



DRAFT GUIDE TO NOISE CONTROL

Laois County Council

Planning & Transportation
Strategic Policy Committee



Forward Planning Section

Planning Department

For information in relation to applying for Pre-Planning or Planning Permission please visit www.laois.ie or contact the Planning Department on:



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Why do we need Noise Control Guidance?

Noise has become an important environmental nuisance in the European Union. The World Health Organisation has found that noise can be a significant public health issue, resulting in possible health effects including sleep disturbance, annoyance, cognitive impairment, mental health and wellbeing, cardiovascular diseases, hearing impairment and tinnitus and adverse birth outcomes.

The issue of noise needs to be considered in the design of new developments, particularly where new development may create additional noise or when development is proposed in a sensitive local acoustic environment.

What is Noise?

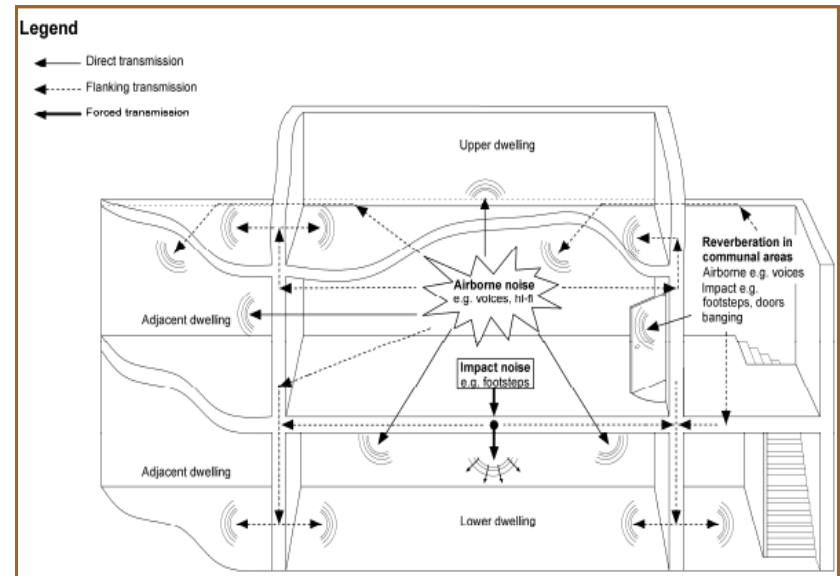
Noise is defined as unwanted sound and can range from high levels (causing physical damage) to levels only just audible. Noise is measured in decibels (dB), and human hearing ranges from approximately 0dB (the threshold of hearing) to 120 dB (the threshold of pain). A change of 3 dB in noise level is just perceptible under normal circumstances and results from doubling or halving the number of noise sources. A change of 10 dB corresponds to an approximately doubling of perceived loudness.



With respect to housing..

New developments are required to deliver a quality of life which residents and visitors are entitled to expect, in terms of amenity, safety and convenience.

Attention is required at the design and construction stages to prevent undue noise transmission between units. In this regard, privacy is an important element of residential amenity. Environmental noise and noise transfer between dwellings are both key considerations in respect of amenity and privacy. Sound transmission in homes should be prevented by way of appropriate acoustic insulation or layout. Appropriate building materials should be utilised and reference should be had to Part E of the Building Regulations in this respect.



Sound Transmission Through Dwellings

In terms of Planning..

Whilst Local Authorities have it within their powers to set conditions relating to noise as part of a planning permission, there is currently no national policy or guidance which addresses the issue of noise during planning. However, cognisance should be had to a number of national documents and guidelines including:

- Transport Infrastructure Ireland *“Guidelines for the Treatment of Noise and Vibration in National Road Schemes”*
- Dept. Of Housing, Planning and Local Government:
 - Design Standards for New Apartments Guidelines for Planning Authorities (March 2018)*
 - Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas*
 - Review of the Wind Energy Development Guidelines 2006 Preferred Draft Approach*
 - Quarries and Ancillary Activities, Guidelines for Planning Authorities;*
- Dept. Of Transport, Tourism & Sport *“Design Manual for Urban Roads and Streets”*
- Building Regulations 2014 *“Technical Guidance Document E Sound”*
- Environmental Protection Agency *“Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities”*.

What can we do?

In order to facilitate noise limitation and control the Planning Authority sets out the following guide to outline the potential issues which should be considered in the design of proposed developments.

In considering planning applications the Planning Authority will take into account the acoustic environment and will consider:

- Whether or not a significant noise adverse effect is occurring or likely to occur
- Whether or not a good standard of acoustic amenity can be achieved.

Examination of the acoustic environment should include identifying whether the overall effect of noise exposure (including any construction related impacts) is, or would be, above the significant observed adverse effect level and the lowest observed adverse effect level.

The table below provides UK recommended internal LAeq target levels for overall noise in the design of new buildings that should be considered. The LAeq target levels are the sum total of structure borne and airborne noise sources:

Activity	Location	Day & Evening	Night (23.00-07.00)
Resting	Living Room	35 dB LAeq, 16 hr	
Dining	Dining room/area	40 dB LAeq, 16 hr	
Sleeping (daytime rest)	Bedroom	35 dB LAeq, 16 hr	30 dB LAeq, 8hr

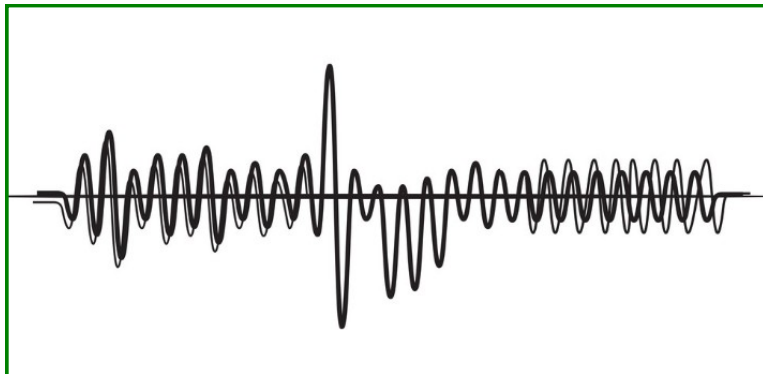
Ground borne noise is assessed separately and is not included as part of these targets, as human response to ground borne noise varies with many factors such as level, character, timing, occupant expectation and sensitivity.

High noise levels increase the risk of development being refused permission due to insufficient noise mitigation or control measures. This risk can be reduced through appropriate acoustic design which should be clearly demonstrated and detailed in the planning application. Expert advise is highly recommended.

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 potential impact. The potential impact depends on a combination of factors including:

- The source and absolute level of the noise together with the time of day it occurs. Some types and levels of noise will cause a greater adverse effect at night than if they occurred during the day as people are more sensitive to noise at night (11pm to 7am). The adverse effect is also greater simply because there is less background noise at night;
- For non continuous noise, the number of noise events and the frequency and pattern of occurrence of the noise;
- The noise spectrum (i.e. Pattern of high or low frequency content) and the general character of the noise (i.e. The tonal characteristics or other particular features). The local built environment and topography should also be taken into account along with the existing and, where appropriate, the planned character of the area;
- The cumulative impacts of more than one source along with the extent to which the source of noise is intermittent and of limited duration.



How to recognise when noise could be a concern?

- When noise is not noticeable there is no effect. As noise exposure increases it will cross the no effect level as it becomes noticeable. However, noise has no adverse effect so long as the exposure does not cause any change in behaviour or attitude. Such noise can slightly affect the acoustic character of an area but not to the extent there is a change in quality of life. At this level no specific measures are required to manage the acoustic environment;
- Higher noise levels above the adverse effect level may cause changes in behaviour and attitude, such as speaking more loudly or impaired sleep. The noise therefore starts to have an adverse effect and consideration needs to be given to mitigating those effects;
- Increasing noise levels can cause significant observed adverse effects resulting in material changes in behaviour such as keeping windows closed for most of the time or sleep disturbance when the noise is present. The planning process seeks to avoid this highly undesirable effect, by use of appropriate mitigation such as by altering the design and layout of a proposed development. Such decisions are made taking account of the economic and social benefit of the activity causing the noise;
- The planning process aims to avoid the highest extreme where noise exposure would cause extensive and sustained changes in behaviour irrespective of mitigation measures. The impacts on health and quality of life are such that regardless of the benefits of the activity causing the noise, the exposure should be prevented.

