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Guidance

Noise

Advises on how planning can manage potential noise impacts in new development.

From: [Department for Levelling Up, Housing and Communities \(/government/organisations/department-for-levelling-up-housing-and-communities\)](#) and [Ministry of Housing, Communities & Local Government \(/government/organisations/ministry-of-housing-communities-and-local-government\)](#)

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This guidance has been updated see [previous version \(/https://webarchive.nationalarchives.gov.uk/ukgwa/20190607100418/https://www.gov.uk/guidance/noise--2\)](#).

Noise

When is noise relevant to planning?

Related content

[Noise policy statement for England \(/government/publications/noise-policy-statement-for-england\)](#)

Noise needs to be considered when development may create additional noise, or would be sensitive to the prevailing acoustic environment (including any anticipated changes to that environment from activities that are permitted but not yet commenced). When preparing plans, or taking decisions about new development, there may also be opportunities to make improvements to the acoustic environment. Good acoustic design needs to be considered early in the planning process to ensure that the most appropriate and cost-effective solutions are identified from the outset.

Related policy: [paragraph 170e](#)

[\(/https://www.gov.uk/guidance/national-planning-policy-framework/15-conserving-and-enhancing-the-natural-environment#para170e\)](https://www.gov.uk/guidance/national-planning-policy-framework/15-conserving-and-enhancing-the-natural-environment#para170e), [paragraph 180a](#)

[\(/https://www.gov.uk/guidance/national-planning-policy-framework/15-conserving-and-enhancing-the-natural-environment#para180a\)](https://www.gov.uk/guidance/national-planning-policy-framework/15-conserving-and-enhancing-the-natural-environment#para180a), [paragraph 180b](#)

[\(/https://www.gov.uk/guidance/national-planning-policy-framework/15-conserving-and-enhancing-the-natural-environment#para180b\)](https://www.gov.uk/guidance/national-planning-policy-framework/15-conserving-and-enhancing-the-natural-environment#para180b), [paragraph 182](#)

[\(/https://www.gov.uk/guidance/national-planning-policy-framework/15-conserving-and-enhancing-the-natural-environment#para182\)](https://www.gov.uk/guidance/national-planning-policy-framework/15-conserving-and-enhancing-the-natural-environment#para182)

Paragraph: 001 Reference ID: 30-001-20190722

Revision date: 22 07 2019

Can noise override other planning concerns?

It can, where justified, although it is important to look at noise in the context of the wider characteristics of a development proposal, its likely users and its surroundings, as these can have an important effect on whether noise is likely to pose a concern.

Paragraph: 002 Reference ID: 30-002-20190722

Revision date: 22 07 2019

How can noise impacts be determined?

Plan-making and decision making need to take account of the acoustic environment and in doing

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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](https://www.gov.uk/government/publications/noise-policy-statement-for-england) (<https://www.gov.uk/government/publications/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.

Paragraph: 003 Reference ID: 30-003-20190722

Revision date: 22 07 2019

What are the 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.

Although the word 'level' is used here, this does not mean that the effects can only be defined in terms of a single value of noise exposure. In some circumstances adverse effects are defined in terms of a combination of more than one factor such as noise exposure, the number of occurrences of the

noise in a given time period, the duration of the noise and the time of day the noise occurs.

See [the noise policy statement for England \(https://www.gov.uk/government/publications/noise-policy-statement-for-england\)](https://www.gov.uk/government/publications/noise-policy-statement-for-england) for further information.

Paragraph: 004 Reference ID: 30-004-20190722

Revision date: 22 07 2019

How can it be established whether noise is likely to be a concern?

At the lowest extreme, when noise is not perceived to be present, there is by definition no effect. As the noise exposure increases, it will cross the 'no observed effect' level. However, the noise has no adverse effect so long as the exposure does not cause any change in behaviour, attitude or other physiological responses of those affected by it. The noise may slightly affect the acoustic character of an area but not to the extent there is a 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 predicted to be above this level the planning process should be used to avoid this effect occurring, for example

through the choice of sites at the plan-making stage, or by use of appropriate mitigation such as by altering the design and layout. While such decisions must be made taking account of the economic and social benefit of the activity causing or affected by the noise, it is undesirable for such exposure to be caused.

At the highest extreme, noise exposure would cause extensive and sustained adverse changes in behaviour and / or health without an ability to mitigate the effect of the 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 avoided.

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

Paragraph: 005 Reference ID: 30-005-20190722

Revision date: 22 07 2019

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 a new noise making source, how the noise from it relates to the existing sound environment;
- 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 (i.e. whether or not the noise contains particular high or low frequency content) and the general character of the noise (i.e. whether or not the noise contains particular tonal characteristics or other particular features), and;
- the local arrangement of buildings, surfaces and green infrastructure, and the extent to which it reflects or absorbs noise.

More specific factors to consider when relevant include:

- the cumulative impacts of more than one source of noise;
- whether any 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 (and the effect this may have on living conditions). 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](https://www.gov.uk/government/publications/ventilation-approved-document-f) (<https://www.gov.uk/government/publications/ventilation-approved-document-f>).
- 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.
- Noise Action Plans (where these exist), 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](https://www.gov.uk/government/publications/noise-action-plans-large-urban-areas-roads-and-railways) (<https://www.gov.uk/government/publications/noise-action-plans-large-urban-areas-roads-and-railways>). Local authority environmental health departments will also be able to provide information about Important Areas.

- the effect of [noise on wildlife](https://randd.defra.gov.uk/ProjectDetails?ProjectID=18136&FromSearch=Y&Publisher=1&SearchText=effects) (<https://randd.defra.gov.uk/ProjectDetails?ProjectID=18136&FromSearch=Y&Publisher=1&SearchText=effects>). Noise can adversely affect wildlife and ecosystems. Particular consideration needs to be given to the potential effects of noisy development on international, national and locally designated sites of importance for biodiversity;
- where 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.
- some commercial developments including restaurants, hot food takeaways, 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 will need to consider whether the potential for adverse noise impacts will be addressed through licensing controls ([including licence conditions](https://www.gov.uk/government/publications/explanatory-memorandum-revised-guidance-issued-under-s-182-of-licensing-act-2003) (<https://www.gov.uk/government/publications/explanatory-memorandum-revised-guidance-issued-under-s-182-of-licensing-act-2003>)). 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.

Paragraph: 006 Reference ID: 30-006-20190722

Revision date: 22 07 2019

Can planning policies include noise standards?

Plans may include specific standards to apply to various forms of proposed development and locations in their area. Care should be taken, however, to avoid these being applied as rigid

thresholds, as specific circumstances may justify some variation being allowed.

Paragraph: 007 Reference ID: 30-007-20190722

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What factors are relevant if seeking to identify areas of tranquillity?

For an area to justify being protected for its tranquillity, it is likely to be relatively undisturbed by noise from human sources that undermine the intrinsic character of the area. It may, for example, provide a sense of peace and quiet or a positive soundscape where natural sounds such as birdsong or flowing water are more prominent than background noise, e.g. from transport.

Consideration may be given to how existing areas of tranquillity could be further enhanced through specific improvements in soundscape, landscape design (e.g. through the provision of green infrastructure) and/or access.

Paragraph: 008 Reference ID: 30-008-20190722

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How can the risk of conflict between new development and existing businesses or facilities be addressed?

Development proposed in the vicinity of existing businesses, community facilities or other activities may need to put suitable mitigation measures in place to avoid those activities having a significant adverse effect on residents or users of the proposed scheme.

In these circumstances the applicant (or 'agent of change') will need to clearly identify the effects of existing businesses that may cause a nuisance (including noise, but also dust, odours, vibration and other sources of pollution) and the likelihood that they could have a significant adverse effect on new residents/users. In doing so, the agent of change will need to take into account not only the