



Armstrong House
3 Bassett Avenue
Southampton
SO16 7DP

T: 02381 555000

20 CALCOT ROAD, READING
NOISE ASSESSMENT

Technical Report: R11515-1 Rev 0

Date: 2nd February 2026

For: The KEEN Partnership
The Courtyard
Edinburgh Road
Reading
RG30 2UA

24 Acoustics Document Control Sheet

Project Title: 20 Norcot Road, Reading – Noise Assessment

Report Ref: R11515-1 Rev 0

Date: 2nd February 2026

	Name	Position	Signature	Date
Prepared by	Stephen Gosling BEng FIOA	Principal Consultant	S. Gosling	
For and on behalf of 24 Acoustics Ltd				

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1.0 INTRODUCTION

- 1.1 24 Acoustics has been instructed by The Keen Partnership to undertake a noise assessment for proposed development at 20 Norcot Road, Reading.
- 1.2 The proposal is for the construction of a workshop with associated storage, office and kitchen facilities. Within this, it is understood that the land has established use as Class B2 dating back to a historic to the use of the site for car sales, car repairs and refurbishment.
- 1.3 This report has assessed the potential noise arising from the proposed development at nearby residential properties.
- 1.4 All noise levels in this report are quoted in dB relative to 20 μ Pa.

2.0 SITE DESCRIPTION AND PROPOSED DEVELOPMENT

- 2.1 The proposed development is at the rear of 20 Norcot Road, Reading. As noted above, the site has been used for car sales, repairs and refurbishment over an extended period. An aerial image from July 2006 shown in Figure 2 below. It is against this operational baseline that the proposal should be assessed.

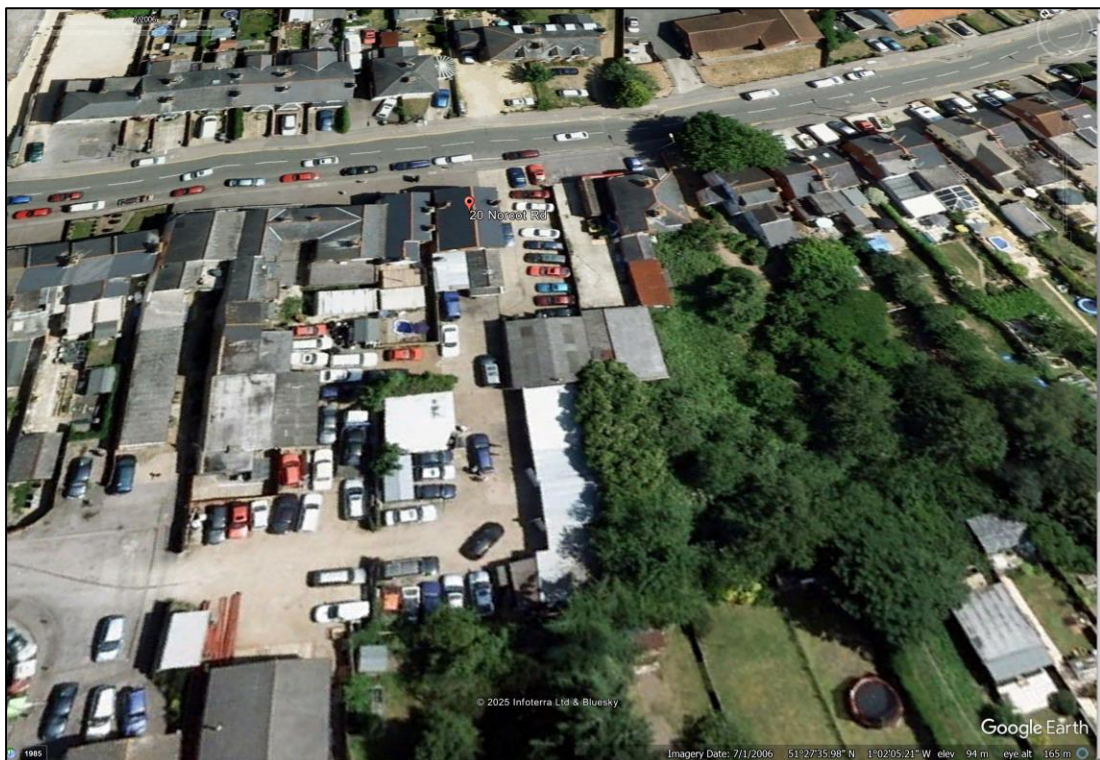


FIGURE 1: Aerial Image of Car Sales, Repair and Refurbishment Premises (2006)

- 2.2 Although there are no current restrictions on the hours of use, the following operational hours are proposed:

Monday to Friday	08:00 – 18:00
Saturday	08:00 – 17:00
Sunday	Closed

- 2.3 The nearest noise sensitive receptors are on Norcot Road and Recreation Road.
- 2.4 The location plan is shown in Figure 2, with a proposed layout plan shown in Figure 3.

3.0 CRITERIA

National Planning Policy Framework

- 3.1 The National Planning Policy Framework (NPPF), states in paragraph 187:

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. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans.

- 3.2 Additionally paragraph 198 states that:

'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;*
- b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.'*

Noise Policy Statement for England

3.3 Paragraph 198 of the NPPF also refers to the Noise Policy Statement for England (NPSE) which is intended to apply to all forms of noise, including environmental noise, neighbour noise and neighbourhood noise. The NPSE sets out the Government's long-term vision to "*promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development*" which is supported by the following aims.

- Avoid significant adverse impacts on health and quality of life;
- Mitigate and minimise adverse impacts on health and quality of life;
- Where possible, contribute to the improvement of health and quality of life.

3.4 The NPSE defines the concept of a significant observed adverse effect level (SOAEL) as "*the level above which significant adverse effects on health and quality of life occur*". The following guidance is provided within the NPSE:

"It is not possible to have a single objective noise-based measure that defines SOAEL that is applicable to all sources of noise in all situations. Consequently, the SOAEL is likely to be different for different noise sources, for different receptors and at different times.

It is acknowledged that further research is required to increase our understanding of what may constitute a significant adverse impact on health and quality of life from noise. However, not having specific SOAEL values in the NPSE provides the necessary policy flexibility until further evidence and suitable guidance is available."

Planning Practice Guidance

3.5 Planning Practice Guidance (PPG) is written to support the NPPF with more specific planning guidance. <https://www.gov.uk/guidance/noise--2>

- 3.6 The PPG expands upon the concept of SOAEL (together with Lowest Observable Adverse Effect Level, LOAEL and No Observed Effect Level, NOEL) as introduced in the NPSE and provides a table of noise exposure hierarchy for use in noise impact assessments in the planning system.

Perception	Examples of Outcomes	Increasing Effect Level	Action
Not noticeable	No Effect	No Observed Effect	No specific measures required
Noticeable and not intrusive	Noise can be heard, but does not cause any change in behaviour or attitude. Can slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life	No Observed Adverse Effect	No specific measures required
Lowest Observable Adverse Effect Level (LOAEL)			
Noticeable and intrusive	Noise can be heard and causes small changes in behaviour and/ or attitude, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a perceived change in the quality of life	Observed Adverse Effect	Mitigate and reduce to a minimum
Significant Observed Adverse Effect Level (SOAEL)			
Noticeable and disruptive	The noise causes a material change in behaviour and/ or attitude, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	Avoid
Noticeable and very disruptive	Extension and regular changes in behaviour and/ or an inability to mitigate effect of noise leading to psychological stress or physiological effects, e.g. regular sleep deprivation/ awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non auditory	Unacceptable Adverse Effect	Prevent

Table 1: PPG Noise Exposure Hierarchy

- 3.7 None of the NPPF, NPSE and PPG documents refer to specific noise acceptability criteria.
- 3.8 Reading Borough Council policy EN17 states that noise from new noise sources be controlled to 10 dB below the prevailing background noise level, using the procedures in BS 4142:2014+A1:2019. However, this requirement does not apply retrospectively to existing noise sources nor land that has established business use (ie, B2), where existing activities form part of the legitimate baseline noise level.
- 3.9 The correct approach therefore for the assessment of noise from existing sources and established uses is to compare the baseline lawful operating noise level with that predicted from the proposed development.

4.0 MEASUREMENT INSTRUMENTATION AND PROCEDURE

- 4.1 Environmental noise measurements were obtained by Jostec using Class 1 instrumentation in June 2025.
- 4.2 The instrumentation was set up to measure environmental noise levels and store data in 15-minute intervals in terms of the overall A-weighted and linear octave band L_{eq} , L_{max} , and L_{90} using fast time weighting.
- 4.3 The measurement equipment was installed externally described as follows:
- Location 1 – Rear of 20 Norcot Road
 - Location 2 – On boundary with 11 Recreation Road
- 4.4 The measured environmental noise levels are shown graphically in Appendix B.

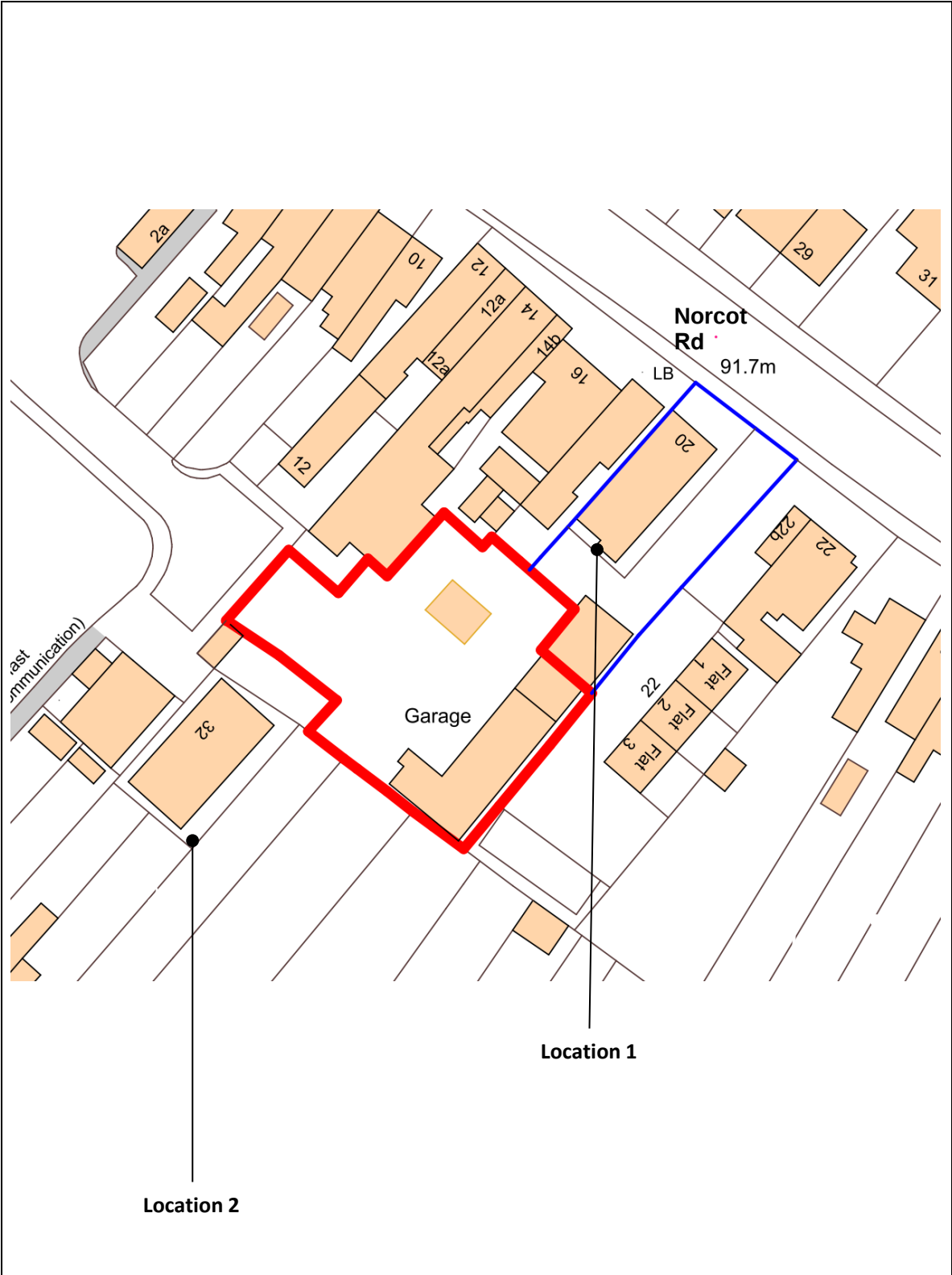
5.0 ASSESSMENT

- 5.1 Daytime noise levels at Location 1 were in the order 60 dB $L_{Aeq\ 15\ min}$ and were controlled by plant and equipment associated with the restaurant at 20 Norcot Road.
- 5.2 Measurements at Location 2 were in the range 45 to 58 dB $L_{Aeq\ 15\ min}$ during the daytime. The variation in measured noise level is considered to be associated with the operations at the car repair centre.

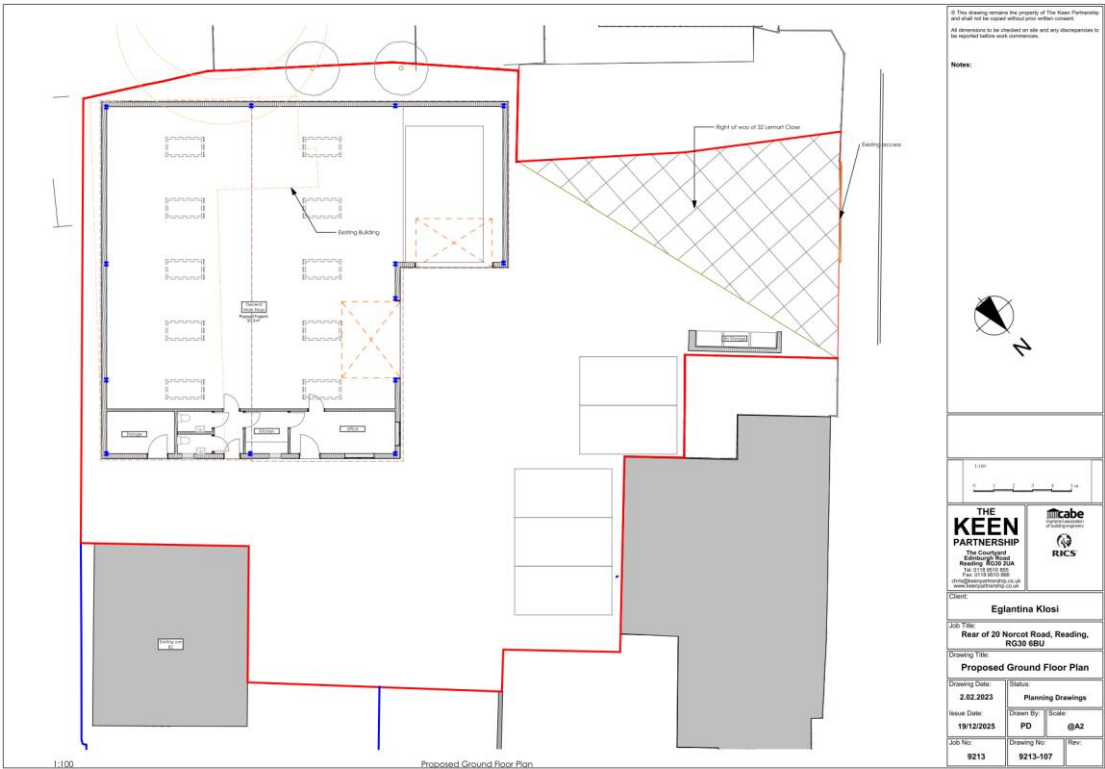
- 5.3 As would be expected, noise arising from the established B2 use varies according to the type of work underway at any one time. Enclosing these sources into the building, as designed and shown in Figure 3, will significantly reduce the resultant noise level in the direction of the residential properties. On this basis, noise arising from the proposal is seen as an improvement over how the existing facility is used.
- 5.4 It is recommended that dedicated items of equipment associated with the proposal (for example an air compressor unit) be housed internally within the proposed building and also within a dedicated enclosure that achieves a minimum sound reduction of 25 dB R_w .
- 5.5 Tactile vibration is rarely an issue from this type of facility therefore has not been considered further.
- 5.6 A Noise Management Plan is given in Appendix C. Implementation will minimise the risk of noise disturbance to nearby properties.

6.0 CONCLUSIONS

- 6.1 24 Acoustics Ltd has been appointed by The Keen Partnership to undertake a noise assessment for proposed development at the rear of 20 Norcot Rd, Reading.
- 6.2 Robust noise mitigation recommendations for the site have been developed. With these measures in place, it is considered that the noise arising from the proposed development will be properly controlled.



Project: 20 Norcot Road	Title: Site Plan and Measurement Locations		
DWG No: Figure 2	Scale: N.T.S.	Rev: -	
Date: Feb 26	Drawn By: SG	Job No: 11515	



Project: 20 Norcot Rd	Title: Proposed Plan (not north aligned)		 24Acoustics
DWG No: Figure 3	Scale: N.T.S.	Rev: -	
Date: Feb 2026	Drawn By: SG	Job No: 11515	

APPENDIX A – ACOUSTIC TERMINOLOGY

Noise is defined as unwanted sound. The range of audible sound is from 0 to 140 dB. The frequency response of the ear is usually taken to be around 18 Hz (number of oscillations per second) to 18000 Hz. The ear does not respond equally to different frequencies at the same level. It is more sensitive in the mid-frequency range than the lower and higher frequencies and because of this, the low and high frequency components of a sound are reduced in importance by applying a weighting (filtering) circuit to the noise measuring instrument. The weighting which is most widely used and which correlates best with subjective response to noise is the dBA weighting. This is an internationally accepted standard for noise measurements.

For variable sources, such as traffic, a difference of 3 dB is just distinguishable. In addition, a doubling of traffic flow will increase the overall noise by 3 dB. The 'loudness' of a noise is a purely subjective parameter, but it is generally accepted that an increase/ decrease of 10 dB corresponds to a doubling/ halving in perceived loudness.

External noise levels are rarely steady, but rise and fall according to activities within an area. In attempt to produce a figure that relates this variable noise level to subjective response, a number of noise indices have been developed. These include:

i) The L_{Amax} noise level

This is the maximum noise level recorded over the measurement period.

ii) The L_{Aeq} noise level

This is "equivalent continuous A-weighted sound pressure level, in decibels" and is defined in British Standard BS 7445 as the "value of the A-weighted sound pressure level of a continuous, steady sound that, within a specified time interval, T , has the same mean square sound pressure as a sound under consideration whose level varies with time".

It is a unit commonly used to describe construction noise and noise from industrial premises and is the most suitable unit for the description of other forms of environmental noise. In more straightforward terms, it is a measure of energy within the varying noise.

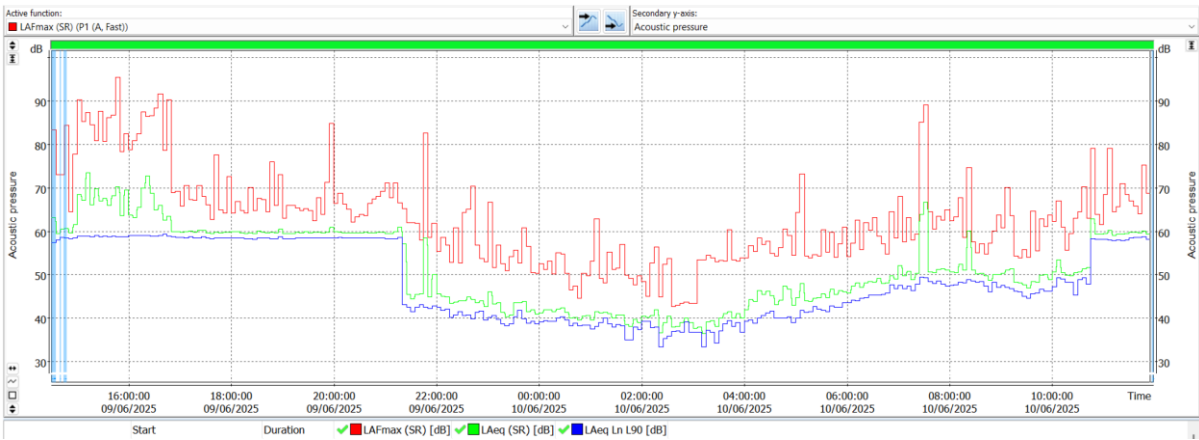
iii) The L_{A10} noise level

This is the noise level that is exceeded for 10% of the measurement period and gives an indication of the noisier levels. It is a unit that has been used over many years for the measurement and assessment of road traffic noise.

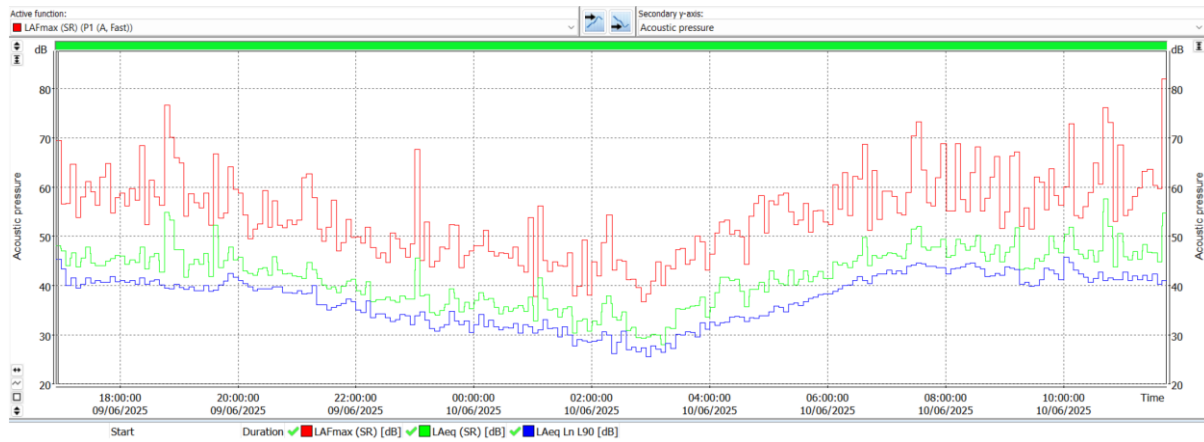
iv) The L_{A90} noise level

This is the noise level that is exceeded for 90% of the measurement period and gives an indication of the noise level during the quieter periods. It is often referred to as the background noise level and is used in the assessment of disturbance from industrial noise.

APPENDIX B1 – MEASUREMENT DATA – LOCATION 1



APPENDIX B2 – MEASUREMENT DATA – LOCATION 2



APPENDIX C – NOISE MANAGEMENT PLAN

This Noise Management Plan identifies measures to ensure ongoing management of noise sources relating to the development.

Management Philosophy

The occupier will recognise the potential for noise to cause disturbance in the surrounding community and will be committed to ensuring ongoing management of noise arising from the site. The management aims are:

- To adopt working practices that minimise noise emissions;
- To ensure that staff, customers and visitors are aware of the procedures identified in the Noise Management Plan;

Appointment of a Responsible Person

A member of the occupier's management team will be deemed responsible for the following:

- Overall management of noise emissions from the site;
- Management of day-to-day activities to ensure noise emissions are minimised;
- To act as main point of contact for the Council and for local residents;
- To ensure best practice is promoted at all times; and
- To ensure that this Noise Management Plan remains current and relevant.

If deemed necessary, for example to accommodate the above tasks within existing workloads, the responsibilities may be shared, providing that all responsible individuals are identified and documented.

Site- Specific Measures

The following actions and controls will be implemented on site:

- Contact details for the Responsible Person will be displayed at the site entrance.
- The occupier will be required to ensure that all vehicles, plant and machinery on site shall be maintained in accordance with manufacturers' specifications at all times.
- Manoeuvring of vehicles will be engaged in a quiet manner.
- Vehicles will not be left to idle unnecessarily, and horns must not be used other than when required in an emergency.
- Vehicle radios must be switched off when on site.
- A considerate and neighbourly approach to relations with local residents will be adopted throughout.