



Part of the KP Acoustics Group

Land South of Railway Line, Scar Lane Huddersfield

BS4142 Assessment Report

Report 28470.BS4142.01

Dags Services Ltd

2 Green Gardens

Golcar

HD7 4DG

1 Galena Road, W6 0LT London, UK

info@kpacoustics.com | +44 (0) 208 222 8778 | www.kpacoustics.com

Registered in England Company No. 7947892. KP Acoustics is the Trading Name of KP Acoustics Limited.

Report 28470.BS4142.01		
Revision History		
Revision	Written by	Checked by
First Issue 07/01/2026	Jamie Murray MIOA Principal Consultant	Steven Leslie MIOA Consultancy Manager
Disclaimer		
<p>KP Acoustics Ltd. has used reasonable skill and care to complete this technical document, within the terms of its brief and contract with the resources devoted to it by agreement with the client. We disclaim any responsibility to the client and others in respect of any matters outside the stated scope. This report is confidential to the client and we accept no responsibility to third parties to whom this report, or any part thereof, is made known. KP Acoustics Ltd. accepts no responsibility for data provided by other bodies and no legal liability arising from the use by other persons of data or opinions contained in this report.</p> <p>KP Acoustics Ltd. 2026</p>		

Contents

1.0	INTRODUCTION	1
2.0	SITE SURVEYS	1
2.1	Site Description	1
2.2	Environmental Noise Survey Procedure	2
2.3	Equipment.....	3
3.0	RESULTS.....	4
4.0	NOISE ASSESSMENT GUIDANCE.....	4
4.1	Local Authority Requirements	4
4.2	BS4142: 2014 ' <i>Methods for rating and assessing industrial and commercial sound</i> '	6
5.0	BS4142 ASSESSMENT	8
5.1	Overview	8
5.2	Assessment	10
6.0	FIXED PLANT NOISE EMISSIONS.....	11
7.0	CONCLUSION.....	12

List of Attachments

28470.TH1	Environmental Noise Time History
Appendix A	Glossary of Acoustics Terminology
Appendix B	Acoustic Calculations

1.0 INTRODUCTION

KP Acoustics Ltd has been commissioned by Dags Services Ltd to undertake a noise impact assessment of an industrial operation at Land South of Railway Line, Scar Lane, Milnsbridge, Huddersfield HD3 4PN.

The proposal is for the *“erection of four industrial units for E(g)(iii) (light industry) use with associated parking and turning facilities with 10 storage units (within a conservation area)”*.

The proposed units fall under Use Class E(g)(iii), which is defined as industrial processes capable of being carried out in a residential area “without detriment to its amenity”. This inherently restricts the nature and scale of future activities within the development. Operations involving heavy machinery, significant external plant or large vehicle movements (e.g. HGV deliveries) would not fall under this use class and are therefore not considered representative.

On this basis, the assessment focuses on the credible noise-generating activities associated with E(g)(iii), namely: cars and vans accessing the site, light-touch operational noise typical of small workshops, and hand-loading associated with small-van deliveries. These represent the worst-case sound sources compatible with the proposed lawful use and form the basis of the assessment presented in this report.

A 72-hour environmental noise survey has been undertaken on site in order to prepare a noise impact assessment in accordance with BS4142:2014 *‘Method for rating and assessing industrial and commercial sound’*.

This report presents the methodology and results from the environmental survey, followed by calculations in accordance with BS4142 to provide an indication as to the likelihood of the noise emissions from the operation having an adverse impact on the closest noise sensitive receiver. Mitigation measures will be outlined as appropriate.

2.0 SITE SURVEYS

2.1 Site Description

As shown in Figure 2.1, the site is bounded by a railway line to the north, residential properties to the south, and commercial/industrial uses to the east and west.



Figure 2.1 Site Location Plan (Image Source: Google Maps)

Inspection of the site revealed that the background noise profile at the monitoring location was driven by distant road traffic, with noise from passing trains dominating intermittently. Intermittent but frequent noise was also clearly audible from nearby industrial uses, including dumping of materials and operation of heavy machinery.

2.2 Environmental Noise Survey Procedure

Continuous automated monitoring was undertaken for the duration of the noise survey between 15:00 on 22/11/2023 and 18:00 on 25/11/2023.

The environmental noise measurement position and the closest noise sensitive receptors are described within Table 2.1 and shown within Figure 2.2.

Icon	Descriptor	Location Description
①	Noise Measurement Position 1	The microphone was positioned within free-field conditions approximately 1.5 m above ground level.
NSR 1	Nearest noise sensitive receptors	18 Scar Lane, residential house to the south.
NSR 2	Nearest noise sensitive receptors	15 Scar Lane, residential house to the south.

Table 2.1 Measurement position and description

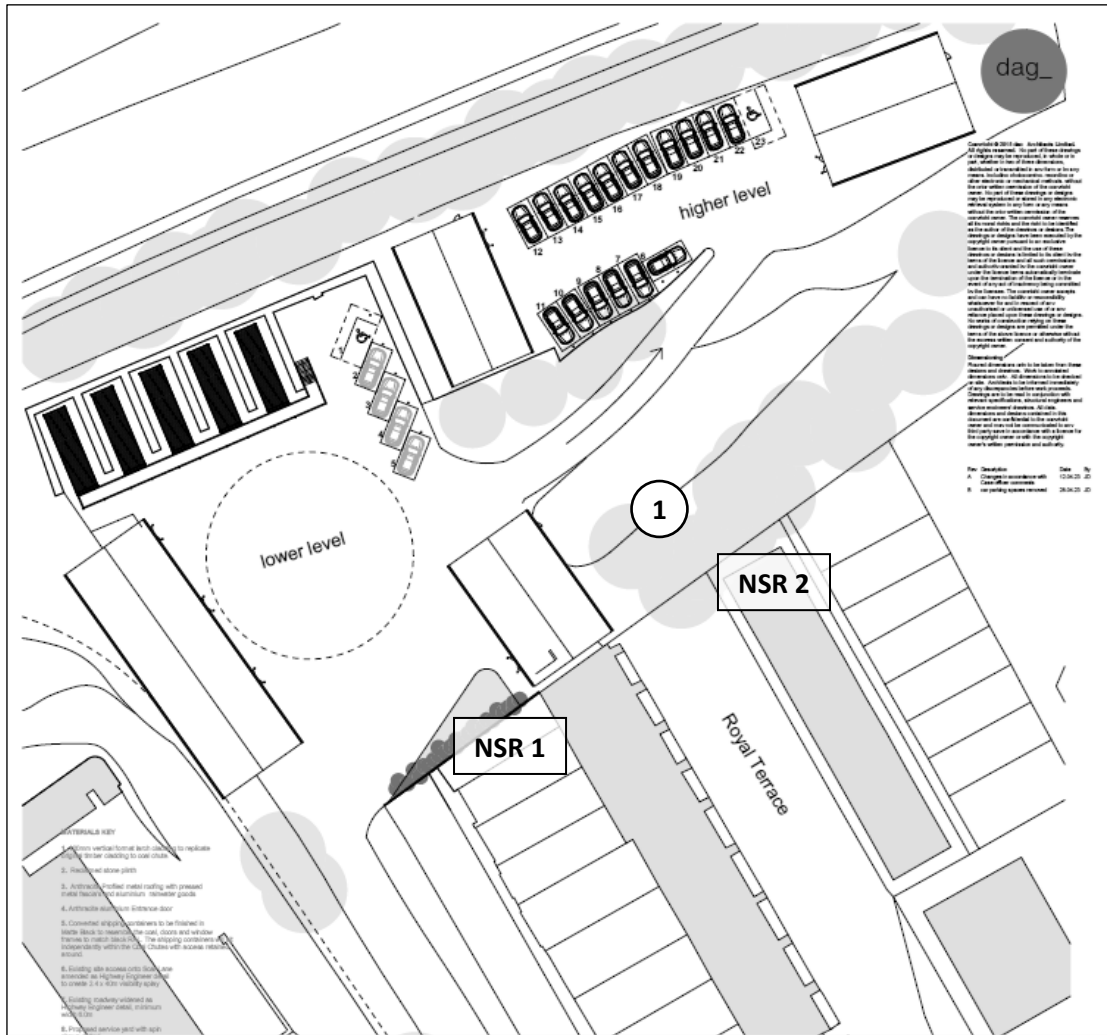


Figure 2.1 Site measurement positions (Image Source: Google Maps)

The choice of the position was based both on accessibility and on collecting representative noise data in relation to the nearest noise sensitive receiver.

Weather conditions were generally dry with light winds and therefore suitable for the measurement of environmental noise. The measurement procedure complied with ISO 1996-2:2017 Acoustics ‘Description, measurement and assessment of environmental noise - Part 2: Determination of environmental noise levels’.

2.3 Equipment

The equipment calibration was verified before and after use and no abnormalities were observed. The equipment used is described within Table 2.2.

Measurement instrumentation		Serial no.	Date	Cert no.
Noise Kit 35	NTI Audio XL2 Class 1 Sound Level Meter	A2A-21110-E0	04/08/2022	UK-22-080
	Free-field microphone NTI Acoustics MC230A	A23570		
	Preamp NTI Acoustics MA220	10995		
	NTI Audio External Weatherproof Shroud	-	-	-
Larson Davis CAL200 Class 1 Calibrator		8932	19/07/2023	UCRT23/1949

Table 2.2 Measurement instrumentation

3.0 RESULTS

The $L_{Aeq,5min}$, $L_{Amax,5min}$ and $L_{A90,5min}$ acoustic parameters were measured throughout the duration of the survey. Measured levels are shown as a time history in Figure 28470.TH1.

Typical background sound levels and residual levels have been determined from the survey data in accordance with the guidance of BS4142 Section 8.1.4. The derived levels for the proposed operational period are shown in Table 3.1.

Time Period	Typical Background Sound Level, dB $L_{A90,1h}$	Residual Sound Level, dB $L_{Aeq,1hr}$
Operational Period 07:30 – 19:00	44	52 - 63

Table 3.1 Measured noise levels

4.0 NOISE ASSESSMENT GUIDANCE

4.1 Local Authority Requirements

The site falls within the jurisdiction of Kirklees Council and has been granted planning permission (ref. 2022/62/91789/W) with conditions. The condition relating to noise is repeated below for reference:

“3. Before construction work commences, a noise assessment report by a suitably competent person shall be submitted to and approved in writing by the Local Planning Authority. The report shall include:

a) an assessment of all of the noise emissions from the proposed development;

b) details of existing background and predicted future noise levels at the boundary of the nearest noise sensitive premises;

c) a written scheme of how the occupants of the above-mentioned noise sensitive premises will be protected from noise from the proposed development including details of all necessary noise attenuation.

The development shall not be brought into use until all works comprised within the measures specified in the approved report have been carried out in full and such works shall be thereafter retained.

Reason: *This is a pre-commencement condition to ensure that the proposed use(s) does not give rise to the loss of amenity to nearby residential properties, by reason of noise, to accord with the aims of Policies LP24 and LP52 of the Kirklees Local Plan and Chapters 12 and 15 of the National Planning Policy Framework.”*

Specific concerns were raised by Environmental Health within responding note WK202221887 as below:

“The proposal is for light industrial use but no detail is given on the proposed use and occupation of the units. Consideration has to be given to any noise emissions from the use or associated use and how this may impact upon the amenity of nearby residential occupiers. A condition is recommended for a noise impact assessment to be undertaken to consider the use of the site, any vehicles (cars/vans, FLT’s etc.) and any fixed mechanical plant or other noise emissions.”

In response to the request for clarification on the nature of the operations, it is noted that the development has been approved specifically for Use Class E(g)(iii). This use class is legally restricted to industrial processes that can be carried out “in any residential area without detriment to its amenity”. By definition, this excludes activities involving heavy manufacturing, significant mechanical plant, powered handling equipment, or frequent HGV movements.

While end users have not yet been identified, the restriction to E(g)(iii) provides a clear upper boundary on the type and scale of operations that can lawfully take place within the units. As such, the assessment has been undertaken using credible worst-case sound sources associated with E(g)(iii) occupiers, including:

- Low-impact internal operational noise,

- Cars and small vans accessing the site,
- Occasional van deliveries, and
- Hand-loading/unloading activities only.

Activities or plant items that would fall outside these assumptions would not be permissible under the consented use class and would therefore be subject to separate planning control.

The EHO's concerns regarding potential operational noise emissions have been fully addressed within this assessment by:

- Establishing typical background sound levels at the nearest noise-sensitive receptors;
- Identifying the maximum plausible noise-generating activities compatible with Use Class E(g)(iii);
- Undertaking a BS 4142: 2014 assessment based on those sources; and
- Evaluating the resulting Rating Level in the context of Policies LP24 and LP52 of the Kirklees Local Plan and the aims of the NPPF.

The methodology therefore provides a robust assessment of the likely noise impact associated with lawful use of the proposed development, despite the absence of confirmed occupiers.

4.2 BS4142: 2014 'Methods for rating and assessing industrial and commercial sound'

British Standard BS4142:2014 '*Methods for rating and assessing industrial and commercial sound*' describes a method for rating and assessing sound of an industrial and/or commercial nature, which includes:

- Sound from industrial and manufacturing processes
- Sound from fixed installations which comprise mechanical and electrical plant and equipment
- Sound from the loading and unloading of goods and materials at industrial and/or commercial premises, and
- Sound from mobile plant and vehicles that is an intrinsic part of the overall sound emanating from premises or processes.

This Standard compares the Rating Level due to the noise source/s under assessment for a one-hour period during the daytime (07:00 – 23:00 hours) and a fifteen-minute period during

the night-time (23:00 – 07:00 hours) with the existing background noise level in terms of an L_{A90} when the noise source is not operating.

It should be noted that the Rating Level is the Specific Sound Level in question ($L_{Aeq, Tr}$), including any relevant acoustic feature corrections, as follows:

- **Tonality** – *‘For sound ranging from not tonal to prominently tonal the Joint Nordic Method gives a correction of between 0dB and +6dB for tonality. Subjectively, this can be converted to a penalty of 2dB for a tone which is just perceptible at the noise receptor, 4dB where it is clearly perceptible, and 6dB where it is highly perceptible’*
- **Impulsivity** – *‘A correction of up to +9dB can be applied for sound that is highly impulsive, considering both the rapidity of the change in sound level and the overall change in sound level. Subjectively, this can be converted to a penalty of 3dB for impulsivity which is just perceptible at the noise receptor, 6dB where it is clearly perceptible, and 9dB where it is highly perceptible’*
- **Intermittency** – *‘If the intermittency is readily distinctive against the residual acoustic environment, a penalty of 3dB can be applied’*
- **Other sound characteristics** – *‘Where the specific sound features characteristics that are neither tonal nor impulsive, though otherwise are readily distinctive against the residual acoustic environment, a penalty of 3dB can be applied’*

Once the Rating Level has been obtained, the representative background sound level is subtracted from the Rating Level to obtain an initial estimate of the impact, as follows:

- Typically, the greater this difference, the greater the magnitude of the impact
- A difference of around +10 dB or more is likely to be an indication of a significant adverse impact, depending on the context
- A difference of around +5 dB could be an indication of an adverse impact, depending on the context
- The lower the rating level is relative to the measured background sound level, the less likely it is that there will be an adverse impact or significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound having a low impact, depending on the context

NOTE: Adverse impacts may include but not be limited to annoyance and sleep disturbance. Not all adverse impacts will lead to complaints and not every complaint is proof of an adverse impact.

The initial estimate of the impact may then be modified by taking consideration of the context in which the sound occurs.

5.0 BS4142 ASSESSMENT

5.1 Overview

Noise emissions associated with the development are expected to arise from three sources:

- a) Vehicle movements associated with staff, visitors, and small van deliveries;
- b) Operational noise breakout from activities taking place within the proposed light-industrial units; and
- c) Fixed plant noise emissions.

No details of the future occupiers are known at this stage. However, the development has been approved under Use Class E(g)(iii), which is restricted to light-industrial processes that can be carried out in any residential area without detriment to amenity. Activities requiring heavy machinery, mechanical handling, frequent HGV deliveries, or operations generating high internal noise levels would fall outside this use class and would therefore not be permissible without separate planning approval.

In line with the request for a robust assessment in the absence of end-user information, the following assumptions have been adopted to represent credible worst-case noise emissions fully compatible with Use Class E(g)(iii).

Vehicle Movements

Vehicle movements have been modelled based on typical usage patterns for small light-industrial/workshop units of this scale. The following assumptions have been adopted:

- Small vans (**LCVs**) are the only delivery vehicles considered. No HGV deliveries are included, as frequent HGV deliveries would not be consistent with E(g)(iii) activity and would materially change the character of the use. A pessimistic assumption of up to 3No. van deliveries in a single one hour period has been considered.

- Passenger vehicles (cars) are assumed to access and manoeuvre within the site throughout the working day. A pessimistic scenario of up to 20 car movements in a single one hour period has been assessed.
- Each LCV delivery has been assumed to comprise of the following, along with historical library data at a distance of 5 metres:
 - LCV arriving – 30 seconds – 62 dB $L_{Aeq,30s}$
 - LCV manoeuvring – 30 seconds – 60 dB $L_{Aeq,30s}$
 - LCV loading by hand – no significant/measurable noise emissions
 - LCV departing – 30 seconds – 62 dB $L_{Aeq,30s}$
- Each passenger vehicle event has been assumed to comprise of the following, along with historical library data at a distance of 5 metres:
 - Car arriving – 30 seconds – 57 dB $L_{Aeq,30s}$
 - Car manoeuvring – 30 seconds – 57 dB $L_{Aeq,30s}$
 - Car departing – 30 seconds – 57 dB $L_{Aeq,30s}$
- Distances, propagation losses, screening, and reflection effects have been applied for each receptor as shown in the calculation tables.
- The site will employ sensible noise management measures to prevent unnecessary noise being generated to ensure the above assumed worst case scenario is never exceeded.

Operational Noise Breakout

Internal operational activity has been modelled based on a representative upper-bound internal sound pressure level of 70 dB $L_{Aeq,1h}$ within each unit. This is considered to be a pessimistic assumption.

The following assumptions have been adopted:

- Two operational states have been assessed, both with shutters open and shutters closed. The shutters open scenario is a highly conservative scenario in which the front roller shutter is fully open during operations.

- The following conservative sound reduction values have been considered:
 - Roof – R_w 25 dB
 - Walls – R_w 25 dB
 - Roller shutter (closed) – R_w 12 dB
 - Roller shutter (open) – R_w 0 dB
- Directivity, distance attenuation and screening were applied for each façade element.

Fixed Plant Noise Emissions

As no plant has been specified at this stage, fixed plant noise cannot be directly assessed. At this stage, it would be typical to set plant noise emission limits to facilitate the procurement of fixed plant items at a later stage. Appropriate limits have been established in Section 6.0.

5.2 Assessment

The noise level at each nearest receptor has been calculated using the noise levels referenced in Section 5.1, and corrected due to different acoustic propagation features such as distance, reflective surfaces, screening elements, etc. The full calculations are appended to this report, a summary of the results for each receptor is provided below, both from individual contributions and a cumulative noise level.

Source	NSR 1	NSR 2
LCV Deliveries	36 dB $L_{Aeq,1h}$	36 dB $L_{Aeq,1h}$
Passenger Vehicles	38 dB $L_{Aeq,1h}$	37 dB $L_{Aeq,1h}$
Operational Noise Breakout (Shutters Closed)	31 dB $L_{Aeq,1h}$	29 dB $L_{Aeq,1h}$
Operational Noise Breakout (Shutters Open)	41 dB $L_{Aeq,1h}$	38 dB $L_{Aeq,1h}$
Cumulative Noise Level (Shutters Closed)	40 dB $L_{Aeq,1h}$	40 dB $L_{Aeq,1h}$
Cumulative Noise Level (Shutters Open)	43 dB $L_{Aeq,1h}$	42 dB $L_{Aeq,1h}$

Table 5.1 Individual contribution from each noise source

The predicted rating level of the development (with shutters open, as a worst case) at the nearest receptors has then been assessed against the typical background sound level in accordance with BS 4142:2014. This assessment is shown below for each receptor.

Description	NSR 1	NSR 2
Rating Level	43 dB L _{Ar,1h}	42 dB L _{Ar,1h}
Existing Residual Sound Level	57 dB L _{Aeq,1h}	57 dB L _{Aeq,1h}
Typical Background Sound Level	44 dB L _{A90,1h}	44 dB L _{A90,1h}
Excess of Rating Level over Background Sound Level	-1 dB	-2 dB

Table 5.2 BS 4142 assessment per receptor

Note that no acoustic feature corrections are considered to apply provided sensible noise management measures are employed. Whilst some of the likely sources of noise could be considered intermittent, the results indicate that the intermittency will not be perceptible at the receptors over the existing residual sound level.

As shown above, the predicted Rating Level does not exceed the background sound level at the nearest receptor during a representative worst-case period and is significantly lower than the residual sound level currently experienced by the receptors. With regards to BS4142:2014, this is an indication of the development having a **low impact** on the receptor.

6.0 FIXED PLANT NOISE EMISSIONS

In accordance with Condition 3 of the planning permission, it is proposed to limit noise from any fixed plant installations to not exceed the background sound level at the receptor at any time.

The following fixed plant noise emission limits are therefore proposed to apply at 1 m from the nearest noise sensitive receptor in accordance with the guidance contained within BS 4142:2014. These limits would be subject to the approval of Kirklees Council.

Time Period	Fixed Plant Rating Level Limit
Daytime 07:00 – 23:00	44 dB L _{Ar,1h}
Night-time 23:00 – 07:00	38 dB L _{Ar,15min}

Table 6.1 Proposed plant noise emission limits

7.0 CONCLUSION

An environmental noise survey and a detailed noise impact assessment have been carried out for the proposed development comprising four E(g)(iii) light-industrial units and associated storage units at Land South of Railway Line, Scar Lane, Huddersfield.

The assessment has considered all credible noise sources associated with lawful E(g)(iii) use. Extremely conservative assumptions have been adopted, including up to 20 car movements per hour, multiple small-van deliveries in a single hour, and assessment of internal operational noise with fully open roller shutters.

The assessment indicates a low impact associated with the proposed development on nearby receptors.

Limits for noise arising from fixed plant installations have been proposed, for approval by Kirklees Council.

Land South of Railway, Scar Lane, Huddersfield - Position 1
Environmental Time History
22/11/2023 to 25/11/2023

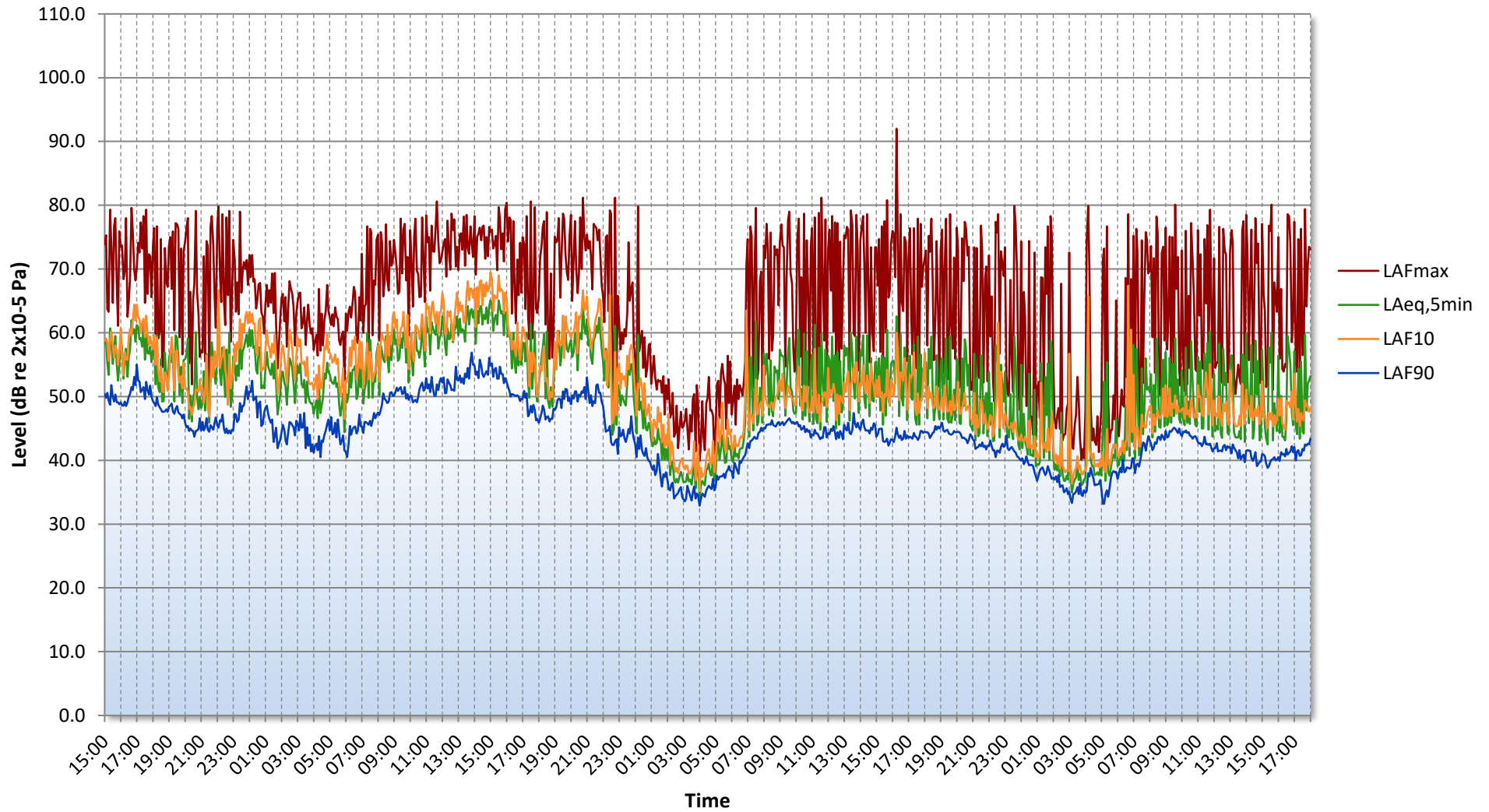


Figure 28470.TH1

GENERAL ACOUSTIC TERMINOLOGY

Decibel scale - dB

In practice, when sound intensity or sound pressure is measured, a logarithmic scale is used in which the unit is the 'decibel', dB. This is derived from the human auditory system, where the dynamic range of human hearing is so large, in the order of 10^{13} units, that only a logarithmic scale is the sensible solution for displaying such a range.

Decibel scale, 'A' weighted - dB(A)

The human ear is less sensitive at frequency extremes, below 125Hz and above 16Khz. A sound level meter models the ears variable sensitivity to sound at different frequencies. This is achieved by building a filter into the Sound Level Meter with a similar frequency response to that of the ear, an A-weighted filter where the unit is dB(A).

L_{eq}

The sound from noise sources often fluctuates widely during a given period of time. An average value can be measured, the equivalent sound pressure level L_{eq} . The L_{eq} is the equivalent sound level which would deliver the same sound energy as the actual fluctuating sound measured in the same time period.

L_{10}

This is the level exceeded for no more than 10% of the time. This parameter is often used as a "not to exceed" criterion for noise.

L_{90}

This is the level exceeded for no more than 90% of the time. This parameter is often used as a descriptor of "background noise" for environmental impact studies.

L_{max}

This is the maximum sound pressure level that has been measured over a period.

Octave Bands

In order to completely determine the composition of a sound it is necessary to determine the sound level at each frequency individually. Usually, values are stated in octave bands. The audible frequency region is divided into 11 such octave bands whose centre frequencies are defined in accordance with international standards. These centre frequencies are: 16, 31.5, 63, 125, 250, 500, 1000, 2000, 4000, 8000 and 16000 Hertz.

Environmental noise terms are defined in BS7445, *Description and Measurement of Environmental Noise*.

APPLIED ACOUSTIC TERMINOLOGY

Addition of noise from several sources

Noise from different sound sources combines to produce a sound level higher than that from any individual source. Two equally intense sound sources operating together produce a sound level which is 3dB higher than a single source and 4 sources produce a 6dB higher sound level.

Attenuation by distance

Sound which propagates from a point source in free air attenuates by 6dB for each doubling of distance from the noise source. Sound energy from line sources (e.g. stream of cars) drops off by 3dB for each doubling of distance.

Subjective impression of noise

Hearing perception is highly individualised. Sensitivity to noise also depends on frequency content, time of occurrence, duration of sound and psychological factors such as emotion and expectations. The following table is a guide to explain increases or decreases in sound levels for many scenarios.

Change in sound level (dB)	Change in perceived loudness
1	Imperceptible
3	Just barely perceptible
6	Clearly noticeable
10	About twice as loud

Transmission path(s)

The transmission path is the path the sound takes from the source to the receiver. Where multiple paths exist in parallel, the reduction in each path should be calculated and summed at the receiving point. Outdoor barriers can block transmission paths, for example traffic noise. The effectiveness of barriers is dependent on factors such as its distance from the noise source and the receiver, its height and construction.

Ground-borne vibration

In addition to airborne noise levels caused by transportation, construction, and industrial sources there is also the generation of ground-borne vibration to consider. This can lead to structure-borne noise, perceptible vibration, or in rare cases, building damage.

Sound insulation - Absorption within porous materials

Upon encountering a porous material, sound energy is absorbed. Porous materials which are intended to absorb sound are known as absorbents, and usually absorb 50 to 90% of the energy and are frequency dependent. Some are designed to absorb low frequencies, some for high frequencies and more exotic designs being able to absorb very wide ranges of frequencies. The energy is converted into both mechanical movement and heat within the material; both the stiffness and mass of panels affect the sound insulation performance.

Vehicle Movements

NSR 1	<i>Deliveries</i>			<i>Passenger Vehicles</i>		
Event	LCV Enter	LCV Manoeuvre	LCV Depart	Car Enter	Car Manoeuvre	Car Depart
Source level at 5m (dBA)	62	60	62	57	57	57
on-time (s)	30	30	30	30	30	30
SEL (dBA)	77	75	77	72	72	72
No Events	3	3	3	20	20	20
L_{eq} at 5m over ASSESSMENT INT. (dBA)	46	44	46	49	49	49
Distance (m)	26	28	26	26	52	26
Distance loss (dB)	-14	-15	-14	-14	-20	-14
Screening loss (dB)	0	0	0	0	-10	0
Reflections (dB)	0	0	0	0	0	0
Noise Level at Receptor L _{Aeq} (dB)	32	29	32	35	19	35
Cumulative Noise Level at Receptor L_{Aeq} (dB)	36			38		

NSR 2	<i>Deliveries</i>			<i>Passenger Vehicles</i>		
Event	LCV Enter	LCV Manoeuvre	LCV Depart	Car Enter	Car Manoeuvre	Car Depart
Source level at 5m (dBA)	62	60	62	57	57	57
on-time (s)	30	30	30	30	30	20
SEL (dBA)	77	75	77	72	72	70
No Events	3	3	3	20	20	20
L_{eq} at 5m over ASSESSMENT INT. (dBA)	46	44	46	49	49	47
Distance (m)	25	37	25	25	37	25
Distance loss (dB)	-14	-17	-14	-14	-17	-14
Screening loss (dB)	0	0	0	0	0	-5
Reflections (dB)	0	0	0	0	0	0
Noise Level at Receptor L _{Aeq} (dB)	32	27	32	35	32	28
Cumulative Noise Level at Receptor L_{Aeq} (dB)	36			37		

Operational Noise Breakout

NSR 1	Unit 1				Unit 2-4				Unit 5				Unit 6			
	Roof	Sides	Front	Open Shutter	Roof	Sides	Front	Open Shutter	Roof	Sides	Front	Open Shutter	Roof	Sides	Front	Open Shutter
Area (m2)	160	117	72	11	290	90	131	33	160	117	72	11	160	117	45	11
SRI (dB)	25	25	20	0	25	25	20	0	25	25	20	0	25	25	20	0
Distance (m)	12	20	9	15	45	40	40	35	55	55	55	55	85	85	85	85
Directionality Corre (dB)	-6	-6	-6	-6	-6	-3	-3	-3	-6	0	-6	-6	-6	-6	0	0
Screening Corr (dB)	-5	-10	0	0	0	0	0	0	-10	-10	-10	-10	-10	-10	-10	-10
Noise Level at Receptor L_{Aeq} (dB)	20	10	29	37	17	16	22	37	2	7	4	16	-2	-3	4	18

Shutters Closed Shutters Open

Cumulative Noise Level at Receptor L_{Aeq} (dB)	31	41
---	----	----

NSR 2	Unit 1				Unit 2-4				Unit 5				Unit 6			
	Roof	Sides	Front	Open Shutter	Roof	Sides	Front	Open Shutter	Roof	Sides	Front	Open Shutter	Roof	Sides	Front	Open Shutter
Area (m2)	160	117	72	11	290	90	131	33	160	117	72	11	160	117	45	11
SRI (dB)	25	25	20	0	25	25	20	0	25	25	20	0	25	25	20	0
Distance (m)	29	29	35	35	60	60	60	60	40	40	40	40	40	40	40	40
Directionality Corre (dB)	-3	0	-6	-6	-6	-3	0	0	-6	0	-3	-3	-6	0	-3	-3
Screening Corr (dB)	0	0	-10	-10	0	0	0	0	0	0	0	0	-10	-10	-10	-10
Noise Level at Receptor L_{Aeq} (dB)	21	22	8	19	14	12	22	36	15	20	20	31	5	10	7	21

Shutters Closed Shutters Open

Cumulative Noise Level at Receptor L_{Aeq} (dB)	29	38
---	----	----