

# Supplementary Guidance: Noise

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## 1. Status of Supplementary Guidance

This Supplementary Guidance (SG) forms part of the Development Plan and is a material consideration in the determination of planning applications.

The SG expands upon the following Aberdeen Local Development Plan policies:

- Policy T5 – Noise

## 2. Introduction to Topic

There is sufficient evidence to link exposure to noise with adverse health effects, with research suggesting that annoyance and sleep disturbance are the most significant impacts.

The Environmental Noise Directive (END) was adopted in 2004 and transposed into the Environmental Noise (Scotland) Regulations 2006. The Aberdeen Agglomeration Noise Action Plan (2014) describes how Scottish Ministers, through the policies and actions implemented by Aberdeen City Council, will deliver their obligations under the END.

## 3. General Guidance

The location and design of a development can play a significant part in preventing, controlling and mitigating the effects of noise. Early discussions with the Council will help to determine the suitability of the site for the proposed development and the level of detail required from an applicant in respect of noise. The preferred approach is to plan for good environmental quality, including the noise climate, from the outset rather than to try to mitigate the effects in retrospect. Issues which may be relevant when considering noise in relation to a development proposal include:

- Type of development and likelihood of significant noise impact (both from the development and impacting on the development);
- Sensitivity of location (e.g. existing land uses, Noise Management Areas (NMA), Quiet Areas (QA));
- Existing noise level and likely change in noise levels;
- Character (tonal, impulsivity, etc.), duration, frequency of any repetition and time of day of noise that is likely to be generated; and
- Absolute level and possible dose-response relationships (the change in effect on a person caused by differing levels of exposure to noise after a certain exposure time) if data is available.

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#### 4. Noise Impact Assessments

A Noise Impact Assessment (NIA) will be required for proposals that are likely to generate significant noise, that may affect noise sensitive receptors or affect noise levels in and around a NMA or QA, or where a noise-sensitive development is proposed which may be affected by existing noise sources. This must be undertaken by a suitably qualified and competent person, usually a noise consultant. The purpose is to demonstrate whether significant adverse noise impacts are likely to occur and, if so, identify effective measures to reduce, control and mitigate the impact.

Before commencing a NIA, a discussion must take place between the applicant and the Council to:

- Agree any potential representative limits of noise and/or the NIA methodology in the context of the proposed development, its location and the surrounding area; and
- Establish criteria for assessing any significant adverse noise impact or predict and describe ambient noise levels (including noise from transport sources) that the proposed development is likely to generate and/or is likely to be subjected to.

Monitoring should be conducted in accordance with BS 7445-1:2003 Description and Measurement of Environmental Noise.

The assessment must describe any assumptions used in the prediction of noise levels and calculations to demonstrate how the noise figures have been attained.

PAN 1/2011 and the accompanying Scottish Government Technical Advice Note, Assessment of Noise, provide guidance on the technical evaluation of noise assessment, recommending both a quantitative and qualitative assessment of noise to determine the Magnitude of Impact and corresponding Significance of Effects. The outcome of the assessment will be used to determine whether noise is a key factor in the decision making process.

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## 5. Noise Sources

The following summarises the main sources of environmental noise which may require to be covered in an assessment.

### 5.1 Road Traffic

Road traffic noise should be measured and assessed using the methodology set out in Calculation of Road Traffic Noise (1998). When night-time noise is significant a noise survey during the night will also be required.

### 5.2 Rail Traffic

Rail traffic noise should be assessed using the methodology set out in The Calculation of Railway Noise (1998). A noise measurement survey will be required for existing track usage. When the survey is based on noise measurements of a sample of trains using the track, the number of trains used in the sample should be representative of the total use of the track.

### 5.3 Industrial or Commercial Noise

Industrial and commercial noise sources can be difficult and complex to assess and require to be considered in detail. While the Scottish Government's Technical Advice Note: Assessment of Noise provides the framework for noise assessment in the planning context, it is also important that

any proposed development will not result in a statutory nuisance being declared under the Environmental Protection Act 1990. BS 4142:1997 Method for Rating Industrial Noise Affecting Mixed Residential and Industrial Areas is widely used in the assessment of complaints of noise nuisance from industrial and commercial sources and consideration should be given to the application of procedures within BS 4142 in the assessment of noise.

The Scottish Environmental Protection Agency (SEPA) regulates noise from certain prescribed industrial processes. Notwithstanding the regulatory role of SEPA, the Council will determine whether any noise impact from an existing or proposed development is significant. The local authority will liaise with SEPA regarding any such prescribed process.

### 5.4 Construction Site Noise

Most developments will have initial noise associated with construction and it is generally accepted that higher levels will be experienced with what is a relatively temporary situation. In some cases there may be a requirement to control particularly noisy activities through the Control of Pollution Act 1974. Guidance on noise issues relating to construction sites can be found in BS 5228:1997 Noise and Vibration Control on Construction and Open Sites.

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### 5.5 Aircraft Noise

Noise from ground movements and from airborne aircraft approaching or departing the Airport could impact on the acceptability of proposed developments in the north of Aberdeen. While each site will require a separate assessment, there is a presumption against development of sites within the Leq 57dB contour for residential purposes.

### 5.6 Wind Turbines

Wind turbines create very specific and complex noise characteristics. Applicants should consult the Wind Turbine Development Supplementary Guidance for detailed guidance. Assessments should be carried out in accordance with ETSU-R-97: The Assessment and Rating of Noise from Wind Farms.

## 6. **Development Management**

Proposals which would lead to significant noise in the vicinity of noise-sensitive land uses, NMAs and QAs, and for which suitable mitigation measures cannot be identified, are unlikely to receive planning permission.

New commercial developments where amplified music, singing, speech or amusement systems are proposed must be designed to ensure that this noise is contained within the development boundary and is inaudible within any neighbouring noise-sensitive property.

Acceptable noise levels should be achieved within dwellings with windows sufficiently open for ventilation. It is estimated that a slightly open window will reduce external noise levels by 15 dB.

BS 8233:2014 Guidance on Sound Insulation and Noise Reduction for Buildings recommends that indoor ambient noise levels for dwellings do not exceed the following guideline values:

Activity	Location	Time: 0700-2300	Time: 2300-0700
<b>Resting</b>	Living room	35 dB LAeq, 16hour	
<b>Dining</b>	Dining room/area	40 dB LAeq, 16hour	
<b>Sleeping (daytime resting)</b>	Bedroom	35 dB LAeq, 16hour	30 dB LAeq,8hour

For impulsive or intermittent noise the World Health Organisation (WHO) recommends that the LAFmax should not exceed 45 dB more than 10-15 times a night.

Alternative ventilation may be required where it is not possible to achieve these criteria with traditional window designs and windows partially open for ventilation.

For traditional external areas that are used for amenity space, such as gardens and patios, it is desirable that the external noise level does not exceed 50 dB LAeq,T, with an upper guideline value of 55 dB Aeq,T, which would be acceptable in noisier environments.

However, it is recognised that these values may not be achievable in all circumstances where development is desirable, such as the City Centre or areas adjoining the strategic transport network. In such cases, development should be designed to achieve the lowest practicable levels in these external amenity spaces.

Where the above values cannot be met, mitigation solutions should be explored, taking into account their impact on the built environment. Design solutions may be possible, such as locating living rooms and bedrooms on the opposite side of a building to the source of the noise or using windows with improved sound reduction. Additional noise mitigation measures include vegetation and acoustic barriers (vegetated/non-vegetated). More information on this can be found in the [Natural Heritage](#) and [Open Space](#) Supplementary Guidance documents.

BS 5228 prescribes internal noise levels based on noise rating curves for different locations such as bedrooms, offices and schools. NR25 is generally used as the design criteria for protection in bedrooms from the noise from fans, air conditioning units, ventilation systems etc. at night.

Construction site operations will generally be restricted to 0700–1900 Monday to Friday and 0900–1600 on Saturday so that noise is not audible at noise-sensitive properties outwith these times. Under normal circumstances, evening, night-time and Sunday working will not be considered reasonable.

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There may be exceptions to this, for example for public safety, police requirements or for specific transportation projects where daytime works may cause unacceptable traffic congestion. In such cases contractors require to contact the Environmental Protection Service at least 4 weeks prior to the proposed works and demonstrate why the work cannot take place during normal working hours.

In terms of planning applications, where appropriate, an Informative will be attached to the grant of permission in relation to 'construction hours' in order to limit the impact on the adjacent area.

Development proposals which are likely to generate significant noise impacts may need to be advertised as Schedule 3 Development under Regulations 20(1)(c) and 38(1)(b) of the Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2008.

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## Acronyms

AQAP	Air Quality Action Plan	PM	Particulate matter
AQMA	Air Quality Management Area	PM2.5	Particles smaller than 2.5 micrometers (fine particles)
BS	British Standards	PM10	Particles up to 10 micrometers (coarse particles)
CHP	Combined Heat and Power	QA	Quiet Area
CNMA	Candidate Noise Management Area	SEPA	Scottish Environment Protection Agency
CQA	Candidate Quiet Area	SG	Supplementary Guidance
dB	Decibel	WHO	World Health Organisation
END	Environmental Noise Directive		
IAQM	Institute of Air Quality Management		
LAeq	A-weighted, equivalent sound level. A widely used noise parameter describing a sound level with the same energy content as the varying acoustic signal measured		
LAeq,T	The equivalent continuous A-weighted sound pressure level having the same energy as a fluctuating sound over a specified time period		
LAFmax	A-weighted, Fast, Maximum, Sound Level.		
Lday	Day equivalent level; A-weighted, Leq. Sound Level measured between 0700 and 1900		
Leq	Equivalent Continuous Sound Pressure Level		
NAP	Noise Action Plan		
NIA	Noise Impact Assessment		
NMA	Noise Management Area		
NO <sub>2</sub>	Nitrogen dioxide		
NO <sub>x</sub>	Nitrogen oxides		
NR	Noise Rating		
PAN	Planning Advice Note		

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## Appendix A: Noise Management Areas and Quiet Areas

Users should consult the Scottish Noise Mapping website for up to date information:

<http://www.scottishnoisemapping.org/>.

### Rail Candidate Noise Management Areas (CNMAs)

- Near Polmuir Road
- Near Station Road

### Road Noise Management Areas (NMAs)

- Auchmill Road at Newton Terrace
- North Anderson Drive at Clifton Road
- Great Northern Road near Smithfield Lane
- King Street at Don Street
- North Anderson Drive at Mastrick Road
- North Anderson Drive at Laburnum Walk
- Littlejohn Street, Mealmarket Street, King Street
- King Street at St Clair Street
- Union Street at Dee Street
- Rennie's Wynd, Wapping Street, Carmelite Street, Trinity Street, Guild Street
- Market Street, Union Street, Netherkirkgate
- Market Street, Virginia Street, Shore Brae
- Palmerston Road, Market Street
- Victoria Road at Walker Road
- A90 at Holburn Street

### Quiet Areas (QAs)

- Hazlehead Park
- Seaton Park