



Project No. 22659

3 Station Parade, Letchworth Garden City

Noise Impact Assessment

Mr Waseel Sheirzad



Revision	Date	Prepared By	Reviewed By	Comments
V1	10/12/25	Bailey Hoare	Jonathon Hill	First Issue

The report has been prepared in good faith by enevo, with all reasonable skill and care, based on information provided or available at the time of its preparation and within the scope of work agreement with the Client. We disclaim any responsibility to the Client and others in respect of any matters outside the scope of the above. The report is provided for the sole use of the named Client and is confidential to them and their professional advisors. No responsibility is accepted to other parties

Limitations to this Report

This report entails a physical investigation of the site with a sufficient number of sample measurements to provide quantitative information concerning the type and degree of noise affecting the site. The objectives of the investigation have been limited to establishing sources of noise material to carrying out an appropriate assessment.

The number and duration of noise measurements have been chosen to give reasonably representative information on the environment within the agreed time, and the locations of measurements have been restricted to the areas unoccupied by building(s) that are easily accessible without undue risk to our staff.

As with any sampling, the number of sampling points and the methods of sampling and testing cannot preclude the existence of “hotspots” where noise levels may be significantly higher than those actually measured due to previously unknown or unrecognised noise emitters. Furthermore, noise sources may be intermittent or fluctuate in intensity and consequently may not be present or may not be present in full intensity for some or all of the survey duration.

1.0 Introduction

Details of Instruction

Mr Waseel Sheirzad has appointed enevo to carry out a noise impact assessment for extension of hours at 3 Station Parade, Letchworth Garden City. The proposed extension of hours is as follows:

- 1200-0000 Sunday to Thursday;
- 1100-0200 Friday and Saturday.

The noise assessment has been conducted with reference to the National Planning Policy Framework and the appropriate British Standards, recognised guidance & reference documents relevant to this site.

This report describes a noise survey of the site and the subsequent analysis to determine the noise environment of the proposed development. It then compares the results with the adopted criteria and, where applicable, recommendations are made with respect to the design of the development.

To support this document a glossary of technical terminology is included in Appendix A.

Site Conditions

The site is an existing takeaway within a block of commercial units with flats above. The site is bound by Letchworth train station to the north and west, offices and residential properties to the east with a number of commercial units and office buildings to the south. The proposal is to extend the hours of the existing hours of the takeaway from 1200-2200 to 1200-0200.

Noise Sensitive Receptors

Noise contributions have been considered at the following Noise Sensitive Receptors (NSRs) based on their proximity to the site:

- NSR1 – Flats above 3 Station Parade, Letchworth Garden City SG6 3AW;
- NSR2 – Flats above The Platform, Letchworth Garden City SG6 3AX.

2.0 Guidance

National Policy

National Planning Policy Framework

The National Planning Policy Framework (NPPF) sets out the Government's planning policies for England and how these are expected to be applied. At the heart of the NPPF is a presumption in favour of sustainable development. It requires Local Plans to be consistent with the principles and policies set out in the NPPF with the objective of contributing to the achievement of sustainable development.

The NPPF states that the planning system has three overarching objectives in achieving sustainable development including a requirement to *"contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy."*

Paragraph 180 of the NPPF states:

"Planning policies and decisions should contribute to and enhance the natural and local environment by:

...

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability."

Additionally, Paragraph 191 of the NPPF states:

"Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:

a) mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life..."

Noise Policy Statement for England

The 'Noise Policy Statement for England' sets out the following vision for ongoing noise policy:

"Promote good health and a quality of life through the effective management of noise within the context of Government policy on sustainable development."

This vision should be achieved through the following Noise Policy Aims:

"Through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development:

avoid significant adverse impacts on health and quality of life;

mitigate and minimise adverse impacts on health and quality of life; and where possible, contribute to the improvement of health and quality of life.”

To achieve this vision, the Noise Policy Statement sets 3 noise levels to be defined by the assessor:

NOEL – No Observed Effect Level

This is the level below which no effect can be detected. In simple terms: below this level, there is no detectable effect on health and quality of life due to the noise.

LOAEL – Lowest Observed Adverse Effect Level

This is the level above which adverse effects on health and quality of life can be detected.

SOAEL – Significant Observed Adverse Effect Level

This is the level above which significant adverse effects on health and quality of life occur.

The Noise Policy Statement considers that noise levels above the SOAEL would be seen to have, by definition, significant adverse effects and would be considered unacceptable. Where the assessed noise levels fall between the LOAEL and the SOAEL noise levels, the Policy Statement requires that:

“...all reasonable steps should be taken to mitigate and minimise adverse effects on health and quality of life while also taking into account the guiding principles of sustainable development... This does not mean that such adverse effects cannot occur.”

Where noise levels are below the LOAEL, it is considered there will be no adverse effect. Once noise levels are below the NOEL, there will be no observable change.

British Standards and Guidance Documents

British Standard (BS) 7445-1:2003 – Description and Measurement of Environmental Noise – Part 1: Guide to Quantities and Procedures

This document defines the basic quantities to be used for the description of noise in community environments and describes basic procedures for the determination of these quantities.

The methods and procedures described in this British Standard are intended to be applicable to sounds from all sources, individually and in combination, which contribute to the total noise at a site. This British Standard does not specify limits for environmental noise.

BS 4142:2014+A1:2019 Method for rating and assessing industrial and commercial sound

BS 4142:2014+A1:2019 describes methods for rating and assessing sound of an industrial and/or commercial nature. The methods use outdoor sound levels to assess the likely effects of sound on people who might be inside or outside a dwelling or premises used for residential purposes upon which sound is incident.

BS 8233:2014 – Guidance of Sound Insulation and Noise Reduction in Buildings

BS 8233:2014 provides a methodology to calculate the noise levels entering a building through facades and façade elements. It also provides details of appropriate measures for sound insulation between dwellings and recommended internal noise levels which are provided for a variety of situations.

ISO 9613 Attenuation of Sound During Propagation Outdoors

ISO 9613 presents a calculation methodology for the determination of the attenuation of sound outdoors. The methodology enables the prediction the levels of environmental noise at a distance from a variety of sources.

IEMA Guidelines for Environmental Noise Impact Assessment

The guidelines state that, for any assessment, the noise level threshold and significance statements should be determined by the assessor, based upon the specific evidence and likely subjective response to the noise. The impact scale adopted in this assessment is shown in Table 1 below.

Table 1
Impact Scale for Comparison of Future Noise against Existing Noise

Degree of effect	Effect Descriptor
None / Not Significant	Less than 2.9 dB L_{Aeq} change in sound level and/or all receptors are of negligible sensitivity to noise or marginal to the zone of influence of the proposals.
Slight	A 3.0 to 4.9 dB L_{Aeq} change in sound level at a receptor of some sensitivity.
Moderate	A 3.0 to 4.9 dB L_{Aeq} in a sound level at a sensitive or highly sensitive noise receptor, or a greater than 5.0 dB L_{Aeq} change in a sound level at a receptor of some sensitivity.
Substantial	Greater than 5.0 dB L_{Aeq} change in sound level at a noise sensitive receptor or a 5.0 to 9.9 dB L_{Aeq} change in sound level at a receptor of great sensitivity to noise.
Very Substantial	Greater than 10 dB L_{Aeq} change in sound level perceived at a receptor of great sensitivity to noise.

The criteria above reflect key benchmarks that relate to human perception of sound. A change of 3 dB A is generally considered to be the smallest possible change in noise that is perceptible. A 10 dB A change in noise represents a doubling or halving of the noise level.

It is considered that the criteria specified in the above table do provide a good indication as to the likely significance of changes in noise levels in this case. Therefore, the above noise threshold levels and significance statements have been used to supplement the criteria provided by the British Standard to assess the impact on a listener.

3.0 Assessment Methodology

Assessed Sources of Environmental Noise

The following sources of noise are considered in the context of this site:

Table 2
Assessment Methodology

Potential Noise Source	Relevant Assessment Methodology
Fixed Plant	BS 4142:2014+A1:2019
Deliveries	BS 4142:2014+A1:2019
Patron Noise	IEMA Guidelines

Selection of Noise Criteria

With reference to the guidance detailed in Section 2 the following criteria have been selected to determine the threshold of effect levels in the context of the National Planning Policy Framework and Noise Policy Statement for England.

Table 3
Assessment Criteria: BS 4142:2014+A1:2019

Effect Level	Criteria	Justification
LOAEL	Free-field external noise levels at adjacent sensitive receptor locations within +5 dB of representative background noise level	Noise levels +5 dB above background are considered an indication of where adverse noise impacts may occur in the context of BS 4142. Noise levels below this level are an indication that it is less likely that the specific sound source will have an adverse impact
SOAEL	Free-field external noise levels at adjacent sensitive receptor above +10 dB of representative background noise level	None – Planning guidance requires that impacts must be reduced below the SOAEL through mitigation, with adverse impacts above the LOAEL but below the SOAEL being mitigated as far as is reasonable

Table 4
Assessment Criteria: IEMA Environmental Guidelines

Effect Level	Criteria	Justification
LOAEL	Ambient noise level change below +2.9 dB at adjacent noise sensitive properties	Noise Levels within IEMA Environmental Guidelines
SOAEL	Ambient noise level change above +5.0 dB at adjacent noise sensitive properties	None – Planning guidance requires that impacts must be reduced below the SOAEL through mitigation, with adverse impacts above the LOAEL but below the SOAEL being mitigated as far as is reasonable

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4.0 Environmental Noise Survey

Noise measurements were undertaken externally during both the daytime and night-time. The measurements were taken from 3rd to the 4th of December 2025.

Survey Methodology and Locations

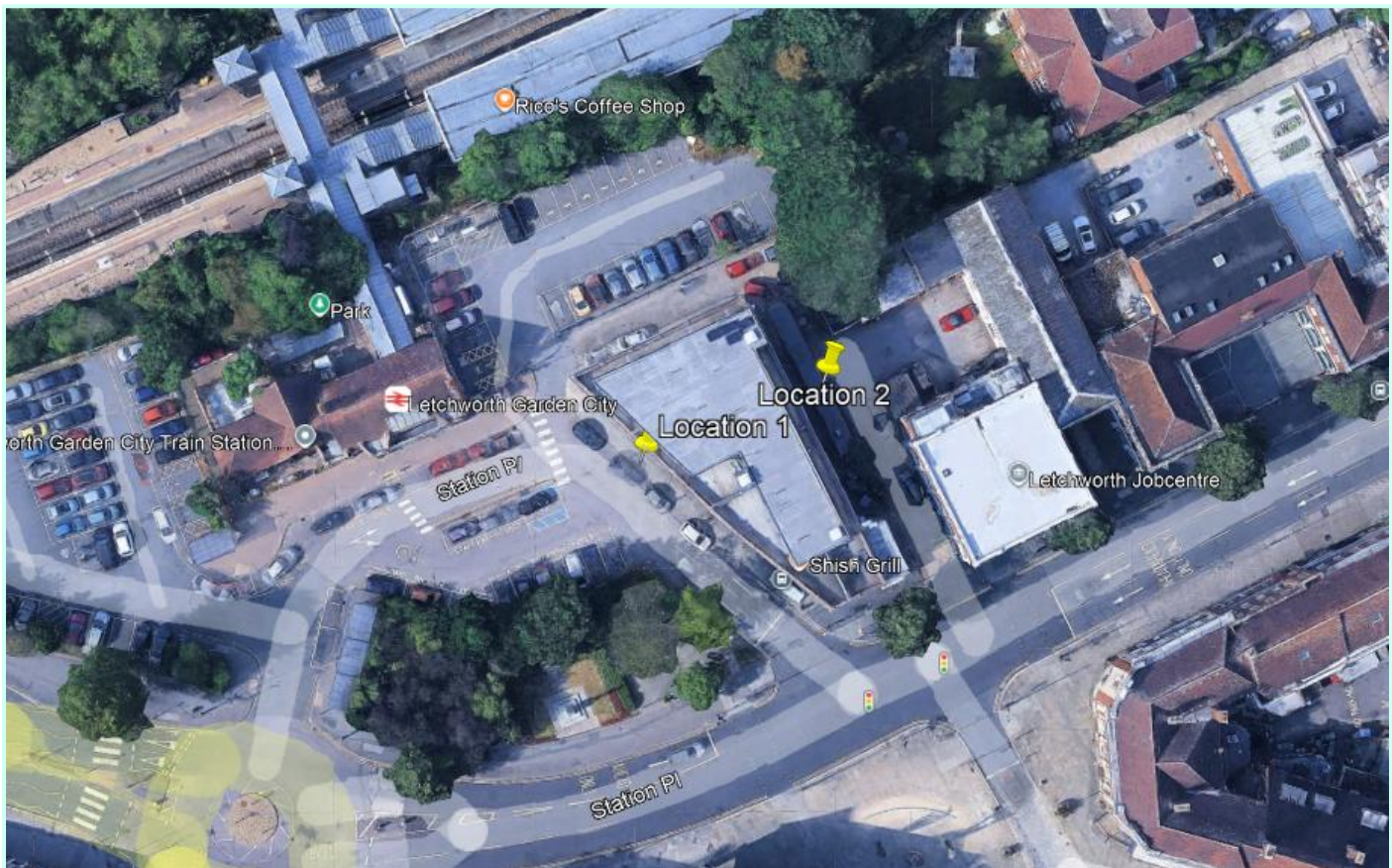
The equipment used during this survey is listed below in Table 3 and have been calibrated before and after the measurement duration and no significant drift was found to have occurred (>0.2dB). The noise monitoring equipment has been calibrated to a traceable standard with the 24 months before the survey.

Table 4
Noise Monitoring Equipment

Equipment	Serial Number
Nti XL3 Sound Level Meter	01397

One measurement location has been surveyed in order to establish both the ambient and background noise levels at the site. Figure 1 below shows the measurement locations in relation the proposed site.

Figure 1
Noise Monitoring Locations



Survey Results

The weather monitoring during the unattended survey was collected from the WOW Met Office data website. Data has been removed for high winds over 5 m/s and any precipitation. Table 5 below shows the results of the survey. Full survey results are available on request.

Table 5
Summary of Measured Noise Levels – dB

Location	Date	Period	Time (h)	L _{Aeq, T}	L _{A90}	L _{AfMax}
1	03/12/2025	Daytime	2200-2230	58.5	50.3	81.5
	03/12/2025	Night-time	2315-2345	59.5	53.8	80.8
	04/12/2025	Night-time	0030-0100	54.5	41.5	74.3
	03/12/2025	Daytime	2245-2315	54.3	48.5	78.9
	03/12/2025	Night-time	2345-0015	52.9	42.4	84.5
	04/12/2025	Night-time	0130-0200	46.1	39.5	60.3

Observations on Site

The existing noise environment is dominated by road traffic noise from Station Place, rail noise from the rail line to the north and noise from other businesses along Station parade.

BS 4142:2014+A1:2019 Background (L_{A90}) Statistical Analysis

In accordance with the methodology detailed in Section 8 of BS 4142:2014+A1:2019, representative background noise levels have been determined through statistical analysis of all 15-minute samples and are expressed as integers (with 0.5 dB being rounded up).

Due to the short measurement duration for the survey the lowest measured background noise level has been taken as the representative background noise level. The lowest measured daytime background recorded at Location 1 is 40 dB L_{A90} and at Location 2 is 39 dB L_{A90}.

5.0 Noise Modelling Methodology

Data Sources

A noise model for this assessment has been created using CadnaA modelling suite and the noise model has been based on the spatial settings and data sources identified in the Table below.

Table 6
Noise Model Input Data

Model Parameter	Scenario	Data Source	Assumptions
Site Plans	All	OS Mastermap	Existing Building heights modelled as 8.5m above ground level (AGL)
Ground Heights	All	Environment Agency Open Data LiDAR Digital Terrain Model (2m Resolution)	None
Ground Absorption	All	N/A	Mixed ground conditions on and off site (G=0), roads hard ground conditions (G=0)
Reflections	All	N/A	3 rd order reflections

Source Noise Assumptions

Fixed Plant

Details of all proposed plant items were provided by the client. The existing extractor fan terminates at second floor roof level.

- 1 No. S&P TP450 Extractor Fan.

Table 7, below, provides details of the noise output of the extractor fan. The extractor fan is internally within the building, therefore, only the outlet/termination point has been considered here.

Table 7
Fixed Plant Noise Levels, dB

Noise Source	Frequency, Hz								SWL (A)
	63	125	250	500	1000	2000	4000	8000	
Extractor Fan (Outlet)	58	70	82	83	86	82	74	67	90

To mitigate the noise level a silencer has been installed in the extraction fan. The table below shows the acoustic performance of the silencer (R02 8-1800).

Table 8
Silencer Sound Reduction Indices, dB

	Frequency, Hz								R _w
	63	125	250	500	1000	2000	4000	8000	
Silencer	8	8	16	27	35	36	20	8	28

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Takeaway Deliveries

Given the inherent variability on noise output from car/van delivery operations, modelling has been undertaken based on knowledge of typical delivery operations from similar sites.

Source noise level data utilised in the assessment of ambient noise (L_{Aeq}) contributions are presented in Tables 8 and 9. All data is presented as sound power levels with no 'on time' corrections, speed or other corrections.

Table 9
HGV/LGV Deliveries: Assessed Noise Source Sound Power Levels
(Ambient Noise Level L_{Aeq} Assessment)

Noise Source	SWL (A)
Car/Van Idling	64.0
Car/Van Manoeuvre (Pass-by)	82.4

The following are the number of deliveries from the site:

- 2no. car/van during 2200-0200 during worst-case 1-hour period;

In accordance with BS 4142:2014+A1:2019, Table 10 presents a summary of the operational assumptions accounted for within the noise model to determine $L_{Aeq,1hour}$ noise contributions at adjacent sensitive receptor locations during the 2200-0200 reference period. Assumptions are based around a typical takeaway delivery taking 15 mins to complete unless otherwise stated.

Table 10
Operational Assumptions (Per Assessed Delivery Event)

Noise Source	Source Type	Height AGL	Operational Assumptions
Car/vVan Manoeuvre (Pass-by)	Moving Point Source	1.0m	Car/Van travelling at 15km/h along access route. 1 complete manoeuvre per event.
Car/Van Idling (Standing Noise)	Point Source	1.0m	30 second total idling

Patron Noise

Details for patron noise have been taken from a number of reports completed within the acoustics industry. To present a worst case a noise level of 67 dBA has been assumed during a normal trading scenario within the proposed external terrace. Table 11 below outlines the noise levels.

Table 11
External Patron Noise: Source Sound Power Levels

Scenario	Sound Power Level, dB L_{WA}
Normal	67.0

6.0 Noise Assessment

Fixed Plant Assessment

The opening hours of the proposed takeaway restaurant will be 1100-0000 Sunday to Thursday and 1200-0200 on a Friday and Saturday. Therefore, the proposed extractor fan has only been assessed against the daytime representative background noise level.

Due to the operational (intermittency) characteristics of the fixed plant not being known yet and to account for any adverse acoustic characteristics, a correction of +3 dB has been applied to determine the rating level ($L_{A,rTr}$) in accordance with BS 4142:2014+A1:2019. The correction is based upon the fixed plant being turned on and off on demand.

The results of this assessment are presented in the table below.

Table 12
Assessment of Fixed Plant Noise Impact at NSRs, dB

NSR	Floor	Existing Measured Background (L_{A90})	Predicted Noise Rating Level ($L_{A,rTr}$)	BS 4142:2014+A1:2019 Difference between Rating Level and Background
		2200-0200	2200-0200	2200-0200
1	First	39	38.2	-0.8
	Second		34.7	-4.3
	Third		33.5	-5.5
2	First	40	15.9	-24.1

As shown in the table above, the operation of the proposed extractor fan during the proposed extended opening hours will be at most 0.8 dB below the representative background noise levels during the daytime reference period, inclusive of a +4 dB character correction for tonality. The predicted plant noise contributions during the daytime are below the LOAEL.

Takeaway Deliveries Assessment

The assessment of ambient noise contributions from takeaway deliveries has been undertaken in accordance with the guidance set out in BS 4142:2014+A1:2019. A character correction of +3 dB has been added to the calculations for intermittency of takeaway deliveries during the proposed extended hours of 2200-0200. The results of this assessment are presented in Table 13 below.

Table 13
Assessment of Takeaway Delivery Noise Impact at NSRs, dB

NSR	Floor	Existing Measured Background, (L_{A90}) 2200-0200	Predicted Noise Rating Levels ($L_{A,rTr}$) 2200-0200	BS 4142:2014+A1:2019 Difference between Rating Level and Background 2200-0200
1	First	40	39.1	-0.9
	Second		37.6	-2.4
	Third		32.4	-7.6
2	First		29.2	-10.8

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As can be seen in Table 13, the results of the assessment indicate that noise contributions from takeaway deliveries are predicted to be a maximum of 0.9 dB below existing measured background during the proposed extended hours of 2200-0200. The predicted takeaway delivery noise contributions during the proposed extended hours are below the LOAEL.

Patron Noise Assessment

An assessment of ambient noise levels during the proposed extended hours of the takeaway (2200-0200) has been completed. The existing ambient noise levels have been compared and calculated against the predicted noise levels from the external patron noise from the takeaway.

The results of this assessment are presented in the table below.

Table 11
Assessment of Patron Noise Impact at NSRs, dB

NSR	Floor	Predicted Noise level from Patron Noise	Measured Existing Noise Level at Development Site	Future Predicted Noise Level at Development Site	Difference between Existing Noise Level and Future Predicted Noise Level
1	First	53.4	54.5	57.0	2.5
	Second	49.9	54.5	55.8	1.3
	Third	39.5	54.5	54.6	0.1
2	First	36.1	54.5	54.6	0.1

As shown in the table above, the external patron noise from the takeaway, during the proposed extended hours, shows a maximum change in the ambient noise level of +0.9 dB. This change, described in Section 3.0, is shown to be None/Negligible as it is below or equal to a +2.9 dB change. Therefore, the results of this assessment are below the LOAEL.

7.0 Conclusion

Mr Waseel Sheirzad has appointed enevo to carry out a noise impact assessment for extension of hours at 3 Station Parade, Letchworth Garden City. The proposed extension of hours is as follows:

- 1200-0000 Sunday to Thursday;
- 1100-0200 Friday and Saturday.

The noise assessment has been conducted with reference to the National Planning Policy Framework and the appropriate British Standards, recognised guidance & reference documents relevant to this site.

This report describes a noise survey of the site and the subsequent analysis to determine the noise environment of the proposed development. It then compares the results with the adopted criteria and, where applicable, recommendations are made with respect to the design of the development.

Fixed Plant Assessment

This assessment shows that the operation of the proposed extractor fan during the proposed extended opening hours will be at most 0.8 dB below the representative background noise levels during the daytime reference period, inclusive of a +4 dB character correction for tonality. The predicted plant noise contributions during the daytime are below the LOAEL.

Takeaway Deliveries Assessment

The results of the assessment indicate that noise contributions from takeaway deliveries are predicted to be a maximum of 0.9 dB below existing measured background during the proposed extended hours of 2200-0200. The predicted takeaway delivery noise contributions during the proposed extended hours are below the LOAEL.

Patron Noise Assessment

This assessment shows that the external patron noise from the takeaway, during the proposed extended hours, shows a maximum change in the ambient noise level of +0.9 dB. This change, described in Section 3.0, is shown to be None/Negligible as it is below or equal to a +2.9 dB change. Therefore, the results of this assessment are below the LOAEL.

Appendix A

Glossary of Acoustic Terminology

"A" Weighting (dB(A)) – The human ear does not respond uniformly to different frequencies. "A" weighting is commonly used to simulate the frequency response of the ear. It is used in the assessment of the risk of damage to hearing due to noise.

Decibel (dB) – The range of audible sound pressures is approximately 2×10^{-5} Pa to 200 Pa. Using decibel notation presents this range in a more manageable form, 0 dB to 140 dB. Mathematically: Sound Pressure Level (dB) = $20 \log \{p(t) / P_0\}$ where $P_0 = 2 \times 10^{-5}$ Pa

Frequency (Hz) – The number of cycles per second, for sound this is subjectively perceived as pitch.

$L_{eq}(T)$ – The equivalent continuous sound level. It is that steady sound level which would produce the same energy over a given time period T as a specified time varying sound.

$L_{Amax}(T)$ – The maximum RMS A-weighted sound pressure level occurring within a specified time period.

LAE or SEL – A measure of A-weighted sound energy used to describe noise events such as the passing of a train or aircraft; it is the A-weighted sound pressure level which, if occurring over a period of one second, would contain the same amount of A-weighted sound energy as the event.

$L_{A90,T}$ Background noise level – The A-weighted sound pressure level of the residual noise in decibels exceeded for 90% of a given time interval.

Octave Band – A range of frequencies defined by an upper limit which is twice the lower limit. Octave bands are identified by their centre frequency.

RW (dB) – The weighted sound reduction incorporates a correction for the ear's response and has been derived in accordance with BS 5821:1984.

Specific Noise – The equivalent continuous A-weighted sound pressure level at the assessment position produced by the specific noise source over a given reference time interval.

Rating Level – $L_{Ar,T}$ The specific noise level plus any adjustment for the character of the noise.

Ambient Noise – Totally encompassing sound in a given situation at any given time composed of noise from many sources, near and far.

Residual Noise – The ambient noise remaining at a given position in a given situation when the specific noise source is suppressed.