



Environmental Health

SGN 2 New Development: Submission Guidance Note on the Information required for an Assessment of the Noise Impact of Proposed New Developments to be undertaken in Connection with a Planning Application

1. Introduction

1.1 Unwanted sound can have a significant impact upon environmental quality, public health and amenity (Planning Advice Note 1/2011, Scottish Government, 2011 <http://www.scotland.gov.uk/Resource/Doc/343210/0114180.pdf>). This guidance is to provide developers with information on dealing with the planning process where noise sensitive developments are planned near to existing noise sources, or where potentially noisy developments are introduced into existing noise sensitive areas.

1.2 This guidance has been developed in response to Planning Advice Note 1/2011 (PAN) and should be read in conjunction with this document and the accompanying Technical Advice Note 'Assessment of Noise' (TAN) <http://www.gov.scot/Publications/2011/03/02104659/0>. It takes into account current policy in relation to planning and noise and provides guidance on undertaking noise assessments which may be required for any potential development in determining planning applications.

1.3 Where noise is a consideration in a planning application, planning officers consult with the Environmental Health Officer (EHO). In the first instance, the EHO will advise whether a noise impact assessment (NIA) is required and review any noise information submitted by the applicant. The EHO considers whether the information provided is sufficient to accurately characterise the noise impact of the proposed development.

1.4 The EHO may advise the planning officer that noise is not a significant issue or that mitigation measures will be required. In some cases, the noise impact may be so significant that the EHO will recommend against the granting of planning permission.

1.5 The developer should liaise with Aberdeenshire Council Environmental Health in the early stages of the planning process. Pre-planning application discussions can be very useful to determine the risk of noise being a significant consideration and to identify the supporting information and detail on noise likely to be required. Prior to commencing any noise impact assessment, it is vital the appointed noise consultant contact Environmental Health to agree the relevant noise assessment methodology and establish appropriate noise assessment criteria to avoid unnecessary delay in the planning process.

2. When Noise Should Be Considered in the Planning Process

2.1 There are two types of development for which noise impact assessments will be required. These are:

i) Proposed Noise Generating Development (NGD) (noise brought to people) ii) Proposed Noise Sensitive Development (NSD) (people brought to noise)

2.2 Where it is not possible to separate noisy and noise sensitive land uses, developers will have to incorporate good acoustic design and a sensitive approach to any new development proposals.

2.3 Where areas already have an unacceptable noise level it may not be possible to mitigate the adverse effects of noise. In such circumstances noise sensitive development may not be appropriate; in some cases there is a need to protect existing commerce and industry from complaints from residents of new housing developments.

3. Noise Policy

3.1 Scottish Government Policy on Noise

The Environmental Noise (Scotland) Regulations, 2006 required the production of strategic noise maps for large urban area, transport corridors and large airports within Scotland <http://www.scottishnoisemapping.org>. From these strategic maps, action plans were drawn up which identified areas where residents were likely to be exposed to the highest levels of noise. These areas are known as Noise Management Areas [NMAs]. These action plans also identified areas where individuals were likely to experience relatively low levels of noise and these were known as Quiet Areas [QAs]. The Scottish Government Action Plans aim to identify noise abatement measures designed to manage, avoid, prevent or reduce the harmful effects of noise exposure in NMA's. These Action Plans also aim to maintain and protect environmental noise quality in QAs. Similarly through the planning process Local Authorities are required to ensure that new development does not result in increasing numbers of people exposed to adverse noise impacts in both NMAs and QAs.

3.2 Local Authority Policy and Guidelines

Under the Town and Country Planning (Scotland) Act 1997 (as amended by the Planning etc. (Scotland) Act 2006 and its associated regulations <http://www.legislation.gov.uk/asp/2006/17/contents>), local authorities must produce a local plan, setting out the Council's detailed policies and proposals for the use, development, protection and improvement of land.

Details of Aberdeenshire Council's existing Local Development Plan, proposed Local Development Plan and various planning information and advice can be viewed at <https://www.aberdeenshire.gov.uk/planning/plans-and-policies/>

4. Noise Assessment and Methodology

4.1 Before undertaking assessment, agreement requires to be reached between developers and Aberdeenshire Council Environmental Health on all relevant noise generating sources and noise sensitive receptors (NSRs), methodology of assessment and noise targets. These details should be confirmed in writing.

4.2 Where a noise impact assessment is required, it must be undertaken by a suitably qualified and competent person. Noise reports must be comprehensive and contain sufficient information for the Council to assess the likely noise impact of the proposed development. Failure to produce sufficient detail with regard to methodology and calculations will result in a delay in the planning process. Noise measurements will generally be required to establish the noise environment at the site of proposed development. Noise monitoring should be conducted in accordance with BS7445-1:2003.

4.3 Any assumptions used in the prediction of noise levels must be clearly stated in the noise report. The submitted report must also provide a sample calculation in order to demonstrate how the noise figures have been attained. Detailed raw data must be made available upon request.

4.4 Wind turbine noise is not covered by this guidance. Please see <https://www.aberdeenshire.gov.uk/media/2646/20150206wtguidancenote.pdf>

4.5 The following table outlines the relevant assessment methodology and target noise levels for the most common noise sources. See TAN appendix 1 for more comprehensive information on further technical standards and codes of practice.

Table 1 Main Noise Targets and Methodology

Noise Sources	Relevant Standard for Assessment	Target Levels	Standard from which target levels are derived
Road Traffic	Calculation of Road Traffic Noise 1998 [CTRN] Design Manual for Roads and Bridges 2012 http://www.dft.gov.uk/ha/standards/dmrb	Day time: $L_{Aeq[16hours]} = 50 - 55dB$ (to achieve internal noise levels of 40 - 45 dB) Night time: $L_{Aeq[8hours]} =$	World Health Organisation Guidelines for Community Noise 1999 BS8233:2014 Sound insulation and noise reduction for

		40 - 45dB (to achieve internal noise levels of 30 - 35 dB)	buildings WHO night noise guidelines for Europe 2009. (NNGE)
Rail Traffic	Calculation of Railway Noise 1995 [CRN] http://www.chiltern-evergreen3.co.uk/uploads/09Sep2010/5.12.pdf		
Industrial or Commercial Noise	BS4142:2014 is a method of rating and assessing industrial and commercial sound.	Assessments of impacts (Section 11) The greater the difference between the background level and the rating level the greater the impact of the specific sound. approximately +5dB is likely to be an indication of an adverse impact, depending on the context approximately +10dB, or more, is likely to be an indication of a significant adverse impact, depending on the context	BS4142:2014 Method for rating and assessing industrial and commercial sound.
Construction/ Demolition Sites	The Control of Pollution Act 1974 http://www.legislation.gov.uk/ukpga/1974/40 BS5228:Code of practice for noise and vibration control	Construction site noise may be controlled by restricting the hours of operation of the site and/or by setting acceptable noise levels described in Annex E of the Code of Practice.	BS5228:2009 Code of practice for noise and vibration control

Fan, air conditioning units, ventilation systems etc.	Noise Rating Curves	Internal Noise levels: NR 25 $L_{eq,1hr}$ If there is a distinguishable tone the NR curve should be reduced to 20 $L_{eq,1hr}$	BS8233:2014 Sound insulation and noise reduction for buildings

Note: New commercial developments where amplified music or any broadcasting is a likely activity should be designed to ensure that this noise is contained within the development boundary and is inaudible within any neighbouring noise sensitive property.

4.6 In the case of NSD brought to an existing noise source developers will need to demonstrate that all mitigation methods have been considered to achieve both satisfactory internal noise levels within any noise sensitive property and protect external amenity areas.

4.7 Only in exceptional circumstances should satisfactory internal noise levels only be achievable with windows closed and other means of ventilation provided. Predictions of internal noise levels within noise sensitive premises must be calculated based on a window being opened for ventilation. The degree of sound reduction afforded by a partially open window should be taken as 10dB (as calculated from the façade level).

For the purposes of this guidance exceptional circumstances are considered to be proposals which aim to promote sustainable development and transport within Aberdeenshire Council and which would provide benefits such as:

- (a) reducing urban sprawl
- (b) reducing uptake of greenfield sites
- (c) promoting higher levels of density near transport hubs, town and local centres
- (d) meeting specific needs identified in the local development plan

4.8 It must be noted that the Scottish Environmental Protection Agency (SEPA) regulate noise from certain prescribed industrial processes. Despite this regulatory role by SEPA, the Local Authority will determine whether any noise impact on noise sensitive receptors from such industrial processes is significant. Liaison between SEPA and the Local Authority must be undertaken

5. Determining the Magnitude of Noise Impact

5.1 For steady continuous noise The World Health Organisation document 'Guidelines for Community Noise' (1999) recommends an indoor guideline value for bedrooms of 30dB LAeq (8h), to prevent sleep disturbance and 45 dB L Amax for single sound event. However, WHO NNGE 2009, which is an extension of the aforementioned guidelines recommends that the single event noise level, the noise level below which there are no

observed effects, is reduced to 42 dB L Amax to protect occupants from sleep disturbance. WHO 'Guidelines for Community Noise' further recommends a daytime level below 50dB LAeq(16h) on balconies, terraces and outdoor living areas to protect receptors from moderate annoyance. WHO also indicates that at an outdoor, daytime level below 55 dB LAeq(16h) will protect the majority of people from being seriously annoyed. Therefore levels predicted to be above 55 dB LAeq(16h) are likely to have a major impact. Table 2 below illustrates the use of these external target levels to determine the magnitude of noise impact, as described in PAN 1/2011

Table 2: Describing the Magnitude of Noise Impact

Noise Sources	Target Levels	Change in Noise Level [predicted or existing noise minus target]	Magnitude of Impact
Road Traffic	External Day time: L Aeq (16hours) = 50 dB Internal Night time: L Aeq (8hours) = 30 dB	>5	Major Adverse
		≤5 but ≥3	Moderate Adverse
		≤3 but ≥1	Minor Adverse
		<1 but ≥0	Negligible Adverse
		0	No Change
Rail Traffic	External Day time: L Aeq (16hours) = 50 dB Internal Night time: L Aeq (8hours) = 30 dB	>5	Major Adverse
		≤5 but ≥3	Moderate Adverse
		≤3 but ≥1	Minor Adverse
		<1 but ≥0	Negligible Adverse
		0	No Change
Industrial or Commercial Noise	Rating Level (L _{Ar}) – Background Noise Level (LA ₉₀) < 5 dB	>10	Major Adverse
		≤10 but ≥5	Moderate Adverse
		≤5 but ≥3	Minor Adverse
		<3 but ≥0	Negligible Adverse
		0	No Change

Notes: External levels are free field noise measurements.

6. Qualitative Assessment

6.1 Following the quantitative determination of the magnitude of noise impact, a qualitative assessment should be undertaken to assess the effect on the amenity value of the existing or proposed noise sensitive receptor. The qualitative assessment will either confirm the quantitative assessment or indicate that additional factors need to be taken into account when describing the magnitude of impact. The additional factors to be taken into account will depend on the type of the noise sensitive receptor e.g. the potential for sleep disturbance, effects on ability to relax, concentrate or converse or use of outdoor space. Examples of descriptors for qualitative impact of noise are given in Table 2.5 of Technical Advice Note: Assessment of Noise.

6.2 Once the magnitude of noise impact has been appropriately described, the level of significance of the impact can be determined. The significance of the impact will depend on the sensitivity of the existing or proposed noise receptor(s). TAN 1/2011 advises that noise assessments should include a Summary Table of Significance to show the number of NSRs likely to be subjected to significant noise impacts. Although the overall number of NSRs

which will be affected is obviously important, the EHO reviewing the noise assessment will also pay heed to the effect on individual NSRs. A large negative noise impact on any one individual NSR will be of concern to the EHO and this will be reflected in the advice the EHO gives to the planning officer.

6.3 In some circumstances, it may also be appropriate to consider the cumulative noise impact in respect of the proposed development. Such circumstances may arise where other developments in the surrounding area have received consent but have not yet been completed. Such circumstances may arise if there are other existing NGD in the vicinity of the proposed development, and/or where other NGD in the area has received planning consent but development has not yet been completed. The developer or their noise consultant should discuss this with the EHO/planning officer during the pre-application discussions.

6.4 The noise assessment should detail any mitigation measures necessary to achieve satisfactory target noise levels.

7. Summary

7.1 PAN 1/2011 and the complementary TAN 1/2011 introduced a new approach to the assessment of noise. The planning process will operate more efficiently and applications will be processed more quickly if applicants, and noise consultants working on their behalf, contact Environmental Health with detailed proposals of the noise impact assessment methodology for the development site. This will give Environmental Health an opportunity to assess the appropriateness of the noise impact assessment proposals and offer advice, should that be necessary.

CHECKLIST

1. Instruct a suitably qualified and competent person to undertake the noise impact assessment.
2. Obtain details of the noise generating equipment/development
3. Determine those noise sensitive receptors which are relevant to the noise generating development
4. Consider whether there is any other noise generating development existing, consented or in the planning process, in the vicinity of your proposed development and whether cumulative noise impact assessment might be necessary
5. Determine the appropriate noise criteria and targets for the noise impact assessment
6. Provide an outline of the proposed noise impact assessment methodology to Aberdeenshire Council with a view to seeking agreement on the proposed methodology

7. Carry out the noise impact assessment in accordance with the agreed methodology (with reference to appropriate guidance and relevant Standards)
8. Determine the magnitude of noise impact with reference to TAN 1/2011 and Table 2 of this note
9. Determine the significance of noise impact with reference to TAN 1/2011
10. Identify any mitigation required to meet the noise criteria and targets identified for the proposed development
11. Prepare and submit a noise impact assessment report with details of assessment steps 1 to 10 and justification for the decisions taken.