

APPENDIX 10.2
LEGISLATION AND PLANNING POLICY

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This appendix provides further information on legislation and planning policy, where this has not been discussed in detail within the main text.

Control of Pollution Act, 1974

Section 60 of the Control of Pollution Act (COPA) states that Local Authorities can serve a notice imposing requirements as to the way in which the works are to be carried out and if it deems necessary specify the following:

- the plant or machinery which is, or is not, to be used;
- the hours during which the works may be carried out;
- the level of noise which may be emitted from the premises in question or at any specified point on those premises or which may be so emitted during specified hours, and
- provide for any change of circumstances.

If the notice is not complied with, the Act includes the power to prosecute the person who “*without reasonable excuse contravenes any requirement of the notice*”.

Environmental Protection Act, 1990

Where it is deemed that a site is generating unnecessary and objectionable noise the Environmental Protection Act provides the powers for a Local Authority to serve a Noise Abatement Notice.

The site which has been served with the abatement notice can claim that they use ‘Best Practicable Means’ (BPM) in order to control noise emitted from site, and that no further remedial works can be practically undertaken.

BS5228-1 Code of Practice for noise and vibration control on construction and open sites:

Noise

BS 5228-1 (Noise) provides practical information on construction noise reduction, and promotes a ‘Best Practical Means’ approach to noise control. The calculation method provided in BS 5228-1 is based on the number and types of equipment operating, their associated sound levels, operational times, and the distance to receptors, together with the effects of any screening.

BS5228-2 Code of Practice for noise and vibration control on construction and open sites:

Vibration

BS 5228-1 (Vibration) provides recommendations for basic levels of vibration control relating to construction and open sites. The legislative background to vibration control is described and guidance is provided concerning methods of measuring vibration and assessing its impacts on the environment.

BS 4142:2014+A1:2019 'Methods for Rating and Assessing Industrial and Commercial Sound' (BS4142)

BS 4142:2014 sets out a procedure for assessing noise impact whereby a Noise Rating is determined and compared with the existing local Background Sound Level.

The Rating Level ($dB_{L_{Ar,Tr}}$) is evaluated from the Specific Noise Level by including several, cumulative corrections to account for factors such as distinguishable tone, impulse, intermittency or other readily distinguishable sound characteristics.

The assessment of the impact depends upon the margin by which the Rating Level of the specific sound source exceeds the Background Sound Level. An initial estimate of the impact of the specific sound is made by subtracting the Background Sound Level from the Rating Level, while considering the following points:

- 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.

BS 6472-1:2008 – 'Guide to evaluation of human exposure to vibration in buildings'

This document provides guidance on predicting human response to vibration in buildings over the frequency range 0.5Hz to 80Hz.

BS 6472 is based on the evaluation of vibration measurements with regards to adverse comment from occupants, rather than criteria relating to health and safety or structural damage.

In terms of assessing what impact the perceptibility of structureborne vibration has on a person the standard promotes the use of the vibration dose value (VDV). The VDV determines an overall dose value accounting for intermittent, impulsive or continuous vibration experienced by a person and rates the level in terms of subjective response. The table below details the relationship between vibration dose and human annoyance:

Place and Time	Low Probability of Adverse Comment ($m/s^{-1.75}$)	Adverse Comment Possible ($m/s^{-1.75}$)	Adverse Comment Probable ($m/s^{-1.75}$)
Residential buildings 16h day	0.2 to 0.4	0.4 to 0.8	0.8 to 1.6
Residential buildings 8h night	0.1 to 0.2	0.2 to 0.4	0.4 to 0.8

These values can be used for both vertical and horizontal vibration, provided that they are calculated according to the appropriate frequency weightings.

Additional guidance in BS 6472-1:2008 is given on the thresholds of perception of continuous whole-body vibration. Although it is recognised that thresholds vary widely among individuals the standard defines broad categories of thresholds of perception; as stated below:

Approximately half the people in a typical population, when standing or seated, can perceive a vertical weighted peak acceleration of 0.015m/s^2 . The weighting used is W_b . A quarter of the people would perceive a vibration of 0.01m/s^2 peak, but the least sensitive quarter would only be able to detect a vibration of 0.02m/s^2 peak or more. Perception thresholds are slightly higher for vibration duration of less than about 1s.

[Calculation of Road Traffic Noise \(CRTN\), Department of Transport \(Welsh Office\), 1988](#)

The Calculation of Noise from Road Traffic (CRTN) is the standard UK procedure, which defines measurement and calculation methods for assessing road traffic noise. This standard uses a method of five stages for calculating traffic noise at a reception point.

[Calculation of Railway Noise \(CRN\), Department of Transport \(Welsh Office\), 1988](#)

CRN refers to The Calculation of Railway Noise, which is the standard UK procedure, which defines measurement and calculations methods for predicting the impact of railway noise. This standard is similar to CRTN for roads and the method for calculating railway noise at a reception point consists of six stages.

[Acoustics, Ventilation and Overheating Residential Design Guide \(AVO\) – V1.1, Association of Noise Consultants, January 2020](#)

The Acoustics, Ventilation and Overheating Guide is intended to be used by acoustics practitioners as well as all those involved in the planning, development, design and commissioning of new dwellings. It recommends an approach to acoustic assessments for new residential development that take due regard of the interdependence of provisions for acoustics, ventilation, and overheating. Application of the AVO Guide is intended to demonstrate good acoustic design as described in the ProPG: Planning & Noise, May 2017 when considering internal noise level guidelines.

[Professional Practice Guidance on Planning and Noise \(ProPG\), Association of Noise Consultants, 2017](#)

The Institute of Acoustics, the Association of Noise Consultants and the Chartered Institute of Environmental Health (CIEH) have joined to produce a Professional Practice Guidance (ProPG) focussing on noise sensitive development. The ProPG has been produced to provide practitioners with guidance on a recommended approach to the management of noise within the planning system in England. ProPG provides planning guidance for the consideration of new residential development that will be exposed predominantly to airborne noise from transport sources. The document provides advice on how guidance within BS 8233:2014 and WHO Guidelines for Community Noise may be applied to improve in the consistency and quality of plan-making and decision-taking in relation to acoustic matters.