RODNEY STEVENS ACOUSTICS

REPORT R240797R1

Revision 1

# Noise Impact Assessment

# Proposed Self-Storage Facility

# 67-75 Lawford Street, Greenacre

PREPARED FOR:

Allamcorp Pty Ltd
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17 December 2024

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# Noise Impact Assessment

# Proposed Self-Storage Facility

# 67-75 Lawford Street, Greenacre

PREPARED BY:

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DOCUMENT CONTROL

| Reference | Status | Date | Prepared | Checked | Authorised |
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| R240797R1 | Revision 1 | 17 December 2024 | Marc Guitart | Desmond Raymond | Desmond Raymond |

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# 1 INTRODUCTION

Rodney Stevens Acoustics Pty Ltd (RSA) has been engaged by Allamcorp Pty Ltd to prepare a noise assessment for the proposed self-storage facility at 67-75 Lawford Street, Greenacre .

This report details the results of an ambient noise survey and establishes the noise criteria for the operation of the proposed self-storage facility.

This assessment is to form part of the supporting documentation for the DA submission to City of Canterbury Bankstown Council. Specific acoustic terminology is used in this report. An explanation of common acoustic terms is provided in Appendix A.

# 2 PROPOSED DEVELOPMENT

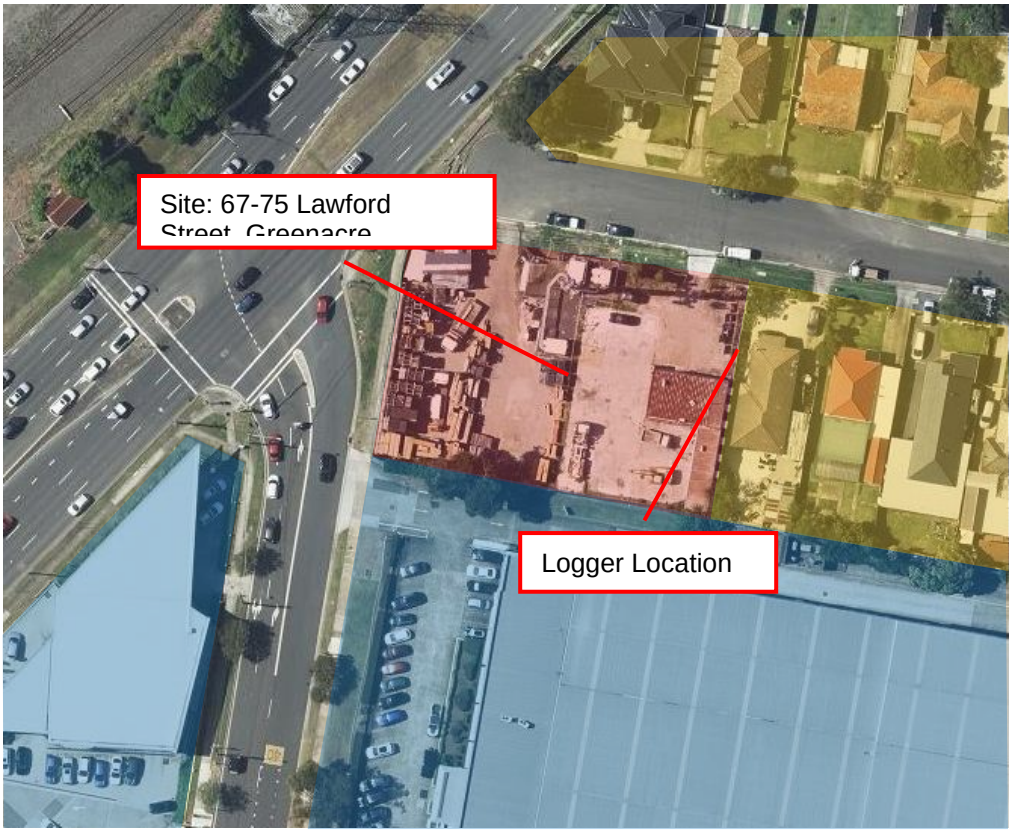
## 2.1 Development Site

The proposed self-storage facility is to be located at 67-75 Lawford Street, Greenacre . The project consists of basement, ground floor plus two levels building. A reception and amenities (toilet, tea, plant, waste and cleaner) are located on the ground floor of the building. The site is bounded by adjoining residential receivers to the north and east. Commercial and Hume Highway to the south and west.

There are a number of sensitive receivers surrounding the proposed development, these receivers will be potentially affected by noise generated by the proposed development. The following table shows the most affected receivers

Figure 2-1 shows an aerial image of the site area and the surrounding environment.

Figure 2-1 Site Location




Aerial image courtesy of SIXmaps © 2024

# 3 BASELINE NOISE SURVEY

## 3.1 Unattended Noise Monitoring

In order to characterise the existing acoustical environment of the area, unattended noise monitoring was conducted between Thursday 24th October and Wednesday 6th November 2024 at the logging location shown in Figure 2-1. The Noise Logger was located on the residential boundary of the site. The noise monitoring at this location is representative of the ambient noise of the area dominated by the traffic noise from Hume Highway A22.

Logger location was selected with consideration to other noise sources which may influence readings, security issues for noise monitoring equipment and gaining permission for access from other landowners.

Instrumentation for the survey comprised of 1 RION NL-42EX environmental noise loggers (serial number 422910) fitted with microphone windshield. Calibration of the logger was checked prior to and following measurements. Drift in calibration did not exceed ±0.5 dB(A). All equipment carried appropriate and current NATA (or manufacturer) calibration certificates. Measured data has been filtered to remove data measured during extraneous noise conditions (Refer to Appendix B).

Upon consultation with historical weather reports provided by the Bureau of Meteorology, no measured data was affected by adverse weather.

The logger determines $L_{A1}$, $L_{A10}$, $L_{A90}$ and $L_{Aeq}$ levels of the ambient noise. $L_{A1}$, $L_{A10}$, $L_{A90}$ are the levels exceeded for 1%, 10% and 90% of the sample time respectively (see Glossary for definitions in Appendix A). Detailed results at the monitoring location are presented in graphical format in Appendix B. The graphs show measured values of $L_{A1}$, $L_{A10}$, $L_{A90}$ and $L_{Aeq}$ for each 15-minute monitoring period.

## 3.2 Data Processing

In order to assess noise emission from the proposed carpark, the data obtained from the noise logger has been processed in accordance with the procedures contained in the NSW Environmental Protection Authority's (EPA) *Noise Policy for Industry* (NPfI, 2017) to establish representative noise levels that can be expected in the residential vicinity of the site. The monitored baseline noise levels are detailed in Table 3-1.

Table 3-1 Measured Baseline Noise Levels Corresponding to Defined NPfI Periods

| Location | Measurement Descriptor | Measured Noise Level – dB(A) re 20 µPa | | |
|---|---|---|---|---|
| | | Daytime 7 am - 6 pm | Evening 6 pm – 10 pm | Night-time 10 pm – 7 am |
| Residential Boundary | $L_{Aeq}$ | 61 | 64 | 59 |
| | RBL (Background) | 48 | 49 | 45 |

Notes: All values expressed as dB(A) and rounded to nearest 1 dB(A);

$L_{Aeq}$ Equivalent continuous (energy average) A-weighted sound pressure level. It is defined as the steady sound level that contains the same amount of acoustic energy as the corresponding time-varying sound.

$L_{A90}$ Noise level present for 90% of time (background level). The average minimum background sound level (in the absence of the source under consideration).

# 4 NOISE GUIDELINES AND CRITERIA

Canterbury-Bankstown Development Control Plan 2023 has the following specific requirements:

Chapter 9 - Industrial Precincts (August 2024) – Development adjacent to residential zones:

*2.7 (d) whether noise generation from fixed sources or motor vehicles associated with the proposed development will be effectively insulated or otherwise minimised;*

*Section 4 – Environmental Management*

*Acoustic privacy*

*4.1 Development must:*

*(a) consider the Noise Policy for Industry and the acoustic amenity of adjoining residential zoned land; and*

*(b) may require adequate soundproofing to any machinery or activity that is considered to create a noise nuisance.*

Chapter 10 - Commercial Land Uses (August 2024) – No requirements

## 4.1 Operational Noise Project Trigger Noise Levels

Responsibility for the control of noise emissions in New South Wales is vested in Local Government and the EPA. The EPA oversees the Noise Policy for Industry (NPfI) October 2017 which provides a framework and process for deriving project trigger noise level. The NPfI project noise levels for industrial noise sources have two (2) components:

- Controlling the intrusive noise impacts for residents and other sensitive receivers in the short term; and
- Maintaining noise level amenity for particular land uses for residents and sensitive receivers in other land uses.

### *4.1.1* Intrusiveness Noise Levels

For assessing intrusiveness, the background noise generally needs to be measured. The intrusiveness noise level essentially means that the equivalent continuous noise level (LAeq) of the source should not be more than 5 dB(A) above the measured Rated Background Level (RBL), over any 15 minute period.

### *4.1.2* Amenity Noise Levels

The amenity noise level is based on land use and associated activities (and their sensitivity to noise emission). The cumulative effect of noise from industrial sources needs to be considered in assessing the impact. The noise levels relate only to other industrial-type noise sources and do not include road, rail or community noise. The existing noise level from industry is measured.

If it approaches the project trigger noise level value, then noise levels from new industrial-type noise sources, (including air-conditioning mechanical plant) need to be designed so that the cumulative effect does not produce total noise levels that would significantly exceed the project trigger noise level.

### *4.1.3* Area Classification

The NPfI characterises the "Urban" noise environment as an area with an acoustical environment that:

- is dominated by 'urban hum' or industrial source noise,
- where urban hum means the aggregate sound of many unidentifiable, mostly traffic and/or industrial related sound sources
- has through-traffic with characteristically heavy and continuous traffic flows during peak periods
- is near commercial districts or industrial districts
- has any combination of the above.

The area surrounding the proposed development falls under the "Urban" area classification.

### *4.1.4* Project Specific Trigger Noise Levels

Having defined the area type, the processed results of the unattended noise monitoring have been used to determine project specific project trigger noise levels. The intrusive and amenity project trigger noise levels for nearby residential premises are presented in Table 4-1. These project trigger noise levels are nominated for the purpose of assessing potential noise impacts from the proposed development.

In this case, the ambient noise environment is not controlled by industrial noise sources and therefore the project amenity noise levels are assigned as per Table 2.2 of the NPfI (Recommended Amenity Noise Levels) and standardised as per Section 2.2 of the NPfI. For each assessment period, the lower (i.e. the more stringent) of the amenity or intrusive project trigger noise levels are adopted. These are shown in bold text in Table 4-1.

Table 4-1 Operational Project Trigger Noise Levels

| Receiver | Time of Day | ANL [1] $L_{Aeq}$ | Measured | | Project Trigger Noise Levels | |
|---|---|---|---|---|---|---|
| | | | RBL [2] $L_{A90(15min)}$ | Existing $L_{Aeq(Period)}$ | Intrusive $L_{Aeq(15min)}$ | Amenity $L_{Aeq(15min)}$ |
| Residential | Day | 60 | 48 | 61 | 53 | 58 |
| | Evening | 50 | 49 | 64 | 54 | 48 |
| | Night | 45 | 45 | 59 | 50 | **43** |
| Commercial | When in use | | | | | **65** |

Note 1: ANL = "Amenity Noise Level" for residences in Urban Areas.

Note 2: RBL = "Rating Background Level".

## 4.2 Sleep Disturbance

The NSW EPA Noise Policy for Industry (NPfI) provides a guidance for sleep disturbance or sleep arousal assessment. The NPfI states the following:

> *The potential for sleep disturbance from maximum noise level events from premises during the night-time period needs to be considered. Sleep disturbance is considered to be both awakenings and disturbance to sleep stages.*
>
> *Where the subject development/premises night-time noise levels at a residential location exceed:*
>
> *• LAeq,15min 40 dB(A) or the prevailing RBL plus 5 dB, whichever is the greater, and/or*
>
> *• LAFmax 52 dB(A) or the prevailing RBL plus 15 dB, whichever is the greater,*
>
> *a detailed maximum noise level event assessment should be undertaken. The detailed assessment should cover the maximum noise level, the extent to which the maximum noise level exceeds the rating background noise level, and the number of times this happens during the night-time period. Some guidance on possible impact is contained in the review of research results in the NSW Road Noise Policy*
>
> *Other factors that may be important in assessing the extent of impacts on sleep include:*
>
> *• how often high noise events will occur*
>
> *• the distribution of likely events across the night-time period and the existing ambient maximum events in the absence of the subject development*
>
> *• whether there are times of day when there is a clear change in the noise environment (such as during early-morning shoulder periods)*
>
> *• current scientific literature available at the time of the assessment regarding the impact of maximum noise level events at night.*
>
> *Maximum noise level event assessments should be based on the LAFmax descriptor on an event basis under 'fast' time response.*
>
> *The detailed assessment should consider all feasible and reasonable noise mitigation measures with a goal of achieving the above trigger levels*

# 5 OPERATIONAL NOISE IMPACT ASSESMENT

The proposed self-storage facility contains a basement, ground and Level 1 and 2 as well as a reception and amenities (toilet, tea, plant, waste and cleaner rooms) are located on the ground floor of the building.

A carpark containing 10 car spaces is located in the basement and 4 car spaces on the ground floor (outside the building). Access to the site will be via Lawford St with three different entry/exits options.

## 5.1 Trading Hours

The proposed site will be staffed between 8:30am and 5pm and will be accessible to customers 24 hours, 7 days a week.

## 5.2 Self-Storage Facility Activities

This assessment will cover the following activities:

- $LAeq_{15\ min}$ traffic movements: cars and trucks at the outdoors ground carpark and entering/exiting the facility.
- Mechanical plant noise (in principle)

Table 5-1 Vehicles Acoustic Power [LwA]

| Action | Light Vehicle – SRV - LwA | Commercial Truck - LwA |
|---|---|---|
| Start | 79 | 85 |
| In transit [dB/m,$m^2$] | 47 | 56 |
| Door Slam * | 103 | 105 |

Notes: *Impulsive Noise: 5 dB added

Light vehicle linear sources are considered at 0.7m to consider the motor location and the vehicle point sources are considered at the height of 1m to consider the height of the door.

The commercial truck is to be located at 1,2 m. All commercial vehicle point sources are considered at the height of 1.5m to consider the height of the door.

Table 5-2 presents the assumed Mechanical Plant Equipment and associated acoustic power levels.

Table 5-2 Mechanical Plant - Acoustic Power [LwA]

| Mechanical Unit | LwA | Location |
|---|---|---|
| Ventilation | 79 | GF- Mechanical Plant External Wall |
| AC | 65 | GF -Office External Wall |

## 5.3 Traffic Generation

Allamcorp Pty Ltd and Turnet Traffic Pty Ltd has provided the maximum site traffic generation as per Table 5-3 based on the 95th percentile (worst case scenario).

Table 5-3 95th Percentile (worst case) Traffic Generation

| Vehicle Movements | |
|---|---|
| AM Weekday Peak Hour | 15 |
| Day - evening Weekday Peak Hour | 19 |
| Day - evening Weekend Peak Hour | 30 |

To be in the conservative side the maximum of 30 vehicle movement per hours have been used in this 15-minute assessment (8 vehicle movements) day-evening and also night time periods.

A total of 6 light cars and 2 commercial vehicles will be parking outside, entering and exiting through the site to cover all the potential noise sources scenarios.

5.1 3D model Specifications

3D Noise modelling has been undertaken using the NSW EPA recognised and approved computer noise model Soundplan V9.0 acoustic modelling package. It uses the ISO 9613 Acoustics – Attenuation of sound during propagation outdoors (ISO, 1996) algorithm.

To predict the noise levels, Table 5-4 modelling parameters/assumptions have been used.

Table 5-4 Noise Modelling Parameters/Assumptions

| Modelling Parameters | |
|---|---|
| Noise Propagation Algorithm | ISO9613 |
| Wind Direction | Calm (Neutral) |
| Order of reflection | 2 |
| Ground Absorption Coefficient (no paved areas) | 0.1 |
| Receivers and Contour Maps Height | 1.5 m |
| Temperature and Humidity | 20°C – 80% |

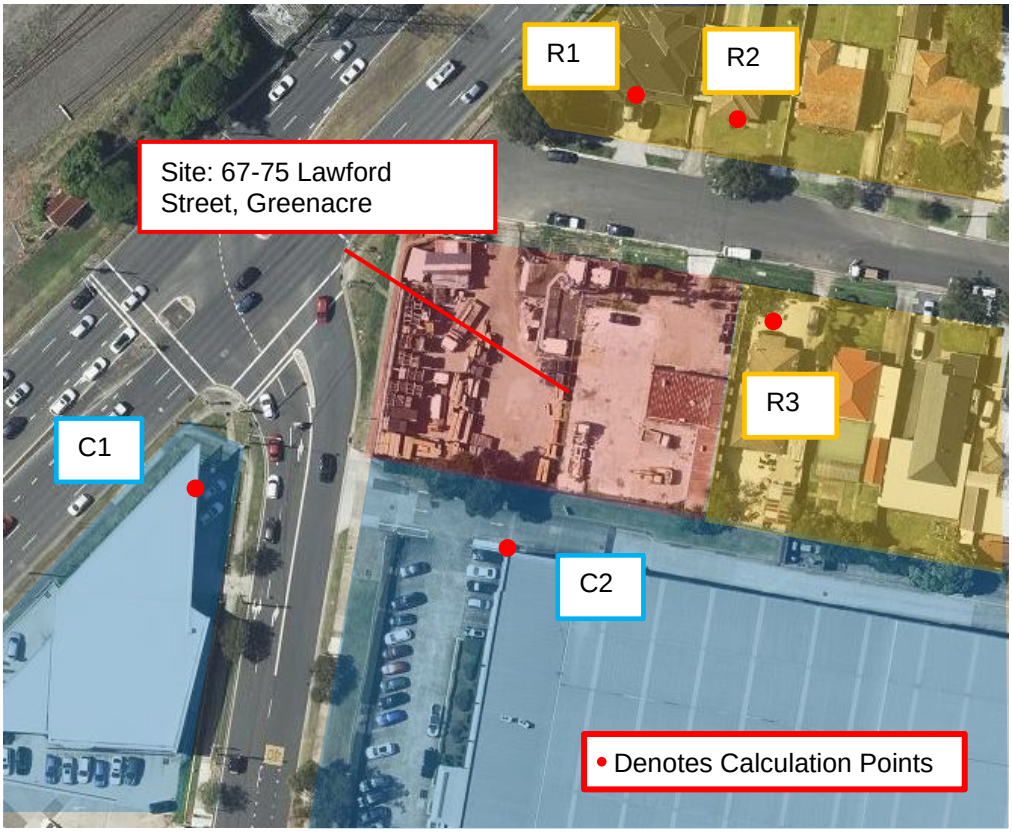
The noise modelling takes into consideration the sound power level of the proposed site operations, activities and equipment, and applies adjustments for attenuation from geometric spreading, acoustic shielding from intervening ground topography, ground effect, meteorological effects and atmospheric absorption.

## 5.2 Predicted Noise Impact Levels

Calculations of the noise levels from the operation of the Proposed Self-Storage Facility have been carried out using the data from previous section.

The following figure presents the proposed development and all sensitive receivers. Table 5-5 shows the address of each affected receiver.

Figure 5-1 Sensitive Receivers Location




Aerial image courtesy of SIXmaps © 2024

Table 5-5 Sensitive Receivers

| Receiver | Number of Levels | Sensitive Receiver's Address |
|---|---|---|
| R1 | 1 | 46 Lawford Street |
| R2 | 1 | 44 Lawford Street |
| R3 | 1 | 65 Lawford Street |
| C1 | 2 | Hume Highway & Waterloo Road |
| C2 | 2 | 457 Waterloo Road |

## 5.3 Predicted Noise Levels

Predictive resultant noise levels have been calculated for the self-storage facility. Noise emissions at the nearest receivers are presented in the table below. The predicted noise calculations take into account the following:

Scenario 1 – Day & Evening Time Use

- Heights of receivers are assumed to be 1.5 meters above respective level.
- All self-storage facility items are operational at the same time (worst case scenario)
- 6 cars will enter/leave
- 2 commercial trucks will be enter/ leave
- Resulting noise levels have been calculated to the most affected point on the boundary of the affected receivers

Table 5-6 Predicted Noise Levels At Sensitive Receivers.

| Receiver | Period | Calculated Noise Level $L_{Aeq}$ – dB(A) | Conservative Noise Criteria | Compliance |
|---|---|---|---|---|
| R1 | Day- Evening | 30 | 48 | Yes |
| | Night | | 43 | Yes |
| R2 | Day- Evening | 28 | 48 | Yes |
| | Night | | 43 | Yes |
| R3 | Day- Evening | 27 | 48 | Yes |
| | Night | | 43 | Yes |
| C1 | Day- Evening | 39 | 65 | Yes |
| | Night | | NA | Yes |
| C2 | Day- Evening | 48 | 65 | Yes |
| | Night | | NA | Yes |

## 6 RECOMMENDATIONS

The operation of the self-storage is assessed to comply with the project specific noise criteria without any need of implementation of noise controls.

## 7 CONCLUSION

Rodney Stevens Acoustics has conducted a review of the proposed self-storage facility at 67-75 Lawford Street, Greenacre . The review has assessed the noise generation from the site and compared it with the noise criteria required by City of Canterbury Bankstown Council and other relevant standards.

This report shows that under the most conservative operating scenarios, the operational noise emission from the proposed self-storage facility will achieve the established criteria at neighbouring residences and commercial receivers. It is therefore recommended that planning approval be granted for the proposed development on the basis of acoustics.

Prepared by:

Marc Guitart

Senior Acoustic Consultant

Approved by:

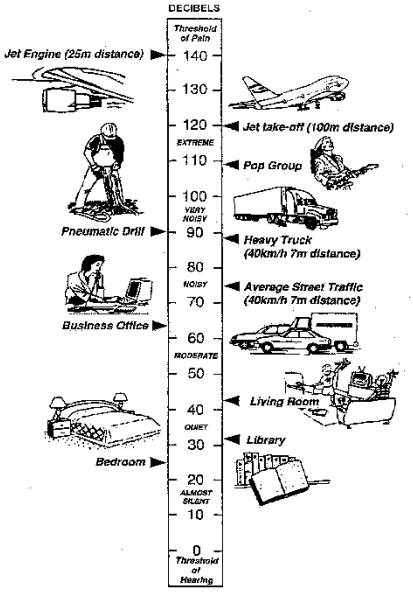
Desmond Raymond

Director

## Appendix A – Acoustic Terminology

| | |
|---|---|
| **A-weighted sound pressure** | The human ear is not equally sensitive to sound at different frequencies. People are more sensitive to sound in the range of 1 to 4 kHz (1000 – 4000 vibrations per second) and less sensitive to lower and higher frequency sound. During noise measurement an electronic '*A-weighting*' frequency filter is applied to the measured sound level *dB(A)* to account for these sensitivities. Other frequency weightings (B, C and D) are less commonly used. Sound measured without a filter is denoted as linear weighted dB(linear). |
| **Ambient noise** | The total noise in a given situation, inclusive of all noise source contributions in the near and far field. |
| **Community annoyance** | Includes noise annoyance due to:<br>character of the noise (e.g. sound pressure level, tonality, impulsiveness, low-frequency content)<br>character of the environment (e.g. very quiet suburban, suburban, urban, near industry)<br>miscellaneous circumstances (e.g. noise avoidance possibilities, cognitive noise, unpleasant associations)<br>human activity being interrupted (e.g. sleep, communicating, reading, working, listening to radio/TV, recreation). |
| **Compliance** | The process of checking that source noise levels meet with the noise limits in a statutory context. |
| **Cumulative noise level** | The total level of noise from all sources. |
| **Extraneous noise** | Noise resulting from activities that are not typical to the area. Atypical activities may include construction, and traffic generated by holiday periods and by special events such as concerts or sporting events. Normal daily traffic is not considered to be extraneous. |
| **Feasible and reasonable measures** | Feasibility relates to engineering considerations and what is practical to build; reasonableness relates to the application of judgement in arriving at a decision, taking into account the following factors:<br>Noise mitigation benefits (amount of noise reduction provided, number of people protected).<br>Cost of mitigation (cost of mitigation versus benefit provided).<br>Community views (aesthetic impacts and community wishes).<br>Noise levels for affected land uses (existing and future levels, and changes in noise levels). |
| **Impulsiveness** | Impulsive noise is noise with a high peak of short duration or a sequence of these peaks. Impulsive noise is also considered annoying. |
| **Low frequency** | Noise containing major components in the low-frequency range (20 to 250 Hz) of the frequency spectrum. |

| | |
|---|---|
| **Noise criteria** | The general set of non-mandatory noise levels for protecting against intrusive noise (for example, background noise plus 5 dB) and loss of amenity (e.g. noise levels for various land use). |
| **Noise level (goal)** | A noise level that should be adopted for planning purposes as the highest acceptable noise level for the specific area, land use and time of day. |
| **Noise limits** | Enforceable noise levels that appear in conditions on consents and licences. The noise limits are based on achievable noise levels, which the proponent has predicted can be met during the environmental assessment. Exceedance of the noise limits can result in the requirement for either the development of noise management plans or legal action. |
| **Performance-based goals** | Goals specified in terms of the outcomes/performance to be achieved, but not in terms of the means of achieving them. |
| **Rating Background Level (RBL)** | Rating background noise level (RBL) – the overall single-figure background level representing each assessment period (day/evening/night) over the whole monitoring period (as opposed to over each 24-hour period used for the assessment background level). The rating background level is the median $L_{A90}$ noise level measured over all day, evening and night time monitoring periods. |
| **Receptor** | The noise-sensitive land use at which noise from a development can be heard. |
| **Sleep disturbance** | Awakenings and disturbance of sleep stages. |
| **Sound and decibels (dB)** | Sound (or noise) is caused by minute changes in atmospheric pressure that are detected by the human ear. The ratio between the quietest noise audible and that which should cause permanent hearing damage is a million times the change in sound pressure. To simplify this range the sound pressures are logarithmically converted to decibels from a reference level of 2 x 10-5 Pa.<br>The picture below indicates typical noise levels from common noise sources. |



dB is the abbreviation for decibel – a unit of sound measurement. It is equivalent to 10 times the logarithm (to base 10) of the ratio of a given sound pressure to a reference pressure.

**Sound power Level (SWL)**

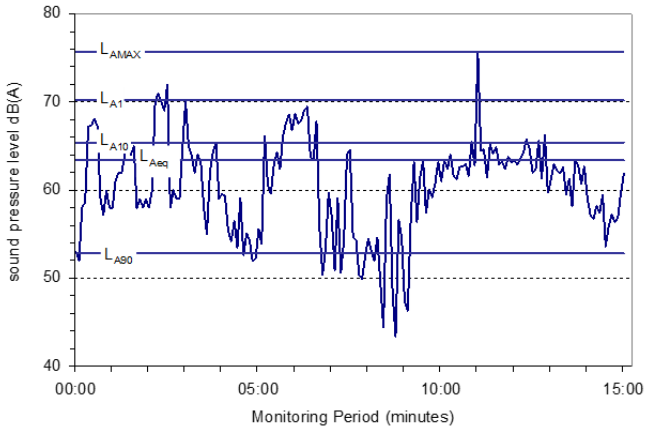
The sound power level of a noise source is the sound energy emitted by the source. Notated as SWL, sound power levels are typically presented in *dB(A)*.

**Sound Pressure Level (SPL)**

The level of noise, usually expressed as SPL in *dB(A)*, as measured by a standard sound level meter with a pressure microphone. The sound pressure level in *dB(A)* gives a close indication of the subjective loudness of the noise.

**Statistic noise levels**

Noise levels varying over time (e.g. community noise, traffic noise, construction noise) are described in terms of the statistical exceedance level.
A hypothetical example of A weighted noise levels over a 15 minute measurement period is indicated in the following figure:




Key descriptors:

$L_{Amax}$ Maximum recorded noise level.

$L_{A1}$ The noise level exceeded for 1% of the 15 minute interval.

$L_{A10}$ Noise level present for 10% of the 15 minute interval. Commonly referred to the average maximum noise level.

$L_{Aeq}$ Equivalent continuous (energy average) A-weighted sound pressure level. It is defined as the steady sound level that contains the same amount of acoustic energy as the corresponding time-varying sound.

$L_{A90}$ Noise level exceeded for 90% of time (background level). The average minimum background sound level (in the absence of the source under consideration).

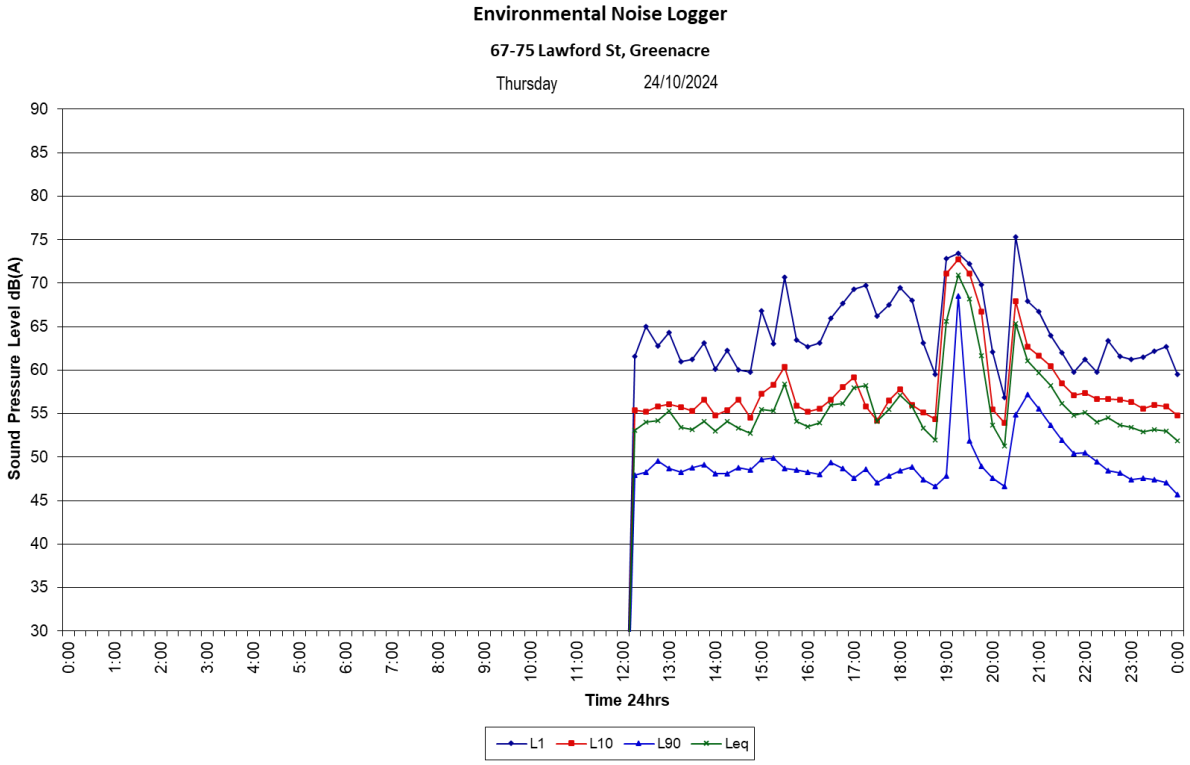
**Threshold**

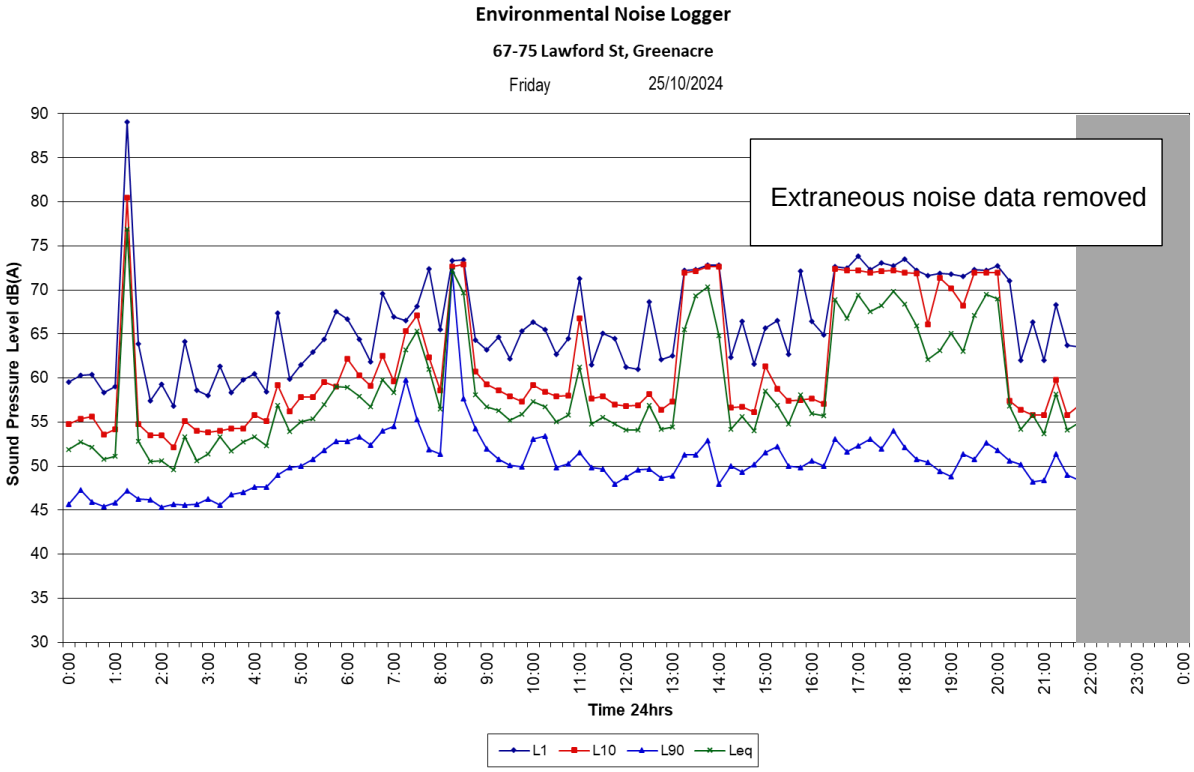
The lowest sound pressure level that produces a detectable response (in an instrument/person).

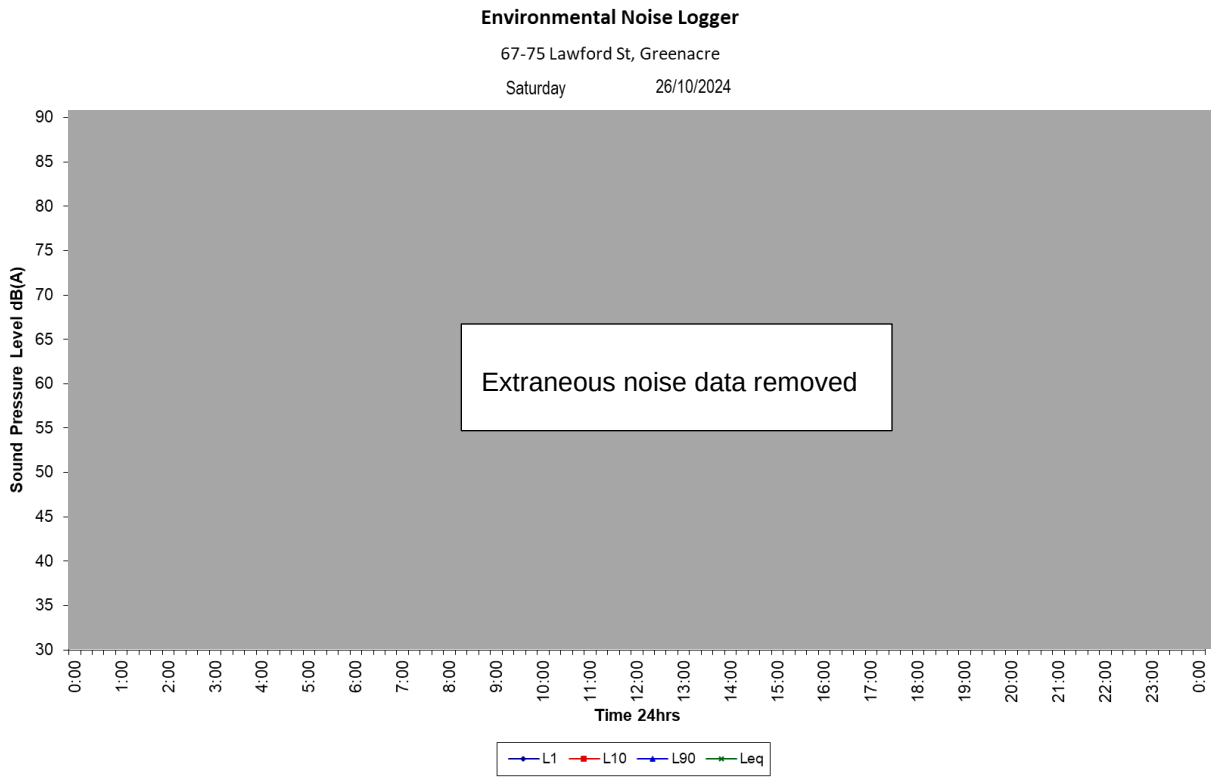
**Tonality**

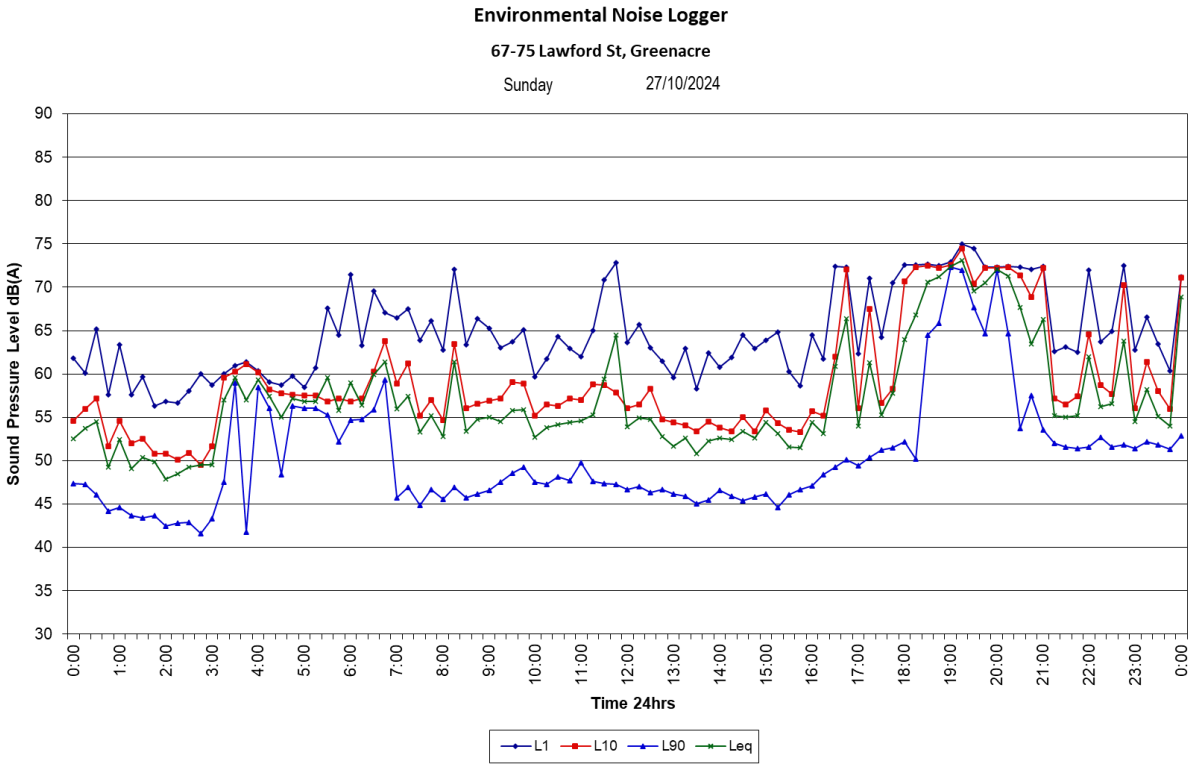
Tonal noise contains one or more prominent tones (and characterised by a distinct frequency components) and is considered more annoying. A 2 to 5 dB(A) penalty is typically applied to noise sources with tonal characteristics

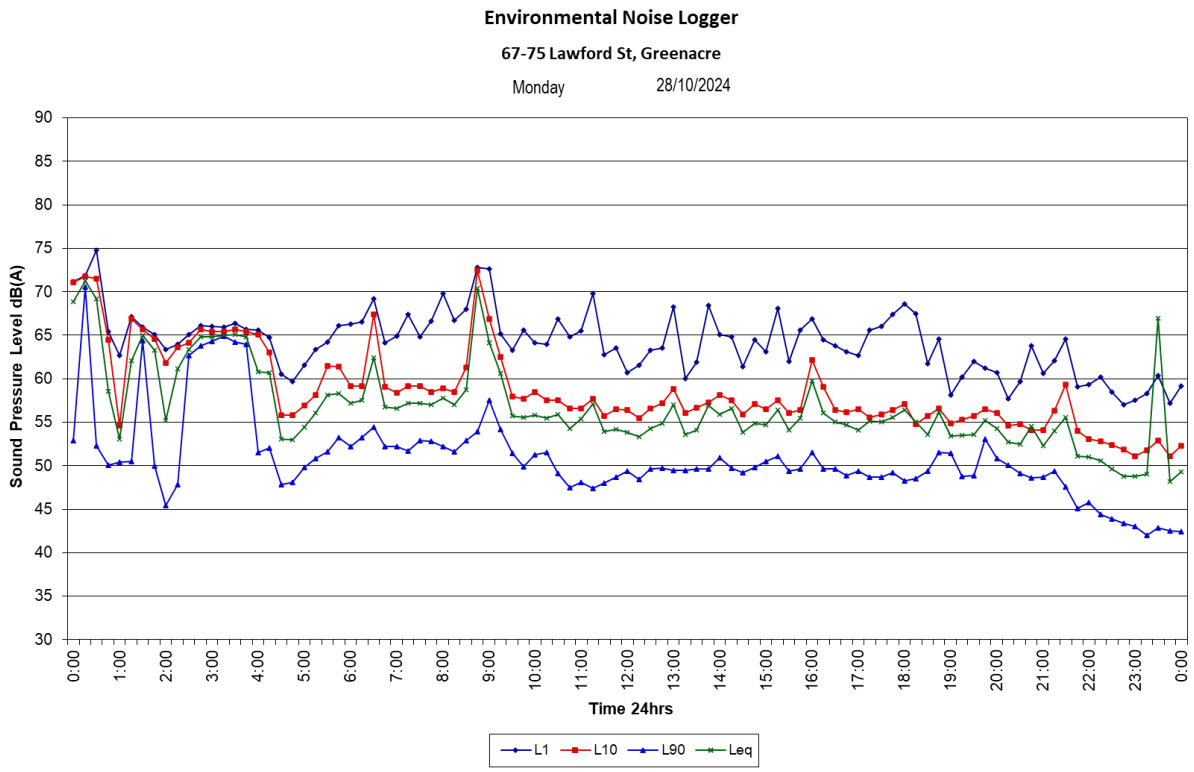
## Appendix B – Logger Graphs

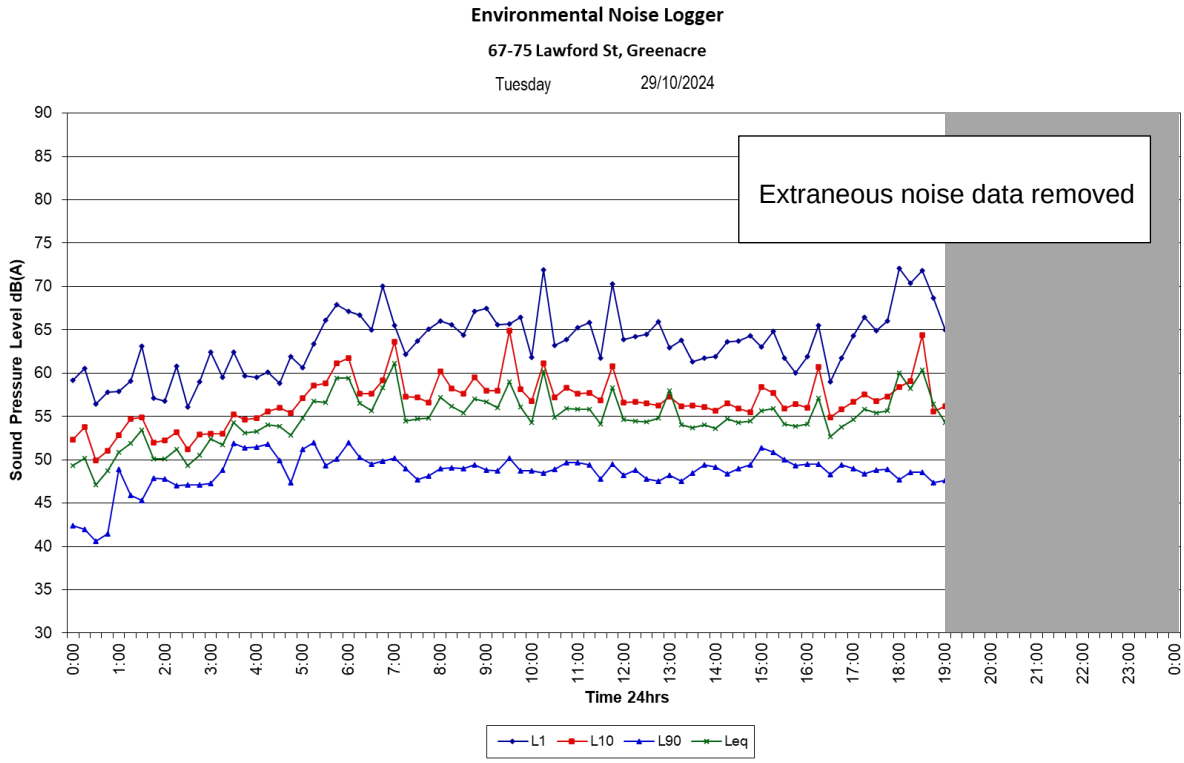


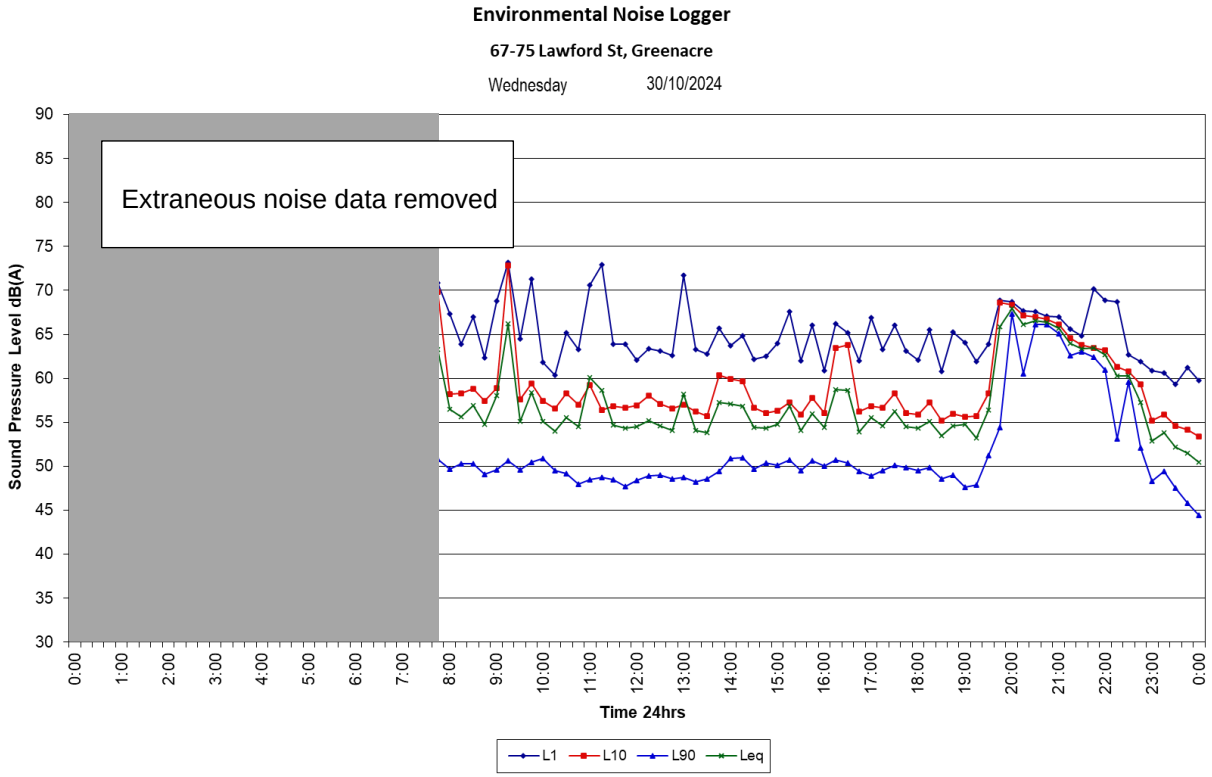



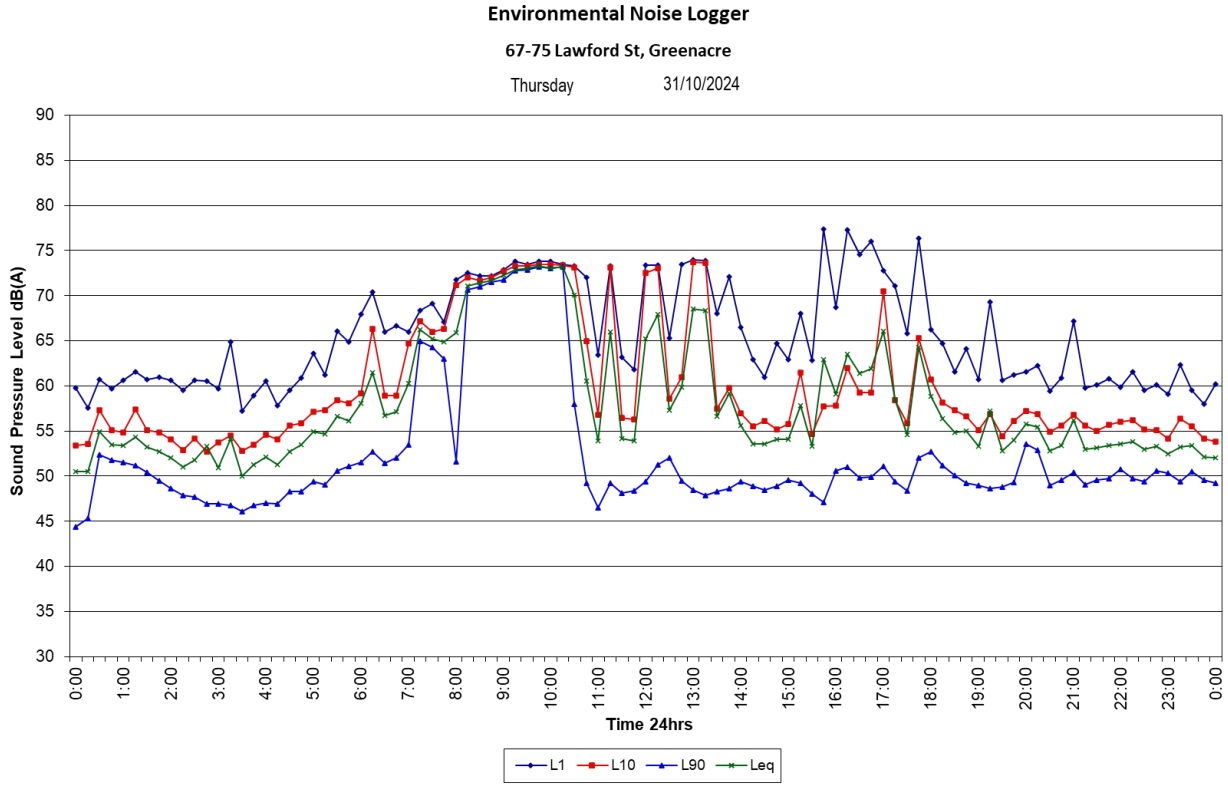

Environmental Noise Logger
67-75 Lawford St, Greenacre
Saturday 26/10/2024
Sound Pressure Level dB(A)
Extraneous noise data removed
Time 24hrs
L1 L10 L90 Leq


Environmental Noise Logger
67-75 Lawford St, Greenacre
Sunday 27/10/2024
Sound Pressure Level dB(A)
Time 24hrs
L1 L10 L90 Leq


Environmental Noise Logger
67-75 Lawford St, Greenacre
Monday 28/10/2024
Sound Pressure Level dB(A)
Time 24hrs
L1 L10 L90 Leq


Environmental Noise Logger
67-75 Lawford St, Greenacre
Tuesday 29/10/2024
Extraneous noise data removed
Sound Pressure Level dB(A)
Time 24hrs
L1 L10 L90 Leq

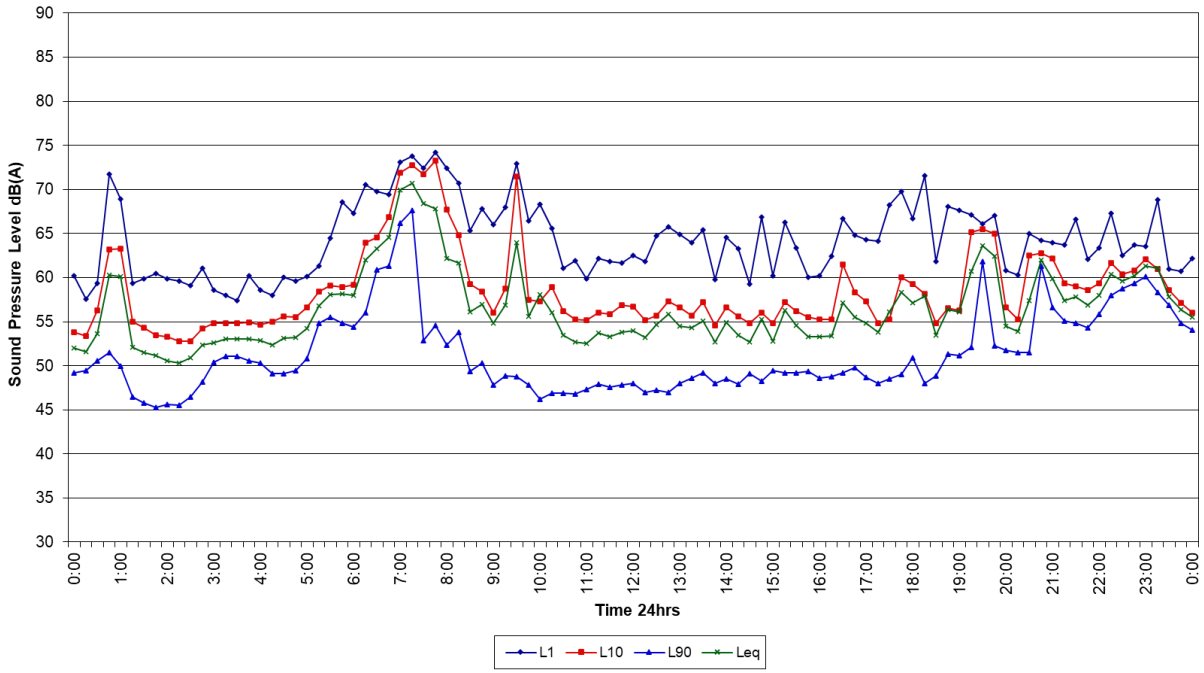

Environmental Noise Logger
67-75 Lawford St, Greenacre
Wednesday 30/10/2024
Extraneous noise data removed
Sound Pressure Level dB(A)
Time 24hrs
L1 L10 L90 Leq


Environmental Noise Logger
67-75 Lawford St, Greenacre
Thursday 31/10/2024
Sound Pressure Level dB(A)
Time 24hrs
L1 L10 L90 Leq

**Traffic Logger**

**67-75 Lawford St, Greenacre**

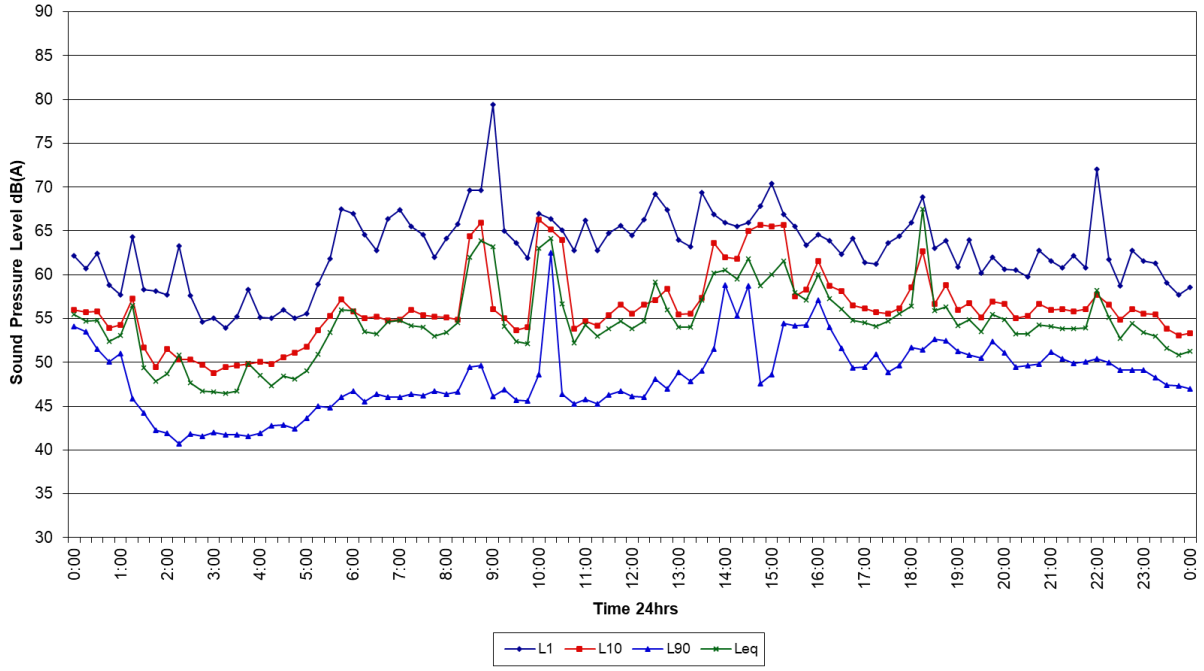
Friday 1/11/2024

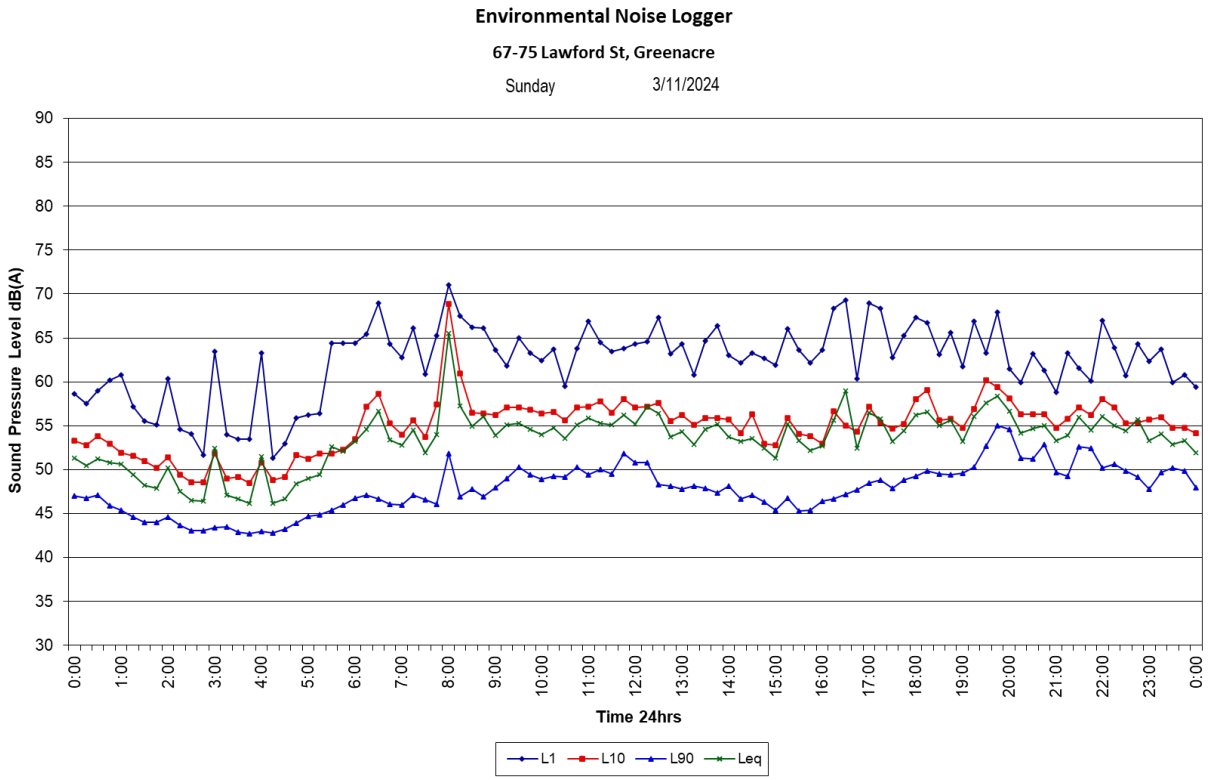


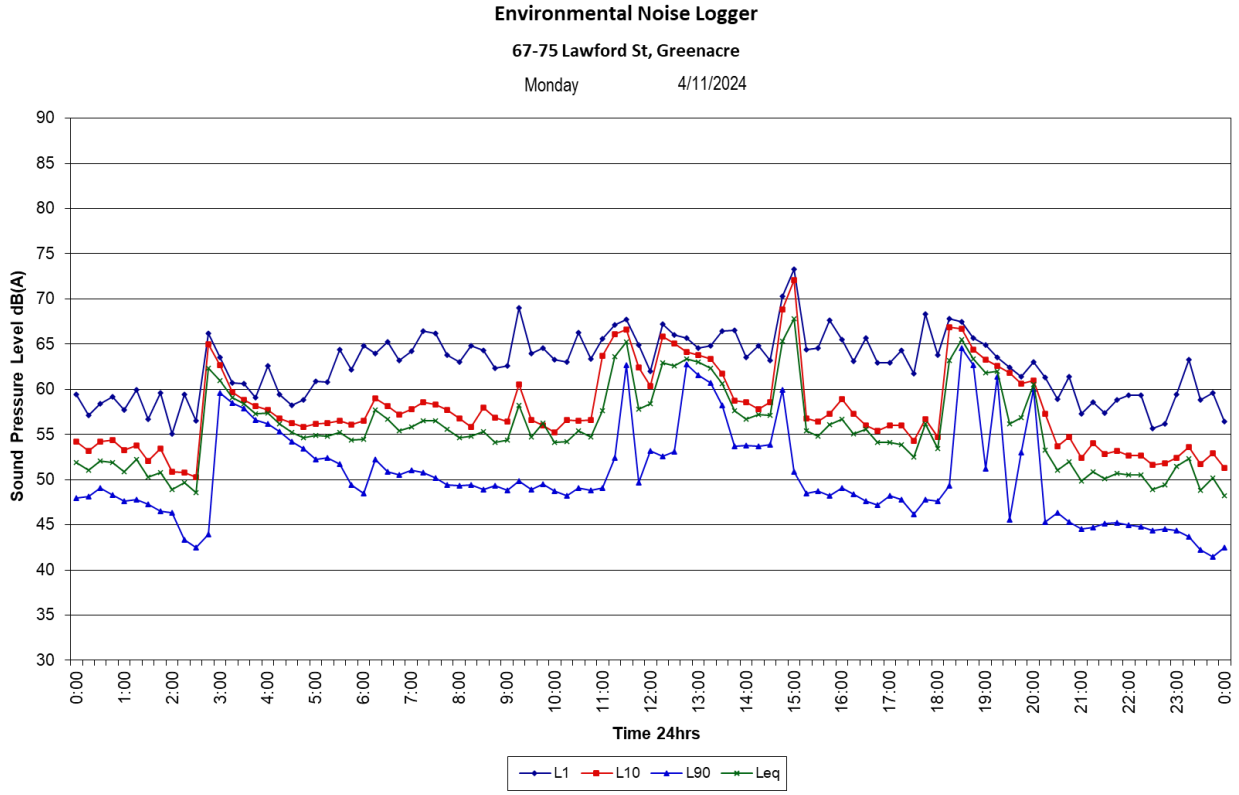

**Environmental Noise Logger**

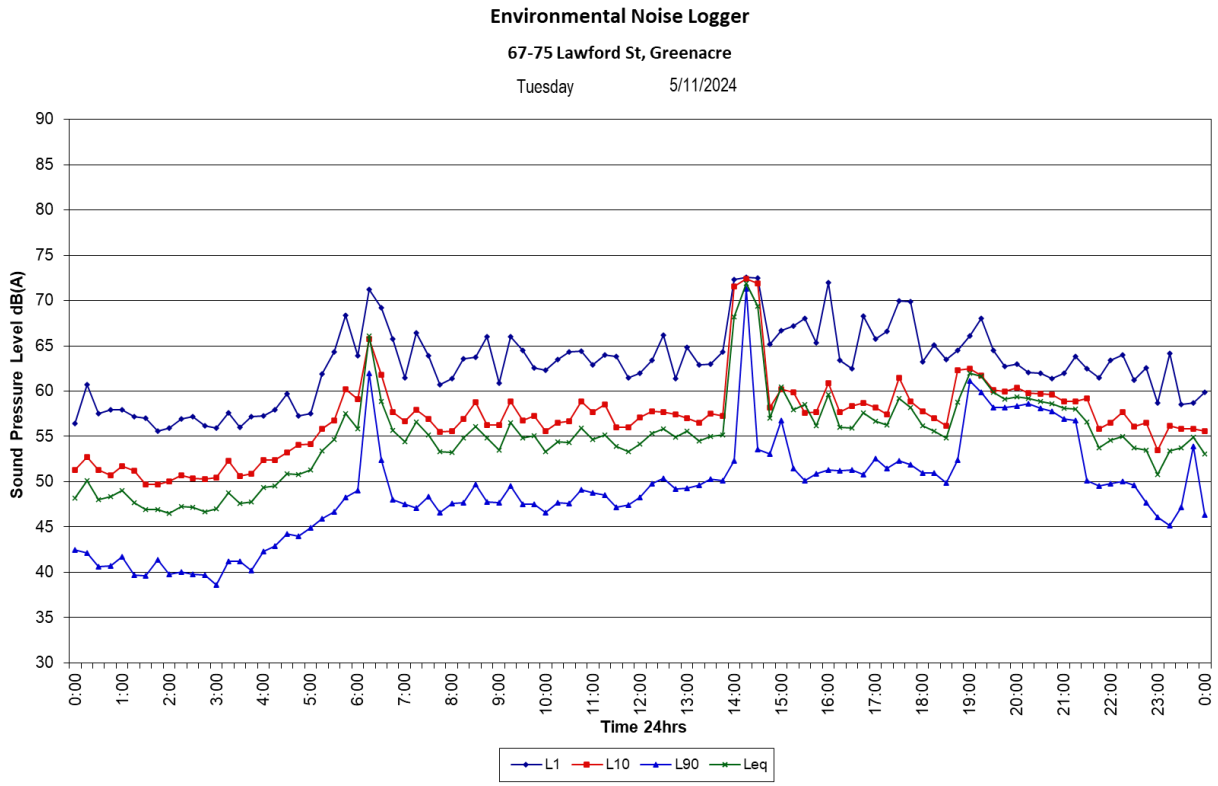
**67-75 Lawford St, Greenacre**

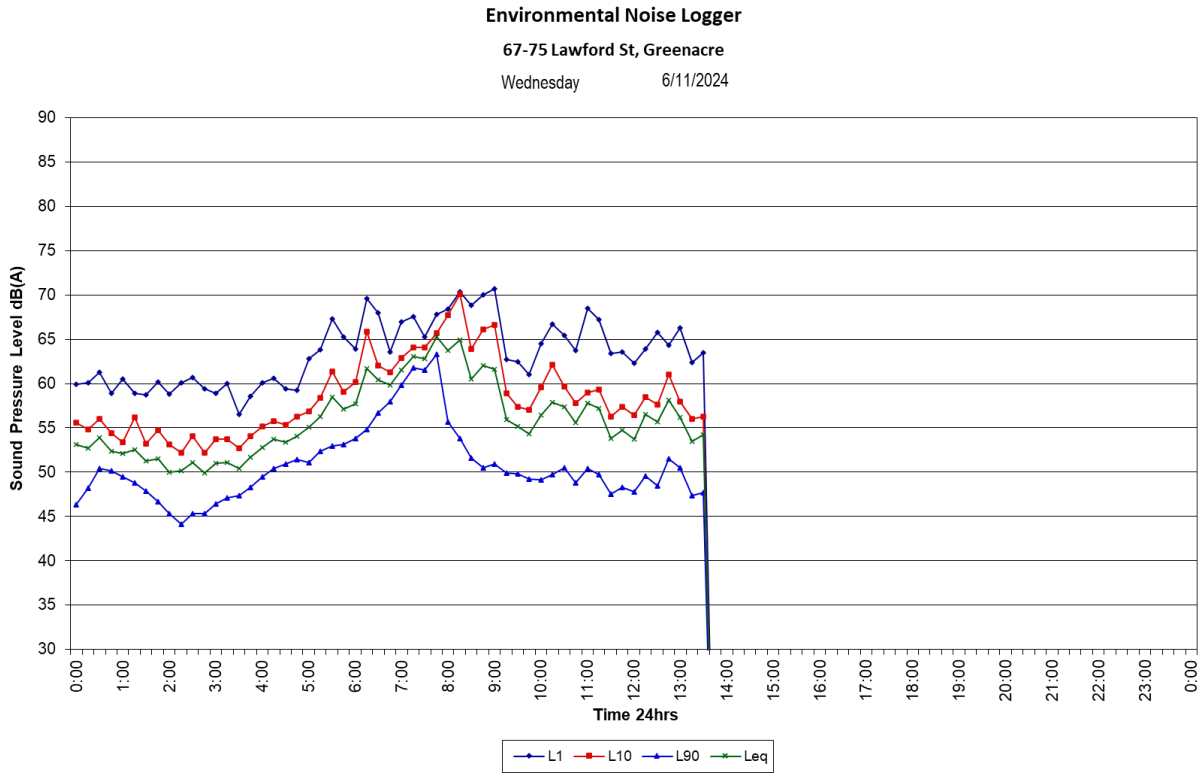
Saturday 2/11/2024




Environmental Noise Logger
67-75 Lawford St, Greenacre
Sunday 3/11/2024
Sound Pressure Level dB(A)
90
85
80
75
70
65
60
55
50
45
40
35
30
0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 0:00
Time 24hrs
L1 L10 L90 Leq


Environmental Noise Logger
67-75 Lawford St, Greenacre
Monday 4/11/2024
Sound Pressure Level dB(A)
90
85
80
75
70
65
60
55
50
45
40
35
30
0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 0:00
Time 24hrs
L1 L10 L90 Leq


Environmental Noise Logger
67-75 Lawford St, Greenacre
Tuesday 5/11/2024
Sound Pressure Level dB(A)
90
85
80
75
70
65
60
55
50
45
40
35
30
0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 0:00
Time 24hrs
L1 L10 L90 Leq


Environmental Noise Logger
67-75 Lawford St, Greenacre
Wednesday 6/11/2024
Sound Pressure Level dB(A)
90
85
80
75
70
65
60
55
50
45
40
35
30
0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 0:00
Time 24hrs
L1 L10 L90 Leq

## Appendix C – Calibration Certificate

# Sound Level Meter
### IEC 61672-3:2013
# Calibration Certificate

**Calibration Number** C24489

| | |
|---|---|
| **Client Details** | Rodney Stevens Acoustics Pty Ltd<br>PO Box 522<br>Wahroonga NSW, 2076 |
| **Equipment Tested/ Model Number :** | Rion NL-42AEX |
| **Instrument Serial Number :** | 00422910 |
| **Microphone Serial Number :** | 197441 |
| **Pre-amplifier Serial Number :** | 25847 |
| **Firmware Version :** | 1.1 |

| Pre-Test Atmospheric Conditions | | Post-Test Atmospheric Conditions | |
|---|---|---|---|
| **Ambient Temperature :** | 20.4 °C | **Ambient Temperature :** | 22.3 °C |
| **Relative Humidity :** | 53.4 % | **Relative Humidity :** | 49.1 % |
| **Barometric Pressure :** | 101.59 kPa | **Barometric Pressure :** | 101.57 kPa |

**Calibration Technician :** Shaheen Boaz
**Secondary Check:** Cooper Sallway
**Calibration Date :** 28 Jun 2024
**Report Issue Date :** 1 Jul 2024

**Approved Signatory :** Ken Williams

| Clause and Characteristic Tested | Result | Clause and Characteristic Tested | Result |
|---|---|---|---|
| 12: Acoustical Sig. tests of a frequency weighting | *Pass* | 17: Level linearity incl. the level range control | *N/A* |
| 13: Electrical Sig. tests of frequency weightings | *Pass* | 18: Toneburst response | *Pass* |
| 14: Frequency and time weightings at 1 kHz | *Pass* | 19: C Weighted Peak Sound Level | *Pass* |
| 15: Long Term Stability | *Pass* | 20: Overload Indication | *Pass* |
| 16: Level linearity on the reference level range | *Pass* | 21: High Level Stability | *Pass* |

The sound level meter submitted for testing has successfully completed the class 2 periodic tests of IEC 61672-3:2013, for the environmental conditions under which the tests were performed.

However, no general statement or conclusion can be made about conformance of the sound level meter to the full requirements of IEC 61672-1:2013 because evidence was not publicly available, from an independent testing organisation responsible for pattern approvals, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2013 and because the periodic tests of IEC 61672-3:2013 cover only a limited subset of the specifications in IEC 61672-1:2013.

Uncertainties of Measurement -

| Acoustic Tests | | Environmental Conditions | |
|---|---|---|---|
| *125Hz* | *±0.13 dB* | *Temperature* | *±0.1 °C* |
| *1kHz* | *±0.13 dB* | *Relative Humidity* | *±1.9 %* |
| *8kHz* | *±0.14 dB* | *Barometric Pressure* | *±0.11 kPa* |
| Electrical Tests | *±0.13 dB* | | |

*All uncertainties are derived at the 95% confidence level with a coverage factor of 2.*

This calibration certificate is to be read in conjunction with the calibration test report.

Acoustic Research Labs Pty Ltd is NATA Accredited Laboratory Number 14172.
Accredited for compliance with ISO/IEC 17025 - Calibration.

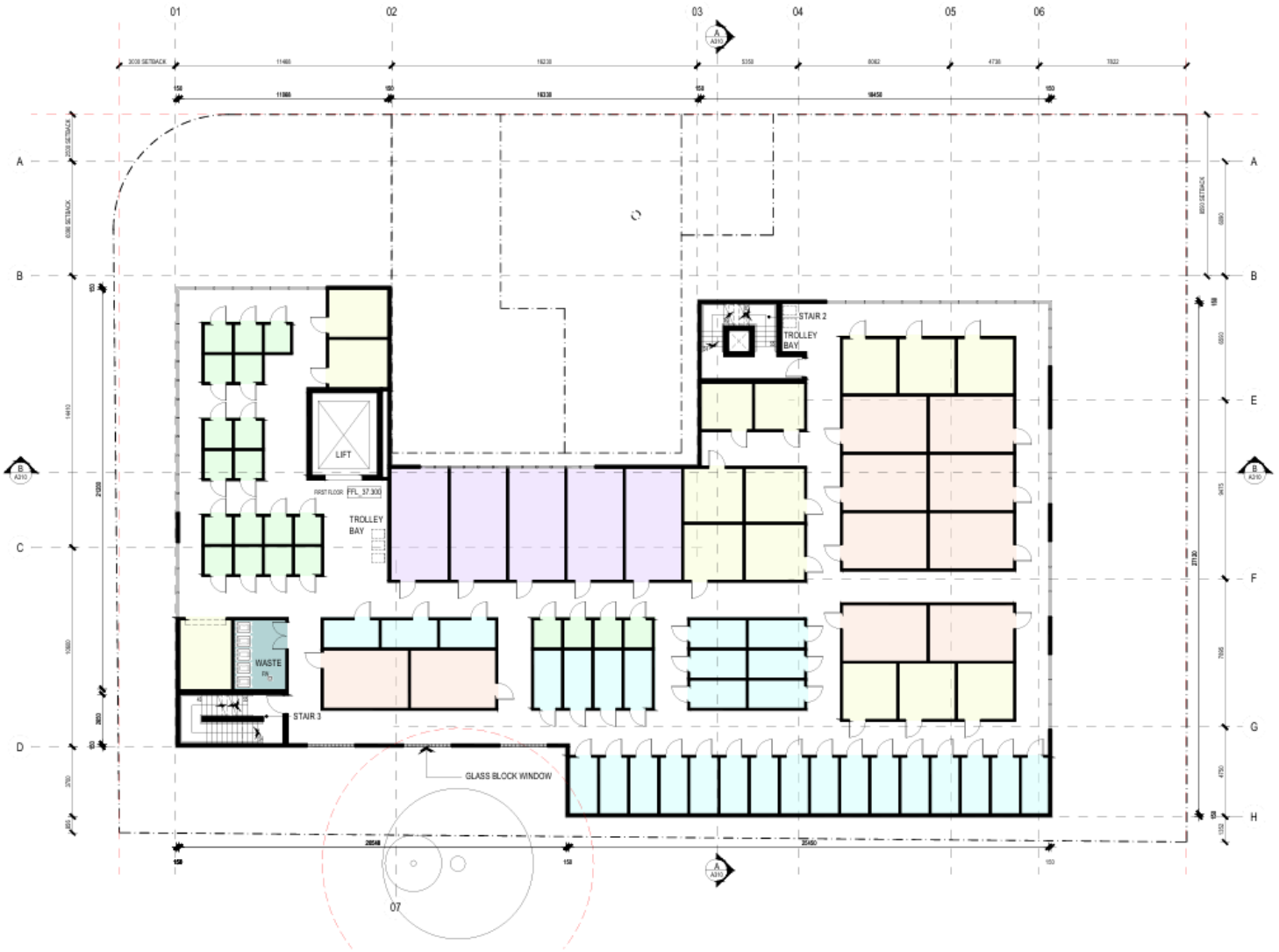
The results of the tests, calibrations and/or measurements included in this document are traceable to SI units.

NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration and inspection reports.

PAGE 1 OF 1

## Appendix D – Architectural Plans


ALLAMCORP PTY LTD | LAWFORD STREET GREENACRE | No. 67-75, LAWFORD STREET, GREENACRE NSW 2100 | GROUND FLOOR PLAN | 24027 A101 DA01 | crawford architects




ALLAMCORP PTY LTD

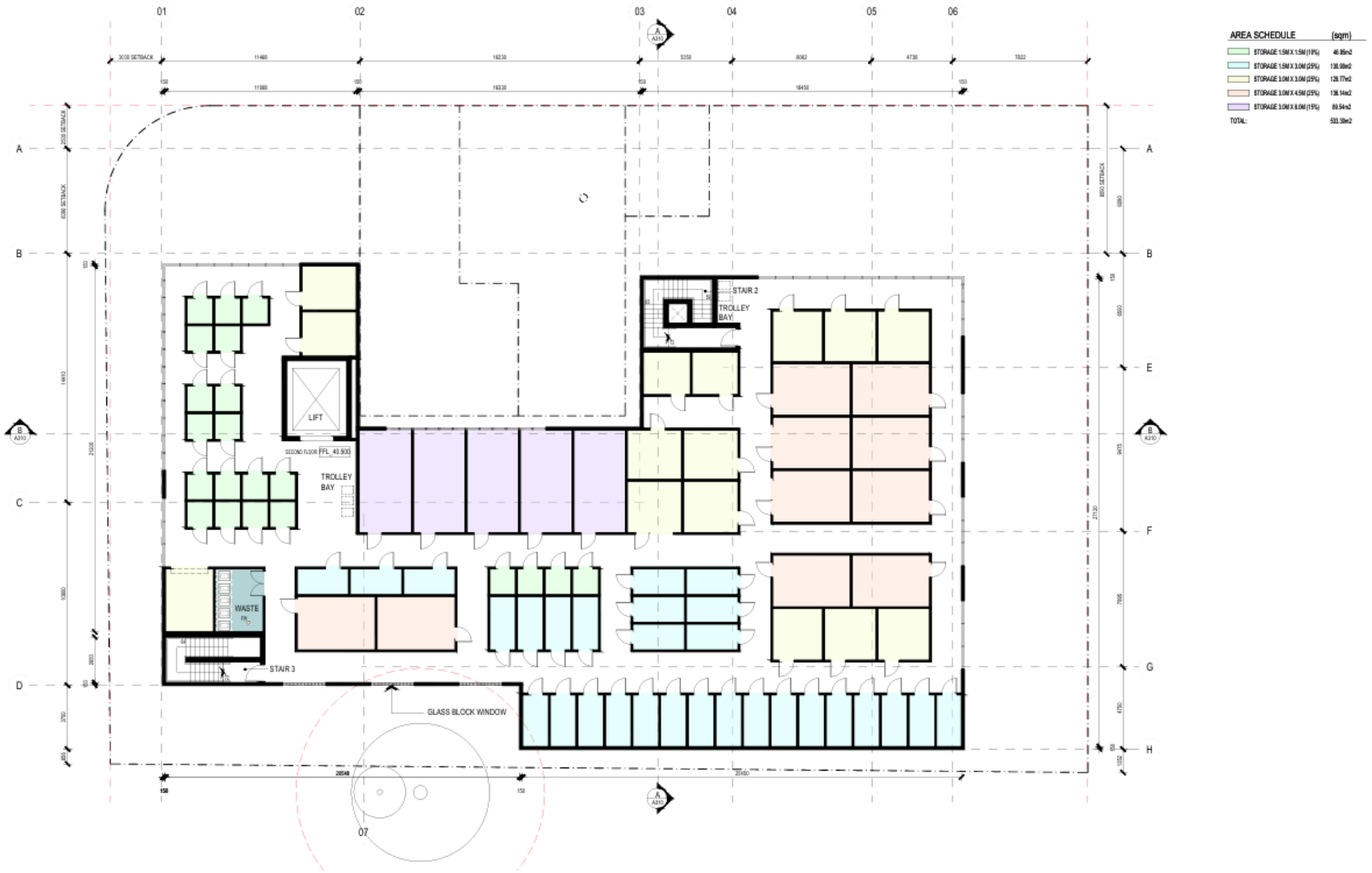
LAWFORD STREET GREENACRE

No. 67-75, LAWFORD STREET, GREENACRE NSW 2190

FIRST FLOOR PLAN

24027 A102 DA01

crawford architects




ALLAMCORP PTY LTD

LAWFORD STREET GREENACRE

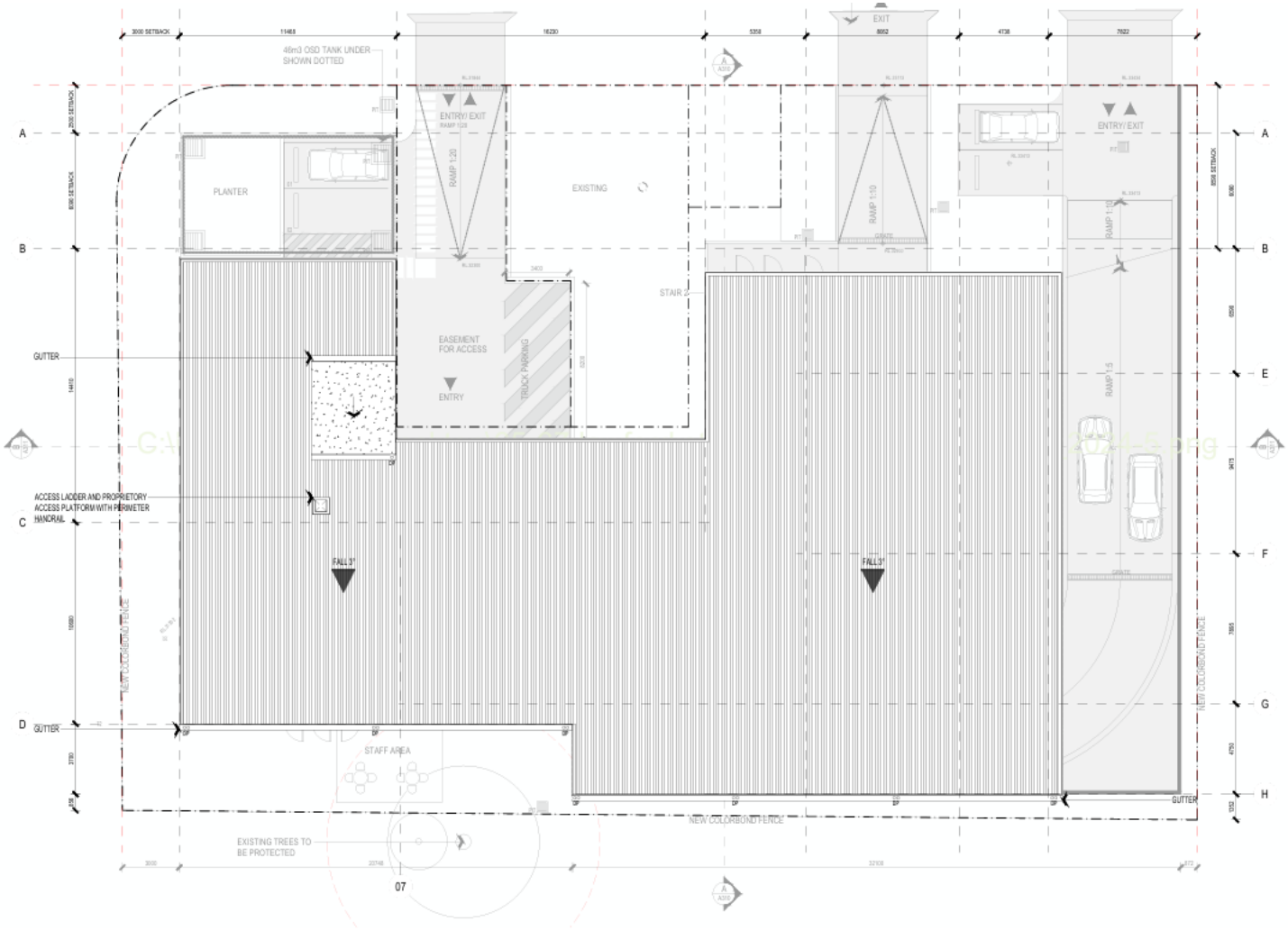
No. 67-75, LAWFORD STREET, GREENACRE NSW 2190

SECOND FLOOR PLAN

DA

24027 A103 DA01

crawford architects




ALLAMCORP PTY LTD

LAWFORD STREET GREENACRE

No. 67-75, LAWFORD STREET, GREENACRE NSW 2190

ROOF PLAN

24027 A104 DA01

crawford architects


01 NORTH FACADE


02 NORTH EAST FACADE

CLIENT: ALLAMCORP PTY LTD
PROJECT: LAWFORD STREET GREENACRE
No. 67-75, LAWFORD STREET, GREENACRE NSW 2190
TITLE: PROPOSED 3D VIEWS - SHEET 01
DATE: OCTOBER
STATUS: DA
PROJECT NUMBER: 24027
DRAWING NUMBER: A910
ISSUE: DA01

crawford architects