

APPENDIX 7.1

GLOSSARY OF ACOUSTIC TERMS

The following glossary of terms has been produced from BS 5228-1: 2009 +A1: 2014 and BS 8233: 2014. They are explanations of the terms used within the noise chapter.

Term	Description
Ambient Noise	Total encompassing sound in a given situation at a given time, usually composed of sound from many sources far and near.
Background Noise	In BS 5228-1 this is defined as the A-weighted sound pressure level of the residual noise at the assessment position that is exceeded for 90% of a given time interval, T ($L_{A90,T}$)
Daytime	Extrapolated from BS 8233 as the period 07:00-23:00 hours (as night-time is 23:00-07:00 hours) or defined in BS 5228-1 as the period 07:00-19:00 hours.
Decibel (dB)	A unit of level derived from the logarithm of the ratio between the value of a quantity and a reference value. It is used to describe the level of many different quantities. For sound pressure levels the reference quantity is 20 μ Pa. The threshold of normal hearing is in the region of 0 dB and 140 dB is the threshold of pain. A change of 1 dB is only perceptible under controlled conditions.
L_{Ax}	Denotes use of frequency weighting 'A' which differentiates between sounds of different frequency (pitch) in a similar way to the human ear. A-weighted measurements broadly agree with people's assessment of loudness.
Evening	Defined in BS 5228-1 as the period 19:00-23:00 hours.
$L_{A10,T}$	The A-weighted noise level exceeded for 10% of the measurement period, T. It gives an indication of the upper limit of fluctuating noise such as that from road traffic. $L_{A10,18h}$ is the arithmetic average of the 18 hourly $L_{A10,1h}$ values from 06:00-24:00.
$L_{A90,T}$	The A-weighted noise level exceeded for 90% of the measurement period, T. This is defined in BS 5228-1 as the background noise level.
L_{AE}	The sound exposure level – the level of a sound with a period of 1 second that has the same sound energy as the event considered.
$L_{Aeq,T}$	The equivalent continuous sound level – the sound level of a notionally steady sound having the same energy as a fluctuating sound over a specified measurement period (T). $L_{Aeq,T}$ is used to describe many noises and can be measured directly with an

ENVIRONMENTAL STATEMENT

Chapter Heading

	integrating sound level meter.
L_{Amax}	The highest A-weighted noise level recorded during a noise event. The time weighting (slow or fast) should be stated.
Night-time	Defined in BS 8233 and BS 5228-1 as the period 23:00-07:00 hours.
Sound Power Level, L_w	An absolute parameter widely used for rating and comparing sound sources. Sound power is a physical property of the source alone, independent of any external or environmental factors.

APPENDIX 7.2

ROAD TRAFFIC DATA

The following table presents the road traffic data used in the noise assessments. The data for all road links are for two-way, 18 hour (06:00-24:00) average annual weekday traffic flows (AAWT).

Link no.	Links	2014 Base (AAWT 18hr)		2021 Without Development (AAWT 18hr)		2021 With Development (AAWT 18hr)	
		Total Vehicles	% HGV	Total Vehicles	% HGV	Total Vehicles	% HGV
1	B4030 West of junction with A4260	3500	4%	3606	4%	3608	4%
2	B4030 Station Road, east of A4260	3561	4%	4014	4%	4173	4%
3	A4260 Oxford Road north of B4030	10014	4%	10354	4%	10377	4%
4	A4260 South Banbury Road, south of B4030	10310	4%	10902	4%	11035	4%
5	Somerton Road North of Camp Rd	1679	5%	1806	5%	1828	5%
6	Camp Road to west of Kirtlington Road	1971	7%	2467	6%	2648	5%
7	Camp Road between Kirtlington Road and Chilgrove Drive	3340	4%	5471	3%	6209	3%
8	Minor Road east of Chilgrove Drive	1924	7%	4695	3%	5605	3%
9	B430 South of M5 Slip Lane junction	8568	6%	10672	5%	11289	5%
10	B430 Ardley Road north of Middleton Stone Junction	6234	4%	7566	4%	7566	4%

ENVIRONMENTAL STATEMENT

Chapter Heading

11	B430 Oxford road south of Middleton Stone	7111	4%	8262	3%	8628	3%
12	B4030 Bicester Road east of Middlestone Stoney	5144	4%	5641	4%	5685	4%
13	B4030 Heyford Road West of Middleton Stone	4935	4%	5511	4%	5630	3%
14	B4030 Lower Heyford Road	2872	4%	2955	4%	2955	4%
15	Port Way	774	4%	832	4%	832	4%
16	B4030 Lower heyford Rd , west of Portway	3201	5%	3293	5%	3293	5%

APPENDIX 7.3

ENVIRONMENTAL NOISE SURVEY TIME HISTORY GRAPHS



