



Department of Transport

**Draft National Networks National Policy Statement
Consultation Document**

Response from the Institute of Acoustics

Background

The Institute of Acoustics (IOA) is the UK's professional organisation for those working in the fields of sound, noise and vibration. Members of the Institute work on a variety of projects including undertaking assessments of the noise and vibration impacts of major infrastructure projects which fall under the scope of the National Networks National Policy Statement (NNNPS)¹. This is in the capacity of both assisting developers meet their policy and legislative obligations and as regulators evaluating the merits of proposals or applying the relevant legislation.

The Institute's response relates primarily to the noise and vibration elements of the draft NNNPS taking account of the proposed changes from the version published in 2014.

This response has been prepared by members of the Institute experienced in working in this area, including members who also sit on the British Standards Committee EH/1/2 which deals with transportation noise. This response has been approved by the IOA's Executive Committee on behalf of the IOA's Governing Council.

Noise and Vibration (Paragraphs 5.219 to 5.233)

Introduction

The Institute welcomes the fact that the bulk of the text within this section of the policy statement is remaining the same. Practitioners have become familiar with applying the policies set out therein and, on the whole, feel that the desired objectives are achieved. The IOA believes that maintaining continuity in such circumstances is very helpful.

In addition to providing comment on the proposed changes within this section, the IOA has taken the opportunity to identify where some of the current text could be improved in the light of experience in implementing the current NNNPS.

Paragraph 5.222

At the start of paragraph 5.222, the reference to EIA and environmental statements has, understandably, been removed due to the opportunity that has arisen to make changes to the assessment regime following the United Kingdom's exit from the European Union.

However, the wording has also changed the emphasis from what is required where 'significant noise impacts' are likely, to just where 'noise impacts' are likely. It is assumed that this text is aimed at aligning the requirements here with the Government's overarching policy as set out in

¹ It is noted that the consultation web page describes the document as the National Networks National Policy Statement (NNNPS) whereas the consultation draft is entitled National Policy Statement for National Networks (NPSNN). For the purposes of the IOA's response, the former acronym will be used.



the Noise Policy Statement for England. However, the term 'noise impacts' can be taken to mean any change in noise, irrespective of its magnitude or context and regardless of whether or not it has any adverse effects on people, for example.

It is recommended, therefore, that the word 'adverse' is placed in front of 'impacts' in the first line, in order to make it clear that detailed assessments are required where there is a risk of adverse noise impacts on health and quality of life as opposed to any small, immaterial, noise changes.

Short and Long Term

The 4th bullet point refers to "in the shorter term such as during the construction period" and the "longer term during the operating life of the infrastructure". This presents a conflict with the use of these terms in assessing highway projects in particular. For those schemes, 'short-term' means the changes in operational noise in the opening year of the project and 'long-term' means the noise change over a longer-term period, usually 15 years.

The suggested solution to this issue is to make reference to the construction period and operational period. That allows the flexibility for the operational period to be further sub-divided into year of opening and longer term as is the current practice with highway schemes.

Weekends

Also, under the fourth bullet point in paragraph 5.222 (third sub-bullet point), the wording 'and weekends' has been added although the sentence as it stands in NNNPS 2014 does not expressly exclude weekends and therefore it is not clear why this is needed here.

If weekends are intended to be assessed as a separate period, the word 'weekday' needs to appear before the 'day, evening and night' or alternatively the wording could be amended to state 'including weekends'.

It is noted that all of these are limited by 'as appropriate' which is considered important to allow the various time periods to be selected by the assessor based on the nature of the scheme and likely impacts and effects. It should be made clear, however, that for most typical situations, calculations based on annual average weekday traffic flows (AAWT) are suitable.

Particular Groups

Under the fifth main bullet point (penultimate bullet point) of paragraph 5.222 the wording 'including identifying whether any particular groups are more likely to be affected' has been added. We welcome this addition.

However, the draft NNNPS could give more clarity over what is intended by the word 'groups' here; for example, differing socio-economic groups and/or groups with protected characteristics as described in the Equality Act 2010.

Proportionate Assessment

At the end of the corresponding paragraph in the current NNNPS (5.189), there is a requirement that "the nature and extent of the noise assessment should be proportionate to the likely noise impact". This requirement has been removed from the NNNPS draft for consultation. This requirement should be retained to allow the depth of any assessment to reflect the potential impact or effect and even for noise to be scoped out where it is clear, at an early stage of a project that there will be no likely adverse effects.



Paragraph 5.224

Scope

In paragraph 5.224, 'operational noise with respect to human receptors' is mentioned. As currently 'noise' is taken to also mean 'vibration', this paragraph misses out any requirement to assess the impacts of vibration on structures. For completeness, it is proposed that an appropriate reference be made.

For the prediction of railway noise, the draft policy currently refers to noise from 'new railways'. Although to be found in the current version of the NNNPS, the word 'new' is not required here. Predictions will also be required for altered railways and the wider effects of new and altered railways and other qualifying operational changes.

Calculation Methods

The paragraph then goes on to specify calculation methods for the prediction of road and railway noise. The Institute believes that this seems overly prescriptive in the context of current policy. There is a case for omitting the text after the first sentence as the policy instruction is clear from that first sentence.

However, should it be felt necessary to retain a definition of appropriate calculation methods, it is recommended that the prediction methods cited in paragraph 5.224 be made more general to allow for the most appropriate calculation methods to be selected based on each individual project's features and requirements.

Furthermore, this would also allow for authorised future developments in calculation methodologies to be included. This approach would also be more aligned with other sections of this draft NNNPS which do not reference specific methods.

British Standards committee EH/1/2 is currently working towards developing a new British Standard "Calculation of Sound Levels Outdoors" which would include a revised methodology for predicting noise levels from road and rail. Specifying any particular calculation methodology at this stage would not allow for this standard to become the preferred UK calculation methodology in the future.

CNOSSOS

To date, the CNOSSOS-EU methodology has only been used in England under the Environmental Noise (England) Regulations 2006, as amended. It has not been formally used for the prediction of noise associated with infrastructure schemes.

The method originates within a European Commission Directive, and has been corrected and significantly amended since first being published in 2015. The Institute anticipate that further amendments to the methodology are likely to occur. However, following the United Kingdom's exit from the European Union, UK based experts will not have any direct influence on future developments. Consequently, given the work towards developing a new British Standard described above, it is recommended to keep the methodologies open to user interpretation, as is currently the case for the draft text in paragraph 5.224 relating to the prediction and assessment of construction noise.



Methodology Descriptions

However, if the decision is made to retain the references to Calculation of Road and Rail Noise and CNOSSOS, the IOA urges that the text should be absolutely clear regarding how those methodologies are defined. .

In the case of Calculation of Road Traffic Noise, this would be:

Calculation of Road Traffic Noise (Department of Transport, Welsh Office, 1988) as modified by Design Manual for Roads and Bridges LA111 Noise and Vibration Appendix A2.

For CNOSSOS it should be:

Annex II Assessment Methods for the Noise Indicators of the current consolidated version of Directive 2002/49/EC, commonly referred to as CNOSSOS-EU.

For the prediction of railway noise, the corresponding definitions would be:

Calculation of Railway Noise (Department of Transport, 1995) and Calculation of Railway noise 1995 Supplement No. 1 Procedure for the calculation of noise from Eurostar trains class 373” (Department for Transport, 20th October 1996, Stationery Office), and adapted as shown in Figure 6.5 of the report Rail and wheel roughness – implications for noise mapping based on the Calculation of Railway Noise procedure (DEFRA, March 2004)”.

and

Annex II Assessment Methods for the Noise Indicators of the current consolidated version of Directive 2002/49/EC, commonly referred to as CNOSSOS-EU.

By adopting the proposed text, the precise methodology to be used is unambiguously described, making it clear what should be used.

Drafting Detail

For both the road and railway prediction methods, the use of the word ‘and’ in the text makes it a requirement that calculations be undertaken using two alternative methods on every project. Presumably this is an error and that it should be ‘or’. If not, it is not clear which method should take precedence in each case. Furthermore, this could lead to more complex and convoluted reporting.

Prediction Methodologies for other railway sources

At paragraph 2.13, the draft NNNPS states that the rail network includes track, stations, depots, maintenance services, marshalling yards and service facilities. However, the specified railway noise prediction methods are only applicable to noise from railway vehicles on the network. If there is a wish to define specific methodologies, more information is required to cover these other sources. The Institute would be happy to liaise with officials over what might be used.



Noise Insulation Regulations (NIR)

It is noted that in paragraph 5.228, that reference is quite rightly made to the Noise Insulation Regulations. It must be remembered that these regulations require that calculations have to be made in accordance with Calculation of Road Traffic Noise and Calculation of Railway Noise, as appropriate, and not CNOSSOS. Consequently, if CNOSSOS is to be overtly mentioned in the new NNNPS, a note reminding users of this issue regarding the NIR should be included.

Paragraph 5.227

Paragraph 5.227 sets out that mitigation measures for the project should be proportionate and reasonable but does not include a requirement for them to meet the aims of government policy on sustainable development even though this is included later in the “Decision-making” section (paragraph 5.232). It is recommended that this phrase is added in here to set this expectation during mitigation design development.

The list of mitigation measures doesn't follow the widely accepted mitigation hierarchy which would start with reducing noise at its source, followed by reducing propagation effects (e.g. increased separation distance between source and receptors / containment) and lastly by mitigation at the receptor. It also does not refer to opportunities for enhancements through good design, even though this is mentioned several times elsewhere in the document.

Noise Limits

In the 5th bullet point, one of the administration options is “specifying acceptable noise limits”. Given the challenges in enforcing noise limits by measurement, it might be more effective to use the expression “specifying appropriate noise criteria”.

Conclusion

The Institute hopes that the Department will find these comments of interest. Representatives of the Institute would be happy to meet with officials to discuss further any of the points raised.

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