



Wind Farm Noise Assessment

The Institute of Acoustics (IOA) is the UK's professional body for those working in acoustics, noise and vibration. It engages widely with other professional bodies in related fields, and members are active in UK, European and International Standards development. Members also work in many sectors including consultancy, research and development, local and central UK Government, as well as for developers and local residents, where they get involved with wind farm noise assessments.

Assessment and Rating of Wind Turbine Noise, 2026

UK Government published 'Assessment and Rating of Wind Turbine Noise' (ARWTN) on 19th June 2026. This guidance replaces ETSU-R-97 'The Assessment and Rating of Noise from Wind Farms' with immediate effect. It can be found at:

<https://www.gov.uk/government/publications/assessment-and-rating-of-noise-from-wind-turbines-guidance>

IOA Good Practice Guide

The new ARWTN endorses good practice guidance from the Institute of Acoustics, which is welcomed. The current version of the IOA's [Good Practice Guide \(GPG\)](#) and supplementary guidance notes (SGN), previously endorsed by the UK Government and devolved administrations, were published in 2013 & 2014. These remain current guidance endorsed for use until such time as updated and approved versions are published.

Modifications needed to map the ARWTN to the existing IOA GPG:

In updating ETSU-R-97 to the new ARWTN, the general principles to assess wind turbine noise remain the same and the Government have made several changes and clarifications to reflect current policy and practice. It is noted that there has been no change to the numerical limits, although a character correction for amplitude modulation (AM) is now included when determining compliance. To enable continued use of the current IOA GPG & SGNs, and their interpretation in the context of the ARWTN guidance, the following adjustments should be made:

Previous term/reference	ARWTN reference
ETSU-R-97 (1996)	Assessment and Rating of Wind Turbine Noise (ARWTN, 2026)
Noise limits, defined as applying to "the cumulative effect of all wind turbines in the area".	Total noise assessment criteria (TNAC)
Lower fixed limit.	Lower Limiting Value (LLV)
Noise limit defined in the consent conditions for a specific wind farm.	Site-Specific Noise Limits (SSNLs)



Whilst most changes are editorial in nature, where there is a conflict between the new ARWTN and the IOA GPG / SGN, then the ARWTN should take precedence. Feedback on any potential conflicts is welcomed to REAG@IOA.ORG.UK so that these matters can be addressed in an update.

Amplitude Modulation

‘Amplitude Modulation’ (AM) is a feature of the character of wind farm noise caused by the cyclical nature of the blades. The IOA-endorsed metric established in 2016 is now included in the ARWTN, and a penalty method is included in the planning condition (the maximum of both a derived AM and tonal penalty). It remains the case that an AM assessment is not required at the planning stage unless there is strong evidence to do so.

Infrasound, Low Frequency Sound, & Ground-borne Vibration

The ARWTN states that no assessment for infrasound, low frequency sound or ground-borne vibration is required.

Summary

The IOA has a responsibility to provide guidance on technical matters within its sphere of activity. The IOA GPG and SGNs are endorsed by IOA Council to give advice to members on how to apply ARWTN (formerly ETSU-R-97). An update to the IOA GPG will follow as soon as possible to reflect the changes in the ARWTN. The IOA will continue to advance the understanding of wind turbine noise assessment through its renewable energy advisory group and update its advice when new evidence emerges.