of the line).

662. The significance of the Kerry Ridgeway trail should not be underestimated. It was repeatedly referred to in submissions by local people to the inquiry and is clearly much valued. As well as being a walking trail it mirrors an ancient drover's route. Mr Croft gave unchallenged evidence that the ridgeway "*has long been identified as a particularly ancient routeway and is lined with barrows and other monuments. The ridgeway remained as an important trade route well into the 19th Century; as such it represents a long running continuation of use, of an early landscape feature.*"⁸⁰¹ Interpretation boards at the Cider House car park provide information on the trail as a historic route and were referred to by a large number of local people.

663. SPM agreed that the ridgeway was of high sensitivity and had a national draw⁸⁰² and was an instance where landscape plays an important role in the

⁸⁰⁰ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 7.16, and SPM's SEI 2013 volume 1 (AD/SPM/029) at 6.7.79

⁸⁰¹ Andrew Croft proof for session 3 (OBJ-002-HISTENV-POE-CROFT-OHL) at 6.21.

⁸⁰² Rory Brooke cross examination. See also his proof (SPM-ECONOMIC-POE-BROOKE-OHL) at 5.42.

enjoyment of the resource. The factors SPM identified as being important in the national draw of the ridgeway were the scenery, landscape and countryside, sightseeing and attractions, peace and quiet, historic sites and the history/heritage of the area⁸⁰³.

664. In the event that the line is undergrounded, as PCC say is essential, then the effects of the line will not be perceived from Kerry Ridgeway⁸⁰⁴. The significant visual effects with all its likely consequences including discouraging use of the Ridgeway would thus be avoided.

665. In order to attempt to undermine PCC's case on the Kerry Ridgeway, SPM relied on the evidence of Mr Brooke an expert on socio-economics. His evidence attempted to address the impacts on the use and enjoyment of land in the vicinity of the line including the Kerry Ridgeway regional path⁸⁰⁵. He described what he was trying to do in examination in chief as 'looking at consequences of the line and other factors for use of Kerry Ridgeway and consequent impacts on tourist accommodation and assets in the economy'⁸⁰⁶. He reached the conclusion that the impact overall on the Kerry Ridgeway would be minor.

666. Sadly Mr Brooke's assessment does not provide evidence on which the Secretary of State can safely base such a conclusion. He asserted that his evidence was taking into account both the impact on tourists and on local people using the Ridgeway⁸⁰⁷, but that was not disaggregated in his work. He was unable to explain beyond the catch all assertion of professional judgment how he was able to assess impact on local people using the Ridgeway in what was billed as a socio-economic analysis⁸⁰⁸. As an attempt at a quantitative piece of work it clearly fails. Mr Brooke had visited the ridgeway only twice, and had conducted no survey into its users⁸⁰⁹. He is not in a position usefully to advise the Secretary of State on how many people are using the ridgeway, who is using the ridgeway, which parts of the ridgeway they are using, or to bring any meaningful quantitative approach to the question of the extent to which this proposal will put people off using the ridgeway.

667. Mr Brooke contended that there was no flaw in his methodology because instead of using surveys he had relied on the consultation responses⁸¹⁰. The

⁸⁰³ Brooke's proof at 10.4.22, which he agreed in cross examination represented the factors of importance in the national draw of the trail.

⁸⁰⁴ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 7.25

⁸⁰⁵ Brooke Proof, SPM/ECONOMIC/POE/BROOKE/009A, this is Secretary of State matter 7 (c) (CD/COM/011).

⁸⁰⁶ Rory Brooke examination in chief.

⁸⁰⁷ Rory Brooke, cross examination.

⁸⁰⁸ Rory Brooke, cross examination.

⁸⁰⁹ Rory Brooke, cross examination

⁸¹⁰ Rory Brooke, cross examination

flaws in this approach will be self-evident. It cannot constitute a systematic attempt to understand who uses the Ridgeway, why and what would put them off doing so. He makes no attempt to systematically understand those consultation responses (for what that effort would be worth). From the very brief selection of consultation responses he provided in his proof, all that can be understood is that the Kerry Ridgeway is a much loved resource⁸¹¹ and, relied on by the local tourist industry.

668. Additionally his approach suffers from the following main flaws:

- a. He accepts that the Kerry Ridgeway is a sensitive receptor, but concludes that the overall impact from the line assessed solely⁸¹² is minor adverse-not significant on the Kerry Ridgeway because of his conclusion that the impact would be 'negligible'. This grading conclusion is based on his assumption that the magnitude would be low merging on medium at one part of the western end or the route⁸¹³. On the basis that the line was only intermittently visible and it was not visible from the majority of the route the impact was downgraded to negligible.
- b. There is simply no basis for this downgrading. If a development needs to affect most of a nationally significant trail in order to have a sufficient effect to be considered substantial then the methodology fails. .
- c. Further the approach fails to consider the crucial question of whether an impact on part only of the route is likely to have a disproportionately greater effect on the route as a whole.

669. In the circumstances PCC have clearly identified impacts on the Kerry Ridgeway regional trail which can and should be avoided by undergrounding.

CULTURAL HERITAGE

670. The line is also unacceptable in the absence of undergrounding by reason of its unacceptable effects on various cultural heritage assets in the region around the Glog.

671. As SPM's 2013 ES noted *"the proposed line ...adopts a course to the south and east of the Severn Valley which takes it past and through some of the richest cultural heritage assets in mid Wales⁸¹⁴."*

672. The line not only takes a route past and through some of the most important assets, but also through important historical landscapes. The area around the Glog is part of the Kerry Hills LANDMAP historic and sensory VSAA

⁸¹¹ Rory Brooke proof (SPM-ECONOMIC-POE-BROOKE-OHL) at 3.2 to 3.12

⁸¹⁴ AD/SPM/029 Volume 1 – Llandinam Updated ES. David Bonner described this quote as 'fair'.

which is rated outstanding⁸¹⁵ (national/international value). The justification for this overall evaluation is that it is *“a prehistoric landscape of key importance containing significant numbers of burial monuments and ritual sites with domestic activity being indicated by a large number of prehistoric finds. Overlain by medieval and later farming evidence and with significant early medieval influence.”*⁸¹⁶

673. Mr Bonner raised some criticism in examination in chief about reliance on LANDMAP, arguing it was not based on characterisation of landscape. However it is clear from the LANDMAP datasheet here that a Historic Landscape Characterisation has been undertaken for the Kerry Hills VSAA. In fact the historic aspect of LANDMAP is well suited to use in EIA to support understanding of the context and background within which the assets are situated. The latest guidance on LANDMAP explicitly says it can be used in this manner. In particular just because an area of landscape lies outside a Registered Landscape does not mean it is not of equal importance⁸¹⁷.

674. The line passes through or by a large number of historical assets. The 2013 SEI recorded major adverse impacts on⁸¹⁸:

- a. seven scheduled ancient monuments- (Bryn Cwmyrhiwdre Round Barrow (MG280), Crugyn Bank Dyke (MG062), Two Tumps Dyke (MG063), Barrow west of Cae-Betin Wood (MG257), Forden Gaer Roman Site (MG012), Great Cloddiau Camp (MG169), Henfron Moated Site (MG220)),
- b. seven grade II listed buildings- (Cilthriew (17306), Farm building at Cilthriew (17307), Outbuilding at Cilthriew (17308), Upper Maenllwyd farmhouse (17304), Caerhowel Smithy (7999), Former Retort House (19506), Rhydwhiman Crossing Cottage (LB87275)
- c. two non-designated assets of national importance- Black Gate Enclosure (1896), Cuckoo Hall hillfort (1822)

675. The SEI also recorded moderate adverse impacts on a further sixteen scheduled monuments, one Grade II* listed building, eight Grade II listed buildings, one Registered Park and Garden and one Registered Historic Landscape⁸¹⁹.

676. Thus it is clear that this line will have an impact on this historic environment. EN-1 requires the decision maker to decide whether an application would cause ‘substantial harm’ or ‘less than substantial harm’ to an asset. EN-1 provides⁸²⁰:

⁸¹⁵ The data sheet is appendix F to Andrew Croft’s proof- OBJ-002-HISTENV-POE-CROFT-APP-OHL – Historic Environment Evidence – Appendices

⁸¹⁶ The data sheet is appendix F to Andrew Croft’s proof- OBJ-002-HISTENV-POE-CROFT-APP-OHL – Historic Environment Evidence – Appendices

⁸¹⁷ Andrew Croft examination in chief.

⁸¹⁸ OBJ-002-HISTENV-POE-CROFT-OHL – Historic Environment Proof of Evidence at 6.5.

⁸¹⁹ OBJ-002-HISTENV-POE-CROFT-OHL – Historic Environment Proof of Evidence at 6.5.

⁸²⁰ EN-1 [CD/COM/001] at 5.8.14 and 5.8.15.

There should be a presumption in favour of the conservation of designated heritage assets and the more significant the designated heritage asset, the greater the presumption in favour of its conservation should be. Once lost heritage assets cannot be replaced and their loss has a cultural, environmental, economic and social impact. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. Loss affecting any designated heritage asset should require clear and convincing justification. Substantial harm to or loss of a grade II listed building park or garden should be exceptional. Substantial harm to or loss of designated assets of the highest significance, including Scheduled Monuments; registered battlefields; grade I and II listed buildings; grade I and II* registered parks and gardens; and World Heritage Sites, should be wholly exceptional.*

Any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of development, recognising that the greater the harm to the significance of the heritage asset the greater the justification will be needed for any loss. Where the application will lead to substantial harm to or total loss of significance of a designated heritage asset the IPC should refuse consent unless it can be demonstrated that the substantial harm to or loss of significance is necessary in order to deliver substantial public benefits that outweigh that loss or harm.

677. Thus PCC provided the decision maker with an analysis of which of the impacts identified by SPM in their SEI could constitute 'substantial harm' and which constituted 'less than substantial harm'. PCC has set out its understanding of what is meant by the terms 'total loss' 'substantial harm' and 'less than substantial harm'⁸²¹.

678. PCC has considered those assets which have been identified in the SEI as being subject to 'major' adverse effects and considered which of them could be considered to experience substantial harm and which could be considered to undergo less than substantial term were the scheme to be permitted. This approach was criticised in a note from CeltPower because it was asserted that the test of substantial harm is not part of Welsh policy⁸²². That is right⁸²³, but misses the point. It is agreed by all parties that in reaching his decision the Secretary of State will apply EN-1, and EN-1 very clearly requires identification of whether there will be substantial harm to various assets.

679. PCC's identified harms are as follows:

⁸²¹ OBJ-002-HISTENV-POE-CROFT-OHL – Historic Environment Proof of Evidence at 4.14. to 4.16. See earlier submissions at paragraph 111.

⁸²² CPL-012 CeltPower Comments on Proofs of Andrew Croft and Martin Carpenter Session 3. The note also pointed out that EIA impacts do not necessarily relate to substantial harm, which is exactly Andrew Croft's point, why he has carried out the exercise discussed here. The note also says that serious concerns in EN-5 terms do not necessarily relate to substantial harm. That point is discussed below in the planning balance section.

⁸²³ Andrew Croft examination in chief.

Asset identified in the ES as being subject to major adverse impact	PCC assessment
(SAMS)	
Bryn Cwmyrhiwdre Round Barrow (MG280),	Substantial harm ⁸²⁴
Crugyn Bank Dyke (MG062),	Substantial harm ⁸²⁵
Two Tumps Dyke (MG063),	Substantial harm ⁸²⁶
Barrow west of Cae-Betin Wood (MG257),	Less than substantial harm ⁸²⁷
Forde Gaer Roman Site (MG012),	Less than substantial harm ⁸²⁸
Great Cloddiau Camp (MG169),	Less than substantial harm ⁸²⁹
Henfron Moated Site (MG220)	Borderline, given the wooded nature less than substantial harm, without the woodland substantial harm ⁸³⁰
(Grade II listed buildings)	
Cilthriew (17306), Farm building at Cilthriew (17307), Outbuilding at Cilthriew (17308),	Less than substantial harm ⁸³¹
Upper Maenllwyd farmhouse (17304),	Less than substantial harm ⁸³²
Caerhowel Smithy (7999),	Less than substantial

⁸²⁴ OBJ-002-HISTENV-POE-CROFT-OHL – Historic Environment Proof of Evidence at 6.29

⁸²⁵ OBJ-002-HISTENV-POE-CROFT-OHL – Historic Environment Proof of Evidence at 6.56

⁸²⁶ OBJ-002-HISTENV-POE-CROFT-OHL – Historic Environment Proof of Evidence at 6.56

⁸²⁷ OBJ-002-HISTENV-POE-CROFT-OHL – Historic Environment Proof of Evidence at 6.47

⁸²⁸ OBJ-002-HISTENV-POE-CROFT-APP-OHL – Historic Environment Evidence – Appendices, at E2.

⁸²⁹ OBJ-002-HISTENV-POE-CROFT-APP-OHL – Historic Environment Evidence – Appendices, at E7.

⁸³⁰ OBJ-002-HISTENV-POE-CROFT-APP-OHL – Historic Environment Evidence – Appendices, at E12

⁸³¹ OBJ-002-HISTENV-POE-CROFT-APP-OHL – Historic Environment Evidence – Appendices, at E20

⁸³² OBJ-002-HISTENV-POE-CROFT-APP-OHL – Historic Environment Evidence – Appendices, at E23

	harm ⁸³³
Former Retort House (19506),	Less than substantial harm ⁸³⁴
Rhydwhiman Crossing Cottage (LB87275)	Less than substantial harm ⁸³⁵
(Non designated assets of national importance)	
Black Gate Enclosure (1896),	Substantial harm ⁸³⁶
Cuckoo Hall hillfort (1822)	Less than substantial harm ⁸³⁷

680. What this exercise demonstrated is that those assets where the effect will be one of substantial harm (the Bryn Cwmyrhiwdre Round Barrow (MG280), Crugyn Bank Dyke (MG062), Two Tumps Dyke (MG063) and the Black Gate Enclosure), are all focussed in or around the section of the route between A483 near Old Neuadd Bank to Cae - betin Wood⁸³⁸. This preponderance of effect at the southern end of the scheme is because, as Mr Croft explained in examination in chief, the routing in the northern section has been more successful⁸³⁹. This is no doubt in part because, as he pointed out, this section is a very different landscape, more open. Its historic value is rooted in pre-history and medieval remains which are clear in the landscape. In this landscape there are more open, long distance stacked views⁸⁴⁰.

681. Whilst SPM, do not now agree with Andrew Croft's conclusions, there is one very important area of agreement. PCC and SPM agree - that that there will be substantial harm to Bryn Cwmyrhiwdre Round Barrow⁸⁴¹. The policy implications of this are considered below. However the impact on the Cross Dyke (MG062) and (MG063) and on the Black Gate Enclosure are not the subject of agreement. This level of disagreement is in no small measure because SPM have attempted very belatedly to step away from the conclusions of their own SEI through their inquiry witness Mr Bonner. He

⁸³³ OBJ-002-HISTENV-POE-CROFT-APP-OHL – Historic Environment Evidence – Appendices, at E27

⁸³⁴ OBJ-002-HISTENV-POE-CROFT-APP-OHL – Historic Environment Evidence – Appendices, at E29

⁸³⁵ OBJ-002-HISTENV-POE-CROFT-APP-OHL – Historic Environment Evidence – Appendices, at E32

⁸³⁶ OBJ-002-HISTENV-POE-CROFT-OHL – Historic Environment Proof of Evidence at 6.67

⁸³⁷ OBJ-002-HISTENV-POE-CROFT-APP-OHL – Historic Environment Evidence – Appendices, at E35

⁸³⁸ Although the Bryn Cwmyrhiwdre Round Barrow (MG280) lies to the west of the A483.

⁸³⁹ Andrew Croft examination in chief

⁸⁴⁰ Andrew Croft examination in chief.

⁸⁴¹ David Bonner cross examination.

disagreed with the conclusions of Dr Sylvester (who wrote the relevant chapter of the ES) and Andrew Croft as follows⁸⁴²

ASSET	IMPACT IN UPDATED ENVIRONMENTAL STATEMENT OF 2013	IMPACTS AS ASSESSED BY DB	LEVEL OF HARM AS ASSESSED BY PCC
MG280 Bryn Cwmrhiwdre Mound – scheduled barrow	Major Adverse (Significant)	Major Adverse (Significant) Substantial harm	Major adverse ⁸⁴³ Substantial Harm
MG121 Glog Round barrows – eight separate monuments scheduled under a single designation	Moderate Adverse (Significant)	Minor Adverse (not Significant)	Moderate Adverse Less than Substantial Harm
MG122 Crugyn Round Barrows – five separate monuments scheduled under a single designation	Moderate Adverse (Significant)	Minor Adverse (not Significant) Less than substantial harm ⁸⁴⁴	Moderate Adverse Less than Substantial Harm
MG048 Two Tumps – two scheduled barrows	Moderate adverse (Significant)	Minor Adverse (not Significant)	Moderate Adverse Less than Substantial Harm

⁸⁴² This table is adapted from one produced by SPM as document SPM/024 – Table collating the assessment conclusions of Mr Croft, the updated environmental statement of 2013 and Mr Bonner

⁸⁴³ Andrew Croft does not do his own assessment of whether the impacts are moderate, minor or major but at 6.68 he notes that “I have reviewed these impacts and concur with the Applicant’s assessment”. Therefore the SEI analysis has been attributed to Andrew Croft in this and subsequent rows.

⁸⁴⁴ David Bonner examination in chief

MG257 Barrow west of Cae-Betin Wood – scheduled barrow	Major Adverse (Significant)	Minor Adverse (not Significant)	Major Adverse Less than Substantial Harm
MG062 early medieval cross dyke – scheduled monument	Major Adverse (Significant)	Moderate ⁸⁴⁵ (probably not Significant)	Major Adverse Substantial Harm
MG063 early medieval cross dyke – scheduled monument	Major Adverse (Significant)	Minor Adverse (not Significant)	Major Adverse Substantial Harm
Banc Gorddwr round barrow (RD250) and putative Crugynau Round Barrow (MG109) - scheduled monuments	Moderate Adverse (significant)	Minor Adverse (not Significant)	Moderate Adverse Less than Substantial Harm
Black Gate Enclosure (1896) – non-designated asset of national importance	Major Adverse (Significant)	Major Adverse ⁸⁴⁶	Major adverse Substantial Harm

682. PCC are therefore in the unusual position of asking that the Secretary of State prefer not only their own witnesses assessment, but also of preferring the assessments in SPM’s SEI, over SPM’s inquiry witness. On analysis, it is clear that Mr Croft’s and Dr Sylvester’s conclusions are to be preferred to Mr Bonner’s. In respect of that PCC make a few general submissions, before turning to the details of individual monuments.

⁸⁴⁵ Recorded as moderate in the original SPM-024 but David Bonner agreed in cross examination that this box could be changed.

⁸⁴⁶ This is not dealt with in David Bonner’s proof, but given that this table originates from SPM it is to be assumed that David Bonner now accepts that this would be a major adverse impact.

683. A simple but nevertheless important point is that Mr Croft and Dr Sylvester are both very familiar with this area. CPAT are based locally and are acknowledged experts in the cultural heritage of Powys. Mr Bonner recognises that in terms of cultural heritage issues local attunement and experience is relevant and the more attuned and experienced the assessor the more likely the overall assessment is to be robust.⁸⁴⁷ CPAT did all the field work of the SEI chapter and drafted the chapter⁸⁴⁸, and did the same for the 2009 SEI⁸⁴⁹, and have therefore been involved for four to five years in the project⁸⁵⁰. Mr Croft was instructed in February 2013⁸⁵¹ and has visited the area and its wider environs on many occasions since then preparing for the inquiry. By contrast Dr Bonner was appointed shortly before proof exchange was due, and has been on site twice (the first time for a few days)⁸⁵². On the first occasion the weather was not ideal⁸⁵³. Before writing his proof Mr Bonner was therefore only able to spend half a mid December day at the southern end of the site, about which the controversy now turns⁸⁵⁴.

684. The circumstances in which Mr Bonner was appointed so close to the proof deadline apparently related to the receipt, on 6th December 2013 of a letter from the Welsh Government⁸⁵⁵. This apparently led SPM to believe that some of the SEI analysis may be conservative. It is right that letter considered that for some of the monuments more than 200m away from the line the correct assessment was moderate rather than large/very large (which still creates a significant impact as all of these SAMs are high sensitivity), and is different to Mr Bonner who generally rates these as minor not significant-see below. However the 6th December 2013 Welsh Government letter was abundantly clear in agreeing with the SEI's conclusions in relation to the Crugyn Bank Dyke (MG062), and Bryn Cwmyrhiwdre Mound (MG280). It said "there will inevitably be indirect impacts at close quarters on the settings of all three⁸⁵⁶ of the above-listed monuments and the conclusions of the ES that these are likely to be a 'Large / Very Large (significant)' are considered by Cadw to be correct." Latterly an earlier letter from CADW of the 3rd June 2013⁸⁵⁷ was produced, which appeared to contradict the points in the later 6th December letter, but as Mr Croft pointed out this was probably before they had seen the additional information provided in the 2013 SEI, particularly viewpoint 84⁸⁵⁸.

⁸⁴⁷ David Bonner, cross examination

⁸⁴⁸ AD/SPM/029 Volume 1 – Llandinam Updated ES at 8.1.6.

⁸⁴⁹ AD-SPM-019: Llandinam Environmental Statement at 8.1.6

⁸⁵⁰ David Bonner, cross examination.

⁸⁵¹ OBJ-002-HISTENV-POE-CROFT-OHL – Historic Environment Proof of Evidence at 1.9

⁸⁵² David Bonner examination in chief.

⁸⁵³ David Bonner examination in chief.

⁸⁵⁴ David Bonner, cross examination.

⁸⁵⁵ CON-001-007 Welsh Government Response to updated ES

⁸⁵⁶ The reference to all three is puzzling because only two (Bryn Cwmyrhiwdre and Crugyn Bank Dyke) are listed. Given the connection between the dykes it is likely that CADW had monument MG063 in mind as the third. This was certainly Andrew Croft's reading of the letter in examination in chief.

⁸⁵⁷ SPM/026 – Letter from CADW 3rd June 2013

⁸⁵⁸ Andrew Croft examination in chief

It would of course be unsafe to rely on a consultees initial response to an earlier iteration of SEI, when a later more informed and considered response to later SEI raises very clear concerns.

685. There is no suggestion that Dr Sylvester or CPAT have changed their view on the impacts of the scheme⁸⁵⁹. SPM do not say that the SEI is anything other than fit for purpose, and no consultee has advanced any criticism of the framework used by CPAT. Mr Bonner agrees that it is in line with good practice⁸⁶⁰.

686. PCC's understanding and assessment of the significance of the monuments is one that is firmly rooted in the landscape. :

*These designated and non-designated assets are key elements of the wider and important prehistoric landscape. The visual relationships between identified monuments, the relationships between the monuments and the topography and other aspects such as relationships between monuments and movement routes are key aspects of the setting of these monuments and key aspects of the wider landscape. The generally open and uncluttered nature of the landscape in the area aids understanding of these relationships and contributes to the setting of the assets.*⁸⁶¹

687. Prehistoric monuments are specifically sited in certain places, for example along watersheds, ridges or the heads of passes, and that this is because they are designed to be visible in the landscape, and to occupy key locations relating to water and movements. They often use local topographical features to aid this prominence. What this means is that views to and from the monuments, and various natural features in the landscape, form key parts of their setting⁸⁶².

688. In comparison SPM's evidence for this inquiry deals with the landscape in a relatively limited way. There is for example no reference to LANDMAP⁸⁶³.

689. In relation to Mr Bonner's approach, it is highly relevant to note that in some cases he does not simply disagree with the SEI, his judgment is very different. By way of context it is agreed that the reason why the Welsh Government has endorsed the use of the DMRB guidelines is to provide a consistent and transparent process allowing judgments to be tested, reducing

⁸⁵⁹ It is unclear if they were ever shown the Welsh Assembly letter of 6th December 2013

⁸⁶⁰ David Bonner Cross examination.

⁸⁶¹ OBJ-002-HISTENV-POE-CROFT-OHL – Historic Environment Proof of Evidence at 6.47 at 6.15

⁸⁶² OBJ-002-HISTENV-POE-CROFT-OHL – Historic Environment Proof of Evidence at 6.47 at 6.16 to 6.19

⁸⁶³ David Bonner, cross examination.

the scope of differing judgment⁸⁶⁴. In so far as Mr Bonner raised concerns about this process being formulaic they are unjustified. No assessment system would attribute anything other than high sensitivity to Scheduled Ancient Monuments. Therefore the assessment is always going to turn on the magnitude of effect. It is also clear that CPAT were quite correctly not applying that magnitude of effect in a formulaic way⁸⁶⁵. That there are so many significant effects is in effect a product of a line routed past so many assets of national significance, not due to any methodological flaw.

690. As can be seen from the table above, in relation to two assets⁸⁶⁶ the SEI (and Mr Croft) consider there would be a major adverse effect, whereas Mr Bonner considers the impact would be minor. While there is room for legitimate professional disagreement, it is difficult to see how that can encompass going from major (defined as *-Change to most or all key cultural heritage elements, such that the asset is totally altered. -Comprehensive changes to setting. - Extreme visual effects⁸⁶⁷*) to minor (defined as *-Changes to key cultural heritage elements, such that the asset is slightly altered or different. -Slight changes to setting. -Slight visual changes to a few key elements⁸⁶⁸*). Mr Bonner did not take any issue with those descriptions and agreed that they could be used to test his judgment⁸⁶⁹. When that is done, it is clear that the Secretary of State should treat Mr Bonner's judgment with extreme caution. It flies in the face of the views of the Welsh Government advised by CADW, CPAT and PCC's adviser.

691. In reality, Mr Bonner's evidence is based on a narrow view of what can constitute impact on the setting of a monument. He agrees that harm to setting is to do with impact on significance, and that a Scheduled Ancient Monument's significance can include history, architecture, historical interest, cultural interest. He also agreed that a setting is surroundings which contribute to an asset and embrace views to and from but also other factors which include, tranquillity, remoteness, special associations and an

⁸⁶⁴ David Bonner cross examination

⁸⁶⁵ AD/SPM/029 Volume 1 – Llandinam at 8.3.21 where they note (of their methodology) *"However, as noted previously, the severity of the effect on heritage assets depends on both the magnitude of effect and the value or importance of the asset. Table 8.3 illustrates how information on the value of the asset and the magnitude of effect are combined to arrive at an assessment of the significance of effect. This process doesn't mechanise the judgement for the significance of effect but serves as a check to ensure that judgements regarding value, magnitude and significance of effect are balanced. The correlation of these two sets of criteria is ultimately a matter of professional judgement supported by a reasoned professional explanation of the rationale behind the conclusions that are drawn."*

⁸⁶⁶ MG257 Barrow west of Cae-Betin Wood – scheduled barrow, and MG063 early medieval cross dyke – scheduled monument

⁸⁶⁷ AD/SPM/029 Volume 1 – Llandinam Updated ES Table 8.2, note text is incomplete and it is necessary to refer to table 8.2 of the 2009 SEI to complete it.

⁸⁶⁸ AD/SPM/029 Volume 1 – Llandinam Updated ES Table 8.

⁸⁶⁹ David Bonner cross examination.

understanding of historic relationships⁸⁷⁰. However did not directly consider matters such as spatial relationship and relationships between assets in his evidence.⁸⁷¹

692. He has not systematically considered whether any of the monuments would be subject to substantial harm in EN-1 terms, and in so far as he has made ad hoc comments about substantial harm this is not in the context of a clear methodology where he set out his understanding of substantial harm. This is of particular importance because Mr Bonner himself said there is no real definition of substantial harm and any term needs understanding⁸⁷². The closest he gave was to say that he would equate substantial harm with the upper end of major impact⁸⁷³.

693. Despite not giving advice in terms of the relevant policy test, Mr Bonner did, for the first time, in examination in chief attempt an explanation of whether undergrounding was justified⁸⁷⁴. However as he accepted in cross examination, his role is to provide accurate and robust assessment of the degree of magnitude of harm to heritage assets not to strike the balance as to whether undergrounding was required⁸⁷⁵. Mr Croft in contrast properly limited his evidence giving the inquiry the benefit of his view that substantial harm could be taken to equate to the test in EN-5 of serious concerns, due to the reference in that test to visual effect.⁸⁷⁶ He accepted that a decision maker could properly come to the view, as Mr Carpenter has done, that despite a finding of substantial harm a decision maker could decide not to underground. He specifically noted that there would be other factors to balance in relation to policy issues⁸⁷⁷.

694. Having addressed the general flaws in Mr Bonner's methodology, PCC consider that in relation to each particular monument the Secretary of State should accept Mr Croft's advice about harm, for the following reasons.

Bryn Cwmyrhiwdre

695. Looking firstly at the Bryn Cwmyrhiwdre, this is a SAM being a pre-historic burial mound⁸⁷⁸, which is located on a locally prominent hill at the edge of boggy ground. In understanding the setting of this monument it is important

⁸⁷⁰ David Bonner cross examination

⁸⁷¹ David Bonner cross examination.

⁸⁷² David Bonner cross examination.

⁸⁷³ David Bonner, cross examination (this accords with Andrew Croft's approach)

⁸⁷⁴ David Bonner examination in chief.

⁸⁷⁵ David Bonner cross examination.

⁸⁷⁶ Andrew Croft examination in chief.

⁸⁷⁷ Andrew Croft cross examination.

⁸⁷⁸ AD/SPM/029 Volume 1 – Llandinam Updated ES at table 8.4

to note that it makes use of local topography to reinforce its location in the landscape, and has a relationship with a local watercourse. It also has clear views across the landscape, including with the Glog. There is agreement that the effect of the line at this location is major adverse⁸⁷⁹, and substantial harm⁸⁸⁰. This is because the poles and wire will result in notable changes to the assets setting, dominating local views of the asset, and affecting the visual relationship with the Glog⁸⁸¹. Notwithstanding that the setting of the asset has been degraded, including by three small wind turbines, SPM and PCC are agreed this constitutes substantial harm. The relationship between the barrow and the line is shown in viewpoint 2⁸⁸². This monument is important, not least because of the findings of substantial harm, but also importantly to see whether Mr Bonner's views in relation to other locations are based on sound judgment.

696. That Mr Bonner on behalf of SPM has found at least one instance of substantial harm is crucially important. This is because questions were put to PCC's witness along the lines that the test of substantial harm had to be applied to all projects consistently. The same test would apply to gas power stations. Mr Croft was specifically asked 'if a small woodpole line in an undesignated landscape that does not physically affect the asset amounts to substantial harm, where does the Secretary of State go with a 400kV line'⁸⁸³? This approach of 'if I can imagine something worst I can't have the most serious effects' is as inappropriate to cultural heritage assessment as it is in landscape assessment. But as Mr Croft quite properly pointed out 'it is perfectly possible for a development of this size and form to result in substantial harm, as is acknowledged by Mr Bonner'⁸⁸⁴.

Black gate

697. There is also agreement about the impact on the Black Gate enclosure, it being agreed that this enclosure will suffer major adverse impact. No specific comment is made by SPM on whether it will suffer substantial harm, although it can be noted that in the only other instance where Mr Bonner has found major harm he has also accepted that there is substantial harm. There is also agreement between Mr Croft and the SEI that although the asset is unscheduled, it is nationally significant. The Black Gate enclosure is a large and visually subtle prehistoric earthwork⁸⁸⁵. Mr Croft considers it is a henge. For the first time in examination in chief Mr Bonner suggested there was a question mark about what it was and for the first time raised a question as to whether it was of national importance. Fortunately Mr Croft was able to

⁸⁷⁹ Dr Bonner notes at 8.36 he concurs with the SEI assessment (SPM-CULTHER-POE-BONNER-OHL - Proof of Evidence on Cultural Heritage of David Bonner). The SEI assessed major adverse impact (table 8.12- AD/SPM/029 Volume 1 – Llandinam Updated ES).

⁸⁸⁰ Orally agreed by David Bonner in cross examination.

⁸⁸¹ Andrew Croft proof OBJ-002-HISTENV-POE-CROFT-OHL – Historic Environment Proof of Evidence at 6.28

⁸⁸² AD/SPM/033 Volume 4a – Llandinam Updated ES – Viewpoints

⁸⁸³ Question to Andrew Croft in cross examination

⁸⁸⁴ Andrew Croft, cross examination.

⁸⁸⁵ AD/SPM/029 Volume 1 – Llandinam Updated ES at table 8.5, Andrew Croft at 6.62 (OBJ-002-HISTENV-POE-CROFT-OHL – Historic Environment Proof of Evidence)

provide the inquiry with additional material in response to this late doubt, as part of his presentation to the inquiry⁸⁸⁶ he provided aerial photographs which show that the enclosure has two entrances, and a circular nature. That and its size and location made Mr Croft quite clear it is a henge monument and he supported Dr Sylvester's view that this is of high, potentially national, importance and should be put forward for scheduling. He also produced a further diagram which showed, at least roughly, the proximity of the poles to this enclosure.

698. It is important to note that EN-1⁸⁸⁷ says at 5.8.4. and 5.8.5. that:

There are heritage assets with archaeological interest that are not currently designated as scheduled monuments, but which are demonstrably of equivalent significance. These include:

- i. -those that have yet to be formally assessed for designation;*
- ii.*

The absence of designation for such heritage assets does not indicate lower significance. If the evidence before the IPC indicates to it that a non- designated heritage asset of the type described in 5.8.4 may be affected by the proposed development then the heritage asset should be considered subject to the same policy considerations as those that apply to designated heritage assets.

699. Mr Croft's firm advice is that this part of EN-1 applies. This is a pre-historic henge of schedulable quality and its significance should be considered high as per the SEI⁸⁸⁸.

700. Again, the asset's setting deliberately responds to its location, both in terms of its valley location and its relationship with a watershed. That and the rural character of its environs (it is in a pasture) form an important part of its setting⁸⁸⁹. It is not a pristine setting (no asset of this age is in exactly its original setting) but it is not a highly compromised setting⁸⁹⁰. Although there is no viewpoint showing this, the line would run very close to the asset, fundamentally changing its rural character, and very significantly affecting its visual relationship with the surrounding area. The line would dominate the asset's setting. Again, given that it is agreed this asset will experience major adverse impact, this can be used to judge the consistency of Mr Bonner's approach in relation to assets where there is disagreement.

Cross Dykes

⁸⁸⁶ OBJ-002-HIST-006

⁸⁸⁷ CD/COM/001

⁸⁸⁸ Andrew Croft re-examination.

⁸⁸⁹ Andrew Croft, at 6.65 (OBJ-002-HISTENV-POE-CROFT-OHL – Historic Environment Proof of Evidence)

⁸⁹⁰ Andrew Croft cross examination.

701. The most important area of disagreement is in relation to the early Medieval Cross Dykes (MG062 and MG063). This is a long linear feature in the landscape. Two parts of its have been scheduled separately, and there is a recently discovered third section. The Dyke is perhaps best seen in the photograph from Montgomeryshire Past, Present from the Air, provided by the Alliance⁸⁹¹. That clearly shows the monuments as features in the landscape; a territorial statement. It is part of a landscape of control, violence, war and territory⁸⁹². It will be seen that the setting of the cross dykes contributes to their significance through their physical form, relationship with local landforms, visibility and ability to appreciate being within and without the area. The visual connections between and along the lengths of dyke are crucial. It is now generally recognised that although the lengths of dyke are scheduled separately they are in fact part of one feature. Mr Croft advised that "the gap" between the two scheduled parts was most likely because they were built to link in pre-existing natural features, and he pointed out that there is a gully lying between them⁸⁹³. There is in reality no "gap".

702. The proposed overhead line will bisect the feature. This is best illustrated by viewpoints 70 and 84⁸⁹⁴. The development proposals will alter the open rural setting of the asset and affect the visual relationships between the two scheduled parts of the monument. Given this very substantial impact on the various crucial parts of the setting of this monument, PCC simply cannot understand how the impact on it can be considered minor or moderate/minor. The bisection of a linear boundary feature is, PCC say, a clear example of harm that can be considered to be substantial.

703. In terms of setting there was some measure of agreement between Mr Croft and Mr Bonner. Mr Bonner agreed⁸⁹⁵ with the SEI in saying:

"The setting of the dyke is a large one for the position of the earthwork is closely connected with the surrounding landscape and its perception will have been a key element in its construction and for its function. Thus the setting takes in the head of the Mule Valley and the lower reaches of the valley below the earthwork, as well as the hillsides that edge it. The length of the earthwork inevitably generates a series of critical views, both of the dyke and from it, whilst the fact that the proposed overhead line passes between the scheduled lengths of the earthwork affects all views regardless of their direction."⁸⁹⁶

704. The main difference between Mr Bonner and Mr Croft, CPAT, and CADW relates to the magnitude of effect. At the time of writing of his proof, his

⁸⁹¹ ALL/018.

⁸⁹² Andrew Croft examination in chief.

⁸⁹³ Andrew Croft, examination in chief.

⁸⁹⁴ AD/SPM/033 Volume 4a – Llandinam Updated ES – Viewpoints

⁸⁹⁵ David Bonner cross-examination

⁸⁹⁶ Viewpoint 84 (AD/SPM/033 Volume 4a – Llandinam Updated ES – Viewpoints) page 52, under heading 'potential effects'.

methodology had not apparently allowed him to reach any firm conclusion on this, as he said of CPAT's judgment (that it was a major magnitude of effect):

"I think the judgment is perhaps too cautious and I remain unconvinced that the overall effect should be classified as significant. In my opinion, the magnitude of effect is potentially no greater than minor."⁸⁹⁷

705. Subsequently he appears to have become rather clearer and now attributes a minor effect to MG062 and a moderate effect to MG063⁸⁹⁸. Despite originally thinking MG063 was minor to moderate impact, he now considers 'there is unquestionably a considerable change to the setting'⁸⁹⁹. That he has already changed his view shows that much greater understanding of assets can come with greater familiarity and with more time and better understanding the gap between him and all other responsible heritage advisers might narrow further still.

706. At present he appears wedded to the conclusion that any effects are likely to be potentially significant localised effects but no more⁹⁰⁰. Reliance on a concept of 'localised effects' itself demonstrates the flaw in his assessment. That the effects on a heritage asset are localised, should not lead to them being devalued. Their significance should depend on the importance of the particular view to the setting of the asset. When it was put to Mr Bonner for example that the impacts at Bryn Cwmyrhiwdre are 'localised' but amounted to substantial harm he accepted that they were in a local landscape, but pointed out that the landscape was expansive and the line passes by the whole of the asset. He contrasted this with Crugyn Bank Dyke. Mr Croft pointed out that this is missing the point, because you are crossing and dividing a continuous boundary feature.⁹⁰¹ Mr Bonner's approach effectively means that where you have a long linear asset you are highly unlikely to ever get substantial harm from an overhead line because it is only likely to ever affect a part of it. To engage in a reduction ad absurdum, if this were right then a 400kV line oversailing Hadrian's Wall would not amount to substantial harm because it can only ever affect a small part of the long linear feature. The distinction cannot be right and the main basis for Mr Bonner's distinguishing between the harm to Bryn Cwmyrhiwdre and the Cross Dyke falls away.

707. The reasons given in his proof for disagreeing with CPAT/Mr Croft and CADW are fourfold:

My reasoning for this primarily relates to 1) the technology choice in terms of material type and relief choice, 2) the backdrop against which the Llandinam Scheme would be viewed, 3) the linear nature of the monument and its

⁸⁹⁷ David Bonner proof at 8.38 (SPM-CULTHER-POE-BONNER-OHL)

⁸⁹⁸ David Bonner cross examination

⁸⁹⁹ David Bonner cross examination.

⁹⁰⁰ David Bonner examination in chief.

⁹⁰¹ Andrew Croft, examination in chief.

setting, for which there are restricted views on account of landform and vegetation, and 4) the fact that the immediate setting of the monument on the north west side of the Llandinam Scheme (where effects are predicted) is already compromised by existing overhead poles/electricity cable, roadside telegraph poles and sheep pens/shelter.

708. When analysed these points carry no weight. In terms of technology choice, he has already accepted that a HDWP 132kV line is capable of causing substantial harm to a SAM, through his view on Bryn Cwmyrhiwdre. In terms of the backdrop, many viewpoints from the monument would not be backdropped at all but rather stacking away from the viewer (see viewpoint 84 where CPAT assessed the visual effect as major). Mr Bonner argued that this was just one viewpoint and he had to assess from all of the viewpoints, and suggested that there may be places on the monument from which the line would not be visible. This is inherently implausible given the routing of the line in relation to the Dyke but in any event is simply a different way of making the bad "locality" argument.

709. In reaching his conclusion he appears to base his views heavily on the existing infrastructure in the area where the line cuts across the feature-he referred to dilapidated sheds, fence posts, telegraph poles, and existing low voltage infrastructure⁹⁰². He considered that the road 'competed' with the Dyke as a landscape boundary feature.⁹⁰³ It is abundantly clear, however, when either walking through this landscape or looking at the viewpoints set out above, that there is nothing in the current setting which will compete with the views of to and from in anything like the way the line will. As Mr Croft said in examination in chief, the proposed line would be a 'fundamentally different scale of visual intrusion' than the present 11kV line and sheep folds which you come across in every rural setting. Instead this is a very substantial overhead line which stacks up and down the valley-it is not characteristic of this landscape and seriously disrupts key aspects of the setting⁹⁰⁴. Existing development in a setting clearly on Mr Bonner's approach cannot prevent a finding of substantial harm because Bryn Cwmyrhiwdre has both small turbines and a road in its vicinity.

710. Thus Mr Bonner's conclusions and the explanation for them do not stand up to scrutiny, especially in light of his acceptance of substantial harm at Bryn Cwmyrhiwdre.

711. The other areas of disagreement are perhaps less significant because PCC have not identified substantial harm. Nevertheless where there is less than substantial harm it is still incumbent on the decision maker to balance that harm against the need of for the project, and PCC maintain that Dr Bonner has systematically underestimated the impacts on other monuments, in particular by insisting that the impact on them is not significant.

⁹⁰² David Bonner examination in chief

⁹⁰³ David Bonner cross examination.

⁹⁰⁴ Andrew Croft, examination in chief.

Prehistoric barrows on the Glog

712. The first such monument is the scheduled prehistoric barrows on the Glog. These monuments represent a clear concentration of pre-historic activity. They have a strong relationship with the Glog, which was deliberately chosen to highlight their visual presence. Their setting is open and rural and has clear relationships with the locations of other monuments. PCC consider that while the distance between the assets and the scheme mean that the visual intrusion from the scheme is limited, the line will be present in views from many of the barrows. Thus there will be a notable impact on the setting and significance of the assets, albeit constituting less than substantial harm.

Two tumps

713. Two Tumps is a pair of barrows on a broad and prominent ridgeline, on very open and exposed ground, having wide open views in all directions which ensures they can be seen from the wider landscape. They have key views across to the Glog (plus other views to the south). The distance between the barrows and the scheme mean visual intrusion is limited, but the line will appear in many views of the monument from the wider landscape. The open nature of the landscape is an important aspect and that will be changed by introducing modern infrastructure through the line, and thus while it constitutes less than substantive harm, it will change a number of aspects of the setting.

Barrow west of Cae Bettin Wood

714. In relation to the barrow west of Cae Bettin Wood, this is a visible mound in an open field of improved pasture. It sits on a ridge connected with the Kerry Ridge and may have formed part of a movement corridor. Key aspects of its setting include open uncluttered and expansive views, and its prominent ridge location, as well as views up to the Kerry ridge and black gate area. This is an instance where the SEI assesses major adverse impact but Mr Bonner assesses minor impact. PCC consider that aspects of the setting will undoubtedly be affected, including notable visual intrusions that will alter the current open rural characteristics of the setting and interfere with certain visual relationships. However due to the fact that the influence of the line in key views out will be limited PCC consider that less than substantial harm is an appropriate assessment.

Banc Gorddwr round barrow and putative Crugynau Round Barrow

715. The Banc Gorddwr round barrow and putative Crugynau Round Barrow are both scheduled, although it is often thought that Crugynau Round Barrow is a natural feature. Their setting is influenced by the fact that the monuments are in an exposed location with expansive views in most directions. They have strong relationships with other monuments including Two Tumps and the Glog. It is fair to say that the distance between the line and its monuments lessens its impact, although views from the mound may be compromised, so that it will result in less than substantial harm.

UNDERGROUNDING

SPM's approach

716. SPM's deficient approach to the route selection was mirrored in its approach to the issue of undergrounding.

717. It is clear that the decision was made at the outset of this process, prior to involvement of landscape architects or cultural heritage professionals, that there would not be undergrounding of this line, and that decision has never been revisited. There could be no clearer evidence of this than Ms Gibson (landscape architect) giving evidence that she was informed at the outset that this line was not to be undergrounded⁹⁰⁵. She said that her first question for the client was whether they were looking at any potential undergrounding on any route. That is not a legitimate approach. Clearly it should be for the environmental planners to inform the client whether they consider a route would justify undergrounding, not the other way round.

718. This is supported by the description in the 2009 ES⁹⁰⁶ which provides at 3.2.7:

SPEN seeks to find an overhead line solution for all high voltage lines and only considers undergrounding where there are exceptional constraints. Such constraints can be found in urban areas and in rural areas of the highest scenic and amenity value.....SPEN considered that in this case, where the overhead line is to be routed through an area of open countryside where there are already overhead lines, underground cabling could not be justified.

719. In any event the point was clear from Mr Leavy's evidence. He gave evidence that once a connection offer had been applied for his predecessor would have done a desktop exercise in order to give a budget for the scheme. This had to be done within 90 days⁹⁰⁷. As Mr Leavy accepted, that means that the offer of connection at a cost set out in the consultation agreement preceded environmental assessment or any published routeing study⁹⁰⁸. The only reasonable inference from this sequence is that a decision was made at the outset about an above ground route and that has not been revisited in any meaningful sense. That is in spite of the findings, for example, of the 2013 ES which identified large/very large adverse effects for the scheme on a number of monuments.

720. Given that SPM took the view from the outset, and have stuck to that view, that this line would not be an undergrounded one, it is to say the least

⁹⁰⁵ Sarah Gibson cross examination (28.1.14)

⁹⁰⁶ AD-SPM-019.

⁹⁰⁷ Eric Leavy cross examination (21.1.14)

⁹⁰⁸ Eric Leavy cross examination (21.1.14)

unfortunate that shortly before PCC's Councillors were to vote SPM wrote to them in a briefing note responding to PCC's former landscape architect's assertion that 'further consideration is warranted relation to the section of landscape to the east of Kerry Hill' stating⁹⁰⁹:

"The assessment of landscape effects in the December 2009 ES, based on the degree of change to the wider landscape arising from the number of planned wind farms in the area, concluded that there would be no significant effects. The further consideration now required by the Council can be addressed by SP Energy Networks being required to provide such information in relation to that section of line shown in the attached plan, under a requirement imposed on an appropriately worded condition attached to any consent. This assessment would include looking at the option of undergrounding."

721. Not only does the note to Councillors show a lack of understanding of the planning process, but it gives the false impression that it had not been concluded from the outset that this line was to be overhead and that there was some prospect that undergrounding might be secured.

722. The balance performed by SPM in their ES 2013, was based on an assumption of an undergrounding cost of £13.6 million, and on accepting Ms Gibson's views on the benefits of undergrounding. As Mr Leavy accepted, if her conclusions are not accepted the balance shifts⁹¹⁰. In terms of company policy Mr Leavy's evidence was that in relation to undergrounding the absolute cost is less important than the question of benefit⁹¹¹, but of course it is necessary to bear in mind that in making that balance he is solely reliant in terms of benefit on the advice of Ms Gibson and Mr Bonner. Mr Leavy accepted that if the Llandinam line itself would (contrary to Ms Gibson) have a serious adverse impact that would alter the judgment⁹¹².

723. That the company has fallen into error in their approach to undergrounding is unsurprising when the company's policy is considered. The company's policy as identified by Mr Leavy is that undergrounding is reserved for situations where the land is of the 'highest landscape value'⁹¹³. It is clear that what he means by this is a nationally designated landscape. At paragraph 5.20 of his proof he states that undergrounding is not proposed in this case "because the landscape is not a nationally designated landscape *and therefore* is not of the highest landscape value"⁹¹⁴. When it was put to him that on SPM's company approach you would never get undergrounding outside of an AONB or a national park, Mr Leavy did not deny this but stated that the company 'took comfort' from the approach in EN-5 to

⁹⁰⁹ Briefing Note September 2012 project update [AD-SPM-014]

⁹¹⁰ Eric Leavy cross examination (21.1.14)

⁹¹¹ Eric Leavy examination in chief (21.1.14)

⁹¹² Eric Leavy cross examination (21.1.14)

⁹¹³ Eric Leavy proof SPM/COMPANY/POE/LEAVY/002A, paragraph 5.16

⁹¹⁴ Eric Leavy proof SPM/COMPANY/POE/LEAVY/002A, paragraph 5.20

undergrounding.⁹¹⁵ If the company do indeed consider that there is support for their misguided approach in EN-5, they are mistaken. EN-5 is quite clear that far from laying down a general rule, 'each project should be assessed individually on the basis of its specific circumstances and taking account of the fact that Government has not laid down any general rule about when an overhead line should be considered acceptable'⁹¹⁶. Absolutely nothing in EN-5 says that undergrounding should be limited to nationally designated landscapes, contrary to what SPM appear to believe. SPM's approach is not supported by their own landscape architect as Ms Gibson agreed in cross examination that EN-5 asks you to consider locally valued landscapes⁹¹⁷.

724. The flaw in SPM's approach can clearly be seen from the fact that it results in double discounting. In deciding the value and sensitivity of the landscape the designation of that landscape is one factor that SPM take into account, but then at the later balancing stage the lack of designation of the landscape is brought into the process yet again. An undesignated piece of landscape has little or no hope of being subject to undergrounding when its lack of designation is wrongly held against it twice in the process in this way.

725. One substantial mystery about the SPM approach remains how they have approached heritage impacts in relation to undergrounding. The mystery arises because, as discussed below, there is a substantial difference between two of their experts in relation to the impacts of the scheme on various heritage assets. Dr Sylvester who wrote the heritage chapter of the ES identified significant adverse effects on a number of assets. Mr Bonner who gave evidence did not agree with a large number of those judgments. In cross examination Mr Leavy said that in coming to their conclusions on the acceptability of the line and the need for undergrounding he was relying on Dr Bonner's evidence. In re-examination he said that at an earlier stage of the process he was relying on Dr Sylvester, and that even relying on Dr Sylvester the balance was still acceptable. PCC simply cannot understand how findings of a series of significant adverse effects on heritage assets do not give rise to, at the very least, a need to consider undergrounding, yet it appears that SPM took the view that they were never required to consider undergrounding.

726. It should be noted that while SPM's own planning witness argues that cultural heritage impacts do not need to be considered as part of an EN-5 undergrounding assessment, she does accept they need to be fed (somehow) into the balance. The muddled and confused planning advice serves to explain the weaknesses of SPM's corporate approach.

PCC undergrounding options

⁹¹⁵ Eric Leavy cross examination (21.1.14). He did assert in re-examination that the matter was considered on a case by case basis, but that does not undermine the point that it is clear that company policy is effectively that undergrounding is only justified in cases of designated landscapes. It may be considered on a case by case basis but in reality no non-designated landscape will lead to a finding of a need to underground.

⁹¹⁶ EN-5 at 2.8.9 (CD/COM/003)

⁹¹⁷ Sarah Gibson cross examination.

727. SPM have never suggested that there is any practical reason why they could not underground in the area that their own work identified as being the most sensitive, being Section B of the route from the A483 near Old Neuadd Bank to Cae-Bettin Wood⁹¹⁸. They produced their own suggestion as to how this area can be undergrounded in the Volume 5 of the 2013 SEI figure 4.4⁹¹⁹. The route extended from:

*Bryn Cwmrhiwdre (in the west) to Blaen-cwm-y-ddalfa (in the east). It follows the 'C' class road west of the A483 where it departs from the public highway and dog legs south and north at Gwynant under the main road. East of the A483 the route follows the bridleway for some 2.5 km running broadly parallel with the OHL route to Black Gate and the B4355. East of Black Gate the route follows the B4355 in a northerly direction before turning eastwards along the public footpath and track at which serves a collection of isolated properties including Brook House and Upper Ceulanau Farm. This section of the route is narrow and torturous and crosses the ford at Cwm Mule. It eventually re-joins the OHL route south-west of Cae-betin Wood.*⁹²⁰

728. However this route was sinuous and excessively long, which is why it was assessed by SPM as costing an additional £13.6million⁹²¹. Therefore PCC undertook investigation work to see if they could advance a route which would avoid some of the most substantial impacts on the landscape and cultural heritage assets, while taking a shorter route and therefore reducing the costs.

729. In the first place PCC considered that there were a number of ways in which they could sensibly shorten the applicant's route even without substantially reworking where it went. The potential reductions identified by Mr Carpenter are⁹²²:

- (i) *Removal of the eastern end where it runs parallel with the OHL route (reduction of 0.8km).*
- (ii) *Removal of the western end, west of the A483 (reduction of 0.8km).*
- (iii) *Utilisation of the bridleway between Cwn Mule and Sheep Pens (north east of Black Gate, (reduction of 1.4km).*
- (iv) *Utilisation of the public footpath at Upper Ceulanau (reduction of 0.3km).*⁹²³

⁹¹⁸ See Figure 1 Field based sensitivity map at appendix 06, AD/SPM/031 Volume 3a – Llandinam Updated ES – Appendices

⁹¹⁹ AD/SPM/035 Volume 5 – Llandinam Updated ES – The Review Of Needs Case And Alternatives

⁹²⁰ Quote from paragraphs 5.1 and 5.2 of Martin Carpenter proof for session 3 OBJ-002-PLANNING-POE-CARPENTER-OHL

⁹²¹ AD/SPM/035 Volume 5 – Llandinam Updated ES – The Review Of Needs Case And Alternatives, at 4.4.4.

⁹²² These are shown on MAC2 (OBJ-002-PLANNING-POE-CARPENTER-OHL) as PCC suggested potential shortcuts/shortening, in black dots.

⁹²³ 5.4 of OBJ-002-PLANNING-POE-CARPENTER-OHL

730. This would result in an overall length of 6km, with a substantial reduction in cost associated with it.

731. However, it also seemed to PCC that with a little more careful thought a wholly reworked undergrounding route could result in substantial saving. This route was developed by PCC's planning witness in consultation with PCC's landscape and cultural heritage witnesses and PCC's electrical engineering adviser to ensure that the most sensitive elements of the landscape and cultural heritage were preserved and technical and engineering requirements met. PCC were able to develop such a route. The first iteration of it appears at MAC 2 of Martin Carpenters proof for session 3⁹²⁴. This route *follows the B4355 south and runs eastwards along the field boundary before turning north to join the OHL route some 600m east of Black Gate*⁹²⁵.

732. The main differences in PCC's route (as can be seen from examining MAC2) are that like PCC's shortened route it does not extend as far west of the A483 as SPM's undergrounding route did, and east of Black Gate it does not follow the tortuous route of the SPM suggested undergrounding route and instead has a short cross country section in roughly a horseshoe shape. PCC's reworked route is 4.2km⁹²⁶ compared to SPM's suggested route of 9.3km⁹²⁷. Those costs are not disputed.

Buildability

733. SPM do not doubt that their own suggested route⁹²⁸ is buildable, and through Mr Paalman they confirmed they were confident with this route at least at a high level. Although Mr Paalman had not originally visited this route, he confirmed that he would not have put it forward unless it was a feasible alternative⁹²⁹. This accords with SPM's SEI which concluded there were unlikely to be adverse technical impacts from their undergrounding proposal and did not identify insurmountable technical difficulties⁹³⁰. The buildability of the SPM proposed route is very important because it is clear when the route is visited on site that it involves at least one very steep section west of lower Celenau, near Brookhouse with a ford at the bottom. This slope was estimated by Mr Paalman as being 20 degrees or more⁹³¹

⁹²⁴ OBJ-002-PLANNING-POE-CARPENTER-OHL

⁹²⁵ OBJ-002-PLANNING-POE-CARPENTER-OHL at 5.7

⁹²⁶ OBJ-002-PLANNING-POE-CARPENTER-OHL, at 5.7

⁹²⁷ OBJ-002-PLANNING-POE-CARPENTER-OHL, at 5.3

⁹²⁸ SEI Volume 5 figure 4.4 (AD/SPM/035)

⁹²⁹ Eric Paalman cross examination

⁹³⁰ AD/SPM/031 Volume 3a – Llandinam Updated ES – Appendices (62.6 MiB) Appendix 05A at 4.7

⁹³¹ Eric Paalman cross examination

(Philip Russell Vick estimated it as 1 in 5⁹³²) yet it was not suggested placing underground cable on this section was not feasible. As the Inspectors will no doubt have observed on the site visit, once the part of the SPM proposed route approaching and around the ford is examined it is very difficult indeed to see why any of the PCC suggestions are not buildable.

734. In relation to PCC's shortened route, the eastern and western shortenings were accepted by SPM through Mr Paalman. Some concerns were expressed about the buildability of the shortening following the bridleway near Cwm Mule⁹³³. These concerns (and they were put no higher than that) appear to centre around a 7 degree slope and the fact that the land is grassed. PCC simply do not accept either that there is a real prospect of scarring the landscape or that a 7 degree slope would cause any practical difficulty. It follows that these concerns, tentatively expressed as they were, are not sustainable.

735. In fact it became clear during Mr Paalman's cross examination that, at least for short sections, slopes of 10-15% could be used for undergrounding cable, so in actual fact there is no reason at all to consider that there would be any problems with a 7% slope. As set out above, he later confirmed that there was no reason to consider undergrounding down a 20% plus slope was not feasible⁹³⁴. The confusion about the extent of slope it was practical to underground down is unsurprising. It was based on gut feeling rather than any technical assessment or manufacturer's guidance⁹³⁵. It was also clear that to the extent that there were any constraints, these are all capable of being solved with appropriate engineering albeit at a cost. This in practice means very little weight can be put on assertions of difficulties in undergrounding cable.

736. PCC put before the inquiry examples of other underground cables using steep sections, such as the underground cable route for the Tir Gwynt wind farm. In terms of the ability to prevent scarring in the landscape following excavation, PCC gave the inquiries examples of successful reinstatement of a very large gas line put through the Brecon Beacons National Park. Both clearly demonstrate that there is no serious issue with gradient or scarring in using undergrounding cable⁹³⁶. The specific concern raised about topsoil being washed out from an underground line causing scarring is simply a matter of appropriate restoration.

⁹³² Philip Russell Vick examination in chief

⁹³³ Eric Paalman examination in chief, his concerns were

⁹³⁴ Eric Paalman cross examination, in discussion of the slope on the SPM suggested route at upper Celennau.

⁹³⁵ Eric Paalman cross examination.

⁹³⁶ Both examples were put to Eric Paalman in cross examination, although clearly the Inspector is familiar with the example of the gas main through the Brecon Beacons National Park because he specifically raised this as an example with Eric Leavy.

737. Lest there be any further issue in relation to scarring⁹³⁷, other landscape experts have proposed undergrounding their 132kV lines through unmade countryside without raising any concerns whatsoever that this might lead to permanent scarring in the countryside⁹³⁸.
738. The final proposed PCC shortening, near upper Celenau was described by Eric Paalman as a 'no no'⁹³⁹ due to it being said it was very steep. However, for the reasons set out above, this is not sustainable.
739. PCC's primary case, however, relates not to their shortened route, but to their reworked route. Through both Mr Leavy and Mr Paalman SPM appeared to accept that the most part of the PCC's reworked (MAC2) undergrounding route is technically feasible. Both Mr Leavy and Mr Paalman accepted that the part of the route to the west of Black Gate was feasible from an engineering point of view.⁹⁴⁰
740. In relation to the area to the east of Black Gate, Mr Leavy's evidence relying he said on Mr Paalman (who's evidence at that time was still to come), was that it was 'completely impracticable' because of the danger of water getting into cable trenches which would leave a scar⁹⁴¹. When Mr Paalman came to give his own evidence about this it became clear that Mr Leavy had misunderstood the extent of the problem, because Mr Paalman did not say it was completely impractical but simply that there were concerns, because he thought that water will find its way down the cable run, and that it will start to scar the landscape. He also considered that the potential effect of expanding or contracting cable was magnified in undulating ground. PCC has shown that these concerns are exaggerated. Neither scarring nor slopes of up to 20% were a realistic concern, PCC maintains that parts of this route have a gradient of 1 in 6.5 and up to 1 in 7⁹⁴².
741. The approach to the PCC alternative was inappropriate in a public electricity provider. Last minute quibbles about feasibility are symptomatic of a mindset fixed in 2007 and a connection agreement that there will be no

⁹³⁷ Mr Livingstone did raise some concern in his examination in chief about scarring it became clear in cross examination that he has simply not assessed the cable route so it is absolutely clear that no weight can be placed on this.

⁹³⁸ See FWLC-LAND-POE-GOODRUM-S4_Landscape Proof of Evidence at 4.2.7. where Colin Goodrum makes it clear that their connection from Llaithddu to the Bryn Dadlau station would be underground and "would follow existing tracks and cross grass fields" while concluding that "landscape and visual effects during operation would be negligible". The same point was made by Llanbadarn Fynydd who were proposing to underground their grid connection until it met the Llandinam line in the event of a connection through that route.

⁹³⁹ Eric Paalman examination in chief

⁹⁴⁰ Eric Leavy examination in chief (21.1.14), Eric Paalman examination in chief.

⁹⁴¹ Eric Leavy examination in chief (21.1.14)

⁹⁴² Philip Russell Vick examination in chief

undergrounding in this scheme.⁹⁴³ Genuine engagement would have led to the examination of minor tweaks to PCC's alternative which readily avoid all of SPM's claimed concerns. PCC itself easily identified a feasible alternative. After Black Gate, the cable would follow the road to the north and then move east further north than the original PCC 'horseshoe'⁹⁴⁴. SPM has not identified a single meaningful constraint to the delivery of this route. The maximum gradient on the route is 1 in 5⁹⁴⁵, so on the logic of Eric Paalman's evidence there is no reason why it would not be buildable.

742. Some concerns were raised that some of the PCC alternatives would involve crossing gullies. Philip Russell Vick gave evidence that the purpose of the route was to minimise intersection with such features as much as possible. The alternative has been informed by PCC's engineers and Mr Croft in terms of heritage effects.

743. Therefore there is no reason to consider PCC's reworked (either original or varied) or foreshortened routes could not in practice be built.

Aesthetic

744. It is clear that in shortening the length of proposed undergrounding PCC are not able to mitigate all of the landscape and visual effects of the Llandinam scheme. However whilst this alternative would not mitigate for all of the landscape and visual effects south of the Kerry Hill, the residual effects are not perceived from the Kerry Ridgeway (east of ES viewpoint 71) and the route would sit low down in the valley, helping to reduce its visual impact on local receptors. At the Public Right of Way by Cae-betin Wood (ES viewpoint 50⁹⁴⁶ and PCC viewpoint 6) significant effects of a considerable magnitude would remain but given the limited extent of such effects these would not be unacceptable or raise serious concerns. Overall the shortened undergrounding route would represent a substantial landscape and visual 'benefit' over the overhead line scheme, retaining a valuable regional landscape resource unharmed, and rendering the Llandinam Scheme acceptable.⁹⁴⁷

745. PCC accepts that in viewpoint 84 it will be possible to see the terminal pole down in the valley at a distance. However it would be distant from key features. PCC accepts that it would be better to underground all the way to Cae Betin wood, but the PCC reworked suggestion is a reasonable compromise in landscape terms⁹⁴⁸.

746. Mr Leavy also raised concerns about the environmental impacts of the terminal structures, although his concern was expressed in terms of impact

⁹⁴³ Eric Leavy cross examination (21.1.14)

⁹⁴⁴ page 16 of OBJ/002/LAN/004

⁹⁴⁵ Philip Russell Vick, examination in chief.

⁹⁴⁶ A point made by Sarah Gibson in examination in chief.

⁹⁴⁷ Philip Russell Vick proof for session 3 (OBJ-002/LAND/POE/RUSSELL/OHL) at 7.25 and 7.26

⁹⁴⁸ Philip Russell Vick examination in chief.

on Black Gate rather than in relation to the Cwm Brynyrhiwdre barrow. However, these can be sited so as to avoid unacceptable effects in PCC's alternative.

Archeological/cultural heritage

747. One of the practicality concerns raised by SPM during the hearing was the possibility of finding underground archaeology. This was raised for the first time in examination in chief by Mr Bonner⁹⁴⁹. Previously SPM's position had been "*the instillation of cabling along a minor road using a 1m wide trench is unlikely to give rise to noticeable impacts over and above those associated with occasional road maintenance*"⁹⁵⁰. However Mr Bonner raised a concern about the part of the PCC reworked route that in previously undisturbed ground passed through the area between the two scheduled parts of the cross dyke. He pointed out that a new area of the cross dyke had recently been found in between them and raised concerns that undergrounding might have a direct effect on physical remains. Part of the problem however, is that Mr Bonner seems to have based this assessment on the view that an area of 9m would be required to be excavated in order to lay the cable.. As set out above, SPM have stated all that is required is a trench 1m x 1m. This was also the position put forward by SPM's technical experts before this inquiry⁹⁵¹, who said instillation of a cable will "involve open cut excavation approximately 1m wide by 1m deep in either unmade ground or in carriageway." Mr Bonner also directly contradicted the earlier work produced by SPM by arguing for the first time that he would not see a difference if the undergrounding were following tracks of bridleways. This again appears to be based on his, clearly mistaken view, that a 9m wide working area must be stripped⁹⁵². What he has clearly done is to confuse the working area required with the extent of excavation.

748. As part of their support for an undergrounding option, PCC had considered the issue of the effect on buried archaeology through Mr Croft⁹⁵³. He considered that as the undergrounding options generally follow tracks and roads the ground is previously developed so there is unlikely to be any adverse effects. Where works are described in undisturbed ground Andrew Croft considers that as the footprint is limited (circa 1 metre) there is limited possibility of disturbing archaeological remains. Standard mitigation techniques will allow known remains to be avoided and any remains that are identified to be recorded in accordance with national and local policy.

749. PCC maintain that if such archaeology is found there will be an appropriate technical solution to manage that, including if necessary drilling under the archaeology. It is notable in this regard that Mr Livingstone who gave evidence on construction and maintenance of the line for SPM⁹⁵⁴ referred to drilling under obstacles such as sewers as a normal part of

⁹⁴⁹ David Bonner examination in chief.

⁹⁵⁰ AD/SPM/031 Volume 3a – Llandinam Updated ES – Appendices, appendix 5A at 4.6.1.

⁹⁵¹ Richard Livingstone's proof SPM-CONSTRUCTION-POE-LIVINGSTONE-OHL at 4.43

⁹⁵² David Bonner examination in chief.

⁹⁵³ Andrew Croft proof (OBJ-002-HISTENV-POE-CROFT-OHL – Historic Environment Proof of Evidence) at 6.77

⁹⁵⁴ Richard Livingstone proof, SPM/CONSTRUCTION/POE/LIVINGSTONE/004A

installing an underground line. In his note produced subsequently to giving evidence⁹⁵⁵ Mr Bonner appeared to accept that this was a possible solution and accepted it was preferable to an open cut trench⁹⁵⁶. He then goes on to maintain that oversailing would be preferable due to an unexplained risk to direct physical remains in the case of thrust boring⁹⁵⁷. PCC see no reason why there should be any significant risk of direct impact on underground remains in the case of thrust boring given modern surveying techniques. Although it is possible the work will require a licence from CADW there is no reason to consider that such a licence will not be forthcoming.

750. Alternatively, in relation to Crugyn Bank Dyke, following the alternative to the horseshoe route would mean that the area between the two scheduled parts of the cross dyke route would be crossed by the undergrounded line following a road. SPM have previously identified that there will be no impacts from following roads, and Mr Bonner accepted that undergrounding a scheme along a carriageway has the potential to reduce effects⁹⁵⁸. Mr Croft noted that alternative would be preferable from a cultural heritage point of view because it makes use of the road and connects further down.

751. Thus, whilst PCC accept that EN-5⁹⁵⁹ states at paragraph 2.8.9 that:

The IPC should, however only refuse consent for overhead line proposals in favour of an underground or sub-sea line if it is satisfied that the benefits from the non-overhead line alternative will clearly outweigh any extra economic, social and environmental impacts and the technical difficulties are surmountable. In this context it should consider:..... the environmental and archaeological consequences (undergrounding a 400kV line may mean disturbing a swathe of ground up to 40 metres across, which can disturb sensitive habitats, have an impact on soils and geology, and damage heritage assets, in many cases more than an overhead line would).

752. The short point is that there is no evidence of any such archaeological impacts here.

753. PCC accept that their shortened or reworked lines would not remove all of the cultural heritage impacts identified by Mr Croft. Mr Croft considered SPM's undergrounding proposal, PCC's reworked alternatives. He concluded that SPM's alternative would reduce the impact on Bryn Cwmyrhiwdre to less than substantial harm, and would remove all the other impacts identified in this

⁹⁵⁵ SPM/027 – Response of David Bonner on various cultural heritage matters raised during session 3 of the conjoined inquiry

⁹⁵⁶ SPM/027 at paragraph 4.1, particularly 4.1.1.

⁹⁵⁷ SPM/027 at paragraph 4.1.8

⁹⁵⁸ David Bonner cross examination.

⁹⁵⁹ CD/COM/003-National Policy Statement for Electricity Networks Infrastructure (EN-5)

Part B of the route⁹⁶⁰. He also identified that 'this option would very notably reduce impacts on the Kerry Hills historic landscape area'⁹⁶¹.

754. Mr Croft's evidence also recognised that a balance had to be struck between economic and environmental considerations, and therefore he co-operated in the development of the Powys reworked alternative which he concluded would 'mitigate and lessen impacts in the area'⁹⁶². The proposal was developed with reference to figure 1 of Mr Croft's evidence which shows 'key visual links between heritage features'. This is of course just one of a range of factors used to develop the undergrounding proposal⁹⁶³. Although SPM have provided section drawings⁹⁶⁴ showing that if you look directly from one monument to another you will not get the line directly in your way. This misses the point. As Andrew Croft pointed out in examination in chief 'barrows are not a join the dots exercise'⁹⁶⁵. From some of the monuments you would see the line as a feature in the valley, from some you would not see it⁹⁶⁶. The cultural heritage assets that justify this undergrounding approach are the cross dykes and Black Gate enclosure, which are located towards the eastern end of the undergrounding⁹⁶⁷. However the undergrounding is not just to prevent the impact on the assets but also due to the contribution the historic element makes to the landscape⁹⁶⁸.

755. In this alternative, the major adverse, substantial harm to the Bryn Cwmyrhiwdre barrow would remain. It is right that Mr Croft's professional view is that from a cultural heritage point of view undergrounding should take place past Bryn Cwmyrhiwdre barrow, but he recognises that striking the undergrounding balance is not for him, but for others⁹⁶⁹. All other impacts in Section area B would be removed save for in relation to the Cae - Betin Wood Barrow which would remain major adverse (but less than substantial) harm, and part of the cross dyke would experience minor adverse (less than substantial) harm while the other part would experience negligible adverse harm. Further the option would notably reduce impacts on the Kerry Hills historic landscape area.

⁹⁶⁰ Andrew Croft (OBJ-002-HISTENV-POE-CROFT-OHL – Historic Environment Proof of Evidence) at 6.73

⁹⁶¹ Andrew Croft (OBJ-002-HISTENV-POE-CROFT-OHL – Historic Environment Proof of Evidence) at 6.74

⁹⁶² Andrew Croft (OBJ-002-HISTENV-POE-CROFT-OHL – Historic Environment Proof of Evidence) at 6.75

⁹⁶³ Andrew Croft, cross examination.

⁹⁶⁴ SPM-023

⁹⁶⁵ Andrew Croft examination in chief.

⁹⁶⁶ Andrew Croft, cross examination.

⁹⁶⁷ Andrew Croft cross examination

⁹⁶⁸ Andrew Croft, cross examination.

⁹⁶⁹ Andrew Croft, examination in chief.

756. In this respect, it is useful to note that Mr Bonner accepts that as the overhead line moves east of the A483 it enters a different landscape, being an important landscape in the bronze age⁹⁷⁰.

Undergrounding costs and reliability

757. The main points which SPM raised in opposition to the principle of undergrounding (as opposed to their comments on the specifics of PCC's proposed route) relate to the increased costs of undergrounding and concerns as to the reliability of undergrounded cables.

758. The costs of PCC's reworked alternative undergrounding is agreed to be £6.6million⁹⁷¹ in addition to the scheme costs (subject to unusual costs such as finding rock). The cost of PCC's shortened option would be £9.55 million⁹⁷² in addition to the scheme costs. A substantial part of the additional costs of undergrounding are derived from lifetime costs which are higher because underground cable does have a higher fault rate⁹⁷³. There is some possibility of these being reduced because they are based on an assumption of a fault rate of 3.2 faults per 100km per year, which PCC submit is not an appropriate statistic, for the reasons they set out below⁹⁷⁴.

759. Although it is clearly more expensive to place cables underground than it is to have them as an overhead line, it is clearly recognised in policy that there are circumstances where the environmental effects of an overhead line are such that the additional cost can be justified. This is considered under the heading 'planning balance' below. SPM themselves recognise this along this line, so under their own proposal they are to underground the line as it approaches the Welshpool substation⁹⁷⁵. In developing their shortened and alternative route selections PCC have reduced to the greatest possible extent the length of line thus minimising the additional costs to the greatest possible extent.

⁹⁷⁰ David Bonner proof, 7.14 SPM-CULTHER-POE-BONNER-OHL_-

⁹⁷¹ Eric Leavy cross examination (21.1.14)

⁹⁷² This figure is given in Martin Carpenter's proof (OBJ-002-PLANNING-POE-CARPENTER-OHL) at 5.6. Although not subject to specific agreement it was not challenged.

⁹⁷³ AD/SPM/031 Volume 3a – Llandinam Updated ES – Appendices (62.6 MiB) Appendix 05A at section 4.5.

⁹⁷⁴ When this point was put to Mr Paalman he simply said that the statistics were based on an estimate. With respect, this answer is wholly inadequate. Given the extent to which the costs are based on the lifetime costs even small variations in the fault rate give rise to very substantial reductions in the proposed costs, yet Mr Paalman did not demur from PCC's suggestion that the statistical information represented a 'rough estimate'.

⁹⁷⁵ 2013 SEI volume 1, AD/SPM/029, 1.4.6

760. In relation to reliability, limited weight should be placed on this concern. Mr Paalman stated in his proof that "service performance is reliable provided that third party interference can be prevented"⁹⁷⁶. He expanded on this in examination in chief stating that underground cables are typically installed in city centres, where there is lots of other infrastructure and digging up of roads and footpaths.

761. The statistics put forward by Mr Paalman asserted a fault rate of 3.2 permanent faults per 100km per year⁹⁷⁷. Even if those statistics are reliable and they remain good for the location here, for a route of 9.3km (as proposed by SPM) there would be 0.29 faults per year or 7.4 for the 25 year life of the development, for a route of 6km as proposed in the PCC foreshortened route there would be 0.19 faults per year or 4.8 for the 25 year permission, and for a route of 4.2km as proposed in PCC's reworked route there would be 0.13 faults per year or 3.4 faults over a 25 year permission.

762. It is not accepted these are appropriate statistics to rely upon. It is clear from Mr Paalman's appendix 8 (the system and equipment performance for five years ending March 2012)⁹⁷⁸ that the 3.2 faults per year do not relate to national statistics but to SPM's own figures. The proper statistics are that nationally there are 2.6 faults per 100km per year, and in England and Wales there are 2.3 faults per 100km per year. PCC can see no reason why this cable would be any more likely than the average for England and Wales to fail. This would suggest that the true figures are closer to 0.21 faults per year or 5.3 for the 25 year life of the development a route of 9.3km (as proposed by SPM), for a route of 6km as proposed in the PCC foreshortened route there would be 0.14 faults per year or 3.5 for the 25 year permission, and for a route of 4.2km as proposed in PCC's reworked route there would be 0.09 faults per year or 3.2 faults over a 25 year permission.

763. Further it is not accepted that statistics about the reliability of underground lines in an urban network can properly be translated to an intensely rural location such as that proposed here. Mr Paalman contradicted himself on this in examination in chief, at one point saying his statistics were on an urban network, and later saying that there was no breakdown for the statistics between rural and urban locations⁹⁷⁹. Mr Paalman's argument was that while cables in the country would be less likely to be dug up, they may fail when they try to expand and contract, especially if the land is undulating. However no good answer was given to the Inspector's very perceptive question of why this could not be resolved by simply putting slack into the cable⁹⁸⁰. That is a clear and obvious solution. It must be employed in, for example, the many urban locations where lengths of cable are unquestionably put underground where those urban locations are undulating.

⁹⁷⁶ Eric Paalman proof SPM-ENGINEERING-POE-PAALMAN-OHL, at 3.39.

⁹⁷⁷ Eric Paalman proof SPM-ENGINEERING-POE-PAALMAN-OHL, at 3.40

⁹⁷⁸ SPM/ENGINEERING/ POE/PAALMAN/003C

⁹⁷⁹ Both from Eric Paalman in examination in chief

⁹⁸⁰ Question from Emyr Jones during Eric Paalman's examination in chief.

764. While any want of reliability is clearly a negative of undergrounding, it is important to put that in context here. The 132kV line is not connecting an end user, but is simply taking electricity from Llandinam repowering to the transmission network. In the unlikely event of a fault, the worst outcome would be that the grid would not receive the electricity from Llandinam for a period of time. No consumer would be left without electricity.

Timing/capacity

765. It was agreed by Mr Leavy that undergrounding the line as proposed by PCC would not cause a timing disadvantage⁹⁸¹. He was right so to agree. In order to put a section of the line underground no further consents would be required. Under the Town and Country Planning (General Permitted Development) Order 1995, provided it is not EIA development⁹⁸², a statutory undertaker such as SPM can use their permitted development powers to carry out development for (inter alia) *“the transmission or supply of electricity....consisting of...the instillation or replacement in, on. Over or under land of an electric line..”*⁹⁸³.

766. It is submitted that the development will not be EIA development for these purposes. In order to understand what constitutes EIA development for the purposes of the GPDO it is necessary to cross refer to the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 and consider as directed by section 3 (10) of the GPDO whether the undergrounding would fall within schedule 1 or schedule 2 of those Regulations. The project would not be of a type mentioned within Schedule 1 or 2 of the Regulations. Therefore there is no reason why any additional consent would be required.

767. Although it is accepted that if SPM were to follow the PCC undergrounding option they would need to acquire land rights there is no reason to believe that would take substantially longer in respect of undergrounding than in respect of the overground option. The period of time taken for acquisition of rights would give an opportunity to carry out detailed design and carry out any necessary investigations.

768. It is accepted that construction of an underground line takes slightly longer than an overground line, but it is submitted that there is no evidence

⁹⁸¹ Eric Leavy cross examination (21.1.14)

⁹⁸² GPDO section 3 (10)

⁹⁸³ GPDO class 17 G. This is subject to a number of exclusions none of which are material.

this would be so substantial as to delay the delivery of the line and undermine the urgency of need argument which has caused PCC to consider in the planning balance that this permission should be granted subject to undergrounding.

769. It is agreed that undergrounding would not result in any inability to meet the necessary capacity⁹⁸⁴.

PLANNING BALANCE

Urgency

770. One of the matters relevant to the planning balance is the urgency of case. In weighing that the Secretary of State will need to consider matters that will inevitably delay the project in any event. The first of those is the need to acquire land rights. No evidence was given to the inquiry where SPM is in achieving those land rights. Mr Leavy simply said that discussion with landowners was being sought, and they would seek to reach agreement where possible.⁹⁸⁵ Clearly from this evidence all land rights have not yet been acquired. The inquiry can also note that there is a significant degree of resistance to the acquiring of those land rights-the inquiry heard from David Jones who represented 25 farmers who own land along the route and are very concerned about the proposal⁹⁸⁶. One landowner feels so strongly that they would not even allow SPM to access their land for the purpose of ecological assessment⁹⁸⁷.

771. What PCC say would delay that process even further is that in practice SPM are now in the position that applications for necessary wayleaves, even if made now, would have to await the decision on the section 37 application before they are determined. Mr Leavy was unable to set out what SPM's the timetable actually is and was unable to explain how SPM would be able to show the wayleave was necessary or expedient before consent was granted⁹⁸⁸.

⁹⁸⁴ Eric Leavy cross examination (21.1.14)

⁹⁸⁵ Eric Leavy examination in chief (21.1.14)

⁹⁸⁶ David Jones, evening session. See also ALL-0HL-POE-07/10.

⁹⁸⁷ Discussed in ecology round table. See SEI 2013 volume 3B (AD/SPM/032) appendix 07 page 14 'tree work instruction' note against pole number 191 for an example.

⁹⁸⁸ Eric Leavey cross examination (21.1.14)

772. SPM subsequently produced a note dealing with acquisition of land rights⁹⁸⁹ arguing that there was nothing in the statutory framework or the relevant guidance⁹⁹⁰ to prevent them seeking wayleaves before they have a consent for their line. With respect, this note misses the point. PCC accept there is nothing to prevent SPM from seeking to agree wayleaves with landowners while they are awaiting a decision on consent for their line. Equally there would have been nothing to prevent SPM from asking the Secretary of State to deal with their application for necessary wayleaves at the same time as he was making a decision on the line-this is expressly anticipated by Paragraph 6 of Schedule 8 to the Electricity Act 1989. The difficulty for SPM is that they did not ask the Secretary of State to deal with the two matters concurrently and for all the reasons set out above they are not realistically going to be able to acquire wayleaves by consent.

773. Therefore it is necessary to consider what would the position of the Secretary of State be if he was faced with an application for wayleave consent in, say, October 2014 prior to his decision on the line. How could he grant a compulsory wayleave in respect of a line that may or may not be consented? The applicant would simply be unable to establish that they need the land.

PCC's planning balance

774. Given that SPM have failed to select the route which minimises their impacts on the environment, PCC could simply argue that this application should be totally rejected and SPM should be required to come back with a properly carried out route selection exercise and undergrounding exercise, taking into account any different urgency balance in relation to the Mid Wales Connection project.

775. At this point it is worth dealing with an argument raised by Ms Berry on behalf of SPM. She argues⁹⁹¹ that "*the appropriate planning test is not whether the best route has been selected; it is necessary only to ensure that the site (or in this case route) chosen for development is 'appropriate'; such that the proposed development...can be developed and would not result in significant adverse impacts that would outweigh the need for and benefits arising from the development....*".

⁹⁸⁹ SPM-015

⁹⁹⁰ Guidance for Applicants, Landowners and Occupiers in relation to Applications to the Secretary of State for Energy and Climate Change from 1 October 2013 for the Grant of Necessary (Compulsory) Electricity Wayleave or Felling and Lopping of Trees Order in England and Wales, January 2014.

⁹⁹¹ Kirsten Berry planning proof (SPM/PLA/POE/BERRY/OHL) at 3.3.6

776. PCC of course maintain that they have identified unacceptable impacts arising from this development unless it is undergrounded, so they maintain that SPM's application fails Ms Berry's test even if it is the correct one. However PCC maintain it cannot be the correct test in the circumstances of this application. Such a test cannot sit with the obligation on SPM in Schedule 9 to 'do what it reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects'⁹⁹². Picking a route that has greater environmental effects cannot be consistent with this duty. It is right that the duty is only to do what can reasonably be done to mitigate. There may be cases where-for example-a proposed alternative route is substantially more expensive or technically not possible, and in those circumstances clearly there is no obligation to pick those routes. Neither of those considerations applies here. Route D would cost £0.8M less than the proposed scheme⁹⁹³. Although Miss Gibson made some vague attempt in cross examination to suggest for the first time that there were technical difficulties with route D, but no such technical difficulties are relied on in any of SPM's own route comparison considerations⁹⁹⁴.

777. The law on consideration of alternatives is well established. In Trusthouse Forte Hotels Ltd v SSE (1987) 53 P&CR 293, Simon Brown J (as was) identified the position as follows:

These authorities in my judgment establish the following principles:

- (1) Land (irrespective of whether it is owned by the applicant for planning permission) may be developed in any way which is acceptable for planning purposes. The fact that other land exists (whether or not in the applicant's ownership) upon which the development would be yet more acceptable for planning purposes would not justify the refusal of planning permission upon the application site.*
- (2) Where, however, there are clear planning objections to development upon a particular site then it may well be relevant and indeed necessary to consider whether there is a more appropriate alternative site elsewhere. This is particularly so when the development is bound to have significant adverse effects and where the major argument advanced in support of the application is that the need for the development outweighs the planning disadvantages inherent in it.*
- (3) Instances of this type of case are developments, whether of national or regional importance, such as airports (see the Rhodes case), coalmining, petro-chemical plants, nuclear power stations and gypsy encampments (see Ynstawe, Ynysforgan and Glais Gypsy Site Action Group v. Secretary of State for Wales and West*

⁹⁹² Electricity Act 1989 (CD-COM-023), Schedule 9, paragraph 1 (1) (b).

⁹⁹³ ES 2013 Volume 5 (AD/SPM/035), table 4.3, under heading 'scheme costs'.

⁹⁹⁴ See ES 2013 Volume 5, table 4.3 which makes no reference to any technical difficulties, in contrast with the consideration of route C in table 4.2 which makes specific reliance on technical difficulties.

Glamorgan County Council .) Oliver L.J.'s judgment in Greater London Council v. Secretary of State for the Environment and London Docklands Development Corporation and Cablecross Projects Ltd. suggests a helpful although expressly not exhaustive approach to the problem of determining whether consideration of the alternative sites is material 1 :

... comparability is appropriate generally to cases having the following characteristics: First of all, the presence of a clear public convenience, or advantage, in the proposal under consideration; secondly, the existence of inevitable adverse effects or disadvantages to the public or to some section of the public in the proposal; thirdly, the existence of an alternative site for the same project which would not have those effects, or would not have them to the same extent; and fourthly, a situation in which there can only be one permission granted for such development, or at least only a very limited number of permissions.

(4) In contrast to the situations envisaged above are cases where development permission is being sought for dwelling houses, offices (see the Glc case itself) and superstores (at least in the circumstances of R. v. Carlisle City Council and the Secretary of State for the Environment, ex parte Cumbrian Co-operative Society Ltd.).

(5) There may be cases where, even although they contain the characteristics referred to above, nevertheless it could properly be regarded as unnecessary to go into questions of comparability. This would be so particularly if the environmental impact was relatively slight and the planning objections were not especially strong: See Sir Brandon Meredith Rhys Williams v. Secretary of State for Wales and others and Vale of Glamorgan Borough Council v. Secretary of State for Wales and Sir Brandon Rhys-Williams, both of which concerned the siting of the same sewage treatment works.

(6) Compulsory purchase cases are a fortiori to planning cases: in considering whether to make or confirm a C.P.O. it is plainly material to consider the availability of other sites upon which the need could be satisfied, particularly where an available alternative site is owned by the acquiring authority itself—see Brown and another v. Secretary of State for the Environment and Another.

778. PCC say this is plainly a case that falls within principles (2) and (3) enunciated by Simon Brown J (as was). There are clear planning objections to development along the proposed route, in the area around the Glog. There will only be one permission granted for this line. There are two alternatives which would ameliorate the significant planning effects, either use of undergrounding around the Glog (as proposed by PCC) or the use of route D. As a matter of law it is plainly relevant to consider those alternatives, although for reasons of the urgency of the need PCC is only promoting undergrounding. It is right that Philip Russell Vick agreed that he understood SPM's frustration that some of PCC's specific points were not made earlier⁹⁹⁵, but the short point is that PCC's feedback from Capita Symonds raised clear concerns about the landscape around the Glog. In light of that it was evidence that the only options available would be undergrounding or choice

⁹⁹⁵ Philip Russell Vick cross examination

of an alternative route. There is nothing in any allegation of lateness in raising the point on behalf of PCC.

779. In support of her position Miss Berry relies on paragraphs 4.4.1. and 4.4.3 of EN-1⁹⁹⁶. She quotes in her proof the section of 4.4.1. the point that 'from a policy perspective, this NPS does not contain any general requirements to consider alternatives or to establish whether the proposed project represents the best option'. However she neglects to quote or consider the very important previous sentence of 4.4.1 which makes it clear that the 'relevance or otherwise to the decision-making process of the existence (or alleged existence) of alternatives to the proposed development is in the first instance a matter of law, detailed guidance on which falls outside the scope of this NPS'. That important qualification is significant. EN-1 does not seek to (and could not seek to) water down the requirement in Schedule 9 of the Electricity Act 1989.

780. Notwithstanding that Powys would be entirely justified in asking that this whole scheme be refused, that is not what they are doing. They recognise that asking for a new scheme to come forwards would involve substantially delay⁹⁹⁷.

781. On balance, PCC support the application route subject to the undergrounding referred to above, principally on the ground that it would facilitate an early grid connection, the advantage of which, coupled with the benefits of the wind energy from Strategic Search Area C (SSA C) which it would transmit, outweighs the impacts⁹⁹⁸.

782. PCC's position is clear, however. If this route is not to be placed partially underground the Secretary of State should refuse this application and require SPM to come up with a new solution.

783. These submissions then turn to look at aspects of the planning balance that relate to whether undergrounding justified. It is worth saying that PCC agree with SPM⁹⁹⁹ that the mechanism here is not for the Secretary of State to say that there must be undergrounding. What has been applied for is an overhead line. The mechanism for the Secretary of State will be to leave a gap in the overhead line that is permitted to reflect the portion of landscape where they consider undergrounding would be justified and where they consider an overhead line would not be justifiable. In so far as Mr Humphries suggested there is anything legally complex about doing so PCC cannot agree. It is no different than granting permission for, say, 37 of 40 turbines applied for as part of a wind farm. They only need is for clarity as to what is permitted but PCC are sure that it is within the powers of those assisting the

⁹⁹⁶ CD/COM/001

⁹⁹⁷ In this they agree with Eric Leavy's answer to one of the inspector's questions where he said that there would be an extended delay of two plus years.

⁹⁹⁸ Martin Carpenter proof, (OBJ-002-PLANNING-POE-CARPENTER-OHL) 1.4

⁹⁹⁹ Michael Humphries QC legal submissions in closing session.

Secretary of State to identify two points no a plan with adequate clarity. There was no serious suggestion by Mr Humphries that a mechanism cannot be found.

784. It would then be for SPM to decide what to do about that gap. They could underground the line relying on their permitted development powers, provided it would not be EIA development¹⁰⁰⁰. PCC believe it is clear from all of the foregoing that there is no basis for thinking an undergrounded line in this area is likely to have significant environmental effects, therefore there is no reason for the Secretary of State to conclude that this would cause any substantial delay to the scheme. Of course the scheme that filled the gap would not have to be PCC's suggestion (either the foreshortened, reworked or adapted version of the reworked route) or SPM's suggestion. Therefore it is not strictly a matter for the inquiry to take a view as to the relative merits or demerits of all the different undergrounding options. What PCC have sought to demonstrate is that undergrounding can be carried out practically, without causing any significant environmental impacts, without extending the timescale for the project significantly and at a cost that is justified by the harm that is avoided. PCC have clearly done so.

785. This legal submission is in fact almost exactly replicated in EN-5 where the policy advice to the minister is:

*The IPC should, however only refuse consent for overhead line proposals in favour of an underground or sub-sea line if it is satisfied that the benefits from the non-overhead line alternative will clearly outweigh any extra economic, social and environmental impacts and the technical difficulties are surmountable.*¹⁰⁰¹

786. That does not mean that the Minister has to decide which of the undergrounding options would be the best. The Secretary of State simply has to be an option that would meet those criteria. As set out above, there clearly is such an option.

787. We then turn to the specific way that all of the different factors identified in this session should be balanced. PCC submit that there are two different presumptions, in EN-1 and in EN-5, that the decision maker will have to balance. The competing presumptions are as follows:

- a. In EN-1 a decision maker is told that substantial harm to a scheduled ancient monument should be 'wholly exceptional'¹⁰⁰². It is a matter of agreement here that there is substantial harm to at least the Bryn Cwmyrhiwdre barrow. Therefore the decision maker will on any view have to engage with the test of why this harm should be permitted 'wholly exceptionally' to happen. PCC go further, however, and say that the same

¹⁰⁰⁰ GPDO schedule 2 Part 17

¹⁰⁰¹ EN-5 (CD/COM/003) at 2.8.8.

¹⁰⁰² EN1 (CD/COM/001) at 5.8.14

position also pertains in relation to the Cross Dyke, and the Black Gate Enclosure.

- b. In EN-5 there is a contrary presumption that connection through an overhead line will 'often be appropriate¹⁰⁰³, that the government does not believe that development of overhead lines is generally incompatible in principle with the developers schedule 9 duties¹⁰⁰⁴, and that the Secretary of State only need consider undergrounding the line where there are serious concerns¹⁰⁰⁵.

788. PCC submit that the correct question in light of the competing presumptions above and the concessions on behalf of the Secretary of State is whether the benefits of the scheme are wholly exceptionally sufficient to outweigh the serious concerns.

789. As set out in the planning hearing, PCC believe that formulation best encompasses the relationship between the presumptions because EN-5 does not purport to be exhaustive guidance. In particular it is necessary to turn to EN-1 for guidance in relation to cultural heritage. Therefore it is necessary to start from the position that substantial harm to a SAM should be wholly exceptional. The decision maker must refuse unless the harm is absolutely necessary. If there is an undergrounding option unless that has proved to be unfeasible or otherwise discountable it cannot be said the harm is absolutely necessary.

790. Much time was spent at the hearing discussing what constituted a serious concern for the purpose of EN-5. PCC's position is that you do not need to start from consideration of this question. Due to the acceptance of substantial harm the starting point is whether there is something that would prevent undergrounding or the adoption of an alternative route and whether there is such an urgent need that substantial harm can be accepted.

791. In actual fact there was a degree of agreement in that SPM considered that in landscape terms serious concern would be caused by a major adverse impact¹⁰⁰⁶. PCC are content to accept that interpretation¹⁰⁰⁷, and as set out extensively above Mr Russell Vick has identified major adverse impacts such that even on SPM's policy approach a serious concern arises and undergrounding needs to be considered. Where PCC and SPM part company is that while SPM are content that a major adverse landscape impact can give rise to serious concern, they do not appear to accept that a major adverse cultural heritage impact arising from a change to the setting of an asset can give rise to serious concern.¹⁰⁰⁸

¹⁰⁰³ EN-5 (CD/COM/003) at 2.8.8

¹⁰⁰⁴ EN-5 (CD/COM/003) at 2.8.2.

¹⁰⁰⁵ EN-5 (CD/COM/003) at 2.8.8

¹⁰⁰⁶ Kirsten Berry, during the planning balance hearing session.

¹⁰⁰⁷ Martin Carpenter, during the planning balance hearing session

¹⁰⁰⁸ Kirsten Berry, during the planning balance hearing session.

792. The very serious difficulty with SPM's approach, however, is that it effectively starts from the position that cultural heritage impacts do not feed into an EN-5 assessment. MsBerry explained that because the 'serious concerns' test and its subsequent balance was located within the 'landscape and visual' section of EN-5 you could only feed landscape and visual impacts into the side of the balance that would be in favour of undergrounding. Extremely curiously, she accepted that on the other side of the balance you can bring in all sorts of other disciplines. Thus on SPM's interpretation EN-5 sets out thought process for the decision maker which requires you to balance the most serious landscape and visual impacts of an overhead line against all of the potential disbenefits of an underground line including economic and cultural heritage impacts, by way of example. Once you have gone through that thought process Ms Berry did admit that you would have to then factor in any other matters in some way and see if they outweighed your EN-5 consideration.

793. There are two very substantial objections to that approach. The first is it requires you to compartmentalise impacts in an entirely artificial and inappropriate manner. Where, as here, there is a section of the route which experiences both very serious landscape and cultural heritage impacts, the method does not allow you to identify that the combination of those impacts might make a particularly strong case for undergrounding in that section. This is despite the fact that Ms Berry expressly agreed that you could come to a conclusion that if there are a series of different bits of harm, none of which quite met the test for unacceptability, you could still add those harms together to give a sound reason for undergrounding¹⁰⁰⁹ She rightly agrees the principle but her methodology has no way of allowing the decision maker to make that decision. Secondly, it is seriously illogical to weigh cultural heritage disbenefits of undergrounding but not be able to weigh cultural heritage advantages as part of the same process. That cannot be logically right. In undertaking the balance SPM would ask you to carry out it means that, for example, you would have to weigh a minor potential archeological impact in the negative, but ignore the fact that minor impact was avoiding the most horrendous heritage impacts imaginable from the overground line.

794. It is plain that the presence of the discussion of undergrounding in the landscape and visual section of EN-5 cannot be such that the Government intended the Alice in Wonderland consequences set out above. SPM's response to PCC's concern about this approach was rather bizarrely to refer to the 2008 Act deciding an application in accordance with an Environmental Statement. This strange response does not begin to resolve the concerns. Under the Electricity Act 1989 consultees such as PCC are able to seek to demonstrate, as they believe they have here, that the environmental information produced contains flawed routeing assumptions, inconsistent and poorly supported judgment, and the proposal being promoted on the back of it should not be accepted either at all or in its current form. None of that

¹⁰⁰⁹ Kirsten Berry, planning balance session

remotely bears on the question of how the various factors for or against undergrounding are properly balanced in an application for a line.

795. Thus PCC say that the correct approach rather than attempting a multi-stage approach as advocated by SPM, is to do one simple balancing act weighing all the matters in favour of undergrounding on the one side, and all the disadvantages of undergrounding on the other¹⁰¹⁰. That balancing act will largely reflect the balancing act identified at EN-5 2.8.8. to 2.8.9. It will only be required where the most serious impacts are identified (such as to give rise to serious concerns) and once those most serious impacts are identified they are considered together and balanced against the disbenefits of undergrounding. The fact that those paragraphs do not specifically remind the decision maker to factor in other potential disbenefits of an overhead line is not to the point. EN-5 itself reminds the decision maker that all the policy statements must be read sensibly and logically together when it says:

*1.3.2 This NPS does not seek to repeat the material set out in EN-1, which applies to all applications covered by this NPS unless stated otherwise. The reasons for policy that is specific to the energy infrastructure covered by this NPS are given, but where EN-1 sets out the reasons for general policy these are not repeated.*¹⁰¹¹

796. Given that SPM have approached their consideration of undergrounding from the flawed starting position outlined above, the inquiry can place little weight on their exercise. This applies both to their analysis at section 4 of appendix 05A¹⁰¹² and to their further exercise produced during the inquiry¹⁰¹³. Regardless of all the other concerns PCC have about the assumptions made in those documents, and the judgments they rely on¹⁰¹⁴, they suffer from this fundamental flaw of approach.

797. In respect of cultural heritage SPM's problems go even deeper, however. That is because despite the fact that their own witness advised that the line gave rise to substantial harm to at least one monument, they declined to give any assistance to the decision maker on how to deal with that conclusion. This is despite the fact that the effect of the conclusion is that such harm should be 'wholly exceptional'¹⁰¹⁵. It is simply unhelpful to argue that it is for the Secretary of State to consider this test. At the very least SPM should have identified for the Secretary of State what they say is 'wholly exceptional' about their scheme that should mean they should be given permission for an overground line notwithstanding the substantial harm. Presumably they will

¹⁰¹⁰ Martin Carpenter, Planning Balance session.

¹⁰¹¹ CD/COM/003

¹⁰¹² AD/SPM/031 Volume 3a – Llandinam Updated ES – Appendices

¹⁰¹³ **SPM/025** – Response of SP Manweb to various undergrounding options outlined during weeks 1 and 2 by PCC and NRW

¹⁰¹⁴ As to which see in particular OBJ-002-012 Powys County Council Response to SPM-025

¹⁰¹⁵ EN-1 at 5.8.14 [CD/COM/001]

invite the Secretary of State to so conclude but on what basis is anyone's guess. The weighing of exceptional circumstances has not taken place either in the context of an undergrounding consideration or an overall balance consideration. Whoever is right about the methodological argument above SPM's planning balance is seriously deficient.

798. PCC therefore invite the Secretary of State to draw the following planning balance:

- a. That the route selected was not the route that took the opportunity to best mitigate the impacts of this line. The Secretary of State could refuse permission, but given the urgent need for this energy PCC do not invite that. However the selection of the wrong route does mean that no weight can be placed on any arguments about the inevitability of any impacts.
- b. Given there is substantial harm to Bryn Cwmyrhiwdre, the Blackgate enclosure and the Cross Dyke, the Secretary of State will have to identify what is wholly exceptional to allow this line to go ahead.
- c. The undergrounding balance will need to weigh the major harm in landscape terms, and in cultural heritage terms, against the disbenefits. The only disbenefit that PCC consider holds any weight is the cost. In relation to PCC's undergrounding option, PCC say that the impacts avoided clearly outweigh the relatively slight increase in cost even using SPM's cost estimates.
- d. The Secretary of State will still have to consider why the substantial harm to Bryn Cwmyrhiwdre be allowed to occur. PCC would acknowledge that on balance, given there has already been some degradation to the setting of that monument through the recent turbines, and given that at this location there are no major landscape impacts, that the need for the line and for the energy and the costs of extensive undergrounding would provide exceptional circumstances. PCC do acknowledge, however, that is a point on which the Secretary of State could legitimately come to opposite view and in those circumstances the next obvious thing for the Secretary of State would be to consider is the SPM original undergrounding proposal.

THE POWYS 160MW UPGRADE

799. Although strictly a session 4 matter, it is right to record amongst the session 3 issues that PCC's support for the Llandinam scheme is not only subject to undergrounding, but is also subject to an upgrade at to enable the line to take up to 175MVA¹⁰¹⁶.

¹⁰¹⁶ OBJ-002-SOC-OHL Statement of Case for Overhead Line Application, at 5.3

800. SPM acknowledge that it would be possible to upgrade the Llandinam scheme so as to export 160MW¹⁰¹⁷. This would involve using 300²mm conductors as opposed to 200²mm conductors on the Llandinam line¹⁰¹⁸. It would also involve upgrading the conductors on the current line (known as EJ¹⁰¹⁹) between Welshpool and Oswestry from its current 175²mm Lynx ACSR conductor¹⁰²⁰ to a 300²mm conductor¹⁰²¹. There would also need to be alterations at Welshpool.

801. In terms of the implications of these greater conductors, in respect of the Llandinam Scheme this would mean the use of slightly thicker poles as compared with those currently shown on the photomontages, and will result in an increase of around 5% in the number of poles¹⁰²². Given that the currently proposed number of poles is 382¹⁰²³, a 5% increase would only represent approximately 19 more poles. Of course the numbers of poles would in any event be reduced from the 382 due to the PCC undergrounding option. Thus it is plain on any view that, provided the Llandinam scheme is undergrounded as per the PCC suggestion it would not cause substantially greater visual impact. This appears to be acknowledged by SPM who describe the increase in visual impact as 'slight'¹⁰²⁴. They also acknowledge that all other environmental effects would be similar between the proposed scheme and the upgraded scheme¹⁰²⁵. There is therefore no reason to think that there will be significant environmental effects in upgrading the Llandinam scheme to carry up to 160MW¹⁰²⁶.

802. In respect of the EJ line between Welshpool and Oswestry, that line is currently a trident wood pole construction with some of it being a portal construction (a type of double wood pole construction with a single steel arm). Parts of it were built in the 1980s and parts of it in the 1960s¹⁰²⁷. It is likely this would need to be replaced with HDWP¹⁰²⁸. SPM's own assessment is that this replacement is likely to have little effect in terms of either landscape or visual amenity¹⁰²⁹, or residential amenity¹⁰³⁰. In respect of the landscape

¹⁰¹⁷ Dr Beddoes proof at 7.11 (SPM/NETWORK/POE/BEDDOES/001A).

¹⁰¹⁸ Dr Beddoes Appendix 10 (SPM/NETWORK/POE/BEDDOES/001C), table at 1.12

¹⁰¹⁹ Dr Beddoes proof at 4.17 (SPM/NETWORK/POE/BEDDOES/001A).

¹⁰²⁰ Dr Beddoes proof at 4.17 (SPM/NETWORK/POE/BEDDOES/001A).

¹⁰²¹ Dr Beddoes Appendix 10 (SPM/NETWORK/POE/BEDDOES/001C), table at 1.12

¹⁰²² Dr Beddoes Appendix 10 (SPM/NETWORK/POE/BEDDOES/001C), 1.7

¹⁰²³ SEI 2013, volume 1, 4.2.1 (AD/SPM/029)

¹⁰²⁴ Dr Beddoes Appendix 10 (SPM/NETWORK/POE/BEDDOES/001C), 1.7

¹⁰²⁵ Dr Beddoes Appendix 10 (SPM/NETWORK/POE/BEDDOES/001C), 1.7

¹⁰²⁶ Curiously at 1.16 of appendix 10 Dr Beddoes then goes on to say it is uncertain if it would be likely to not have significant environmental effects. With respect, on the basis of their own carefully set out assessment there is no real uncertainty on this point.

¹⁰²⁷ Dr Beddoes proof at 4.17 (SPM/NETWORK/POE/BEDDOES/001A).

¹⁰²⁸ Dr Beddoes Appendix 10 (SPM/NETWORK/POE/BEDDOES/001C), table at 1.12

¹⁰²⁹ Dr Beddoes Appendix 10 (SPM/NETWORK/POE/BEDDOES/001C), table at 1.12, under heading landscape and visual.

¹⁰³⁰ Dr Beddoes Appendix 10 (SPM/NETWORK/POE/BEDDOES/001C), table at 1.12 under heading residential amenity.

and visual amenity of the upgrade, Philip Russell Vick for PCC does not consider the rebuild would give rise to any significant landscape and visual effects¹⁰³¹, and Mr Goodrum for Llaithddu considers the effects of the upgrade to be limited¹⁰³². Therefore everyone who has considered the landscape and visual effects of this upgrade consider that they will not be significant, and nobody has brought forward any landscape and visual evidence that the effects will be significant.

803. SPM also gave consideration to other possible effects of the upgrade to the EJ line, and did not identify any likely significant effects¹⁰³³.

804. In the circumstances it is likely that consents will not be required for either the upgrade to Llandinam line or the upgrade to the EJ line. SPM acknowledge that if no further consents are required they could provide the upgraded Llandinam line within the same timetable as their proposed Llandinam line¹⁰³⁴. In Cross examination Dr Beddoes extended this concession to include the upgrade to EJ¹⁰³⁵, so assuming Powys are correct that there is no need for any further consents there is no reason to believe that there would be any delay in providing the upgraded scheme.

805. PCC's main position is that the upgrading of the Llandinam scheme would be necessary if any more capacity than the current level of the Llandinam wind farm is to be permitted in SSAC. This is because of the view of Philip Russell Vick, discussed below in relation to session 4, that the alternative way of getting capacity out of SSAC (CC1) is likely to be unacceptable in landscape and visual terms.

806. PCC maintain that to grant the Llandinam line and subsequently have the CC1 option would be a substantial overprovision of capacity for those wind farms that are acceptable in SSAC. Such an overdesigned system would not provide an efficient economical and co-ordinated system of electricity supply contrary to section 9 of the Electricity Act 1989. It would cause wholly unnecessary environmental impacts contrary to their duty under Schedule 9 of the Electricity Act 1989. In confirmation of this, Dr Beddoes identified providing overcapacity as a negative attribute of a line design solution in his

¹⁰³¹ Philip Russell Vick proof for session 4 (OBJ-002-LAND-POE-RUSSELL-S4) at 5.3

¹⁰³² Colin Goodrum proof for session 4 (FWLC-LAND-POE-GOODRUM-S4) at 4.2.12

¹⁰³³ Dr Beddoes Appendix 10 (SPM/NETWORK/POE/BEDDOES/001C), table at 1.12.

Curiously at 1.17 of appendix 10 Dr Beddoes then goes on to say it is uncertain if it would be likely to not have significant environmental effects. With respect, on the basis of their own carefully set out assessment there is no real uncertainty on this point.

¹⁰³⁴ Dr Beddoes Appendix 10 (SPM/NETWORK/POE/BEDDOES/001C), at 1.16

¹⁰³⁵ Dr Beddoes cross examination.

proof¹⁰³⁶ and in cross examination¹⁰³⁷. In seeking to utilise existing infrastructure (the Welshpool to Oswestry line) before seeking to build new lines, the PCC approach follows the approach SPM identify as being the correct one¹⁰³⁸.

807. This is no doubt why SPM were prepared to agree in relation to the upgraded Llandinam option that *Hypothetically, this alternative is compliant with SP Manweb's statutory duties.*¹⁰³⁹

808. SPM's general approach, both in their session 3 evidence and their document SPM/028 provided for session 4, is to label anything that provides less than their contracted capacity 'hypothetical' and dismiss it on that basis. That submission is problematic for a number of reasons. Firstly it is clear that simply because SPM have a certain level of contracted capacity, it does not mean that those applying for the generating stations necessary for that level of contracted capacity will receive consent¹⁰⁴⁰. Currently SPM appear to have contracted capacity of 264.3 MW in SSAC alone¹⁰⁴¹. PCC have demonstrated through this inquiry that significantly exceeds the environmental capacity of SSAC. Additionally it substantially exceeds the indicative capacity set out in TAN 8 for the area¹⁰⁴². The short point is that until and unless the wind farms are granted permission by the Secretary of State all proposals are "hypothetical".

809. PCC say in any event that there would be very substantial benefits to the upgraded Llandinam line, along with the upgrade of the EJ line. The first is

¹⁰³⁶ 6.67.5, confirmed in cross examination.

¹⁰³⁷ Dr Beddoes cross examination

¹⁰³⁸ Confirmed by the fact that in their document 'Statement on Preservation of Amenity in England & Wales in Accordance with Schedule 9 of the Electricity Act 1989' [CD SPM LIC 01] SPM say at page 4 "We will seek to construct new lines or substations only where the existing distribution network cannot be upgraded to meet security of supply requirements, or where an increase in demand for electricity transportation capacity is foreseen which cannot be satisfied by other means or where new connections to customers are required". Therefore SPM recognise that in order to comply with their duty under Schedule 9 they should look to upgrade existing infrastructure first.

¹⁰³⁹ See Dr Beddoes Appendix 10, last box of the table.

¹⁰⁴⁰ The proposition is common sense, but for what it is worth it was agreed by Dr Beddoes in cross examination.

¹⁰⁴¹ This figure is taken from SPM-016 – Powys Wind farm Scenario – January 2014 SP Manweb Produced. It should be noted that there are some potential questions about this figure as it appears to include Llaithddu whereas PCC understood Llaithddu did not have a connection agreement. It does not include other schemes in planning including Garreg Lwyd, Bryngydfa, Hirdywell, and Neuadd Goch which according to the table do not currently have connection agreements but which would amount to another 136MW of capacity and on SPM's approach would have to be offered connection agreements if sought.

¹⁰⁴² The TAN8 figure for SSAC being 70MW, and the maximum figure identified in the July 2011 Welsh Government Letter at CD/COM/020 being 98 MW.

that it would avoid the requirement for CC1 which would avoid 35km of new line¹⁰⁴³

810. One potential benefit is that it would replace the EJ line which in parts dates back to the 1960s¹⁰⁴⁴ and contains a mixture of infrastructure types, with a modern line on modern visually consistent infrastructure. Although SPM assert in their note SPM 014 that it is capable of meeting the present and anticipated network demand¹⁰⁴⁵, it is ranked 112 out of 252 lines in terms of priority for remedial intervention (1 being the highest¹⁰⁴⁶). There is clearly some benefit in replacing infrastructure that is in part obsolete and 50 years old, even if there are no current plans to do so.

811. A further potential benefit would be that any additional schemes also using the upgraded Llandinam line would be able to have access to a very substantially earlier grid connection date. For all the reasons set out above PCC do not believe that any slippage would be caused from the current date of 2017. Therefore there would be a further 60MW of capacity that could be provided by 2017 rather than by 2019 at the earliest if they need to rely on the CC1 scheme. Given the urgent need case on which all the applicants before this inquiry rely, that is a very substantial benefit.

812. Mr Leavy's evidence was that the proposed Llandinam line was, relatively speaking, expensive to provide due to its length, and that it was being funded by Celtpower¹⁰⁴⁷. One advantage of the Powys proposal is that costs could be spread amongst two or more developers. In relation to the Mid-Wales connection project, there is a tipping point below which the project will become uncommercial¹⁰⁴⁸, but nobody was prepared to identify where that point was.

813. SPM have made some attempt to suggest that the upgraded Llandinam line would not be financially beneficial compared with CC1. Unfortunately SPM's evidence on this point has been wholly inconsistent and unenlightening. In SPM-028 reliance is placed on the costs of the upgraded Llandinam line plus such upgrades as are necessary to the Welshpool to

¹⁰⁴³ Agreed by Dr Beddoes in cross examination.

¹⁰⁴⁴ 62% is trident design of around 30 years old and the remaining 38% is of a now obsolete wood pole portal design and 50 years old, see SPM's note SPM-014 – Response to various queries raised during the evidence of Dr Beddoes and Mr Paalman, at 2.2

¹⁰⁴⁵ SPM 014 at 2.5

¹⁰⁴⁶ SPM 014 at 2.6

¹⁰⁴⁷ Eric Leavy, cross examination by the alliance

¹⁰⁴⁸ Eric Leavy proof SPM/COMPANY/POE/LEAVY/002A, paragraph 7.31.9, the 'tipping point' was confirmed in cross examination.

Oswestry line. It is asserted that they will be 'virtually the same cost'¹⁰⁴⁹ as the status quo (being the Llandinam scheme without upgrade, plus CC1). However, in Dr Beddoes Appendix 10 he variously stated the upgrade option would cost £1.3 million more and £2 million more. He was not able to explain the breakdown of this in cross examination. SPM subsequently produced document SPM-014¹⁰⁵⁰. Unfortunately the document was wholly unenlightening. It simply asserted without evidence that the necessary upgrade to the Llandinam line would be £1.3 million more, and overall the upgraded Llandinam line would cost £2 million more than the status quo. No figures were given for any of the costs incurred or costs saved other than those. Therefore PCC do not accept in the absence of cogent evidence that a scheme which does not require the building of 35km of new line (CC1) plus contributing to the need for an extensive 400kV line, is substantially more expensive than the Llandinam line, and furthermore does not understand how the current assertion that the schemes are 'virtually the same cost' fits with the evidence previously given.

814. For the sake of completeness even if it were the case that the upgraded Llandinam scheme were the same price or slightly more expensive PCC maintain that given the unacceptable environmental consequences of CC1 (and the 400kV line) (see Session 4 section of these closings) then an upgraded Llandinam line is the correct approach taking into account all of SPM's statutory duties.

¹⁰⁴⁹ SPM note paragraph 1.1.4.

¹⁰⁵⁰ SPM-014 – Response to various queries raised during the evidence of Dr Beddoes and Mr Paalman.

SECTION VI Cumulative and combined considerations for all schemes

LANDSCAPE AND VISUAL

Starting Point

815. In relation to the cumulative and combined landscape and visual effects of the developments before the inquiry the starting point is the conclusion reached on the individual effects of the schemes as assessed in sessions 1 and 2 of the inquiry. The issue is therefore whether any combined or cumulative effects require any alteration to the conclusions reached on those individual effects and their acceptability. This in turn has been broken down within the inquiry as between the cumulative and combined effects of the schemes within each SSA (sessions 1 and 2) and as between SSA B and C (session 4).

816. In practice, session 4 served to confirm the conclusions of sessions 1 and 2 and, as far as PCC is concerned, served to re-enforce its conclusion that within SSA C the case for preventing the spread of wind turbine development to the east of the Ithon Valley is overwhelming. It also served to identify that development going beyond that regarded by the Council as acceptable in SSA C (and coincidentally TAN8) will lead to a step change in the magnitude of clearly identifiable effects of wind farm development which provide the clearest benchmark of unacceptability.

Approach

817. Before turning to address the substance of the issues raised in session 4 of the inquiry, it is necessary to touch upon the issue of approach and to define the terms which have been used in evidence and will be used within these submissions.

818. There is unanimous agreement as between the landscape witnesses before the inquiry that the accumulation or combination of landscape and visual effects of all of the schemes before the inquiry, and those which are consented and in planning, is an important material consideration. It is the effect of all that is permitted and built which will impact upon the landscape and visual amenity of the County and which needs to be assessed over and above the individual acceptability of each scheme. This is what is properly termed the combined effect.

819. It will also be relevant for the Secretary of State to identify as appropriate, the effect which each individual scheme makes to that combined effect in order to assess whether it is or is not significant. This has been assessed by all of the relevant witnesses by considering the accretive or incremental effect of adding a given scheme to a baseline which (for session 4) includes all other schemes (operational/consented/in-planning). This is properly termed the in cumulation assessment.

820. It is important to note that the in cumulation assessment tells the reader nothing about the acceptability of the baseline to which the scheme to be assessed is added. It focuses exclusively on the issue of additionality i.e. what does the scheme add incrementally.

821. It follows that simply because a scheme has no significant in cumulation effect does not mean that it is acceptable in landscape or visual impact terms. It may for example be too harmful having regard to its own individual merits to be acceptable. The fact that this individual unacceptability may not incrementally increase the overall magnitude effects of a number of schemes has no bearing on its individual acceptability. The key benefit of the in cumulation element of the assessment process is that, if the Secretary of State concludes that the combined effect of the developments and their grid connections is unacceptable, he has before him some guidance as to which schemes (or parts of schemes) should be prime contenders for rejection in order to keep that combined effect within acceptable limits.

822. The approach adopted by each of the applicants has been based on the incremental approach to in cumulation assessment. This is based on part only of the guidance contained in Scottish Natural Heritage's "Assessing the Cumulative Impact of Onshore Wind Energy Developments".¹⁰⁵¹ That guidance advises:

"The purpose of a Cumulative Landscape and Visual Impact Assessment (CLVIA) is to describe, visually represent and assess the ways in which a proposed windfarm would have additional impacts when considered in addition to other existing, consented or proposed windfarms. It should identify the significant cumulative effects arising from the proposed windfarm".¹⁰⁵²

¹⁰⁵¹ CD-CPL-LAN-007

¹⁰⁵² Ibid para. 55

823. The Guidance also stresses that this is only one aspect of the assessment of accumulated effects. It is careful in its definition of terms to recognise that there are two aspects of “cumulative development”:

“Cumulative impacts can be defined as the additional changes caused by a proposed development in conjunction with other similar developments or as the combined effect of a set of developments, taken together.”¹⁰⁵³

It further identifies that the process of assessment:

“...needs to identify the overall impacts which may arise from a group of projects and distinguish the contribution of each individual project to these.”¹⁰⁵⁴

824. It is important to recognise the distinction and difference between an assessment of combined effects and an assessment of in cumulation assessment so that proper use can be made of the relevant material before the inquiry. The furthest that the applicants have each gone is to undertake an in cumulation assessment of incremental effect¹⁰⁵⁵. They each recognise however that the Secretary of State must undertake a combined assessment in order to determine the appeals. Their approach is best summarised by the evidence of Llandinam’s landscape witness:

“In my company’s approach, which reflects best practice guidance (SNH Cumulative impacts of onshore wind energy developments (CPL-LAN-007), the assessment identifies whether any additional magnitude of change which is caused by Llandinam Repowering, when added to the impact of a number of “baseline” developments, is significant or not. Importantly, the proposed Development, in my case Llandinam Repowering, remains the focus of my assessment and I do not assess the effects of the other schemes or development. That is for other applicant’s to undertake. Furthermore, I do not attempt to assess the overall, combined effect of a number of developments taken together as that is beyond the remit of the assessment as acknowledged in the Landscape Institute’s Guidelines for Landscape and Visual Impact Assessment 3 (CP-LAN-005) at paragraph 7.18: “the assessor will not have assessed other schemes and cannot therefore make a fully informed judgement. A comprehensive overview of the cumulative effects

¹⁰⁵³ Ibid para. 7

¹⁰⁵⁴ Ibid para.8

¹⁰⁵⁵ Mr Stevenson for RWE did undertake a limited combined effects assessment, but this was limited to combined visual effects and from one viewpoint only – see Session 4 proof Appx 1 RWE-LAND-POE-STEVENSON-S4. It did not pretend to be an assessment of the overall combined visual effects of the schemes before the inquiry and did not address combined landscape effects.

must rest with the Inspector and the Secretary of State, who will have the benefit of hearing cumulative evidence from each of the Applicants".¹⁰⁵⁶

825. There is undoubtedly some support for this approach in the SNH Guidance as there is in TAN 8,¹⁰⁵⁷ but the SNH Guidance stresses the generic nature of its content and the need for professional judgement to inform the scope of any assessment¹⁰⁵⁸ having regard to the particular development scenario within which any given decision is to be taken. Within that context, the focus of the applicants on the effects of their scheme with any assessment of cumulative effects restricted to the incremental only, is unhelpful. The applicants' analyses are of no use in identifying any thresholds of acceptability of combined impacts, because the approach they have adopted leads to the potentially perverse conclusion that the more wind farms there are in the baseline and the greater their effects the easier it is to argue that the addition of yet more has no significant effect. Further, six different assessments of incremental effects, with variations in terms of the detail of effects, is not a happy basis upon which to make a properly informed assessment of combined effects.

826. Fortunately, the Secretary of State will have the advantage of PCC's landscape and visual effects evidence which provides both a combined and a cumulative impact assessment. It is the only evidence before the inquiry to do so and for that reason alone is entitled to very significant weight.

Limitations

827. That said, note of caution needs to be sounded in relation to the Session 4 combined assessments. Whilst the inquiry schemes themselves (both wind farms and SPM's 132kV grid connections) can be fully assessed, as can their effects with existing operational development, the introduction of consented and in-planning proposals coupled with likely but by no means fixed grid connection options, inevitably introduces a significant measure of uncertainty into any assessment. PCC has throughout been at pains to ensure that its assessment is appropriately high level, realistic given the state of present knowledge and avoids spurious accuracy. Such a high level assessment does assist in gauging whether there are step changes in effects which breach thresholds of acceptability and whether, in terms of grid connections there are any obvious reasons why any such connections may not be consentable in landscape and visual impact terms.

828. To this end, the approach and methodology for PCC's assessment is of necessity 'strategic'; this is not an assessment equivalent to that which would be appropriate for an ES or related to a planning application (i.e. at a specific project level). In so far as it is relevant, it accords with the 3rd Edition '*Guidelines for Landscape and Visual Impact Assessment*'¹⁰⁵⁹ (GLVIA 3).

¹⁰⁵⁶ Welch Session 4 proof para.2.2 p8 CPL-LAND-POE-WELCH-S4

¹⁰⁵⁷ CD/COM/16 Annex D para.6.2 p.60

¹⁰⁵⁸ CPL-LAN-007

¹⁰⁵⁹ Landscape Institute, Guidelines for Landscape and Visual Impact Assessment 3rd Edition, 17 April 2013 [CD-CPL-LAN-005]

GLVIA 3 points to 'Appraisals', at paragraph 1.11, and to LVIA in Strategic Environmental Assessment.¹⁰⁶⁰

829. Based on the GLVIA 3, PCC has used seven criteria against which to assess landscape and visual susceptibility, at a high level, to the various development types and the in-combination cumulative effects:

- a. Protection of designated landscapes (e.g. National Parks, AONBs, designated historic landscapes);
- b. Compatibility with and protection of landscape fabric and character (e.g. topographic form, landcover pattern, settlement pattern, boundary type, scale, sense of enclosure, condition);
- c. Protection of tranquillity and remoteness (as defined by LANDMAP);
- d. Protection of rarity and local distinctiveness (as defined by LANDMAP);
- e. Protection of scenic value and overall evaluation (as defined by LANDMAP);
- f. Protection of visual amenity of valued recreational resources (e.g. promoted long distance footpaths and well-recognised viewpoints);
- g. Protection of visual amenity and landscape settings of settlements.¹⁰⁶¹

830. In making assessments against these criteria, the landscape baseline defined by LANDMAP has been used because its evaluation is well suited to a high level assessment. This has been supplemented where necessary by Mr Russell-Vicks's own appreciation of the landscape (for those landscapes in Shropshire). The evidence in LANDMAP, in particular in the Visual and Sensory Aspect Area (VSAA) descriptions, evaluates the key components of each landscape type, specifically 'Scenic Quality', 'Integrity', 'Character', 'Rarity' and provides an overall evaluation. GLVIA 3 defines sensitivity as "*A term applied to specific receptors, combining judgements of the susceptibility of the receptor to the specific type of change or development proposed and the value related to that receptor*". Whilst LANDMAP evaluations do not go as far as to provide a full sensitivity assessment as envisaged by GLVIA 3, they do, nevertheless, provide a strong indicator of likely sensitivity and, when combined with value, susceptibility as well, sufficient for a high level assessment.¹⁰⁶²

831. PCC's combined assessment has concentrated on aspect areas, in particular VSAA's, which have an Outstanding or High overall evaluation, or Moderate overall evaluation but with an outstanding or high evaluation in

¹⁰⁶⁰ Paras 1.12 to 1.14

¹⁰⁶¹ Russell-Vick Session 4 proof para. 2.6 p.6 OBJ-002-LAND-POE-RUSSELL-S4

¹⁰⁶² Russell-Vick Session 4 proof para 2.7 p.6/7 OBJ-002-LAND-POE-RUSSELL-S4

either scenic quality or character evaluation criteria which the NRW's guidance indicates "*could be starting points for the assessment of significant effects*".¹⁰⁶³

832. The study area necessarily extends beyond the boundaries of LANDMAP and into part of Shropshire and here '*The Shropshire Landscape Typology*' 2006¹⁰⁶⁴ has been used to make an equivalent set of assessments.

833. For this high level assessment PCC has used three categories used to define the magnitude of effect (landscape or visual) as follows:

- a. High = Where the object would be a new dominant or prominent feature which would become a key characteristic or feature and which would change the existing overall character or individual characteristic;
- b. Medium = Where the object would be a new conspicuous or apparent feature which, whilst a recognisable new element, would not become a key characteristic or feature and would not change the existing overall character or individual characteristic;
- c. Low = Where the object would be a new inconspicuous or faint feature which would be barely perceived and would not change the existing overall character or individual characteristic.¹⁰⁶⁵

834. As with the scheme specific assessments, effects have been assessed to be either significant or not significant where one that is significant is of sufficient weight to be material to the planning consideration and potentially the decision regarding a nationally important infrastructure project.

835. Significant landscape and visual effects are likely to occur when the receptor is of *High* susceptibility (or potentially in the case of those LANDMAP VSAs identified as Moderate with high scenic value and/or character) and the potential magnitude of effect would be *High*. PCC regard such an assessment as, therefore, an indicator of potential significance and potential unacceptability in landscape and visual terms.

836. In the context of NPS EN-5, such unacceptable effects can be considered to raise the "*serious concerns*" in relation to grid connections. It is to be noted however, that PCC's assessment properly reflects EN-1 which states that "*.....Government considers.....it will not be possible to develop the necessary amounts of such infrastructure without some significant residual adverse impacts*".¹⁰⁶⁶ PCC accepts that the landscape and visual harm must equate to

¹⁰⁶³ CD-CPL-LAN-008 Para.6.2 p.11/20 LANDMAP Guidance Note 3 May 2013 Guidance

¹⁰⁶⁴ Shropshire County Council, *The Shropshire Landscape Typology*, 2006 [CD-VATT-LAN-010]

¹⁰⁶⁵ Russell-Vick Session 4 proof para. 2.11 p.8 OBJ-002-LAND-POE-RUSSELL-S4

¹⁰⁶⁶ CD/COM/001 para.3.2.3 p.17

more than significant adverse impacts, such impacts being inevitable to some degree.

SSA B & C LANDSCAPE AND VISUAL COMBINED EFFECTS - BASELINE¹⁰⁶⁷

837. The study area for the assessment for in combination and cumulative assessment includes the landscape context for SSAs B and C, the Meifod Valley east to the border with Shropshire, the Severn Valley to Welshpool and the landscape between Oswestry and north to Wrexham.
838. The combined/cumulative assessment of wind farms and associated infrastructure relates only to the landscape context of SSAs B and C (see Session 1 and 2 sections of this closing). In relation to SSAB grid connections to the north, it is the Meifod Valley which would be principally affected.
839. The Meifod Valley is aligned broadly west to east and has been selected by National Grid as the route corridor for their proposed 400kV line. The Meifod Valley is named after the village of Meifod which lies on the valley floor towards the western end of the valley of the River Vyrnwy between Newbridge, where the River Banwy joins the Vyrnwy, and the village of Llansantffraid-ym-Mechain. Typical of the narrow incised valleys of mid-Wales, this upper section of the valley has a small to medium scale with a strong sense of enclosure provided by the steep valley sides with round topped and wooded hills which frame the gently dished valley floor. This section of the valley is scenically attractive.¹⁰⁶⁸
840. At Llansantffraid-ym-Mechain, where the River Vyrnwy is joined by the Afon Cain from the north, the lower section of the valley in the east opens out to form a broader, flatter valley floor with less defined and more gently undulating valley sides. East of Llansantffraid-ym-Mechain the River Vyrnwy meanders widely across the broad, flat, floodplain forming the border with Shropshire east of Llanymynech. The scale, in contrast with the upper valley, is medium to large scale with a reduced sense of enclosure. Although rural in character, with a strong sense of intactness, this lower part of the valley, does not share the same high level of scenic quality as the upper part in the west.
841. The landscape character of the Severn Valley is largely defined by physical form of the valley which changes gradually from south-west to north-east, as the valley steadily widens and the sense of enclosure from the valley sides reduces; north-east of Welshpool that gradual change continues with the floodplain becoming the predominant topographical characteristic. There is some enclosure and topographical relief to both sides of the valley floor. The

¹⁰⁶⁷ Russell-Vick Session 4 proof section 3 pp.10-15 OBJ-002-LAND-POE-RUSSELL-S4

¹⁰⁶⁸ LANDMAP does not recognise this, no doubt because the area of landscape is defined as a small part of a wider landscape type.

Breidden Hills, to the east, are a significant landform and prominent landmark standing as a marker of the termination of the Shropshire uplands to the south. Whilst to the west the Llanymynech Hill marks the end of the mid-Wales uplands to the west.

842. North from Oswestry to Wrexham, the lower lying gently undulating topography of Shropshire borders the edge of the Powys and Clwyd uplands. The landscape is heavily settled with small towns and villages and crossed by several busy routes, including the A5, and also by some prominent electrical infrastructure, including the National Grid's 400 kV line from Legacy to Shrewsbury.

Published Landscape Character Data and Assessments

843. The Session 4 Study Area includes a large number of LANDMAP aspect areas.¹⁰⁶⁹ Many of those VSAs have an overall evaluation of Outstanding, High or Moderate with an Outstanding or High evaluation in either scenic quality or character.¹⁰⁷⁰

844. Four landscape types are relevant to this assessment from the Shropshire Landscape Typology.¹⁰⁷¹ There is no evaluation within the Shropshire work, simply a description of characteristics. No direct comparison can be made with the LANDMAP values. The four types are as follows:

- a. Wooded River Gorge
- b. Settled Pastoral Farmlands
- c. Principal Settled Farmlands
- d. Riverside Meadows¹⁰⁷²

845. This is inevitably a coarse assessment, but applying the LANDMAP approach to these landscapes to provide a 'level playing field' for this high level assessment, only Wooded River Gorge and Riverside Meadows landscape types would meet the indicator test for likely significant effects set out in LANDMAP Guidance Note 3.¹⁰⁷³

Designated Landscapes

¹⁰⁶⁹ Russell-Vick Session 4 proof Appendix B OBJ-002-POE-APP-RUSSELL-S4

¹⁰⁷⁰ For LANDMAP Assessments see Russell-Vick Session 4 proof appendices, Appx.B OBJ-002-POE-APP-RUSSELL-S4

¹⁰⁷¹ Russell Vick Session 4 proof Appx C OBJ-002-POE-APP-RUSSELL-S4

¹⁰⁷² Russell-Vick Session 4 proof para. 3.8 p.13 OBJ-002-LAND-POE-RUSSELL-S4

¹⁰⁷³ Ibid Table 1 pp.13-14 OBJ-002-LAND-POE-RUSSELL-S4

846. The south-eastern edge of the Snowdonia National Park falls within the Session 4 Study Area, however, the ZTVs for both SSAB schemes (the nearest schemes) indicate that visual impacts and consequently any landscape character effects arising would generally be restricted only to the higher parts of the landscape within the National Park. No significant effects on the National Park are likely to arise from the SSA C schemes and none will arise with SSAB in combination with SSAC.¹⁰⁷⁴

847. Equally, no significant landscape or visual effects are likely on the Ceredigion Special Landscape Area as a whole given that it lies approximately 17km west of Llandinam Repowering and Llaithddu and some 20km south-west of Carnedd Wen and Llanbrynmair.¹⁰⁷⁵

848. The Shropshire Hills AONB lies some 5.5km to the east of Llanbadarn Fynydd and around 12km from Llaithddu and Llandinam Repowering. PCC's combined cumulative impact assessment of the SSA C schemes demonstrates that significant landscape and visual impacts would arise for the AONB from the three schemes before the Inquiry plus those TACPA schemes before the Council (see Session 1 section of this closing). In respect of the Llandinam 132kV OHL there would be no harm to the AONB either individually or cumulatively. No additional significant cumulative effects would occur as a result of other associated infrastructure over and above those set out in relation SSAC.

Visual Baseline

849. The applicants' conjoined SEI figures define ZTVs for all of the various component parts of the cumulative assessment except for the grid connection options north of Oswestry to Legacy.¹⁰⁷⁶ No issue has been by PCC with their accuracy.

850. The main visual receptors in respect of higher sensitivity which fall within the potential ZTVs and which are relevant to a high level assessment are:

- a. Principal settlements (almost entirely contained within the valleys and therefore less likely to experience significant cumulative visual effects);
- b. Promoted long distance trails (the Glyndŵr's Way and Offa's Dyke National Trails and the Kerry Ridgeway and Severn Way Regional Trails);
- c. Other Public Rights of Way within the designated landscape areas.

¹⁰⁷⁴ Russell-Vick Session 4 proof para.3.10 p.14 OBJ-002-LAND-POE-RUSSELL-S4

¹⁰⁷⁵ Ibid para. 3.11

¹⁰⁷⁶ Figures 5-10 of LUC's Visualisations AD-RES-042 (RES Supplementary Environmental Information, December 2013, Volume 3 Part 2)

851. Eight viewpoints were identified for the Session 4 cumulative assessment. These views are relevant to assessing the cumulative visual effects of the SSA B and C wind farm proposals both incrementally and in-combination. Most of these are from well-recognised locations where receptors are likely to be towards the very highest end of visual sensitivity.

CUMULATIVE EFFECTS OF SSA C SCHEMES WITH TACPA SCHEMES (AND LLANDINAM GRID CONNECTION)

Overview

852. The combined effects of Llandinam Repowering, Llaithddu and Llanbadarn Fynydd together are unacceptable in landscape and visual terms. PCC also considers the cumulative effects of these schemes together with the TACPA schemes before PCC to be unacceptable.¹⁰⁷⁷

853. PCC accepts that the Llandinam 132kV OHL (with the undergrounding section) would have no additional acceptable effects in landscape and visual terms cumulatively with Llandinam Repowering and/or Llaithddu (both northern and southern arrays). However, it would be unacceptable in-combination with Llanbadarn Fynydd and/or Neuadd Goch (and the other TACPA schemes, albeit that Neuadd Goch would be by far the greatest incremental contributor to the in-combination effects).¹⁰⁷⁸

854. Therefore, within SSA C PCC supports the combination of Llandinam Repowering, Llaithddu (northern array); potentially with Hirddywel (a TACPA scheme yet to be formally considered by PCC) subject to the remaining environmental capacity of the area together with the Llandinam 132kV OHL scheme. The need to upgrade this proposal to a heavy-duty wood pole 160MW/ 176MVA to Welshpool, with the upgrade of an existing 132kV OHL from Welshpool to Oswestry is accepted.¹⁰⁷⁹ The evidence is that this rebuild, would be unlikely to give rise to any significant environmental effect.¹⁰⁸⁰

855. The approval of further wind farm schemes over and above these would require either the implementation of the SPM CC1 grid connection, together with the Cefn Coch substation, and increased pressure for 'heavier' grid connection infrastructure from Cefn Coch to Oswestry or Legacy; alternatively

¹⁰⁷⁷ See Russell-Vick Session 1 proof section 8 OBJ-002-LAND-POE-RUSSELL-SSA-C and Apps K and L OBJ-002-LAND-APPA-L-RUSSELL-SSA-C

¹⁰⁷⁸ See Russell-Vick Session 3 proof paras. 7.20-7.22 OBJ-002-LAND-POE-RUSSELL-OHL

¹⁰⁷⁹ See Russell-Vick Session 4 proof Figure PRV1 OBJ-002-POE-FIGS-RUSSELL-S4

¹⁰⁸⁰ Ibid para. 5.3 p.23; see also Goodrum Session 4 proof 4.2.4 p.18, 4.2.10 p.19 and 4.2.12 p.20 FWLC-LAND-POE-GOODRUM-S4

the construction of a second 132kV HDWP line adjacent to the 132kV Llandinam scheme as far as Welshpool and then to Shrewsbury. The implications of these options for the in-combination assessment are addressed out below.

Cumulative Landscape and Visual Assessment of the Acceptable PCC Scenario for SSA C (part of Scenario 1)

856. PCC’s high level assessment of this scenario against the assessment criteria is as follows:¹⁰⁸¹

i. Cumulative Landscape and Visual Assessment of the Preferred PCC Scenario for SSA C (part of Scenario 1)

<i>Assessment Criteria</i>	<i>Potential Susceptibility</i>	<i>Potential Magnitude of Cumulative Effect</i>	<i>Potential Significance</i>
Designated Landscapes	Shropshire Hills AONB lies some 12km from Llandinam Repowering and Llaithddu (north). PCC’s Session 1 evidence concludes there would not be an impact on character of AONB. PCC’s Session 3 evidence concludes that the Llandinam OHL would not be visible from the Shropshire Hills AONB but would cross the Vale of Montgomery registered historic landscape. The OHL impact on character of the registered landscape would be limited due to its low lying, flat topography, open character, some compatibility with the grain and texture of the landscape and presence of other OHL in the vicinity.	Low	Not significant
Landscape Fabric and Character	Wind farms would have limited direct impact on landscape fabric of MNTGMVS443 and on its character given the presence of the existing P&	Low	Not significant

¹⁰⁸¹ The relevant LANDMAP Visual and Sensory Aspect Areas are set out in Russell-Vick Session 4 proof at para.5.4 p.24 OBJ-002-LAND-POE-RUSSELL-S4

	L Wind Farm. The OHL route would have a low impact on hedgerow vegetation and trees of MNTGMVS254 and MNTGMVS650 and a low to medium impact on MNTGMVS946.		
Tranquillity and Remoteness	This part of the study area, in particular the uplands area, exhibits notable degrees of tranquillity and remoteness. Both are identified as qualities of MNTGMVS443, MNTGMVS254, RDNRVS111 & RDNRVS114, tranquillity alone for MNTGMVS212 & RDNRVS128 and remoteness alone for MNTGMVS438 but these all incorporate the presence of the P&L Wind Farm. The replacement of the existing wind farm with fewer but higher turbines over a wider area of MNTGMVS443 would have a low to medium effect on these characteristics.	Low to Medium	Not significant
Rarity and Distinctiveness	This part of the study area exhibits a high degree of rarity and local distinctiveness, including MNTGMVS443, MNTGMVS254, MNTGMVS438, RDNRVS128, Wooded River Gorge and Riverside Meadows. The upland areas identify the P&L Wind Farm as a particular contributor to these qualities and the change to this aspect would therefore be low. The impact of the OHL on these qualities of MNTGMVS254 would be medium (with undergrounding).	Low	Not significant
Scenic Value	This part of the study area exhibits a high degree of scenic value, including MNTGMVS443, MNTGMVS254, MNTGMVS438, RDNRVS111, RDNRVS114, RDNRVS128 and MNTGMVS946. The presence of the P&L Wind Farm is considered by LANDMAP to be a contributor to the qualities of MNTGMVS443. There would be a medium cumulative effect on the scenic qualities of MNTGMVS254 and MNTGMVS946, for all of the others, the effect would be low due to restricted visual effects on	Low to Medium	Not significant

	these areas.		
Visual Amenity: Recreational Receptors	The visual impact on users of Glyndŵr's Way would be medium adverse from certain relatively short lengths, most notably from the vicinity of Bwlch y Sarnau from which the wind farms would have an increased visual presence. Visual impact on Offa's Dyke and Severn Way of the OHL would be low in magnitude.	Low to Medium	Not significant
Visual Amenity: Settlements	The wind farms would be distant from most settlements in the study area, with the hamlet of Bwlch y Sarnau and Pant y Dwr the exceptions and from which the wind farms would have an increased visual presence and the magnitude medium adverse. The OHL would be distant and largely discrete from settlement and the magnitude low to medium.	Low to Medium	Not significant

857. The overall in-combination landscape and visual effects of part Scenario 1 including Llandinam Repowering, Llaithddu (north), Hirddywel potentially and an overhead line connection to the grid at Welshpool/Oswestry would be limited in magnitude and the impact not significant.

CUMULATIVE EFFECTS OF SSA B WITH TACPA SCHEMES (AND BNC & BSC GRID CONNECTIONS)

Overview

858. PCC has concluded that the cumulative landscape and visual effects of the Llanbrynmair and Carnedd Wen wind farm schemes, together with the other existing and consented wind farms in SSA B (subject to the Council's objection to the Llanbrynmair access and the Carnedd Wen five turbines) is acceptable.¹⁰⁸² Those existing or consented wind farms which form part of the baseline for the cumulative assessment of Llanbrynmair and Carnedd Wen are Carno A&B, Carno Extension, Cemmaes, Mynydd Clogau and the consented, but not yet operational, Tirgwynt.

¹⁰⁸² Russell-Vick Session 4 proof para.6.1 p.27 OBJ-002-LAND-POE-RUSSELL-S4

859. However, the cumulative landscape and visual effects of these two schemes in-combination with the operational, consented and in-planning (TACPA) schemes, together with their associated connections and infrastructure, would be significant and unacceptable.¹⁰⁸³ It is the incremental effects of the in-planning NSIP and TACPA wind farms that give rise to the significant and unacceptable effects. The in-planning NSIP and TACPA schemes are Cemmaes III (TACPA application refused, appeal pending), Dyfnant Forest (NSIP ES Scoping advanced stage), Mynydd Lluest-y-Graig (NSIP ES Scoping advanced stage), Carno Phase III (TACPA application) and Esgair Cwmowen (TACPA).

860. As to grid connections, the Council considers that use of parallel twin 132kV OHL grid connections from the Llanbrynmair and Carnedd Wen sub-stations (BNC 3, 4 and 5, and beyond to the Legacy sub-station) could be acceptable in landscape and visual terms, both in their own right and cumulatively, subject to appropriate detailed design and mitigation, including the consideration of undergrounding and alternative designs such as parallel twin trident poles, to reasonably minimise the landscape and visual effects.¹⁰⁸⁴ In this scenario, i.e. limited to Llanbrynmair and Carnedd Wen wind farms¹⁰⁸⁵, the Cefn Coch substation would not be required and the grid connection would need to be made at Legacy (a distance of 70km) on the parallel twin 132kV OHL grid connections. The Mott Macdonald Report¹⁰⁸⁶ confirms that this is technically feasible and the applicants have confirmed that there are no viability constraints to a 132kV grid solution over this distance.¹⁰⁸⁷

Cumulative Landscape and Visual Assessment of the Acceptable PCC Scenario for SSA B (part of Scenario 1)

861. The following table sets out PCC's high level assessments against the Russell-Vick criteria.¹⁰⁸⁸

Cumulative Landscape and Visual Assessment of the Preferred PCC Scenario for SSA B (part of Scenario 1)

¹⁰⁸³ Ibid para. 6.2 p.27

¹⁰⁸⁴ See Russell-Vick session 4 proof para. 6.3 p.27 and Figure PRV1

¹⁰⁸⁵ PCC's Scenario 1 OBJ-002-POE-FIGS-RUSSELL-S4

¹⁰⁸⁶ AD-RWE-31

¹⁰⁸⁷ Confirmed by all applicants at the Grid Hearing Session on 25 March 2014

¹⁰⁸⁸ The relevant LANDMAP Visual and Sensory Aspect Areas are set out at para.6.4 p.28 of Mr Russell-Vick's Session 4 proof (OBJ-002-LAND-POE-FIGS-RUSSELL-S4).

Assessment Criteria	Potential Susceptibility	Potential Magnitude of Cumulative Effect	Potential Significance
Designated Landscapes	The south-east boundary of the Snowdonia National Park would lie some 2.5km from the nearest Carnedd Wen turbine and 6km from Llanbrynmair. PCC's Session 2 evidence identifies that whilst there would be some visual significant cumulative effects there would not be significant cumulative character effects or effects on the Special Qualities. The OHL grid connections would not be perceptible from the National Park.	Low to Medium	Not significant
Landscape Fabric and Character	The wind farms would have a noticeable beneficial impact on the existing landscape fabric of the site (i.e. the clearance of afforestation and restoration of moorland) but, in any case, the VSAs directly affected are not valued for their intrinsic character although this character effect would be perceived from nearby VSAs, however, this would be outweighed by the adverse effects of the wind turbines, including notably MNTGMVS422. The OHLs would potentially have a low to medium impact on hedgerow vegetation and trees of MNTGMVS650, Wooded River Gorge and Riverside Meadows.	Low to Medium	Not significant
Tranquillity and Remoteness	This part of the study area, in particular the relatively lightly settled agricultural landscapes and river valleys (MNTGMVS422, MNTGMVS278, MNTGMVS612, WRXHMVS049, WRXHMVS052 and MNTGMVS650), exhibit notable degrees of tranquillity, with remoteness isolated to the uplands areas (MNTGMVS147,	Low to Medium	Not significant

	<p>MNTGMVS733 and MNTGMVS363). The effect of the wind farms on the sense of remoteness of those upland VSAs to the south would be barely perceptible and of low magnitude due the presence of Carno A&B, Carno Extension, Mynydd Clogau and Tirgwynt (consented). The effect of the OHLs on the tranquillity of the lower lying areas would locally be high but this effect would drop off within only several hundred metres due to the restricted are of visual effect. Overall the effect on this characteristic of these VSAs is considered to be low to medium.</p>		
Rarity and Distinctiveness	<p>This part of the study area exhibits a high degree of rarity and local distinctiveness across large areas, including MNTGMVS422, MNTGMVS278, MNTGMVS962, WRXHMVS049, WRXHMVS052, MNTGMVS650, MNTGMVS119, Wooded River Gorge and Riverside Meadows. Those more upland farming landscapes, such as MNTGMVS422 would be more affected (Medium) by the presence of the wind farms than would the low lying landscapes of Shropshire and Wrexham, because of the existing presence of OHLs in these landscapes and relatively contained effect of wood pole OHLs.</p>	Low to Medium	Not significant
Scenic Value	<p>Much of the study area exhibits a high degree of scenic value, including MNTGMVS422 (which is Outstanding), MNTGMVS278, MNTGMVS147, MNTGMVS363, MNTGMVS612, MNTGMVS733, MNTGMVS962, MNTGMVS875, WRXHMVS049, WRXHMVS052, MNTGMVS650, Wooded River Gorge and Riverside Meadows. There would be a medium cumulative effect on the scenic qualities of MNTGMVS422 and low to MNTGMVS278 due to the presence of the wind farms, for all of the</p>	<p>Medium on MNTGMVS422</p> <p>Low to remainder</p>	<p>Significant for MNTGMVS422 because of its Outstanding Scenic value</p> <p>Low for the remainder</p>

	others, the effect would be low due to restricted visual effects on these areas of the OHLs.		r
Visual Amenity: Recreational Receptors	The visual impact on users of Glyndŵr's Way would be high adverse from certain relatively short lengths, most notably from close to the wind farms. Some high level and notable viewpoints from within the National Park would be Medium/High.	Medium to High	Significant
Visual Amenity: Settlements	The wind farms would be distant from most settlements in the study area, with the exceptions of the Banwy Valley villages of Foel, Llangadfan and Llanerfyl to the north and Carno Valley villages of Llanbrynmair, Llan, Talerdigg and Carno to the south. However, the visual impact would be Low at these settlements except for Foel and Llangadfan where it would be High/Medium. The OHL would run past Meifod (potentially undergrounded here), Llansantffraid-ym-Mechain, Llanymynech and Pant but largely discrete from settlement except in the north at Oswestry in which views of other OHL and other built infrastructure are not uncommon and the magnitude Low to Medium.	Medium to High	Significant

862. The overall in-combination landscape and visual cumulative effects of the scenario including Llanbrynmair and Carnedd Wen (subject to PCC's objection to the Llanbrynmair access and the Carnedd Wen five turbines) and the parallel twin 132kV OHL grid connections to Legacy would be significant in landscape terms, although this would be limited to the scenic value of one VSAA but one of Outstanding value, and some significant visual effects, including on users of a national trail, from viewpoints within the National Park and several settlements. Nevertheless, overall these would not, in PCC's view be so significant in extent or degree to be unacceptable effects in landscape and visual terms.

SSA B Alternative Scheme Combinations

863. The TACPA Carno III scheme (45MW) could be included in the part Scenario 1 and make a grid connection without the need for a major new

substation at Cefn Coch. Its power could be exported to Legacy via the same twin wooden pole system as required by Llanbrynmair (90MW) and Carnedd Wen (135-150MW, depending on the five objected to by PCC), or through an upgrade of one or both OHLs to 176MVA heavy duty wood pole OHLs. This is 'extension' to PCC's Scenario 1 would not require a significant change to the grid connections already required by Llanbrynmair and Carnedd Wen.

864. The Council is currently considering the Carno III scheme and recognise that its clustering effect with the existing Carno array assists in limiting its overall impacts, although its currently proposed scale may not be acceptable. Notwithstanding that as proposed, there would potentially be individual landscape and visual effects of the Carno III scheme, its incremental part of the in-combination cumulative effects of Carno III with a heavy duty OHL would not increase the overall cumulative landscape and visual effects substantially and not markedly over and above those identified.

865. The addition of other SSA B located schemes would increase the likelihood of the need for the Cefn Coch substation and an upgrade of the wooden pole OHL grid connection to an L7 small steel lattice tower (27m high) single OHL. Such a solution could accommodate up to around 450-600MVA, depending on the conductors, as opposed to the approximate maximum of circa 350MW on parallel twin wood poles (132kV up to 176MVA).¹⁰⁸⁹ It would need to run from Cefn Coch to Legacy, there being inadequate capacity at the Oswestry substation. This would have similar consequences for the OHL grid connection out from Cefn Coch as would the CC grid connection from SSA C and be similar, therefore, to the PCC Scenario 2.¹⁰⁹⁰

866. The current in-planning Nant-y-Moch scheme in SSA D (140-176MW) has a proposed grid connection to the substation at Cefn Coch. Its capacity could be provided for by the L7 small steel lattice OHL grid connection in a scenario with Llanbrynmair, Carnedd Wen and Carno III (up to 461MW in total). The in-planning TACPA scheme Esgair Cwmowen (45MW) or in-scoping NSIP scheme Mynydd Lluest-y-Graig (50MW) could also be accommodated within the capacity of the L7 small steel lattice grid connection but the larger in-scoping NSIP Dyfnant Forest scheme (80-120MW) could not, individually or with others. Scenarios with the inclusion of schemes beyond 600MW capacity in total of an L7 OHL would generate the need for the National Grid's 400kV line from Cefn Coch to the existing line at Oswestry.¹⁰⁹¹

867. An L7 small steel lattice tower grid connection between Cefn Coch and Legacy would lead to an increase in landscape and visual effects over and above those of the twin wood pole system due to the increased height of the installation (from 14m to 27m), the appearance of the construction (from

¹⁰⁸⁹ Russell-Vick Session 4 proof para.6.8 p.32 OBJ-002-LAND-POE-RUSSELL-S4

¹⁰⁹⁰ See Russell-Vick session 4 proof figure PRV2 OBJ-002-POE-FIGS-RUSSELL-S4

¹⁰⁹¹ Russell-Vick Session 4 proof para. 6.9 p.32 OBJ-002-LAND-POE-RUSSELL-S4

'simple' double twin uprights, i.e. four poles, to a lattice construction) and the material (timber to steel). The height would be the major factor; at 14m the twin wood poles would be at or below the tree-line, especially in the river valleys where the topography is flat, whilst the 27m high structures would always exceed the height of the tree-line, greatly increasing the 'real', as opposed to theoretical, ZTV and increasing the magnitude of visual effect, particularly on the valley settlements.

868. Such effects would be less readily absorbed in landscape character terms and the current levels of tranquillity, rarity/distinctiveness and scenic value of the river valley and adjacent landscapes would be more likely to be adversely affected. 'Serious concerns' as referred to in EN-5 would be likely to be triggered in the Meifod Valley and undergrounding would be required in the upper section of the valley. Detailed landscape and visual assessment would be required by the Council and the effects would have to be considered having regard to the need. There is the potential for significant individual and cumulative effects and for this connection to be found unacceptable in landscape and visual terms.

CUMULATIVE EFFECTS BETWEEN SSA B AND SSA C SCHEMES AND TACPA WIND FARMS

Overview

869. PCC does not consider that unacceptable in-combination cumulative landscape effects would occur between the wind farm schemes before the Inquiry in SSA B and C (over and above those in-combination cumulative landscape effects that would occur separately with the SSA B and C schemes).¹⁰⁹²

870. From a few sensitive locations, in particular weather conditions, there is the potential for additional significant visual effects (over and above those in-combination cumulative visual effects that would occur separately with the SSA B and C schemes). The area likely to be affected would be the landscape between SSA B and C where the sole visual effects of either would not be significant but together they would.¹⁰⁹³ However, the number of locations would be limited to the higher areas of ground, whilst noting that the area of open upland/moorland of a level to provide clear open views of all schemes, between the two SSAs, is limited. Such visual effects, limited in extent and relatively in degree, do not render any or all of the schemes unacceptable.

¹⁰⁹² Russell-Vick Session 4 proof para. 7.1 p.34 OBJ-002-LAND-POE-RUSSELL-S4

¹⁰⁹³ Viewpoint 3 – Garreg Hir – (LUC Visualisation CCVP3) the SSAB schemes would on their own be close to giving rise to a significant visual effect but with the SSAC schemes, seen in the right conditions, these could in-combination give rise to a significant cumulative visual effect. AD-RES-042 (RES Supplementary Environmental Information, December 2013, Volume 3 Part 2)

871. The Applicants' joint selected cumulative photomontages illustrate all of the schemes before the Inquiry plus the in-planning NSIP and TACPA schemes. They do not illustrate the grid connection proposals or alternatives and have not been selected for this purpose. Whilst many of these photomontages highlight cumulative visual effects, many of which are clearly significant in nature, on their own they do not necessarily indicate the acceptability or otherwise of a scheme or combination of schemes, but they do taken overall illustrate the potential for very wide ranging and severe visual effects if all or many of the schemes currently in-planning were to come forward.

CC GRID CONNECTIONS AND CUMULATIVE EFFECTS WITH SSA B & C SCHEMES

Overview

872. The Council considers that the CC1 132kV OHL route, together with its connections to Neuadd Goch and Llanbadarn Fynydd (CC2 and 3 respectively) to be unacceptable in its own right in landscape and visual terms and cumulatively with operational, consented and in-planning wind farms and other infrastructure.¹⁰⁹⁴ The route corridor of CC1 would have a significant and unacceptable impact on the landscape character, including several landscapes of High overall evaluation as considered by LANDMAP, and significant and unacceptable visual impacts along its length.

873. PCC's "acceptable schemes" in SSA C schemes in Scenario 1, i.e. Llandinam Repowering and Llaithddu (north), together potentially with Hirddywel subject to formal consideration, total some 156MW. The electricity generated by this acceptable scenario would be capable of being accommodated on an upgraded Llandinam 176MVA OHL. Exceeding this capacity would require the CC1 route from SSA C to a Cefn Coch substation together with the need to upgrade the grid connection route to Legacy to a L7 small steel lattice.

874. A combination of Llandinam Repowering and Llaithddu (both north and south arrays) or Llandinam Repowering and Llanbadarn Fynydd, which would total 164MW or 161.5MW respectively of generation. This is individually just capable of being accommodated on an upgraded Llandinam OHL. The implementation of all three schemes before the Inquiry, with or without Hirddywel, would inevitably

¹⁰⁹⁴ Russell-Vick Session 4 proof para.8.1 p.36 OBJ-002-LAND-POE-RUSSELL-S4

lead to the CC1 route or a second HDWP north east from SSAC¹⁰⁹⁵ because of the limit on capacity at Welshpool in addition to the Llandinam OHL.¹⁰⁹⁶

875. The SPM proposal for the CC1 connection, would consist of a single 14m high twin wood pole 132kV OHL. This would run from Bryn Cwmyrhiwdre, close to the head of the Ithon Valley, some 32km north to the Cefn Coch substation. It would run east-west over the Waun Ddubarthog ridge, north towards Llanidloes across the Moelfre undulating foothills, where it would cross the Severn Valley, north over the Oakley Park hill area before crossing the Caersws Basin west of Caersws. Then north again, through minor valley systems through the Mynydd Garth-pwt hill area, before crossing the Carno Valley west of Carno village, before climbing again up, alongside Garreg Hir, onto the Esgair Cwmowen ridge and to the Cefn Coch substation.

876. A principal concern with this route corridor (beyond the Council's concern that it is not necessary in the context of its objection to many of the wind turbines in SSA C) is that the route corridor, largely by necessity, cuts across the natural grain of the topography, running perpendicular to the essentially west to east valley system and climbing up and through one area of high land after another.

877. In this context the CC1 proposal does not perform well when compared with the Holford Rules¹⁰⁹⁷ which seek to avoid such alignments because of the likely unsympathetic and adverse landscape and visual outcomes. Along this route corridor various diversion alternatives are indicated in the current proposals¹⁰⁹⁸. Several of these are likely to be preferable in landscape terms because they follow the topography more sympathetically, for example the diversion in the Oakley Park hill area, although they are not themselves without some considerable effects. There is the increased likelihood of impacting on private property and increasing visual impacts on local residents, as some of these alternatives seek to follow the lower lying areas. The route over the Esgair Cwmowen area would pass through an exposed remote landscape and, notwithstanding the presence (Mynydd Clogau with Tirgwynt consented) and the potential presence of wind turbines, the clutter of this infrastructure would have a significant adverse impact.

878. Further 'in principle' concerns relate to the likely heavy vegetation loss along some of the length of the route, because of the small to medium scale of the

¹⁰⁹⁵ Shrewsbury has been mooted as a possible grid connection point but no assessment has been undertaken of the feasibility of such a connection.

¹⁰⁹⁶ See Russell-Vick session 4 proof Scenario 2 Figure PRV2 OBJ-002-POE-FIGS-RUSSELL-S4

¹⁰⁹⁷ CD/SPM/GUID/001

¹⁰⁹⁸ SPM Mid Wales Connections Line Routeing Methodology & Appraisal Phase 3 Report September 2013 Goodrum Session 4 Appx.1 FWLC-LAND-POE-GOODRUM-S4

field pattern in certain areas and wooded character of some of the minor valleys the route seeks to follow, and the subsequent character impacts on an area of countryside without any other significant or similar overhead infrastructure. Whilst the character of such landscapes can restrict the extent of the effects due to limiting the extent of visibility, nevertheless, locally to the line the effects are likely to be physically more substantial than in larger scale more open (and flatter) landscapes.

Landscape and Visual Assessment of CC1, CC2 and CC3

879. PCC’s high level assessments of CC1, CC2 and CC3 against the seven criteria are as follows:¹⁰⁹⁹

<i>Assessment Criteria</i>	<i>Potential Susceptibility</i>	<i>Potential Magnitude of Effect</i>	<i>Potential Significance</i>
Designated Landscapes	No issues arise in respect of Snowdonia National Park or the Shropshire Hills AONB. The route would run parallel (some 1.5 – 2km distant) to the west boundary of the Caersws Registered Historic Landscape for a length around 5km but likely to be only visible from the designated landscape from within the open landscape of the Severn Valley. Visual impact would be limited.	Low	Not significant
Landscape Fabric and Character	The OHL route corridor would potentially have a considerable impact on the small to medium scale field pattern and fine grain of the landscapes in MNTGMVS254, MNTGMVS438, MNTGMVS227 and	Medium to High	Potentially Significant

¹⁰⁹⁹ The relevant LANDMAP Visual and Sensory Aspect Areas are set out in Russell-Vick’s session 4 proof para.8.7 p.37/38 OBJ-002-LAND-POE-RUSSELL-S4

	RDNRVS123.		
Tranquillity and Remoteness	Tranquillity and Remoteness are strong characteristics of the upland areas of MNTGMVS443, MNTGMVS254 and MNTGMVS733, noting that the former is considered by LANDMAP to be enhanced by the presence of the P&L wind farm. The greatest impact would be at Esgair Cwmowen. Remoteness is a characteristic of the lower lying areas MNTGMVS438 and MNTGMVS695. The effect of the OHL on the remoteness of the lower lying areas would locally be high but this effect would drop off within only several hundred metres due to the restricted are of visual effect. Overall the effect on this characteristic of these VSAs is considered to be medium.	Medium	Not significant
Rarity and Distinctiveness	The study area exhibits an overall moderate level of local distinctiveness and rarity, with high levels prevalent in MNTGMVS443, MNTGMVS254 and MNTGMVS438.	Low to Medium	Not significant
Scenic Value	High levels of scenic value are exhibited across most of the study area including MNTGMVS443, MNTGMVS254, MNTGMVS438,	Medium to High	Potentially Significant

	MNTGMVS733, MNTGMVS227 and MNTGMVS695.		
Visual Amenity: Recreational Receptors	From Waun Ddubarthog to Oakley Park the route would cross over Glyndŵr's Way national trail twice and pass within 100m on one other occasion. The route would also pass over the Severn Valley Way regional trail at Oakley Park and run adjacent to it for 1km. Visual impact would be High on both routes and many other public rights of way as well.	High	Significant
Visual Amenity: Settlements	The route would be largely distant from settlement. The scattered properties at Newchapel, villages of Oakley park and Clatter would experience some visual impact.	Low to Medium	Not significant

880. The significant impacts would be to the existing landscape fabric and character of the small to medium scale farmed landscapes, the wooded character of the minor valleys and the open landscape of Esgair Cwmowen; the visual effects on the national and regional trails and, most significantly of all, to the high scenic value of the study area through which most of the route corridor would run. Whilst potentially none of these impacts alone or in-tandem would trigger 'serious concerns' at any one specific point in the landscape, such as to require the need for undergrounding, the accumulation of many other high adverse effects across a wide area and diversity of landscapes mean that the route would be potentially unacceptable in landscape and visual terms.

881. This conclusion contrasts with that reached by both Llabadarn Fynydd and Llaithduu. On Llaithduu's analysis, not a single effect of the CC1 route would be significant.¹¹⁰⁰ That was a conclusion which Llandabarn Fynydd were prepared to endorse following a review of the Llaithddu assessment by their landscape witness.¹¹⁰¹ However, the Llaithddu analysis has a series of critical flaws which

¹¹⁰⁰ Goodrum Session 4 proof para. 7.2.6 p.37 FWLC-LAND-POE-GOODRUM-S4

¹¹⁰¹ See Gates Session 4 rebuttal proof para.1.1.3 VATT-LAND-REBUTTAL-GATES-S4

lead it to underestimate the magnitude of effect of introducing an HDWP within the CC1 corridor.

882. Firstly, it is benchmarked by the SPM assessment of effects for the Lladninam 132kV scheme.¹¹⁰² For the reasons set out in the Session 3 section of these submissions, the SPM assessment of effects¹¹⁰³ is a “fudged” assessment which is skewed to avoid ever finding an effect to be major notwithstanding and thus internally inconsistent with its own underlying methodology. It is not a generally reliable basis for concluding as to the magnitude of effects of this form of infrastructure in this landscape. Secondly, Llaithddu’s analysis of the sensitivity of the landscape to change is based on the introduction of generic “electrical infrastructure”¹¹⁰⁴ rather than the construction of a HDWP overhead line. Whilst Llaithddu sought to contend that such a proposal would be “slender” and “readily absorbed into the landscape”,¹¹⁰⁵ that description shows little understanding of the true nature and effects of the HDWP design. Its pole structures, stays and the need for straight lines with significant clearances to vegetation are all features which ensure that such proposals impose themselves on a landscape rather than being readily absorbed. Thirdly, the Llaithddu field-based sensitivity assessment¹¹⁰⁶ beyond the obvious failing of not properly considering the infrastructure to be introduced then compounds that weakness by reaching conclusions which are effectively the opposite which the underlying LANDMAP data would indicate. The result is that only one of the lengths of the CC1 corridor is identified as having a sensitivity as high as medium high. The remainder of the route is predominantly of medium sensitivity with medium-low sections at either end.¹¹⁰⁷

883. That may be contrasted with SPM’s analysis of the same route¹¹⁰⁸ which more closely reflects the LANDMAP assessment. When an allowance is made for its inherent bias in favour of the likely effects of a HDWP, that SPM assessment accords fairly closely with that of PCC. Ultimately, the conclusion must be that Llaithddu’s sensitivity assessment is of limited value. Its description of the landscape is broadly accurate but it does not explain let alone demonstrate how the descriptions input in any meaningful sense into the sensitivity analysis. That is probably because they do not.

884. The Llanbadarn Fynydd “review” of sensitivity advances the applicants’ case no further. It too is substantially reliant on SPM’s “benchmarking” and based on

¹¹⁰² See Goodrum Session 4 proof para 4.2.11 p.19 FWLC-LAND-POE-GOODRUM-S4

¹¹⁰³ Undertaken by Ms Gibson

¹¹⁰⁴ Goodrum XX PCC 26.3.14

¹¹⁰⁵ Goodrum Session 4 proof para. 7.1.1 p.35 FWLC-LAND-POE-GOODRUM-S4

¹¹⁰⁶ Goodrum Session 4 proof appendices FWLC-LAND-POE-APP-GOODRUM-S4

¹¹⁰⁷ See Goodrum Fig 32 Session 4 proof Appx 5. FWLC-LAND-POE-APP-GOODRUM-S4

¹¹⁰⁸ See SPM Field-Based Landscape Sensitivity in Relation to Overhead Lines March 2012 – Goodrum Session 4 proof appendices Appx.4 FWLC-LAND-POE-APP-GOODRUM-S4

a misunderstanding of the components of a HDWP 132kV line.¹¹⁰⁹ Again this substantially weakens the sensitivity conclusions reached. Worse still, the only difference of opinion between Llanbadarn Fynydd and Llaithddu on the issue of landscape sensitivity relates to Llanbadarn Fynydd's downgrading of the only section of CC1 ranked as medium/high by Llaithddu.¹¹¹⁰ The reasons advanced for this downgrading reflect Mr Gates apparent phobia of managed pastoral landscapes,¹¹¹¹ a contention which has consistency with his Session 1 evidence as its sole merit. Helpfully however, Llanbadarn Fynydd have confirmed that PCC's landscape sensitivity criteria are sound¹¹¹² and the true sensitivity of the CC1 route to the infrastructure proposed can be assessed in the field.

885. In respect of the cumulative effects of CC1, CC2 and CC3 with the wind farms and other infrastructure, such effects would be limited to the route corridors within SSA C, where there would be some significant cumulative effects with wind farms and the Llandinam 132kV OHL, and at Cefn Coch with the SSA B schemes and infrastructure. However, the CC1, CC2 and CC3 routes would not in themselves be a major incremental part of those significant effects i.e. they would not in themselves lead to an acceptable wind farm being unacceptable in purely incremental terms.¹¹¹³ However, to the extent that CC1 would be required to serve one or more SSAC wind farm, its combined effect would be to compound the overall effects of the relevant wind farms. Were these to be Llaithduu or Llanbadarn Fynydd, this would serve to reinforce the conclusion that these should not be permitted.

The Shrewsbury Additional 132kV HDWP Option

886. This option is referred to in the Mott Macdonald report as being technically feasible. With the upgrade of the Llandinam scheme to 160MW, this would have the capacity to increase the generation exported from SSAC to 336MW.¹¹¹⁴ This would have capacity for most of the proposed SSAC generation but would come at a significant environmental cost. To parallel two lines would require spacing of 17m¹¹¹⁵ between the lines themselves and then a corridor or corridors through the landscape accommodating the same levels of clearance proposed with the Llandinam scheme. Given the character, nature and scale of the landscape through which this parallel solution would have to pass and, even in the absence of even a high level assessment, the significance of likely effect is obvious.

¹¹⁰⁹ Mr Gates believed the design involved single poles rather than the dual pole HDWP design – Gates Session 4 rebuttal proof paras. 1.6.2 and 1.6.4 VATT-LAND-REBUTTAL-GATES-S4

¹¹¹⁰ Subsection 4 – Afon Cerist. See Gates Session 4 rebuttal para.1.5.5 VATT-LAND-REBUTTAL-GATES-S4

¹¹¹¹ Ibid para. 1.5.6

¹¹¹² Ibid para. 1.5.1

¹¹¹³ Confirmed by Mr Russell-Vick in XX by LF 27.3.14

¹¹¹⁴ 160MW + 176MW

¹¹¹⁵ See SPM Note SPM-031 and SPM-031a

Use of the Llandinam 132kV scheme

887. Llanbadarn Fynydd correctly point out that the grid solutions are scheme neutral i.e. their individual acceptability does not turn on which wind farms they serve and Llanbadarn Fynydd might be able to make use of the Llandinam scheme either in isolation or as part of an upgraded solution. That is correct, although for the reasons already set out the Llanbadarn Fynydd scheme is not acceptable, the Llandinam scheme now is and it has the benefit of the connection agreement with SPM. Further, a north/north easterly grid connection from Llanbadarn Fynydd would come at additional environmental cost. It would require a connection to be routed through a cone northwards from the wind farm¹¹¹⁶ and through a landscape of high sensitivity and rich with heritage assets. To avoid unacceptable effects undergrounding is likely to be required.

888. It follows that any scheme which generates a requirement for a parallel HDWP solution compounds its individual landscape and visual effects. Where use can be made of the capacity of the Llandinam scheme, there would be no such compounding provided that the connection is undergrounded.

NATIONAL GRID 400kV LINE¹¹¹⁷

Overview

889. The starting point for the purposes of the five wind farm schemes before the inquiry is that they do not either individually or cumulatively generate sufficient electricity to justify the installation of a 400kV connection to the national grid. It is addressed in closing so that the Secretary of State is aware of the likely implications should approvals for wind farms in the SSA's demonstrably exceed their environmental capacities. The "trigger" for a 400kV line is about 600 MW.

890. PCC considers that the route corridor of the 400kV National Grid connection between the proposed Cefn Coch sub-station and the Oswestry sub-station would have a significant and unacceptable impact on the landscape character of a substantial area of the northern Powys landscape, including in particular parts of the Vyrnwy Valley and several landscapes of High overall evaluation as considered by LANDMAP, as well as significant and unacceptable visual impacts along its length. PCC recognises the reduction of overall effects provided by the proposed undergrounded length along part of the Meifod Valley but considers that this would not adequately mitigate the landscape and visual harm of the scheme overall.

¹¹¹⁶ See Gates Session 4 Apps Figure 5 VATT-LAND-REBUTTAL-GATES-S4

¹¹¹⁷ Russell-Vick Session 4 proof section 9 pp.41-45 OBJ-002-LAND-POE-RUSSELL-S4

891. The scheme for the 400kV line would involve steel lattice towers typically 46.5m high and some 360m apart running for around 50km north-east from the Cefn Coch substation, across the Banwy Valley and into the Meifod Valley at Newbridge, where it would be undergrounded for 13km along the base of the valley to 1km east of the A490 road. From here it would run overground following the Meifod Valley and the course of the River Vyrnwy to Llanymynech where it would run east of Oswestry to join the existing 400kV line at Woolston. Other route options have been considered and consulted upon by National Grid, for example a more southerly set of options and variants have been looked at via the Severn Valley and Welshpool. The route currently preferred by National Grid has the advantage of being the shortest length between the two end points and for its length along the Meifod Valley at least, it would follow the general grain of the topography. However, this route corridor's 'advantages' are also something potentially shared by the other less significant grid connection options.

892. At a high level the route corridor and its effects can be split into four sections: From the Cefn Coch substation to Newbridge, the undergrounded section in the upper part of the Meifod Valley, the lower overground section in the Meifod Valley and the section into Shropshire to Oswestry.

893. The section from Cefn Coch to Newbridge is not a particularly good landscape 'fit' with topography. Whilst the route initially follows a shallow valley with an open character, it has by necessity to drop down, across and up the valley sides, perpendicular to the grain of the Banwy Valley, before similarly dropping down into the Meifod Valley near Newbridge. This route is significantly harmful to the character of the Banwy Valley as a whole (bearing in mind its importance as a settled area and east-west transport corridor). The proposed undergrounded second section is absolutely necessary to mitigate the serious concerns that would otherwise arise in the context of the narrow, settled and highly scenic upper part of the valley. The lower part of the valley in the third section has a greater scale than the upper part and some more capacity to absorb the effects. However, significant effects would occur to adjoining landscapes on the valley's edge and visual impacts to settlements and scattered property. The fourth section in Shropshire is predominantly flat to gently undulating and has a broad, open character with a large scale. The effects in this section would be significant locally but not widespread because of the inherent scale of this landscape.

Landscape and Visual Assessment of the National Grid 400kV Line

894. PCC's high level assessments against the assessment criteria is as follows:¹¹¹⁸

¹¹¹⁸ The relevant LANDMAP Visual and Sensory Aspect Areas are set out in Mr Russell-Vick's session 4 proof at para. 9.4 OBJ-002-LAND-POE-RUSSELL-S4

<i>Assessment Criteria</i>	<i>Potential Susceptibility</i>	<i>Potential Magnitude of Effect</i>	<i>Potential Significance</i>
Designated Landscapes	Designated landscapes are too distant to be significantly affected.	Low	Not significant
Landscape Fabric and Character	Valley and small scale landscapes adjoining the Banwy Valley vulnerable to major development changes to their fabric and character, e.g. MNTGMVS119 and MNTGMVS278, where the impacts would potentially be significant. Some landscapes adjoining the Meifod Valley would be sensitive to major development changes such as MNTGMVS612 and MNTGMVS962, because their integrity and character depends to degree on adjoining characteristics, i.e. views across the valley.	Medium to High	Potentially significant in local areas
Tranquillity and Remoteness	Tranquillity and remoteness are only exhibited together in the Esgair Cwmowen part of the study area, i.e. MNTGMVS733. The 400kV line would have a significant effect on the sense of both in this area as would the proposed wind arms and associated other infrastructure. Tranquillity is also experienced in the small scale farmlands by the Banwy Valley, MNTGMVS278, and along the Meifod Valley, MNTGMVS650 and Riverside Meadows. Again both would be significantly affected by the OHL,	Medium to High	Potentially significant

	notwithstanding the undergrounded section.		
Rarity and Distinctiveness	The study area exhibits considerable areas of rarity and local distinctiveness in the valley areas, i.e. MNTGMVS650, MNTGMVS119 and Riverside Meadows. The loss to the local distinctiveness of the lower Meifod Valley would be significant.	Medium to High	Potentially significant
Scenic Value	High scenic value is associated with the upland parts of the study area affected including the Meifod valley side to the north, rather than the valley floors, i.e. MNTGMVS733, MNTGMVS278, MNTGMVS612 and MNTGMVS962. The impacts on the scenic qualities of some of the adjoining landscapes are likely to be significant because of the high degree of visual effect of the OHL.	Medium to High	Potentially significant
Visual Amenity: Recreational Receptors	Glyndŵr's Way would cross the route of the corridor at Meifod village, by which the route would be undergrounded. There would be no significant visual effects on this section of the route. The route would pass over Offa's Dyke path where this crosses the valley at Llanymynech. The visual impact on this national rail would be significant for a 3km length.	High	Potentially significant

Visual Amenity: Settlements	Several settlements (and many scattered and more isolated property) would be affected in the lower Meifod Valley including Llansantffraid-yr-Mechain, Llanymynech, Llandysilio, Maesbrook, Pant, Llyncllys, Crickheath, Woolston and West Felton.	High	Significant
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895. The National Grid 400kV line would have a widespread range of landscape and visual impacts. In the section from Cefn Coch to Newbridge, it would be significantly out of scale with the landscape of the Banwy Valley and adjoining landscape and harmful to the scenic value of the Pont Llogel Farmlands. In the upper section of the Meifod Valley a length of undergrounding would be essential but considerable concern still remains over the precise length of undergrounding and the locations for the substantial sealing compounds required. In the lower section of the valley there would be an impact on landscape character and the sense of tranquillity of the river landscapes as well as significant visual effects to a large number of settlements. In the section from the border into Shropshire the concern relates to high and significant visual impacts on settlement and on Offa's Dyke national Trail. The 400kV scheme would be individually and cumulatively significantly harmful and unacceptable in landscape and visual terms even allowing for 13km undergrounding in the Meifod Valley.

SSA C HIGHWAY IMPROVEMENTS

Overview

896. In relation to the construction of the SSA C schemes, PCC accepts that there may be the requirement for localised highway improvements at the Mochdre Industrial Estate and at Builth Wells, where a temporary bridge and related highway links may be required to cross the River Wye. PCC considers that the landscape and visual effects of these may be acceptable subject to detailed design and appropriate mitigation but would seek to reserve its position until such details are available.

897. The improvements at the Mochdre Industrial Estate, at Newtown, would appear to require a short length of new link road from the industrial estate to the A483. Whilst there would be some earthworks and vegetation loss the impacts are considered to be low key in landscape and visual terms and PCC would not object on these grounds, should the requirements prove necessary.

898. The current details for the temporary bridge and links at Builth Wells are limited for a proper assessment to be undertaken. From the information that is available a temporary link could potentially be formed without a significant

or irreversible landscape and visual effect. Again PCC would not object to appropriate proposals, as long as they were necessary.

SESSION 4 TRANSPORT AND NOISE

Transport session 4 cumulative effects

Overview

899. In the PCC statement of case for session 4¹¹¹⁹ the Council indicated that although the route from Newtown to the Llandinam and Llaithddu sites was likely to be achievable, there was a lack of sufficient evidence in relation to the proposed AIL movements along the route. This meant that a proper judgment could not be made on the transport implications of the proposals¹¹²⁰.
900. In relation to the proposed AIL route from Ellesmere Port to the Llanbadarn Fyndd, Carnedd Wen and Llanbryn-mair sites PCC considered that the route was reasonable and appropriate subject to further clarifications of the route being provided¹¹²¹.
901. Prior to the start of Session 4 further information was received from the applicants as set out in the PCC evidence¹¹²².
902. This has allowed PCC, after careful consideration, to withdraw their overall objections in relation to the individual and cumulative transport effects of the applications [save as has been identified earlier in these submissions in relation to outstanding session 1 and 2 issues], subject to the imposition of suitable conditions.
903. Despite the overall conclusion that the highway objections should not be maintained, Powys recognise that there will inevitably be considerable disruption and inconvenience caused on the roads to residents of and visitors to Powys. That level of disruption and inconvenience will clearly be lessened if, in accordance with the overall case presented by Powys to the inquiry, not all of the schemes are granted consent. This is a matter that should be weighed in the overall balance by the Secretary of State.

Construction traffic and conditions

904. Each Applicant has expressed a preference for a particular AIL delivery route¹¹²³.

¹¹¹⁹ OBJ-002-SOC-S4

¹¹²⁰ OBJ-002-SOC-S4 at 5.3, pps 9-10

¹¹²¹ OBJ-002-SOC-S4 at 5.4, p.10

¹¹²² OBJ-002-TRANS-POE-AXON-S4 – proof of M Axon, pps 6-8

¹¹²³ See OBJ-002-TRANS-POE-APP-AXON-S4 at Figure MA1 which shows the sites and the propose AIL routes

905. Carnedd Wen and Llanbrynmair (SSA B) and Llanbadarn Fynydd (SSA C), propose the use of routes from Ellesmere Port, and this is set out in the Strategic Traffic Management Plan ('sTMP').
906. The two remaining sites in SSA C, Llandinam and Llaithddu, propose the use of routes from Newport. This is set out in the 'Llandinam Wind Farm Repowering Draft Traffic Management Plan, 24th December 2013' and the 'Fferm Wynt Llaithddu Wind Farm Transport Management Plan' dated August 2013.
907. PCC does not have a preference in principle between the use of Ellesmere Port and Newport for the transport of wind farm components and considers that in principle either route is acceptable.
908. In relation to non AIL construction traffic, PCC are content that provided suitable conditions are included requiring transport management to be agreed and implemented the movements will not be of such a scale as to cause PCC to object¹¹²⁴.
909. PCC have proposed a number of highway related conditions. Most are uncontroversial and cover the standard requirements for similar schemes. To the extent that there has been disagreement with some applicants on particular issues, PCC make the following submissions.
910. In relation to AIL traffic, it is inevitable that conditions will be required to deal with routing and required engineering works as well as for the appropriate management of the movement AILs alongside other potential developments.
911. To this end, PCC have proposed conditions which require the submission and approval of an AIL Traffic Management Plan to provide a framework for the routing and engineering detail relating AIL traffic. Some of the applicants (Carnedd Wen, Llanbrynmair and Llanbadarn Fynydd) consider that there is no need for a further plan approval process as the submitted sTMP is in a suitably finalised form. PCC disagree. Although the latest version of the STMP has been produced in an amended and fairly detailed form and accepted 'in principle' by the WG it is likely to require further change. As is usual, PCC and the Welsh Government¹¹²⁵ have suggested a wording of condition which requires, at the relevant time, for submission and subsequent approval of a traffic management plan. That is reasonable and necessary as:
- a. circumstances on the ground may well change in the intervening period – which may be several years – before submission. By way of example, if the Newtown Bypass were to exist it would make sense for Llanbadarn

¹¹²⁴ PCC have proposed a condition requiring the submission and approval of a construction traffic management plan for non AIL vehicles.

¹¹²⁵ See WG responses dated 25.2.14, condition 4 save in relation to Llanbrynmair. PCC notes that these do not appear to be on the inquiry website but should be.

Fyndd to use that road for AIL access rather than the proposed Mochdre route and the current version of the sTMP would need to be revised¹¹²⁶.

b. There remain a number of inaccuracies in even the latest version of the sTMP which will need to be corrected¹¹²⁷.

912. As Mr Tucker has pointed out in his submission to the inquiry on planning conditions¹¹²⁸, the sTMP is still not fully designed and will require variations to address the requirements of specific sites and their chosen turbine components. It is therefore necessary to adopt conditions to ensure that for each site there is a specific plan which is approved by the relevant highway authority at the relevant time.

913. A condition requiring the submission of an AIL management strategy to address issues relating to movement management and to deal with the potential conflict with routing and management schemes for other sites is proposed and is also necessary.

914. PCC also propose a condition requiring the submission of a scheme to provide for the remediation of any damage or deterioration of the highway (to include both the trunk road and the local road network) attributable to the development. Given the extent of movements this is clearly necessary and it is of note that a similar condition has been requested by the Welsh Government¹¹²⁹.

Noise issues – cumulative issues and AM

915. Issues relating to noise have now been agreed as set out in the various statements of common ground¹¹³⁰ between PCC and the applicants. PCC do not consider there will be any outstanding cumulative or individual noise issues that should result in the schemes being refused.

¹¹²⁶ As accepted by Llanbadarn Fynydd – see Bell planning Balance (VATT-PLANNINGBALANCE-POE-BELL) hearing statement (May 2014) at p.20, para 4.5.3, bullet point 2

¹¹²⁷ For example: Section 1 p1 - Delivery times, only one per day through Welshpool and Newtown – there is no need for this restriction; Section 1 (2.2 Legislative Context) - it is not the case that all AIL movements will be escorted by the Police; Section 1 3.1 - the Vastre route is no longer either a proposal or indeed acceptable to PCC; Section 1 3.2.1 – PCC does not agree the SSA B south route nor is it being proposed now - Section 1 3.2.3 - more mention of the Vastre which should have been deleted to be consistent; Section 1 4.1 - SSA B (South) still mentioned; Section 1 7.1; 7.2.2; 7.2.3 - Delivery times - one per day through Welshpool Section 1 9.1; 9.2.3; 2.2.1, 3.2.1- the Vastre is referred to in error.

¹¹²⁸ No inquiry reference is currently available. (CROC-001-SIE)

¹¹²⁹ The principle of a condition requiring such remediation is not unusual – see for example condition 8 of the recent S of S Turncole Farm decision – 13.2.14 – at appendix 1 of Cand (Celtpower) supplementary proof on noise for session 4

¹¹³⁰ FWLC-SOCG-002 – PCC and Llaithddu; VATT-NOISE-SOCG-SSA-C – PCC and Llanbadarn Fynydd; CPL-SOCG-004A – PCC and Llandinam;; RES-PCC-SOCG-NOISE-SSA-B – PCC and Llanbrynmair; RWE-PCC-SOCG-NOISE-SSA-B – PCC and Carnedd Wen.

916. In relation to conditions, agreement has been reached in relation to conditions covering construction noise and operational noise¹¹³¹.

917. In light of recent research by Renewable UK and a series of appeal decision imposing conditions in relation to Amplitude Modulation, PCC submit that if the Secretary of State considers it necessary, it would be appropriate to impose a condition relating to this on all the schemes in the form suggested by Powys¹¹³². The proposed wording is similar to the approach adopted by the Secretary of State in Turncole and that suggested by the Inspector during session 4. It recognises that further research or at least endorsement of existing research is likely in the near future and that recent research provides an evidence base to support the existence of 'OAM'. To that end it requires the submission and approval of a scheme for the regulation and assessment of Amplitude Modulation which should accord with relevant guidance – should it exist at the time of submission.

918. To that extent at least, matters have moved on since the various Statements of Common Ground were entered into¹¹³³. In considering whether

¹¹³¹ No inquiry reference is available.

¹¹³² *"No turbine shall be brought into operation before a scheme for the assessment and regulation of Excess Amplitude Modulation (EAM) has been submitted to and approved by the Local Planning Authority. That scheme shall be in general accordance with, if it exists:*

a) any guidance endorsed in National Planning Policy of Guidance at that time; or in the absence of endorsed guidance

b) any suitable published methodology endorsed as good practice by the Institute of Acoustics

The approval scheme shall be implemented for the life of the development hereby approved"

¹¹³³ The agreed position with the developers in the SOCGs was based on previous understanding

that the only AM conditions imposed by an Inspector were at Den Brook (APP/Q1153/A/06/2017162) and by the Secretary of State at Swinford (APP/F2415/A/09/2096369/NWF). These cases predate the Institute of Acoustics guidance and have been discussed at length in several later decisions. These decisions and the debate as to whether to attach conditions for AM is frequently rehearsed. Three such cases which support the view that a condition should not be attached are Woolley Hill (APP/H0520/A/11/2158702), March 2012 – see paras 183-202; Jacks Lane (APP/V2635/A/11/2154590) July 2012 – see paras 161-167; and Batsworthy Cross (APP/X1118/A/11/2162070) – Oct 2012 – see paras 156-172. There remains no consensus amongst the acoustic community regarding the definition, causes, mechanics, duration or seriousness of OAM. The latest published research into OAM is that of "Renewable UK entitled Wind Turbine Amplitude Modulation: Research to Improve Understanding as to its Cause and Effect -December 2013". A copy can be downloaded at:

<http://www.renewableuk.com/en/publications/index.cfm/wind-turbineamplitude-modulation>. This document has been discussed at a number of inquiries in January 2014. The research provided some evidence base for supporting the existence of OAM. It also stated that in certain circumstances it can be susceptible to objective identification and quantification. Two recent cases to imposed AM conditions. In the Turncole appeal (FUL/MAL/10/01070) decision – 13th February 2014 the Secretary of State decided an AM condition was needed in this case – see at para 18; In Appeal Ref: APP/W1145/A/13/2194484 Land at Dunsland Cross, Brandis Corner, Devon on 30th January 2014 an AM condition was also imposed – see at at para 59:

such a condition is necessary, it is appropriate in this area to apply a relatively low threshold of necessity as indicated by the Inspector during the session 4 hearing. PCC do not consider that an AM condition would duplicate the statutory nuisance regime as suggested by Carnedd Wen¹¹³⁴.

HISTORIC ENVIRONMENT CONSIDERATIONS

PCC "Acceptable" Scenario 1

919. No cumulative or scheme-based objections, in historic environment terms, to the wind farm schemes proposed under Scenario 1 have been lodged by PCC. Whilst the development of the Llandinam Repowering, Llaithddu (northern array), Llanbrynmair and Carnedd Wen schemes will undoubtedly result in some harm to the historic environment, the scale of that harm is considered acceptable in the context of relevant national heritage policy.

920. The connections required to support these schemes under Scenario 1 would also result in a degree of harm. In relation to SSAC, the proposed 132kV connection to Welshpool has been subject to examination at Session 3 of the Inquiry and has also been the subject of a detailed Environmental Statement. Part of the southern section of the route would, if implemented in its proposed form, result in Substantial Harm to Scheduled Monuments and a non-designated asset of equivalent significance¹¹³⁵. The scale of such harm is clearly in serious conflict with policy. Limited undergrounding in the area would in PPC's view reduce this harm to acceptable levels. Other designated heritage assets along the route would be harmed but not to the same degree and conflict with historic environment policy in these locations is lessened. Assuming that an appropriate undergrounding solution can be delivered for part of route, then the 132kV to Welshpool from SSAC will not result in significant cumulative impacts.

921. The two double wood pole 132kV OHL connections from SSAB to Legacy have been assessed at a high level for this report.¹¹³⁶ A route of this length through landscapes of historic value will inevitably result in some harm. The solution does however, on initial analysis, seem to be the least harmful and it is anticipated that detailed design and scheme development could address some of the outstanding issues and, with undergrounding be acceptable.

922. Should the SSAD scheme require consideration, then a single L7 small steel lattice tower to the Legacy sub-station would be required in place of the

¹¹³⁴ As Mr Bufton explained in the session 4 noise hearing session the regimes have differing thresholds. One is concerned with preventing nuisance and the other protecting amenity. A noise could impact on amenity without breaching the threshold of statutory nuisance.

¹¹³⁵ See paragraphs 5.8.4 and 5.8.5 of EN-1 CD/COM/001

¹¹³⁶ Croft Report section 6 OBJ-002-CULTHER-POE-CROFT-S4

two double wood pole 132kV OHL connections. This would be a more harmful option and potentially less capable of improvement through detailed design.

Scenario 2

923. Scenario 2 includes all of the proposals before the Inquiry in SSAC and SSAB i.e. Llandinam, Llaithddu (in its entirety), Llanbadarn Fynydd, Carnedd Wynn and Llanbrynmair. It could also include the Hirddywel scheme in SSAC and Carno III in SSAB, if these were consented.

924. Scenario 2 would likely require a heavy duty 132kV OHL to Welshpool from Llandinam (as per Session 3), a substation at Cefn Coch, a heavy duty 132kV OHL line from SSAC to the proposed sub-station (CC1), and a single L7 small steel lattice tower solution to the Legacy sub-station. To this would be added any connection to serve SSAD.

Historic Environment Consideration

925. As set out in the Session1 section of these closings, the Llanbadarn Fynydd scheme would have considerable cumulative historic environment impacts, as well as some notable historic environment impacts in its own regard. It is also of note that the southern part of Llaithddu would harm a number of assets including the scheduled Fowler's Armchair. These impacts on the historic environment would be additional to the impacts associated with the schemes set out in Scenario 1 above.

926. The addition of both Llanbadarn Fynydd and the southern part of Llaithddu to the Scenario would also require the construction of additional grid related infrastructure. As proposed by SPM that would be CC1, 2 and 4, sub-station at Cefn Coch and (subject to overall capacity issues) a steel lattice tower to Legacy or a second 132kV HDWP line to Shrewsbury.

927. The CC1 option would result in further harm to the historic environment including potentially substantial harm to a number of designated assets¹¹³⁷. These additional cumulative impacts require consideration alongside the already identified issues associated with Llanbadarn Fynydd and the southern part of Llaithddu. The additional harm further increases the conflict with policy that these proposals have.

Scenario 3

928. Scenario 3 encompasses all of the currently proposed NSIP and TCPA wind farms. The Session 1 section of this closing, clearly highlights the scale of harm associated with the maximum development scenario for wind farms in SSAC. The proposed schemes would cumulatively result in Substantial Harm to a large number of designated heritage assets within and around SSAC and are clearly in serious conflict with national and local policy.

¹¹³⁷ See sections 3 and 6 of the Croft Session 4 Report OBJ-002-CULTHER-POE-CROFT-S4

929. It is also clear that a maximum development scenario in SSAC would require considerable additional grid infrastructure. Whilst theoretically the developments in SSAC could be connected to the grid via Cefn Coch using a L7 tower, this could only occur if development in SSAB and SSAD was severely limited. Essentially therefore, the maximum development scenario in SSAC ensures the need for a 400kV connection.

930. The 400kV line would result in a large number of historic environment impacts and would substantially harm a number of designated assets, as well as degrading important areas of historic landscape and probably removing extensive archaeological remains. These are summarised in Mr Croft's session 4 report. Whilst this has been criticised by Llanbrynmair on the basis of being premature and too detailed given the stage National Grid's proposals have reached,¹¹³⁸ that criticism is misplaced. National Grid is currently focussed on routing within its selected corridor i.e. the corridor is now effectively settled. This allows for the high level assessment undertaken by Mr Croft which acknowledges in terms that it can only consider potential effects at this point of time. However, even at this level and even assuming that there will be elements of undergrounding, it can be concluded that National Grid's proposals is likely to have a number of very significant effects which are consequence of the combination of wind farms that it will serve. These very significant cumulative effects need to be borne in mind when considering the cumulative issues raised by the applications. The scale of development envisaged within SSAB under this scenario is also very substantial and cumulative impacts on the historic environment are anticipated, as well as substantial impacts associated with individual schemes. Consideration of these schemes will need to take into account the internal cumulative impacts and cumulative grid connection impacts.

931. Overall, Scenario 3 will undoubtedly result in very substantial harm to the historic environment due to the scale and spread of development. It is clearly the worst case of the three scenarios from a historic environment perspective.

Session 4 Overall Conclusion

932. PCC does not rely on the combined or cumulative effects of any of the schemes to justify refusal of consent. Its starting position is that, save for Llandinam as now advanced, each of the schemes before the inquiry is individually unacceptable for the reasons set out in the Session 1 and 2 sections of these submissions

933. The benefit of the session 4 consideration of combined and cumulative effects is that it has confirmed:

- a. That Llanbadarn Fynydd and the entirety of the LLaithddu scheme will have unacceptable effects. The grid connection requirements of consenting both schemes in their entirety simply serve to make these two unacceptable schemes even more harmful as they would result in a step change in grid connection effects;

¹¹³⁸ RES-CULTHER-REBUTTAL-CARTER-S4

- b. That the SSAB inquiry schemes (if amended to address PCC's outstanding objections) are acceptable even allowing for their cumulative and combined impacts;
- c. That highways and noise issues do not alter either conclusion; and
- d. There is advantage in holding to the TAN8 indicative capacities if there is to be any prospect of avoiding the step change to a clearly unacceptable 400kV grid connection which is currently proposed simply to service various wind farm connection agreements.

SECTION VII Scheme specific planning balances

Approach

934. The essential duty of the Secretary of State in relation to each of the applications is to undertake an overall balance to establish where the balance of advantage and disadvantage lies in the overall public interest.

935. This section encompasses the following steps:

- a. The identification of the principally relevant national and local policy framework;¹¹³⁹
- b. The identification of the key tests for assessing the effects of the proposed developments;
- c. The appraisal of each scheme against the identified policy tests including an assessment of the level of benefit or harm to be weighed with the identified need and the provision of interim conclusions;
- d. The assessment of the level of harm with mitigation with any combined impacts from the Inquiry schemes, including the proposed and future grid connections affecting the overall balance; and
- e. The identification of any cumulative impacts from the other wind farm applications (operational, consented and in planning) that affect the interim conclusions on the planning balance;
- f. PCC's overall conclusions.

POLICY OVERVIEW AND CONTEXT

UK and Welsh Policy

936. PCC fully supports both the UK Government's and Welsh Government's planning and energy policy and its targets for renewable energy to reflect the UK's international obligations. To minimise wider environmental harm, PCC also supports the strategic approach to the location of wind farms contained in Planning Policy Wales (PPW)¹¹⁴⁰ and TAN 8¹¹⁴¹ which identifies Strategic Search Areas (SSAs) for wind farm development. PCC further endorses the recognition in the National Planning Policy Statements for Energy (NPS) and PPW that energy provision should seek to avoid or minimise the impact on

¹¹³⁹ This is more fully set out in the Authorities SOCG see [OBJ-002-PROC-005]

¹¹⁴⁰ Planning Policy Wales Edition 6 February 2014 [CD-RWE-PLA-003]

¹¹⁴¹ Technical Advice Note 8 Renewable Energy 2005 (TAN 8) [CD/COM/016]

the environment, and should not compromise international and national statutory obligations for designated areas, species and habitats.

937. PCC accepts that the relevant NPS's should be afforded substantial weight. They, along with relevant statutory and other policy provisions and material considerations, provide the context for decision making. In general terms each of the wind farm proposals before the Inquiry accords with EN-1 and EN-3 in so far as they seek to meet the need for a greater number of electricity generating schemes that utilise onshore wind energy. The NPS's support the principle of bringing forward renewable energy projects; however, the impacts of such projects are fully recognised in the national policy. Whilst harm, particularly landscape and visual impact, is inevitable with a major wind farm, these must be carefully assessed and weighed against the overall need for renewable energy.

938. EN-1 highlights in particular the role of renewable electricity generation in enabling the UK to source 15% of energy consumption from renewable sources by 2020 and that the need for new renewable electricity generation projects is urgent. It is in that context that EN-1 indicates that the decision maker should start with a '*presumption in favour of granting consent to applications for energy NSIPs*'. In undertaking the planning balance, PCC's starting point has been that a national need exists, it is urgent and that meeting it will deliver the significant benefits identified in national policy.

939. With regard to the impacts identified EN-1 and EN-3, their coverage is not intended to be exhaustive and the decision maker should therefore consider any impacts which it determines are relevant and important to its decision¹¹⁴². As most renewable energy resources can only be developed where the resource exists and where they are economically feasible, there is no requirement to apply a sequential approach in the consideration of renewable energy projects¹¹⁴³ (for example, by giving priority to the re-use of previously developed land for renewable technology developments).

940. With regard to the provision of new electricity generating infrastructure, EN-5 provides the national policy guidance and confirms that all of the generic impacts covered in EN-1 are likely to be relevant for related infrastructure projects. It also advises that additional specific considerations will be relevant – *biodiversity and geological conservation, landscape and visual and noise and vibration*. Whilst EN-5 states that the overhead provision of new electricity lines (ie 132kV and above) will often be appropriate, they can give rise to adverse landscape and visual impacts and that these can be unacceptable taking account of the local environment and context. Any '*serious concerns*' identified in EN-5 terms will have to be balanced against the need to provide an appropriate connection to the grid and the statutory obligations of the utility provider.

941. Planning Policy Wales (PPW) 6th Edition 2014¹¹⁴⁴ deals with sustainable energy. Local planning authorities should facilitate the development of all

¹¹⁴² National Policy Statement for Renewable Energy Infrastructure EN-3 para 2.5.32

¹¹⁴³ National Policy Statement for Renewable Energy Infrastructure EN-3 para 2.5.36

¹¹⁴⁴ CD-RWE-PLA-003

forms of renewable and low carbon energy to move towards a low carbon economy. At the same time, local planning authorities should ensure that international and national statutory obligations to protect designated areas, species and habitats and the historic environment are observed and that mitigation measures are required for potential detrimental effects on local communities whilst ensuring that the potential impact on economic viability is given full consideration.

942. PPW supports wind energy as it continues to offer the greatest potential for delivering renewable energy. It states that Wales has an abundant wind resource and power generation using this resource remains the most commercially viable form of renewable energy. The Welsh Government accepts that the introduction of new, often very large structures for onshore wind, needs careful consideration to avoid and where possible minimise their impact. However, the need for wind energy is a key part of meeting the Welsh Government's vision for future renewable electricity production as set out in the Energy Policy Statement (2010) and should be taken into account by decision makers when determining such applications (paragraph 12.8.12).
943. PPW confirms that the most appropriate scale at which to identify areas for large scale onshore wind energy development is at an all-Wales level as set out in TAN 8 which identifies the most appropriate locations for large scale wind farm development, referred to as Strategic Search Areas (SSAs). PPW states that developers will need to be sensitive to local circumstances, including siting in relation to local landform, proximity to dwellings and other planning considerations. The development of large wind farms or other large scale renewable and low carbon energy schemes will not generally be appropriate in internationally or nationally designated areas and sites.
944. Advice is given to determining applications for renewable and low carbon energy development. The following matters need to be taken into account:
- a. the contribution a proposal will play in meeting identified national, UK and European targets and potential for renewable energy, including the contribution to cutting greenhouse gas emissions;
 - b. the wider environmental, social and economic benefits and opportunities from renewable and low carbon energy development;
 - c. the impact on the natural heritage, the Coast and the Historic Environment;
 - d. the need to minimise impacts on local communities to safeguard quality of life for existing and future generations;
 - e. ways to avoid, mitigate or compensate identified adverse impacts;
 - f. the impacts of climate change on the location, design, build and operation of renewable and low carbon energy development. In doing so consider whether measures to adapt to climate change impacts give rise to additional impacts;

- g. grid connection issues where renewable (electricity) energy developments are proposed; and
- h. the capacity of and effects on the transportation network relating to the construction and operation of the proposal.

945. The boundaries of the SSAs are 'broad brush' following mainly desk top assessments¹¹⁴⁵. PCC undertook refinement work to the boundaries of SSA B and SSA C and as the refinement exercise was to an extent evidence based it is to be given some weight. The weight to be accorded to that work, however, will depend on (a) the extent to which they are supported by the more detailed evidence before this inquiry and (b) any inherent flaws within them. Importantly, TAN 8 recognised that not all of the land within SSAs would be environmentally suitable for such major development but that the SSAs identified sufficient land to meet the Welsh Government's energy policy aspirations which are expressed inter alia, in the indicative capacity figures for each SSA.

946. Within the SSAs, whilst cumulative impact can be a material consideration, any such impact must be balanced against the need to provide renewable energy. All conclusions reached must be fully justified in any decisions taken. TAN 8 is clear that developers will need to be sensitive to local circumstances, including the siting of proposals in relation to local landform, proximity to dwellings and other planning considerations¹¹⁴⁶. The fact that land lies within an SSA (refined or otherwise) does not lessen the responsibility on applicants either to choose acceptable sites or, having done so, to mitigate those impacts capable of mitigation.

947. Whilst the approach of identifying SSAs has considerable merit, it is important to appreciate that the identification of the SSAs was the product of a high level process. Their importance lies firstly in identifying broad areas within which strategic provision is likely to be least harmful and secondly, in providing a broad measure of the likely cumulative capacity of the areas if the 'least harmful' objective is to be attained¹¹⁴⁷.

948. TAN 5 (Nature, Conservation and Planning) recognises that wildlife and its habitats are of fundamental importance to our future wellbeing and prosperity. The development of land can pose a threat to wildlife and natural features however, the advice states that opportunities can be created through enhancing ecological interests and therefore their enjoyment. TAN 5 encourages authorities, developers and stakeholders to work together to deliver more sustainable development that does not result in losses from the natural heritage but rather provide opportunities to enhance it¹¹⁴⁸.

949. TAN 23 (Economic Development) advises that energy generation is included in the list of economic development uses. It also confirms that it is

¹¹⁴⁵ TAN 8 - paragraph 2.4 [CD/COM/016]

¹¹⁴⁶ TAN8: para 12.8.14

¹¹⁴⁷ Powys CC Opening Statement [OBJ-002-003]

¹¹⁴⁸ TAN 5 (Nature, Conservation and Planning) [CD-CON-003-PLA-011} para 1.6.1

the 'final use' of the land which is the important factor in terms of its relevance and potential contribution to economic development¹¹⁴⁹.

UK Roadmap 2013

950. Whilst substantial weight should also be given to the potential contribution of the proposals to securing electricity from renewable sources, it is clear that the UK is now virtually certain to meet its overall target for installed on-shore wind capacity several years in advance of the target year of 2020. Indeed, there is now every likelihood that the target will be exceeded by some margin. The UK Renewable Energy Roadmap Update (November 2013) states:

'Since the publication of the last Update in 2012, the UK has made very good progress towards our challenging 2020 renewables target, to deliver 15% of our energy demand from renewable sources. We are fully committed to achieving this target and have seen a significant amount of deployment to date, particularly in the renewable electricity sector. This was demonstrated in 2012 when more than 4% of the UK's energy came from renewable sources – above our interim target'.¹¹⁵⁰

951. That is not to understate the continued urgency of the need, but in terms of weight and balance it indicates there is no justification for accepting poorly located, poorly designed or inadequately mitigated proposals.

Local Policy

952. The Powys UDP was adopted in March 2010 and comprises the development plan. Policy E3 concerns wind power and is a permissive policy which includes a balance that is to be made to consider the unacceptable adverse impacts of such proposals. Impacts include those upon; landscape quality, conservation and archaeology, wildlife habitats, public rights of way, local road network and residential amenity (including noise and disturbance). The individual and cumulative effects of proposals are also to be assessed within the policy as well as the provision of an acceptable means of access to enable the scheme to come forward.

Conclusion

953. A balanced approach must therefore be taken to assess the advantages and disadvantages in the public interest. This requires taking into account and applying appropriate weight to the relevant material factors including energy and planning policy and environmental issues. The inputs into this balance is usefully summarised in EN-1:

'In considering any proposed development, and in particular when weighing its adverse impacts against its benefits, the IPC should take into account:

¹¹⁴⁹ TAN 23 (Economic Development) [CD-RWE-PLA-004] Para 1.1.5

¹¹⁵⁰ UK Renewable Energy Roadmap Update 2013 (CD-RWE-PLA-002)– Ministerial Foreword

Its potential benefits including its contribution to meeting the need for energy infrastructure, job creation and any long-term or wider benefits; and

Its potential adverse impacts, including any long-term and cumulative adverse impacts, as well as any measures to avoid, reduce or compensate for any adverse impacts'.¹¹⁵¹

IDENTIFYING AND APPLYING THE POLICY TESTS TO THE PRINCIPAL ISSUES

954. PCC has provided evidence at each Session of the Inquiry to deal with the specific issues it has identified in respect of each application. On some issues it has relied upon the evidence submitted by NRW. The following principal issues were addressed:

- a. Landscape & visual
- b. Cultural heritage
- c. Ecology
- d. Transport
- e. Noise

Landscape and Visual Impact

955. Taking into account the policy context, where the overall effect of the scheme is significantly detrimental when viewed in the context of the inevitable impacts of a nationally significant infrastructure project, it is unacceptable in either landscape or visual impact terms. This assessment is informed by the following policy references:

956. Part 5 of EN-1 (*Generic Impacts*) considers the actual impacts of the projects on a number of issues including historic environment and the landscape and visual character. Section 5.9 deals with landscape and visual and states that the impacts of energy projects will vary on a case by case basis according to the type of development, its location and the landscape setting of the proposed development.

957. EN-1 (para 5.9.8) recognises that virtually all nationally significant energy infrastructure projects will have effects on the landscape. Projects need to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other relevant constraints the aim should be to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate.

958. Paragraphs 5.9.14 and 5.9.15 of EN-1 state that outside nationally designated areas, there are local landscapes that may be highly valued locally and protected by local designation. Where a local development plan has policies based on landscape character assessment, these should be paid

¹¹⁵¹ See EN-1 para 4.1.3 [CD/COM/001] at para 4.1.3

particular attention. The scale of such projects means that they will often be visible within many miles of the site of the proposed infrastructure. The IPC¹¹⁵² should judge whether any adverse impact on the landscape would be so damaging that it is not offset by the benefits (including need) of the project.

959. EN-3 (paragraph 2.7.46 onwards) states that modern onshore wind turbines that are used in commercial wind farms are large structures and there will always be significant landscape and visual effects from their construction and operation for a number of kilometres around a site. The arrangement of wind turbines should be carefully designed within a site to minimise effects on the landscape and visual amenity while meeting technical and operational siting requirements and other constraints.

960. Policy E3 of the UDP which states :-

'Applications for wind farms including extensions to existing sites and individual wind turbine generators will be approved where:

they do not unacceptably adversely effect the environmental and landscape quality of Powys, either on an individual basis or in combination with other proposed or existing similar developments.

Where the cumulative impact of the proposals in combination with other approved or existing wind farms would be significantly detrimental to overall environmental quality they will be refused.'

Cultural Heritage

961. A review of the relevant policy confirms that where there is substantial harm to a heritage asset, this will be unacceptable in cultural heritage terms. Substantial harm to designated heritage asset should be permitted only wholly exceptionally. This assessment is informed by the following policy references:

962. EN-1 (para 5.8.12) states that in considering the impact of a proposed development on any heritage assets, account should be had to the particular nature of the significance of the heritage assets and the value that they hold for this and future generations. There should be a presumption in favour of the conservation of designated heritage assets and the more significant the designated heritage asset, the greater the presumption in favour of its conservation should be.

963. EN-1 requires the assessment of a proposal to determine if it would cause "*Less than Substantial Harm*" or "*Substantial Harm*" to the significance of an asset or "*Total Loss*" of an asset's significance. Any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of development, recognising that the greater the harm to the significance of the heritage asset the greater the justification will be needed

¹¹⁵² Following amendments introduced by the Localism Act 2011, responsibility for processing development consent applications for NSIPs passed to the Planning Inspectorate (PINS) from the IPC.

for any loss. Where the application will lead to substantial harm to or total loss of significance of a designated heritage asset the IPC should refuse consent unless it can be demonstrated that the substantial harm to or loss of significance is necessary in order to deliver substantial public benefits that outweigh that loss or harm. Such harm should be exceptional.

964. Paragraph 5.8.14 sets out the main tests in relation to harm to assets:

"There should be a presumption in favour of the conservation of designated heritage assets and the more significant the designated heritage asset, the greater the presumption in favour of its conservation should be. Once lost heritage assets cannot be replaced and their loss has a cultural, environmental, economic and social impact. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. Loss affecting any designated heritage asset should require clear and convincing justification. Substantial harm to or loss of a grade II listed building park or garden should be exceptional. Substantial harm to or loss of designated assets of the highest significance, including Scheduled Monuments; registered battlefields; grade I and II listed buildings; grade I and II* registered parks and gardens; and World Heritage Sites, should be wholly exceptional."*

965. Paragraphs 5.8.15 and 5.8.18 establish the principle that harm to the significance of an asset needs to be weighed against the public benefit, and that for developments which affect the setting of assets the same tests apply.

"5.8.15 Any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of development, recognising that the greater the harm to the significance of the heritage asset the greater the justification will be needed for any loss. Where the application will lead to substantial harm to or total loss of significance of a designated heritage asset the IPC should refuse consent unless it can be demonstrated that the substantial harm to or loss of significance is necessary in order to deliver substantial public benefits that outweigh that loss or harm."

"5.8.18 When considering applications for development affecting the setting of a designated heritage asset, the IPC should treat favourably applications that preserve those elements of the setting that make a positive contribution to, or better reveal the significance of, the asset. When considering applications that do not do this, the IPC should weigh any negative effects against the wider benefits of the application. The greater the negative impact on the significance of the designated heritage asset, the greater the benefits that will be needed to justify approval"

966. Policy E3 of the UDP states as follows:-

Applications for wind farms including extensions to existing sites and individual wind turbine generators will be approved where:

They do not unacceptably impact upon any buildings or features of conservation or archaeological interest.

Ecology

967. As general principle, development should aim to avoid significant harm to biodiversity and geological conservation interests. A review of the relevant policy sets out the following approach :

- a. EN-1 states that where significant harm cannot be avoided, then appropriate compensation measures should be sought (para 5.3.7). In taking decisions, appropriate weight must be attached to designated sites of international, national and local importance; protected species; habitats and other species of principal importance for the conservation of biodiversity; and to biodiversity and geological interests within the wider area.
- b. Paragraph 5.3.16 deals with the protection of habitats and other species. It states that many individual wildlife species receive statutory protection under a range of legislative provisions. Other species and habitats have been identified as being of principal importance for the conservation of biodiversity in England and Wales. Consent should be refused where harm to the habitats or species and their habitats would result, unless the benefits (including need) of the development outweigh that harm. In this context the IPC should give substantial weight to any such harm to the biodiversity features of national or regional importance which it considers may result from a proposed development.
- c. Policy E3 of the UDP refers to policies ENV 3 - 7 of the plan which covers a range of nature conservation and biodiversity issues, and reflects international and national obligations on these topics in addition to local ones.

968. The development of a wind farm must also meet the statutory tests involved by effects on habitats and species and, where necessary, appropriate assessment will have to be carried out separately.

969. Policy E3 states:

Applications for wind farms including extensions to existing sites and individual wind turbine generators will be approved where:

They do not unacceptably adversely affect wildlife habitats or species that are of international, national or local importance in accordance with policies ENV 3-7.

Transport

970. The impacts from nationally important infrastructure projects on the highway network and public rights of way relate principally to the construction phase and these can be substantial. The key test for nationally important projects of this kind is whether the proposed access arrangements would have such a severe impact on the safe use and enjoyment of the highway that they are unacceptable. The following policy context is relevant:

971. Section 5.13 of EN-1 deals with traffic and transport. The transport of materials, goods and personnel to and from a development during all project phases can have a variety of impacts on the surrounding transport infrastructure and potentially on connecting transport networks, for example through increased congestion. Impacts may include economic, social and environmental effects.

972. A new wind farm development may give rise to substantial impacts on the surrounding transport infrastructure and it should be ensured that the applicant has sought to mitigate these impacts, including during the construction phase of the development.

973. EN-3 provides further guidance on transport in paragraphs 2.7.73 onwards. Many onshore wind farms will be sited in areas served by a minor road network. Modern wind turbines are large structures and the construction of a wind farm will therefore require sufficient access for long and wide load items.

974. There may be a number of wind farms proposed that use a common port and/or access route and pass through the same towns. Where a cumulative impact is likely then a cumulative transport assessment should form part of the EIA. Paragraph 2.7.82 states that where cumulative effects on the local road network or residential amenity are predicted as a result of multiple wind farm developments, it may be appropriate for applicants for various projects to work together to ensure that the number of abnormal loads and deliveries are minimised.

975. Policy E3 of the UDP refers to the following:

Applications for wind farms including extensions to existing sites and individual wind turbine generators will be approved where:

they do not unacceptably adversely affect the enjoyment and safe use of highways and the public rights of way network, especially bridleways (including during the construction phase).

they would be capable of being served by an acceptable means of highway access and any new or improved roads and accesses required would not have unacceptable environmental impacts.

Noise

976. The test is whether the proposed development unacceptably effects the amenity of any local occupier recognising the national importance of the projects. Noise impacts can be significant in respect of new wind farms. Factors that will determine the likely noise impact from development include¹¹⁵³:

- a. the inherent operational noise from the proposed development, and its characteristics;

¹¹⁵³ EN-1 para 5.11.3

- b. the proximity of the proposed development to noise sensitive premises
- c. the proximity of the proposed development to quiet places and other areas that are particularly valued for their acoustic environment or landscape quality; and,
- d. the proximity of the proposed development to designated sites where noise may have an adverse impact on protected species or other wildlife.

977. The policy references and tests are set out as follows:

- a. The IPC¹¹⁵⁴ should not grant development consent unless it is satisfied that the proposals will meet the following aims:
 - i. avoid significant adverse impacts on health and quality of life from noise;
 - ii. mitigate and minimise other adverse impacts on health and quality of life from noise; and
 - iii. where possible, contribute to improvements to health and quality of life through the effective management and control of noise.
- b. EN-3 provides further guidance on noise in paragraphs 2.7.52 onwards. The method of assessing the impact of noise from a wind farm on nearby residents is described in the report, '*The Assessment and Rating of Noise from Wind Farms*' (ETSU-R-97). Where the correct methodology has been followed and a wind farm is shown to comply with ETSU-R-97 recommended noise limits, the IPC may conclude that it will give little or no weight to adverse noise impacts from the operation of the wind turbines. Where a wind farm cannot demonstrate compliance with the recommended noise limits set out in ETSU-R-97, it will be necessary to consider refusing the application unless suitable noise mitigation measures can be imposed by requirements to the development consent.

978. Policy E3 in the UDP states:

Applications for wind farms including extensions to existing sites and individual wind turbine generators will be approved where:

- 3. they do not unacceptably adversely affect the occupants or users of sensitive properties (usually dwellings) or their amenities by reason of noise, vibration, shadow flicker or reflected light.*

ASSESSMENT OF THE INQUIRY APPLICATIONS AND INTERIM CONCLUSIONS

979. This section draws on the evidence of the benefits relied upon by the applicants and of the evidence given by PCC at each of the Inquiry Sessions and reaches a conclusion on the individual acceptability of each scheme by reference to the overall balance in the public interest. This does not include

¹¹⁵⁴ EN-1 para 5.11.9

the likely effects of associated grid connections which together with other combined and cumulative impacts are considered in Sections 5 and 6 respectively.

Llandinam Repowering

980. This scheme removes the existing wind farm which has been on the site since 1992 and for which there is no de-commissioning scheme. It is a significant wind farm proposal which, on its own will generate some 102 MW of renewable electricity which will make a substantial contribution to the overall need. To put this in context, the TAN 8 indicative upper capacity for SSA C is 98MW. In terms of economic benefits, 13 jobs are to be created at the de-commissioning stage of the existing wind farm and a further 175 jobs created during the 2 year construction phase. Of the £130M development costs, some £40M + is estimated to go to procurement of local goods and services. The income for the landowners will facilitate agricultural diversification and provide the long term security of farming operations. Taken together, these are considerable benefits.

981. The amendments to the scheme which have been made since the objection by PCC include the deletion of the 5 most northerly turbines together with other layout alterations. In light of the planning policy context, PCC has concluded that, whilst there will be some significant adverse effects from the Llandinam Repowering scheme, these are limited when seen in the context of the *"real visual enhancements"*¹¹⁵⁵ which will result from the de-cluttering of the landscape by the taller but fewer turbines. The overall effect therefore is not significantly detrimental in terms of landscape and visual impacts.

982. The only outstanding landscape issue concerns an existing group of trees adjacent to an unclassified road, the U2835. PCC have confirmed that this group should be retained through an amendment to the access route to avoid the trees. CeltPower is agreeable to carry out this revision having secured control of the requisite land and it is an issue therefore that can be dealt with by condition.

983. The deletion of the 5 most northerly turbines has reduced the scale of impact on the Caersws Basin Registered Historic Landscape. PCC are satisfied that the development would not cause substantial harm to the basin or its setting. There would be some limited harm to its setting and other heritage assets which must be taken into account in the overall balance¹¹⁵⁶.

984. PCC is satisfied that the local highway access arrangements via Newtown can be mitigated through works to the road network. Accordingly, there is no outstanding objection to these arrangements subject to the imposition of conditions.

¹¹⁵⁵ P Russell-Vick PoE Session 1 para 9.4 (OBJ002(PCC)-LAND-POE-RUSSELL-SSA-C)

¹¹⁵⁶ A. Croft PoE Session 1 [OBJ002(PCC)-HISTENV-POE-CROFT-SSA-C VOL1

985. The proposed strategic route for AILs (abnormal infrastructure loads) from the south via Newport includes the construction of a Bailey bridge at Builth Wells in order to cross the River Wye. There are some harmful environmental impacts to these works, but PCC see no reason why, in principle, a planning application for this temporary crossing should not be approved¹¹⁵⁷.

986. The acoustic impacts of the proposed wind farm are not significant and can be controlled by appropriate planning conditions including an Amplitude Modulation (AM) condition¹¹⁵⁸.

987. In summary, whilst there would be some significant landscape and visual impacts, there would also be visual enhancements. The proposal does not therefore reach the threshold of unacceptability in landscape and visual impact terms. In terms of cultural heritage terms, any effects with the revised proposal are less than substantial. There will be some highway disbenefits but these have been mitigated so as not to be severe and the noise effects are not significant. These harms assessed both individually and in combination do not clearly outweigh the significant benefits of the proposal. PCC has concluded that the overall balance in the public interest now justifies the grant of an appropriately conditioned consent.

Llaithddu

988. The Llaithddu scheme is effectively in two parts – a northern and southern array – generating some 66.7 MW of renewable electricity. This is a significant benefit as are the economic benefits which the applicants state as being the retention of more than 50% of the project value in the local economy. The scheme also brings forward a programme of land management to enhance future breeding birds and wildlife¹¹⁵⁹. The proposal to create a community fund which was addressed in Session 1 of the Inquiry but, for the reasons set out in PCC's legal submission¹¹⁶⁰, in the absence of any guarantee that the fund will be used to mitigate the direct or indirect effects of the schemes and thus fairly and reasonably relate to the wind farm development, PCC has not taken it into account. PCC has applied this approach consistently for the other proposed wind farms, all of which promote a community fund.

989. In relation to landscape and visual matters, part of the proposal would not have a significantly detrimental effect on the landscape or visual amenity provided that the Llandinam scheme is approved. At its northern end, where it would abut the Llandinam scheme, it would follow a secondary ridge to the south-east of that occupied by Llandinam and would be largely concealed in views from the Dulas valley to the west. The northern part of Llaithddu would be read as effectively an extension of the Llandinam proposal and its impact is therefore considered limited and supportable in this context.

990. The southern part of Llaithddu would have a significantly detrimental effect on the on the Upper Marteg Valley and the setting and visual amenity of Bwlch y Sarnau, a hamlet to the south of the development. PCC has

¹¹⁵⁷ M. Axon PoE- Session 4[OBJ-002-TRANS-POE-AXON-S4]

¹¹⁵⁸ P Bufton PoE – Session 4 paras 22-24 [OBJ-002-NOISE-POE-BUFTON-S4]

¹¹⁵⁹ Llaithddu – Non- Technical Summary (April 2008)

¹¹⁶⁰ OBJ-002-CMB-003

identified that the impacts on this small settlement would be severely detrimental and that this scheme, in his judgement, would have the worst effect on a settlement of any of the proposals before the Inquiry¹¹⁶¹. In addition, PCC has concluded that the landscape change to this area would be substantial.

991. With regard to cultural heritage, less than substantial harm has been identified in relation to the southern part of the scheme although it is noted that considerable harm, particularly upon the Scheduled Ancient Monument of Fowlers Armchair, was identified by CPAT and Mr Kibble (for the Alliance)¹¹⁶².
992. No highway objection is taken in relation to local highways and access issues. PCC consider the proposed southern strategic route for AILs (via Newport and Builth Wells) is acceptable noting that the smaller scale of the turbines does not require the construction of a bailey bridge to cross the River Wye. Subject to appropriate conditions therefore the highway arrangements are acceptable. There would still be some inconvenience to other users of the highway during the construction period but it would be minor.
993. Noise impacts are considered to be able to be controlled by appropriate conditions including the AM requirement referred to above.
994. Whilst the scheme as a whole would deliver a significant benefit in terms of renewable energy provision and economic benefits in terms of jobs and investment, these come at a severe environmental cost to the Afon Marteg Valley and the settlement of Bwlch y Sarnau. Those impacts clearly outweigh the benefits of the scheme as a whole and it ought not to be consented.
995. The unacceptable impacts could be avoided with the removal of the 15 southern turbines. By this means the landscape and visual harm can be largely avoided and certainly to a level which does not give rise to significant detriment. The removal of these turbines would also remove the identified harm upon nationally important heritage assets. Balancing the benefit of the reduced scheme against its disbenefits, the harms do not clearly outweigh the benefits and therefore a Town and Country Planning Act consent would be justified for the 12 turbines in the northern array which would generate some 27.6MW of renewable electricity. It is accepted by PCC that the Secretary of State has no power under the Electricity Act 1989 to consent the construction of a generating station with a capacity of less than 50MW. However, with a clearly expressed conclusion that the northern array is acceptable, there is every prospect of a Town and Country Planning Act application being consented in ample time for Llaithddu to benefit from a 2019 grid connection date (albeit to an upgraded Llandinam 132 kV scheme).

¹¹⁶¹ P Russell-Vick PoE Session 1 (OBJ002(PCC)-LAND-POE-RUSSELL-SSA-C)(paras 6.21-6.22)

¹¹⁶² B Kibble PoE Session 1 [ALL-SSAC-PoE-05]

Llanbadarn Fynydd

996. Llanbadarn Fynydd proposes 17 turbines generating up to 59.5MW. In terms of jobs and economic benefits,¹¹⁶³ these are set out in Llanbadarn Fynydd's Socio-Economic proof for Session 4 which states that 41 FTE jobs would be created or retained during the construction period and there would also be supply chain benefits. No FTE jobs would be created on site during the 25 year operation but maintenance etc would create 2 FTE jobs. Llanbadarn Fynydd also states that they would implement an innovative approach to procurement for the construction stage. As the smallest scheme before the inquiry, it would generate the least benefit in terms of the wider public interest albeit that this is still significant. In terms of its impacts, notwithstanding its relative size, it generates the greatest harmful landscape and visual impacts of any wind farm before this Inquiry.
997. The Llanbadarn Fynydd landscape unit on the eastern part of SSA C is of considerable value (although not designated) and judged to be of a comparable quality to the nearby Shropshire AONB and, critically, it is almost entirely 'untouched' by the effect of wind farm development. PCC has concluded that the Llanbadarn Fynydd scheme would have very substantial harmful landscape effects¹¹⁶⁴. To the extent that it clearly breaches the threshold of acceptability and there is no meaningful way in which the scheme could be amended to address the level of harm identified; its siting is simply inappropriate. In addition the Llanbadarn Fynydd proposal would de-sensitise a substantial area of landscape which would 'open up' an area currently largely unaffected by wind farm development.
998. A number of significant cultural heritage impacts were identified by PCC in relation to designated assets. Whilst individually the harm was not considered to be substantial in policy terms, the cumulative effect on the assets would be substantial and should be permitted only in wholly exceptional circumstances.
999. The local access arrangements are acceptable as is the proposed strategic route for AILs from the north via Ellesmere and Welshpool, subject to appropriate planning conditions¹¹⁶⁵. There would be some inconvenience to other road users during the construction period but this would be minor.
1000. The ecological impacts of this scheme can be addressed through suitable conditions. They are minor.
1001. The noise impacts can also be addressed by conditions including the AM condition as referred to above.
1002. Overall the benefits of the Llanbadarn Fynydd proposal are very substantially outweighed by its landscape and visual impacts. The scheme is in an entirely inappropriate location which marks a step change, namely, development to the east of the Ithon Valley, the effects of which cannot be acceptably mitigated. Consent should be withheld in PCC's view on this

¹¹⁶³ LF Bell Socio Economic Session 4 (VATT-SOCIOECO-POE-BELL-S4)

¹¹⁶⁴ P Russell-Vick PoE- Session 1 para 7.16 (OBJ002(PCC)-LAND-POE-RUSSELL-SSA-C)

¹¹⁶⁵ M Axon PoE - Session 4 para 2.22 (OBJ-002-TRANS-POE-AXON-S4)

ground alone. PCC's conclusion is reinforced by the precedent effect which would be caused by granting planning permission for a scheme which would de-sensitise the landscape to the east of the Ithon Valley to further wind farm development thus magnifying the harmful effects. It would also lead to unacceptable combined and cumulative effects (see below).

Carnedd Wen

1003. This substantial scheme would generate some 150 MW of renewable electricity within SSA B. The economic benefits were set out by Regeneris on behalf of the applicant who stated that the project would represent a significant economic investment creating business opportunities for the local and Welsh supply chain through the construction, operation and maintenance of the wind farm and the habitat enhancement scheme. Regeneris reported that 50 FTE jobs would be created during the construction phase and £14M would be 'levered' into the local economies of Mid and North Wales. Ongoing operations and maintenance could generate a further 24 FTE and £1.3M to the local economy. Overall these economical and ecological benefits are very significant.
1004. The scale of the landscape and its upland plateau characteristics means that the proposed wind farm can, in principle, be accommodated.
1005. There are however, significant landscape and visual effects arising from the development notably upon the Nant yr Eira Valley and the Banwy Valley. There are also significant effects upon some parts of the Snowdonia National Park to the north. PCC has identified the most significant landscape and visual effect as being on the Banwy Valley. This necessitates a partial mitigation of the effect upon the Banwy Valley through the removal of 5 turbines in the north eastern part of the scheme (R23, 26, 28, 29 and 30). These turbines are the closest to the Banwy Valley and their removal would have the greatest individual impacts and, importantly, reinforce the desired perception that the wind farm is contained on the plateau.
1006. The scheme raises no cultural heritage concerns from PCC.
1007. In relation to local highway issues, access to the site will be gained directly from the trunk road (the A458) utilising (and upgrading) the existing forestry track which is considered to be appropriate and acceptable to PCC, subject to conditions. PCC also have no objection to the proposed strategic route for AILs via Ellesmere and Welshpool, again subject to conditions. Whilst there would be some inconvenience to other road users during the construction period, this will be minor.
1008. The scheme includes a significant ecological enhancement proposal which is welcomed and supported by PCC.
1009. Noise issues can be addressed satisfactorily by conditions as proposed with the other wind farm schemes.
1010. Whilst the matter is finely balanced, the overall harms of the scheme clearly outweigh its benefits if the 5 turbines remain within it. The harm they cause is wholly disproportionate to their benefit. With the removal of the 5

turbines through a suitably worded condition, the harms no longer clearly outweigh the benefits and the project can be consented.

Llanbrynmair

1011. The scheme generates some 90MW of renewable electricity and effectively dovetails with the Carnedd Wen proposals. The economic benefits of the project include the use of local firms at the construction phase where skills can be matched. The local economy will be further enhanced through relocated staff using local amenities. Llanbrynmair refers to local links with the community as an educational resource. The number of jobs are not readily provided but they can be expected to be proportionate to the other proposed wind farms as can the anticipated financial contribution to the local economy. Given the scale of the scheme these are significant benefits.
1012. Due to the close proximity of the proposal to Carnedd Wen and the similar upland landscape characteristics the development can also be accommodated within it. There are some significant landscape and visual impacts from the turbines particularly upon the Nant yr Eira Valley but PCC concludes that they can be visually accepted.
1013. However, the scale of the landscape, visual and ecological impacts of the proposed highway works within the Nant yr Eira Valley are identified as being severe over some 7.25km of a small rural lane. These effects would be wholly unacceptable upon the outstanding scenic value of the Llanerfyl Mosaic Farmlands and in landscape and visual terms PCC considers that these impacts are sufficient to render the whole scheme unacceptable¹¹⁶⁶.
1014. An alternative access arrangement has been put forward by PCC which would enable the Llanbrynmair AILs to use the Carnedd Wen access. For clarification, the access proposals for construction traffic (from the south-west via Talerddig) is acceptable to PCC.
1015. PCC sees no reason why this alternative for AILs should not come forward and PCC's position on this matter is as follows:
1016. The application as submitted with the proposed highway works to the Nant yr Eira Valley is unacceptable and would be so even if this was the only AIL access proposed for the scheme. In this scenario consent should not be granted for the Llanbrynmair wind farm.
1017. With the use of the Carnedd Wen site an acceptable access can be provided.
1018. The only alternative arrangement consulted upon before the Inquiry and advanced through SEI is an extension to the Carnedd Wen access proposals. Accordingly, the SoS can only grant permission subject to Llanbrynmair being served by those arrangements. If Carnedd Wen is not approved, an access can be secured over the Carnedd Wen land but in the absence of any proposal (or SEI) relating to that scenario the options are:

¹¹⁶⁶ P Russell-Vick PoE Section 7 – Session 2 (OBJ-002-LAND-POE-RUSSELL-SSA-B)

- a. Refuse permission.
- b. Minded to grant permission, subject to a revision to the Llanbrynmair application to provide access over the Carnedd Wen land.

1019. It is recognised that there are significant benefits to the Llanbrynmair proposals. However the works to a rural road are widespread and radical such that the landscape and visual impacts in particular would be overwhelming to the area. There are also significantly harmful ecological impacts associated with these highway works. In addition, there would be notable and harmful disruption to the local community during the extensive construction period of the proposed highway works.

1020. Overall therefore, the impacts of the works to the Nant yr Eira Valley would be so harmful that they significantly outweigh the benefits that this nationally important project provides. An acceptable alternative access can be secured and this further supports PCC's position that, as submitted, the application should be refused

COMBINED IMPACTS

1021. There is a significant distance (approximately 10km) between SSA B and SSA C. The proposed wind farms would be visible between the two and from sensitive locations there is the potential for significant visual effects. However overall, the landscape and visual impacts would not be harmful.

1022. Carnedd Wen and Llanbrynmair within SSA B are only acceptable with an alternative access for AILs for Llanbrynmair and with the removal of 5 turbines from the north eastern part of the Carnedd Wen scheme. Subject to these revisions, the combined impacts of the two developments are, overall acceptable, in the context of their national significance.

1023. The combined impacts of the approval of the 3 wind farms in SSA C would be very significant. The southern array of the Llaithddu scheme would have a significant impact the landscape qualities of the area and severe impacts upon Bwylch y Sarmau. The landscape and visual impacts of the Llanbadarn Fynydd scheme would also be significantly detrimental to the area east of the Ithon Valley. Approval of this proposal would effectively open up the area to future wind farm development and therefore set a precedent that should be resisted bearing in mind the inherent landscape and cultural heritage qualities that have been identified.

1024. The impacts of the grid connections is a further key assessment of the combined impacts. The proposed 132kV overhead line linking the Llandinam Repowering scheme to Welshpool is supported by PPC subject to a section of the route east of the A483 being undergrounded. This proposal can provide grid connection for Llandinam, the northern array of Llaithddu and (if approved by PCC) the Hirddywell scheme (27MW) which is a current application. An upgraded overhead line is entirely achievable which would provide connection to the grid for up to 160MW.

1025. Approval of Llandadarn Fynydd would trigger the proposed Mid-Wales Grid Connection to be implemented which links SSA C to SSA B at the new hub at

Cefn Coch. This step change in terms of grid connection is unacceptable in the light of the significant landscape, visual and cultural heritage impacts of these emerging proposals.

1026. With regard to SSAB the Carnedd and Llanbrynmair schemes together with the existing and consented wind farms can be connected by twin 132kV wooden poles to Legacy and this is supported by PCC.

1027. The National Grid propose to provide a 400kV overhead line from the new hub at Cefn Coch to Oswestry some 50km in length. It is being promoted in response to agreements with wind farm operators to connect some 800 MW of electricity from the proposed wind farms in Mid Wales. This proposal is strongly opposed by PCC due to the significant landscape, visual and cultural heritage impacts. It represents a further unacceptable "step change" that is wholly unnecessary in the context of PCC's assessment of the environmental capacity of SSA B and SSA C (which have been undertaken for this Inquiry) and TAN 8.

1028. With reference to TAN 8, indicative capacity targets were provided for each SSA. The upper capacity target for SSA C is 98MW and 430MW for SSA B. The updated position in relation to SSA B and SSA C shows some 620MW in SSA B and 365MW in SSA C.

AREA B	MW
Operational (since 2005/TAN 8) and consented	
Mynydd Clogau	14.5
Carno A and B	33.6
Carno extension	15.6
Tirgwynt	28
'In Planning'	
Carno III	45
Esgair Cwm Owen	45
Mynydd Lluest-y-Graig	> 50
Cemmaes III	> 27.6
Dyfnant Forest	>120
<i>Carnedd Wen*</i>	150

<i>Llanbrynmair*</i>	90
TOTAL	619.3

AREA C	MW
'In Planning'	
Garreg Lwyd	46
Bryngydfa	36
Hirddywel	27
Neuadd Goch	27
<i>Llanbadarn Fynydd*</i>	59.5
<i>Llandinam Repowering* (including existing 31MW)</i>	102
<i>Llaithddu*</i>	66.7
TOTAL	364.2

CUMULATIVE IMPACTS

1029. The tables above demonstrate the level of wind farm projects within SSA B and SSA C. Taken together they represent an amount of development that in PCC's view would be overwhelming to both areas. They would also trigger both the Mid Wales Grid connection and the National Grid proposals.
1030. The cumulative effects of this level of development would be significantly harmful and environmentally damaging contrary to UK and national guidance for on-shore wind farm development. Such impacts further reinforce PCC's conclusions on each of the applications the subject of this conjoined Inquiry.
1031. It is noted that the National Grid proposals do not reinforce the existing grid. They deliver connection for the in planning wind farm projects as confirmed by the Project Need Case (July 2012) prepared by the National Grid (and entitled Connection of On-Shore Wind Farms in Mid Wales via Shropshire). The proposals are contingent on meeting SPMANweb's (and others) connections for wind farms in the region. Clearly, if all of the connections are not required, for example, through permission not being granted, the prospect of the 400 KV coming forward recedes.
1032. The on-shore proposals for SSA D can be connected to the grid without the 400KV scheme. The on-shore wind development of SSA D and its grid connection are not strictly matters for this Inquiry and will be considered separately in the future.

OVERALL CONCLUSIONS

1033. This conjoined Inquiry has provided PCC with the opportunity (for the first time) to take a strategic view on the impacts of 5 major wind farm proposals within the County. PCC has undertaken an assessment to consider the environmental capacity of SSA B and SSA C to inform their approach for this Inquiry. This has enabled PCC to refine its views on the development schemes in order to support the appropriate level of development set against the relevant energy and planning policy and the overall need for renewable energy to contribute towards the European and UK obligations.
1034. This overall planning balance has considered all of the evidence presented by PCC during the Inquiry and has concluded as follows in respect of each application.

Llandinam Repowering

1035. Whilst there would be some significant landscape and visual impacts, there would also be visual enhancements. The proposal does not therefore

reach the threshold of unacceptability in landscape and visual impact terms. In terms of cultural heritage terms, any effects with the revised proposal are less than substantial. There will be some highway disbenefits but these have been mitigated so as not to be severe and the noise effects are not significant. These harms assessed both individually and in combination do not clearly outweigh the significant benefits of the proposal and the overall balance in the public interest now justifies the grant of an appropriately conditioned consent.

Llaithddu

1036. The scheme as a whole would deliver a significant benefit in terms of renewable energy provision and economic benefits in terms of jobs and investment, however, these come at a severe environmental cost to the Afon Marteg Valley and the settlement of Bwlch y Sarnau. Those impacts clearly outweigh the benefits of the scheme as a whole and it ought not to be consented.

1037. PCC have considered whether the impacts could be avoided and conclude that with the removal of the 15 southern turbines, the landscape and visual harm can be largely avoided and certainly to a level which does not give rise to significant detriment. The removal of these turbines would also remove the identified harm upon nationally important heritage assets. Balancing the benefit of the reduced scheme against its disbenefits, the harms do not clearly outweigh the benefits and therefore consent should be refused and a revised, lesser scheme will have to be promoted as a Town and Country Planning Act application for the 12 turbines in the northern array.

Llanbadarn Fynydd

1038. Overall the benefits of this proposal are very substantially outweighed by its landscape and visual impacts. The scheme is in an entirely inappropriate location which marks a step change, namely, development to the east of the Ithon Valley, the effects of which cannot be acceptably mitigated. Consent should be withheld on this ground alone. This conclusion is reinforced by the precedent effect which would be caused by granting planning permission for a scheme which would de-sensitise the landscape to the east of the Ithon Valley to further wind farm development thus magnifying the harmful effects. It would also lead to unacceptable combined and cumulative effects.

Carnedd Wen

1039. The economic and ecological benefits of this scheme are significant and weigh in its favour. However, the harms identified in respect of the 5 turbines is wholly disproportionate with their benefit. Therefore, with the removal of the 5 turbines through a suitably worded condition, the harms no longer clearly outweigh the benefits and the project can be consented.

Llanbrynmair

1040. There are significant benefits to the proposals, however, the highway works to the rural road within the Nant yr Eira Valley are widespread and radical such that the landscape and visual impacts in particular would be

overwhelming to the area. There are also significantly harmful ecological impacts associated with these highway works. In addition, there would be notable and harmful disruption to the local community during the extensive construction period of the proposed highway works.

1041. Overall therefore, the impacts of the works to the Nant yr Eira Valley would be so harmful that they significantly outweigh the benefits that this nationally important project provides. An acceptable alternative access can be secured and this further supports PCC's position that, as submitted, the application should be refused.

Simon Bird QC

Tom Cosgrove

Clare Parry

Counsel for PCC

Mid Wales (Powys) Conjoined Wind Farm Inquiry
Applicant Documents

Doc No	Description	Submitted Wk No	Submitted Day No	Submitted Date	On Web	Comments
CPL/001	Comments on venue and format of PI	1	1	20/12/12	Y	
CPL/002	Joint Comments on venue and format of PI with RWE & FWLC	1	1	20/12/12	Y	
CPL/OSOC	Outline Statement of Case and PI Registration Form	1	1	21/1/13	Y	
CPL/003	Letter and Plans dated 14th February 2013 re deletion of 5 turbines	1	1	14/2/13	Y	
CPL/004	Letter dated 14th Feb 2013 in response to the Alliance Doc ALL/002	1	1	14/2/13	Y	
CPL/005	Letter in responses to RWE/005 re timetable opening week	1	1	10/4/13	Y	
CPL/006	Public Notice re Supplementary Environmental Information submitted 12th April 2013	1	1	12/4/13	Y	
CPL/SOC	Statement of Case for Public Inquiry	1	1	14/5/13	Y	
CPL/PLA/PF/POE	Proof of Evidence Planning & Energy Policy	1	1	14/5/13	Y	
CPL/PLA/PF/POE/APP1	Appendix 1 to Proof of Evidence Planning & Energy Policy	1	1	14/5/13	Y	
CPL/PLA/PF/POE/APP2	Appendix 2 to Proof of Evidence Planning & Energy Policy	1	1	14/5/13	Y	
CPL/PLA/PF/POE/APP3	Appendix 3 to Proof of Evidence Planning & Energy Policy	1	1	14/5/13	Y	
CPL/PLA/PF/POE/APP4	Appendix 4 to Proof of Evidence Planning & Energy Policy	1	1	14/5/13	Y	
CPL/PLA/PF/POE/APP5	Appendix 5 to Proof of Evidence Planning & Energy Policy	1	1	14/5/13	Y	
CPL/007	Opening Statement	1	2	5/6/13	Y	
CPL/008	Planning Policy Wales Edition 4 28th Feb 2011 Welsh Assembly Government	1	3	6/6/13	Y	
CPL/SOC/SSA-C	Addendum to CPL/SOC to include Session 1	2	4	9/7/13	Y	
CPL/SOC/SSA-C/APP1	Appendix 1 to SOC Core Document List fro Session 1	2	4	9/7/13	Y	
CPL/009	Statement in Response to Alliance re Impacts on Tourism, PROW, Need Evidence - Peter Frampton	2	4	27/8/13	Y	
CPL/010	Comments on evidence of Mr Bonfield for the Alliance and Mr Brennan Produced by James Welch for Llandinam Repowering	5	4	4/10/13	Y	
CPL-011-1	Consent document - 12.04.09.26C Page 1 and 32 submitted at Inquiry	5	4	4/10/13	Y	
CPL/11	Statement on Location of Substation for 132kV line application - Mr G Parker & Mr C Howarth	9	1	21/1/14	Y	
CPL/12	Comments on Proofs of Mr A Croft & Mr M Carpenter for Session 3 132kV line	9	1	21/1/14	Y	
CPL/12a	Appendix 1 Bedford BC vs SOS & Nuon Ltd	9	1	21/1/14	Y	
CPL/12b	Appendix 2 ATAC & CAPE v SOS (CLG) Kings Lynn & West Norfolk BC, EON and RES UK	9	1	21/1/14	Y	
CPL/SOC/s4	Statement of Case for Session 4 - Cumulative Effects	10	1	28/1/14	Y	
CPL-013	Note on Transport Conditions - Tucker	15	1	6/5/14	Y	
CPL-014	Note on Noise Conditions - Cand	15	1	6/5/14	Y	
CPL-015	Note on Carbon Calculations	15	1	20/5/14	TBA	
CPL-016	Note on Fire Hazards	16	1	23/5/14	TBA	
CPL-017	Closing Statement	16	2	28/5/14	TBA	
CPL-017a	Cellpower Closing - Planning Encyclopedia 70_32 to 35	16	2	28/5/14	TBA	
FWLC/001	Joint Comments on venue and format of PI with RWE & CPL	1	1	20/12/12	Y	
FWLC/OSOC	Outline Statement of Case	1	1	31/1/13	Y	
FWLC/RF	Registration Form	1	1	21/1/13	N	
FWLC/002	Statement on behalf of FWLC -Response to Alliance request for adjournment	1	1	18/2/13	Y	
FWLC/PLA/SOC	Statement of Case on Planning & Energy Policy	1	1	14/5/13	Y	
FWLC/003	Letter dated 13May 2013 re SEI extension to deadline	1	1	4/6/13	Y	
FWLC/004	Opening Statement Llaithddu	1	1	4/6/13	Y	
FWLC/005	Inquiry Note on Appropriate Assessment	1	2	5/6/13	Y	
FWLC/006	Letter to DECC dated 19th June 2013 Re SEI June 2013 and Option 2 proposal	2	4	19/6/13	Y	
FWLC/006A	Attachment to Letter FWLC/006 Map of Option 2 showing 27 Turbines	2	4	19/6/13	Y	
FWLC/006/B	Revision dated 24th June 2013 to letter FWLC/006	2	4	24/6/13	Y	
FWLC/SOC/SSA-C	Statement of Case Session 1 SSA-C	2	4	9/7/13	Y	
FWLC/007	Note on Hydrology - A reply to Dr Harvey J E Rodda's concerns - Neil Bagley	2	5	4/9/13	Y	
FWLC/008	Note on Amplitude Modulation - A reply to Mr Geoffrey Weller.s concerns	2	5	4/9/13	Y	
FWLC/009	Further Opening Statement Llaithddu for Session 1	2	4	3/9/13	Y	
FWLC/010	Explanatory Note to photographic record of use	4	2	24/9/13	Y	
FWLC/010a	Plan and Aerial Photograph	4	2	24/9/13	Y	
FWLC/011	Note on recreation	4	2	24/9/13	Y	

Mid Wales (Powys) Conjoined Wind Farm Inquiry
Applicant Documents

Doc No	Description	Submitted Wk No	Submitted Day No	Submitted Date	On Web	Comments
FWLC/SOC/S4	Statement of Case Session 4 Cumulative Effects	10	1	28/1/14	Y	
FWLC/012	Letter dated 25th February, 2014 re: Session 4 Proofs	12	1	25/2/14	Y	
FWLC/013	Clarification and response note - Transport ALLs Buchan	12	1	14/3/14	Y	
FWLC/014	Session 4 Clarification Note	13	2	19/3/14	Y	
FWLC-015	Session 4 Clarification Note on 4th April Site Visit	14	3	3/4/14	Y	
FWLC/016	Updated Protected Species Report (May 2014)	15	1	6/5/14	Y	
FWLC/017	Note on Peat	15	1	20/5/14	Y	
FWLC/017a	Appendix to FWLC/17	15	1	20/5/14	Y	
FWLC/018	Note on Economic Benefits	4	1	13/9/14	Y	
FWLC/019	Closing Statements	16	3	30/5/14	TBA	
RES/001	Comments on venue and format of PI	1	1	12/12/12	Y	
RES/OSOC	Outline Statement of Case and PI Registration Form	1	1	21/1/13	Y	
RES/002	Response Alliance Doc ALL/002 with Respect to EIA	1	1	14/2/13	Y	
RES/PLA/SOC	Statement of Case on Planning & Energy Policy	1	1	14/5/13	Y	
RES/003	Opening Statement	1	1	4/6/13	Y	
RES/SOC/SSA-B	Statement of Case SSA-B	3	8	10/8/13	Y	
RES/004	E-mail exchange re: clarification on the Collett's report	7	3	13/11/13	Y	
RES/005	Transport Response to Dominic Woodfield 16th November 2013	8	2	19/11/13	Y	
RES/006	RES letter to RWE re Shared Access 8th November 2013	8	2	19/11/13	Y	
RES/006a	RWE Response to RES re Shared Access 18th November 2013	8	2	19/11/13	Y	
RES/007	Indicative Construction Programme Gant Chart	8	2	19/11/13	Y	
RES/008	Response to Powys e-mail of 5 November	8	4	22/11/13	Y	
RES/009	Note on Impact on Peat by the Neithirion Bypass	8	4	22/11/13	Y	
RES/010	Carbon calculator inquiry summary	9	1	25/11/13	Y	
RES/011	Note on Habitat Surveys (Botanical Note) MG	9	1	28/11/13	Y	
RES/012	Response to Dominic Woodfield	9	1	28/11/13	Y	
RES/013	Note on viability of shared access with Carnedd Wen	9	1	9/12/13	Y	
RES/014	Notes on Points raise by the Alliance in ALL-016	8	3	5/12/13	Y	
RES/015	Letter to the Inspector re: Clarification on Session 4	10	4	31/1/14	Y	
RES/SOC/S4	Statement of Case Session 4 Cumulative Effects	10	1	28/1/14	Y	
RES/016	Closing Statement	16	2	29/5/14	TBA	
RWE/001	Joint Comments on venue and format of PI with CPL & FWLC	1	1	20/12/12	Y	
RWE/002	Letter dated 14th December 2012 To Powys County Council	1	1	21/1/13	Y	
RWE/RF	Registration Form re Neaudd Goch Bank Wind Farm	1	1	25/1/13	Y	
RWE/OSOC	Outline Statement of Case	1	1	21/1/13	Y	
RWE/OSOC/1	Outline Statement of Case re Neaudd Goch Bank Wind Farm	1	1	25/1/13	Y	
RWE/003	Response to Alliance Document ALL/002	1	1	14/2/13	Y	
RWE/004	Letter dated 5th March 2013 to DECC reducing the maximum capacity to 150 MW	1	1	7/3/13	Y	
RWE/005	Letter dated 28th March 2013 re Timetable Opening Week	1	1	28/3/13	Y	
RWE/PLA/SOC	Statement of Case on Planning & Energy Policy	1	1	14/5/13	Y	
RWE/006	Opening Statement	1	2	5/6/13	Y	
RWE/007	Letter dated 16th July 2013 re status of SOCG	2	4	16/7/13	Y	
RWE/SOC/SSA-B	Statement of Case SSA-B	3	8	10/9/13	Y	
RWE/008	Optimisation of Site Access from A458	4	4	27/9/13	Y	
RWE/009	Letter to Inspector re: Clarification on Session 4	11	1	5/2/14	Y	
RWE/SOC/S4	Statement of Case Session 4 Cumulative Effects	10	1	28/1/14	Y	
RWE/010	Note on Conditions for Closing Session	15	1	15/5/14	Y	
RWE/011	Closing Statement	16	2	29/5/14	TBA	
VATT/OSOC	Outline Statement of Case and PI Registration Form	1	1	21/1/13	Y	

Mid Wales (Powys) Conjoined Wind Farm Inquiry
Applicant Documents

Doc No	Description	Submitted Wk No	Submitted Day No	Submitted Date	On Web	Comments
VATT/001	Comments on venue and format of PI	1	1	18/12/12	Y	
VATT/002	Further Comments on Venue and format of the PI	1	1	21/1/13	Y	
VATT/003	Response to Alliance documents ALL/002	1	1	14/2/13	Y	
VATT/004	Public Notice re Supplementary Environmental Information submitted 15th February 2013	1	1	15/2/13	Y	
VATT/005	Letter dated 26 March 2013 re Updated Timetable	1	1	26/3/13	Y	
VATT/006	Letter dated 5th April 2013 in response to RWE005	1	1	5/4/13	Y	
VATT/PLA/SOC	Statement of Case on Energy & Planning Policy	1	1	14/5/13	Y	
VATT/007	Letter dated 17th May 2013 re Transport Sessions 1& 4	1	1	17/5/13	Y	
VATT/008	Opening Statement	1	1	4/6/13	Y	
VATT/009	Note on Session 1 (Area C) Proposed Outline Timetable	1	2	5/6/13	Y	
VATT/010	Public Notice re Revised Supplementary Environmental Information June 2013	2	4	19/6/13	Y	
VATT/011	Letter dated 9th July 2013 Re Progress Update on SOCG SSC-A	2	4	9/7/13	Y	
VATT/SOC/SSA-C	Statement of Case Session 1 SSA-C	2	4	9/7/13	Y	
VATT/SOC/SSA-C/ADD1	Addendum to Statement of Case Session 1 SSA-C	2	4	30/7/13		
VATT/TRANS/SOCG/SSA-C	Transport SOCG for Session 1 signed by Vattenfall, PCC and WGT (VATT/012)	2	4	18/7/13	Y	
VATT/HISENV/SOCG/SSA-C	Statement of Common Ground between Vattenfall & Cadw and Clwyd Powys Archaeological Trust (VATT/013)	2	4	22/7/13	Y	
VATT/NOISE/SOCG/SSA-C	Statement of Common Ground between VATT & PCC	2	4	31/7/13	Y	
VATT/ECOLGY/SOCG/SSA-C	Statement of Common Ground between VATT and NRW	2	4	31/7/13	Y	
VATT/012	List of scheduled monuments in Radnorshire - Simon Atkinson	2	4	3/9/13	Y	
VATT/013	Deserted Medieval & Later Rural Settlements in Radnorshire	2	4	3/9/13	Y	
VATT/014	List of Scheduled monuments within 5km of SSA-C sites - Simon Atkinson	2	4	3/9/13	Y	
VATT/015	Written Submission Local Transport Issues - Mr Peter Mansell BSc Ceng MICE FCIHT	2	5	4/9/13	Y	
VATT-SOC-S4	Statement of Case Session 4 Cumulative Effects	10	1	28/1/14	Y	
VATT/016	Letter & plans re: amendments to application to facilitate access to site south of Newtown	12	1	21/2/14	Y	
VATT-017	Adverts for addendum to December 2013 SEI	12	1	6/3/14	Y	
VATT-017a	Adverts for addendum to December 2013 SEI	12	1	6/3/14	Y	
VATT-018	Letter to DECC clarifying name change from Nuon to Vattenfall	15	1	16/4/14	Y	Copy received to Banks Solutions on this d
VATT-019	Closing Statement	16	3	30/5/14	Y	
VATT-019a	Closing Statement - Table of Contents	16	3	30/5/14	Y	
SPM/001	Comments on venue and format of PI	1	1	18/12/12	Y	
SPM/RF	Resistration Form	1	1	21/1/13	N	
SPM/OSOC	Outline Statement of Case	1	1	21/1/13	Y	
SPM/002	Response to Alliance Document ALL/002	1	1	14/2/13	Y	
SPM/003	Submission in response to the Draft Inquiry Timetable issued 8th March 2013	1	1	12/3/13	Y	
SPM/004	Letter dated 5th April 2013 in response to RWE Document RWE/005	1	1	5/4/13	Y	
SPM/005	Opening Statement	1	1	4/6/13	Y	
SPM/006	Letter Dated 27th June 2013 re Approach to the Assessment of Cumulative Impacts	2	4	27/6/13	Y	
SPM/SOC/OHL	Statement of Case	9	1	26/11/13	Y	
SPM/006/1	Response to PCC Application to Defer	9	1	8/11/13	TBA	
SPM/007	Letter to Inspector regarding Statements of Common Ground	9	1	26/11/13	Y	
SPM/008	Letter to the Inspector for clarification on Session 3 matters	9	1	17/12/13	Y	
SPM/009	Draft Conditions for Discussion	9	1	21/1/14	TBA	
SPM/010	Note following the evidence of Mr Leavy	10	2	22/1/14	Y	
SPM/011	Note following the evidence of Mr Rory Brooke	10	2	23/1/14	Y	
SPM/012	Possible duplication	10	2	23/1/14	TBA	
SPM/013	Routes D & E- & Newtown Bypass & Properties	10	2	23/1/14	TBA	
SPM/014	Response to various queries raised during the evidence of Dr Beddoes and Mr Paalman	10	4	24/1/14	Y	
SPM/015	Clarification of the ability of the a license holder to seek necessary wayleaves when an application for S37 conser	10	4	24/1/14	Y	
SPM/016	Powys Wind Farm Scenario - January 2014 (SP Manweb produced)	10	4	24/1/14	Y	
SPM/017	Llandinam Updated ES - Viewpoint Pole Measures- reduced	10	4	24/1/14	TBA	
SPM/018	Paper Explaining Regulatory Scrutiny SPM is Subject To	10	4	24/1/14	Y	

