



9 November 2009

David Cox
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RES UK & Ireland Ltd
Beaufort Court
Egg Farm Lane
Kings Langley
Herts
WD4 8LR

Our Ref: APP/W0530/A/07/2059471

Your Ref: S/1018/06/F

Dear Sir,

# TOWN AND COUNTRY PLANNING ACT 1990 – SECTION 78 LAND AT WADLOW FARM, WEST WRATTING, CAMBRIDGESHIRE APPLICATION: S/1018/06/F

1. I am directed by the Secretary of State to say that consideration has been given to the report of the Inspector, Mr D G Lavender MRTPI, who held a public local inquiry between 9 June and 7 July 2009, with a site inspection on 8 July 2009, into your Company's appeal against the decision by South Cambridgeshire District Council to refuse planning permission for the erection of thirteen three bladed, horizontal axis wind turbines, electricity transformers, access tracks, crane hardstandings, control building, substation, permanent anemometer mast, highway modifications, temporary construction compound and two temporary anemometer masts at Wadlow Farm, Six Mile Bottom Road, West Wratting, Cambridgeshire (application ref: S/1018/06/F, dated 7 June 2007). In exercise of powers under Section 79 and paragraph 3 of Schedule 6 to the Town and Country Planning Act 1990, this appeal was recovered for the Secretary of State's own determination by Direction made on 12 December 2008. The reason given for this Direction was that "the appeal involves 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

2. The Inspector recommended that the appeal be allowed and planning permission be granted subject to conditions. For the reasons given below, the Secretary of State agrees with the Inspector's conclusions and agrees with his recommendation. A copy of the Inspector's report (IR) is enclosed. All references to paragraph numbers, unless otherwise stated, are to that report.

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#### **Procedural matters**

3. The Secretary of State has taken account of the Environmental Statement which was submitted under the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999. Taken together with the further information submitted in response to an Article 19 Direction made on 23 June 2008 and other information volunteered by the appellant company (IR1.2 – IR1.5), the Secretary of State agrees with the Inspector (IR12.2) that the submitted Environmental Statement complies with the above regulations, and he is satisfied that sufficient information has been provided for him to assess the environmental impact of the application.

#### **Policy considerations**

- 4. In deciding the application, 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.
- 5. In this case, the development plan comprises the East of England Plan 2008 (RSS), along with the South Cambridgeshire Local Development Framework Core Strategy (adopted in January 2007) and the South Cambridgeshire Development Control Policies Development Plan Document (DPD) (adopted in July 2007). The Secretary of State is aware of the recent judgment by Mr Justice Mitting in relation to the challenge to policies HA1, LA1(2), LA2, LA3 and SS7 of the East of England Plan. However, as he does not consider that those policies are of direct relevance to the appeal proposal, he does not consider that that judgment prevents him from giving full weight to those policies in the RSS which are relevant to this appeal. He agrees with the Inspector (IR4.6) that those are ENG2, ENV3 and ENV6.
- 6. The Secretary of State also agrees with the Inspector that the relevant DPD policies in this case are as set out by the Inspector at IR4.7-4.8, and that policy ST/1 of the Core Strategy is also relevant to this appeal.
- 7. Other material considerations which the Secretary of State has taken into account include: Planning Policy Statement (PPS) 1: Delivering Sustainable Development; Planning Policy Statement: Planning and Climate Change (supplement to PPS1); Planning Policy Guidance note (PPG) 2: Green Belts; PPS 7: Sustainable Development in Rural Areas; PPG15: Planning and the Historic Environment; PPG16: Archaeology and Planning; PPS22 and its companion Guide: Renewable Energy, along with the Government's subsequent statement regarding the findings of the Salford University report into Aerodynamic Modulation of Wind Turbine Noise (published by BERR in August 2007); PPG24: Planning and Noise; Circular 11/95: Planning Conditions; and Circular 05/2005: Planning Obligations.
- 8. The Secretary of State has also taken into account draft PPS4: *Planning for Prosperous Economies*, published for consultation in May 2009 and draft PPS15: *Planning for the Historic Environment*, published for consultation in July 2009.

However, as these documents are still at consultation stage and may be subject to change, he affords them little weight.

#### Main issues

- 9. The Secretary of State agrees with the Inspector that the matters which he discusses at IR12.5-12.17 do not bear directly on the consideration of this appeal and he sees no need to comment further on them.
- 10. Within the context of determining the extent to which the appeal proposal accords with the Development Plan (see paragraphs 4-6 above), and to which he turns first, the Secretary of State agrees with the Inspector that the main considerations in this case are those identified at IR12.18-12.20.

### The relationship of the proposal to the development plan

- 11. The Secretary of State agrees with the Inspector that, for the reasons set out at IR12.122-123, the proposal accords with the development plan taken as a whole. He notes the Inspector's points (IR12.24) that the Council's DPDs have not yet reached a point at which specific areas suitable for wind farm development have been identified and that the general policies relating to wind farms have not been formulated with schemes of the scale of the appeal proposal in mind. He also agrees with the Inspector that there are particular conflicts with RSS policy ENV6 and DPD policies CH/2 and 4 in relation to the preservation of the settings of Fleam Dyke and Grange Farmhouse (see paragraph 16 below), and with policy NE/15 arising from the risk of exposure to noise in the form of "other AM" (see paragraph 19 below).
- 12. Nevertheless, the Secretary of State agrees with the Inspector (IR122.24) that the present development plan policies are generally welcoming towards renewable energy development and that, to the extent that any conflict may arise with particular policies, these are outweighed by the importance of achieving the national policy objectives relating to climate change and energy supply (IR12.123).

## Landscape capacity

13. For the reasons given at IR12.21-12.23, the Secretary of State agrees with the Inspector that, although the appeal site may not be the "best" site in the Eastern Region, it is apparent that neither the capacity study commissioned by the Eastern Regional Assembly (IR12.21) nor present strategic renewable energy policies militate against a wind farm being developed on the appeal site.

#### Landscape assessment

14. For the reasons given at IR12.26-12.30 and summarised at IR12.111-12.112, the Secretary of State agrees with the Inspector's conclusion with regard to landscape assessment (IR12.30) that suggestions that there would be loss of openness, tranquillity and rurality are largely unfounded and that, although the appearance of the landscape would be changed as a result of the presence of turbines, the overall magnitude and effect of such change would be acceptable.

### Visual impact assessment

- 15. The Secretary of State agrees with the Inspector's conclusion at IR12.114 that the visibility of turbines from houses, villages and cultural heritage assets is not, itself, sufficient reason to reject wind turbine development unless there is evidence that such visibility will lead to actual harm. Accordingly, for the reasons given at IR12.31-12.45, the Secretary of State agrees with the Inspector that there would be insufficient visual impact on Balsham, West Wratting, Fulbourn, Great Wilbraham, West Wickham, Six Mile Bottom, Weston Colville (including Weston Colville Hall), Weston Green, Brinkley, Hildersham and Horseheath and their settings to lead to actual harm. Similarly, for the reasons given at IR12.47. the Secretary of State agrees with the Inspector that the living conditions of the occupiers of the two Grange Farm cottages which would have a direct view of the lines of turbines from their rear windows and gardens would not be such as to make their homes unattractive places in which to live; and he similarly agrees with the Inspector's conclusions with regard to the properties described at IR12.48-12.51. He also agrees with the Inspector that, for the reasons given, the setting of Mutlow Hill would not be affected (IR12.56).
- 16. Against these conclusions that there would be no actual harm to most of the small settlements in the vicinity, the Secretary of State agrees with the Inspector's reasoning and conclusions at IR12.46 that the proposed turbines would neither preserve nor enhance the setting of Grange Farmhouse. He also agrees with the Inspector (IR 12.52-12.55) that, with turbines in such close proximity to it, the setting of Fleam Dyke would not be "preserved" (in the statutory sense). However, the Secretary of State also agrees with the Inspector (IR12.115) that these negative findings are not determinative and that a balance of considerations has to be undertaken. Thus, for the reasons given at IR12.116-12.117 (and having regard to the provisions of the Unilateral Undertaking in respect of Fleam Dyke considered in paragraph 22 below), the Secretary of State agrees with the Inspector that the desirability of preserving the settings of Grange Farmhouse and Fleam Dyke is not the most compelling factor in weighing the degree of harmful effect against the range of potentially positive effects and the need for renewable energy.

#### Green Belt and the setting of Cambridge

17. For the reasons given at IR12.57, the Secretary of State agrees with the Inspector that there is no substance to objections relating to the location of the appeal proposals just beyond the edge of the Cambridge Green Belt.

#### Noise

18. For the reasons given at IR12.58-12.73, the Secretary of State agrees with the Inspector's conclusion at IR12.119 that the proposal meets the requirements of ETSU-R-97 (as advised in paragraph 22 of PPS22) and that the planning conditions proposed (see paragraph 21 below) will act as an additional safeguard

- to ensure that the noise immissions<sup>1</sup> accordingly predicted would not be exceeded.
- 19. The Secretary of State has also had regard to the Inspector's deliberations on "Amplitude Modulation" (also known as "Aerodynamic Modulation" (AM)) at IR12.74-12.83 and IR12.119-12.121. However, as the Inspector acknowledges, although the advice in ETSU-R-97 takes account of "blade swish" (IR12.74), excess AM can also be manifested in other ways which ETSU-R-97 recognised but left open for further investigation (IR12.76). This further investigation led to the publication of a statement by BERR in August 2007 regarding the findings of the Salford University report into Aerodynamic Modulation of Wind Turbine Noise. as referred to in paragraph 8 above. This statement concluded that there did not appear to be a compelling case for further work into AM at present and so continued to support the approach adopted in PPS22 based on the process in ETSU-R-97. The Secretary of State therefore agrees with the Inspector's conclusion at IR12.121 that "other" AM remains no more, and no less, than a potential risk and that, for the reasons given by the Inspector in that paragraph, nearby residents would be adequately protected by the normal ETSU-R-97 style of condition.

## Other matters

20. The Secretary of State has had regard to the Inspector's conclusions on the various "other" matters considered at IR12.85-12.105. He sees no reason to disagree with any of those conclusions or the reasoning behind them; and he accordingly agrees with the Inspector (IR12.124) that nothing in the other matters raised at the Inquiry and in representations would justify altering the overall conclusion on this case.

#### Conditions

21. The Secretary of State has considered the Inspector's explanation of the conditions put forward at the Inquiry at IR11.1-11.18; his proposed amendments as set out in Annex B to the IR (and repeated in the Annex to this letter); and his explanation of them at IR12.106-12.110. The Secretary of State considers that the conditions proposed by the Inspector are necessary and relevant to the proposed development and meet the policy tests of Circular 11/95. In particular, he agrees with the Inspector that, for the reasons given at IR12.106, it would be appropriate to impose a time limit of 5 years for commencement. Furthermore, for the reasons set out in paragraph 19 above, the Secretary of State agrees with the Inspector at IR12.106 that the ETSU-R-97 noise condition should be included as Condition 7 in the conditions set out in the attached Annex.

#### Obligation

22. The Secretary of State has considered the Section 106 Unilateral Undertaking and the Inspector's comments at IR11.19, as well as national policy as set out in Circular 05/2005. The Secretary of State agrees with the Inspector that its provisions would help to improve access to Fleam Dyke, provide signs to inform

<sup>&</sup>lt;sup>1</sup> a measure of the cumulative noise energy to which an individual is exposed over time

the public of the cultural heritage of the monument and provide for planting and vegetation management. He considers that the Undertaking would meet the tests contained in Circular 05/2005 and that it accords with the policy in that Circular.

#### **Overall Conclusions**

23. The Secretary of State agrees with the Inspector that the proposed development can be regarded as complying with the overall objectives of the development plan and with national policy. He also agrees with the Inspector that, to the extent that any conflict may arise with particular development plan policies, these are outweighed by the importance of achieving the national policy objectives relating to climate change and energy supply. The Secretary of State therefore concludes that there are no material considerations of sufficient weight which count against the proposal to determine the application other than in accordance with the overall objectives of the development plan.

#### **Formal Decision**

- 24. Accordingly, for the reasons given above, the Secretary of State agrees with the Inspector's recommendation. He hereby grants planning permission for the erection of thirteen three bladed, horizontal axis wind turbines, electricity transformers, access tracks, crane hardstandings, control building, substation, permanent anemometer mast, highway modifications, temporary construction compound and two temporary anemometer masts at Wadlow Farm, Six Mile Bottom Road, West Wratting, Cambridgeshire in accordance with application ref: S/1018/06/F, dated 7 June 2007.
- 25. 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.
- 26. 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.

## Right to challenge the decision

- 27. 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.
- 28. A copy of this letter has been sent to Cheshire West and Chester Borough Council and all parties who appeared at the inquiry.

Yours faithfully

#### Jean Nowak

Authorised by Secretary of State to sign in that behalf

#### Schedule of conditions

- 1 The development hereby permitted shall begin not later than five years from the date of this decision.
- Other than in respect of the temporary construction compound, the planning permission is for a period not exceeding 25 years from the date that the development is first connected to electricity grid. The dates of (a) first connection to the grid and (b) of the full operation of all the turbines shall be notified in writing to the Local Planning Authority within 28 days of each of these two events occurring.
- If any wind turbine hereby permitted fails to produce electricity for supply to the electricity grid for a continuous period of 9 months the wind turbine and its associated ancillary equipment shall be removed from the site to a depth of at least 1metre below ground and the land shall be reinstated within a period of 6 months from the end of that 9 month period in accordance with a scheme submitted to and approved in writing by the Local Planning Authority prior to the commencement of development. The scheme shall include management and timing of the works and a traffic management plan, and shall be implemented as approved.
- At the end of the 25 year period, the turbines shall be decommissioned and they and all related above ground structures shall be removed from the site. Twelve months before the decommissioning of the turbines, a scheme for the restoration of the site shall be submitted to the Local Planning Authority for approval in writing. The scheme shall make provision for the removal of the wind turbines and their associated ancillary equipment to a depth of at least 1 metre below ground. The scheme shall include management and timing of the works and a traffic management plan, and shall be implemented as approved.
- Development shall not be begun until a Construction Method Statement has been submitted to and approved in writing by the Local Planning Authority and shall include:
  - (a) A Traffic Management Plan;
  - (b) Details of:
    - (i) The formation of the construction compound and access tracks and any areas of hardstanding;
    - (ii) Any Temporary Site Illumination;
    - (iii) The methods to be adopted to reduce the effects of noise occurring during the construction period to the lowest practicable level and in accordance with BS5228;
    - (iv) The arrangements to be made for the disposal of surplus materials;
    - (v) The construction of the access into the site and the creation and maintenance of associated visibility splays:
    - (vi) The construction of the Crane Pads;

- (vii) The carrying out of foundation works;
- (viii) The erection of the meteorological masts;
- (ix) Proposals for post-construction restoration/reinstatement of the working areas;
- (c) Measures to secure:
  - (i) Dust Management;
  - (ii) Cleaning of site entrances and the adjacent public highway;
  - (iii) Pollution Control, covering:
    - a. Water courses and ground water
    - b.Subsoil
    - c.Bunding of fuel storage areas
    - d.Sewage
  - (iv) The sheeting of all HGVs taking spoil to/from the site to prevent spillage or deposit of any materials on the highway;
  - (v) Soils storage and handling.

The Construction Method Statement shall be carried out as approved.

- 6. The hours of operation of the construction phase of the development and any traffic movements to or from the site associated with the construction of the development hereby permitted shall be limited to between 0700 hours and 1900 hours on weekdays and between 0700 hours and 1300 hours on Saturdays and no work shall take place on Sundays or Bank Holidays or as otherwise previously agreed in writing by the Local Planning Authority. Outside of these hours, development at the site shall not be audible from the boundary of any noise-sensitive property and shall be limited to turbine erection, commissioning, maintenance, emergency works (provided that the developer retrospectively notifies the Local Planning Authority of the emergency works within 24 hours), dust suppression and the testing of plant and equipment.
- 7. 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 attached Guidance Notes, shall not exceed the values set out in the attached Tables 1 and 2 and:
  - (a) Noise limits for properties within 2km of a wind turbine which lawfully exist or have planning permission for construction at the date of this consent but are not listed in the Tables attached shall be those of the nearest location listed in Tables 1 and 2 unless otherwise requested by the Local Planning Authority.
  - (b) Within 28 days from the receipt of a written request from the Local Planning Authority, following a complaint to it the wind farm operator shall, at its expense, employ an independent 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 attached Guidance Notes
  - (c) Upon notification in writing of an established breach of the noise limits in Condition 6 the wind farm operator shall within 28 days propose a scheme

to the Local Planning Authority to mitigate the breach and to prevent its future occurrence. This scheme shall specify the timescales for implementation.

- (d) 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 attached Guidance Notes within 28 days of such request. Such data shall be retained for a period of not less than 12 months.
- (e) No development shall commence until there has been submitted to the Local Planning Authority details of a nominated representative for the development to act as a point of contact for local residents (in connection with clauses a-e above) together with the arrangements for notifying and approving any subsequent change in the nominated representative. The nominated representative shall have responsibility for dealing with any noise complaints made during the construction, operation and decommissioning of the wind farm and liaison with the Local Planning Authority.
- 8. Prior to commencement of development, details of the wind turbine external finish and colour shall be submitted to and approved in writing by the Local Planning Authority. Only wind turbines with the approved finish and colour shall be installed upon the development site.
- 9. The overall height of the wind turbines shall not exceed 120 m to the tip of the blades and the length of the blades shall not exceed 48 metres. The wind turbines and anemometry mast and their associated access tracks and crane hardstandings shall be situated within 50 metres of the positions shown on Figures 4.1 and 4.2 of Volume 3 of the Environmental Statement and no wind turbine or anemometry mast shall be situated closer to the nearest public footpath, road or highway than is shown on that plan. In particular, no part of turbine T1 shall extend closer than 200 m towards Old Cambridge Road.
- 10. All wind turbine blades shall rotate in the same direction.
- 11. Notwithstanding any design or colour approved by the Local Planning Authority pursuant to Condition 8, all wind turbines shall be of a three bladed configuration, shall be of a semi-matt finish and shall not display any name, sign, symbol or logo on any external surfaces other than those reasonably required to meet statutory health and safety requirements.
- 12. No wind turbine or anemometry mast shall be externally lit for any purpose unless otherwise previously approved in writing by the Local Planning Authority.
- 13. Prior to the commencement of the development details of the external treatment and orientation of the proposed substation shall be submitted to and approved in writing by the Local Planning Authority. The compound and substation shall only be constructed in accordance with Figure 4.13 of Volume 3 of the Environmental Statement unless otherwise approved in writing by the Local Planning Authority.

- 14. No development shall commence until a timetable for habitat creation, management and monitoring and for post-construction bat monitoring as outlined in the Ecological Mitigation and Enhancement Strategy ("the Strategy") date stamped by South Cambridgeshire District Council 29th November 2006, has been submitted to and approved in writing by the Local Planning Authority. The timetabling and strategy shall be implemented as so approved.
- 15. No development shall take place on the application site until a written scheme of archaeological investigation has been submitted by the applicant and approved in writing by the Local Planning Authority. The scheme shall include timetabled provision for a nominated archaeologist to be given access to undertake a "watching brief" during the excavation of access tracks, hedgerow openings, turbine foundations and other operational areas of the development site during the construction phase. The scheme shall include provision for remains to be recorded, removed or left in situ and shall only be implemented as approved.
- 16. No development shall take place on site until a scheme to secure the investigation and alleviation of any electro-magnetic interference to TV and radio reception caused by the operation of the turbines has been submitted to and approved by the Local Planning Authority. In the event of turbine-related interference being identified, the approved details shall be implemented within 12 months of the development being first connected to the electricity grid.
- 17. Prior to the commissioning of the development hereby approved, a scheme to alleviate the incidence of shadow flicker at any affected property shall be submitted to and approved in writing by the Local Planning Authority. At the request of the occupant of the affected property, any turbine producing shadow flicker at any occupied dwelling which existed at the time that this permission was granted shall be shut down and the blades remain stationary until the conditions causing those shadow flicker effects have passed. The development shall be carried out in accordance with the approved details.
- 18. No development shall commence until a scheme has been submitted in writing to and approved by the Local Planning Authority providing for the assessment of and remediation of any interference with any of Anglian Water's telemetry links which may be caused by the operation of the development. The development shall thereafter only be carried out in accordance with the Approved Scheme.

#### SCHEDULE OF NOISE GUIDANCE NOTES FOR CONDITION 7

These notes are to be read with condition 7 clauses a-e. They further explain these clauses and specify the methods to be deployed in the assessment of complaints about noise imissions from the wind farm.

#### 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 quality (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).

- The microphone should be mounted at 1.2 1.5 m above ground level, fitted with a two layer windshield (or suitable alternative approved in writing from 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 a location agreed with the Local Planning Authority and at least 3.5m away from the building facade or any reflecting surface except the ground.
- c) The L<sub>A90,10min</sub> measurements should be synchronised with measurements of the 10-minute arithmetic mean average wind speed, power generation 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 hub height anemometer located on the site meteorological mast to enable compliance with the conditions to be evaluated. Such data 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.

#### Note 2

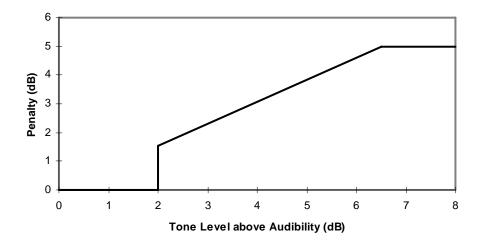
- (a) The noise measurements should be made so as to provide not less than 20 valid data points as defined in Note 2 paragraph (b). Such measurements should provide valid data points for the range of wind speeds, wind directions, times of day and power generation requested by the Local Planning Authority. 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 within 28 days all of the data collected under condition 2 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 2<sup>nd</sup> order polynomial or otherwise as may be agreed with the local planning authority 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 immission 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<sub>A90,10min</sub> data have been obtained as provided for in Note 1, a tonal assessment is performed on noise immissions during 2-minutes of each 10minute 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,  $\Delta L_{tm}$  (Delta  $L_{tm}$ ), 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 levels 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 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 in order to determine the background noise,  $L_3$ , at the assessed wind speed. The wind farm noise at this wind speed,  $L_1$ , is then calculated as follows, where  $L_2$  is the measured wind farm noise level at the assessed wind speed 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 wind farm noise. If the rating level lies at or below those set out in condition 1 then no further action is necessary. If the rating level exceeds those set out in condition 7, then the development fails to comply with condition 7.

# TABLES OF NOISE LIMITS RELATING TO CONDITION 7

Table 1: Between 23:00 and 07:00 hours (Maximum Noise Level L<sub>A90, 10min</sub> dB):

Property	Standardised Wind speed at 10m height, ms <sup>-1</sup>											
	1	2	3	4	5	6	7	8	9	10	11	12
Balsham (Nearest)	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	45.4	49.8	53.6	56.1
Dotterell Lodge	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	46.5	50.3	54.0	56.8
Dungate Farm	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	46.5	50.3	54.0	56.8
Dungate House	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	46.5	50.3	54.0	56.8
Grange Cottages	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.6	48.0	51.0
Grange Farm	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.6	48.0	51.0
Green End Farm	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	44.6	48.0	51.0
Lark Hall	43.0	43.0	43.0	43.0	43.0	43.0	43.0	45.3	48.6	51.7	54.3	56.3
Lark Hall Heath Farm	43.0	43.0	43.0	43.0	43.0	43.0	43.0	45.3	48.6	51.7	54.3	56.3
Larkhall Cottages	43.0	43.0	43.0	43.0	43.0	43.0	43.0	45.3	48.6	51.7	54.3	56.3
Larkhall New Cottages	43.0	43.0	43.0	43.0	43.0	43.0	43.0	45.3	48.6	51.7	54.3	56.3
Lower Heath Farm	43.0	43.0	43.0	43.0	43.0	43.0	43.0	45.3	48.6	51.7	54.3	56.3
New Wadlow Cottages	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.8	47.3	50.9	54.5
Oxcroft Farm	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	45.4	49.8	53.6	56.1
Spike Hall	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.8	47.3	50.9	54.5
Upper Heath Farm	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.8	47.3	50.9	54.5
Valley Farm Cottage	43.0	43.0	43.0	43.0	43.0	43.0	43.0	45.3	48.6	51.7	54.3	56.3
Wadlow Cottage	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.8	47.3	50.9	54.5
Wadlow Farm	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.8	47.3	50.9	54.5
West Wratting Valley Farm	43.0	43.0	43.0	43.0	43.0	43.0	43.0	45.4	48.9	52.3	55.1	56.6
Rectory Farm	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	45.4	49.8	53.6	56.1
Dotterell Hall	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	46.5	50.3	54.0	56.8

Table 2: At all other times (Maximum Noise Level  $L_{A90,\ 10min}$  dB):

Property	Standardised Wind speed at 10m height, ms <sup>-1</sup>											
	1	2	3	4	5	6	7	8	9	10	11	12
Balsham (Nearest)	37.5	37.5	37.5	37.5	37.5	37.9	40.5	43.4	46.4	49.4	52.2	54.7
Dotterell Lodge	40.2	40.2	40.2	40.2	40.7	41.7	43.3	45.4	47.9	50.7	53.6	56.3
Dungate Farm	40.2	40.2	40.2	40.2	40.7	41.7	43.3	45.4	47.9	50.7	53.6	56.3
Dungate House	40.2	40.2	40.2	40.2	40.7	41.7	43.3	45.4	47.9	50.7	53.6	56.3
Grange Cottages	37.5	37.5	37.5	37.5	37.5	37.5	37.5	39.8	42.3	44.7	47.0	49.0
Grange Farm	37.5	37.5	37.5	37.5	37.5	37.5	37.5	39.8	42.3	44.7	47.0	49.0
Green End Farm	37.5	37.5	37.5	37.5	37.5	37.5	37.5	39.8	42.3	44.7	47.0	49.0
Lark Hall	37.5	37.5	37.5	37.5	38.9	41.6	44.6	47.7	50.7	53.5	55.9	57.7
Lark Hall Heath Farm	37.5	37.5	37.5	37.5	38.9	41.6	44.6	47.7	50.7	53.5	55.9	57.7
Larkhall Cottages	37.5	37.5	37.5	37.5	38.9	41.6	44.6	47.7	50.7	53.5	55.9	57.7
Larkhall New Cottages	37.5	37.5	37.5	37.5	38.9	41.6	44.6	47.7	50.7	53.5	55.9	57.7
Lower Heath Farm	37.5	37.5	37.5	37.5	38.9	41.6	44.6	47.7	50.7	53.5	55.9	57.7
New Wadlow Cottages	37.5	37.5	37.5	37.5	37.5	38.4	40.3	42.6	45.2	48.0	50.6	53.0
Oxcroft Farm	37.5	37.5	37.5	37.5	37.5	37.9	40.5	43.4	46.4	49.4	52.2	54.7
Spike Hall	37.5	37.5	37.5	37.5	37.5	38.4	40.3	42.6	45.2	48.0	50.6	53.0
Upper Heath Farm	37.5	37.5	37.5	37.5	37.5	38.4	40.3	42.6	45.2	48.0	50.6	53.0
Valley Farm Cottage	37.5	37.5	37.5	37.5	38.9	41.6	44.6	47.7	50.7	53.5	55.9	57.7
Wadlow Cottage	37.5	37.5	37.5	37.5	37.5	38.4	40.3	42.6	45.2	48.0	50.6	53.0
Wadlow Farm	37.5	37.5	37.5	37.5	37.5	38.4	40.3	42.6	45.2	48.0	50.6	53.0
West Wratting Valley Farm	42.5	44.0	44.6	44.9	45.1	45.6	46.6	48.1	50.1	52.5	55.1	57.5
Rectory Farm	37.5	37.5	37.5	37.5	37.5	37.9	40.5	43.4	46.4	49.4	52.2	54.7
Dotterell Hall	40.2	40.2	40.2	40.2	40.7	41.7	43.3	45.4	47.9	50.7	53.6	56.3