

Notes of Meeting

Noise Working Group (NWG)

DTI Conference Centre, 1 Victoria Street
Monday 23 April 2007

Present: Duarte Figueira (DTI)
Zoë Keeton (DTI)
Helen Matthews (Defra)
Richard Perkins (Defra)
Anne Wood (CLG)
Mark Dorrington (AEA Energy & Environment)
Jeremy Bass (RES)
Alan Purdue (Castle Morpeth LA)
David Spode (Shrewsbury LA)
Andy McKenzie (Hayes McKenzie Partnership Ltd)
Malcolm Hayes (Hayes McKenzie Partnership Ltd)
Bob Davis (RD Associates)
Dick Bowdler (New Acoustics)
Geoff Leventhall (Consultant)
Mark Legerton (npower)
Mark Jiggins (Hoare Lea Acoustics)
Chris Tomlinson (BWEA)

Andy Moorehouse (University of Salford)
Ben Piper (University of Salford)
Sabine von Hünberbein (University of Salford)

Apologies: Sue Ellis (Defra)
Jonathan Perks (AEA Energy & Environment)
Bernard Berry (Consultant)
Marcus Trinick (Bond Pearce)
Huw Thomas (Anglesey LA)
Mike Raw (Scottish Borders LA)
Andrew Bullmore (Hoare Lea Acoustics)
Mike Anderson (RES)

1. Introduction by Zoë Keeton

Zoë Keeton welcomed those present. Zoë informed the NWG that the aim of this meeting was to review the Amplitude Modulation report¹, produced by University of Salford. Zoë added that it was anticipated that Salford's report will be published on the Defra/DTI website June 2007 (date to be confirmed).

Zoë reminded the NWG of their role (Ref. Annex 1) and explained that the NWG was an advisory Group to DTI, solely to provide clear expert technical advice and guidance on the issue surrounding Amplitude Modulation of Aerodynamic Noise (AM).

¹ University of Salford, 'Research into Amplitude Modulation of Wind Turbine Noise'. April 2007, NANR233

Zoë informed the NWG that a statement prepared by DTI, Defra and CLG was released in November 2006. This statement seeks to clarify the position with regard to the LFN² report and the action being taken by the NWG in the area on AM. Its aim is to give clear guidance to local authorities and inspectors when considering wind farm applications.

2. **Agree minute of last meeting**

Minutes from the meeting held on 19 October 2006 were agreed by the NWG.

3. **Presentation of the Defra Study entitled 'Research into Amplitude Modulation of Wind Turbine Noise'**

Salford University provided an overview of the AM study commissioned by Defra, DTI and CLG.

The aims of this study were to ascertain the prevalence of AM from UK wind farm sites, to try to gain a better understanding of the likely causes, and to establish whether further research into AM is required. The objectives of the study are as follows:

- (a) To establish the levels and nature of the reported noise complaints received across the UK relating to noise issues from wind farms, both historic and current, and determine whether AM is a significant effect;
- (b) To review and understand the level of knowledge/understanding that exists throughout the world on AM, and whether AM can be predicted.

The report concluded that the incidence of AM at wind farms is very limited in terms of the number of people affected. It also concluded that the causes of AM are not fully understood and that AM cannot be predicted using current state of the art.

Following this presentation an open discussion took place. In summary the main comments were:

- There was a general consensus that the report was considered to be technically objective addressing all issues in the project's specification.
- The statistical data reported was robust, having achieved a 100% response rate from both surveys.
- The NWG suggested that a few sections of the report should be reworded for clarification. However, the decision will remain with Salford to implement recommendations put forward by the NWG.
- There was a view from one member of the NWG that the work did not fully address the NWG original aspirations (to identify potential locations for site measurements). However, the NWG were reminded that the project's specification was to commission a study to gather empirical data to better understand the extent and cause of AM.
- There was a general consensus that further analysis of the data collected could benefit and enhance the understanding surrounding AM at specific sites (details in section 4).

² Hayes McKenzie report on Low Frequency Noise (The Measurement of Low Frequency Noise at Three UK Wind Farms, W/45/00656/00/00, URN No. 06/1412)

- If further work is undertaken then consideration should be given to manufacturers and developers being more closely involved.

4. **Proposals for further work**

The NWG agreed that following on from the Salford report additional work should be undertaken to further analyse the data at sites where AM had been identified. This analysis should include, but not be limited to:

- Frequency/prevalence of AM noise emission (one day a year or every day)
- Where identified is the issue current or historic
- Commonality between sites (wind conditions, terrain, turbine design etc.)
- Additional information for sites where issue has been resolved as a result of noise management procedures or other corrective adjustments.

Zoë informed the NWG that a meeting will take place (at the earliest opportunity) involving Defra and DTI to discuss availability of funding and a draft specification for this additional work.

Governmental approval will then be sought for undertaking this second phase of work.

5. **Recommendations/Review of Actions**

- University of Salford's report to be published in June 2007 (date to be confirmed).
- Government to discuss an outline specification for additional work and funding (date to be confirmed). Details of the outcome to be circulated to the NWG. Government approval will then be sought.

6. **Any Other Business**

There was no other business.

AEA Energy & Environment
24 April 2007

Annex 1.

Terms of Reference

The NWG will address issues specifically relating to the Hayes McKenzie report:

- Consider and agree, if thought appropriate, the main conclusions of the report
- Consider the report's findings relating to AM
- If appropriate, provide a means to assess and apply a correction where AM is predicted to be a clearly audible feature
- Make clear recommendations to advise Government