

Appendix 4.

16/580/TPPMAJ.

Planning Conditions.

Duration of the Consent

01. This planning permission shall expire and cease to have effect after a period of 25 years from the date 12 months from the date of commencement of works, or when electricity is first exported from any of the approved wind turbines to the electricity grid network (the "First Export Date"), whichever is earlier. Upon the expiration of that 25 year period, the wind turbines shall be decommissioned and removed from the site. Written confirmation of the First Export Date, within the period 12 months from the date of commencement, shall be submitted in writing to the Planning Authority, within one month of the First Export Date.

Reason: To allow the Planning Authority to calculate the date of expiry of the consent.

Redundant turbines

02. The wind farm operator shall, at all times after the First Export Date, record information regarding the monthly supply of electricity from the site and electricity generated by each individual turbine within the development and retain the information for a period of at least 12 months. The information shall be made available to the Planning Authority within one month of any request by them. In the event that any wind turbine installed and commissioned fails to supply electricity on a commercial basis for a continuous period of 12 months, then unless otherwise agreed, the wind turbine, along with any ancillary equipment, fixtures and fittings not required in connection with retained turbines, shall, within 3 months of the end of the said continuous 12 month period, be dismantled and removed from the site and the surrounding land fully reinstated in accordance with this condition. For the avoidance of doubt, in making a direction under this condition, the Planning Authority shall have due regard to the circumstances surrounding the failure to generate and shall only do so following discussion with the wind farm operator and such other parties as they consider appropriate.

All decommissioning and reinstatement work required by this condition shall be carried out in accordance with the approved decommissioning, restoration and aftercare strategy, or, should the decommissioning, restoration and aftercare strategy not have been approved at that stage, other decommissioning and reinstatement measures approved in writing by the Planning Authority.

Reason: To ensure that any redundant wind turbine is removed from site, in the interests of safety, amenity and environmental protection.

Duration of works

03. No development shall commence unless and until a timetable for the construction period has been agreed in writing with the Planning Authority. The timetable shall

include the start and finish date, noting that the construction work shall not exceed a period of three years from the date of commencement unless otherwise approved in writing by the Planning Authority.

Reason: To ensure proper planning and other environmental control of the development.

Design and operation of wind turbines

04. No turbines shall be erected until full details of the proposed wind turbines have been submitted to, and approved in writing by, the Planning Authority. These details shall include:

- The make, model, design, power rating and sound power levels of the turbines to be used.
- The external colour and/or finish of the turbines to be used (including towers, nacelles and blades) which should be non-reflective pale grey semi-matt.
- Overall height of the turbines shall not exceed 125 metres to the tip of the blades in a vertical position.
- Each wind turbine shall have three blades and all wind turbines shall rotate in the same direction.

Thereafter, development shall progress in accordance with these approved details and, with reference to part 2 above, the turbines shall be maintained in the approved colour, free from external rust, staining or discolouration, until such time as the wind farm is decommissioned.

Reason: To ensure that the environmental impacts of the turbines forming part of the development conform to the impacts assessed in the environmental statement and in the interests of the visual amenity of the area.

Signage

05. Notwithstanding the provisions of the Town and Country Planning (Control of Advertisements) (Scotland) Regulations 1984 (as amended), and unless there is a demonstrable health and safety or operational reason, none of the wind turbines substation buildings/enclosures or above ground fixed plant shall display any name, logo, sign or other advertisement without express advertisement consent having been granted on application to the Planning Authority.

Reason: To ensure that the turbines are not used for advertising, in the interests of visual amenity.

Design of sub-station and ancillary development

06. No development shall commence until full details of the location, layout, external appearance, dimensions and surface materials of all control and/or substation buildings, welfare facilities, compounds and parking areas, as well as any fencing, walls, paths and any other ancillary elements of the development, have been submitted to, and approved in writing by, the Planning Authority. Thereafter, development shall progress in accordance with these approved details. For the

avoidance of doubt, details relating to the control and substation buildings shall include additional architectural design, carried out by suitably qualified and experienced people, to ensure that they are sensitively scaled, sited and designed.

Reason: To ensure that all ancillary elements of the development are acceptable in terms of visual, landscape noise and environmental impact considerations.

Ecological Clerk of Works

07. No development shall commence unless the Planning Authority has approved in writing the terms of appointment by the Company of an independent and suitable qualified Ecological Clerk of Works (ECoW) in consultation with SNH and SEPA as necessary. The terms of appointment shall:

- Impose a duty to monitor compliance with the ecological and hydrological requirements set out in the Environmental Statement and any other information lodged in support of the application, the Construction and Environmental Management Plan, and the Habitat Management Plan.
- Undertake or oversee a series of repeat ecological surveys within 12 months prior to construction and/or decommissioning.
- Require the ECoW to report to the Company's nominated construction project manager any incidences of non-compliance with the ECoW works at the earliest practical opportunity.
- Require the ECoW to submit monthly reports to the Planning Authority summarising works undertaken on site.
- Require the ECoW to report to the Planning Authority any incidences of non-compliance with the ECoW Works at the earliest practical opportunity.
- The ECoW shall be appointed on the approved terms throughout the period from Commencement of Development, to completion of post construction restoration works.

No later than 18 months prior to decommissioning of the development or the expiry of this consent (whichever is the earlier), details of the terms of appointment by the wind farm operator of an independent ECoW throughout the decommissioning, restoration and aftercare phases of the development shall be submitted to the Planning Authority for written approval in consultation with SNH and SEPA.

An ECoW shall also be appointed under the terms of this condition throughout the decommissioning and restoration phases of the development.

Reason: To secure effective monitoring of and compliance with the environmental mitigation and management measures associated with the development.

Micro-siting

08. Wind turbines, buildings, masts, areas of hardstanding and tracks may be adjusted by micro-siting within the site as shown on Figure 1.2 of the Environmental Statement Addendum (site layout plan), subject to the following restrictions:

- No wind turbine, building, access track directly associated with a turbine, mast or hard standing shall be moved more than 50m from the position shown on Figure 1.2 of the Environmental Statement Addendum.
- No general access track shall be moved more than 20 metres from the position shown on Figure 1.2 of the Environmental Statement Addendum.
- All micro-siting permissible under this condition must be approved in advance in writing by the Environmental Clerk of Works (EcoW).
- No wind turbine proposed within 800 metres of a non-financially involved residential property shall be micro-sited closer to that residential property.

Prior to commencement of works, the Planning Authority shall be notified in writing with a plan of the development, showing the final position of all wind turbines, masts, areas of hardstanding, tracks and associated infrastructure forming part of the development. The plan should specify areas where micro-siting has taken place and, for each instance, be accompanied by copies of approval of the micro-siting by the Ecological Clerk of Works (EcoW).

Reason: To control environmental impacts while taking account of local ground conditions.

Protection of Breeding Birds

09. No ground works (site clearance and stripping of vegetation) or construction works will be undertaken during the bird breeding season (March to August inclusive) unless previously agreed in writing by the Planning Authority. If an application is made to the Planning Authority to undertake such works during the bird breeding season, then the ECoW or another suitably qualified surveyor will undertake a pre-construction survey prior to commencement of works to check if the peregrine breeding site adjacent to the development site is in use and if so to inform how works can best be programmed to avoid disturbance.

If an active peregrine breeding site is found, appropriate measures will be implemented in consultation with SNH to avoid disturbance.

The ECoW will also carry out a pre-construction breeding bird survey prior to commencement of works to locate any active nests used by other bird species. Any active nests will be cordoned off to a suitable distance (agreed in consultation with SNH) and construction/decommissioning operations delayed within the cordon until the young have fledged and the nest becomes vacant, to be confirmed by the ECoW.

The ECoW will carry out a watching brief during works.

Reason: To ensure legal compliance with respect to breeding birds.

Construction and Operational Environmental Management Plan

10. No development shall commence unless a Construction and Environmental Management Plan (COEMP) outlining site specific details of all on-site construction works, post-construction reinstatement, drainage and mitigation, operational

environmental monitoring, together with details of their timetabling, has been submitted to, and approved in writing by, the Planning Authority in consultation with SNH and SEPA.

The COEMP shall include (but shall not be limited to):

- A site waste management plan (dealing with all aspects of waste produced during the construction period other than peat), including details of contingency planning in the event of accidental release of materials which could cause harm to the environment.
- Details of the formation of the construction compound, welfare facilities, any areas of hardstanding, turning areas, internal access tracks, car parking, material stockpiles, oil storage, lighting columns, and any construction compound boundary fencing.
- A construction dust management plan.
- Construction noise management plan.
- Details of measures to be taken to prevent loose or deleterious material being deposited on the local road network including wheel cleaning and lorry sheeting facilities, and measures to clean the site entrances and the adjacent local road network.
- A pollution prevention and control method statement, including arrangements for the storage and management of oil and fuel on the site.
- Soil storage and management.
- A drainage management strategy, demonstrating how all surface and waste water arising during and after development will be managed and prevented from polluting any watercourses or sources.
- A surface water and groundwater management and treatment plan, including details of the separation of clean and dirty water drains, and location of settlement lagoons for silt laden water.
- A peat management plan, to include details of all peat stripping, excavation, storage and reuse of material in accordance with best practice advice published by SNH and SEPA.
- Sewage disposal and treatment.
- Temporary site illumination.
- The construction of the access into the site and the creation and maintenance of associated visibility splays.
- Provision of wheel washing facilities.
- The method of construction of the crane pads.
- The method of construction of the turbine foundations.
- The method of working cable trenches.
- The method of construction and erection of the wind turbines and meteorological masts.
- Details of watercourse crossings.

Post-construction restoration/reinstatement of the working areas not required during the operation of the development, including construction access tracks, construction compound, storage areas, laydown areas, access tracks, passing places and other construction areas. Wherever possible, reinstatement is to be achieved by the careful use of turfs removed prior to construction works. Details should include all seed mixes to be used for the reinstatement of vegetation.

All construction work associated with the Development must be carried out in accordance with the current BS 5228, 'Code of practice for noise and vibration control on construction and open sites'.

Reason: To ensure that all construction operations are carried out in a manner that minimises their impact on amenity and the environment, and that the mitigation measures contained in the Environmental Statement are fully implemented.

Construction Hours

11. Hours of construction work on site involving the use of machinery and powered tools, or any other operation that would be audible from any noise-sensitive receptor, and all HGV movements to and from the site, shall only take place between the hours of 08:00 and 18:00 Mondays to Fridays, 08:00 to 12:30 on Saturdays and not at all on Sundays or the Christmas or New Year Public Holidays, unless otherwise agreed, in writing, with the Planning Authority. Outwith these specified hours, development on the site shall be limited to maintenance, emergency works, dust suppression, and the testing of plant and equipment, unless otherwise approved in advance in writing by the Planning Authority.

Reason: In the interests of local amenity.

Traffic Management Plan

12. No development shall commence until a Construction Traffic Management Plan (CTMP) has been submitted to, and approved in writing by, the Planning Authority in consultation with Roads Services. The CTMP, which shall be implemented as approved, shall include the measures as follows:

- A description of all measures to be implemented by the developer to manage traffic during the construction phase (including routing strategies), with any additional or temporary signage and traffic control undertaken by a recognised suitably qualified traffic management consultant.
- The identification and delivery of all upgrades to the public road network to ensure that it is to a standard capable of accommodating construction-related traffic (including the formation or improvement of any junctions leading from the site to the public road) to the satisfaction of Roads Services, including:
 - A route assessment report for abnormal loads and construction traffic, including swept path analysis and details of the movement of any street furniture, any traffic management measures and any upgrades and mitigations measures as necessary.
 - An assessment of the capacity of existing bridges and other structures along the construction access routes to cater for all construction traffic, with

upgrades and mitigation measures proposed and implemented as necessary.

- A videoed trial run to confirm the ability of the local road network to cater for turbine delivery. Three weeks' notice of this trial run must be made to the Roads Services who must be in attendance.
- Drainage and wheel washing measures to ensure water and debris are prevented from discharging from the site onto the public road.
- A risk assessment for the transportation of abnormal loads to site during daylight hours and hours of darkness.
- A contingency plan prepared by the abnormal load haulier. The plan shall be adopted only after consultation and agreement with the Police and Roads Services. It shall include measures to deal with any haulage incidents that may result in public roads becoming temporarily closed or restricted.
- A procedure for the regular monitoring of road conditions and the implementation of any remedial works required during the construction period.
- A detailed protocol for the delivery of abnormal loads/vehicles, prepared in consultation and agreement with interested parties. The protocol shall identify any requirement for convoy working and/or escorting of vehicles and include arrangements to provide advance notice of abnormal load movements in the local media. Temporary signage, in the form of demountable signs or similar approved, shall be established, when required, to alert road users and local residents of expected abnormal load movements. All such movements on public roads shall take place outwith peak times on the network, including school travel times, and shall avoid local community events.
- A detailed delivery programme for abnormal load movements, which shall be made available to Roads Services and community representatives.
- Details of any upgrading works required at the junction of the site access and the public road. Such works may include suitable drainage measures, improved geometry and construction, measures to protect the public road and the provision and maintenance of appropriate visibility splays.
- Details of appropriate traffic management which shall be established and maintained at the site access for the duration of the construction period. Full details shall be submitted for the prior approval of Roads Services.
- A concluded agreement in accordance with Section 96 of the Roads (Scotland) Act 1984 under which the developer is responsible for the repair of any damage to the local road network that can reasonably be attributed to construction related traffic. As part of this agreement, pre-start and postconstruction road condition surveys must be carried out by the developer, to the satisfaction of Roads Services.
- Measures to ensure that construction traffic adheres to agreed routes.
- Appropriate reinstatement works shall be carried out, as required by Roads Services, at the end of the turbine delivery and erection period.

Reason: To maintain safety for road traffic and the traffic moving to and from the development, and to ensure that the transportation of abnormal loads will not have any detrimental effect on the road network.

Habitat and Species Management Plan

13. No development shall commence unless a habitat and species management plan has been submitted to, and approved in writing by, the Planning Authority in consultation with SNH, SEPA and RSPB as necessary. The habitat and species management plan shall set out proposed habitat and species management of the wind farm site during the period of construction, operation, decommissioning, restoration and aftercare of the site, and shall provide for the improvement, maintenance, monitoring and reporting of high focus habitats.

The approved habitat and species management plan shall include provision for regular monitoring and review to be undertaken to consider whether amendments are needed to better meet the habitat and species plan objectives. In particular, the approved habitat and species management plan will be updated to reflect ground condition surveys undertaken following construction and prior to the date of Final Commissioning and submitted to the Planning Authority for written approval in consultation with SNH and SEPA.

The habitat and species management plan will incorporate a Grazing Management Plan, to include measures reducing grazing activities as described in Chapter 7 of the Environmental Statement Addendum.

Unless otherwise agreed in advance in writing with the Planning Authority, the approved habitat and species management plan shall be implemented in full.

Reason: In the interests of good land management and the protection of habitats and species.

Peregrine

14. Prior to the First Export Date, a Peregrine Research and Management Plan for peregrines across the NHZ2 (Orkney and North Caithness) region will be designed and submitted to, and approved in writing by the Planning Authority in consultation with SNH. The Peregrine Research and Management Plan will be implemented in accordance with the approved terms and timing.

Reason: To offset potential adverse effects on peregrine through furthering understanding of the NHZ2 peregrine population.

Recreation and Access Plan

15. No development shall commence unless a Recreation and Access Plan for the construction and operation phases of the wind farm has been submitted to, and approved in writing by, the Planning Authority, including new infrastructure and upgrades to Core Path 25 and Aspirational Core Path/St Magnus Way within the site, and how that would be maintained in perpetuity. Thereafter the plan shall be implemented in full.

Reason: In the interests of maintaining public access.

Archaeological Clerk of Works

16. No development shall commence unless the Planning Authority has approved in writing the terms of appointment of an independent Archaeological Clerk of Works (AcoW). The scope of the AcoW's appointment shall include:

- Monitoring compliance with the archaeological mitigation works that have been approved in this consent.
- Advising the Company on adequate protection and recording of archaeological interests on the site.
- Checking for new records of archaeological interests for which additional mitigation may be required.
- Directing the micro-siting and placement of turbines and tracks.
- Monitoring the compliance with mitigation, reinstatement and restoration measures approved in this consent.
- Reporting any breaches of the mitigation, reinstatement and restoration measures approved in this consent to the Planning Authority in writing.

The AcoW shall be appointed on the approved terms throughout the period from Commencement of Development, throughout any period of construction activity and during any period of post construction restoration works.

No later than 18 months prior to decommissioning of the Development or the expiration of this consent (whichever is the earlier), details of the terms of appointment of an independent ACoW shall be submitted to and approved in writing by the Planning Authority. The ACoW shall be appointed on the approved terms throughout the decommissioning, restoration and aftercare phases of the Development.

Reason: To ensure the protection or recording of archaeological features on the site.

Noise

17. 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, shall not exceed the values for the relevant integer wind speed set out in, or derived from, the tables attached to these conditions at any dwelling which is lawfully existing or has planning permission at the date of this permission and:

a) The wind farm operator shall, for turbines which are under his control, 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 wind farm operator shall provide this information in the format set out in Guidance Note 1(e) to the Planning Authority on its request, within 14 days of receipt in writing of such a request.

- b) No electricity shall be exported until the wind farm operator has submitted to the 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 Planning Authority.
- c) Within 21 days from receipt of a written request from the Planning Authority following a complaint to it from an occupant of a dwelling alleging noise disturbance at that dwelling, the wind farm operator shall, at its expense, employ a consultant approved by the 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 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 Planning Authority, the noise giving rise to the complaint contains or is likely to contain a tonal component.
- d) The assessment of the rating level of noise immissions shall be undertaken in accordance with an assessment protocol that shall previously have been submitted to and approved in writing by the 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 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 wind farm operator shall submit to the 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 the Tables 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 Planning Authority for the complainant's dwelling.
- f) The wind farm operator shall provide to the 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 Planning Authority for compliance measurements to be made under paragraph (c), unless the time limit is extended in writing by the 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 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 wind farm operator 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 Planning Authority.

h) Once the Planning Authority has received the independent consultant's noise assessment required by this condition, including all noise measurements and any audio recordings, where the Planning Authority is satisfied of an established breach of the noise limits set out in the attached tables 1 and 2, upon notification by the Planning Authority in writing to the wind farm operator of the said breach, the wind farm operator shall within 21 days propose a scheme for the approval of the Planning Authority. The scheme shall be designed to mitigate the breach and to prevent its future recurrence. This scheme shall specify the timescales for implementation. The scheme shall be implemented as reasonably approved by the Planning Authority and according to the timescales within it. The scheme as implemented shall be retained thereafter unless otherwise agreed with the Planning Authority.

i) Where it is shown to the satisfaction of the planning authority that the occupier of any dwelling to which the above noise limits apply has a Financial Involvement in the development, any number in table 1 or table 2 below (Noise limits expressed in dB LA90,10-minute ...) which is less than 45.0 shall be taken to be 45.0.

Table 1 – Between 07:00 and 23:00 – 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 metre height (m/s) within the site averaged over 10 minute periods.											
	1	2	3	4	5	6	7	8	9	10	11	12
Mannobreck	35.0	35.0	35.0	35.0	35.6	37.8	40.0	42.2	44.2	44.2	44.2	44.2
Swannay House	35.0	35.0	35.0	35.0	35.6	37.8	40.0	42.2	44.2	44.2	44.2	44.2
Surtidale	35.0	35.0	35.4	37.4	39.9	42.4	44.9	47.0	47.0	47.0	47.0	47.0
Crismo	35.0	35.0	35.0	35.0	35.7	37.4	39.3	39.3	39.3	39.3	39.3	39.3

Table 2 – Between 23:00 and 07:00 – 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 metre height (m/s) within the site averaged over 10 minute periods.											
	1	2	3	4	5	6	7	8	9	10	11	12
Mannobreck	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.4	43.4	43.4
Swannay House	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.4	43.4	43.4
Surtidale	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.1	44.1	44.1	44.1
Crismo	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0

Table 3: Coordinate locations of the properties listed in Tables 1 and 2.

Property	Easting	Northing
Mannobreck	329588	1029290
Swannay House	329597	1029253
Surtidale	330140	1028985
Crismo	331496	1028840

Note to Table 3: 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 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 ETSUR-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/BS EN 60804 Type 1, or BS 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 BS EN 60651/BS 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 to 1.5 metres above ground level, fitted with a two-layer windshield or suitable equivalent approved in writing by the 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 Planning Authority details of the proposed alternative representative measurement location prior to the commencement of measurements and the measurements shall be undertaken at the approved alternative representative measurement location.

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

(d) To enable compliance with the conditions to be evaluated, the wind farm operator shall continuously log arithmetic mean wind speed and wind direction at hub height for each turbine and arithmetic mean power generated by each turbine, all in successive 10-minute periods, unless otherwise agreed in writing with the Planning Authority. The mean wind speed data for the operating turbines 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, averaged across all operating wind turbines, 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 Planning Authority in accordance with the noise condition shall be provided in comma separated values in electronic format.

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) 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 measurements periods set out in Guidance Note 1. In specifying such conditions the Planning Authority shall have regard to those conditions which prevailed during times when the complainant alleges there was disturbance due to noise or which are considered likely to result in a breach of the limits.

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

Guidance Note 3

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

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

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

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

(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 17 on page 104 of ETSU-R-97 (The Assessment and Rating of noise from Wind Farms)

Guidance Note 4

(a) If a tonal penalty is to be applied in accordance with Guidance Note 3 the rating level of the turbine noise at each wind speed is the arithmetic sum of the measured noise level as determined from the best fit curve described in 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 Planning Authority in its written protocol under paragraph (d) of the noise condition.

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

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

(d) The wind farm operator 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 Planning Authority in its written request under paragraph (c) and the approved protocol under paragraph (d) of the noise condition.

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

$$L_1 = 10\log[10^{L_2/10} - 10^{L_3/10}]$$

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

(h) If the rating level after adjustment for background noise contribution and adjustment for tonal penalty (if required in accordance with guidance 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 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 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.

Shadow Flicker

18. No development shall commence unless and until a Shadow Flicker Protocol has been submitted to, and approved in writing by, the Planning Authority. The Shadow Flicker Protocol shall set out a protocol for addressing any complaint received from a residential receptor within the study area defined in Chapter 14 of the Environmental Statement Addendum, and will set out mitigation and management options.

Operation of the turbines shall take place in accordance with the approved Shadow Flicker Protocol and any mitigation measures that have been agreed through the protocol shall be implemented.

Reason: In the interest of local residential amenity.

Aviation Safety

19. No development shall commence until the Planning Authority, Ministry of Defence, Defence Infrastructure Organisation Safeguarding (DIOS), Defence Geographic Centre (DGC) and Civil Aviation Authority (CAA) have been provided with the following information, and evidence has been provided to the Planning Authority that this has been done:

- The date of the expected commencement of each stage of construction.
- The height above ground level of the tallest structure forming part of the development.
- The maximum extension height of any construction equipment.
- The position of the turbines and masts in latitude and longitude.

Reason: In the interests of aviation safety.

Post Construction Restoration

20. No development shall commence until a scheme of restoration of areas disturbed as a result of the construction process has been submitted to, and approved in writing by, the Planning Authority. The scheme will include (but not limited to):

- Offsite bridge structures and retaining walls.
- Offsite carriageway and road widening.
- Area of temporary construction compound.

- Anemometer mast(s).
- Areas around turbines.
- Track edges and trenching.

Thereafter the scheme of restoration will be implemented in accordance with the approved timescales to the satisfaction of the Planning Authority.

Reason: To maintain proper planning control.

Site Decommissioning, Restoration and Aftercare

21. The development shall cease to generate electricity and shall be decommissioned by no later than the date 25 years from the date 12 months from commencement of works, or First Export Date. The total period for restoration of the Site in accordance with this condition shall not exceed three years from the date of Final Decommissioning without prior written approval of the Planning Authority.

No development shall commence unless a decommissioning, restoration and aftercare strategy has been submitted to, and approved in writing by, the Planning Authority in consultation with SNH and SEPA. This strategy will be reviewed every 5 years. The strategy shall outline measures for the decommissioning of the development, restoration and aftercare of the site and will include, without limitation, proposals for the removal of the development, the treatment of ground surfaces, the management and timing of the works, and environmental management provisions.

No later than three years prior to decommissioning of the development or the expiration of this consent (whichever is the earlier) a detailed decommissioning, restoration and aftercare plan, based upon the principles of the approved decommissioning, restoration and aftercare strategy, shall be submitted to the Planning Authority for written approval in consultation with SNH and SEPA. The detailed decommissioning, restoration and aftercare plan will provide updated and detailed proposals for the removal of the Development, the treatment of ground surfaces, the management and timing of the works and environment management provisions which shall include:

- A site waste management plan (dealing with all aspects of waste produced during the decommissioning, restoration and aftercare phases).
- Details of the formation of the construction compound, welfare facilities, any areas of hardstanding, turning areas, internal access tracks, car parking, material stockpiles, oil storage, lighting columns, and any construction compound boundary fencing.
- A dust management plan.
- Construction noise management plan.
- Details of measures to be taken to prevent loose or deleterious material being deposited on the local road network including wheel cleaning and lorry sheeting facilities, and measures to clean the site entrances and the adjacent local road network.

- A pollution prevention and control method statement, including arrangements for the storage and management of oil and fuel on the site.
- Details of measures for soil storage and management.
- A surface water and groundwater management and treatment plan, including details of the separation of clean and dirty water drains, and location of settlement lagoons for silt laden water.
- Details of measures for sewage disposal and treatment.
- Temporary site illumination.
- The construction of any temporary access into the site and the creation and maintenance of associated visibility splays.
- Details of watercourse crossings.
- A species protection plan based on surveys for protected species (including birds) carried out no longer than 18 months prior to submission of the plan.
- Traffic management plan.
- Community liaison plan.
- ECOW/site environment management appointment.

The Development shall be decommissioned, the site restored and aftercare undertaken in accordance with the approved plan, unless otherwise agreed in writing in advance with the Head of Development and Regulatory Services in consultation with SNH and SEPA.

Reason: To ensure the decommissioning and removal of the development in an appropriate and environmentally acceptable manner and the restoration and aftercare of the site, in the interests of safety, amenity and environmental protection.

Financial Guarantee

22. No development shall commence until:

- i. Full details of a bond or other financial provision to be put in place to cover all of the decommissioning and site restoration measures outlined in the approved decommissioning, restoration and aftercare strategy have been submitted to, and approved in writing by, the Planning Authority.
- ii. Confirmation in writing by a suitably qualified independent professional that the amount of financial provision proposed under part (i) above is sufficient to meet the full estimated costs of all decommissioning, dismantling, removal, disposal, site restoration, remediation and incidental work, as well as associated professional costs, has been submitted to, and approved in writing by, the Planning Authority.
- iii. Documentary evidence that the bond or other financial provision approved under parts (i) and (ii) above is in place has been submitted to, and confirmation in writing that the bond or other financial provision is satisfactory has been issued by, the Planning Authority.

Thereafter, the developer shall:

iv. Ensure that the bond or other financial provision is maintained throughout the duration of this permission.

v. Pay for the bond or other financial provision to be subject to review five years after the commencement of development and every five years thereafter until the wind farm is decommissioned and the site restored.

Each review shall be:

- Conducted by a suitably qualified independent professional.
- Published within three months of each five-year period ending, with a copy submitted upon its publication to both the landowner(s) and the Planning Authority.
- Approved in writing by the Planning Authority without amendment or approved in writing by the Planning Authority following amendment to their reasonable satisfaction.

Where a review approved under part (c) above recommends that the amount of the bond or other financial provision should be altered (be that an increase or decrease) or the framework governing the bond or other financial provision requires to be amended, the Wind Farm Operator shall do so within one month of receiving that written approval, or another timescale as may be agreed in writing by the Planning Authority, and in accordance with the recommendations contained therein.

Reason: To ensure financial security for the cost of the restoration of the site to the satisfaction of the Planning Authority.

CAA Notification

23. Prior to commencement of any works on the hereby approved development, the developer shall notify the Civil Aviation Authority (CAA) of the proposed development and works, at the following address:

Off Route Airspace 5, Directorate of Airspace Policy, Civil Aviation Authority, CAA House, 45-59 Kingsway, London WC2B 6TE (Email: airspace@caa.co.uk).

Reason: In the interests of aviation safety.