



ELECTRICITY ACT 1989
CONSTRUCTION AND OPERATION OF A WIND TURBINE GENERATING STATION (“LLANBRYNMAIR WIND FARM”) IN POWYS, MID-WALES

1. Pursuant to section 36 of the Electricity Act 1989, the Secretary of State for Business, Energy and Industrial Strategy (“the Secretary of State”) hereby consents to:
 - (a) the construction of that part of the Development (as set out in paragraph 2) comprising a wind turbine generating station with a maximum electricity generation capacity of 90MW on the area of land (“the site”) delineated by a solid red line on the Drawing No. 01592D2205-16 – Site Boundary Drawings 1A, 1B (to the extent that it refers to sheets 3A to 3E only) and 1-3A to 1-3E (supplementary environmental information dated February 2014) between the villages of Llanbrynmair and Llanerfyl in Powys; and
 - (b) the operation of that generating station.
2. The Development shall 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) additional construction, maintenance and emergency site access tracks;
 - (e) an onsite electricity substation and 2 welfare buildings;
 - (f) a permanent anemometry mast and 5 pairs of temporary power performance calibration masts;
 - (g) 6 borrow pits for the extraction of stone to be used in the construction of the Development;
 - (h) a communications mast; and
 - (i) a new junction for the A470 at Talerddig and associated highways works to facilitate access to the site,
 - (j) but does not include consent for works to provide access for Abnormal Indivisible Loads from the Llanerfyl to Talerddig road (Drawing No. 01592D2205-16 – Site Boundary Drawings 1-1A to 1-1K and 1-2A to 1-2G).



3. This consent is granted to RES UK & Ireland Limited (company no. 04913493), its assignees and successors ("the Company").
4. This consent is subject to the following conditions.
 - (A) 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 supplementary environmental information provided in connection with the application in so far as these do not conflict with the conditions of the deemed planning permission or the terms of any details, plan, protocol, scheme or strategy approved by the Local Planning Authority (as defined in condition (1) of the deemed planning permission) in accordance with that permission.
 - (B) Phase 1 and Phase 2 of the Development (as defined in condition (1) of the deemed planning permission) shall each be commenced within 5 years from the date of this consent.
 - (C) Neither Phase 1 or Phase 2 of the Development (as defined in condition (1) of the deemed planning permission) shall commence (including site clearance and tree felling) until consent for a route to provide access onto the site for Abnormal Indivisible Loads has been approved by the Local Planning Authority following consultation with the relevant highway authorities.
5. The Secretary of State in exercise of the powers conferred by section 90(2) of the Town and Country Planning Act 1990 hereby directs that planning permission for the Development be deemed to be granted subject to the following conditions:

Definitions

- (1) 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 (S.I. 2003 No 1998);

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

"Company" has the meaning given by paragraph 3 of this consent;

"construction period" means the period from the commencement of the Development until the date 6 months after the site compounds have been reinstated in accordance with the conditions of this permission;

"Development" has the meaning given by paragraph 2 of this consent;



“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 Report” means the report entitled “The Assessment and Rating of Noise from Wind Farms” published by the Energy Technology Support Unit for the Department of Trade and Industry in September 1996;

“final commissioning” means the date on which the last wind turbine forming part of the Development is commissioned and exporting electricity;

“first export” means the date on which electricity is first exported on a commercial basis;

“heavy commercial vehicle” has the meaning given in section 138 of the Road Traffic Regulation Act 1984;

“highway authority” has the meaning given in the Highways Act 1980;

“LA90” means the decibel level exceeded for 90% of each sample period;

“Local Planning Authority” means Powys County Council;

“NRW” means Natural Resources Wales and its successors;

“Phase 1” means that part of the Development to be carried out on the land shaded blue on Drawing No. 01592D2281-01, Site Phasing Plan (attached to this consent);

“Phase 2” means that part of the Development to be carried out on the land shaded red on Drawing No. 01592D2281-01, Site Phasing Plan (attached to this consent);

“public holiday” means a day that is, or is to be observed as, a public holiday in Wales;

“Secretary of State” has the meaning given by paragraph 1 of this consent;

“site” has the meaning given by paragraph 1 of this consent;

“wind speed” means wind speed measured on the site at the wind turbine hub height, and corrected to a standard height of 10 metres above ground level, in a manner agreed with the Local Planning Authority;

“wind turbine” means a wind turbine forming part of the Development.

Reason: For the avoidance of doubt.

- (2) Where a condition provides for details or a plan, protocol, scheme or strategy (“the plan”) to be approved by the Local Planning Authority:
 - (a) the plan and the approval shall be in writing;



- (b) the approved plan shall be taken to include any amendments that may subsequently be approved in writing by the Local Planning Authority (following consultation with any person with whom consultation was originally required); and
- (c) no approval for a plan or an amendment to a plan shall be given if the plan or amended plan may give rise to any materially new or materially different environmental effects to those assessed in the environmental statement and supplementary environmental information.

Reason: For the avoidance of doubt.

The Development

- (3) Subject to the other conditions of this permission, the Development shall be carried out:
 - (a) in accordance with the following approved plans and documents:
 - (i) Drawing No. 01592D2205-16, Site Boundary Drawings 1A, 1B (to the extent that it refers to sheets 3A to 3E only) and 1-3A to 1-3E (supplementary environmental information dated February 2014);
 - (ii) Drawing No. 01592D0005-01, Figure 3.5, Turbine Layout (supplementary environmental information dated August 2013);
 - (iii) Drawing No. 01592D2217-06, Figures 3.25a and 3.25b, Layout and Micrositing Areas (supplementary environmental information dated August 2013);
 - (iv) Drawing No. 01592D2276-05, Figure 4.1, Alternative Infrastructure Layout (supplementary environmental information dated February 2014); and
 - (b) 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.

Reason: For the avoidance of doubt.

- (4) (a) The permission for Phase 1 of the Development shall be for a period of 25 years from the first export from Phase 1.
- (b) 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.



- (5) Confirmation of the date first export for each Phase shall be provided to the Local Planning authority within 1 month of its occurrence.

Reason: To establish the date from which condition (4) shall apply.

- (6) Confirmation of the date of final commissioning shall be provided to the Secretary of State and the Local Planning Authority no later than 1 calendar month after that event.

Reason: To establish the date of final commissioning.

Decommissioning and restoration

- (7) (a) Not less than 24 months before the expiry of this permission in relation to Phase 1 of the Development, a scheme (including methodologies) for updated habitats, birds and protected species surveys to inform the site decommissioning and restoration scheme referred to in condition (8) shall be submitted to the Local Planning Authority for approval following consultation with NRW.
- (b) Not less than 24 months before the expiry of this permission in relation to Phase 2 of the Development, a scheme (including methodologies) for updated habitats, birds and protected species surveys to inform the site decommissioning and restoration scheme referred to in condition (8) shall be submitted to the Local Planning Authority for approval following consultation with NRW.

Reason: To inform the site decommissioning and restoration scheme.

- (8) (a) Not less than 18 months before the expiry of this permission in relation to Phase 1 of the Development in accordance with condition (4)(a), a scheme for the decommissioning and restoration of the relevant part of site ("the site decommissioning and restoration scheme") shall be submitted to the Local Planning Authority for approval following consultation with NRW.
- (b) Not less than 18 months before the expiry of this permission in relation to Phase 2 of the Development in accordance with condition (4)(b), a scheme for the decommissioning and restoration of the relevant part of site ("the site decommissioning and restoration scheme") shall be submitted to the Local Planning Authority for approval following consultation with NRW.
- (c) The site decommissioning and restoration schemes shall be informed by the updated habitats, birds and protected species surveys conducted in accordance with the schemes referred to in condition (7).
- (d) The site decommissioning and restoration schemes shall include, but not be limited to:



- (i) details of all tracks, structures, buildings, underground cables and utilities and other associated infrastructure to be removed to a depth of 1 metre below ground;
 - (ii) details of the means of removal, including means of avoiding impacts on peatland habitats;
 - (iii) phasing of the removal of tracks, structures, buildings and other associated infrastructure;
 - (iv) earth moving and soil replacement;
 - (v) restoration of the landscape and habitat;
 - (vi) monitoring of the restored areas and remedial actions;
 - (vii) reinstatement of public rights of way, footpaths and bridleways.
- (e) The schemes shall be implemented as approved and shall be completed within 12 months of the expiry date of the permission for Phase 2.

Reason: To ensure site is restored in a sympathetic manner upon expiry of this permission.

- (9) (a) Prior to the implementation of either site decommissioning and restoration scheme, a community liaison scheme shall be submitted to and approved by the Local Planning Authority.
- (b) The scheme shall include:
- (i) details of Company liaison with the local community to ensure residents are informed of how the decommissioning of the Development is progressing;
 - (ii) a mechanism for dealing with complaints from the local community during the decommissioning of the Development; and
 - (iii) a nominated representative of the Company who will have the lead role in liaising with local residents and the Local Planning Authority.
- (c) The community liaison scheme shall be implemented as approved.

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

- (10) On completion of the restoration work carried out in accordance with the site decommissioning and restoration schemes, any remaining fixed equipment, machinery and buildings erected or brought onto the site for the purpose of implementing the schemes 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 schemes.



- (11) (a) Before any development shall commence on the site, the Company shall submit to the Local Planning Authority details of a financial instrument and arrangements which shall ensure that funds sufficient to cover the costs of the completion of the decommissioning and site restoration are available to the Local Planning Authority prior to the commencement of decommissioning and site restoration.
- (b) 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 anniversaries of the first export from Phase 1 to ensure that the funds remain sufficient to cover the completion of the decommissioning and site restoration costs of the Development.
- (c) No development shall take place on site until the Local Planning Authority has approved the financial instrument and arrangements and the financial instrument and arrangements are in place.
- (d) The financial instrument and arrangements shall be maintained by the Company throughout the duration of this permission and restoration period.
- (e) The arrangements for the deposit of funds, inflation adjustment and review of the financial instrument shall be implemented as approved.

Reason: To ensure the site is left in a satisfactory manner upon completion of the site decommissioning and restoration schemes.

Turbine failure

- (12) 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 be notified as soon as possible of the failure;
- (b) the Local Planning Authority may require the Company to submit a scheme 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, informed by updated habitats, birds and protected species surveys, shall be submitted to the Local Planning Authority for approval; and
- (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 wind turbines requiring repair or for wind turbines which require decommissioning.



Development micro-siting

- (13) (a) No development (excluding tree felling, site and vegetation clearance) shall commence until a protocol (the "micro-siting protocol") has been submitted to the Local Planning Authority for approval following consultation with NRW.
- (b) The micro-siting protocol shall include:
- (i) agreed criteria for micro-siting wind 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 metres from blade tip to woodland and forestry edges;
 - (ii) an agreed hierarchy of issues to be considered in micro-siting decisions; and
 - (iii) the extent of any NRW involvement in the final micro-siting approval process and implementation of the approved scheme.
- (c) 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.
- (d) The Development shall be carried out and operated in accordance with the approved micro-siting protocol.

Reason: To allow the Company 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.

- (14) All aspects of the Development shall be carried out within 50 metres from their approved location for wind turbines and 100 metres for access tracks and access crossings of drains or ditches and other infrastructure.

Reason: To minimise environmental impact.

- (15) 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, wind 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 and appearance

- (16) (a) No wind turbines shall be delivered to the 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 have been submitted to and approved by the Local Planning Authority.

- (b) The wind 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.

- (17) (a) Before any wind turbines are erected, a scheme for specifying the colour and finish shall be submitted to the Local Planning Authority for approval.
- (b) The scheme shall include:
 - (i) a sample of the colour proposed; and
 - (ii) 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.
- (c) No wind turbines shall be erected until the scheme and the proposed colour have been approved by the Local Planning Authority, and the turbines shall be finished in accordance with the approved scheme and colour.

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

- (18) All wind turbines shall be of a standard 3-blade horizontal axis design, and the blades of all wind turbines shall rotate in the same direction.

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

- (19) All electricity cables connecting the wind turbine arrays and the substation shall be installed underground.

Reason: In the interests of visual amenity.

- (20) (a) 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.
- (b) The substation shall be constructed in accordance with the approved details.

Reason: In the interests of visual amenity.

- (21) (a) No outdoor lighting other than:
 - (i) aviation lighting installed in accordance with condition (52); and



- (ii) temporary site illumination approved as part of the construction and environmental management plan approved under condition (38),

shall be used in the course of the Development unless details of the outdoor lighting have been submitted to and approved by the Local Planning Authority.

- (b) Outdoor lighting shall be provided only in accordance with the approved details.

Reason: In the interests of visual amenity.

- (22) 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 wind turbines nor any building or structures of the Development without approval from the Local Planning Authority.

Reason: In the interests of visual amenity.

Construction hours

- (23) (a) Construction work shall take place only between the hours of 07:30 and 19:30 hours on Monday to Friday and between the hours of 07:30 and 13:00 hours on Saturdays, with no construction work on a Sunday or public holidays.
- (b) Outside these hours, works at the site shall be limited to emergency works, erection of wind turbines, dust suppression, the testing/maintenance of plant and equipment and construction work that is not audible from any noise-sensitive property, unless otherwise approved in writing by the Local Planning Authority.
- (c) The Local Planning Authority shall be informed in writing of emergency works within 3 working days of their occurrence.

Reason: To protect amenity.

- (24) 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

(25) No Abnormal Indivisible Load deliveries shall take place until a new junction onto the A458 trunk road and the Abnormal Indivisible Load access route from the A458 to the site boundary of the Development has been constructed to the *satisfaction* of the Local Planning Authority following consultation with the relevant highway authorities.

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

(26) (a) No development (including site clearance and tree-felling) shall commence until detailed plans of the new junction for the A470 at Talerddig have been submitted to and approved by the Local Planning Authority following consultation with the relevant highway authorities.

(b) The details submitted shall reflect plan reference 60283248-D-040 (revision G) submitted with the supplementary environmental information dated August 2013 and include:

(i) 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;

(ii) drainage details;

(iii) road markings and signage proposals; and

(iv) a programme for the implantation of the works.

(c) The works shall be implemented in accordance with the approved plans before any development shall commence.

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

(27) (a) No development (including site clearance and tree-felling) shall commence 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 as shown on drawing number 01592D2276-05 have been submitted to and approved by the Local Planning Authority following consultation with the relevant highway authorities.

(b) The details submitted shall include:

(i) details of localised widening and indivisible passing places;

(ii) details of changes to vertical alignments;

(iii) 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;



- (iv) drainage details; and
 - (v) road markings and signage proposals.
- (c) The works shall be implemented in accordance with the approved plans before any development shall commence.

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

- (28) (a) No deliveries by Abnormal Indivisible Load shall take place until an assessment of the capacity of and impact on highway structures including layover areas, passing places, bridges, culverts, retaining walls, embankments and drainage systems that may be affected by Abnormal Indivisible Load deliveries has been carried out, submitted to and approved by the Local Planning Authority following consultation with the relevant highway authorities.
- (b) Where the approved assessment indicates that 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 structures to accommodate the passage of Abnormal Indivisible Loads have been submitted to and approved by the Local Planning Authority.
- (c) 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.

- (29) (a) 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 by the Local Planning Authority.
- (b) The plan shall include details of the following:
- (i) frequency and timing of building condition and building structural surveys in relation to Abnormal Indivisible Load deliveries;
 - (ii) identification of relevant matters to be contained within a building condition and building structural survey;
 - (iii) details of requirements to submit survey reports to the Local Planning Authority;
 - (iv) 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 structural surveys;



- (v) procedures for the design and implementation of any strengthening works identified as necessary by the building condition and building structural surveys; and
 - (vi) procedures for the approval and implementation of any remediation works to individual properties identified as required.
- (c) The building condition and building structural survey plan shall be implemented as approved.

Reason: In the interests of avoiding damage to property.

- (30) (a) 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 (August 2012) has been submitted to and approved by the Local Planning Authority following consultation with the relevant highway authorities.
- (b) The traffic management plan shall include:
- (i) details of Abnormal Indivisible Loads vehicle routing;
 - (ii) 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;
 - (iii) 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;
 - (iv) management of junctions and crossings of highways and other public rights of way while Abnormal Indivisible Loads deliveries take place;
 - (v) management and maintenance of layover areas, passing places and welfare facilities while Abnormal Indivisible Load deliveries take place;
 - (vi) details of temporary warning signs;
 - (vii) restrictions on Abnormal Indivisible Loads movements during special events including (without limitation) the Royal Welsh and Smallholders shows;
 - (viii) 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; and
 - (ix) details of a review mechanism to enable changes in circumstances after the approval of the traffic management plan to be addressed.



- (c) The traffic management plan for Abnormal Indivisible Load deliveries shall be implemented as approved.

Reason: In the interests of highways safety and amenity.

- (31) (a) No Abnormal Indivisible Load deliveries shall be made to the site until an Abnormal Indivisible Load management strategy has been submitted to and approved by the Local Planning Authority following consultation with the relevant highway authorities.
- (b) The Abnormal Indivisible Load management strategy shall include details of the following:
 - (i) persons responsible for the management and implementation of the Abnormal Indivisible Load management strategy;
 - (ii) means of control of timing of delivery of Abnormal Indivisible Load movements;
 - (iii) temporary traffic diversions and traffic hold points;
 - (iv) details of banksmen and escorts for Abnormal Indivisible Loads;
 - (v) co-ordination with all other Abnormal Indivisible Load deliveries (including without limitation to other wind farms in Mid-Wales);
 - (vi) description of procedures for the allocation of delivery slots including delivery slot triggers and trading;
 - (vii) the appointment and role of a transport co-ordinator;
 - (viii) liaison with relevant highway and planning authorities and the police;
 - (ix) liaison with members of the public and local communities;
 - (x) liaison with the hauliers, developers and landowners;
 - (xi) details of a review mechanism to enable changes in circumstances after the approval of the management strategy to be addressed.
- (c) The Abnormal Indivisible Load management strategy shall be implemented as approved.

Reason: In the interests of highway safety and amenity.

- (32) (a) 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.



- (b) The scheme shall include:
 - (i) a pre-construction condition survey of the sections of the Llanerfyl to Talerdig road that would be used by construction traffic; and
 - (ii) further post-construction survey work of those sections of the highway.
- (c) 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.

- (33) (a) No construction works shall take place on site until a construction traffic management plan in respect of general construction traffic has been submitted to and approved by the Local Planning Authority following consultation with the relevant highway authorities.
- (b) The construction traffic management plan shall include details of the following:
 - (i) construction vehicle routeing;
 - (ii) means of monitoring vehicle movements to and from the site including the use of liveried construction vehicles displaying the name of the Company, the vehicle number, a telephone number for complaints and procedures for dealing with complaints;
 - (iii) timing of deliveries of construction materials to the site;
 - (iv) the management of junctions and crossings of roads and other public rights of way;
 - (v) measures to be put in place including contractual arrangements with contractors and subcontractors to ensure that complaints and breaches of the construction traffic management plan's requirements are able to be remedied;
 - (vi) a travel plan aimed at maximising the use of sustainable travel by the construction workforce associated with the Development;
 - (vii) vehicle movements during special events including (without limitation) the Royal Welsh and Smallholders shows;
 - (viii) communications with members of the public and local communities; and
 - (ix) details of a review mechanism to enable changes in circumstances after the approval of the construction traffic management plan to be addressed.



- (c) The construction traffic management plan shall be implemented as approved.

Reason: In the interests of highway safety and amenity.

- (34) (a) No Abnormal Indivisible Load movements associated with any repairs, removal or replacement of components shall take place during the life of the Development until a traffic management plan dealing with such repair, removal and replacement has been submitted to and approved by the Local Planning Authority following consultation with the relevant highway authorities.

- (b) The traffic management plan shall be implemented as approved.

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

- (35) (a) No movement of traffic associated with the decommissioning of the Development shall take place until a traffic management plan dealing with decommissioning has been submitted to and approved by the Local Planning Authority following consultation with the relevant highway authorities.

- (b) The traffic management plan shall be implemented as approved.

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

Felling, vegetation clearance and peat management

- (36) (a) No development including site and vegetation clearance, felling and lopping shall commence on Phase 1 or Phase 2 until a detailed felling and vegetation clearance and peat management plan relating to that Phase has been submitted to and approved by the Local Planning Authority following consultation with NRW.

- (b) The felling and vegetation clearance and peat management plan shall be in accordance with the objectives and conditions set out in the peat management plan at Appendix 8.9 of volume IIB of the supplementary environmental information dated August 2013 and shall include but not be limited to:

- (i) measures to minimise effects on peat and peatland habitats during the construction of on-site access roads, site clearance and felling;
- (ii) 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;
- (iii) measures to manage areas for curlew, insofar as they are affected by felling, vegetation and site clearance;



- (iv) details of methods to be used in the post-forestry felling peat depth assessments;
 - (v) the objectives and conditions set out in the peat management plan at Appendix 8.9 of volume IIB of the supplementary environmental information dated August 2013;
 - (vi) measures to monitor the implementation of the felling and vegetation clearance and peat management plan and for any necessary remedial measures to be out in place;
 - (vii) a working statement, including design and construction, to cover all channel and bank works including crossings;
 - (viii) the proposed storage of materials (including waste materials) and disposal of surplus materials;
 - (ix) a detailed timetable for forestry felling, site clearance and habitat management (and the timetable shall include potential contingencies for birds and protected species);
 - (x) 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;
 - (xi) construction method statements for access roads, construction compounds and other infrastructure; and
 - (xii) 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 felling and vegetation clearance and peat management plan.
- (c) The felling and vegetation clearance and peat management plan 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.

- (37) (a) No development (other than felling and vegetation clearance) shall commence on Phase 1 or Phase 2 until a final peat management plan relating to that Phase and informed by the post-forestry felling peat depth assessments have been submitted to and approved by the Local Planning Authority following consultation with NRW.
- (b) The final peat management plan that relates to a Phase shall include all details included within the felling and vegetation clearance and peat management plan that relates to that Phase plus any updated/additional measures required to achieve those measures.



- (c) The final peat management plan shall be implemented as approved.

Reason: In the interests of minimising effects on peat.

Construction management

- (38) (a) No development other than site clearance, scrub or vegetation removal or tree felling works shall commence until a construction and environmental management plan has been submitted to and approved by the Local Planning Authority following consultation with NRW.
- (b) The construction and environmental management plan shall include details of:
- (i) 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;
 - (ii) a working statement (including design and construction) to cover all channel and bank works including all channel crossings;
 - (iii) the proposed storage of materials (including waste materials) and disposal of surplus materials;
 - (iv) 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;
 - (v) details of surface treatments and the construction of all hard surfaces and tracks;
 - (vi) construction method statements for wind turbines, access roads, construction compounds and other permanent and temporary infrastructure;
 - (vii) a water quality and pollution prevention plan, to include measures to avoid pollution due to run-off, pollution response plans and water quality monitoring;
 - (viii) details of production processes for concrete, including washing out procedures;
 - (ix) emergency procedures;
 - (x) measures to control dust and mud, including wheel-washing facilities and the sheeting of heavy commercial vehicles;
 - (xi) temporary site illumination;
 - (xii) methods to control construction noise;



- (xiii) the opening, excavation and reinstatement of on-site borrow pits;
 - (xiv) details of phasing of the construction works;
 - (xv) a post-construction restoration plan, including removal of temporary structures, construction compounds and construction materials;
 - (xvi) details of measures to prevent the spread of non-native invasive species; and
 - (xvii) the roles and responsibilities of persons responsible for the management and implementation of the construction and environmental management plan.
- (c) The construction and environmental management plan shall be implemented as approved.

Reason: To ensure a satisfactory level of environmental protection.

- (39) (a) No wind turbine shall be removed or replaced until a revised construction and environmental management plan dealing solely with that removal or replacement has been submitted to and approved by the Local Planning Authority following consultation with NRW.
- (b) The revised construction and environmental management plan shall be implemented as approved.

Reason: To ensure a satisfactory level of environmental protection.

Rights of way management plan

- (40) (a) No development shall commence until a rights of way management plan has been submitted to and approved by the Local Planning Authority.
- (b) The rights of way management plan shall include:
- (i) details of the temporary re-routeing of public rights of way during construction of the Development;
 - (ii) details of the provision of signage and other information alerting the public to construction works;
 - (iii) details of any fencing or barriers to be provided during the construction period;
 - (iv) details as to how public rights of way, paths and roads will be inspected prior to and monitored during the construction period; and
 - (v) details of protection of breeding birds where any public right of way is re-routed.



- (c) The rights of way management plan shall be implemented as approved.

Reason: To protect public rights of way.

Ecology

- (41) (a) No development shall commence on-site until a detailed habitat management plan, 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 by the Local Planning Authority following consultation with NRW.
- (b) The habitat management plan shall include (but not be limited to) details of the habitat management measures set out in the outline habitat management plan at Appendix 5.2 of volume II of the supplementary environmental information dated August 2013 and detail of the following:
- (i) the inclusion of ditch blocking in Habitat Management Area ("HMA") 3 as identified in Drawing No. 01592D2216-07, Figure 5.3 Habitat Management Plan in the supplementary environmental information dated August 2013;
 - (ii) 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 raptors referred to in Schedule 1 to the Wildlife and Countryside Act 1981);
 - (iii) retention of open tree cover where possible;
 - (iv) 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);
 - (v) a scheme and programme to secure the eradication of re-seeded conifers and rhododendrons;
 - (vi) a minimum blanket bog restoration area target;
 - (vii) retention of areas of rough grassland to provide suitable foraging habitat for barn owls;
 - (viii) management and stocking rates of restored blanket bog habitat;
 - (ix) 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;
 - (x) the measures to be secured to implement the provisions of the habitat management plan; and



- (xi) 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.
- (c) The Development shall be carried out and operated in accordance with the approved habitat management plan.

Reason: In the interests of nature conservation.

- (42) (a) No development (including vegetation clearance and tree felling) shall commence until details of a suitably qualified ecological clerk of works to be employed on the Development have been submitted to and approved by the Local Planning Authority.
- (b) The ecological clerk of works, who shall be a member of the Chartered Institute of Ecology and Environmental Management, shall be appointed at least 1 month prior to the commencement of any tree felling/site and vegetation clearance works or development.
- (c) The scope of the ecological clerk of works's duties shall include, but not be limited to:
 - (i) 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;
 - (ii) advising the Company on the implementation of the approved mitigation proposals and the protection of important nature conservation interests on the site;
 - (iii) directing and consulting on the micro-siting and placement of wind turbines, roads and other infrastructure;
 - (iv) monitoring and reporting on the compliance with the construction and environmental management plan approved under condition (38) and the habitat management plan approved under condition (41); and
 - (v) attending liaison meetings with and reporting compliance with conditions and plans and mitigation measures to the Local Planning Authority 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.

- (43) (a) A breeding bird protection plan shall be submitted to and approved by the Local Planning Authority following consultation with NRW at least 15 months prior to the commencement of construction.
- (b) The breeding bird protection plan shall include but not be limited to details of:



- (i) black grouse surveys to be carried out 1 breeding season prior to construction which shall take place during the lekking period of mid-March to the end of May and annually thereafter during that period until the end of the construction period;
 - (ii) breeding bird surveys to be carried out 1 breeding season prior to construction and annually thereafter until the end of the construction period;
 - (iii) curlew surveys to be carried out 1 breeding season prior to construction and annually thereafter until the end of the construction period;
 - (iv) pre-construction surveys for birds referred to in Schedule 1 to the Wildlife and Countryside Act 1981 if works are to be undertaken during the breeding season, i.e., between 1 March and 31 August (both dates inclusive);
 - (v) measures to prevent disturbance to raptors referred to in Schedule 1 to the Wildlife and Countryside Act 1981, 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;
 - (vi) prohibition of track construction between 15 February and 31 July (both dates inclusive) each year in areas where curlew are present as indicated by pre-commencement surveys;
 - (vii) a cap of 80 heavy commercial vehicle movements to site per day between 15 February and 31 July (both dates inclusive) each year (i.e., 160 trips per day);
 - (viii) 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;
 - (ix) measures to limit collision of barn owl with infrastructure and fencing; and
 - (x) 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.
- (c) Survey methodologies and scope shall be agreed in writing with the Local Planning Authority following consultation with NRW.
- (d) All surveys shall be undertaken by a suitably qualified and experienced surveyor approved in writing by the Local Planning Authority.



- (e) The breeding bird protection plan shall be implemented as approved.

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

- (44) (a) No development, other than tree felling, vegetation and site clearance works, shall commence until a protected species plan has been submitted to and approved by the Local Planning Authority following consultation with NRW.

- (b) The protected species plan shall include, but not be limited to:

- (i) 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;
- (ii) an assessment of the impacts on bat roosts as a result of the tree clearance works, along with associated mitigation measures;
- (iii) a monitoring procedure to record weather conditions and bat activity at wind turbines using automated bat detectors;
- (iv) a monitoring procedure to record bat mortality at wind turbines;
- (v) annual reporting of the results of monitoring with recommendations for any remedial action that may reduce bat mortality;
- (vi) a procedure for agreeing and implementing remedial measures aimed at avoiding or reducing bat mortality; and such measures may include, but shall not be limited to, wind turbine curtailment and/or land management changes; and
- (vii) an agreed timeframe for monitoring, sufficient to determine the impact of the operation of the Development on bats and the efficacy of any remedial measures that may be implemented.

- (c) The protected species plan shall be implemented as approved.

Reason: In the interests of the favourable conservation status of protected species.

- (45) Within 6 months of the date of this permission, all databases and records collated within the environmental statement and supplementary environmental information shall be digitally sent to the Biodiversity Information Service for Powys and Brecon Beacons National Park.

Reason: To ensure that environmental data and information gathered is properly recorded.

- (46) All biodiversity databases and 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 to the Biodiversity Information Service for Powys and Brecon Beacons National Park within 6 months of the data being gathered.

Reason: To ensure that environmental data and information gathered is properly recorded.

Shadow flicker

- (47) (a) No wind turbine shall be erected until a scheme has been submitted to and approved 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 any dwelling which lawfully exists or has planning permission at the date of this permission.
- (b) The scheme shall include remedial measures to alleviate any shadow flicker attributable to the Development.
- (c) The wind turbines shall be operated in accordance with the approved scheme.

Reason: In the interests of residential amenity.

Television interference

- (48) (a) No wind turbine shall be erected until a scheme has been submitted to and approved by the Local Planning Authority providing for the investigation and remediation of any interference with television reception at any dwelling which lawfully exists or has planning permission at the date of this permission.
- (b) 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 the complaint is notified to the Company by the Local Planning Authority within 24 months of the date of final commissioning.
- (c) The scheme shall be implemented as approved.

Reason: In the interests of residential amenity.

Archaeology

- (49) (a) No development shall commence until a scheme of archaeological investigation has been submitted to and approved by the Local Planning Authority.
- (b) 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 until 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; and
 - (c) the latitude and longitude of every turbine.

Reason: In the interests of aviation safety.

- (52) (a) 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.
- (b) The lights shall be installed in accordance with the approved details and maintained until the wind turbines are decommissioned and removed from the site.

Reason: In the interests of aviation safety.

Community liaison

- (53) (a) No development shall commence until a community liaison scheme for the construction period has been submitted to and approved by the Local Planning Authority.
- (b) The community liaison scheme shall include:
- (i) details of Company liaison with the local community to ensure residents are informed of how the construction of the Development is progressing;
 - (ii) a mechanism for dealing with complaints from the local community during the construction of the Development; and
 - (iii) a nominated representative of the Company who will have the lead role in liaising with local residents and the Local Planning Authority.
- (c) The community liaison scheme shall be implemented as approved.

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



- (54) (a) No development shall commence until a training and employment management plan has been submitted to and approved by the Local Planning Authority.
- (b) The aim of the plan shall be 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.
- (c) The Company shall use its reasonable endeavours to implement the approved plan.

Reason: In the interests of the local economy.

Noise

- (55) (a) No wind turbine shall be brought into operation until a scheme for the assessment and regulation of Excess Amplitude Modulation has been submitted to and approved by the Local Planning Authority.
- (b) The scheme shall be in general accordance with, if it exists at the time of submission:
- (i) relevant guidance endorsed in National Planning Policy; or
- (ii) in the absence of endorsed guidance, the final report of the Institute of Acoustics Amplitude Modulation Working Group and results of the DECC-commissioned research into human response to the Amplitude Modulation component of wind turbine noise published in August 2016.
- (c) The scheme shall be implemented as approved for the life of the Development.

Reason: In the interests of public amenity to ensure that Excess Amplitude Modulation is suitably addressed.

- (56) (a) The rating level of noise emissions from the combined effects of the wind turbines (including the application of any tonal penalty), when determined in accordance with the attached Guidance Notes, 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.
- (b) 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.
- (c) 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.

- (d) 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 emissions from the wind farm at the complainant's dwelling 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.
- (e) The assessment of the rating level of noise imissions shall be undertaken in accordance with an assessment protocol that shall previously have been submitted to and approved 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 imissions. 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 (d), and such others as the independent consultant considers likely to result in a breach of the noise limits.
- (f) Where a dwelling to which a complaint is related is not listed in the Tables, 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 emissions 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.
- (g) The Company shall provide to the Local Planning Authority the independent consultant's assessment of the rating level of noise imissions 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 (d), 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 emissions.

- (h) Where a further assessment of the rating level of noise emissions 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 (g) unless the time limit has been extended in writing by the Local Planning Authority.
- (i) In this condition and in the Guidance Notes, "dwelling" means a building within use classes C3 and C4 of the Town and Country Planning (Use Classes) Order 1987 which lawfully exists or has planning permission at the date of this permission.

Reason: In the interests of the protection of residential amenity.

Table 1 – Noise limits expressed in decibels LA90,10 minute as a function of the standardised windspeed (m/s) at 10-metre height to be applied to noise from Llanbrynmair Wind Farm at all times of Day or Night

Locations	Standardised 10 metre-height Wind Speed (as defined in accordance with the Guidance Notes)											
	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-lwyd	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
Glegrymant	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.9	37.6	38.9	39.6
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
Ffriddfawr	38.7	38.7	38.7	38.7	38.7	38.7	38.7	40.7	42.9	42.9	42.9	42.9
Cwmderwen	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-lloi	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
Nanl-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
Dol 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-lwyd	291029	303782
Castell y Gwynt	294857	302951
Panty Powsi	294820	302356
Nant yr Esgairwen	294406	302236
Capel 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



Ffriddfawr	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-11ol	295255	312635
Dol-y-maen	294289	313607
Nanl-y-dugod	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
DolFawr	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

Guidance Notes

These Guidance Notes shall be read with and form part of condition (56). 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 and any tonal penalty applied in accordance with Guidance Note 3.

Guidance Note 1

- (a) Values of the LA90(10-minute) noise statistic shall be measured at the complainant's dwelling, 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 shall be mounted at 1.2 - 1.5 metres above ground level, fitted with a 2-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 dwelling to undertake compliance measurements is withheld, the Company 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 shall 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 wind turbine control systems of the wind farm.
- (d) To enable compliance with the conditions to be evaluated, the Company shall continuously log arithmetic mean wind speed in metres per second and wind direction in degrees from north at hub height for each wind 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 Local 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 the ETSU Report 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 Guidance 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 (e) of condition (56), 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 10-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 shall 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.

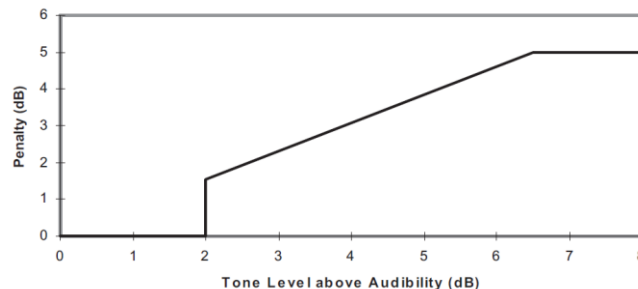
Guidance Note 3

- (a) Where, in accordance with the approved assessment protocol under paragraph (e) of condition (56), 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 shall 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 the ETSU Report, 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 the ETSU Report.
- (d) The tone level above audibility shall be plotted against wind speed for each of the 2-minute samples. For 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 wind 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 (e) of condition (56).
- (b) If no tonal penalty is to be applied then the rating level of the wind 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 (f) of condition (56), 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) Repeat 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 (d) and the assessment protocol approved under paragraph (e) of condition (56).
- (f) The wind farm noise (L1) at this speed shall then be calculated as follows where L2 is the measured level with wind 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 Guidance 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 Guidance Note 3 above) at any integer wind speed lies at or below the values set out in the Tables or at or below the noise limits approved by the Local Planning Authority for a complainant's dwelling in accordance with paragraph (f) of condition (56) then no further action is necessary. If the rating level at any integer wind speed exceeds the values set out in the Tables or the noise limits approved by the Local Planning Authority for a complainant's dwelling in accordance with paragraph (f) of condition (56) then the Development fails to comply with the conditions.

Head of Energy Infrastructure Planning

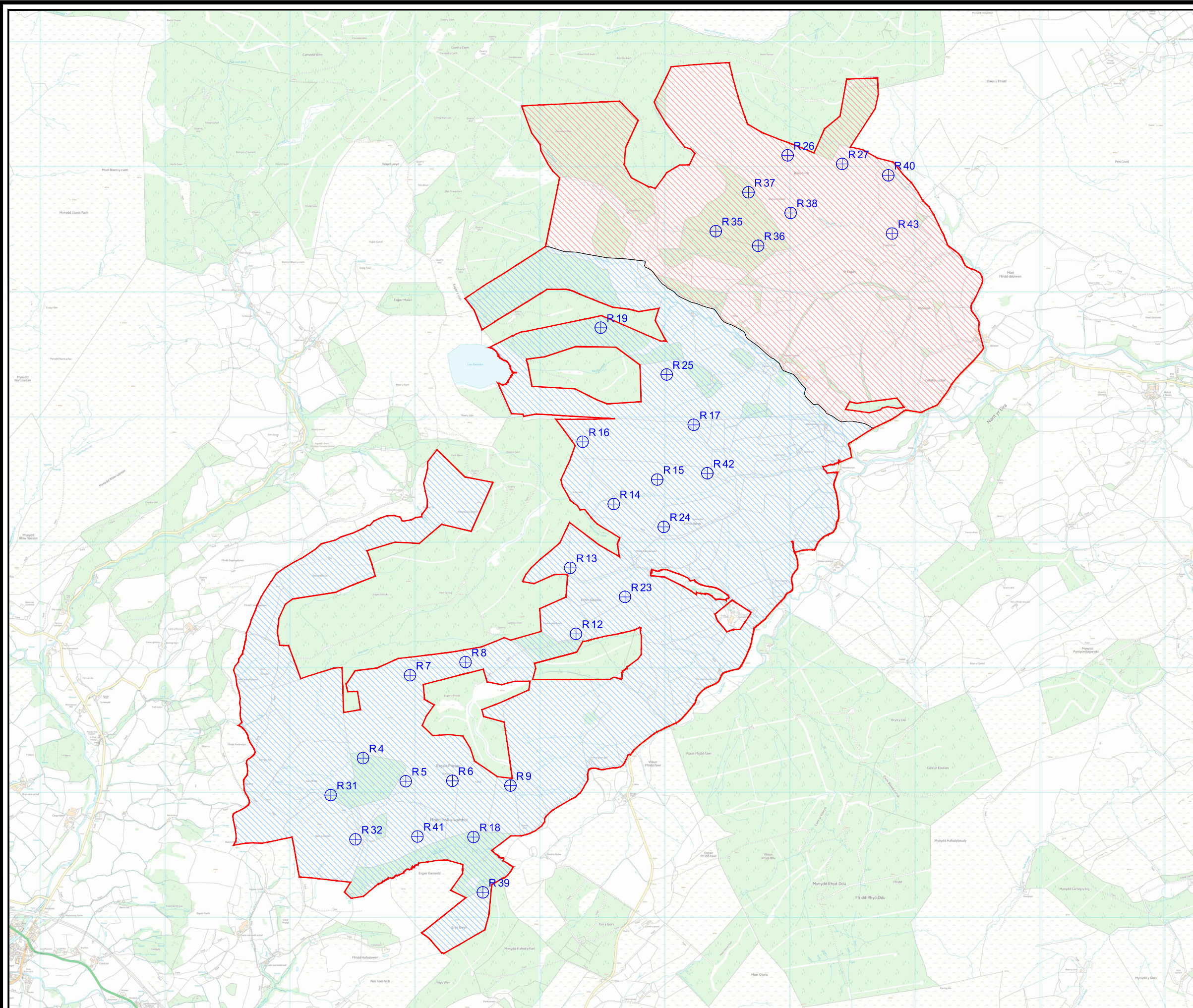
Department for Business, Energy and Industrial Strategy

Date: 17 December 2021



LLANBRYNMAIR WIND FARM

SITE PHASING PLAN



KEY

- SITE BOUNDARY
(TAKEN FROM RES DRAWING 01592D2205-16)
- PHASE 1
- PHASE 2
- R_X WIND TURBINE



LAYOUT DWG 01592D0004-10 T-LAYOUT NO. PWAlia087

DRAWING NUMBER **01592D2281-01**

SCALE - 1:30,000 @ A3

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