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Louise Rich
Eversheds LLP
1 Callaghan Square
Cardiff
CF10 5BT

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DRH/MES/NP1-13

Elizabeth Dunn
Borges Salmon
Narrow Quay House
Narrow Quay
Bristol
BS1 4AH

David Hardy
Cobbetts LLP
No.1 Whitehall Riverside
Leeds
LS1 4BN

Dear Sir or Madam,

TOWN AND COUNTRY PLANNING ACT 1990 – SECTION 78

APPEAL BY CATAMOUNT ENERGY LTD - at land at Barmoor between Ford and Lowick, Berwick-upon-Tweed, TN15 2NR - Application reference 06/B/0148

APPEAL BY MOORSYDE WIND FARM LTD - at Moorsyde Wind Farm, north of Felkington and to the south of Shoresdean, Berwick-upon-Tweed, TD15 2NR - Application reference 04/B/1107

APPEAL BY NPOWER RENEWABLES LTD - at land at Toft Hill, to the south west of Grindon, Berwick-upon-Tweed, TD15 2NN - Application reference 06/B/1001

1. I am directed by the Secretary of State to say that consideration has been given to the report of the Inspector, Ruth MacKenzie BA (Hons) MRTPI, who held a public local inquiry between 6 May and 22 June 2009 into your clients' appeals:

Appeal A: made by Catamount Energy Ltd against a decision by Berwick-upon-Tweed Council (the Council) to refuse planning permission for the proposed development of 6 turbines (up to 110.5m in overall height), on-site sub-station including electrical control room, temporary construction compound area, unit transformers, upgrading and providing new access tracks, and a permanent anemometry mast at Land at Barmoor, between Ford and Lowick, in accordance with planning application reference 06/B/0148 dated 14 February 2006.

Appeal B: made by Moorsyde Wind Farm Ltd against a decision by the Council to refuse planning permission for the proposed development of 7 wind turbine generators, an anemometry mast, a substation and associated infrastructure, at Moorsyde wind farm, north of Felkington and south of Shoresdean in accordance with planning application reference 06/B/1107 dated 18 November 2004.

Appeal C: made by Npower Renewables Ltd against the decision of the Council to refuse planning permission for the erection of 7 wind turbines, together with associated infrastructure and services at Land at Toft Hill to the south west of Grindon in accordance with planning application reference 06/B/1001 dated 31 October 2006.

2. On 26 August 2008, the appeals were recovered for the Secretary of State's determination, in pursuance of section 79 of, and paragraph 3 to Schedule 6 to, the Town and Country Planning Act 1990 because they involve proposals of major significance for the delivery of the government's climate change programme and energy policies.

Inspector's recommendation and summary of the decision

3. The Inspector recommended that Appeal A be allowed, subject to planning conditions, and that Appeals B and C be dismissed. For the reasons given below, the Secretary of State agrees with the Inspector's conclusions, except where stated, and agrees with her recommendations. A copy of the Inspector's report (IR) is enclosed. All references to paragraph numbers, unless otherwise stated, are to that report.

Procedural Matters

4. In reaching this position the Secretary of State has taken into account the Environmental Statements submitted under the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999, and the additional and revised information provided for each scheme (IR9, IR14 and IR18). The Secretary of State is content that the Environmental Statements comply with the above regulations and that sufficient information has been provided for him to assess the environmental impact of the application.

Policy considerations

5. In determining the appeals, the Secretary of State has had regard to section 38(6) of the Planning and Compulsory Purchase Act 2004 which requires that proposals be determined in accordance with the development plan unless material considerations indicate otherwise.

6. In this case, the development plan comprises the North East of England Plan Regional Spatial Strategy to 2021 published in July 2008 (RSS), the saved policy of the Northumberland County and National Park Joint Structure Plan (2005) and the saved policies of the Berwick-upon-Tweed Local Plan (LP) (1999). The Secretary of State considers that the development plan policies most relevant to the appeal are those set out by the Inspector at IR29.
7. Other material considerations which the Secretary of State has taken into account include Planning Policy Statement (PPS) 1: *Delivering Sustainable Development* and PPS1 Supplement: *Planning and Climate Change*; PPS7: *Sustainable Development in Rural Areas*; PPS9: *Biodiversity and Geological Conservation*; PPG15: *Planning and the Historic Environment*; PPG16: *Archaeology and Planning*; PPS22: *Renewable Energy* and PPS22 Companion Guide: *Planning for Renewable Energy*; PPG24: *Planning and Noise*; Circular 11/95: *The Use of Conditions in Planning Permission*; Circular 05/05: *Planning Obligations*. He has also taken account of: *Landscape Appraisal for Onshore Wind Development (the 'Benson Report')*; *North East Regional Renewable Energy Strategy and Wind Farm Development*; and *Landscape Capacity Studies: South and West Berwick-upon-Tweed*.
8. Since the close of the inquiry the consultation draft PPS15: *Planning for the Historic Environment* has been published. However, as this document is at consultation stage and may be subject to change, it has been afforded little weight.
9. The Secretary of State has had regard to the listed buildings near the Appeal A site. In accordance with section 66 of the Planning (Listed Buildings and Conservation Areas) Act 1990, he has paid special regard to the desirability of preserving the listed buildings or their settings or any features of special architectural or historic interest which they may possess.

Main issues

10. The Secretary of State considers that the main issues in this case are those listed by the Inspector on page 46 of her report, as well as the need for wind energy developments and the relationship of the proposals with the development plan.

The relationship with the development plan

11. The Secretary of State agrees with the Inspector's reasoning and conclusions in respect of planning policy in IR297-300. He considers that the development plan policies with most direct relevance to the appeals are RSS policies 39, 40 and 41 (IR297). The Secretary of State concludes that all three appeal sites fall within the Broad Area of Least Constraint (BALC) to the south and west of Berwick-upon-Tweed identified in RSS policy 41 (IR298). He has considered the extent to which the proposals comply with other aspects of the development plan below.

Appeal A specific issues

12. The Secretary of State agrees with the Inspector's reasoning and conclusions on Appeal A in respect of landscape character effects, visual effects, cultural

heritage and air safety at IR301-318. Like the Inspector, he considers that, despite the major landscape effects at close quarters, the containment of the site by hills and woodlands would prevent the significant effects of the proposal spreading more than about 1km from the site (IR305). He also agrees with the Inspector that although in certain places and for some people the visual effects would be major, overall, they would be acceptable (IR310).

13. In respect of Ford Moss Colliery scheduled ancient monument (SAM) and its Grade II listed chimney, the Secretary of State agrees with the Inspector (IR311) that its setting would be changed by the wind farm, but not to an unacceptable degree. Overall in respect of cultural heritage, he shares the Inspector's view that the settings of SAMs and other cultural heritage features would not be significantly affected (IR318), and that there would be no conflict with RSS policy 16 (IR315). He also agrees that there is no evidence to suggest that air safety would be unacceptably prejudiced (IR317).

Appeal B specific issues

14. The Secretary of State agrees with the Inspector's reasoning and conclusions on Appeal B in respect of landscape character effects and visual effects at IR321-329. In respect of landscape character he agrees with the Inspector that there would be a 'high' adverse magnitude of change, which would lead to a 'major' effect on the landscape (IR323). Regarding visual effects, like the Inspector, he considers that the density and height of the 7 turbines and the movement of their rotating blades would be seriously harmful to the principal views of the Cheviots (IR328), and that there is conflict with LP policy F4 (IR327). He also agrees that residents would experience material harm to their visual amenity, but not to the extent that living conditions would become intolerable (IR329).
15. The Secretary of State has carefully considered the Inspector's comments in respect of noise at IR330-333. He notes the Inspector's view that the evidence suggests that noise limits set out in ETSU-R-97, and in the noise condition suggested by the appellant, would be breached from time to time, and also notes the Inspector's comments with regard to the enforcement of this condition (IR332). The Secretary of State takes the view that the significant potential for noise limits to be breached at Moorsyde weighs against the appeal irrespective of any concerns about monitoring and enforcement of this condition. He agrees with the Inspector that there is no evidence to indicate that the scheme before him was designed with the objective of keeping noise disturbance to a minimum, and that there is conflict with Key Principle (viii) of PPS22 in that respect (IR334).

Appeal C specific issues

16. The Secretary of State has had regard to the Inspector's comments in respect of the Duddo Stone Circle SAM at IR338-349. He agrees with the Inspector, for the reasons she gives at IR344-346 that the site of Appeal C is well within the setting of the Duddo Stone Circle (IR346). He also shares the Inspector's view that the proposed windfarm would have a significant adverse impact on the setting of this SAM (IR348) and that the scheme would conflict with national policy in PPG16 and also with LP policy F26 and with RSS policies 16 and 32 (IR349).

17. The Secretary of State agrees with the Inspector's reasoning and conclusions on Appeal C in respect of landscape character, visual effects and noise at IR350-354. Like the Inspector, he is satisfied that any changes to the key characteristics of the contemporary landscape would be within acceptable limits (IR350). Regarding visual effects, he agrees with the Inspector that there are no dwellings where living conditions would be harmed to an unacceptable degree (IR351), and that the presence of the turbines would not make the day-to-day or recreational use of local roads, footpaths and bridleways unacceptably unpleasant (IR352). In respect of turbine noise, the Secretary of State agrees with the Inspector that there is no evidence to show that the proposal would worsen living conditions to an unacceptable degree at Shellacres, or at any of the other more distant dwellings and that limited weight should be ascribed to this matter (IR354).

Matters in common to all 3 appeals

18. The Secretary of State has had regard to the Inspector's comments in respect of cumulative landscape effects and cumulative visual effects at IR356-366. He observes that, given his decision to dismiss Appeals B and C, none of the combinations of windfarm proposals considered unacceptable by the Inspector in terms of either cumulative landscape effects or cumulative visual effects would result. He sees no reason to disagree with the Inspector's comments (IR370-372) about the effect of the proposed schemes on tourism. He therefore attaches no weight to these matters.

19. The Secretary of State agrees with the Inspector's reasoning and conclusions (IR373-378) in respect of the need for wind energy developments. The Secretary of State notes the very substantial shortfall between Northumberland's pro rata target and its predicted installed capacity for 2010 (IR375). He agrees with the Inspector that, although encouraging progress is being made towards the 2020 renewable energy target (IR374 and 376), this target should not be thought of as a 'ceiling' and he further agrees that not all windfarms in the pipeline will come to fruition (IR377). Like the Inspector (IR378) he considers that there is, and there will continue to be, an urgent need for renewable energy developments, and this is a matter to which the Secretary of State attaches substantial weight.

Other matters

20. The Secretary of State has carefully considered the other matters raised at the Inquiry. He agrees with the Inspector's reasoning and conclusions in relation to grid connections (IR381). Given the very considerable life-span of the schemes, the Secretary of State does not consider that the reversibility of the schemes is a matter which weighs in their favour. He has not taken account of the possibility identified by the Inspector (IR380) that future planning permissions might be granted, allowing the turbines to remain.

The planning balance

21. The Secretary of State agrees with the list of benefits in common to all three appeals identified by the Inspector at IR383-385. Like the Inspector (IR383) he attaches significant weight in each case to the environmental and economic

benefits that flow from renewable energy generation in accordance with Key Principle (iv) of PPS22. He considers that each of the schemes gain further support from their location in a BALC. For the reasons given by the Inspector at IR385, he attaches limited weight to the job opportunities afforded by each of the schemes.

22. In the case of Appeal A, the Secretary of State agrees with the Inspector's balancing of factors at IR387-389. Like the Inspector, he considers that the benefits of the scheme outweigh its harms, that the scheme complies with Key Principle (i) of PPS22 and that the relevant criteria of RSS policy 40 are met (IR389).
23. The Secretary of State shares the Inspector's view that the factors listed at IR390 are matters which weigh in favour of Appeal B. In relation to considerations weighing against the scheme, as set out at paragraph 15 above, the Secretary of State has concluded that the significant potential for noise limits to be breached at Moorsyde weighs against the appeal irrespective of any issues in relation to monitoring and enforcement. He agrees with the Inspector in relation to the other matters identified in IR391 as weighing against the scheme. Like the Inspector (IR392), he attaches substantial weight to the serious harm that would be caused to the principal views of the Cheviots. For the reasons given by the Inspector at IR392, the Secretary of State also agrees that criterion (b) of RSS policy 40 and Key Principle (i) of PPS22 would not be satisfied
24. In the case of Appeal C, the Secretary of State agrees with the Inspector's balancing of factors at IR393-395. Like the Inspector, he considers that the harms of the Appeal C scheme would outweigh the benefits, principally because of the significant adverse impact that the turbines would have on the setting of the Duddo Stone Circle SAM. In common with the Inspector (IR349 and 395) the Secretary of State attaches substantial weight to the harm which Appeal C would cause to the historic environment. He also shares the Inspector's view (IR395) that, as the scheme would be located where environmental impacts could not be satisfactorily addressed, it would be contrary to Key Principle (i) of PPS22.

Conditions

25. The Secretary of State has considered the proposed conditions for each of the appeal schemes and the Inspector's comments on these at IR284-292. He is satisfied that the conditions recommended in the Inspector's schedule are reasonable and necessary and meet the tests of Circular 11/95. However, these conditions would not overcome the Secretary of State's reasons for refusing Appeals B and C.

Obligation

26. The Secretary of State has considered the Section 106 Unilateral Undertaking that has been submitted in relation to Appeal B and the Inspector's comments on it at IR293-296. Like the Inspector (IR295), he is satisfied that the Undertaking meets the tests set out in Circular 05/2005. However, he does not consider that its provisions overcome his other concerns with this appeal proposal, as set out in this letter

Overall Conclusions

27. As set out above, the Secretary of State has identified that all three appeal schemes receive support from RSS policy 41 from their locations within the BALC identified in the policy, and from the benefits of renewable energy generation, and he attaches significant weight to these factors.
28. In the case of Appeal A, the Secretary of State has concluded at paragraph 22 above that the relevant criteria of RSS policy 40 are met, and that the scheme complies with Key Principle (i) of PPS22. As set out at paragraph 12 above, he has also concluded that, overall, the scheme's visual effects would be acceptable, and he has identified no unacceptable harm in terms of landscape character effects. Overall in relation to Appeal A, the Secretary of State has found no material conflict with development plan policies or national policies, and he sees no reason to determine the appeal other than in accordance with the development plan.
29. In the case of Appeal B, as set out at paragraph 23 above, the Secretary of State considers that the proposal would cause serious harm to the principal views of the Cheviots, in conflict with LP policy F4, and he has attached substantial weight to this harm. As set out at paragraphs 15 and 23 above, he has also identified conflict with 2 key objectives of PPS22 and harm in relation to the significant potential for noise limits to be breached. He has also concluded (at paragraph 23 above) that RSS policy 40 would not be satisfied. The Secretary of State concludes overall that the scheme would conflict with the development plan and he has found no material considerations of sufficient weight to justify his determining Appeal B other than in accordance with the development plan.
30. In the case of Appeal C, as set out at paragraph 24 above, the Secretary of State attaches substantial weight to the significant adverse impact this scheme would cause to the setting of the Duddo Stone Circle SAM. He has also concluded at paragraphs 16 and 24 above that the proposals are contrary to RSS policies 16 and 32, LP policy F26, and national policy in PPG16 and PPS22. He concludes therefore that the scheme would conflict with the development plan and he has found no material considerations of sufficient weight to justify his determining this appeal other than in accordance with the development plan.

Formal Decision

31. Accordingly, for the reasons given above, the Secretary of State agrees with all the Inspector's recommendations and makes the following decisions:

Appeal A

32. The Secretary of State hereby allows the appeal and grants planning permission for 6 turbines (up to 110.5m in overall height), on-site substation including electrical control room, temporary construction compound area, unit transformers, upgrading and providing new access tracks, and a permanent anemometry mast in accordance with application reference 06/B/0148 dated 14 February 2006, as amended, subject to the conditions set out in Annex A.

Appeal B

33. The Secretary of State hereby dismisses the appeal and refuses planning permission for the proposed development of 7 wind turbine generators, an anemometry mast, a substation and associated infrastructure, at Moorsyde wind farm, north of Felkington and south of Shoresdean in accordance with planning application reference 06/B/1107 dated 18 November 2004.

Appeal C

34. The Secretary of State hereby dismisses the appeal and refuses planning permission for the erection of 7 wind turbines, together with associated infrastructure and services at Land at Toft Hill to the south west of Grindon in accordance with planning application reference 06/B/1001 dated 31 October 2006.

35. An applicant for any consent, agreement or approval required by a condition of this permission for agreement of reserved matters has a statutory right of appeal to the Secretary of State if consent, agreement or approval is refused or granted conditionally or if the Local Planning Authority fail to give notice of their decision within the prescribed period.

36. This letter does not convey any approval or consent which may be required under any enactment, bye-law, order or regulation other than section 57 of the Town and Country Planning Act 1990.

37. This letter serves as the Secretary of State's statement under regulation 21(2) of the Town and Country (Environmental Impact Assessment) (England and Wales) Regulations 1999.

Right to challenge the decision

38. A separate note is attached setting out the circumstances in which the validity of the Secretary of State's decision may be challenged by making an application to the High Court within six weeks from the date of this letter.

39. A copy of this letter has been sent to Northumberland County Council and all parties who appeared at the inquiry.

Yours faithfully

Christine Symes

Authorised by Secretary of State to sign in that behalf

Annex A: schedule of conditions for Appeal A

Time Limits and Site Restoration

1. The development hereby permitted shall begin not later than 5 years from the date of this decision.
2. Within one month of the first generation or electricity to the grid, the local planning authority shall be informed in writing of the date of such generation. By the end of 25 years from that date, all surface elements of the development shall have been removed from the site in accordance with a scheme which shall be submitted to and approved in writing by the local planning authority not later than 12 months prior to the expiry of the said period of 25 years.
3. If any turbine fails to produce electricity to the grid for a continuous period of 12 months it, and its associated ancillary equipment, shall be removed from the site within a period of 6 months from the end of that 12 month period. The land shall be reinstated in accordance with a scheme to be submitted to and approved in writing by the local planning authority, and implemented as approved. The scheme shall include the management and timing of the works, and a traffic management plan.

Micro-siting

4. Turbines 4 and 5, and tracks relating solely to those turbines, may be micro-sited within 30m of the positions shown on Plan A (Figure 1.0 Planning Application, Revision B, 10 October 2007), so long as neither turbine shall be situated closer to a public highway or dwelling (in existence at the date of this permission) than is shown on that plan. A plan showing the final position of the turbines and tracks shall be submitted to the local planning authority within one month of the completion of development.

Construction Traffic Method Statement and Construction Method Statement

5. No development shall commence until a Construction Traffic Method Statement and a Construction Method Statement have been submitted to and agreed in writing by the local planning authority. They shall both be implemented as approved in writing by the local planning authority.
6. The Construction Traffic Method Statement shall include: vehicle routing; the management of junctions to, and crossings of, the public highway and other public rights of way; the scheduling and timing of vehicular movements; details of escorts for abnormal loads; and temporary warning signs.
7. The Construction Method Statement shall include: the timing of construction works; the construction method and surface treatment of all hard surfaces and tracks; details of site compounds and parking areas; details of wheel washing facilities, highway cleaning and pollution control; the means of disposal of surplus materials; the timing and methods of cable trenching and foundation works; the timing, construction method and external materials of any substation/control buildings; the timing and construction method of the

anemometry mast; dust management; noise management (including identification of access routes, locations of materials lay-down areas, details of equipment to be employed, operations to be carried out, mitigation measures and a scheme for the monitoring of noise); and details of the reinstatement of any temporary working areas.

Construction Hours

8. The hours of work during the construction phase, and any traffic movements to or from the site associated with the construction of the development, shall be 07.30hrs to 19.00hrs Mondays to Fridays, and 07.30hrs to 14.00hrs on Saturdays. No work shall take place outside these hours (including on Bank Holidays). Exceptionally, the delivery of large turbine and crane components may take place outside the construction hours specified above, subject to at least 24 hours prior notice being given to the local planning authority and prior approval in writing being granted by the local planning authority.

Highways

9. No development shall commence until details of the proposed access to the site from the public highway and temporary or permanent improvements to the public highway have been submitted to and approved in writing by the local planning authority. The works shall be implemented in accordance with the approved details.

Appearance

10. No development shall commence until details of the semi-matt external finish and colour of the turbines have been submitted to and approved in writing by the local planning authority. The turbines shall be built in accordance with the approved details. The turbines shall not be illuminated, or display any name, sign, symbol or logo. All the blades shall rotate in the same direction.

Shadow Flicker

11. No development shall commence until a scheme for the avoidance of any shadow flicker effect for dwellings within 10 rotor diameters of any turbine has been submitted to and approved in writing by the local planning authority. The scheme shall be implemented as approved.

Television interference

12. No wind turbine shall be erected until a scheme to secure the investigation and alleviation of any electro-magnetic interference to terrestrial TV caused by the operation of the turbines has been submitted to and approved in writing by the local planning authority. The scheme shall be implemented as approved.

Archaeology

- 13.No development shall commence until a scheme of investigation for archaeological work has been submitted to and approved in writing by the local planning authority. The scheme shall be implemented as approved.

Wildlife

- 14.No development shall commence until a Habitat Management Plan has been submitted to and approved in writing by the local planning authority. The Plan shall include a scheme for the management and enhancement of hedgerows and biodiversity, a scheme for pre-construction badger and otter surveys, and a scheme to minimise disturbance to nesting birds during the construction works. The Habitat Management Plan shall be implemented as approved.

Noise

- 15.The rating level of noise immissions from the combined effects of the wind turbines (including the application of any tonal penalty), when calculated in accordance with the Guidance Notes below, shall not exceed the values set out in Tables 1 and 2 below. Where there is more than one property at a given location, the noise limits apply to all properties at that location. Noise limits for properties within 2km of a wind turbine which are lawfully existing at the date of this decision but not listed in the Tables shall be those of the nearest location listed in Tables 1 and 2 unless otherwise requested by the local planning authority.
- 16.At the request of the local planning authority, following a complaint to it, 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 following the procedures described in the Guidance Notes below.
- 17.Wind speed, wind direction and power generation data for each wind turbine shall be continuously logged and provided to the local planning authority at its request, and in accordance with the Guidance Notes below, within 28 days of receipt in writing of such a request.

GUIDANCE NOTES RELATING FOR NOISE CONDITIONS

NOTE 1

- (a) Values of the $L_{A90,10min}$ noise statistic should be measured at the complainant's property, using a sound level meter of IEC 651 Type 1, or BS EN 61672 Class 1, standard (or the equivalent relevant UK adopted standard in force at the time of the measurements) set to measure using a fast time weighted response. This should be calibrated in accordance with the procedure specified in BS 4142: 1997 (or the equivalent relevant UK adopted standard in force at the time of the measurements).
- (b) The microphone should be mounted at 1.2 - 1.5m above ground level, fitted with a two layer windshield or suitable equivalent approved by the local authority, and placed outside the complainant's dwelling.

Measurements should be made in “free-field” conditions, so that the microphone should be placed at least 3.5m away from the building facade or any reflecting surface except the ground.

- (c) The $L_{A90,10min}$ measurements should be synchronised with measurements of the 10-minute arithmetic average wind speed and with operational data from the turbine control systems of the wind farm or farms.
- (d) The wind farm operator shall continuously log arithmetic mean wind speed and arithmetic mean wind direction data in 10 minute periods from the nacelle anemometers of each turbine, duly corrected for the presence of the rotating blades, to enable compliance with the conditions to be evaluated. Such data shall be averaged over the data from all turbines and ‘standardised’ to a reference height of 10 metres as described in ETSU-R-97 at page 120 using a reference roughness length of 0.05m.

NOTE 2

- (a) The noise measurements should be made so as to provide not less than 20 valid data points as defined in Note 2 paragraph (b). Such measurements should provide valid data points for the range of wind speeds, wind directions, times of day and power generation requested by the local planning authority. In specifying such conditions the local planning authority shall have regard to those conditions which were most likely to have prevailed during times when the complainant alleges there was disturbance due to noise. At its request, the wind farm operator shall provide all of the data to the local planning authority
- (b) Valid data points are those that remain after all periods during rainfall have been excluded.
- (c) A least squares, “best fit” curve of a maximum 2nd order should be fitted to the data points and define the rating level at each integer speed.

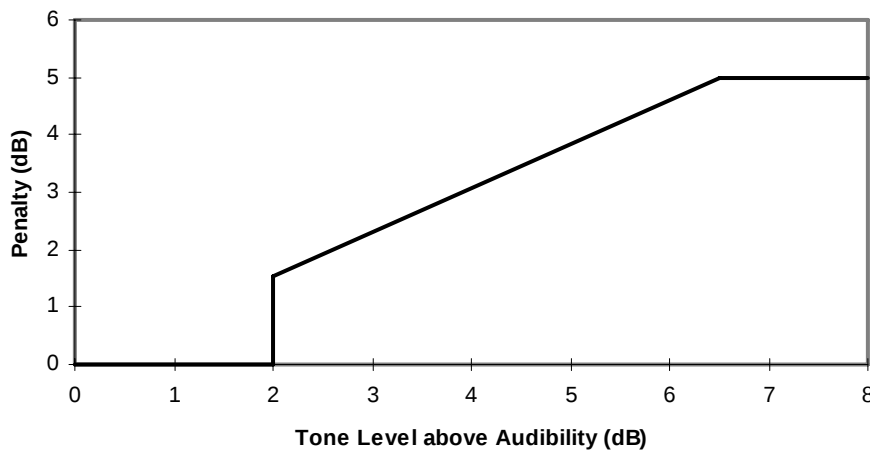
NOTE 3

Where, in the opinion of the local planning authority noise immissions at the location or locations where assessment measurements are being undertaken contain a tonal component, the following rating procedure should be used.

- (a) For each 10-minute interval for which $L_{A90,10min}$ data have been obtained, as provided for in Note 1, a tonal assessment is performed on noise immissions during 2 minutes of each 10 minute period. The 2 minute periods should be regularly spaced at 10 minute intervals provided that uninterrupted clean data are available. Where clean 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 standard procedure shall be reported.
- (b) For each of the 2 minute samples, the margin above or below the audibility criterion of the tone level difference, ΔL_{tm} , should be

calculated by comparison with the audibility criterion given in Section 2.1 on pages 104-109 of ETSU-R-97.

- (c) The margin above audibility is plotted against wind speed for each of the 2 minute samples. For samples for which the tones were below the audibility criterion, or no tone was identified, substitute a value of zero audibility.
- (d) A linear regression should then be performed to establish the margin above audibility at the assessed wind speed for each integer wind speed. If there is no apparent trend with wind speed then a simple arithmetic average shall be used.
- (e) The tonal penalty is derived from the margin above audibility of the tone according to the figure below. The rating level at each wind speed is the arithmetic sum of the wind farm noise level, as determined from the best fit curve described in Note 2, and the penalty for tonal noise.



NOTE 4

If the rating level is above the limit set out in the noise conditions, measurements of the influence of background noise should be made to determine whether or not there is a breach of condition. This may be achieved by repeating the steps in Note 2, with the wind farm switched off, and determining the background noise at the assessed wind speed, L_3 . The wind farm noise at this speed, L_1 , is then calculated as follows where L_2 is the measured level with turbines running but without the addition of any tonal penalty:

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

The rating level is re-calculated by adding the tonal penalty (if any) to the derived wind farm noise L_1 . If the rating level lies at or below the values set out in the noise conditions then no further action is necessary. If the rating level exceeds the values set out, then the development fails to comply.

TABLE 1**Between 23:00 and 07:00 hours (Noise Level in dB L_{A90, 10min}):**

Location	Wind speed at 10m height, m/s											
	1	2	3	4	5	6	7	8	9	10	11	12
Routin Lynn	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.5	47.5	49.9
Fordwood House	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.5	47.5	49.9
Property at [396200,637900]	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.5	47.5	49.9
Fordcommon Cottage	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.7	48.0	51.0	53.3
Friendly House B+B	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.7	48.0	51.0	53.3
Watchlaw	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.7	48.0	51.0	53.3
Barmoor Ridge	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.7	47.4	49.5
Barmoor Ridge*	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	47.4	49.5
Coal Harbour	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	45.3	47.5	49.1
Brackenside Farm	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.8	47.5	50.8	53.4	55.1
Brackenside*	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	47.5	50.8	53.4	55.1
Barmoor South Moor	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	46.0	49.6	52.6	54.7
Barmoor South Moor*	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	46.0	49.6	52.6	54.7
Dunsall	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.7	47.4	49.5
Barmoor Castle	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.3	46.1	48.9	51.3	53.2
Barmoor Home Farm	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.3	46.1	48.9	51.3	53.2
Barmoor	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.3	46.1	48.9	51.3	53.2
Barmoor Lane End	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.3	46.1	48.9	51.3	53.2
Ham Hall	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.3	46.1	48.9	51.3	53.2
Moss Hall	43.0	43.0	43.0	43.0	43.0	43.0	43.0	45.0	48.9	52.4	55.2	57.1
White House	43.0	43.0	43.0	43.0	43.0	43.0	43.0	45.0	48.9	52.4	55.2	57.1
Blue House	43.0	43.0	43.0	43.0	43.0	43.0	43.0	45.0	48.9	52.4	55.2	57.1
Lowick High Stead	43.0	43.0	43.0	43.0	43.0	43.0	43.0	45.0	48.9	52.4	55.2	57.1
Barmoor Red House	43.0	43.0	43.0	43.0	43.0	43.0	43.0	45.0	48.9	52.4	55.2	57.1
Lowick South Moor	43.0	43.0	43.0	43.0	43.0	43.0	43.0	45.0	48.9	52.4	55.2	57.1
Kemping Moss Farm	43.0	43.0	43.0	43.0	43.0	43.0	43.0	45.0	48.9	52.4	55.2	57.1
Biteabout	43.0	43.0	43.0	43.0	43.0	43.0	43.0	45.0	48.9	52.4	55.2	57.1
Doddington Northmoor	43.0	43.0	43.0	43.0	43.0	43.0	43.0	45.0	48.9	52.4	55.2	57.1
All other properties lawfully existing at the date of this permission located 2km or more from any wind turbine	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.5	47.4	49.1

- a property occupied by someone with a financial interest in the development, as defined on page 66 of 'The Assessment and Rating of Noise from Wind Farms' (ETSU-R-97).

TABLE 2**At all other times (Noise Level in dB L_{A90, 10min}):**

Location	Wind speed at 10m height, m/s											
	1	2	3	4	5	6	7	8	9	10	11	12
Routin Lynn	35.0	35.0	35.0	35.0	35.0	35.0	35.9	38.6	41.5	44.7	47.8	50.9
Fordwood House	35.0	35.0	35.0	35.0	35.0	35.0	35.9	38.6	41.5	44.7	47.8	50.9
Property at [396200,637900]	35.0	35.0	35.0	35.0	35.0	35.0	35.9	38.6	41.5	44.7	47.8	50.9
Fordcommon Cottage	35.0	35.0	35.0	35.0	35.8	37.8	40.2	42.9	45.8	48.7	51.6	54.4
Friendly House B+B	35.0	35.0	35.0	35.0	35.8	37.8	40.2	42.9	45.8	48.7	51.6	54.4
Watchlaw	35.0	35.0	35.0	35.0	35.8	37.8	40.2	42.9	45.8	48.7	51.6	54.4
Barmoor Ridge	35.0	35.0	35.0	35.0	35.7	37.2	38.9	40.9	43.0	45.3	47.7	50.1
Barmoor Ridge*	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.3	47.7	50.1
Coal Harbour	35.0	35.0	35.0	35.0	35.0	36.2	38.5	40.9	43.4	45.9	48.2	50.3
Brackenside Farm	35.0	35.0	35.0	35.0	36.2	38.8	41.7	44.9	48.1	51.3	54.3	56.9
Brackenside*	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	48.1	51.3	54.3	56.9
Barmoor South Moor	35.0	35.0	35.0	35.0	35.0	37.1	39.9	43.0	46.3	49.6	52.7	55.5
Barmoor South Moor*	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	46.3	49.6	52.7	55.5
Dunsall	35.0	35.0	35.0	35.0	35.7	37.2	38.9	40.9	43.0	45.3	47.7	50.1
Barmoor Castle	35.9	35.9	35.9	36.4	37.7	39.6	41.9	44.5	47.2	50.0	52.6	55.0
Barmoor Home Farm	35.9	35.9	35.9	36.4	37.7	39.6	41.9	44.5	47.2	50.0	52.6	55.0
Barmoor	35.9	35.9	35.9	36.4	37.7	39.6	41.9	44.5	47.2	50.0	52.6	55.0
Barmoor Lane End	35.9	35.9	35.9	36.4	37.7	39.6	41.9	44.5	47.2	50.0	52.6	55.0
Ham Hall	35.9	35.9	35.9	36.4	37.7	39.6	41.9	44.5	47.2	50.0	52.6	55.0
Moss Hall	35.0	35.0	35.2	36.4	38.3	40.8	43.6	46.7	49.9	52.9	55.6	57.9
White House	35.0	35.0	35.2	36.4	38.3	40.8	43.6	46.7	49.9	52.9	55.6	57.9
Blue House	35.0	35.0	35.2	36.4	38.3	40.8	43.6	46.7	49.9	52.9	55.6	57.9
Lowick High	35.0	35.0	35.2	36.4	38.3	40.8	43.6	46.7	49	52.9	55.6	57.9

Stead									.9			
Barmoor Red House	35.0	35.0	35.2	36.4	38.3	40.8	43.6	46.7	49.9	52.9	55.6	57.9
Lowick South Moor	35.0	35.0	35.2	36.4	38.3	40.8	43.6	46.7	49.9	52.9	55.6	57.9
Kemping Moss Farm	35.0	35.0	35.2	36.4	38.3	40.8	43.6	46.7	49.9	52.9	55.6	57.9
Biteabout	35.0	35.0	35.2	36.4	38.3	40.8	43.6	46.7	49.9	52.9	55.6	57.9
Doddington Northmoor	35.0	35.0	35.2	36.4	38.3	40.8	43.6	46.7	49.9	52.9	55.6	57.9
All other properties lawfully existing at the date of this permission located 2km or more from any wind turbine	35.0	35.0	35.0	35.0	35.0	35.0	35.9	38.6	41.5	44.7	47.7	50.1

- a property occupied by someone with a financial interest in the development, as defined on page 66 of 'The Assessment and Rating of Noise from Wind Farms' (ETSU-R-97)).