

Appendix 8.1: Glossary Cherryfield Drive, Kirkby

March 2024



Experts in noise and vibration
assessment and management

Document Control

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8.1.1 Glossary

dB	Decibel. The logarithmically scaled measurement unit of sound.
A-weighting	Frequency weighting applied to measured sound in order to account for the relative loudness perceived by the human ear.
Basic Noise Level, BNL	The basic noise level (BNL) is a measure of source noise. For road traffic noise, this is calculated using the traffic flow volume, speed and heavy goods vehicle (HGV) percentage to determine a reference noise emission at a distance of 10 metres from the kerb for an individual road link.
C and C_{tr}	Spectrum adaption terms that uses a standard reference curves to determine the weighted value of airborne sound insulation. C and C_{tr} take into account different source spectra, where C considers the A-weighted pink noise spectrum and C_{tr} considers the A-weighted urban traffic noise spectrum.
D_{n,e,w}	The element normalized level difference is a measure of the broadband sound insulation performance of a ventilator ion opening, typically used by
Façade Sound Level	Sound level that is determined 1 metre in front of a window or door in a façade, including reflections from the facade.
Free-field Sound Level	A sound level which is measured or calculated in the open without any reflections from nearby surfaces except the ground. Measurements are typically carried out at 1.2 m to 1.5 m above ground level and at least 3.5 m from other reflective surfaces such as buildings which is in accordance with British Standard 7445-2: 1991 <i>Description and measurement of environmental noise - Part 2: Guide to the acquisition of data pertinent to land use</i>.
L_{Aeq,T}	A-weighted equivalent continuous sound level over a given time period. It is the sound level of a steady sound that has the same energy as a fluctuating sound over the same time period.
L_{A10,T}	The A-weighted sound level exceeded for 10% of the measurement period. It is widely used as a descriptor of road traffic noise.

$L_{A90,T}$	The A-weighted sound level exceeded for 90% of the measurement period. Often referred to as the background sound level.
L_{Amax}	The A-weighted maximum recorded noise level during a measurement period.
Ambient sound level, $L_a = L_{Aeq,T}$	The A-weighted equivalent continuous sound level of the totally encompassing sound for a given situation and time interval, T.
Lowest Observed Adverse Effect Level, LOAEL	The level above which adverse effects on health and quality of life can be detected.
Noise	In basic terms, unwanted sound.
Noise Mapping	Computer generated maps showing the variation of predicted noise levels across an area.
Noise Modelling	The use of computer software to predict noise levels.
Noise Monitoring	The measurement of sound levels at a specific location.
Noise Sensitive Receptor, NSR	Receptors which are particularly sensitive to noise. Examples include residential dwellings, hospitals, healthcare facilities, education facilities, community facilities, quiet areas designated under the European Noise Directive (END), international and national or statutorily designated sites, public rights of way and cultural heritage assets.
Residual Sound Level	The A-weighted equivalent continuous ambient sound level remaining when the specific sound level has decreased to a degree in which it does not contribute to the ambient sound level.
R_w	The weighted Sound Reduction Index which characterises the airborne sound insulation of a building element over a range of frequencies with a single number quantity.

Significant Observed Adverse Effect Level, SOAEL	The level above which significant adverse effects on health and quality of life occur.
Sound	The physical vibration in the air, propagating away from a source.
Sound Power Level, L_w	The sound power level (L_w) of a source is a measure of the acoustic energy radiated by a source per second. The sound power level is an inherent characteristic of a sound source.
Specific Sound Level, $L_s = L_{Aeq,T}$	The A-weighted equivalent continuous sound pressure level produced by the specific sound source at the reference location over a reference time interval, T
Rating level, $L_{Ar,Tr}$	The specific sound level plus any adjustment for the characteristic features of the sound.