

Appendix 5.4: Legislative Framework, Policy and Guidance Documents

1.1 Policy Context

1.1.1 *National Planning Policy Framework*

Published in February 2019, The National Planning Policy Framework (NPPF) defines the Government's planning policies for England and sets out how these should be applied.

Reference to noise is made in Section 15: Conserving and enhancing the natural environment.

Paragraph 170 States:

"Planning policies and decisions should contribute to and enhance the natural and local environment by:
[...]

(e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basing management plans."

Paragraph 180 States:

"Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:

- a) mitigate and reduce to a minimum potential adverse impact resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life;
- b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason;..."

Paragraph 182 States:

"Planning policies and decisions should ensure that new development can be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or 'agent of change') should be required to provide suitable mitigation before the development has been completed."

1.1.2 Noise Policy Statement for England

The NPPF refers to the Noise Policy Statement for England (NPSE), with regards to defining ‘adverse impacts’. Noise impacts are categorised by the NPSE as follows:

“NOEL – No Observed Effect Level – This is the level below which no effect can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life due to the noise.

LOAEL – Lowest Observed Adverse Effect Level – This is the level above which adverse effects on health and quality of life can be detected

SOAEL – Significant Observed Adverse Effect Level – This is the level above which significant adverse effects on health and quality of life occur”

The NPSE sets out three aims as follows:

- Avoid significant adverse effects on health and quality of life i.e. for effects above the SOAEL;
- Where effects are between the LOAEL and SOAEL, all reasonable steps must be taken to mitigate and minimise adverse effects; and,
- Where possible, contribute to improvement of health and quality of life.

While the NPSE states that adverse effects should be avoided, mitigated and minimised, as appropriate, this does not mean that such adverse effects cannot occur.

Furthermore, the aims of NPSE should be interpreted with respect to the wider UK principles that underpin sustainable development, including mutually dependant economic, social and environmental factors.

1.1.3 Planning Practice Guidance

Planning Practice Guidance – Noise (PPG) provides guidance on how planning policies should be applied, with regards to adverse noise effects. It provides detail on the interaction between the effect levels outlined in NPSE, human perception, likely outcomes and actions to be taken as a result.

Economic and social benefits of the activity causing any noise effects must be taken in to account when making decisions, while recognising that it is undesirable for such noise exposure to be caused. At the highest extreme, when adverse effects are unacceptable, adverse effects should be prevented from occurring, regardless of any other associated benefits.

The table below summarises the noise exposure hierarchy refers to the Noise Policy Statement for England (NPSE), with regards to defining ‘adverse impacts’. Noise impacts are categorised by the NPSE as follows:

Perception	Examples of Outcomes	Increasing Effect Level	Action
No Observed Effect Level			
Not Present	No Effect	No Observed Effect	No specific measures required
No Observed Adverse Effect Level			
Present and not intrusive	Noise can be heard, but does not cause any change in behaviour, attitude or other physiological response. Can slightly affect the acoustic character of the area but not such that there is a change in the quality of life.	No Observed Adverse Effect No specific measures required	No specific measures required
Lowest Observed Adverse Effect Level			
Present and intrusive	Noise can be heard and causes small changes in behaviour, attitude or other physiological response, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a small actual or perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum
Significant Observed Adverse Effect Level			
Present and disruptive	The noise causes a material change in behaviour, attitude or other physiological response, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	Avoid

Present and very disruptive	Extensive and regular changes in behaviour, attitude or other physiological response and/or an inability to mitigate effect of noise leading to psychological stress, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory.	Unacceptable Adverse Effect	Prevent
-----------------------------	--	-----------------------------	---------

PPG summarises the approach to be taken when assessing noise and accepts that noise can override other planning concerns, but states:

“Neither the Noise Policy Statement for England nor the National Planning Policy Framework (which reflects the Noise Policy Statement) expects noise to be considered in isolation, separate from the economic, social and other environmental dimensions of Proposed Development”.

The first aim of the NPSE is to avoid significant adverse effects on health and quality of life. Published in February 2019, the National Planning Policy Framework (NPPF) defines the Government’s planning policies for England and sets out how these should be applied.

Reference to noise is made in Section 15: Conserving and enhancing the natural environment.

1.2 Local Policy

1.2.1 Manchester's Local Development Framework – Core Strategy

Policy DM 1 of the Core Strategy relates to Development Management, which outlines specific issues which require consideration with regards to proposed development. The following relates to potential effects associated with noise and vibration:

Effects of amenity, including privacy, light, noise, vibration, air quality, odours, litter, vermin, birds, road safety and traffic generation. This could also include proposals which would be sensitive to existing environmental conditions, such as noise.

1.2.2 Manchester Unitary Development Plan – Extant Policies

Policy DC 26 of the Manchester Unitary Development Plan relates specifically to Development and Noise. The following sections of DC 26 relate to the Proposed Development:

“DC26.1 The Council intends to use the development control process to reduce the impact of noise on people living and working in, or visiting, the City. In giving effect to this intention, the Council will consider both:

- a. the effect of new development proposals which are likely to be generators of noise; and*
- b. the implications of new development being exposed to existing noise sources which are effectively outside planning control.*

DC26.2 New noise-sensitive developments (including large-scale changes of use of existing land or buildings), such as housing, schools, hospitals or similar activities, will be permitted subject to their not being in locations which would expose them to high noise levels from existing uses or operations, unless the effects of the noise can realistically be reduced. In giving effect to this policy, the Council will take account both of noise exposure at the time of receiving a planning application and of any increase that may reasonably be expected in the foreseeable future.

DC26.3 Developments likely to result in unacceptably high levels of noises will not be permitted: a. in residential areas;

- b. near schools, hospitals, nursing homes and similar institutions;*
- c. near open land used frequently for recreational purposes.*

DC26.4 Where the Council believes that an existing noise source might result in an adverse impact upon a proposed new development, or where a new proposal might generate potentially unacceptable levels of noise, it will in either case require the applicant to provide an assessment of the likely impact and of the measures he proposes to deal satisfactorily with it. Such measures might include the following:

- a. engineering solutions, including reduction of noise at source, improving sound insulation of sensitive buildings or screening by purpose-built barriers;*
- b. layout solutions, including consideration of the distance between the source of the noise and the buildings or land affected by it; and screening by natural barriers or other buildings or non-critical rooms within a building; and*

c. administrative steps, including limiting the operating times of the noise source, restricting activities allowed on the site or specifying an acceptable noise limit. Any or all of these factors will be considered appropriate for inclusion in conditions on any planning permission.

DC26.5 The Council will control noise levels by requiring, where necessary, high levels of noise insulation in new development as well as noise barriers where this is appropriate.

DC26.6 Exceptions to the general policy will be considered on their merits. The Council accept, as an example, that the occasional use of outdoor facilities such as sports stadia for concerts can be acceptable in certain circumstances. Any such proposal will be considered in the light of consultation with local residents and others, and the practicability of appropriate conditions on any approval.”

1.3 Regional Policy

1.3.1 *Places for Everyone – Greater Manchester Combined Authority*

The 'Places for Everyone' document refers to noise in a variety of settings such as transport, construction, aircraft, railway and cultural facilities.

There is no specific guidance within this text for noise and reference is made towards the consideration of noise across various types of infrastructure.

All aspects of noise that are mentioned within the 'Places for Everyone' document is considered within other policy and guidance outlined with the report and this appendix. These include a range of British Standards, road noise calculation methods (CRTN), Noise Policy Statement for England guidance, Planning Practice Guidance, World Health Organisation guidance and others within this appendix.

1.4 National Guidance

1.4.1 *Guidance on Assessment of Noise from Construction and Demolition*

The demolition and construction phase of the Proposed Development has the potential to generate noise.

Guidance on the prediction and assessment of construction and demolition noise is given in British Standard 5228 -1:2009 + A1:2014 (BS5228-1), and BRE Controlling Particles, vapour and noise pollution from construction sites.

Construction noise can have intrusive effects on surrounding neighbourhoods, which can be varied and complex depending on the nature the site works. Generally, construction and demolition activities are characterised by noise sources that change location and vary in level over the duration of operations.

The duration of site operations is also an important consideration as higher noise levels may be acceptable if it is identified to occur for a limited time period.

The Control of Pollution Act, 1974 (COPA) gives the Local Authority the means to enforce specific requirements or restrictions on construction works, without the need for any prior warning or consultation, under Section 60. This can include specific times of operation, maximum permitted noise levels and the types of plant which should be used.

However, it is generally preferable for the chosen contractor to obtain prior consent under Section 61 of COPA. Section 61, enables the site contractor to submit and agree a suitable methodology with the Local Authority, prior to commencing with construction or demolition, in order to address any associated noise or other concerns.

In addition, BS5228-1 provides recommended significance criteria for assessing potential significant effects associated with the construction and demolition phase of large projects.

1.4.2 *Guidance on Assessment of Vibration from Construction and Demolition*

Work involving heavy plant on open sites has the potential to generate vibration that can propagate beyond the boundary of the site. In situations where particularly heavy plant, vibrating compaction equipment or piling rigs are being used within close proximity to the site boundary, nearby properties may experience ground borne vibration.

Guidance on the assessment of vibration from open sites is given in BS 5228-2:2009 + A1:2014 (BS5228-2). BS5228-2 indicates that vibration can have disturbing effects on the surrounding neighbourhood; especially where particularly sensitive operations may be taking place. The significance of vibration levels adjacent to a site is also dependent upon the nature of the source.

BS5228-2 indicates that the threshold of perception is generally accepted to be between a Peak Particle Velocity (PPV) of 0.14mms^{-1} and 0.3mms^{-1} . In an urban setting it is unlikely that vibration levels of this order would be noticeable. However, BS5228-2 also indicates that vibration of 1.0mms^{-1} in residential environments is likely to result in complaint, but can be tolerated if prior warning and an explanation has been given to residents. Furthermore, exposure to vibration levels of 10mms^{-1} is likely to be intolerable for more than a brief period.

The Highways Agency Research Report No. 53 “Ground Vibration caused by Civil Engineering Works” 1986 suggests that, when vibration levels from an unusual source exceed the human threshold of perception,

complaints may occur. The onset of complaints due to continuous vibration is probable when the PPV exceeds 3 mms-1.

BS6472-1 suggests that adverse comments or complaints, resulting from continuous vibration, are rare in residential context where vibration levels are below 0.8 mms-1. Continuous vibration is defined as “vibration which continues uninterrupted for either a daytime period of 16 hours or a night-time period of 8 hours”. Proposed demolition and construction works at the Site is unlikely to cause continuous vibration as defined in BS6472-1.

BS5228-2 suggests that the onset of cosmetic damage is 15mm/sec (15 mms-1 at 4 Hz increasing to 20 mms-1 at 15 Hz for residential or light commercial type buildings). In addition to COPA, BS5228-1 provides guidance on significance criteria for assessing the likely significant noise effects associated with the construction phase of large projects.

1.4.3 *Guidance on Assessment of Road Traffic Noise*

Professional Practice Guidance: Planning and Noise (ProPG) provides guidance for new residential developments exposed to noise from the surrounding transport network. It provides a recommended approach for engineers to allow effective of noise, within the planning system in England.

Calculation procedures for predicting road traffic noise levels are set out in Department of Transport – Calculation of Road Traffic Noise (CRTN), which was prepared to enable entitlement under the Noise Insulation Regulations 1975 to be determined. However, CRTN states that the guidance within is equally appropriate for the calculation of traffic noise for land use planning purposes.

British Standard 8233:2014 (BS8233) recommends the following guideline noise levels, based the World Health Organisation (WHO) Guidelines for Community Noise:

- 35dB L_{Aeq} , 16hour should be achieved during the daytime, within living rooms and bedrooms;
- 30dB L_{Aeq} , 8hour should be achieved during the night-time, in bedrooms;
- 45dB L_{AFmax} should be achieved during the night-time, in bedrooms;
- 50dB L_{Aeq} , 16hour is desirable within outdoor living areas, such as gardens and patios; and,
- 55dB L_{Aeq} , 16hour is the upper guideline value for outdoor living areas, which would be acceptable in noisier environments.

In addition, for internal noise levels BS8233 states;

“Where development is considered necessary or desirable, despite external noise levels above WHO guidelines, the internal target levels may be relaxed by up to 5 dB and reasonable internal conditions still achieved.”

Furthermore, with regard to external noise, BS8233 states;

“However, it is also recognised that these guideline values are not achievable in all circumstances where development might be desirable. In higher noise areas, such as city centres or urban areas adjoining the strategic transport network, a compromise between elevated noise levels and other factors, such as the convenience of living in these locations or making efficient use of land resources to ensure development needs can be met, might be warranted. In such a situation, development should be designed to achieve the lowest practicable levels in these external amenity spaces, but should not be prohibited.”

1.4.4 *Guidance on Assessment of Industrial and Commercial Noise*

BS4142 provides guidance on rating and assessing the significance of industrial and/or commercial sound, including:

- Sound from industrial and manufacturing processes;
- Sound from fixed installations which comprise mechanical and electrical plant and equipment;
- Sound from the loading and unloading of goods and materials at industrial and/or commercial premises; and,
- Sound from mobile plant and vehicles that is an intrinsic part of the overall sound emanating from premises or processes, such as that from forklift trucks, or that from train or ship movements on or around an industrial and/or commercial site.

BS4142 is applicable to the following levels, at outdoor locations:

- Rating levels for sources of sound of an industrial and/or commercial nature; and
- Ambient, background and residual sound levels, for the purposes of:
- Investigating complaints;
- Assessing sound from proposed, new, modified or additional source(s) of sound of an industrial and/or commercial nature; and
- Assessing sound at proposed new dwellings or premises used for residential purposes.

BS4142 refers to noise levels from any industrial/commercial sources as the 'specific level'. The presence of acoustic features within the specific noise level will result in acoustic feature correction(s) i.e. penalty. The specific noise level along with any applicable correction is referred to as the 'rating level'.

BS4142 assesses the significance of impacts by comparing the rating level to the 'background level' i.e. the typical LA90 noise level, while taking in to account the context in which the specific noise occurs.

In addition, BS4142 identifies that the absolute level of sound, the character, and the residual sound and the sensitivity of receptor should all be taken into consideration

The greater the increase between the rating level over the background noise level, the greater the magnitude of the impact. The assessment criteria given by BS4142 are as follows:

- A difference of around +10dB or more is likely to be an indication of a significant adverse impact, depending on the context.
- A difference of around +5dB is likely to be an indication of an adverse impact, depending on the context.
- The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context.

During the daytime, BS4142 requires that noise levels are assessed over 1-hour periods, and during the night-time, noise levels are required to be assessed over 15-minute periods.

The initial assessment of impact should then be modified due to context. BS4142 states that all pertinent factors should be taken into consideration, including:

- The absolute level of sound;
- The character and level of the residual sound compared to the character and level of the specific sound; and
- The sensitivity of the receptor and whether dwellings or other premises used for residential purposes will already incorporate design measures that secure good internal and/or outdoor acoustic conditions.

Work involving heavy plant on open sites has the potential to generate vibration that can propagate beyond the boundary of the site. In situations where particularly heavy plant, vibrating compaction equipment or piling rigs are being used within close proximity to the site boundary, nearby properties may experience ground borne vibration.