

ANGUS COUNCIL

DEVELOPMENT STANDARDS COMMITTEE – 2 JUNE 2015

**PLANNING APPEAL DECISION
THE WELTON, KINGOLDRUM, KIRRIEMUIR, DD8 5HY**

REPORT BY HEAD OF PLANNING AND PLACE

Abstract:

This report presents the findings of the Reporter appointed by the Scottish Ministers to determine the appeal against the refusal of Angus Council to grant planning permission for the erection of two 225kW Wind Turbines 47 metres to tip on land 605M north west of The Welton, Kingoldrum for Carrach Wind Farm LLP. The appeal was allowed and planning permission granted subject to the conditions listed in the appendix to this report.

1. RECOMMENDATION

It is recommended that the Committee notes the outcome of the above appeal.

2. INTRODUCTION

- 2.1 The Development Standards Committee at the meeting on 17 September 2014 refused planning permission (application No. 14/00276/FULL) for the for the erection of two 225kW wind turbines on land 605M north west of The Welton, Kingoldrum.
- 2.2 The applicant, Carrach Wind Farm LLP appealed against the refusal and the Reporter's conclusions and decision are presented below.

3. REPORTER'S DECISION

Reasoning

- 3.1 I am required to determine this appeal in accordance with the development plan, unless material considerations indicate otherwise.
- Development Plan
- 3.2 The development plan consists of the Tayplan Strategic Development Plan (approved June 2012) and the Angus Local Plan Review (adopted in February 2009). Tayplan provides the general strategic planning context for the area in order to inform the preparation of individual local development plans. This includes providing the vision and general planning objectives. In relation to renewable energy proposals, the general objective is that provision should be made in an environmentally acceptable manner. However, Tayplan does not include detailed guidance that is directly applicable for the assessment of two turbines less than 50 metres in height.
- 3.3 Policies ER 34 and ER 35 of the Angus Local Plan Review relate to renewable energy development and wind energy proposals. As the appeal is for two wind turbines both policies have to be considered together. The objective is to support in principle renewable energy development provided that the various criteria in Policies ER 34 and ER 35 can be complied with.
- 3.4 In addition, there are a number of general policies that apply to any development, including a proposal for two wind turbines. The ones I have been referred are Policy S1 (b) – development in the countryside, Policy S6 (b) – development principles and ER 5 – conservation of landscape character. I note however, that the relevant criterion for these three policies essentially repeat the requirement to consider the landscape and visual impact of the proposal as set out in Policies ER 34 and ER 35.

- 3.5 The submissions to the council and those made during the appeal process have raised a number of issues. However, it appears to me that the determining issue in dispute between the council and the appellant is whether the two turbines would result in unacceptable landscape and visual impacts, including impacts on nearby dwellings and cumulative impacts.
- Landscape impacts*
- 3.6 The appellant has submitted an environmental report which includes a landscape and visual impact assessment prepared using a widely recognised methodology. The assessment in turn has been considered by the council's planning officials. There is no dispute that the proposal will not have any unacceptable impacts on any formal landscape designation.
- 3.7 The Tayside Landscape Character Assessment is referred to in Policy ER 5 and should be taken into account to ensure a good landscape fit. The site falls within landscape character type Tay 5 – Highland foothills. I agree that in general terms, the highland foothills form a transition between the highland summits and the broad valley lowland landscape types to the south. I recognise that any wind turbine proposal would have to be carefully designed to make sure that it was in scale with the landscape and would not be unduly prominent.
- 3.8 For landscape and visual assessment purposes 'scale' does not relate to any particular dimension. It is a descriptive term regarding the perception of relative size. Scale is generally considered to be important because viewers will use other landscape features as scale indicators to gauge the perceived size of the two turbines. A turbine that is out of scale may be perceived to be unduly conspicuous and could visually dominate the surrounding landscape.
- 3.9 Both the appellant and the council have taken particular phrases from the Angus Wind Farms – Landscape Capacity and Cumulative Impacts Study (2008), Angus Local Plan Review - Implementation Guide for Renewable Energy Proposals (2012), and Strategic Landscape Capacity Assessment for Wind Energy in Angus (2014) to support their respective conclusions about the appropriateness of the scale of the two turbines.
- 3.10 Landscape capacity studies can be helpful tools in understanding the nature of the landscape impacts caused by wind turbines. However, they should not be given the attribute of detailed zonings for a particular number of turbines of a particular size. I note that paragraph 1.4 of the Strategic Landscape Capacity Assessment for Wind Energy in Angus (2014) states, *"It is emphasised that this is a strategic level landscape and visual study, providing a context for consideration of capacity for, and the cumulative effects of, existing and potential wind turbine developments in Angus. No site specific conclusions should be drawn from it in relation to current, proposed or future wind turbines and wind farms."*
- 3.11 The council in justifying the refusal of planning permission appears to attach considerable weight to certain phrases. In particular, *"on lower ground towards Strathmore"* and *"not be located near the summit of Mile Hill."* However, I consider that it is more important to take into account the general conclusions of such studies rather than focus on individual phrases. I note for example, that the objective for landscape character type Tay 5 - Highland foothills, is not to protect a wind farm free landscape but to create a landscape with occasional wind farms.
- 3.12 The appellant's site specific landscape and visual assessment considered both the impact on landscape character type Tay 5 – Highland foothills and the impact on the surrounding landscape character types. The assessment concluded that there would be no significant impacts. I agree that the direct impacts of two turbines would be limited. In my judgement, two turbines with a hub height of 30.5 metres and a total height less than 50 metres would not be out of scale with the surrounding landscape. In general, the two turbines would be seen in the context of a topography that would not make them appear unduly conspicuous.
- 3.13 Based on my site visits and assessment of the material before me, I find the conclusions of the appellant's landscape and visual impact to be fair. It seems to me that these conclusions are consistent with the three landscape capacity studies. Overall, the three landscape capacity studies do not support the assertion that two turbines of a maximum height of 47 metres would be out of scale with landscape character type Tay 5 – Highland foothills.

Visual impacts

- 3.14 Diagrams 5.5a and 5.5b of The Carrach Wind Turbines Landscape Figures (Production A01b) show the extent of theoretical visibility. In practice, this is a worst case, the actual extent of visibility would be less due to the presence of trees and minor changes in topography. The diagrams show that the area of most visibility is to the south of the site. Thirteen representative viewpoints were assessed in the environmental report. At only one of the viewpoints was the change in view considered to be significant.
- 3.15 It seems to me that the main public viewpoints would be from the local road network. As such, views would be for a relatively short duration. Furthermore, due to the topography, views of the two turbines are generally not constant. I accept that Cat Law is also a public viewpoint. However, due to a combination of distance, the height of the two turbines, the intervening topography and the expansive views, I consider that there would be a negligible impact. I believe that this is demonstrated in the wire line diagrams included within Production A02a. Overall, in the context of planning policies supporting appropriate wind turbine development, I do not consider that there are any unacceptable visual impacts.

Residential amenity

- 3.16 Subject to appropriate conditions there is no suggestion that the proposal would exceed the noise limits set out in Assessment and Rating of Noise for Wind Farms (ETSUR-97). There is sufficient separation distance between the two turbines and nearby houses to avoid any shadow flicker.
- 3.17 The environmental report identifies 27 properties within 2 kilometres of the two turbines. It considers that only 4 would be affected. One of these has a financial interest in the project. It concludes that none of the 4 properties would experience a significant visual impact. The author of the report of handling accepted this conclusion.
- 3.18 I agree that nearby local residents would not only experience the two turbines from their houses but also within their garden areas and travelling about the local road network as part of their daily routine. In my opinion, nearby local residents would experience the greatest impact from the development.
- 3.19 However, the fact that the two turbines would be seen at relatively close quarters is not of itself a sound basis for the refusal of planning permission. Bearing in mind the distances involved, the relatively modest height of the two turbines and that views are not solely focussed upon the two turbines, I agree with the conclusions of the environmental report. I cannot accept that two turbines of a height less than 50 metres would have a demonstrably harmful impact on the residential amenities of nearby houses.

Cumulative landscape and visual impacts

- 3.20 I accept that within the larger study area there are a number of operational and consented wind turbines that would mean that there are some cumulative impacts. It is important to recognise that some cumulative landscape and visual impacts are an inevitable consequence of both the policies of the development plan and of the Scottish Government.
- 3.21 However, bearing in mind the separation distances and the modest height of the proposal, I do not consider that any cumulative impacts would be significant. In my judgement, landscape character type Tay 5 - Highland foothills would remain a landscape with occasional turbines as a result of the development of the proposal.

Other matters

- 3.22 Policies ER 34 and ER 35 have criteria that relate to other matters. These include designated sites, road safety, water quality, impact on birds, television interference and site restoration. Some of these matters were raised in the representations made by local residents. However, none, subject to appropriate conditions, are considered significant in the environmental report, in the consultation replies from the relevant organisations or by the council. Therefore, subject to appropriate planning conditions, I consider that none of the other criteria are breached by the proposal.

Development plan conclusions

- 3.23 Overall, I find that where landscape and visual impacts occur, they are localised, proportionate and not unexpected for a proposal of this nature. In the context of development plan policies supporting renewable energy proposals, I find no unacceptable impacts that would conflict with the criteria in Policies ER 34 and ER 35. I therefore agree with the author of the report of handling, that overall, the proposal complies with the provisions of the development plan.

Material Considerations

Previous appeal decision

- 3.24 I am aware that a previous proposal at a similar location was refused planning permission and the subsequent appeal dismissed. However, each case must be considered on its individual merits.
- 3.25 The previous proposal related to 9 turbines with a maximum height of 84 metres. The scale and extent of the overall landscape and visual impact of the previous proposal is of a completely different order than the proposal before me. I note for example, that the Strategic Landscape Capacity Assessment for Wind Energy in Angus (2014) concludes that there is no capacity in landscape character type Tay 5 - Highland foothills for turbines over 50 metres.
- 3.26 It is an unfair reading of the previous appeal decision to suggest that no other wind turbine proposal would ever be acceptable. It is desirable that proposals address reasonable planning concerns expressed in previous decisions.

Balintore Castle

- 3.27 Balintore Castle is an A listed building currently being renovated, approximately 2.8 kilometres from the two turbines. I agree with my colleague, that at such a distance the issue is not the impact of the two turbines on the setting of the listed building but the impact of the view from the castle itself. I also agree that the castle has obviously been designed to maximise the views to the east and south.
- 3.28 However, unlike the scheme before my colleague, only two blade tips would be visible. In the context of such expansive views, I cannot agree that the visibility of two blade tips would amount to a significant visual disturbance. I cannot therefore see any reasonable basis for concluding that two turbines, less than 50 metres in height, partially screened by intervening topography and 2.8 kilometres away should undermine the renovation project or the future use of an A listed building.

Council's planning guidance and advice

- 3.29 I have considered the three landscape capacity studies in the landscape and visual impact section above. The council considered that the proposal breached the aims of the capacity studies. However, I find that this places undue reliance on certain phrases. Overall, I find that that two turbines, less than 50 metres in height, would comply with the overall objective of the various studies. The development of the proposal in my opinion would continue to keep landscape character type Tay 5 - Highland foothills a landscape with occasional wind farms.

Benefits

- 3.30 The proposal would generate a relatively modest amount of electricity but this would still contribute to achieving the Scottish Government's renewable energy targets. In particular, the Scottish Government target for 500 Megawatts of electricity generated from community and locally owned projects. Any capital investment, irrespective of its size is beneficial to the wider economy. I also note the submission made on behalf of the appellant that the scheme would assist in developing the farm business.

Scottish Planning Policy

- 3.31 Scottish Planning Policy introduces a presumption in favour of development that contributes to sustainable development. I have found above that the proposal would have no unacceptable environmental impacts. It seems to me, that a proposal for two turbines that

would be environmentally acceptable would be exactly the kind of development that the Scottish Government would consider contributes to sustainable development.

- 3.32 Paragraph 169 lists a number of considerations for wind farms. Although expressed in a different style, I note that many of these considerations are similar to those listed in Policies ER 34 and ER 35. Where paragraph 169 lists additional matters, I have not been made aware of any where a planning harm would occur. I conclude that the proposal can draw considerable support from Scottish Planning Policy.

Conclusions

- 3.33 I therefore conclude that for the reasons set out above, the proposed development accords overall with the relevant provisions of the development plan. I do not consider that there are any material considerations of sufficient weight that would justify the refusal of planning permission in this instance. I have considered all the other matters raised but there are none which would lead me to alter my conclusions.

Conditions

- 3.34 The appellant has not disputed the planning conditions proposed by the council. In general terms I agree that the proposed conditions are necessary and comply with the advice contained in Circular 4/1998 – The Use of Conditions in Planning Permissions. However, the noise conditions and notes for guidance mix reference to noise emissions and noise immissions. Noise emission means the noise emitted by a source of sound. Noise immission means the noise to which a receiver is exposed. For the purposes of the noise conditions and guidance notes, it is the noise received by nearby residents that is relevant. I have therefore made sure that there is a consistent reference to noise immissions.

4. FINANCIAL IMPLICATIONS

There are no financial implications.

5. OTHER IMPLICATIONS

Risk

There are no risks associated with the recommendations contained in this report.

Human Rights Implications

There are no Human Rights implications.

Equalities Implications

The issues contained in this report fall within an approved category that has been confirmed as exempt from an equalities perspective.

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 a material extent in preparing the above report.

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Date: 20 May 2015

APPENDIX: CONDITIONS REFERRED TO IN REPORT

APPENDIX : CONDITIONS

1. That the wind turbines hereby approved shall be removed from the site no later than 26 years after the date when it is erected unless otherwise approved by the Planning Authority through the grant of a further planning permission following submission of an application. Written confirmation of the date of erection of the turbines shall be provided to the Planning Authority within one month of that date.

Reason: In order to limit the permission to the expected operational lifetime of the wind turbine development and to allow for restoration of the site.

2. That prior to the commencement of development, the applicant shall provide the Ministry of Defence (Defence Estates – Safeguarding) with the following information, a copy of which shall also be submitted to the Planning Authority:-

- Proposed date of commencement of construction;
- Estimated date of completion of construction;
- Height above ground level of the tallest structure;
- Maximum extension height of any construction equipment;
- Latitude and Longitude of the proposed turbine.

Reason: In the interests of aviation safety.

3. That should any wind turbine no longer be required or should it cease to generate electricity for a period of six months it shall be removed and the site restored to its previous condition in accordance with the details approved under condition 4(iii) of this permission. The restoration works shall be completed no later than twelve months following the date that the turbine has ceased to generate electricity or as otherwise agreed in writing with the Planning Authority.

Reason: In order to ensure that the turbines are removed and the land restored to its previous condition in the event that the turbines are no longer required in the interests of the visual amenity of the area.

4. That prior to the commencement of the development hereby approved the following information shall be submitted to and approved in writing by the Planning Authority: -

(i) The precise route and details of the transmission cables from the turbine. Thereafter the transmission cables shall be provided only in accordance with the approved details;

(ii) Details of the colour of the wind turbines which shall be Agate Grey (RAL 7038) unless otherwise agreed with the Planning Authority. Thereafter the turbines shall be finished in accordance with the approved details;

(iii) A scheme for the decommissioning and restoration of the site including aftercare measures. The scheme shall set out the means of reinstating the site to agricultural land following the removal of the components of the development. The developer shall obtain written confirmation from the Planning Authority that all decommissioning has been completed in accordance with the approved plan and (unless otherwise agreed in writing by the Planning Authority) works for removal of site apparatus shall be completed within 12 months of the final date electricity is generated at the site;

(iv) A survey of existing television signal reception to establish a baseline against which to assess the impact of the wind turbines. Thereafter, within six weeks of the wind turbine coming into operation, and subsequently at the reasonable request of the Planning Authority following receipt of a complaint, a report assessing the effect of the wind turbines on local television signal reception ('the report') shall be submitted to the Planning Authority. If any impact on TV reception signal takes place, the report shall include detailed measures to overcome reception interference. In the event that interference with TV signals occurs, the operation of the turbines shall cease until measures to mitigate any such interference are implemented. Should such measures fail to address the TV interference the operation of the turbines shall cease until otherwise approved in writing by the Planning Authority.

(v) The developer shall secure the implementation of an archaeological watching brief, to be carried out by an archaeological organisation acceptable to the Aberdeenshire Council Archaeology Service on behalf of the planning authority, during any ground breaking and development work. The retained archaeological organisation shall be afforded access at all reasonable times and allowed to record and recover items of interest and finds. Terms of Reference for the watching brief will be supplied by the Aberdeenshire Council Archaeology Service. The name of the archaeological organisation

retained by the developer shall be given to the planning authority and to the Aberdeenshire Council Archaeology Service in writing not less than 14 days before development commences.

Reason: In order that the Planning Authority may verify the acceptability of the transmission lines, access route and turbine colour in the interests of visual amenity; in order to ensure appropriate site restoration; and in order to mitigate any impacts on television reception and in order to record items of archaeological interest.

5. At least one month prior to commencement of development, the developer shall provide to the planning authority written details of the bond or other financial provision which it proposes to put in place to cover all decommissioning and site restoration costs on the expiry of the consent/permission period in accordance with the requirements of condition 4(iii). No development shall start on site until the developer has provided documentary evidence that the proposed bond or other financial provision is in place and written confirmation has been given by the planning authority that the proposed bond or other financial provision is satisfactory. The developer shall ensure that the approved bond or other financial provision is maintained throughout the duration of this consent/permission. The adequacy of the approved bond or other financial provision shall be subject to a review at five yearly intervals from commencement of development, to be paid for by the developer and conducted by a competent independent professional who has relevant experience within the wind energy sector. The findings of such reviews shall be submitted in writing to the planning authority within 2-months of the anniversary of the commencement of development.

Reason: To ensure that there are sufficient funds available for the full costs of site Restoration

6. That the turbines hereby approved shall: -

- have no symbols, signs, logos or other lettering by way of advertisement
- displayed on any part of the wind turbine;
- be designed such that the blades of both turbines rotate in the same direction,
- that is, all clockwise or anticlockwise;
- not be lit other than for the purposes of aviation safety.

Reason: In the interests of the visual amenity of the area.

7. That, prior to the commencement of development, a Construction Traffic Management and Routing Plan shall be submitted to and approved in writing by the Planning Authority. The details of the plan should consider arrangements for the following:

(i) agreement with the Roads Authority on the routing for abnormal loads;

(ii) the type and volume of vehicles to be utilised in the delivery of construction materials;

(iii) assessment of the suitability of the proposed routes, including bridge capacities, to accommodate the type and volume of traffic to be generated by the development. The assessment shall include details of swept path analyses and include DVD video route surveys;

(iv) mitigating measures on public roads, including, carriageway widening, junction alterations, associated drainage works, protection to public utilities, temporary or permanent traffic management signing, and temporary relocation or removal of other items of street furniture;

(v) the restriction of delivery traffic to agreed routes;

(vi) the timing of construction traffic to minimise impacts on local communities, particularly at school start and finish times, during refuse collection, at weekends and during community events;

(vii) a code of conduct for HGV drivers to allow for queuing traffic to pass;

(viii) liaison with the roads authority regarding winter maintenance;

(ix) contingency procedures, including names and telephone numbers of persons responsible, for dealing with vehicle breakdowns;

(x) a dust and dirt management strategy, including sheeting and wheel cleaning prior to departure from the site;

(xi) the location, design, erection and maintenance of warning/information signs for the duration of the works, at site accesses and crossovers on private haul roads or tracks used by construction traffic and pedestrians, cyclists or equestrians;

(xii) contingencies for unobstructed access for emergency services;

(xiii) co-ordination with other major commercial users of the public roads on the agreed routes in the vicinity of the site;

(xiv) traffic management, in the vicinity of temporary construction compounds;

(xv) the provision of data from traffic counters, installed at locations and at intervals to be agreed with the Roads Authority, at the applicant's expense;

(xvi) arrangements for the monitoring, reviewing and reporting on the implementation of the approved plan; and

(xvii) procedures for dealing with non-compliance with the approved plan.

The development shall be undertaken in accordance with the approved Construction Traffic Management and Routing Plan.

Reason: To ensure the free flow of traffic, in the interests of road safety and for the convenience of road users.

8. The rating level of noise immissions from 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, LA90 35dB (A) 10 min at wind speeds up to 10 m/s at 10m height.

Reason: In order to safeguard the residential amenity of adjacent property.

9. Prior to the commencement of development the make and model of the turbine selected for use in the development shall be submitted to and approved in writing by the Planning Authority. In the event that 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 other approved wind turbine development, demonstrating that the noise limits specified by this permission shall not be exceeded shall be submitted for the written approval of the Planning Authority. Only the make and model of turbine approved by this condition shall be erected.

Reason: In order that the planning authority can verify the model of turbine to be used and to ensure that noise limits can be met.

10. In the event that noise immissions from any wind turbine exceeds the levels set by this permission, operation of the turbine/s shall cease until measures to reduce noise levels to comply with this permission are implemented. Should such measures fail to achieve compliance with the noise levels set by this permission the operation of the turbine/s shall cease until otherwise approved in writing by the planning authority.

Reason: In order to safeguard the residential amenity of adjacent property.

11. 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 Planning Authority on its request, within 14 days of receipt in writing of such a request.

Reason: In order to safeguard the residential amenity of adjacent property.

12. 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 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 Planning Authority.

Reason: In order to safeguard the residential amenity of adjacent property.

13. Within 21 days of receipt of a written request from the Planning Authority, following a complaint to it from an occupant of a sensitive property alleging noise disturbance at that property, 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. For the avoidance of doubt sensitive receptors includes all residential properties, hospitals, schools and office buildings.

Reason: In order to safeguard the residential amenity of adjacent property.

14. 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 emissions. 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 by the Planning Authority to investigate a complaint, and such others as the independent consultant considers likely to result in a breach of the noise limits.

Reason: In order to safeguard the residential amenity of adjacent property.

15. 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 undertaken, 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 emissions.

Reason: In order to safeguard the residential amenity of adjacent property.

16. 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 condition 7 above unless the time limit has been extended in writing by the Planning Authority.

Reason: In order to safeguard the residential amenity of adjacent property.

17. Within 2 months of receipt of a written request from the Planning Authority following a complaint to it from an occupant of a sensitive property, the wind farm operator shall, at its expense, undertake a shadow flicker assessment in accordance with a methodology approved in writing by the Planning Authority and submit it for the written approval of the Planning Authority. The aforementioned assessment shall consider any sensitive receptors a minimum of 1km from any turbine. Where under worst case conditions any property is predicted to be affected by shadow flicker for more than 30 minutes per day or more than 30 days per year then a scheme of mitigation shall be submitted for the written approval of the Planning Authority. Operation of the wind turbines shall cease in those conditions where shadow flicker is predicted to occur or until the approved mitigation scheme is implemented. For the avoidance of doubt sensitive receptors includes all residential properties, hospitals, schools and office buildings.

Reason: In order to safeguard the residential amenity of adjacent property.

18. That in the event of a pollution incident or interruption to supply, caused by the wind farm development, affecting or likely to affect any private water supply, the wind farm operator shall provide an immediate temporary supply to those affected until permanent mitigation can be effected to the satisfaction of the Planning Authority. Any replacement supply shall be of a quality to meet the private water supplies (Scotland) Regulations 1992 or any other appropriate Regulation in force at the time.

In any case a permanent replacement supply or mitigation measures shall be provided no later than one month after the supply is first affected.

Reason: In order to safeguard the residential amenity of adjacent property.

19. Noise associated with construction operations including the movement of materials, plant and equipment shall not exceed the noise limits shown in table A below for the times shown. At all other times noise associated with construction operations shall be inaudible at any sensitive receptor. For the avoidance of doubt sensitive receptors includes all residential properties, hospitals, schools and office buildings.

Reason: In order to safeguard the residential amenity of adjacent property.

Table A: Construction Noise Limits

Day	Time	Average Period	Noise limit
Monday - Friday	07:00 – 08:00	1 hour	55 dBA Leq
Monday - Friday	08:00 – 18:00	10 hour	65 dBA Leq
Monday - Friday	18:00 – 19:00	1 hour	55 dBA Leq
Saturday	07:00 – 08:00	1 hour	55 dBA Leq
Saturday	08:00 – 18:00	10 hour	65 dBA Leq
Saturday	18:00 – 19:00	1 hour	55 dBA Leq
Sunday	08:00 – 18:00	10 hour	55 dBA Leq

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 emissions. 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.

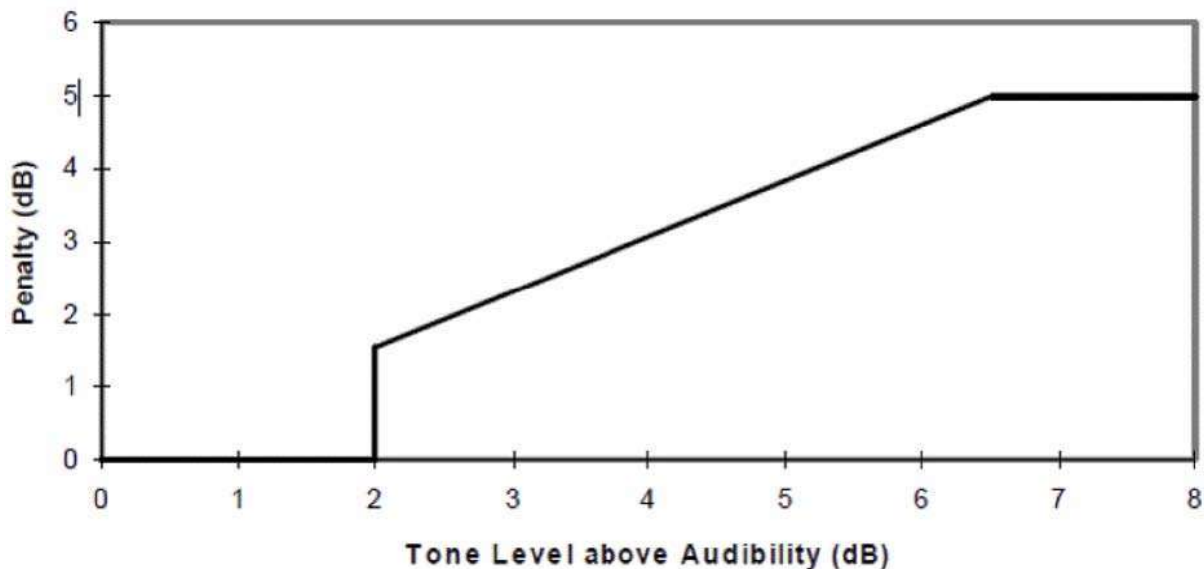
(b) For each 10 minute interval for which LA90,10 minute data have been determined as valid in accordance with Guidance Note 2 a tonal assessment shall be performed on noise emissions during 2 minutes of each 10 minute period. The 2 minute periods should be spaced at 10 minute intervals provided that 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 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 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 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 are 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.

Advisory notes

1. **The length of the permission:** This planning permission will lapse on the expiration of a period of three years from the date of this decision notice, unless the development has been started within that period (See section 58(1) of the Town and Country Planning (Scotland) Act 1997 (as amended)).

2. **Notice of the start of development:** The person carrying out the development must give advance notice in writing to the planning authority of the date when it is intended to start. Failure to do so is a breach of planning control. It could result in the planning authority taking enforcement action (See sections 27A and 123(1) of the Town and Country Planning (Scotland) Act 1997 (as amended)).

3. **Notice of the completion of the development:** As soon as possible after it is finished, the person who completed the development must write to the planning authority to confirm the position (See section 27B of the Town and Country Planning (Scotland) Act 1997 (as amended)).