



# Noise

## Technical Guidance Note

Issued by the Environmental Health Authority  
to assist planning applicants  
and acoustic consultants

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# **Introduction**

## **Background**

The Environmental Health Authority receive and provide comments on a large number of planning consultations each year.

We have limited resources to provide acoustic advice, and do not currently offer a pre-application advisory service. Accordingly this guidance details expected standards for various types of development with the aim of helping:

- To highlight the importance of noise as a material planning consideration
- To ensure consistency in noise related planning applications
- To provide information on the harmful impacts of noise and mitigation options
- To clarify the general circumstances under which we would expect a noise assessment to accompany a planning application.
- To provide guidance on noise assessments

All expected standards detailed within this guidance aim to comply with the:

- Noise Policy Statement for England
- National Planning Policy Framework
- National Planning Practice Guidance, and
- Ashford Borough Council Local Plan 2030

## National Policy

### Noise Policy Statement for England

The overarching framework for national noise policy is the Noise Policy Statement for England (NPSE). The long-term vision identified in the policy is to:

*'Promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development.'*

The aims of the policy are:

*Through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development:*

- *avoid significant adverse impacts on health and quality of life;*
- *mitigate and minimise adverse impacts on health and quality of life; and*
- *where possible, contribute to the improvement of health and quality of life.*

The NPSE introduces the concept of adverse effects common to toxicology to the assessment of noise impacts:

- **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.*

Noise effect levels are not set at fixed figures but vary depending on the context and character of the noise and site specific factors which may impact on the severity of the effect. The NPSE states:

*'It is not possible to have a single objective noise-based measure that defines SOAEL that is applicable to all sources of noise in all situations. Consequently, the SOAEL is likely to be different for different noise sources, for different receptors and at different times. It is acknowledged that further research is required to increase our understanding of what may constitute a significant adverse impact on health and quality of life from noise. However, not having*

*specific SOAEL values in the NPSE provides the necessary policy flexibility until further evidence and suitable guidance is available.'*

Further information and discussion relating to possible objective levels for NOELs SOAELs and LOAELs is available at:

<http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=0&ProjectID=18157>

## **National Planning Policy Framework**

The concepts outlined in the NPSE are incorporated into the National Planning Policy Framework (NPPF). Paragraph 180 relates to noise:

*180. 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:*

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

Paragraph 182 also introduces the agent of change principle':

*182. 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.*

## **National Planning Practice Guidance**

Practical guidance on how the NPPF should be applied is contained within the National Planning Practice Guidance (NPPG). The guidance includes qualitative examples of how to interpret adverse effect levels in a Planning context.

<b>Perception</b>	<b>Examples of Outcomes</b>	<b>Increasing Effect Level</b>	<b>Action</b>
Not noticeable	No Effect	No Observed Effect	No specific measures required
Noticeable and not intrusive	Noise can be heard, but does not cause any change in behaviour or attitude. Can slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life.	No Observed Adverse Effect	No specific measures required
<b>Lowest Observed Adverse Effect Level</b>			
Noticeable and intrusive	Noise can be heard and causes small changes in behaviour and/or attitude, 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 perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum
<b>Significant Observed Adverse Effect Level</b>			
Noticeable and disruptive	The noise causes a material change in behaviour and/or attitude, 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
Noticeable and very disruptive	Extensive and regular changes in behaviour and/or an inability to mitigate effect of noise leading to psychological stress or physiological effects, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory	Unacceptable Adverse Effect	Prevent

## Permitted Development Rights

The General Permitted Development Order (as amended) contains details of developments which are permitted by prior notification rather than full planning consent.

Class O of the Order deals with changes of use from offices to dwelling houses. The GPDO (as amended) requires that in such conversions the developer must apply to the local planning authority for a determination as to whether the prior approval of the authority will be required as to—

(d) impacts of noise from commercial premises on the intended occupiers of the development

Class P of the Order deals with changes of use from Storage and Distribution to dwelling houses. The GPDO (as amended) requires that in such conversions the developer must apply to the local planning authority for a determination as to whether the prior approval of the authority will be required as to—

(v) noise impacts of the development,

Class PA of the Order deals with changes of use of light industrial to dwelling houses. The GPDO (as amended) requires that in such conversions the developer must apply to the local planning authority for a determination as to whether the prior approval of the authority will be required as to—

(iv) where the authority considers the building to which the development relates is within an area that is important for providing industrial services or storage or distribution services or a mix of those services (which includes, where the development relates to part of a building, services provided from any other part of the building), whether the introduction of, or an increase in, a residential use of premises in the area would have an adverse impact on the sustainability of the provision of those services

Class Q of the Order deals with changes of use from agricultural buildings to dwelling houses. The GPDO (as amended) requires that in such conversions the developer must apply to the local planning authority for a determination as to whether the prior approval of the authority will be required as to—

(b) noise impacts of the development,

For further details of Permitted Development rights see the Order itself or the following website:

<http://planningguidance.communities.gov.uk/blog/guidance/when-is-permission-required/what-are-permitted-development-rights/>

In each of the above cases noise is a material consideration and so must be adequately assessed in planning applications and conditions may be applied in respect of noise.

## Local Planning Policy

The Local Plan is a set of borough-wide planning policy documents that are used to set out how Ashford will be regenerated and protected. It sets out masterplans, development sites and is used to decide if development proposals should be given planning permission.

Ashford's Local Plan 2030 is available at:

<https://www.ashford.gov.uk/local-plan>

## Planning Conditions

In respect of planning conditions and obligations the NPPF requires that:

*'Local planning authorities should consider whether otherwise unacceptable development could be made acceptable through the use of conditions or planning obligations. Planning obligations should only be used where it is not possible to address unacceptable impacts through a planning condition.'*

*'Planning conditions should be kept to a minimum and only imposed where they are necessary, relevant to planning and to the development to be permitted, enforceable, precise and reasonable in all other respects. Agreeing conditions early on is beneficial to all parties involved in the process and can speed up decision making. Conditions that are required to be discharged before development commences should be avoided, unless there is a clear justification.'*

The Environmental Protection Service will recommend planning conditions in relation to noise where these meet the above tests and allow development to proceed that would otherwise be considered unacceptable.



# **Standards and Guidance**

## **Standards Expected of Noise Consultants**

Consultants should hold relevant technical qualifications such as a diploma or degree in acoustics, and ideally be members of the Institute of Acoustics (IOA) and/or the Association of Noise Consultants (ANC).

### Expectation №1

**All noise assessments must be conducted by a person suitably qualified in acoustics and noise control.**

**The assessment should contain details of the assessor's qualifications, competency, professional memberships, and, experience.**

When providing information to support planning applications consultants are expected to act at all times honestly, impartially and objectively and to gather evidence and report findings in a scientifically rigorous manner.

All 'stock' or 'library' data used in assessments shall be supported with full details of how, where, and when it was obtained. Where such levels deviate from established research then more detailed justification shall be expected.

Assessments should be open and clear in respect of the level of uncertainty attached to their conclusions.

## Noise from Fixed Plant and Industry

The methodology of BS4142:2014+A1:2009 should be followed in full when assessing the impacts from the following noise sources:

- 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 trains on or around an industrial and/or commercial site.

BS4142:2014+A1:2009 should not be used to assess noise sources outside of its intended scope and inappropriate use of the standard will not be accepted as valid acoustic assessment for the purposes of planning applications.

The BS4142:2014+A1:2009 methodology involves predicting or measuring the specific sound level from the source in question and applying rating penalties for acoustic character features such as tonality, impulsivity or irregularity. This rated sound level is then compared to the existing typical LA90 background sound level. Impacts are assessed as follows:

- a) Typically, the greater this difference, the greater the magnitude of the impact.
- b) A difference of around +10 dB or more is likely to be an indication of a significant adverse impact, depending on the context.
- c) A difference of around +5 dB is likely to be an indication of an adverse impact, depending on the context.
- d) 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.

It is necessary to submit a noise assessment for any development which could result in a change in noise impact on any sensitive receptor (a sensitive receptor is any receptor that may be adversely impacted by noise such as residential dwellings, schools, hospitals etc.). Examples of such developments are those that involve installing new noise-generating plant, new work processes or equipment or making changes to buildings or structures that affect sound transmission.

It is also necessary to submit a noise assessment for any development which places new sensitive receptors where they may be affected by noise from existing commercial uses. Examples of this would be a new residential flat on a High Street served by air-

conditioning and kitchen ventilation plant or a new housing development on the edge of an existing industrial estate. When locating sensitive uses near to existing commercial noise sources it is essential to use good acoustic design to minimise noise impact. See the [Good Acoustic Building Design](#) section of this guidance for further information.

In some areas, existing noise levels already cause adverse or significantly adverse effects. It is essential that assessments consider not only the impact of the new noise source but also the cumulative impact of the new source in addition to existing noise in order to prevent gradually creeping background levels.

Expectation No2

**In order to avoid recommendations against the grant of planning permission the assessment Rating sound level should not exceed the representative  $L_{A90}$  background sound level at any time.**

**Furthermore in order to prevent gradually creeping background levels over time it is expected that the unrated 'Specific' sound level does not exceed 10dB below the representative  $L_{A90}$  background sound level at any time.**

**The 'Specific', 'Rating' and 'Background' sound levels shall be calculated in full accordance with BS4142:2014+A1:2009.**

The same standard is applied for all fixed plant, including permanent backup generators and other systems which may only run for part of the time. In exceptional cases it may be possible to deviate from this standard, such as where;

- The existing background level is very low (below 30dB  $L_{A90}$ )
- It is impossible to achieve the required standard despite using all reasonable means of mitigation AND there is no significant adverse effect from the plant

## External Amenity Areas

If external amenity spaces are an intrinsic part of the overall design, the acoustic environment of those spaces should be considered so that they can be enjoyed as intended.

External amenity areas such as balconies and gardens should be protected from noise as far as is reasonably practicable. It is however recognised that in noisy environments such as town centres it may be deemed better to have balconies, than to remove them from a scheme on noise grounds.

### Expectation №3

**The following standards should be achieved in private external amenity areas for residential development;**

**Daytime (07:00-23:00) - 50dB  $L_{Aeq, 16hr}$**

**Where it is not possible to achieve the above target, despite implementing all reasonable mitigation measures, the standard can be relaxed by 5dB.**

Mitigation measures that should be considered include:

- Building design, location and layout to shield amenity areas or place them away from noise sources where possible
- Use of acoustic fencing with a gap-free joining system and a minimum density of 12Kg/m<sup>2</sup> (or solid blockwork walls) to gardens
- Use of high, solid and imperforate balustrades to balconies and terraces
- Use of Class A acoustic absorption (suitable for outdoor areas) on balcony undersides and soffits
- Enclosure of balconies and terraces to form 'winter gardens'

## Mitigation of Commercial Noise Impacts

In all cases where plant does not meet the required standards it is necessary to use mitigation measures. The following should be considered:

- Relocation of plant or noise-generating activity
- Substitution for alternative or quieter plant or processes
- Reduction in source noise levels via engineering methods (e.g. lower-noise fans, flow smoothing on duct bends etc.)
- Change in working practices or processes to reduce noise (e.g. changing times of operation, reducing fan\jet power)
- Use of duct attenuators
- Use of acoustic barriers
- Use of acoustic absorption
- Vibration isolation and/or damping
- Enclosure of plant in insulating enclosures
- Insulation of building envelopes

Applicants are advised to consider plant choice, engineering methods and working practices as the favoured means of reducing noise. These can save energy and lead to significant savings in operating costs.

Pathway methods such as barriers, enclosure and absorption can be expensive and in some cases also lead to higher ongoing costs.

## Noise and Vibration from Transportation Sources

Transportation noise should be assessed when a development gives rise to the possibility that any sensitive receptor may be exposed to adverse impacts from transportation noise. Examples would be locating housing on a busy road or adjacent to a railway line. The noise assessment should cover a period sufficient to be representative of the prevailing noise climate.

In most cases this will require assessment covering midweek and weekends. The assessment should also include full details of the proposed building construction and composite façade calculations to predict the internal noise level in habitable rooms.

### Expectation №4

**Residential dwellings shall achieve the internal sound standards as specified in BS8223:2014**

**Where there is any concern over the effectiveness of measures submitted to comply with these standards post-completion verification testing may be required.**

Regular individual noise events (for example, passing aircraft, trains, and loud road vehicles) can cause sleep disturbance.

With respect to the night-time  $L_{AFmax}$  noise levels, the WHO Guidelines for Community Noise state:

*‘For a good sleep, it is believed that indoor sound pressure levels should not exceed approximately 45 dB  $L_{Amax}$  more than 10–15 times per night’*

### Expectation №5

**Buildings shall be designed to ensure that individual noise events do not exceed 45dB  $L_{AFmax}$  more than 10 times in any night inside any bedroom. The 10th highest individual  $L_{AFmax}$  event in any night shall be determined and the noise level from this event shall be used to inform the mitigation design target.**

**Where there is any concern over the efficacy of measures submitted to comply with this standard post-completion verification testing may be required**

$L_{AFmax}$  should be reported for individual noise events. Time-based reporting periods (such as  $L_{AFmax}$  per 5-minute periods) should only be used where it can be demonstrated that only one significant event occurs in each reporting period. It may be necessary to use the sound level trace to verify when individual events have occurred. It is important that assessment of  $L_{AFmax}$  events covers enough time to gain a representative picture of the typical level and regularity of such events.

Expectation №6

**Where it is necessary, despite good acoustic design, to rely on closed windows to achieve noise standards there must be a suitable alternative means of ventilation to adequately control excess heat in the summer months.**

**Such ventilation must be adequate for purpose, and prevent the opening of affected windows for long periods, thus exposing the occupants to unacceptable levels of noise.**

BS8233:2014 gives further advice on sound insulation and noise reduction for buildings. Where transportation noise affects schools, the requirements of Department for Education Building Bulletin 93 'BB93: Acoustic design of schools - performance standards' should be followed.

Transportation can also be a source of vibration; in particular railways. Where there is a risk that a development may lead to adverse effects from vibration (either through creating a new vibration source or more commonly through placing sensitive receptors close to existing vibration sources), a vibration assessment will be required. The following standard should be achieved:

Expectation №7

**All developments must be designed to ensure that habitable rooms in the residential element of the development are not exposed to vibration dose values (VDV) in excess of;**

**Night-time (07:00-23:00) - 0.13 mm/s**

Where assessment shows that habitable rooms will be exposed to unacceptable levels of vibration, expert advice should be sought on vibration mitigation measures and proposals submitted in advance of determination of the application.

## Good Acoustic Building Design

The NPPG guidance on design states:

*‘Good quality design is an integral part of sustainable development. The National Planning Policy Framework recognises that design quality matters and that planning should drive up standards across all forms of development. As a core planning principle, plan-makers and decision takers should always seek to secure high quality design.’*

*‘Local planning authorities are required to take design into consideration and should refuse permission for development of poor design.’*

It is therefore essential that developments use good acoustic design to achieve internal sound standards as far as is reasonably practicable. In order to do this successfully noise and vibration must always be considered at the initial design stage.

If noise and vibration are only considered after site and building plans have been finalised (for example when specifying performance requirements of the building envelope), then the development is very unlikely to comply with the requirements of planning policy.

Good acoustic design will include:

- Location of buildings on the site to minimise noise exposure (this will include maximising separation of noise sources and sensitive receptors and use of buildings or topography to screen noise)
- Layout of habitable rooms within buildings to reduce noise exposure to more noise-sensitive rooms
- Ensuring dwellings exposed to high noise levels are dual aspect to provide each unit with access to a relatively quiet façade when possible
- Access to relatively quiet external amenity space
- Measures to reduce noise at source and/or on the transmission path where possible
- Design and insulation of the building envelope

Such measures should always be implemented in preference to sole reliance on insulation of the building envelope. In cases where the methods above would be effective in reducing noise exposure, relying only on sound insulation of the building envelope will not be regarded as good acoustic design. Such an approach leads to unsatisfactory development where dwellings are unnecessarily sealed from their environment and provide relatively poor amenity.



Expectation №8

**It is important that developers demonstrate good acoustic design, instead of reliance on insulation provided by the building's facade, to achieve internal noise standards**

**Where good acoustic design principles are not applied, a development does not comply with the NPPF even if internal standards are achieved.**

It is expected that the IOA's professional practice guidance on Planning and Noise is followed for all new developments: <http://www.ioa.org.uk/publications/propg>

## Internal transference of noise within buildings

Approved Document E of the Building Regulations 2010 details legal standards for buildings for resistance to the passage of sound. In addition to the Regulation requirements, Part E states:

*'The performance standards set out in tables 1a and 1b are appropriate for walls, floors and stairs that separate spaces used for normal domestic purposes. A higher standard of sound insulation may be required between spaces used for normal domestic purposes and communal or non-domestic purposes. In these situations the appropriate level of sound insulation will depend on the noise generated in the communal or non-domestic space. Specialist advice may be needed to determine if a higher standard of sound insulation is required, and, if so to determine the appropriate level.'*

It is necessary to submit an assessment of internal sound transference for any development which includes domestic spaces adjacent to non-domestic or commercial uses. It is also necessary to submit an assessment of internal sound transference for any development which may increase noise impacts in existing multi-use buildings. Some examples of where an assessment would be required are:

- A new development incorporating an A4 bar on the ground floor and residential flats above
- Conversion of an existing ground floor A1 shop to an A3 restaurant where there is an existing residential flat above
- Conversion of an office sharing a party wall with a light industrial use into a residential dwelling
- Any situation where an assessment is required as a result of other standards (such as BB93 acoustic standards for schools)

Expectation №9

**Habitable rooms within a development sharing a party ceiling/floor element with commercial premises shall be designed and constructed to provide reasonable resistance to the transmission of sound sufficient to ensure that noise due to the commercial premises does not exceed noise rating curve NR20 when measured as an L<sub>10</sub> across any 5 minute period.**

In some cases an airborne sound insulation standard will be specified rather than requiring compliance with a noise rating criterion. In such cases the standards will usually be as follows:

Expectation №10

Party walls/floors/ceilings between commercial premises and residential dwellings should achieve the following minimum airborne sound insulation weighted standardised level difference:

- For A4 premises, D1\D2 premises such as places of worship, concert halls, community space for hire or B2\B8 industrial premises, standards will be judged on a case by case basis depending on the exact nature of the use. Greater than 60dB  $D_{nT,w} + C_{tr}$  is likely to be necessary.
- For A3/A5 premises or large A1 cafes, shops and supermarkets: At least 55dB  $D_{nT,w} + C_{tr}$
- For small A1 café or shop: At least 50dB  $D_{nT,w} + C_{tr}$

It is essential that realistic source levels are used when assessing commercial uses, and any supplied levels must be fully evidenced and supported, as detailed in the *Standards expected of noise consultants*.  $L_{AFmax}$  levels may also be relevant.

Some typical levels are;

Use	Typical internal noise level
Public house/bar with no music	88dB $L_{Aeq}$
Public House/bar with live/recorded music	95dB $L_{Aeq}$
Nightclub dance floor	Up to 105dB $L_{Aeq}$
Restaurant with busy dining area and no music	80-85dB $L_{Aeq}$
Restaurant kitchen	80-90dB $L_{Aeq}$ 95 dB $L_{AFmax}$

*\*taken from NANR92 and Achutan C. 'Assessment of Noise Exposure in a Hospital Kitchen'.*

Where commercial uses are placed above residential dwellings, an impact sound insulation limit will also be specified. These will be determined on a case-by-case basis and in such cases specialist advice and assessment will be necessary.

In most cases sound insulation can be improved by installing secondary ceilings and floors separated by a gap from existing and structurally isolated by resilient acoustic mounts. Use of layers of high density plasterboard with staggered joints can provide the necessary mass. Workmanship in installation is crucial to avoid gaps where boards join or around edges and care must be taken to retain structural isolation and prevent structural or flanking sound transmission. Works should be specified and actively supervised by a suitably qualified acoustic consultant.

Building Regulations 2010 Approved Document E and BS8233:2014 provide further details on sound insulation.

Expectation №11

**In situations considered particularly sensitive, post construction validation testing will be required to demonstrate that standards are met. Testing should be fully in accordance with the methodology of BS EN ISO 16283-1:2014+A1:2017 (for airborne sound) and BS EN ISO 16283-2:2018 (for impact sound).**

## Noise from Entertainment and Leisure Venues

Careful consideration should be given, when proposing a new entertainment or leisure venue, to issues such as the proximity of noise sensitive properties and the noise mitigation required to render the development acceptable. This includes both noise emanating from within the building, but also from patrons using outside areas.

Furthermore, extreme caution should be applied to change of use applications relating to listed buildings, where the buildings fabric may not lend itself to such use classes. In some cases the works required to the building, including sound insulation upgrades, façade insulation, and the proximity to residential properties may mean that the development is not viable due to the work being unacceptable from a conservation status, unacceptable from a noise perspective, or simply unviable due to the increased expense associated with upgrading an historic building. In some cases stringent conditions may be necessary, such as prohibition of live/recorded music, which may affect the proposed development.

Where developments incorporate entertainment venues such as public houses, bars, nightclubs, sports venues, leisure venues, performance spaces etc. an acoustic assessment must be submitted to detail the impact of this on sensitive receptors. An acoustic assessment would also be necessary in the case of placing new sensitive receptors where they may be affected by noise from existing entertainment and leisure venues.

The assessment should include measurement of the background sound level at times appropriate to the operation of the premises; identification of sensitive receptors; and prediction of the specific noise level from the venue at the façade (and in external amenity areas where appropriate).

Noise from entertainment venues may include amplified sound, music, PA systems, and noise from people drinking or smoking outside and dispersing from the premises.

The IOA '*Good Practice Guide on the Control of Noise from Pubs and Clubs*' states that for premises where entertainment takes place on a regular basis, music and associated sources should not be audible inside noise-sensitive properties at any time. For premises where entertainment takes place less frequently, music and associated sources should not be audible inside noise-sensitive properties between 2300-0700hrs. For other times the following should be achieved:

### Expectation №13

**For new entertainment premises the  $L_{Fmax}$  sound from amplified and non-amplified music and speech shall not exceed the lowest  $L_{90(5min)}$ , 1m from the facade of any sensitive receptor in all third octave bands between 63Hz and 8 kHz.**

Noise from people in beer gardens, terraces and other outdoor areas of licensed premises can cause significant disruption to residents.

Where applications include outdoor areas (or changes to outdoor areas) an assessment of noise impact may be required.

Outdoor areas of licensed premises may be considered unacceptable in principle in some cases, depending on the level of impact. In other cases conditions may be imposed by the LPA to mitigate and minimise impact. Such conditions may cover:

- Design (including location, barriers, absorption)
- Hours of use – the IOA ‘*Good Practice Guide on the Control of Noise from Pubs and Clubs*’ states that use of gardens and external play areas should not commence before the start of normal trading and should normally cease at dusk or at 2100hrs
- Capacity
- How the area is used and managed

Details of what an assessment should cover can be found in the [Other Noise Sources](#) section of this guidance

Where entertainment venues are located alongside sensitive receptors in mixed-use buildings, unacceptable impacts on residential amenity from internal or structure-borne noise must be avoided.

Expectation №14

**All new residential units shall be designed to ensure that the internal noise levels shown below are not exceeded as a result of entertainment noise. Predictions and measurements should be made inside the relevant residential units with windows and doors closed.**

**L<sub>Aeq</sub> (5 minute) 27dB**

When locating sensitive uses near to entertainment venues it is essential to use good acoustic design to minimise noise impact. See the [Good Acoustic Building Design](#) section of this guidance for further information.

More information and practical and management advice on controlling noise at source from entertainment venues can be found via;

- The British Beer and Pub Associations  
‘*Effective Management of Noise from Licensed Premises*’
- The Institute of Acoustics  
‘*Good Practice Guide on the Control of Noise from Pubs and Clubs*’

## Construction Noise and Vibration

Construction and demolition sites are a source of complaint to the Local Authority.

Where development is considered to be a major site or may have significant impact on the local area during the construction phase, submission of a Construction Environmental Management Plan (CEMP) will be required.

### Expectation №15

**The CEMP shall oblige the applicant, developer and contractors to commit to current best practice with regard to construction site management and to use all best endeavours to minimise off-site impacts, and will include the following information:**

- **Confirmation of working hours for any works audible outside the site boundary, which are expected to be**

**Monday-Friday 0800-1800hrs,  
Saturday 0800-1300hrs,  
No working on Sundays or Bank Holidays**

**With the exception of emergency works, or works that are unavoidable and in line with best practice.**

- **Details of works activities to be conducted**
- **Noise monitoring**
- **Mitigation measures to be applied, which may include measures such as; hydrogen floodlighting, 'silent' generators, acoustic screening/hoarding, location of specific activities, limiting noisy activities to the core of the working day, and similar.**
- **Arrangements for a site management contact for nearby occupiers during demolition and/or construction. This may include measures such as resident newsletters and site signage.**
- **A commitment to adopt and implement the Considerate Contractor Scheme**

Where a CEMP is required through the planning process it will relate to factors beyond just noise. For example, site waste management, air quality and emissions, dust management, site contamination and other issues. The above standard relates only to the noise aspects of a CEMP and is therefore not an exhaustive list of likely requirements.

Further information is available from the following sources:

- S61 of Control of Pollution Act 1974,

- BS 5228-1:2009+A1:2014 'Code of practice for noise and vibration control on construction and open sites',
- BS 7385-2:1993 Evaluation and measurement for vibration in buildings. Guide to damage levels from ground-borne vibration,
- BS 6472-1:2008 'Guide to evaluation of human exposure to vibration in buildings - vibration sources other than blasting,
- Relevant CIRIA practice notes, and
- BRE practice notes.

Whilst best practicable means must be used at all times in the control of noise from construction sites it is recognised that construction sometimes involves high noise levels. In such cases the following parameters should be used:

<u>Expectation №16</u>		
<b>Parameter</b>	<b>Trigger (Amber)</b>	<b>Action (Red)</b>
<b>Environmental Noise Unit – dB(A)</b>	<b>75 dB LAeq 5min (short term)</b>	<b>80 dB LAeq 5min</b>
	<b>70 dB LAeq 10hr (daily)</b>	<b>75 dB LAeq 10hr (daily)</b>
<b>Vibration</b>	<b>1mm/s PPV for occupied residential and educational buildings</b>  <b>3mm/s PPV for occupied commercial premises where work is not of an especially vibration sensitive nature or for potentially vulnerable unoccupied buildings</b>  <b>5mm/s PPV for other unoccupied buildings</b>	
<b>Hoardings</b>	<b>Min height 2.3m</b> <b>Min density 7Kg/m2</b>	

Trigger levels can give advanced warning of a potential problem whilst action levels indicate a need to reduce noise or stop works.



Significant programmed/expected work required outside the standard site hours may require permission from the Environmental Protection Service under S61 of the Control of Pollution Act 1974 (e.g. regular extensions for set-up and clean down periods, extended concrete pours, the delivery and collection of abnormal loads, etc.). Please contact [epcomplaints@ashford.gov.uk](mailto:epcomplaints@ashford.gov.uk) with details of the project for further advice on prior consents.

## Noise from Servicing Commercial Uses

Noise from servicing of commercial uses can cause complaints. This is particularly problematic where servicing takes place at night or in the late evenings or early mornings.

The following standards apply:

Expectation №17

**Deliveries or collections to commercial units shall only be between the following hours:**

**08.00-20.00hrs Monday to Saturday  
10.00-16.00hrs Sundays and Bank Holidays**

In some cases it may be possible to agree variations to these times to allow for greater flexibility for the site. This will depend on the number and scale of deliveries, the context of the application and the character of the area.

Any variation to these standards will be assessed individually where suitable information can be submitted to demonstrate that deliveries and collections will not cause disturbance to nearby sensitive receptors.

Where there is doubt over the impact it is necessary to submit a full acoustic assessment to examine this.

Expectation №18

**For larger commercial uses or in areas of particular sensitivity a service management plan shall be submitted detailing how all elements of the site are to be serviced and the controls and mitigations that will be put in place.**

Full details of good practice, principles and processes for 'quiet deliveries' including practical advice and sector-specific guidance can be found via:

<https://www.gov.uk/government/publications/quiet-deliveries-demonstration-scheme>

## Other Noise Sources

(children's playgrounds/nurseries, MUGAs, beer gardens etc.)

There are various noise sources which do not fall into the specific categories previously described in this guidance and/or which are not covered by existing recognised standards.

Any noise source that may affect sensitive receptors should be assessed as part of a planning application.

Examples would include new car parks, children's play in playgrounds and nursery play areas, multi-use games areas, skate parks, etc.

### Expectation №19

**Where no relevant standards exist to guide an acoustic assessment, the assessment should include:**

- **Comprehensive measurement of examples of the noise source from existing sites operating elsewhere. Stock data shall only be accepted where full details of how, where and when it was obtained are provided.**
- **Comparison and verification of measured data against existing data sources where possible (e.g. from scientific literature or international standards)**
- **Assessment of the existing background level at the receptor location**
- **Calculation of the predicted specific noise level at the façade, gardens and amenity areas of sensitive receptors, based on relevant obtained data**
- **Comparison of noise levels to relevant general standards such as WHO standards, BS8233:2014, and other relevant guidance.**
- **Full consideration of the impact of  $L_{AFmax}$  noise (for example from door slams, ball strikes, shouts or whistles)**
- **Consideration of the character and nature of the noise, and whether this may exacerbate the impact on amenity**
- **Full consideration and reporting of assessment uncertainty**

As there are no specific standards governing how to assess irregular noise sources, extra care should be taken to ensure that source data and predictions are sufficiently robust and the assessment should be open and clear in respect of the level of uncertainty attached to the conclusions.

In the case of placing new sensitive receptors where they may be affected by existing noise sources such as the above, assessment should follow the same principles as above however the source data should be based on maximum typical existing

(measured) noise levels from the sites, accounting for reasonable future changes in intensity of use.

Where significant adverse impacts are identified as a result of the assessment the application is likely to be refused. Other adverse effects should be mitigated and minimised as far as possible. Mitigation may involve measures to reduce the noise at source, such as anti-rattle fencing on MUGAs, or measures to reduce or prevent transmission of sound, such as acoustic fencing around a playground or car park.

Noise management measures can be crucial for mitigating behavioural noise sources. It is not always possible to specify sufficiently enforceable or precise noise management measures to form the basis of a reasonable planning condition. In such cases a recommendation for refusal of permission will be made. Where it is judged that specific, precise, reasonable and enforceable noise management measures can be detailed, a condition can be recommended to the Planning Department to cover this requiring an enforceable noise management plan.

Expectation №20

**In cases where ongoing noise management and control is considered particularly important, a noise management plan (detailing controls and mitigations) will be required.**

## Quiet Areas and Places of Relative Tranquillity

The NPPF requires that Local Planning Authorities 'identify and protect areas of tranquillity which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.'

The NPPG states:

*'There are no precise rules, but for an area to be protected for its tranquillity it is likely to be relatively undisturbed by noise from human caused sources that undermine the intrinsic character of the area. Such areas are likely to be already valued for their tranquillity, including the ability to perceive and enjoy the natural soundscape, and are quite likely to be seen as special for other reasons including their landscape.'*

Where applications are received that may adversely affect any spaces prized for relative tranquillity, an assessment of noise impact will be expected.

Where possible, developments will be expected to contribute to the improvement of health and quality of life by creating new quiet spaces and areas of tranquillity or contributing to improvement of existing spaces.

The following are some examples of design good design that can help to reduce noise impact and improve relative tranquillity:

- Using building locations and site layout to form barriers and reduce noise
- Using other physical barriers or ground level changes to provide shielding from noise sources such as roads
- Green walls to reduce noise reflection
- Planting of trees and shrubs
- Plants and ground greening to reduce reflection and encourage wildlife

## **Noise Standards in Applications for Prior Consent for Permitted Development**

Details of when noise is a consideration for permitted development applications were given in the [Permitted Development Rights](#) section of this guidance.

In such cases noise must be assessed exactly as it would in a full planning application, as detailed in the [Technical Standards and Guidance](#) section of this guidance.

The Environmental Protection team will apply the same acoustic standards detailed in this guidance to such applications, as far as they are relevant and applicable under the Order.

## **Appendix A: Glossary**

<b>Term</b>	<b>Definition</b>
<b>dB</b>	Decibel. Decibels are not an absolute unit of measurement; they logarithmically express a ratio between two quantities. In this guidance dB refers to Decibels of Sound Pressure relative to a reference value of $2 \times 10^{-5}$ pascals.
<b><math>D_{nT,w} + C_{tr}</math></b>	Weighted standardized level difference (dB). $C_{tr}$ refers to the spectral adaption term. Used for measuring airborne sound insulation in buildings.
<b><math>L_{Aeq}</math></b>	A-weighted equivalent continuous noise level. A single sound level with the same energy content over a given time period as the varying acoustic signal measured
<b><math>L_{AFmax}</math></b>	A-weighted, fast, maximum, root mean squared (RMS) sound level.
<b><math>L_{10}</math></b>	A statistical noise measure to show the noise level exceeded for 10% of the measurement period.
<b><math>L_{90}</math></b>	A statistical noise measure to show the noise level exceeded for 90% of the measurement period.
<b><math>L_{den}</math></b>	The equivalent continuous noise level over a whole 24-hour period, but with noise in the evening (19:00 to 23:00) increased by 5 dB(A) and noise at night (23:00 to 07:00) increased by 10 dB(A) to reflect the greater noise-sensitivity of people at those times.
<b><math>L_{night}</math></b>	The equivalent continuous noise level over the night-time period (23:00 to 07:00). $L_{night}$ does not contain any night-time noise weighting.
<b><math>L_{nT,w}</math></b>	Weighted standardised impact sound pressure level. Used for measuring impact sound insulation in buildings.
<b>NR</b>	Noise Rating Curves. A method for rating the acceptability of indoor environments for the purposes of hearing preservation, speech communication and annoyance, based on curves developed by Kosten and van Os (1962).
<b>PPV</b>	Peak Particle Velocity. A measure of vibration primarily used for assessing risk to building damage. The greatest instantaneous particle velocity during a given time interval.
<b>Sensitive Receptor</b>	Any receptor that may be adversely affected by the noise or vibration in question. In most cases this would refer to residential dwellings, schools, hospitals etc. but may also refer to sites which may be adversely affected for other reasons (for example containing equipment sensitive to noise or vibration).

**VDV**

Vibration Dose Value. A cumulative measurement of the vibration level received over an 8-hour or 16-hour period, commonly used for assessing human annoyance response to vibration.



## **Appendix B: Abbreviations**

<b>Abbreviation</b>	<b>Meaning</b>
<b>ABC</b>	Ashford Borough Council
<b>CEMP</b>	Construction Environmental Management Plan
<b>EP</b>	Environmental Protection Service
<b>GPDO</b>	General Permitted Development Order
<b>LOAEL</b>	Lowest Observed Adverse Effect Level
<b>LPA</b>	Local Planning Authority
<b>MUGA</b>	Multi Use Games Area
<b>NOEL</b>	No Observed Effect Level
<b>NPPF</b>	National Planning Policy Framework
<b>NPPG</b>	National Planning Practice Guidance
<b>NPSE</b>	Noise Policy Statement for England
<b>SOAEL</b>	Significant Observed Adverse Effect Level