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Ms Caroline Kelly,
EPA headquarters.
Environmental Protection Agency
Johnstown Castle Estate
Co. Wexford Y35 W821.

Email: airthematicteam@epa.ie

Date: Tuesday, 11 February 2025

Re: Submission on behalf of the Irish Branch of the Institute of Acoustics on revising the Draft Guidance Note for Noise (NG4).

Dear Caroline,

In response to the open consultation on revising the Draft Guidance Note for Noise (NG4), the Committee of the Irish Branch of the Institute of Acoustics has prepared a series of points for consideration concerning the revised NG-4 guidance document. As practitioners and regular users of the NG-4 guidance, we are fortunate to be able to comment on the matters below that may need further consideration before implementing the final draft.

The Appropriateness of Smartphone Apps in National Guidance:

(1) We note that Smartphone apps are now included in NG4 as a means to subjectively assess tonal noise and are listed as a helpful aid. We note that the draft guidance states in Appendix 4 that smartphone apps are not to be used for compliance assessment. However, there is a high level of detail on how to use one app in particular, in Appendix 4. This would still require a relatively high level of expertise and knowledge to be used correctly. Understanding acoustics is required, especially in understanding the method and equipment limitations. The guidance, particularly Section 8, is mainly for license holders and acoustic engineers with the required competency; the question arises regarding the need for this level of detail on a Smartphone app in the draft guidance. Could it be misused?

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(2) Appendix 4 states that "*...the measured tonal frequency and the relative amplitude between the tone and the broadband noise either side of the tone are accurate to within Class 1 sound level meter standards.*" There are no studies referenced in the document to substantiate this. We propose the removal of all smartphone references from the NG-4 guidance as they do not meet Class 1 instrumentation requirements as stated in BS EN 61672.

In conclusion, we believe Smartphones are not suitable for measuring or assessing environmental noise, especially as only competent persons should be completing noise impact and compliance assessments.

Increasing Role of BS4142 in Assessment:

(3) There is an increased emphasis on using the relative method BS4142:2014+A1:2019 in the document. In addition, the applicable absolute limits are determined based on the baseline soundscape as outlined in the previous version of NG4. It is considered that this could give rise to the potential for conflicting impact determination and the difficulties that may arise, especially in low background sites where background levels may be as low as mid-twenties dB(A). Thus, even with the low background limits applicable, a BS4142 assessment rating of significant adverse impact depending on context may apply. Using or applying both approaches in practice in many situations may be difficult.

(4) Is there a need to emphasise BS4142 when quiet area screening/limits and low background limits are already included in NG4?

Competency:

(5) We note and welcome the inclusion of increased competency requirements in NG4 and, in particular, the need to demonstrate this within reports. Although outside the scope of reviewing NG4, implementing competency requirements is critical to producing high-quality assessments and reports that can be relied upon. We, therefore, suggest that a simple checklist for Enforcement Officers would be beneficial to ensure that acoustic reports with insufficient information are returned based on (a) insufficient author details/qualifications, (b) inadequate instrumentation that does not meet requirements (Class 1 instrumentation, BS EN 61672, and calibration)

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and (c) a failure to estimate the site-specific noise where necessary.

Monitoring Considerations:

(6) Section 6.1, pages 40-41, discusses the selection of noise stations for baseline monitoring. The text notes that the baseline stations will subsequently influence the choice of routine compliance stations. Although the text briefly touches on selection considerations here, it does not clearly distinguish between the selection criteria for each:

- During a baseline survey, the main priority is to obtain a reasonably accurate indication of the soundscape over 24 hours or several days. These surveys are often unattended. Equipment security is a key consideration, but ease of access is less important. For instance, a baseline noise station may be selected in a field behind a dwelling.
- Conversely, compliance surveys are typically attended to and require repeated daytime, evening, and nighttime visits. Ease of access is essential. The field behind the dwelling may be unsuitable due to livestock, and a compliance position at the dwelling entrance or the field gate may be more appropriate.
- It is suggested that explicit provision be made on p40-41 to select separate baseline and routine compliance stations.

(7) Section 7.2. This section does not refer to the possibility of undertaking compliance monitoring simultaneously using two or more sound level meters simultaneously at more than one position. Such 'concurrent' monitoring is beneficial where several stations are located within the vicinity of each other, are exposed to similar soundscapes, or where facility noise is dominant or entirely inaudible. Since most modern sound level meters now include audio recording, concurrent monitoring is valid and should be acknowledged in the document.

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Appendix 2 - Quiet Area Screening

(8) We do not understand the requirement for regression analysis of the wind-noise dataset in Appendix 2 (although we note this was in the previous version of NG4). What is the objective of the regression analysis, considering it is not mentioned in the text? It is recommended that this requirement be further explained or removed as it has no relevance in the context of NG-4 compliance monitoring. It is the committee's view that this should be removed, and while this has a place in wind farm assessment, it has no relevance to a licensable facility assessment.

The Use of Arithmetic Averaging

(9) The arithmetic averaging of $L_{A90,15min}$ is technically incorrect and featured in previous versions of the EPAs NG-4. It would appear that this is still included in the document even though advances in software now allow for easier data manipulation. Arithmetic averaging of a measured 90th percentile is simply incorrect. There is also the question of conflict with a BS4142 assessment, which is now required.

Minor Corrections:

(10) The following are noted as minor corrections required in the document:

- Page 18. The title of ISO9613-2: 2024 is incorrect. The correct title is: *"Acoustics - Attenuation of Sound During Propagation Outdoors - Part 2: Engineering method for the prediction of sound pressure levels outdoors."*
- Page 56, 3rd paragraph $L_{A90,T}$ typo error.
- Page 128 - There is a minor typo on the 30-minute reference interval.

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Again, we commend the EPA for providing such a comprehensive Draft NG-4 guidance document; however, as a guidance document, it should be technically accurate, practical, applicable and serve as a robust approach to environmental noise assessment. We look forward to the revised version of NG-4 and await both consideration and implementation of our recommendations and comments as everyday users of the guidance document.

Yours sincerely,

Diarmuid Keaney, Chair of the Irish Branch of the Institute of Acoustics.

This document has been prepared by a working group within the Committee of the Irish Branch of the Institute of Acoustics.

Contact Details for the Chair of the Irish Branch of the Institute of Acoustics on any matters relating to this document

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