

# Grange Wind Farm

APPEAL BY GRANGE WIND FARM LIMITED FOLLOWING THE REFUSAL OF PLANNING PERMISSION FOR THE INSTALLATION OF SEVEN WIND TURBINE GENERATORS AND ASSOCIATED HARDSTANDINGS, TRACKS, ANEMOMETRY MAST, SWITCHGEAR HOUSE AND UNDERGROUND CABLES ON LAND ADJACENT TO FLIXBOROUGH GRANGE FARMHOUSE, FLIXBOROUGH, DN15 8RY

**Further statement of Ian F Bennett** BSc CEng MIOA

## Noise

### **GWFL/IFB2: Response to the Written Statement of North Lincolnshire Council**

October 2011

Town & Country Planning Act 1990

The Town and Country Planning (Determination by Inspectors) (Inquiries Procedure) (England) Rules 2000

Planning Application Reference: WF/2010/1242

Planning Inspectorate reference: APP/Y2003/A/11/2156713/NWF

*On behalf of the Appellant Grange Wind Farm Ltd*

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## Council's Statement of Case: Noise evidence

The following is my response to the report of Mr Richard Watson, Blue Tree Acoustics, prepared on behalf of North Lincolnshire Council and appearing as pages 97 to 109 of the Council's Statement of Case. I note that Mr Watson makes no reference to any previous experience in wind farm noise assessment in his Appendix setting out details of his qualifications and experience.

The heading numbers below refer to the Blue Tree Acoustics report.

### **Paragraphs 2.7 and 2.8**

The noise monitoring locations were considered by the Inspector in the previous Inquiry and were not criticised by him. Paragraph of 4.2 of my original Statement refers to this.

### **Paragraph 2.9**

This is a more detailed criticism of location M3, which was on the east side of the River Trent, whereas the three receptor locations mentioned are on the west side. Notwithstanding these criticisms, which were heard at the previous Inquiry, the Inspector was satisfied that the background noise levels in the locality were sufficiently accurately characterised for the formulation of planning conditions on noise. All three locations are specifically identified in the Conditions previously drafted. Without any noise measurements to indicate otherwise, any suggestion that the background noise levels would differ from those on which the Conditions were based is no more than speculation.

### **Paragraph 2.10**

The location of monitor M4 in Burton Woods was examined in detail by the Inspector in evidence to the previous Inquiry. The Inspector was satisfied that

Conditions to limit noise levels could be based on these data. At paragraph 4.3 of my original Statement I confirm that the noise limits were derived from the background noise surveys and were agreed with the Council's noise witness at the previous Inquiry.

#### **Paragraph 2.11**

The minimum distances from reflective surfaces as recommended were, in fact, observed. It is incorrect to infer that the minimum distance was in fact 3m. Paragraph 4.2 of my original Statement confirms that the background noise surveys were conducted in accordance with ETSU-R-97 and the previous Inspector did not find otherwise.

#### **Paragraph 2.14**

Although ETSU-R-97 says that rain gauges can provide an indication of when rain fell, this is not a *sine qua non* of the survey methodology. In my experience rain gauges can give equivocal results. The Council's noise witness at the previous Inquiry had no difficulty with the approach adopted, and neither did the Inspector.

#### **Paragraph 2.17**

This paragraph restates the points discussed above. I note that it is said to be 'possible' that M3 does not accurately reflect the noise environment at R2, R5 and R6; and that it is said to be 'likely' that M4 overestimates noise levels (although no evidence to support this is provided by Blue Tree); and that it is 'possible' that an approach within 3.5m (but still more than 3m) from a reflective surface would overstate background noise levels. None of these points was sufficiently compelling for the previous Inspector, or Mr Bines (the Council's noise witness at the first Inquiry) to doubt the appropriateness of the noise conditions based on the surveys.

### **Paragraph 2.18**

It is quite usual for noise calculations to be based on a 'candidate' turbine in this way. As my Paragraph 4.4 states, certified noise data were used.

### **Paragraph 2.19**

The noise emissions at  $5\text{ms}^{-1}$  and below are always considerably lower than those at 6, 7 and  $8\text{ms}^{-1}$ . Different turbine manufacturers have different policies on the extent of the noise information they provide, but the sound power level of a large wind turbine tends to follow a fourth-order polynomial curve: it is quite usual to make this assumption and no criticism of this approach has previously been made by the Council.

### **Paragraph 2.21**

Modern large, slow-rotating turbines do not emit significant tonal noise. A suite of planning conditions dealing with the possibility of tonal noise is routinely included (as it is in this case) but I am not aware of any operational multi-megawatt wind farm site where it has been necessary to invoke the 'tonal penalty'.

### **Paragraph 2.22**

Mr Watson asserts that the noise levels at R1 'may be slightly higher' but his report does not adduce any evidence to support the assertion. I do not, therefore, know how they have arrived at a result slightly different from mine, nor can I tell by how much we differ.

### **Paragraph 4.1**

Mr Watson states in his conclusion that North Lincolnshire Council has correctly refused the application on noise grounds. This directly contradicts the findings of the Inspector at the previous Inquiry, who was satisfied that the methods and findings of

the ES noise assessment were sufficiently robust for planning conditions to be based on its results. North Lincolnshire Council's own noise witness came to the same view. I state at Paragraph 4.6 of my original Statement, and at Paragraph 7.1 of my Conclusions, that the ES and updated noise study show that the proposed Grange wind farm can be constructed and operated within parameters that have been found acceptable at similar sites throughout the UK, and in compliance with current Government policy. It follows (paragraph 7.6) that there are no reasons on noise grounds to withhold planning permission for the Grange wind farm.

Ian F Bennett BSc CEng MIOA  
12 October 2011