DEPARTMENT FOR BUSINESS, ENERGY AND INDUSTRIAL STRATEGY

<u>VARIATION OF CONSENT UNDER SECTION 36C OF THE ELECTRICITY ACT</u> 1989

<u>DIRECTION UNDER SECTION 90 OF THE TOWN AND COUNTRY PLANNING</u> ACT 1990

CONSTRUCTION AND OPERATION OF A WIND TURBINE GENERATING STATION ON LAND ON THE WAUN DDUBARTHOG RIDGE NEAR LLANDINAM

The Secretary of State in exercise of the powers conferred on him by section 36C of the Electricity Act 1989 hereby varies the consent granted for the wind turbine generating station on land on the Waun Ddubarthog ridge near Llandinam in accordance with the variations shown in italic text in the Annex and gives a direction under section 90(2) of the Town and Country Planning Act 1990.

Date: 30 October 2020

Gareth Leigh Head of Energy Infrastructure Planning Department for Business, Energy and Industrial Strategy

DEPARTMENT OF ENERGY AND CLIMATE CHANGE FOR BUSINESS, ENERGY AND INDUSTRIAL STRATEGY

ELECTRICITY ACT 1989

CONSTRUCTION AND OPERATION OF A WIND TURBINE GENERATING STATION AT WAUN DDUBARTHOG RIDGE NEAR LLANDINAM POWYS

- 1. Pursuant to section 36 of the. Electricity Act 1989, the Secretary of State for Energy and Climate Change <u>Business</u>, <u>Energy and Industrial Strategy</u> ("the Secretary of State"), by this consent granted to Celtpower Limited ("the Company"), its assignees and successors, hereby consents to:
 - (a) the construction of a wind turbine generating station ("the Development"), as defined in Conditions 2 and 4, on land on the Waun Ddubarthog ridge near Llandinam delineated by a solid red line on Figure A4-1AD ("the Site"), annexed to and duly endorsed on behalf of the Secretary of State; and
 - (b) the operation of that generating station.
- 2. Subject to Condition 4, the Development shall be a wind powered electricity generating station with a maximum generating capacity of 102MW and comprise:
 - (i) erection of 31 wind turbines having a height to blade tip of up to 121.2 metres, and 3 wind turbines (T29, T3 and T43) with a height to blade tip of up to 111.2m;
 - (ii) crane hardstandings;
 - (iii) upgrading and construction of on-site access tracks and associated water-course crossings;
 - (iv) an on-site electricity substation;
 - (v) two permanent Power Performance Assessment (PPA) masts;
 - (vi) on-site underground cabling; and
 - (vii) temporary Power Performance Assessment masts;
- 3. The consent is granted subject to the following conditions:
 - (1) The proposed wind farm shall be constructed as shown in Figure A4-1AD, and Drawing LLA-P-009 Rev A4 Sheets 1 & 2, annexed to and duly endorsed on behalf of the Secretary of State, subject to micro-siting and variation in accordance with Planning Conditions (15) to (17) below.
 - (2) Subject to any variation in accordance with Condition 4, the decommissioning of the existing wind farm shall be completed before "first

export" from any wind turbine authorised under this consent, including in particular:

- (i) the dismantling and removal of such of the 103 wind turbines covered by the original planning permissions as in place at the date this consent was granted, and associated infrastructure; and
- (ii) the upgrading of a number of the existing hardstandings and existing tracks to allow for crane access during dismantling.
- (3) Following the completion of the construction of the Development outlined in Condition 4, the Company shall surrender the planning permissions for the existing wind farm.
- (4) In this condition:

"First export", in this condition, means the date on which electricity is first exported on a commercial basis; and

"Existing wind farm" means that authorised at the time of the granting of this consent under the planning permissions for the Penrhyddlan and Rhyddhywel Range, Llidiartywaun Wind Farms.

- 4. (a) Subject to paragraph (b), the Development shall be constructed and operated in accordance with:
 - (i) the provisions of the conditions of the deemed planning permission ("the Planning Conditions");
 - (ii) the terms of any scheme, programme, statement, plan, details, or report to be approved by the Local Planning Authority under the Planning Conditions; and
 - (iii) the details contained in the Environmental Statement.
 - (b) the Local Planning Authority may approve changes to provisions referred to (a)(i) and (a)(ii), so far as permitted under the Planning Conditions, provided that amendments or variations are in accordance with the principles and assessments set out in the Environmental Statement.
 - (c) approval for any change under paragraph (b) may only be given in relation to immaterial changes, where it has been demonstrated to the satisfaction of the Local Planning Authority that the subject matter of the approval sought is unlikely to give rise to any materially new or materially different environmental effects from those assessed in the Environmental Statement.
 - (d) In this condition "Environmental Statement" means the Environmental Statement of September 2008, the Supplementary Environmental Information of December 2011, and the Supplementary Environmental Information of April 2013.

- 5. The Development shall be commenced before <u>the expiration of five years</u> <u>from the date of this consent on or before 7th September 2025</u>.
- 6. 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 Planning 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 (c. 8), 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", unless the context indicates otherwise, is as defined by conditions 1 to 4 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;
- **"Environmental Statement"** means the Environmental Statement of September 2008, the Supplementary Environmental Information of December 2011, and the Supplementary Environmental information of April 2013;
- **"Existing wind farm"** means that authorised at the time of the granting of this consent under the planning permissions for the Penrhyddlan and Rhyddhywel Range, Llidiartywaun Wind Farms;
- **"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" 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;

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

"Local Planning Authority" means Powys County Council, or any successor authority for the area within which the Development is located;

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

"site", unless the context indicates otherwise, means land within the Development boundary shown outlined in red on the map attached to this consent, and as referred to in Condition 1;

"wind speed" means wind speeds measured on the site at the wind 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.

- (2) Where, under any Planning 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

(3) The commencement of the Development shall not be later than 7th September 2025.

Reason: To reflect the time it may reasonably take to put in place the necessary pre-construction measures required, for example – tendering, obtaining the necessary financing and design of the proposal.

- (4) (a) Subject to micro siting in accordance with Planning Conditions (15) to (18), the Development shall be carried out in accordance with the following approved plans and documents:
 - (i) The application plan, labelled Figure A4-1AD, submitted to DECC in April 2013; and
 - (ii) The Environmental Statement.
 - (b) The Development authorised under this deemed planning permission includes the following ancillary development:
 - (i) Upgrading of the site access from the A483 road;
 - (ii) Three temporary construction compound and laydown areas; and
 - (iii) Eight borrow pits.
 - (c) In case of conflict between the documents covered by sub-paragraphs (a) (i) and (a) (ii), it is the latest iteration of the design for the Development shown in the application plan that is authorised.

Reason: For the avoidance of doubt.

(5) 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.

(6) 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 Planning Condition (5) shall apply.

(7) 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 Planning Condition (5) shall apply.

Decommissioning of existing Penrhvddlan and Rhyddhywel Range, **Llidiartywaun Wind Farms**

- (8)(a) No wind turbines shall be erected until a scheme for the decommissioning of the existing wind farm ("the scheme") has been submitted to and approved by the Local Planning Authority.
 - (b) The scheme in paragraph (a) shall include provisions for:
 - the removal of existing wind turbines; (i)
 - (ii) the removal of such tracks, cabling (including grid connection to Newtown) and other redundant infrastructure as are not to be retained.
 - (c) The scheme shall require:
 - that existing wind turbines to be entirely taken down and removed from the site no later than 24 months after commencement; and
 - 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.
 - Subject to the requirements of paragraphs (b) and (c), all decommissioning will be completed in accordance with the scheme.

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

Site decommissioning and restoration

- (9)(a) Not less than 12 months before the expiry of this permission in accordance with Planning Condition (5), a scheme for the decommissioning and restoration of the Site ("the Site Decommissioning and Restoration Scheme") shall be submitted to and approved by the Local Planning Authority.
 - The Site Decommissioning and Restoration Scheme shall be informed (b) by ah environmental survey conducted for the preparation of that scheme.
 - The scheme shall include, but not be limited to: (c)
 - Location of material laydown areas:
 - (i) (ii) an environmental management plan informed by an environmental survey to include details of measures to be taken during the decommissioning period to protect wildlife and habitats;
 - details of all tracks, structures, buildings, underground cables and utilities, and other associated infrastructure to be removed; (iv) details of means of removal;
 - earth moving and soil replacement; (v)
 - (vi) restoration of the landscape: and
 - (vii) monitoring of the restored areas and remedial actions.

- (d) The scheme will be implemented and completed within 24 months after the expiry of this permission.
- (e) In this condition, "an environmental survey" must:
 - (i) consider the environmental effects of the Development and its decommissioning on species and habitats protected at the time that the survey is conducted; and
 - (ii) be relevant and up-to-date.

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

- (10) (a) Prior to the implementation of the Site Decommissioning and Restoration Scheme, a community liaison scheme must be submitted to the Local Planning Authority for approval.
 - (b) A community liaison scheme submitted for approval under paragraph (a) must include:
 - (i) details of liaison by the Company 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 relevant Local Planning Authority.
 - (c) The community liaison scheme approved under paragraph (a) must be implemented as approved.

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

(11) On completion of the restoration work carried out in accordance with the Site Decommissioning and Restoration Scheme, any remaining fixed equipment, machinery and buildings erected or brought onto the site for the purpose of that 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.

(12) (a) 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 costs of completing decommissioning and site restoration are available to the Local Planning Authority prior to the commencement of decommissioning and site restoration. (b) The financial instrument in paragraph (a) 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.

- (13) (a) No Development will 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.
 - (b) The financial instrument in paragraph (a) will be maintained by the Company, or any person assigned this consent, 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.

Wind turbine failure

- (14) (a) If any wind turbine fails to export electricity for a continuous period of 12 months or more (other than for reasons relating to noise), the Local Planning Authority must be notified upon expiry of that 12 month period by the Company.
 - (b) Upon the expiry of the 12 month period in paragraph (a), the Local Planning Authority can instruct the Company to submit a detailed scheme setting out:
 - (i) how the wind turbine will be removed from the site; and
 - (ii) 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.
 - (c) Any scheme required under paragraph (b) must:
 - (i) include details of any necessary protection for breeding birds required as a consequence of the works;
 - (ii) be submitted to the Local Planning Authority within 2 months of the Local Planning Authority's instruction; and

- (iii) implemented within 6 months of approval unless a longer period is agreed in writing by the Local Planning Authority provided that
- (d) if, during the period following an instruction to the Company from the Local Planning Authority in accordance with (b) the wind turbine once again exports electricity, there will be no requirement to remove the wind turbine or associated infrastructure.

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

Development Micro-Siting

- (15) (a) The wind turbines and anemometer masts shall be erected at the coordinates given on Figure 4-1AD.
 - (b) Subject to Planning Condition (17), a variation of the indicated position of any of the wind turbines shall be permitted by up to 50 metres in any direction.
 - (c) Subject to Planning Condition (17), 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, Figure 4-1AD.
 - (d) Micro-siting tolerances are shown on Drawing No. LLA-P-009 Rev A4 Sheets 1 & 2.
 - (e) Any variation permitted under this condition cannot be outside the environmental impacts considered in the Environmental Statement.

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.

- (16) (a) Planning condition (15) 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.
 - (b) The position of any part of the Development infrastructure presently shown on the approved plan, Figure 4-1AD as being within the restricted areas shall be varied in accordance with Planning Condition (15) or Planning Condition (17) 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.

- (17) Notwithstanding the constraints placed on variation of the location of tracks by Planning Condition (15), 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; and
 - (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.

(18) Within 6 months after final commissioning, 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

- (19). (a) No wind turbines shall be delivered to site until details of the wind 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 the Local Planning Authority for approval.
 - (b) Wind turbines, anemometer mast and associated apparatus forming part of the Development may only be permitted where in accordance with the details approved by the Local Planning Authority under paragraph (a).

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

- (20) (a) No wind turbines shall be erected until the proposed colour scheme for the wind turbines is submitted to the Local Planning Authority and approved by that Local Planning Authority.
 - (b) Wind turbines may only be erected if they comply with the colour scheme approved under paragraph (a).

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

(21) The wind turbine blades on all the wind turbines hereby granted consent may only rotate in the same direction.

Reason: To safeguard the visual amenities of the area.

(22) All electricity cables connecting the wind turbine arrays and the substation must be installed underground.

Reason: In the interests of visual amenity.

(23) No Development of the on-site substation building may 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.

- (24) (a) No outdoor lighting other than
 - (i) temporary site illumination approved under Planning Condition (37) as part of the Construction Environmental Management Plan; and
 - (ii) aviation lighting to be installed in accordance with Planning Condition (49) of this Consent, may be used in the course of operation of the Development unless details of such lighting have been submitted to and approved by the Local Planning Authority.
 - (b) Any approval granted under this condition cannot be outside the environmental impacts considered in the Environmental Statement for the Development.
 - (c) Outdoor lighting may only be provided in accordance with the details approved by the Local Planning Authority.

Reason: in the interests of visual amenity.

(25) 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, any building or any other structure without approval from the Local Planning Authority.

Reason: In the interests of visual amenity.

Construction Hours

- (26) (a) Subject to paragraphs (b) and (c), construction work may only take place between the hours of 07:30 to 19:30 hours on Monday to Friday inclusive, and 07:30 to 13:00 hours on Saturdays ("the permitted hours"), with no construction work on a Sunday or a public holiday in Wales.
 - (b) Outside the permitted hours, works at the site shall be limited to emergency works, erection of wind turbines (not including piling activities), dust suppression, and the testing/maintenance of plant and equipment, or construction work that is not audible from any noise sensitive property.
 - (c) The Local Planning Authority shall be informed in writing of emergency works within three working days of works permitted under paragraph (b).
 - (d) Work not within paragraphs (a) and (b) may be approved in writing by the Local Planning Authority.

Reason: To protect amenity.

(27) 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

- (28) (a) 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.
 - (b) The details submitted under paragraph (a) must 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; and
 - (iii) road markings and signage proposals.
 - (c) Any approval granted under this condition cannot be outside the environmental impacts considered in the Environmental Statement for the Development.

(d) 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) may take place prior to the implementation of the works in accordance with the approved details approved under paragraph (a).

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

- (29) (a) 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.
 - (b) The details submitted under paragraph (a) must include:
 - (i) details of localised widening and indivisible load 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;
 - (v) road markings and signage proposals; and
 - (vi) a programme for the works.
 - (c) Any approval granted under this condition cannot be outside the environmental impacts considered in the Environmental Statement for the Development.
 - (d) The works to be carried out to the C2025 Pentre Road and U2835 unclassified county highway may only be implemented in accordance with the details approved in accordance with paragraph (a).

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

- (30) (a) Prior to the submission of the Transport Management Plan required by Planning Condition (31), 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.
 - (b) No deliveries by Abnormal Indivisible Load shall take place until the approved assessment has been carried out.

- (c) 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.
- (d) Any works required by paragraph (c) must completed prior to any Abnormal Indivisible Load deliveries to the site.

Reason: in the interests of highway safety and amenity.

- (31) (a) 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.
 - (b) The TMP must include:
 - (i) Abnormal Indivisible Load vehicle routeing;
 - (ii) 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;
 - (iii) availability of access to any passing places, layover areas and welfare facilities that are not proposed to form a part of the highway network;
 - (iii) the outcome of trial runs to demonstrate the suitability of the route:
 - (iv) management of junctions and crossings of highways and other public rights of way while Abnormal Indivisible Load deliveries take place;
 - (v) management and maintenance of layover areas, passing places and welfare facilities;
 - (vi) details of temporary warning signs;
 - (vii) restrictions on Abnormal Indivisible Load movements during special events including (without limitation) the Royal Welsh and Smallholders shows;
 - (viii) 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;
 - (ix) details of a review mechanism to enable changes in circumstances after the agreement of the TMP to be addressed; and
 - (x) 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 (including methods of construction, drainage, street lighting, signage and road markings).

- (c) After a TMP has been approved under paragraph (a), delivery of Abnormal Indivisible Loads shall be carried out in accordance with that approved TMP.
- (d) Any approval granted under this condition cannot be outside the environmental impacts considered in the Environmental Statement for the Development.
- (e) Any works required by this condition must be completed in accordance with the approved details before to the commencement of any Abnormal Indivisible Load deliveries to the site.

Reason: in the interests of highways safety and amenity.

- (32) (a) No Abnormal Indivisible Load 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.
 - (b) All Abnormal Indivisible Load deliveries may only be carried out in accordance with the approved AlL Management Strategy, which must include details of the following:
 - (i) persons responsible for the management and implementation of the AIL Management Strategy;
 - (ii) means of control of timing of delivery Abnormal Indivisible Load movements;
 - (iii) temporary traffic diversions and traffic hold points;
 - (iv) details of banksmen and escorts for abnormal loads;
 - (v) coordination with all other Abnormal Indivisible Load deliveries (including without limitation to other wind farms in Mid Wales)
 - (vii) description of procedures for the allocation of delivery slots including delivery slot triggers and trading;
 - (viii) the appointment and role of a Transport Coordinator;
 - (ix) management and maintenance of layover areas and welfare facilities;
 - (x) liaison with relevant highway and planning authorities and the Police:
 - (xi) liaison with members of the public and local communities; and
 - (xii) liaison with the hauliers and landowners.

Reason: In the interests of highway safety and amenity

(33) (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) Any approval granted under this condition cannot be outside the environmental impacts considered in the Environmental Statement for the Development.
- (c) The scheme shall be implemented as approved.

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

- (34) (a) 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 ("the plan") has been submitted to and approved in writing by the Local Planning Authority.
 - (b) The approved traffic management plan must be complied with and must 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 requirements in the plan 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 agreement of the plan to be addressed.
 - (b) Any approval granted under this condition cannot be outside the environmental impacts considered in the Environmental Statement for the Development.

Reason: In the interests of highway safety and amenity.

(35) (a) 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.

- (b) Any approval granted under this condition cannot be outside the environmental impacts considered in the Environmental Statement for the Development.
- (c) The approved traffic management plan under paragraph (a) must be implemented.

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

- (36) (a) 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.
 - (b) Any approval granted under this condition cannot be outside the environmental impacts considered in the Environmental Statement for the Development.
 - (c) The approved traffic management plan must be implemented.

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

Construction Management

- (37) (a) No development may commence until a Construction Environmental Management Plan (CEMP) has been submitted to and approved in writing by the Local Planning Authority.
 - (b) The CEMP must be complied with, subject to any variations approved in writing by the Local Planning Authority.
 - (c) The CEMP must include:
 - (i) 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;
 - (ii) location and method of working of borrow pits;
 - (iii) details of the proposed storage of materials and disposal of surplus materials to include soil, peat, rock and waste;
 - (iv) dust management details;
 - (v) an Environmental Management and Pollution Prevention Plan including a Drainage Management Plan and a Ground and 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;

- (vi) temporary site illumination during the decommissioning and construction period;
- (vii) details of the phasing of construction works;
- (viii) details of and method statements for surface treatments and the construction of all hard surfaces, tracks and cable trenches;
- (ix) details of emergency procedures and pollution response plans including those for heavy rain;
- (x) siting and details of wheel washing facilities;
- (xi) 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;
- (xii) a site environmental management plan to include details of measures to be taken during the decommissioning and construction period to protect wildlife and habitats;
- (xiii) areas on the Site designated for the storage, loading, off-loading, parking and manoeuvring of heavy duty plant, equipment and vehicles;
- (xiv) 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;
- (xv) 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:
- (xvi) details of coordination with any approved scheme of archaeological works;
- (xvii) details of the design and construction of any water crossings and culverts:
- (xviii) details for the decommissioning and removal of the existing wind turbines and associated infrastructure on the Site;
- (xix) details of tree felling, timber removal and any replanting proposed;
- (xx) monitoring procedures to ensure compliance;
- (xxi) 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;
- (xxii) details of soil and peat management;
- (xxiii) details of concrete mixing and washout areas; and
- (xxiv) a waste management plan.

(d) Any approval granted under this condition cannot be outside the environmental impacts considered in the Environmental Statement for the Development.

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

Rights of Wav Management Plan

- (38) (a) No Development shall commence until a Rights of Way Management Plan (RWMP) has been submitted to and approved by the Local Planning Authority.
 - (b) The RWMP must be implemented as approved and must include:
 - (i) details of the temporary re-routing 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) Any approval granted under this condition cannot be outside the environmental impacts considered in the Environmental Statement for the Development.

Reason: to protect public rights of way.

Ecology

- (39) (a) No vegetation clearance and tree felling or other Development may commence until a breeding bird protection plan has been submitted to and approved by the Local Planning Authority.
 - (b) The plan in paragraph (a) must incorporate the proposals seeped in the 2013 SEI and, for curlews, the draft Breeding Bird Protection Plan for this species, dated 20 September 2013.
 - (c) The plan in paragraph (a) must set out 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.
 - (d) A breeding bird protection plan approved under paragraph (a) must 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.

(e) Any approval granted under this condition cannot be outside the environmental impacts considered in the Environmental Statement for the Development.

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

- (40) (a) 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.
 - (b) The survey results from paragraph (a) 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.
 - (c) The surveys required by paragraph (a) shall be undertaken by a suitably qualified ecologist in the last suitable season prior to site preparation and construction work commencing.
 - (d) Any approval granted under this condition cannot be outside the environmental impacts considered in the Environmental Statement for the Development.
 - (e) The programme of mitigation work shall be implemented as approved for the duration of decommissioning of the existing wind farm and construction activities.

Reason: In the interests of nature conservation.

- (41) (a) First export may not take place unless a post-construction monitoring programme has been submitted to and approved by the Local Planning Authority.
 - (b) The post-construction monitoring programme must:
 - (i) provide for monitoring habitat areas, selected bird species and bats detailed in the Habitat Management Plan (HMP) agreed pursuant to Planning Condition (42):
 - (ii) detail the scope and frequency of the proposals set out in the agreed HMP; and
 - (iii) provide for reporting as agreed to the Local Planning Authority and other parties as deemed appropriate by the Local Planning Authority.

(c) The post-construction monitoring programme must be implemented as approved unless amended with the prior approval of the Local Planning Authority.

Reason: To protect breeding birds and bats.

- (42) (a) 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.
 - (b) The HMP must incorporate the proposals set out in the Environmental Statement and the draft proposals dated 23 September 2013.
 - (c) The HMP must include measures to:
 - (i) enhance the soligenous fen and bogmire habitat,
 - (ii) enhance the habitat for brown hares,
 - (iii) enhance the habitat for viviparous lizard,
 - (iv) enhance the habitat for breeding curlews.
 - (d) The HMP must be implemented as approved unless amended with the prior approval of the Local Planning Authority.
 - (e) Any approval granted under this condition cannot be outside the environmental impacts considered in the Environmental Statement for the Development.

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

- (43) (a) Prior to the commencement of site clearance, tree felling or other Development an Ecological Clerk of Works (ECoW) shall be appointed.
 - (b) The ECoW shall be appointed after approval by the Local Planning Authority for the period from commencement of Development to final commissioning.
 - (c) The scope of work of the ECoW is to include:
 - (i) 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;
 - (ii) advising the Company on adequate protection of nature conservation interests on the Site and downstream on the River Wye SAC:
 - (iii) directing the micrositing and placement of wind turbines, tracks and other infrastructure;

- (iv) monitoring the compliance with environmental management measures in the CEMP and all methods statements and keeping an audit trail of compliance; and
- (v) 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

- (44) (a) Prior to the erection of the first wind turbine, a written scheme must 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 which lawfully existed or had planning permission at the date of this consent.
 - (b) The written scheme in paragraph (a) must include details of remedial measures to alleviate any shadow flicker attributable to the Development.
 - (c) The wind turbines must be operated in accordance with the approved protocol unless the Local Planning Authority gives its prior written consent to any variations.
 - (d) Any approval granted under this condition cannot be outside the environmental impacts considered in the Environmental Statement for the Development.

Reason: In the interests of residential amenity.

Television Interference

- (45) (a) No wind turbine may 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 consent.
 - (b) The scheme in paragraph (a) must 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 Company by the Local Planning Authority within 24 months of the date of final commissioning.
 - (c) A scheme approved under paragraph (a) must be implemented as approved.

Reason: In the interests of residential amenity.

Archaeology

- (46) (a) No Development may commence until a scheme of archaeological investigation has been submitted to and approved by the Local Planning Authority.
 - (b) A scheme of archaeological investigation approved under paragraph (a) must be implemented as approved.
 - (c) Any approval granted under this condition cannot be outside the environmental impacts considered in the Environmental Statement for the Development.

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

(47). All records collated, as a result of the scheme of archaeological investigation, under Planning Condition (46), must 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 collated.

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

Aviation

- (48) No wind turbine may 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; and
 - (c) the latitude and longitude of every wind turbine.

Reason: In the interests of aviation safety.

- (49) (a) 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 wind 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 wind turbines as the Local Planning Authority, having consulted the Ministry of Defence, agrees will provide equally effective illumination for air navigation purposes.
 - (b) 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

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

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

Local Employment and Training

(51) The Development may not be commenced until details of a Training and Employment Management Plan, has been submitted to and approved in writing by the Local Planning Authority. The plan must 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. It must include requirements to submit monitoring information on the plan to the Local Planning Authority. The Development is to be carried out in accordance with the agreed plan, including any amendments to the plan that have been agreed in writing with the Local Planning Authority.

Reason: To promote training and employment opportunities for local people and to maximise the use of local contractors and supply chains.

Noise

- (52) (a) No wind turbine may 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).
 - (b) That scheme in paragraph (a) must be in general accordance with, if existing at the time of submission:

- (i) relevant guidance endorsed in National Planning Policy; or in the absence of endorsed guidance; and
- (ii) relevant guidance published by the Institute of Acoustics, or its successor.
- (c) Any approval granted under this condition cannot be outside the environmental impacts considered in the Environmental Statement for the Development.
- (d) The approved scheme under paragraph (a) must be implemented while any wind turbine consented under this consent operating at the Development.

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

- (53) 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 lawfully exists or has planning permission at the date of this consent 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.

- The assessment of the rating level of noise immissions shall be (d) 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 (rnls) within the site averaged over 10-minute periods											
	1	2	3	4	5	6	7	8	9	10	11	12
Cwm Diffwys	35.	35.	35.	35.	36.	38.	38.	38.	38.	38.	38.	38.
	0	0	0	0	5	0	0	0	0	0	0	0
Pantydwr	35.	35.	35.	35.	36.	37.	37.	37.	37.	37.	37.	37.
	0	0	0	0	0	0	0	0	0	0	0	0
Cwm Feinon	35.	35.	35.	35.	37.	39.	39.	39.	39.	39.	39.	39.
	0	0	0	0	0	0	0	0	0	0	0	0
Waen Cwm	35.	35.	35.	35.	38.	39.	39.	39.	39.	39.	39.	39.
Yr Ynys	0	0	0	0	0	5	5	5	5	5	5	5
Waenllwydion	35.	35.	35.	35.	35.	35.	35.	35.	35.	35.	35.	35.
	0	0	0	0	0	0	0	0	0	0 .	0	0
Wainhir	35.	35.	35.	35.	36.	37.	37.	37.	37.	37.	37.	37.
	0	0	0	0	0	0	0	0	0	0	0	0
Bryn Llyndwr	35.	35.	35.	35.	36.	36.	37.	37.	37.	37.	37.	37.
	0	0	0	0	0	5	0	5	5	5	5	5
Paby Llwyd 1	35.	35.	35.	35.	37.	39.	39.	39.	39.	39.	39.	39.
	0	0	0	0	0	0	0	0	0	0	0	0
Paby Llwyd 2	35.	35.	35.	35.	37.	38.	39.	39.	39.	39.	39.	39.
	0	0	0	0	0	0	0	0	0	0	0	0
Paby Llwyd 3	35.	35.	35.	35.	36.	36.	37.	39.	39.	39.	39.	39.
	0	0	0	0	0	0	0	0	0	0	0	0
Paby Llwyd 4	35.	35.	35.	35.	35.	35.	36.	37.	37.	37.	37.	37.
	0	0	0	0	0	0	0	0	0	0	0	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 Feinion	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 wind farm 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 wind 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 wind turbine and arithmetic mean power generated by each wind 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

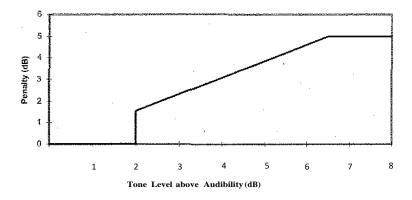
- (a) The noise measurements shall be made so as to provide not less than 20 valid data points as defined in Guidance Note 2 (b).
- (b) Valid data points are those measured in the conditions specified in the agreed written protocol under paragraph (d) of the noise condition, but excluding any periods 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 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 (d) of the noise condition.

- (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 (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 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 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.

Date: 30 October 2020

Gareth Leigh Head of Energy Infrastructure Planning Department for Business, Energy and Industrial Strategy

