

# **INSTITUTE OF ACOUSTICS**

## **IOA Noise Working Group (Wind Turbine Noise)**

### **Amplitude Modulation Working Group**

#### **Terms of Reference**

##### **INTRODUCTION**

In response to a request from the Institute of Acoustics Noise Working Group (IOA NWG), and approved by IOA Council, the IOA has agreed to set up a working group to look at the issue known as 'Amplitude Modulation'. The aim of the group will be to review the available evidence, and to produce guidance on the technical aspects for the assessment of AM in wind turbine noise.

The membership of the AM Working Group (AMWG) is drawn from the membership of the IOA and the CIEH, and seeks to include different representatives of the consultancy, academic, development and local authority sectors.

The AMWG will report to the IOA NWG, who in turn report to IOA Council.

##### **ROLES AND RESPONSIBILITIES**

The role of the AMWG is to provide advice to the IOA NWG on current good practice in the assessment of AM within wind turbine noise assessment.

The Working Group should:-

- Undertake a literature review of available research and evidence on amplitude modulation and current methods in use, as appropriate; and on psycho-acoustic effects of AM
- Consider the design parameters for an AM metric and assessment method to be used in the UK;
- Consider the various metrics and methodologies available to describe AM, and develop a preferred option if possible, or identify alternatives for the IOA membership to consider;
- Produce a first draft of a consultation document with explanatory notes / justifications for consultation;
- Consult the IOA membership and where appropriate other relevant technical experts on the draft guidance document;
- Consider the consultation responses and if appropriate, produce a final Supplementary Guidance Note and / or consider the need for further research;
- Provide software, if possible, to allow the analysis of AM data.

It is expected that the Supplementary Guidance Note will report on the metrics and methods considered, propose a preferred metric and assessment methodology and illustrate how it might work in practice. The primary goal is to develop a methodology which could be used within the planning regime; consideration must be given to use within the statutory nuisance regime as well.

If a consensus view on a particular issue cannot be reached between members of the working group, the various options should be listed out, with the pros and cons of each option discussed. Specific consultation questions to be put to the IOA NWG / peer review group should be aimed firstly at resolving these issues.

It is expected that the Working Group's activities will be of relevance to:

- i. acoustic consultants;
- ii. local authorities;
- iii. developers;
- iv. academics carrying out research on wind turbine noise
- v. turbine manufacturers;
- vi. the general public living close to wind turbines;

The activities of the Working Group initially relate to technical acoustic issues only, and therefore the initial membership will be drawn from groups i) to iv).

There may be occasions when the subject matter under discussion could benefit from input from other specialist representatives. When such occasions arise the Working Group may agree additional representation. If this results in additional costs these should be referred to the IOA Executive for approval.

## **WORKING ARRANGEMENTS**

### *Meeting Frequency*

The Working Group will meet as often as necessary; at least four times provided a quorum is present.

### *Meeting Quorum and Leadership*

A quorum is defined as 5 members of the Working Group. The Working Group meetings should be chaired by the chairperson, who will also act as the group's liaison to the IOA NWG. In the absence of the appointed chairperson, those present shall elect a temporary chairperson.

## *Administration*

The other arrangements for the AMWG are:-

- Secretariat duties will be performed by a member of the AMWG appointed by the chairperson;
- An agenda for each meeting will be drawn up and circulated to the working group (copied to the steering group for information) no less than 2 working days in advance of each meeting;
- AOB can be tabled at the discretion of the Chairperson;
- Notes and summary action points of each meeting will be produced and sent to AMWG members (copied to the IOA NWG for information) within 10 working days of each meeting;
- The AMWG will conduct most of its business via teleconference calls and email, but will meet at least once prior to the publication of the draft guidance for consultation with the IOA NWG and then as often as necessary. Meeting notes listing key actions will be made available to the IOA Council via the IOA Executive and published on the IOA website;
- The AMWG will report formally to the IOA NWG Chairperson, and shall provide ongoing reports as required.
- The Terms of Reference for the AMWG, and any subsequent amendments, will be approved by the IOA NWG.  
AMWG members will be entitled to claim travel expenses to meetings, at a rate to be set by the IOA Executive. No other payments will be made.

## *Proposed Timescales*

The AMWG will agree a work programme, which is expected to cover a period of 5 months from the Inception meeting to the publication of a consultation draft and software. A 6 week consultation is envisaged, followed by a further 4 week period during which the Working Group will consider the responses and produce a final version of the document and software for approval by IOA Council.

## *Ownership*

Editorial ownership of the output document(s) will be retained by IOA Council.

Version: Issue 1 - 13 10 2014