



The Institute of Acoustics

Response to the Consultation on the draft National Policy Statement for fusion energy generation (EN-8)

Introduction

The Institute of Acoustics (IOA) is the UK's professional body for those working in acoustics, sound, noise and vibration. The IOA has some 3000 members from diverse backgrounds, with engineers, scientists, educators, lawyers, occupational hygienists, architects and environmental health practitioners among their number. This multidisciplinary culture provides a productive environment for cross-fertilisation of ideas and initiatives. The range of interests of members within the world of acoustics is equally wide, embracing such aspects as aerodynamics, architectural acoustics, building acoustics, electroacoustics, engineering dynamics, noise and vibration, hearing, speech, underwater acoustics, together with a variety of environmental aspects.

Members of the IOA regularly carry out noise and vibration impact assessments for nationally significant infrastructure projects, acting variously for developers, for local authorities and other consultees, and for community and objector groups. Members also contribute to the British Standards and to the national guidance on which those assessments rely.

Often in collaboration with other professional and trade bodies, such as the Chartered Institute of Environmental Health and the Association of Noise Consultants, the IOA publishes guidance relevant to noise and planning, including:

- **Professional Practice Guidance on Planning and Noise**
- **Professional Practice Guidance on Gym Acoustics**
- **Acoustics, Ventilation and Overheating: Residential Design Guide**
- **Air Source Heat Pump Briefing Note**, a Professional Advice Note

This consultation response was prepared by the following members of the IOA, who have relevant expertise in the assessment of noise and vibration from nationally significant infrastructure projects, as well as in the creation and implementation of local and national government noise policy:

- **Esteban Omos**, Technical Director, WSP
- **Richard Perkins**, Technical Director (Acoustics), Mott MacDonald
- **Matt Torjussen**, PhD Researcher, The University of Salford

The comments below are confined to noise and vibration. Where the IOA offers no comment on a question, or on part of a question, this is because the subject matter falls outside the IOA's area of expertise.

Background

The IOA responded in June 2024 to the consultation on the proposed approach to siting fusion energy facilities and on the scoping of the Appraisal of Sustainability (AoS) for EN-8. That response made two principal recommendations on noise and vibration: that EN-8 should rely on the framework already set out in the Overarching National Policy Statement for Energy (EN-1) rather than create a bespoke regime for fusion; and that a number of noise policy documents, guidance and British Standards omitted from the AoS scoping report should be brought into the appraisal. The IOA is pleased to note that both recommendations have been taken forward in the documents now consulted upon.



Part A: Scope and clarity

Q1. Does draft EN-8, when read alongside EN-1 (and other relevant National Policy Statements), provide a clear, coherent and appropriate planning framework for fusion energy infrastructure?

Yes.

So far as noise and vibration are concerned, the IOA welcomes draft EN-8 as a clear and coherent framework. The draft defers to the assessment principles in EN-1 and does not repeat that material. This avoids duplication across the suite of energy National Policy Statements and preserves a single, well understood basis for assessment that is already familiar to those who will have to apply it.

That approach is correct in principle. The noise and vibration sources associated with fusion energy infrastructure, including turbines and generators, cooling plant, pumps, compressors and transformers, together with the construction activities needed to build a facility of this scale, are closely comparable to those of other major energy infrastructure. There is no scientific case for a bespoke regime, and the IOA said as much in its 2024 response.

Paragraph 3.5.7 of draft EN-8 states that the operation of fusion energy infrastructure is unlikely to be associated with significant noise, vibration or air quality impacts, but that such impacts are expected to be part of constructing and decommissioning the infrastructure and that appropriate mitigation measures should be applied. Read together with paragraph 3.1.3, which requires applicants to address the whole lifecycle of the infrastructure, the drafting is clear.

Part B: Role, scope and assessment principles

Q2. Do Sections 1 and 2 of draft EN-8 provide sufficient clarity on the role, scope and assessment principles of the fusion energy National Policy Statement?

Yes.

The IOA has no comments on Sections 1 and 2. These sections address the background to EN-8, its role in the wider planning system, its relationship with EN-1, geographical coverage, period of validity and review, the infrastructure covered and the Appraisal of Sustainability and Habitats Regulations Assessment relating to it. Also included are Good Design, the Regulatory Justification process, the relationship between the regulatory regimes for fusion energy infrastructure and the development consent regime, climate change adaptation and mitigation, and the impact of multiple devices. These matters fall outside the IOA's area of expertise in noise and vibration.

The IOA's comments are confined to the acoustics content of Section 3 and are given in response to Question 3.

Part C: Assessment considerations

Q3. Are the approaches set out for each consideration adequate and appropriate for all fusion energy infrastructure, making clear what, if anything, is required beyond the requirements of EN-1?

Yes.

The IOA welcomes the treatment of noise and vibration under 'Local impacts' at paragraphs 3.5.6 to 3.5.9, which places reliance on the 'Noise and Vibration' section of EN-1. This is consistent with the recommendation in the IOA's 2024 response that EN-8 should not create a bespoke noise regime for fusion technology.



Part D: Environmental assessments

Q4. Are the environmental assessments (Appraisal of Sustainability and Habitats Regulations Assessment) for draft EN-8 reasonable and appropriate?

Yes.

So far as noise and vibration are concerned, the IOA considers the Appraisal of Sustainability (AoS) reasonable and appropriate for a plan-level policy document, and welcomes the changes made since the scoping stage.

In its 2024 response the IOA recommended that the AoS should address the effects of construction and operational noise and vibration on local wildlife, including marine life and protected species. That recommendation was accepted, and the point is now carried through the appraisal. Noise pollution and vibration arising from construction, operation and decommissioning activities is identified under AoS Objective 4 as a potential effect on the qualifying features of habitats sites, with bird, mammal and fish species listed. Disturbance of aquatic species from noise during operation is recognised under AoS Objective 3.

AoS Objective 11, on health and wellbeing, identifies noise and vibration among the potentially significant negative impacts arising in particular during construction. AoS Objective 6, on landscape, townscape and visual amenity, recognises the effect of development on tranquillity, including at night. Both are appropriate treatments at this level of assessment.

The IOA also notes that the Noise Policy Statement for England, the Planning Practice Guidance on Noise and BS 4142, BS 5228, BS 6472 and BS 8233, all identified as omissions in the IOA's 2024 response, have since been incorporated into the review of policies, plans and programmes in the AoS Appendices. The IOA welcomes this.

On baseline data, the AoS continues to draw on datasets derived from strategic noise mapping: Noise Important Areas in the environmental baseline, and, in Wales, the Quiet Areas designated under the Environmental Noise (Wales) Regulations 2006. As the IOA observed in 2024, these datasets capture only a subset of the sources that shape the acoustic environment at any given site. EN-1 addresses this. Where noise impacts are likely to arise, paragraph 5.12.6 expects the applicant to describe the characteristics of the existing noise environment and to identify the noise-sensitive receptors and noise-sensitive areas that may be affected. The response to the IOA recorded in the AoS Appendices confirms that EN-8 reflects the requirements of EN-1, and the IOA is happy to see it included. It suggests only that the strategic noise mapping datasets be understood as indicative context at the early stages of the project, with project and site-specific survey under EN-1 remaining the primary basis for baseline evidence once particular sites are known.

The IOA has no comments on the Habitats Regulations Assessment.

Part E: Further comments

Q5. Do you have any other comments on draft EN-8?

No.

Conclusion

In summary, the proposed draft EN-8 appears appropriate to allow noise and vibration aspects to be adequately considered as part of the planning process. If officials would like to explore further any of the points raised, relevant members of the IOA would be delighted to meet with them. The response has been approved by representatives approved by the IOA's Governing Council.



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