

**Preliminary assessment of proposed  
Wind Farm Development  
Batsworthy Cross Devon  
by  
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of  
MAS Environmental  
for  
Two Moors Campaign**

LPA Reference 43272

10<sup>th</sup> January 2009

## Summary findings

- I In summary the ES and the assessment provides unreliable background noise data, collected by applying incorrect methods which are now widely recognised as flawed. The methods were directly contrary to the guidance. This is then compared to a source noise which fails to reflect the worst case conditions. The source noise predictions provided are between 4-9dB(A) too low for the commonly occurring stable air conditions. The background noise analysis appears to over-predict levels by a significant margin and there are errors of unknown proportion. The assessment falls well short of of a robust analysis.
- II Assessment errors should be considered fatal to the application and result in refusal. There is no other rational approach. It is of serious concern that impact upon Marley Moor Farm has not been assessed. This property is closer than all those dwellings without a financial link. As a consequence the analysis is wholly undermined. Poole Farm has atypical background noise levels and cannot represent impact at Marley Moor Farm. Furthermore the guidance identifies the criteria applicable to Poole Farm is different to that for Marley Moor Farm. This is a most serious oversight by the Developers and the Council.
- III Levels are wrongly compared to the ETSU-R-97 daytime value of 40dB. It is patently clear 35dB should be used and this is not a case warranting the highest of levels. The proposal is based upon more daytime and evening noise than is acceptable for this location.
- IV The ES and further information show exceedances at a significant number of properties for various wind speeds.

- V When necessary adjustments are applied to reflect worst case stable air downwind propagation conditions, errors in prediction methodology and the measurement procedures are also factored in, substantial exceedances of guideline values are predicted. This leads to a revised prediction of unacceptable and serious adverse impact.
  
- VI In addition to the predicted exceedances using ETSU-R-97 which identifies levels for wind turbine noise that is benign in character, the large turbines proposed produce noise characteristics outwith the parameters of the ETSU guidance and warranting additional decibel penalties. The assessment fails to factor in excess Amplitude Modulation within the noise impact which is clearly predicted to occur in this case. This renders the noise substantially more intrusive. It is no longer benign in character. The assessment also fails to consider adverse low frequency noise impact which I have demonstrated can arise with tall turbines and stable air conditions. This is also likely therefore in this case.
  
- VII The extent of errors in procedure, the application of methods contrary to ETSU-R-97 and the failure to properly factor wind shear seriously diminish any confidence in the analysis and refusal is strongly recommended regardless of the additional impact features of excess amplitude modulation and low frequency noise. The approach to wind shear determination in this case is seriously flawed with compound errors. As a minimum a robust EIA and ES are required from which a properly informed impact assessment can be determined.

VIII The use of an indicative turbine prevents approval of any other turbine without a further planning application.

IX There are insufficient means to control the foreseen impact from the turbines and as a consequence the defects cannot be addressed by standard controls. The proposed condition does not meet the requirements of Circular 11/95 and is incapable of protecting residential properties from unacceptable impact. It is also mathematically incorrect and irrational. If adopted I recommend immediate consideration of a Judicial Review.

## **1.0 Qualifications and Experience**

1.1 I qualified as an Environmental Health Officer (EHO) and have 33 years of experience in this field of work. In addition to my EHO qualifications, I hold the Diploma in Acoustics and Noise Control Engineering and now lecture on that course. I am a Member of the Institute of Acoustics and a fellow of the Royal Society for the promotion of Health.

1.2 During my local government career I worked at 5 different local authorities over a period of 19 years from 1975 to 1994. Throughout that time I was heavily involved with and primarily specialised in noise and nuisance issues and planning and noise issues. As part of my last three appointments I operated as the Council's noise specialist.

1.3 Since 1994 I have worked as an Independent Consultant EHO, operating my own business. I have been involved in a wide range of noise cases and have represented private individuals, companies and local authorities. I am retained by a number of Local Authorities to advise them in noise matters.

- 1.4 I have presented expert evidence at a considerable number of tribunals including Planning Inquiries and Informal Hearings. I first gave evidence at a Planning Inquiry in 1980. I specialise in environmental noise issues and have been involved in assessing a broad range of noise sources including noise from wind farm developments. I am currently investigating a wind farm in relation to allegations of nuisance. I have considered approximately 16 different wind farms and in several cases have been asked to provide evidence in relation to challenges by way of judicial review. I have been involved in a wide range of other noise cases in the courts.
- 1.5 I have written several training courses and workshops which I deliver throughout the UK. These cover environmental noise, nuisance and planning issues. I have delivered approximately 30 courses / workshops of this type every year since 1997. These are targeted at Environmental Health Officers, Enforcement Officers, Noise and Planning specialists. A large proportion of these courses are specifically directed at planning and noise issues and the interpretation of guidance on noise.
- 1.6 I have also delivered one day courses / seminars specifically on Wind Farm Noise and ETSU-R-97, the main guidance relied upon by developers. This has involved research into the subject which is on-going.
- 1.7 The courses I run provide detailed peer analysis of noise issues furthering my knowledge of this field of work. Many of my observations reflect a consensus of views.

- 1.8 I have a particular interest in the enforceability of planning conditions in relation to noise and have undertaken much research and gathered extensive information on this subject over the last 10 years.
- 1.9 I have been retained to advise a significant number of local authorities and am currently advising three separate local authorities on wind farm developments.
- 1.10 In 2003 I undertook a detailed study of the ETSU-R-97 guidance and identified a number of inadequacies within the document. This led me to undertake my own independent research into the effects of wind farms which are not considered under the present available guidance ETSU-R-97, in particular impact within dwellings. I have both observed and measured low frequency noise and excessive aerodynamic modulation of noise internally due to wind turbines, neither of which are addressed by ETSU-R-97. Some of my early findings have been used by my peers in their own study.