

**ANGUS COUNCIL**

**ANGUS COUNCIL - 10 DECEMBER 2015**

**S36 CONSULTATION - LAND AT MACRITCH HILL GLEN ISLA**

**GRID REF: 326969 : 760177**

**REPORT BY HEAD OF PLANNING AND PLACE**

**Abstract:**

The Scottish Government Energy Consents Unit has received an application for consent under the Electricity Act 1989 to construct and operate a wind farm comprising 18 wind turbines measuring 80m to hub and 125m to blade tip and associated works for Eneco Wind UK Ltd on a site to the north and east of Backwater Reservoir, Near Kirriemuir, Angus. The wind farm would have a maximum generating capacity of 59.4 Megawatts (MW). Angus Council is a Statutory Consultee on this proposal and this report seeks approval for amendment to the Council's response to the consultation. At the meeting of 14 May 2015 Angus Council agreed with the recommendation to object to the development proposal for the reasons given in Report No 197/15. Since the Council's objection was issued additional information has been submitted in respect of the points of objection relating to Private Water Supplies and Operational Noise. At its meeting of 22 October 2015 the Council agreed that the objection on the grounds of Private Water Supply issues should be removed. It is now recommended that Angus Council now withdraws its objection in respect of Operational Noise.

**1. RECOMMENDATION**

It is recommended that the Council withdraws its objection in respect of Operational Noise.

**2. ALIGNMENT TO THE ANGUS COMMUNITY PLAN/SINGLE OUTCOME AGREEMENT/ CORPORATE PLAN**

This report contributes to the following local outcome(s) contained within the Angus Community Plan and Single Outcome Agreement 2013-2016:

- Our communities are developed in a sustainable manner
- Our natural and built environment is protected and enjoyed

**3. INTRODUCTION**

3.1 Members will recall that at the meeting of 14 May 2015 Report No 197/15 recommended that Angus Council objected to the proposed wind energy development comprising 18x125m wind turbines and associated development known as Macritch Hill Wind Farm. The proposal is subject to an application for consent to the Scottish Government Energy Consents Unit under Section 36 of the Electricity Act 1989.

3.2 The purpose of this report is to update the Council of the current position in respect of further consideration of additional information that has been submitted by the applicant's agent in order to attempt to overcome some of the reasons for objection to the development proposal as detailed in report No 197/15. The reasons for objection were:

*That the proposed wind turbine development would result in unacceptable adverse landscape impacts, including cumulative impacts having regard to landscape character and setting within the*

*immediate landscape and wider landscape character types. Accordingly the application is contrary to Policy 3 of TAYplan and Policies S1, ER5 and ER34 and ER35 of the Angus Local Plan Review.*

*That proposed wind turbine development would give rise to unacceptable visual impacts, including cumulative impacts on occupants of residential properties and on those using the wider area for recreational purposes. Accordingly the application is contrary to Policies S1, S6, ER34 and ER35 of the Angus Local Plan Review.*

*That proposed wind turbine development would give rise to adverse impacts on the setting of Scheduled Ancient Monuments and there is no overriding public interest to allow the development in a form that would have such impact. Accordingly the application is contrary to Policy 3 of TAYplan and Policies ER18 and ER34 of the Angus Local Plan Review.*

*That insufficient information has been submitted to demonstrate that the proposed wind turbine development would not have a significant adverse impact on protected bird species. Accordingly the application is contrary to Policies ER4 and ER35 of the Angus Local Plan Review.*

*That insufficient information has been submitted to demonstrate that the proposed wind turbine development would not have a significant adverse impact on private water supplies. Accordingly the application is contrary to Policies S6 and ER25 of the Angus Local Plan Review.*

*That insufficient information has been submitted to demonstrate that the proposed wind turbine development would not have a significant adverse impact on the amenity of occupants of nearby residential property by virtue of operational noise. Accordingly the application is contrary to Policies S4, S6, ER11 and ER35 of the Angus Local Plan Review.*

- 3.3 At the meeting of 22 October 2015, Members agreed to withdraw the objection in respect of private water supplies (Report No 409/15 refers).

#### **4. ADDITIONAL INFORMATION RECEIVED**

- 4.1 Since Angus Council objected to the proposed development at Macritch Hill for the reasons stated in Report No 197/15, the applicants have been allowed a further period for consultation by the Scottish Government Energy Consents and Deployment Unit in order that they can attempt to overcome any points of objection where the grounds of objection relate to insufficient information.
- 4.2 In order to attempt to overcome the Council's objections in relation to operational noise, additional information has been submitted in the form of a response to a review of the noise section of the Environmental Statement submitted in support of the application that was undertaken by the Council's appointed noise consultant; Mr Dick Bowdler. A further submission in respect of comments from the Council's Environmental Health Service was submitted on 06 October 2015 which included clarification on equipment calibration, justification for the proposed noise limits at Longdrum and an explanation for excluding noise data affected by rainfall and this information addressed the Council's objections on the grounds of noise.

#### **5. ADDITIONAL CONSULTATIONS**

- 5.1 Environmental Health has been consulted in respect of the additional information detailed above. In respect of Operational Noise, Environmental Health has generally accepted the reasoning in respect of the potentially affected properties identified. It has been highlighted that the method used for deriving noise limits at Longdrum is not valid however given that the derived limits at the property are conservative, EH are satisfied that all outstanding issues in relation to operational noise have been resolved and have withdrawn their objection on that basis. However it is recommended that should consent for the development be issued it should be subject to conditions along the following lines:

1. *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 at any property lawfully existing at the date of this planning permission:  
(a) the  $L_{A90}$  dB (A) 10min levels, shown in tables A & B, during the respective periods described in these tables; where there is more than one property at a location the noise limits apply to all properties at that location or  
(b)  $L_{A90}$  35dB (A) 10min at wind speeds up to 10 m/s at 10m height at any other location.*
2. *Prior to the commencement of development the make and model of the turbine selected for use in the development shall be submitted for the written approval of the Planning Authority.*
3. *Prior to the commencement of development; where any turbine other than the candidate turbine is to be installed, a detailed noise assessment, including where necessary a cumulative assessment taking into account any existing wind turbine developments approved prior to the date of this permission, demonstrating that the noise limits specified by this permission shall not be exceeded shall be submitted for the written approval of the Planning Authority.*
4. *Prior to the commencement of development; where any wind turbine is required to operate in a reduced power mode in order to comply with the noise limits specified by this permission a scheme for the mitigation of noise shall be submitted for the written approval of the Planning Authority.*
5. *The wind farm operator shall continuously log power production, wind speed and wind direction, all in accordance with Guidance Note 1(d). This 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 Local Planning Authority on its request, within 14 days of receipt in writing of such a request.*
6. *No electricity shall be exported until the wind farm operator has submitted to the Local Planning Authority for written approval a list of proposed independent consultants who may undertake noise compliance measurements in accordance with this permission. Amendments to the list of approved consultants shall be made only with the prior written approval of the Local Planning Authority.*
7. *Prior to the commencement of development a scheme for the carrying out of a compliance monitoring assessment of noise immissions from the wind farm shall be submitted for the written approval of the Planning Authority. Thereafter and within 3 months from the date that electricity is first sold to the grid network the wind farm operator shall carryout compliance monitoring and undertake an assessment of noise immissions including a comparison with any noise limits applied to the consent all in accordance with the approved scheme. Thereafter and within 1 month of the completion of monitoring the wind farm operator shall submit the assessment and all relevant data for the written approval of the Planning Authority. Thereafter compliance monitoring and assessment shall be carried out every two years or such other period as may be agreed in writing with the Planning Authority.*
8. *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 wind farm operator 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.*



**Table B: Operational wind turbine noise at all other times**

<b>Location</b>	<b>Standardised 10m Height Wind Speed m/s</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>
<i>North Lodge</i>	35	35	38	40	43	46	48	51	54	56
<i>Glenmarkie</i>	38	39	40	41	41	41	41	41	41	41
<i>Glenhead</i>	35	37	39	41	44	47	50	53	56	58
<i>Glendamff</i>	35	35	37	39	42	45	48	50	53	55
<i>Longdrum</i>	35	35	37	39	41	41	41	41	41	41

## **6. CONCLUSION**

- 6.1 Subsequent to the withdrawal of the Environmental Health objection to the lack of information in relation to operational noise, it is recommended that Angus Council now withdraws its objection to the proposal in respect of there not being sufficient information to demonstrate that the development would not have a significant adverse impact on the amenity of occupants of nearby residential property by virtue of operational noise.
- 6.2 The suggested conditions and guidance given in this report would be passed to any Reporter appointed by the Scottish Ministers to consider as part of any subsequent Public Inquiry in relation to the S36 application.
- 6.3 The Council's remaining reasons for objecting to the proposal are unaffected.

**NOTE:** No background papers, as defined by Section 50D of the Local Government (Scotland) Act 1973, (other than any containing confidential or exempt information) were relied on to any material extent in preparing the above Report.

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**Appendix1: Operational Noise Guidance Notes**



**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/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 – 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 turbine control systems of the wind farm.

(d) To enable compliance with the conditions to be evaluated, the wind farm operator shall continuously log arithmetic mean wind speed in metres per second and wind direction in degrees from north at hub height for each turbine and arithmetic mean power generated by each turbine, all in successive 10-minute periods. Unless an alternative procedure is previously agreed in writing with the Planning Authority, this hub height wind speed, averaged across all operating wind turbines, shall be used as the basis for the analysis. All 10 minute arithmetic average mean wind speed data measured at hub height shall be 'standardised' to a reference height of 10 metres as described in ETSU-R-97 at page 120 using a reference roughness length of

0.05 metres . It is this standardised 10 metre height wind speed data, which is correlated with the noise measurements determined as valid in accordance with Guidance Note 2, such correlation to be undertaken in the manner described in Guidance Note 2. All 10-minute periods shall commence on the hour and in 10- minute increments thereafter.

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

(f) A data logging rain gauge shall be installed in the course of the assessment of the levels of noise immissions. The gauge shall record over successive 10-minute 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 assessment protocol, 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. In specifying such conditions the Local 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, noise immissions at the location or locations where compliance measurements are being undertaken contain or are likely to contain a tonal component, a tonal penalty is to be calculated and applied using the following rating procedure.

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

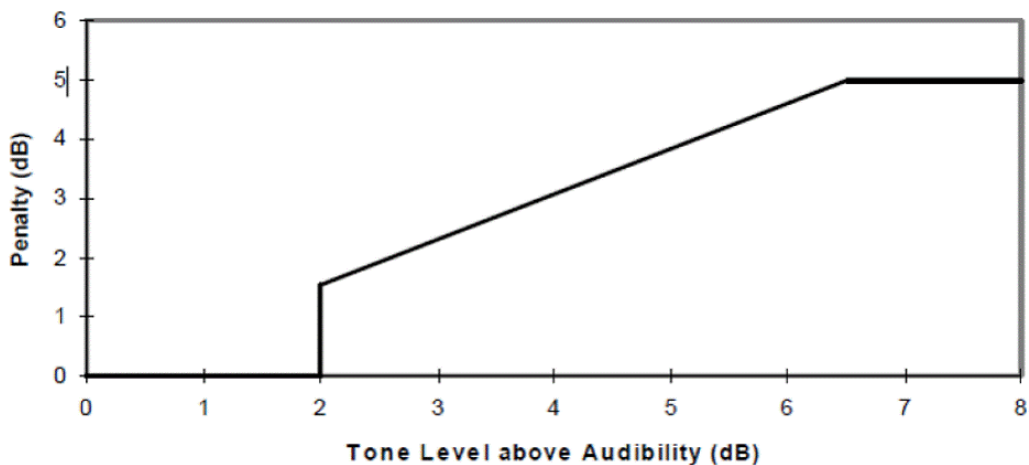


(c) For each of the 2 minute samples the tone level above or below audibility shall be calculated by comparison with the audibility criterion given in Section 2.1 on pages 104-109 of ETSU-R-97.

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

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

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



#### Guidance Note 4

(a) If a tonal penalty is to be applied in accordance with Guidance Note 3 the rating level of the turbine noise at each wind speed is the arithmetic sum of the measured noise level as determined from the best fit curve described in Guidance Note 2 and the penalty for tonal noise as derived in accordance with Guidance Note 3 at each integer wind speed within the range specified by the agreed written assessment protocol.

(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, 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 emission 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 Local Planning Authority in its written request and the approved protocol.

(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:

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

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

(h) If the rating level after adjustment for background noise contribution and adjustment for tonal penalty (if required in accordance with note 3 above) at any integer wind speed lies at or below the values set out in the Tables attached to the conditions or at or below the noise limits approved by the Local Planning Authority for a complainant's dwelling 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 then the development fails to comply with the conditions.