

**Town and Country Planning Act 1990**

**Appeal by Broadview Energy Developments Limited  
Site at Spring Farm Ridge between Greatworth and Helmdon**

**Planning Inspectorate Reference: APP/Z2830/A/11/2165035**

**South Northamptonshire Council Ref: S/2010/1437/MAF**

## **SUMMARY PROOF OF EVIDENCE**

**of**

**Robert A Davis BSc(Eng) MIOA**

**on**

**Noise Issues**

**On behalf of the Helmdon, Stuchbury and Greatworth Windfarm  
Action Group (HSGWAG)**

**August 2013**



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S1 My name is Robert Davis. My qualifications and experience are summarised in my main proof. I have been instructed by the Helmdon, Stuchbury and Greatworth Windfarm Action Group to review the noise assessment for the proposed wind farm at Spring Farm Ridge, Helmdon, and to present evidence on noise at this appeal.

S2 I have reviewed the noise assessment as set out in the Appendix G of the Environmental Statement (ES) dated September 2010, Chapter 12 of the Further Environmental Assessment (FEI) dated February 2012, and the TNEI Note of 7 August 2013. I reach the following conclusions:

S3 I do not consider that noise from construction and decommissioning activities should present any obstacle to planning permission, subject to appropriate controls. I am aware that there are public concerns about low frequency noise, infrasound and vibration from wind turbines and possible resulting adverse health effects, but there is no general, scientifically-informed agreement that such effects can result. Therefore my evidence relates only to the assessment of the levels of wind turbine noise, as measured on the dB(A) scale, likely to be audible at dwellings in the vicinity of the site, and the effects of these levels of noise on residential amenity and the amenity of the local countryside.

S4 I am currently awaiting a response from Mr Arnott of TNEI to attempt to clarify two issues:

- The values of Sound Power Levels assumed for the Vestas V90 2.0MW turbine now adopted as a 'candidate' for the purposes of noise assessment.
- The necessity for and effect of carrying out directional analysis on the background noise data to derive appropriate noise limits for receptors to the south, south west and south east of the site.

Depending on the outcome of these discussions, which may lead to revisions to the assessment, I may need to provide supplementary evidence.

S5 The noise assessment as presented relies wholly on a comparison between predicted wind farm noise levels, at local dwellings, with noise limits derived from measurements of existing background noise levels using the procedure in the ETSU-R-97 Report. I do not consider that sole reliance on such a comparison is

sufficient to consider the potential effects of wind farm noise on residential amenity in rural areas where background noise levels can be very low.

- S6 Even if it is agreed that noise from the wind farm would not exceed noise limits properly derived using ETSU-R-97, this would not mean that there would be no adverse noise impact in this rural area. This is because the ETSU noise limits do not represent the threshold of no substantial adverse noise impact but only an upper limit of absolute acceptability: the ETSU procedure provides only a 'pass/fail' test. Clearly noise levels cannot change from being 'of no consequence' to 'unacceptable' once a particular threshold is passed. It follows that there must be some adverse impact at noise levels below such a threshold. These impacts could be substantial, as they would be in this case, to the extent that many people would find them unacceptable.
- S7 I have made comparisons between predicted wind turbine noise levels and existing background noise levels, including using the principle of British Standard 4142, to provide a measure of this adverse impact.
- S8 Inspectors at other inquiries have given weight to this consideration, even in cases where it was not disputed that the ETSU limits would be complied with, and have expressed the view that material loss of amenity can result even in situations where noise levels are 'ETSU-compliant'.
- S9 National policy does not state that compliance with ETSU-R-97 limits should be the one and only test of whether the noise impact of a proposed wind farm is acceptable in reaching a planning decision.
- S10 It is clear that some residents in the vicinity of the proposed Spring Farm Ridge wind farm would experience a significant increase in background noise levels in this currently tranquil area. Wind turbine noise would be clearly audible outside dwellings in some wind conditions during daytime amenity hours (evenings, Saturday afternoons and Sundays). At night, wind turbine noise would be audible in bedrooms, when windows are open, at a level significantly higher than the background noise level from other sources. At four dwellings in particular, noise levels in bedrooms at night are likely to equal or exceed the WHO recommended limit to avoid sleep disturbance. Residents would suffer a substantial loss of amenity.

- S11 Users of the footpaths and bridleways near to and crossing the site would experience high levels of wind turbine noise which would greatly detract from the pleasure of using these rights of way.
- S12 There is a risk that the wind turbine noise would exhibit enhanced amplitude modulation (a pronounced 'swish' or 'thump'), audible at dwellings. The causes of amplitude modulation are complex and not fully understood, and the risk of its occurring cannot be quantified. The occurrence of enhanced amplitude modulation would result in wind turbine noise being more noticeable and intrusive than steady noise of the same level of the same measured noise level. There are difficulties in framing a condition to address enhanced amplitude modulation although such a condition could be imposed if permission is to be granted.
- S13 I conclude that the development as proposed would have substantial adverse effects on the amenity of the area and the quality of life of people living in the vicinity, by way of noise. In my opinion many residents, and visitors to the area, would consider the impact of noise to be unacceptable.