

**Argyll and Bute Council  
Development and Economic Growth**

**This Supplementary report is a recommended response to the Scottish Government's Energy Consents Unit (ECU) consultation on the Section 36 Consultation for Ladyfield Renewable Energy Park Ltd comprising up to 13 turbines with a maximum height of 180m and ancillary infrastructure, including a Battery Energy Storage System (BESS) on Land approximately 4.7 km north of Inveraray**

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**Reference No:** 24/00053/S36/ECU0003291  
**Applicant:** The Scottish Government  
**Proposal:** Section 36 Consultation for erection of 13 turbines with a maximum height of 180m, and ancillary infrastructure, including a Battery Energy Storage System (BESS)  
**Site Address:** Land Approximately 4.7 km north of Inveraray

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**SUPPLEMENTARY REPORT NO. 1**

**1. INTRODUCTION**

- 1.1 A detailed Report of Handling was prepared for PPSL Committee on the 20<sup>th</sup> November 2024 (dated 6<sup>th</sup> November 2024). The committee were advised that due to an outstanding issue regarding Noise, the Energy Consents Unit had agreed to an extension for submission of a consultation response from Argyll and Bute Council in respect of this proposal to 19<sup>th</sup> December 2024.
- 1.2 It was recommended that consideration of this proposal be continued until the PPSL Committee on 18 December 2024 when an updated report would be presented.
- 1.3 The Committee agreed to continue consideration of this proposal to their meeting on 18 December 2024.
- 1.4 This Supplementary Report provides an update for Members on this Section 36 Consultation.

**2. REPRESENTATION UPDATE**

- 2.1 Since November PPSL no further representations have been received by the Energy Consents Unit.

**3. CONSULTATION UPDATE**

- 3.1 NatureScot - since November PPSL it has been brought to the attention of Officers that the Energy Consents Unit had not uploaded the most recent consultation response from NatureScot. This response was received by the ECU in the 14<sup>th</sup> May 2024 and simply confirmed that they had no further comments to make on the application. Consequently, no change is required to the Officer recommendation in respect to the advice provided by NatureScot.

**4. NOISE**

- 4.1 In the Report of Handling it was recommended that the ECU be notified that Argyll & Bute Council objected to the proposal on the grounds that there were unresolved

noise issues, and it was not possible to reach a conclusion on the proposal's acceptability in that regard at that time. Furthermore, that if these matters were resolved Argyll & Council would withdraw its objection.

- 4.2 Following November PPSL the Applicant provided further clarification to the points raised by the Council's Noise Consultant.

Applicant (25<sup>th</sup> November 2024) – in summary, are pleased that the Noise Consultants report concludes that in general good practice has been adopted, seeks clarity on a couple of minor matters and recommends that a condition can be used to control noise from the proposal.

The report recommends that the day-time noise limits proposed in the EIAR can be accepted, but that the night-time noise limits should be reduced to a minimum of 38dB instead of 43dB. Although the 43dB minimum fixed limit is recommended for night-time periods in ETSU-R-97 (which is still recommended in current Scottish planning guidance), in this instance the applicant is prepared to accept the proposed noise limit values.

On this basis the Applicant accepts the planning condition recommended by the Council's Noise Consultant subject to a couple changes to bring the wording more in line with current good practice. In particular, the requirement for post-construction monitoring in the absence of complaints is proposed to be deleted as it does not accord with the ETSU-R-97 guidelines.

- 4.3 The Applicant's response, which included points of clarification and a revised noise condition was forwarded to the Council's Noise Consultant for comment.

Council's Noise Consultant (27<sup>th</sup> November 2024) – advised that they have reviewed the information provided by the Applicant. They confirm that the Applicant is correct – the requirement to monitor within 6 months from the start of operation is not part of the example condition that they had used as the basis for the included condition. They are happy for this to be removed and rely upon the requirement to monitor in response to reasonable complaint. Finally, the additional information provided covers their request.

- 4.4 The agreed condition is attached at Appendix 1 of this report.

## **5. CONCLUSION & RECOMMENDATION**

- 5.1 To conclude, all outstanding noise matters have now been addressed, subject to the agreed condition. Consequently, it is recommended that the noise objection is removed and the recommendation is amended as follows.

**(1) Argyll & Bute Council does not object on landscape and visual grounds, however, recommends the following advice is considered by the Energy Consents Unit:**

**Mitigation** - Consideration should be given to the mitigation recommended by the Council's Consultant Landscape Architect:

- There is scope to reduce effects on views from Glen Aray and from Dun na Cuaiche by removing or substantially reducing the heights of Turbines 11 and 13. This measure would also reduce intrusion from Loch Fyne, particularly in the Strachur area and would negate adverse impacts (particularly if woodland were

to be removed in future) close to Inveraray at Viewpoint 4. It is additionally recommended that off-site planting should be undertaken to extend screening along the A819 and mitigate effects on views.

- The applicant should also consider more ambitious landscape and biodiversity mitigation and enhancement proposals in line with the aims of NPF4 Policy 3. The proposed wind farm should form a catalyst to effect quicker and more far-reaching improvement to uniform and, in places, poorly designed forestry. The proposed Wind Farm Restocking Plan does not hugely differ from the baseline Restocking Plan (see Figures 14.4 and 14.7) and more should be done to improve the angular northern and south-eastern margins of productive forest. The planting of more extensive native woodlands should form part of the Biodiversity Enhancement Management Plan (BEMP) and Wind Farm Forest Plan. Biodiversity and landscape enhancement measures should not be confined to the site (which is limited by its use as a productive forest) but should extend outside the site with the aim of better integrating the forest with its surroundings and improving connectivity for wildlife.
- The effects of visible aviation lighting are concerning particularly given the considerable number of applications in Argyll & Bute where turbine lighting is proposed. While it is accepted that the day-time effects of the proposal would be of greater significance and would be likely to affect more people, consideration should be given to future mitigation of the effects of lighting on the dark skies of Argyll. It is therefore also strongly recommended that an Aircraft Detection Lighting System should be installed at the earliest opportunity as this would reduce the duration and impact of night-time lighting.

**(2) Argyll & Bute Council recommends that the recommendations of the Local Biodiversity Officer are considered by the ECU:**

- Floatation tracks must be used on areas of deeper peat to avoid disturbance.
- While the impact to bats is unlikely to be significant, it would be advisable to monitor any fatalities that may occur from collision as they are found to forage within the wind turbine areas.
- the applicant should include a clear plan of proposed fence siting, the type of marking to be used, the distance from known lek sites, and programme of monitoring fence for any potential black grouse carcasses.

**(3) Argyll & Bute Council recommends that all conditions recommended by consultees should be included in any Consent**

**Author of Report: Arlene Knox**  
**Reviewing Officer: Sandra Davies**

**Date: 2<sup>nd</sup> December 2024**  
**Date: 3<sup>rd</sup> December 2024**

**Fergus Murray**  
**Head of Development and Economic Growth**

## APPENDIX 1: NOISE CONDITION

The rating level of noise immissions from the combined effects of the wind turbines hereby permitted (including the application of any tonal penalty and amplitude modulation (AM) 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 Table 1 attached to these conditions and:

- A) The wind farm operator shall continuously log power production, wind speed and wind direction, all in accordance with Guidance Note 1(b). This data shall be retained for a period of not less than 24 months. The wind farm operator shall provide this information in a format to be agreed with the Planning Authority within 14 days of receipt in writing of such a request.
- B) Within 21 days from receipt of a written request of the Planning Authority, following a complaint to it alleging noise disturbance at a dwelling, the wind farm operator shall, at its expense, employ an independent consultant and provide a written protocol to be approved by the Planning Authority. The protocol shall describe the procedure to assess the level and character 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 as far as possible the time or meteorological conditions to which the complaint relates and time or conditions relating to tonal noise or AM if applicable. Measurements to assess compliance with the noise limits shall be undertaken in accordance with the assessment protocol which shall be approved in writing by the Planning Authority.
- C) The assessment of the rating level of noise immissions shall be undertaken in accordance with an assessment protocol that shall, prior to the commencement of any measurements, 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 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 include 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 (b), and such others as the independent consultant considers likely to result in a breach of the noise limits.
- D) 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 protocol within 2 months of the date of the approval

of the protocol by the Local Authority unless otherwise agreed by the Planning Authority. The assessment shall include all data collected for the purposes of undertaking the compliance measurements and analysis, such data to be provided in a format to be agreed with the Planning Authority. Certificates of calibration of the equipment shall be submitted to the Planning Authority with the report.

- E) Where a further assessment of the rating level of noise immissions from the wind farm is required pursuant to Guidance Note 5 of the attached Guidance Notes, the wind farm operator shall submit a copy of the further assessment within 21 days of submission of the independent consultant's initial assessment unless otherwise agreed by the Planning Authority.

Table 1 Daytime and night-time noise limits on combined operational noise levels due to the consented wind turbines ( $L_{A90}$ , dB)

<b>Standardised wind speed <math>v_{10}</math> m/s</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
<b>Ladyfield Farm, North Tullich and South Tullich</b>												
Daytime dB $L_{A90}$	37.2	38.2	39.1	40.1	41.1	42.1	43.2	44.2	45.4	46.5	47.7	48.9
Night-time dB $L_{A90}$	38.0	38.4	39.4	40.3	41.2	42.2	43.2	44.2	45.3	46.5	47.7	49.0
<b>Drimfern</b>												
Daytime dB $L_{A90}$	35.0	35.0	35.6	36.7	37.6	38.7	39.8	40.9	42.1	43.2	44.5	45.7
Night-time dB $L_{A90}$	38.0	38.0	38.0	38.0	38.0	38.5	39.4	40.4	41.5	42.6	43.8	44.9
<b>Three Bridges and Linnieghluttain</b>												
Daytime dB $L_{A90}$	45.1	45.1	45.3	45.8	46.5	47.3	48.2	49.2	50.1	50.9	51.7	52.2
Night-time dB $L_{A90}$	45.7	45.7	45.7	46.1	46.7	47.5	48.3	49.2	49.9	50.5	50.8	50.8
<b>Maam House</b>												
Daytime dB $L_{A90}$	40.8	41.6	42.4	43.2	44.1	45.0	45.9	46.8	47.7	48.7	49.7	50.7
Night-time dB $L_{A90}$	42.1	42.6	42.9	43.4	43.8	44.3	45.0	45.7	46.6	47.7	49.0	50.6

***Reason: to protect residential amenity.***

## Guidance Notes for Noise Condition

These notes are to be read with and form part of the planning condition on noise. The measured data is to be split into bins as described below. The rating level in each bin is the arithmetic sum of the wind farm noise level, any tonal penalty applied in accordance with Note 3 and any AM penalty applied in accordance with Note 4. 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). IOAGPG is "A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise" or any update of that report current at the time of measurement. The IOA Metric is "A Method for Rating Amplitude Modulation in Wind Turbine Noise" dated 9<sup>th</sup> August 2016 or any update of that current at the time of measurement.

### Note 1 – Data Collection

- a. Values of the LA90,10-minute noise index should be measured in accordance with the IOAGPG. Measurements shall be undertaken in such a manner to enable a tonal penalty to be calculated and to allow an AM penalty to be calculated for selected periods where a tonal or AM assessment is required.
- b. To enable compliance with the conditions to be evaluated, the wind farm operator shall continuously log arithmetic mean wind speed in metres per second (m/s) and arithmetic mean wind direction in degrees from north in each successive 10-minutes period in a manner to be agreed in writing with the Planning Authority. The wind speed at turbine 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 are correlated with the noise measurements determined as valid. The wind farm operator shall continuously log arithmetic mean nacelle anemometer wind speed, arithmetic mean nacelle orientation, arithmetic mean wind direction as measured at the nacelle, arithmetic mean rotor RPM and whether each wind turbine is running normally during each successive 10-minutes period for each wind turbine on the wind farm. All 10-minute periods shall commence on the hour and in 10-minute increments thereafter synchronised with Universal Time (UT).

### Note 2 – Data Analysis

- a. The independent consultant shall identify a sub-set of data having had regard to:-
  - the conditions (including time of day and corresponding wind directions and speeds) at times in which complaints were recorded;
  - the nature/description recorded in the complaints if available;
  - information contained in the written request from the local planning authority;
  - likely propagation effects (downwind conditions or otherwise);
  - the results of the tonality/AM analysis where relevant.In cases where it is possible to identify patterns of clearly different conditions in which complaints have arisen additional sub-sets may be considered provided this does not introduce unreasonable complexity in the analysis and can be justified by the independent consultant.
- b. Within each of the sub-set(s) of data identified, data shall be placed into

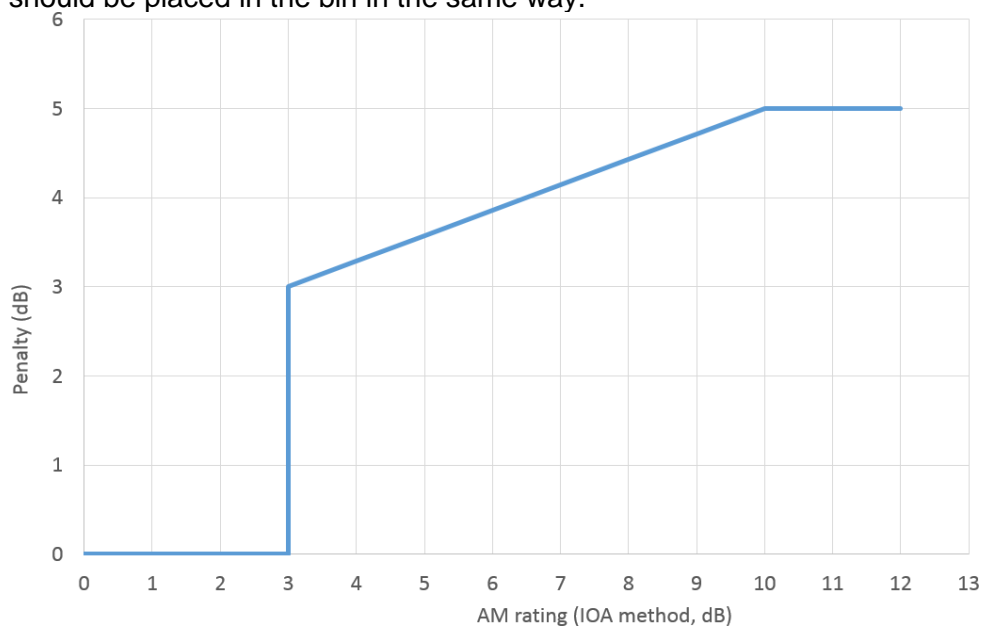
separate 1 m/s wide wind speed bins.

### Note 3 – Tonal Penalty

- a. Where, in accordance with the protocol, the noise contains or is likely to contain a tonal component, a tonal audibility shall be calculated for each ten-minute period using the following procedure.
- b. For each 10-minute period for which a tonal assessment is required this 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").
- c. For each of the 2-minute samples the tone level above audibility shall be calculated by comparison with the audibility criterion given in Section 2.1 on pages 104 -109 of ETSU-R-97. Samples for which the tones were below the audibility criterion or no tone was identified, a value of zero audibility shall be substituted. Where data for a ten-minute period are corrupted, that period shall be removed from the tonal analysis.
- d. The tone level above audibility for each ten-minute period shall be placed in the appropriate data sub-set and wind speed bin.

### Note 4 – AM Penalty

- a. Where, in accordance with the protocol, the noise contains or is likely to contain AM, an AM penalty shall be calculated for each ten-minute period using the following procedure.
- b. For each 10-minute interval for which an AM assessment is required this shall be performed in accordance with The IOA Metric. The value of AM for each ten-minute period shall be converted to a penalty in decibels in accordance with the graph below and the penalty shall be placed in the appropriate data sub-set and wind speed bin. Where a penalty is zero it should be placed in the bin in the same way.



### Note 5 – Calculation of Rating Level

- a. The LA90 sound pressure level for each data sub-set and wind speed bin is the arithmetic mean of all the 10 minute sound pressure levels within

that data sub-set and wind speed bin except where data has been excluded for reasons which should be clearly identified by the independent consultant. The tonal penalty for each bin is the arithmetic mean of the separate 10-minute tonal audibility levels in the bin converted to a penalty in accordance with Fig 17 on page 104 of ETSU-R-97. The AM penalty for each bin is the arithmetic mean of the AM penalties in the bin. The assessment level in each bin is the arithmetic sum of the bin LA90, and the larger of the AM or tonal penalty should be applied.

- b. If the assessment level in every bin lies at or below the values set out in the Table(s) attached to the conditions then no further action is necessary. In the event that the assessment level is above the limit(s) set out in the Tables attached to the noise conditions in any bin, 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. Correction for background noise need only be undertaken for those wind speed bins where the assessment level is above the limit.
- c. The wind farm operator shall ensure that all the wind turbines in the development are turned off for such periods as the independent consultant requires to undertake the further assessment. The further assessment shall be undertaken in accordance with the following steps:-
  - i. Repeating the steps in Note 1, with the wind farm switched off, and determining the background noise ( $L_3$ ) in each bin as required in the protocol. At the discretion of the consultant and provided there is no reason to believe background noise would vary with wind direction, background noise in bins where there is insufficient data can be assumed to be the same as that in other bins at the same wind speed.
  - ii. The wind farm noise ( $L_1$ ) in each bin shall then be calculated as follows where  $L_2$  is the measured level with turbines running but without the addition of any tonal nor AM penalty:

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

- iii. The rating level shall be calculated by adding the tonal and AM penalties to the derived wind farm noise  $L_1$  in that bin.
- iv. If the rating level after adjustment for background noise contribution and adjustment for tonal and AM penalties in every bin lies at or below the values set out in the Tables attached to the condition at all wind speeds then no further action is necessary. If the rating level at any integer wind speed exceeds the values set out in the Table(s) attached to the condition then the development fails to comply with the planning condition in the circumstances represented by that bin.