

Guidance

Noise

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Noise

Paragraph: 001 Reference ID: 30-001-20140306

When is noise relevant to planning?

Noise needs to be considered when new developments may create additional noise and when new developments would be sensitive to the prevailing acoustic environment. When preparing local or neighbourhood plans, or taking decisions about new development, there may also be opportunities to consider improvements to the acoustic environment.

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Related policy

National Planning Policy Framework

- Paragraph 123 (http://planningguidance.planningportal.gov.uk/blog/policy/achieving-sustainable-development/delivering-sustainable-development/11-conserving-and-enhancing-the-natural-environment/#paragraph_123)

Paragraph: 002 Reference ID: 30-002-20140306

Can noise override other planning concerns?

It can, but neither the Noise Policy Statement for England  (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69533/pb13750-noise-policy.pdf) nor the National Planning Policy Framework (which reflects the Noise Policy Statement) expects noise to be considered in isolation, separately from the economic, social and other environmental dimensions of proposed development.

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Paragraph: 003 Reference ID: 30-003-20140306

How to determine the noise impact?

Local planning authorities' plan-making and decision taking should take account of the acoustic environment and in doing so consider:

- whether or not a significant adverse effect is occurring or likely to occur;
- whether or not an adverse effect is occurring or likely to occur; and
- whether or not a good standard of amenity can be achieved.

In line with the Explanatory Note of the Noise Policy Statement for England, this would include identifying whether the overall effect of the noise exposure (including the impact during the construction phase wherever applicable) is, or would be, above or below the significant observed adverse effect level and the lowest observed adverse effect level for the given situation. As noise is a complex technical issue, it may be appropriate to seek experienced specialist assistance when applying this policy.

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Paragraph: 004 Reference ID: 30-004-20140306

Observed Effect Levels

- **Significant observed adverse effect level:** This is the level of noise exposure above which significant adverse effects on health and quality of life occur.
- **Lowest observed adverse effect level:** this is the level of noise exposure above which adverse effects on health and quality of life can be detected.
- **No observed effect level:** this is the level of noise exposure below which no effect at all on health or quality of life can be detected.

See Explanatory Note to the Noise Policy Statement [\[X\]](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69533/pb13750-noise-policy.pdf) (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69533/pb13750-noise-policy.pdf) for England for further information.

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Paragraph: 005 Reference ID: 30-005-20140306

How to recognise when noise could be a concern?

At the lowest extreme, when noise is not noticeable, there is by definition no effect. As the noise exposure increases, it will cross the no observed effect level as it becomes noticeable. However, the noise has no adverse effect so long as the exposure is such that it does not cause any change in behaviour or attitude. The noise can slightly affect the acoustic character of an area but not to the extent there is a perceived change in quality of life. If the noise exposure is at this level no specific measures are required to manage the acoustic environment.

As the exposure increases further, it crosses the lowest observed adverse effect level boundary above which the noise starts to cause small changes in behaviour and attitude, for example, having to turn up the volume on the television or needing to speak more loudly to be heard. The noise therefore starts to have an adverse effect and consideration needs to be given to mitigating and minimising those effects (taking account of the economic and social benefits being derived from the activity causing the noise).

Increasing noise exposure will at some point cause the significant observed adverse effect level boundary to be crossed. Above this level the noise causes a material change in behaviour such as keeping windows closed for most of the time or avoiding certain activities during periods when the noise is present. If the exposure is above this level the planning process should be used to avoid this effect occurring, by use of appropriate mitigation such as by altering the design and layout. Such decisions must be made taking account of the economic and social benefit of the activity causing the noise, but it is undesirable for such exposure to be caused.

At the highest extreme, noise exposure would cause extensive and sustained changes in behaviour without an ability to mitigate the effect of noise. The impacts on health and quality of life are such that regardless of the benefits of the activity causing the noise, this situation should be prevented from occurring.

This table summarises the noise exposure hierarchy, based on the likely average response.

			Action
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Perception	Examples of Outcomes	Increasing Effect Level	
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
		Lowest Observed Adverse Effect Level	
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
		Significant Observed Adverse Effect Level	
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

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Paragraph: 006 Reference ID: 30-006-20140306

What factors influence whether noise could be a concern?

The subjective nature of noise means that there is not a simple relationship between noise levels and the impact on those affected. This will depend on how various factors combine in any particular situation.

These factors include:

- the source and absolute level of the noise together with the time of day it occurs. Some types and level of noise will cause a greater adverse effect at night than if they occurred during the day – this is because people tend to be more sensitive to noise at night as they are trying to sleep. The adverse effect can also be greater simply because there is less background noise at night;
- for non-continuous sources of noise, the number of noise events, and the frequency and pattern of occurrence of the noise;
- the spectral content of the noise (ie whether or not the noise contains particular high or low frequency content) and the general character of the noise (ie whether or not the noise contains particular tonal characteristics or other particular features). The local topology and topography should also be taken into account along with the existing and, where appropriate, the planned character of the area.

More specific factors to consider when relevant:

- where applicable, the cumulative impacts of more than one source should be taken into account along with the extent to which the source of noise is intermittent and of limited duration;
- consideration should also be given to whether adverse internal effects can be completely removed by closing windows and, in the case of new residential development, if the proposed mitigation relies on windows being kept closed most of the time. In both cases a suitable alternative means of ventilation is likely to be necessary. Further information on ventilation can be found in the Building Regulations.
- In cases where existing noise sensitive locations already experience high noise levels, a development that is expected to cause even a small increase in the overall noise level may result in a significant adverse effect occurring even though little to no change in behaviour would be likely to occur.
- Where relevant, Noise Action Plans, and, in particular the Important Areas identified through the process associated with the Environmental Noise Directive and corresponding regulations should be taken into account. Defra's website has information on Noise Action Plans and Important Areas [\[2\]](http://archive.defra.gov.uk/environment/quality/noise/environment/actionplan/locations.htm) (<http://archive.defra.gov.uk/environment/quality/noise/environment/actionplan/locations.htm>). Local authority environmental health departments will also be able to provide information about Important Areas.
- The effect of noise on wildlife. Noise can adversely affect wildlife and ecosystems. Further information may be found on Defra's website [\[3\]](http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=18136&FromSearch=Y&Publisher=1&SearchText=effects) (<http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=18136&FromSearch=Y&Publisher=1&SearchText=effects>). Particular consideration should be given to noisy development affecting designated sites (http://planningguidance.planningportal.gov.uk/blog/guidance/natural-environment/biodiversity-ecosystems-and-green-infrastructure/#paragraph_011).
- 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.
- The potential effect on an existing business of a new residential development being located close to it should be carefully considered as the existing noise levels from the business may be regarded as unacceptable by the new residents and subject to enforcement action. In the case of an established business, the policy set out in the third bullet of paragraph 123 (http://planningguidance.planningportal.gov.uk/blog/policy/achieving-sustainable-development/delivering-sustainable-development/11-conserving-and-enhancing-the-natural-environment/#paragraph_123) of the Framework should be followed.
- Some commercial developments including fast food restaurants, night clubs and public houses can have particular impacts, not least because activities are often at their peak in the evening and late at

night. Local planning authorities will wish to bear in mind not only the noise that is generated within the premises but also the noise that may be made by customers in the vicinity.

When proposed developments could include activities that would be covered by the licensing regime, local planning authorities should consider whether the potential for adverse noise impacts will be addressed through licensing controls (including licence conditions [\[1\]](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/98101/guidance-section-182-licensing.pdf) (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/98101/guidance-section-182-licensing.pdf)). Local planning authorities should not however presume that licence conditions will provide for noise management in all instances and should liaise with the licensing authority.

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Related policy

National Planning Policy Framework

- Paragraph 123 (http://planningguidance.planningportal.gov.uk/blog/policy/achieving-sustainable-development/delivering-sustainable-development/11-conserving-and-enhancing-the-natural-environment/#paragraph_123) (Bullet 3 (http://planningguidance.planningportal.gov.uk/blog/policy/achieving-sustainable-development/delivering-sustainable-development/11-conserving-and-enhancing-the-natural-environment/#paragraph_123))

Paragraph: 007 Reference ID: 30-007-20140306

Enforcement action against a statutory nuisance

Noise can constitute a statutory nuisance and is subject to the provisions of the Environmental Protection Act 1990 and other relevant law where relevant. This includes noise affecting balconies and gardens.

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Paragraph: 008 Reference ID: 30-008-20140306

How can the adverse effects of noise be mitigated?

This will depend on the type of development being considered and the character of the proposed location. In general, for noise making developments, there are four broad types of mitigation:

- **engineering:** reducing the noise generated at source and/or containing the noise generated;
- **layout:** where possible, optimising the distance between the source and noise-sensitive receptors and/or incorporating good design to minimise noise transmission through the use of screening by natural or purpose built barriers, or other buildings;
- **using planning conditions/obligations** to restrict activities allowed on the site at certain times and/or specifying permissible noise levels differentiating as appropriate between different times of day, such as evenings and late at night, and;
- **mitigating** the impact on areas likely to be affected by noise including through noise insulation when the impact is on a building.

For noise sensitive developments mitigation measures can include avoiding noisy locations; designing the development to reduce the impact of noise from the local environment; including noise barriers; and, optimising the sound insulation provided by the building envelope. Care should be taken when considering mitigation to ensure the envisaged measures do not make for an unsatisfactory development (see the guidance on design (<http://planningguidance.planningportal.gov.uk/blog/guidance/design/>) for more information).

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Are there further considerations relating to mitigating the impact of noise on residential developments?

Yes – the noise impact may be partially off-set if the residents of those dwellings have access to:

- a relatively quiet facade (containing windows to habitable rooms) as part of their dwelling, and/or;
- a relatively quiet external amenity space for their sole use, (e.g. a garden or balcony). Although the existence of a garden or balcony is generally desirable, the intended benefits will be reduced with increasing noise exposure and could be such that significant adverse effects occur, and/or;
- a relatively quiet, protected, nearby external amenity space for sole use by a limited group of residents as part of the amenity of their dwellings, and/or;
- a relatively quiet, protected, external publically accessible amenity space (e.g. a public park or a local green space designated because of its tranquillity) that is nearby (e.g. within a 5 minutes walking distance).

The management of the noise associated with particular development types is considered in the following documents:

- Mineral extraction – National Planning Practice Guidance: Minerals (<http://planningguidance.planningportal.gov.uk/blog/guidance/minerals/>);
- Aircraft noise – Aviation Policy Framework [\[X\]](https://www.gov.uk/government/publications/aviation-policy-framework) (<https://www.gov.uk/government/publications/aviation-policy-framework>);
- Wind turbines – National Planning Practice Guidance for Renewable and low carbon energy (<http://planningguidance.planningportal.gov.uk/blog/guidance/renewable-and-low-carbon-energy/>) including ETSU R 97 [\[X\]](https://whitehall-admin.production.alpha.gov.co.uk/government/uploads/system/uploads/attachment_data/file/49869/ETSU_Full_copy_Searchable_.pdf) (https://whitehall-admin.production.alpha.gov.co.uk/government/uploads/system/uploads/attachment_data/file/49869/ETSU_Full_copy_Searchable_.pdf);
- The National Policy Statements for Energy, Renewable Energy, Ports, Hazardous Waste and Waste Water [\[X\]](http://infrastructure.planningportal.gov.uk/legislation-and-advice/national-policy-statements) (<http://infrastructure.planningportal.gov.uk/legislation-and-advice/national-policy-statements>).

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Can Local Plans include noise standards?

Yes, local planning authorities working with local communities and business may decide to develop and include in their Local Plans specific standards to apply to various forms of proposed development and locations in their area. Care should be taken, however, to avoid these being implemented as fixed thresholds as specific circumstances may justify some variation being allowed. Noise standards developed through Local Plans only need be concerned with the management of noise to and from the local environment (with the exception of teaching and learning spaces within schools where external noise is also a consideration in building regulations [\[X\]](http://www.planningportal.gov.uk/uploads/br/BR_PDF_AD_E_2010.pdf) (http://www.planningportal.gov.uk/uploads/br/BR_PDF_AD_E_2010.pdf)).

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Are noise concerns relevant to neighbourhood planning?

Noise concerns can be relevant to neighbourhood planning, and it is important to consider potential changes in the acoustic environment when drawing up a neighbourhood plan or considering a neighbourhood development order. The local planning and environmental health departments will be able to advise whether noise could be a concern.

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Paragraph: 012 Reference ID: 30-012-20140306

What factors are relevant to identifying areas of tranquillity?

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.

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