



18-26 LAMBERT STREET, BATHURST

NOISE IMPACT ASSESSMENT

REPORT NO. 17263
VERSION 1.0

NOVEMBER 2025

PREPARED FOR

B.A.R CONSTRUCTIONS PTY LTD
2/11 LOMBARD DRIVE
BATHURST NSW 2795

DOCUMENT CONTROL

Version	Status	Date	Prepared by	Approved by
0.1	Draft	25/06/2024	Nic Hall (NH), MAAS ¹	NH
1.0	Final	30/11/2025	NH	NH

1. MAAS = Member, Australian Acoustical Society.

TABLE OF CONTENTS

	Page
GLOSSARY OF ACOUSTIC TERMS	
1 INTRODUCTION	5
2 SITE AND SURROUNDS	7
2.1 Site Location	7
2.2 Surrounding Land Use	7
3 EXISTING NOISE ENVIRONMENT	9
4 RAIL NOISE ASSESSMENT	12
4.1 Rail Noise Criteria	12
4.2 Rail Noise Assessment	12
5 INDUSTRIAL NOISE IMPACTS	14
5.1 Industrial Noise Criteria	14
5.1.1 Recommended Amenity Noise Levels	14
5.2 Existing Workshop Noise Levels	15
5.3 Noise Mitigation	16
6 CONCLUSION	17
APPENDIX A – NOISE MONITORING RESULTS	

GLOSSARY OF ACOUSTIC TERMS

Most environments are affected by environmental noise which continuously varies. To describe the overall noise environment, a number of noise descriptors have been developed and these involve statistical and other analysis of the varying noise over sampling periods, typically taken as 15 minutes. The most common of these noise descriptors are defined below.

L_{Amax}	The maximum noise level over a sample period is the maximum level, measured on fast response, during the sample period.
L_{A1}	The L_{A1} level is the noise level which is exceeded for 1% of the sample period. During the sample period, the noise level is below the L_{A1} level for 99% of the time.
L_{A10}	The L_{A10} level is the noise level which is exceeded for 10% of the sample period. During the sample period, the noise level is below the L_{A10} level for 90% of the time.
L_{A90}	The L_{A90} level is the noise level which is exceeded for 90% of the sample period. During the sample period, the noise level is below the L_{A90} level for 10% of the time. This measure is commonly referred to as the background noise level.
L_{Aeq}	The equivalent continuous sound level (L_{Aeq}) is the energy average of the varying noise over the sample period and is equivalent to the level of a constant noise which contains the same energy as the varying noise environment. This descriptor is a common measure of environmental noise.
ABL	The Assessment Background Level is the single figure background level representing each assessment period (daytime, evening and night time) for each day.
RBL	The Rating Background Level for each period is the median value of the ABL values for the period over all of the days measured. There is therefore an RBL value for each period – daytime, evening and night time.

1 INTRODUCTION

SoundIN Pty Ltd (SoundIN) has been engaged by B.A.R Constructions Pty Ltd to undertake a noise impact assessment for a planning proposal (the Proposal) that seeks to amend the Bathurst Regional LEP as follows:

- Rezone that part of the subject land that is currently zoned E4 General Industrial to R1 General Residential.
- Remove the Floor Space Ratio from the entire site.
- Apply a Minimum Lot Size for Subdivision of 550 m² for the entire site.
- Apply a Minimum Lot Size for Dual Occupancy of 600 m² (800 m² battleaxe) for the entire site.
- Apply a Minimum Lot Size for Manor Houses, Multi Dwelling Housing & Residential Flat Buildings of 900 m² (1,100 m² battleaxe) for the entire site.

The subject land is located at 18-26 Lambert Street Bathurst (the Site). The locality of the Proposal is shown in **Figure 1-1**.

This report presents an assessment of potential noise impacts on future residential use of the Site due to existing nearby industrial and transportation (rail) noise sources.

Figure 1-1 Site Locality



2 SITE AND SURROUNDS

2.1 Site Location

The Site is located at 18-26 Lambert Street, Bathurst. It is less than 1 kilometre to the south of the Bathurst town centre. The Site location is shown in **Figure 2-1**.

The Site is a slightly irregular shaped parcel with an area of 3,763 m². The main part of the Site has a frontage of approximately 57 m to Lambert Street.

The main part of the Site comprises a large warehouse building with a close street alignment. The Site is occupied by the Town and Country Water Shop.

A concrete surface vehicle area is established on the north western side of the building and includes parking as well as a driveway that leads to a mostly grassed external storage area at the rear of the site.

The south eastern side of the building comprises a concrete surface external storage area, screened from the street. It also includes a separate driveway which is subject to a right of carriageway that provides access to another business (Inwood Motors) which is on the adjoining property to the rear.

2.2 Surrounding Land Use

Surrounding land use is generally reflective of the current zoning pattern. The E4 zone comprises well established industrial businesses on both sides of Lambert Street. However, there are existing dwellings in the E4 zone.

Figure 2-1 depicts the surrounding development pattern. It can be seen that the subject land is on the fringe or transition between an industrial precinct and well-established residential neighbourhoods. The existing dwellings within the industrial area are identified in **Figure 2-1**.

Figure 2-1 Proposal Site and Surrounding Area



3 EXISTING NOISE ENVIRONMENT

Unattended noise monitoring was conducted between Friday 3 and Wednesday 15 May 2024 to establish the existing ambient noise levels at the Site. The noise monitoring location is shown in **Figure 3-1**.

The noise monitoring equipment used for these measurements consisted of environmental noise loggers set to A-weighted, fast response. This equipment is capable of remotely monitoring and storing noise level descriptors for later detailed analysis. The equipment calibration was checked before and after the survey and no significant drift was noted.

From the background noise levels (L_{A90}) the Rating Background Levels (RBLs) were determined using the methodology recommended in the *Noise Policy for Industry* (NPfI) and are presented in **Table 3-1**.

Table 3-1 Rating Background Levels (RBL)

Monitoring Location	Rating background level (dBA)		
	Day (7am – 6pm)	Evening (6pm – 10pm)	Night (10pm – 7am)
L1 – 18-26 Lambert Street	44	36	30

The measured RBL indicate that ambient noise levels at the Site are relatively low and are considered typical of many residential settings. For assessing potential industrial noise impacts on residential land uses, the NPfI defines three residential receiver categories and, for each category, nominates typical land zonings and existing background noise levels (RBL), as shown in **Table 3-2**.

Based on the measured background noise levels and the advice from the NPfI, the existing background noise levels at the Site are considered consistent with a “suburban residential” receiver category. The Proposal involves rezoning the Site to R1 – general residential which is typical of an “urban residential” receiver category and would typically exhibit higher background noise levels than those found at the Site.

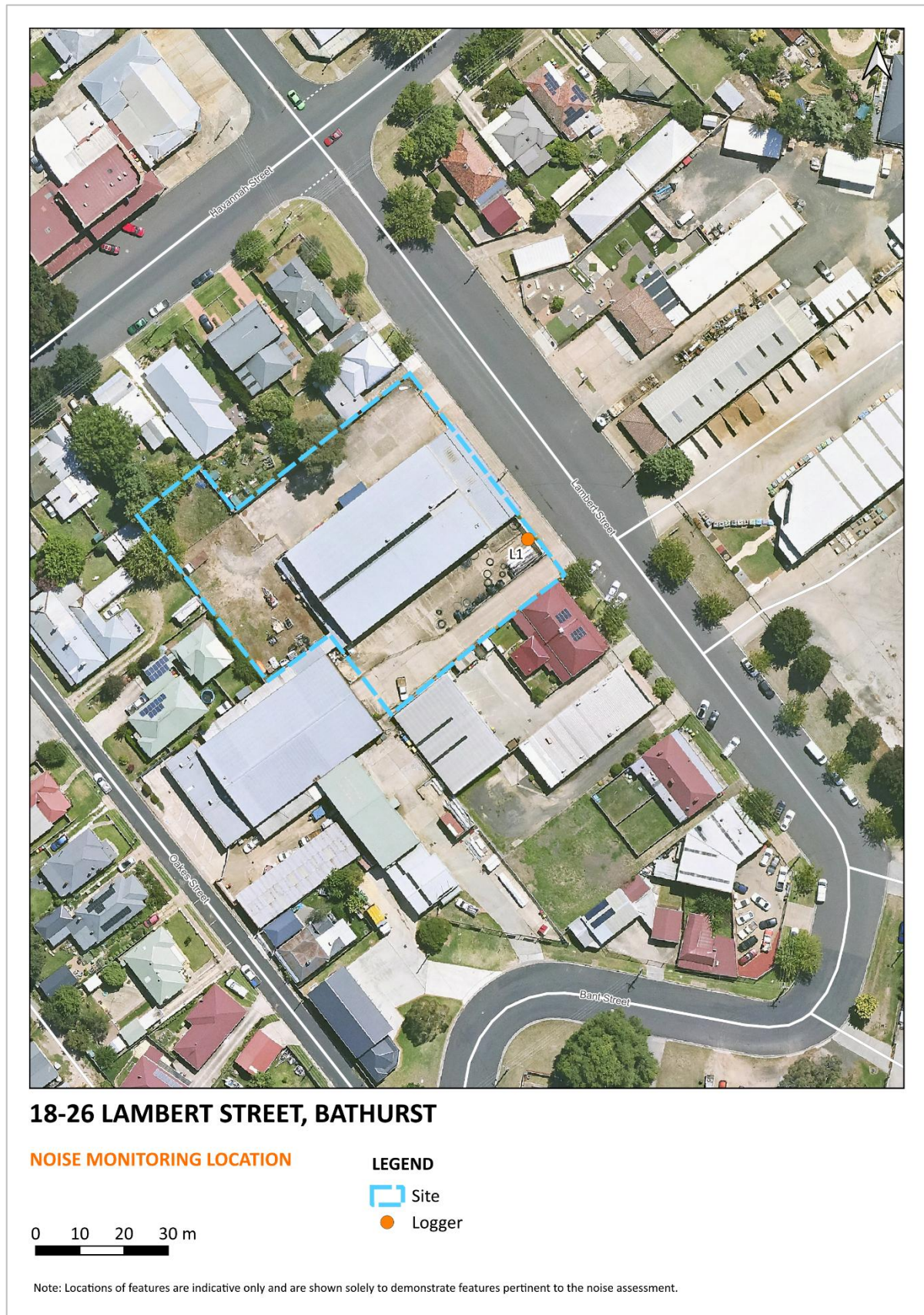
On this basis, the Proposal is considered unlikely to result in a land use conflict, with regard to background noise levels, as the background noise levels at the Site are below those often found within areas zoned R1 – general residential.

The measured RBL are consistent with observations made at the Site during visits on the afternoon of Thursday 2 and Friday 3 May 2024 that the existing noise environment at the Site was generally quiet and consistent with many residential settings. The most significant potential source of noise impacts identified during the visits was the mechanical workshop immediately to the rear of the Site. Potential impacts from this activity are discussed in Section 5.

Table 3-2 NPfl Residential Receiver Categories

Receiver Category	Typical planning zoning	Typical existing RBL (dBA)	Description
Rural residential	RU1 – primary production RU2 – rural landscape RU4 – primary production small lots R5 – large lot residential E4 – environmental living	Daytime < 40 Evening < 35 Night < 30	Rural – an area with an acoustical environment that is dominated by natural sounds, having little or no road traffic noise and generally characterised by low background noise levels. Settlement patterns would be typically sparse.
Suburban residential	RU5 – village RU6 – transition R2 – low density residential R3 – medium density residential E2 – environmental conservation E3 – environmental management	Daytime < 45 Evening < 40 Night < 35	Suburban – an area that has local traffic with characteristically intermittent traffic flows or with some limited commerce or industry. This area often has the following characteristic: evening ambient noise levels defined by the natural environment and human activity.
Urban residential	R1 – general residential R4 – high density residential B1 – neighbourhood centre (boarding houses and shop-top housing) B2 – local centre (boarding houses) B4 – mixed use	Daytime > 45 Evening > 40 Night > 35	Urban – 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

Figure 3-1 Noise Monitoring Location



4 RAIL NOISE ASSESSMENT

This section of the report presents an assessment of potential rail noise impacts on future residents within the Site. This assessment has been included at the request of Bathurst Regional Council who have noted the proximity of the Site to a nearby rail corridor.

4.1 Rail Noise Criteria

Rail noise impacts on new residential development on land adjacent to an existing rail corridor is regulated by the *State Environmental Planning Policy (Transport and Infrastructure) 2021* (the “Transport and Infrastructure SEPP”).

Clause 2.100 of the Transport and Infrastructure SEPP deals with “impact of rail noise or vibration on non-rail development” and requires that:

If the development is for the purposes of residential accommodation, the consent authority must not grant consent to the development unless it is satisfied that appropriate measures will be taken to ensure that the following LAeq levels are not exceeded:

- *In any bedroom in the building: 35dBA at any time 10.00pm until 7.00am; and*
- *Anywhere else the building (other than a garage, kitchen, bathroom or hallway): 40dBA at any time.*

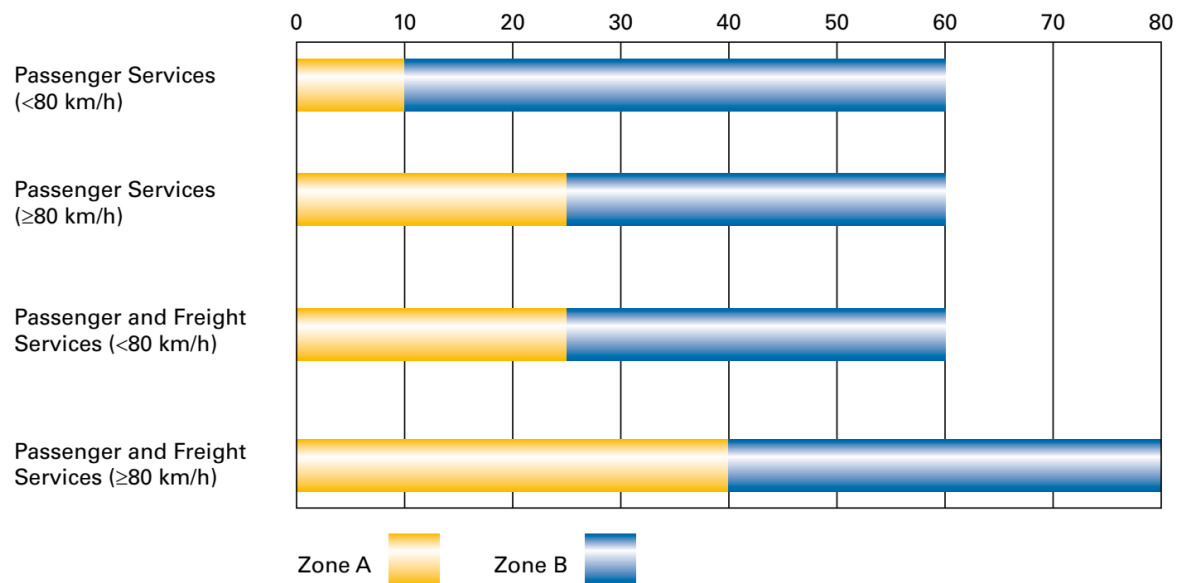
4.2 Rail Noise Assessment

Potential noise impacts on the Proposal due to rail operations have been assessed using the procedures outlined in *Development Near Rail Corridors and Busy Roads – Interim Guideline* (the “DNRCBR Guideline”). The DNRCBR Guideline references the *State Environmental Planning Policy (Infrastructure) 2007*, which preceded the Transport and Infrastructure SEPP.

The DNRCBR Guideline identifies two “Acoustic Assessment Zones” which depend upon the type (i.e. passenger and/or freight) and the speed of train movements within an operational rail corridor and the distance of residential dwellings to the nearest operational rail track. These acoustic assessment zones are depicted in **Figure 4-1**.

The Site is located more than 180 metres from the rail corridor. Therefore, in accordance with the DNRCBR Guideline, no further assessment of rail noise impacts is warranted.

Figure 4-1 Acoustic Assessment Zones (based on distance (m) from operational rail track)



Rail movements on the adjacent corridor are understood to comprise both passenger and freight services, at speeds of less than 80 km/h. Therefore, in accordance with the DNRCBR Guideline:

5 INDUSTRIAL NOISE IMPACTS

As noted in Section 3, the existing noise environment at the Site is typical of a suburban residential area and does not exhibit significant levels of industrial noise. The most significant potential source of noise impacts identified during visits to the site is the mechanical workshop immediately to the rear of the Site. An assessment of potential noise impacts from the workshop is presented in this Section.

5.1 Industrial Noise Criteria

The *Noise Policy for Industry* (NPfI) (EPA, 2017) provides a framework for assessing environmental noise impacts from industrial premises and industrial development proposals in New South Wales.

The NPfI recommends the development of project noise trigger levels, which provide a benchmark for assessing a proposal or site. The project noise trigger levels should not be interpreted as mandatory noise criteria but, rather, as noise levels that, if exceeded, would indicate a potential noise impact on the community.

The NPfI stipulates that project noise trigger levels are determined for the daytime (7am – 6pm), evening (6pm – 10pm) and night time (10pm – 7am) periods, as relevant. The determined trigger levels typically apply at the most affected point on or within the receiver property boundary.

While the NPfI is most often used to assess potential noise impacts from a new industrial development, it provides the following advice for proposed residential rezoning near existing industrial areas:

The impact of noise from an existing industry on a proposed new residential area should be made using the recommended amenity noise level for the residential land use, not the project intrusiveness noise level. Where impacts exceed the amenity noise level, consideration should be given to how these impacts can be avoided or mitigated, such as modifying the location of the proposed residential development, placing screening land uses in-between the proposed residences and existing industry, or ensuring residences are built in a manner that provides acceptable indoor noise amenity.

5.1.1 Recommended Amenity Noise Levels

The recommended amenity noise level represents the objective for total industrial noise at a receiver location and are presented in **Table 5-1** for residential receivers.

Table 5-1 Recommended Amenity Noise Levels – Residential Receivers

Receiver	Noise amenity area	Time of day ¹	Recommended amenity noise level – L _{Aeq,period} (dBA)
Residential	Rural	Day	50
		Evening	45
		Night	40
	Suburban	Day	55
		Evening	45
		Night	40
	Urban	Day	60
		Evening	50
		Night	45

1. Day – 7am – 6pm; Evening = 6pm – 10pm; Night = 10pm – 7am.

The proposal involves rezoning the Site to R1 – general residential. As discussed in Section 3, this zoning is typically associated with the urban residential receiver classification. However, as also discussed in Section 3, the existing background noise levels at the Site are consistent a suburban residential receiver classification. To facilitate a conservative assessment, the more stringent suburban receiver classification has been adopted.

The project amenity noise levels for the Proposal are presented in **Table 5-2**.

Table 5-2 Project Amenity Noise Levels

Receiver	Time of day ¹	Recommended amenity noise level – L _{Aeq,period} (dBA)
Future residential	Day	55
	Evening	45
	Night	40

1. Day – 7am – 6pm; Evening = 6pm – 10pm; Night = 10pm – 7am.

5.2 Existing Workshop Noise Levels

During a site visit on Friday 3 May 2024, noise levels associated with the operation of the workshop were measured on the Site. At approximately 10 metres from the open workshop roller door, the L_{Aeq,15min} noise level was measured to be 55 dBA. During the measurement, a compressor was operating continuously in the workshop. While it is foreseeable that there would be short periods of noise levels

higher than those measured, it is equally likely that there would be significant periods of time where noise levels would be significantly lower than those measured.

It should also be noted that $L_{Aeq,15min}$ noise levels are higher than $L_{Aeq,period}$ noise levels due to different averaging periods. To make a comparison between descriptors, the NPfI assumes that the $L_{Aeq,15min}$ equivalent of an $L_{Aeq,period}$ noise level is equal to the $L_{Aeq,15min}$ level plus 3dB. Accordingly, the measured $L_{Aeq,15min}$ noise level of 55 dBA is equivalent to an $L_{Aeq,period}$ noise level of 52 dBA.

This noise level, which corresponds to a point approximately 10 metres in front of the open workshop roller door, complies with the project amenity noise level during the daytime but exceeds the evening and night time project amenity noise levels by 7 dBA and 12 dBA, respectively.

At locations on the Site without a view of the roller door, such as along the rear (western) boundary of the Site, noise levels would be approximately 15 dBA lower than those at the measurement point, or lower, and would comply with the project amenity noise levels at all times of day.

5.3 Noise Mitigation

It is noted that most mechanical workshops generally operate during daytime (7am – 6pm) hours only. However, to reduce the potential for a land-use conflict, it is recommended that all acoustically sensitive spaces on the Site that have a clear view of the roller door are effectively shielded from the workshop.

Acoustically sensitive spaces would comprise backyards/courtyards, balconies and operable windows. Acoustic shielding simply requires breaking the line of sight between the sensitive space and the workshop roller door by a solid object (i.e. no penetrations) constructed of materials such as timber, colorbond or masonry.

Adoption of the above mitigation would reduce noise levels by approximately 10 dBA, resulting in an $L_{Aeq,period}$ noise level of 42 dBA at 10 metres in front of the open workshop roller door. This level complies with the daytime and evening project amenity noise levels and exceeds the night time project amenity noise level by 2 dBA.

At distances of 15 metres or more from the workshop roller door, noise levels would be at least 2 dBA lower than those at 10 metres from the roller door and, subject to the aforementioned shielding, would comply with the project amenity noise levels at all times of day.

6 CONCLUSION

SoundIN has been engaged to undertake a noise impact assessment for a planning proposal to rezone a parcel of land at 18-26 Lambert Street, Bathurst for residential use.

This report presents an assessment of potential noise impacts on future residential use at the site from existing transportation (rail) and industrial sources.

Noise monitoring indicates that the existing background noise levels at the Site are low and well within the range of typical background noise levels found in the proposed zoning.

Rail noise impacts on future residential dwellings have been assessed using the criteria and methodology provided in the DNRCBR Guideline, which indicates that impacts are unlikely and require no further assessment.

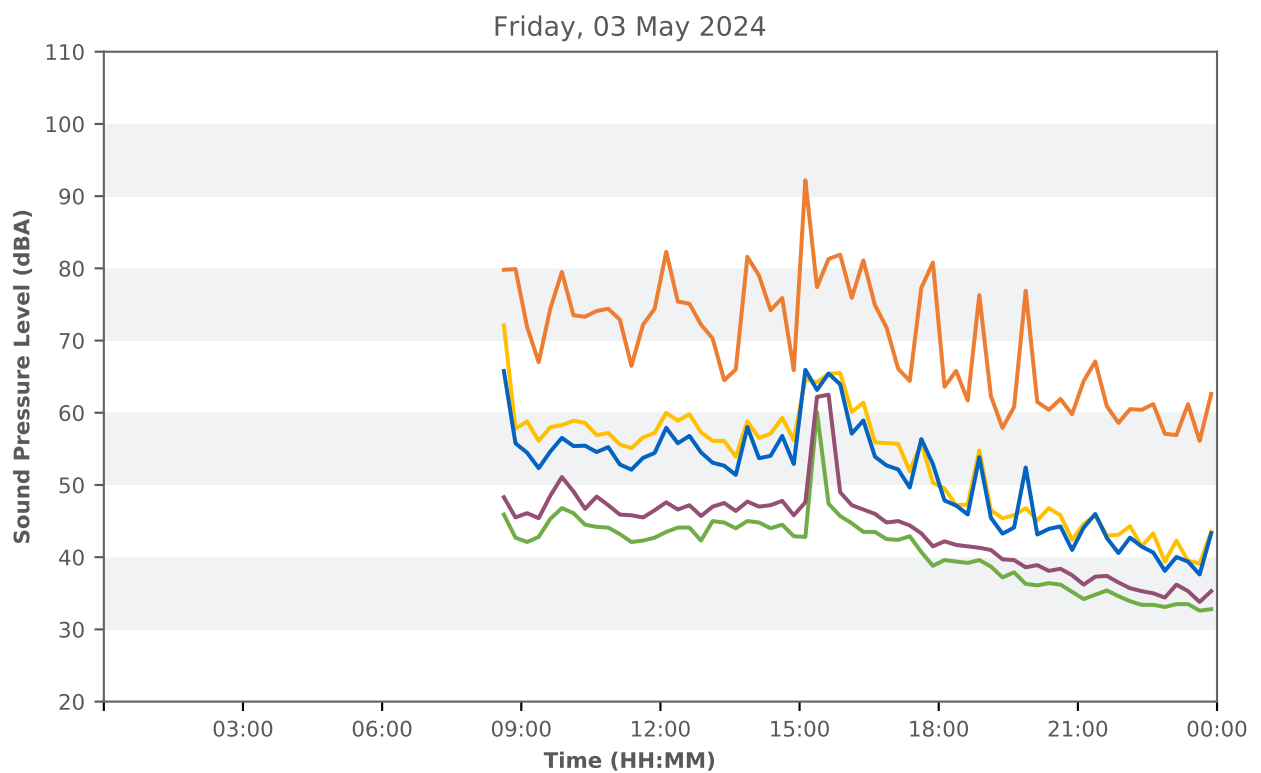
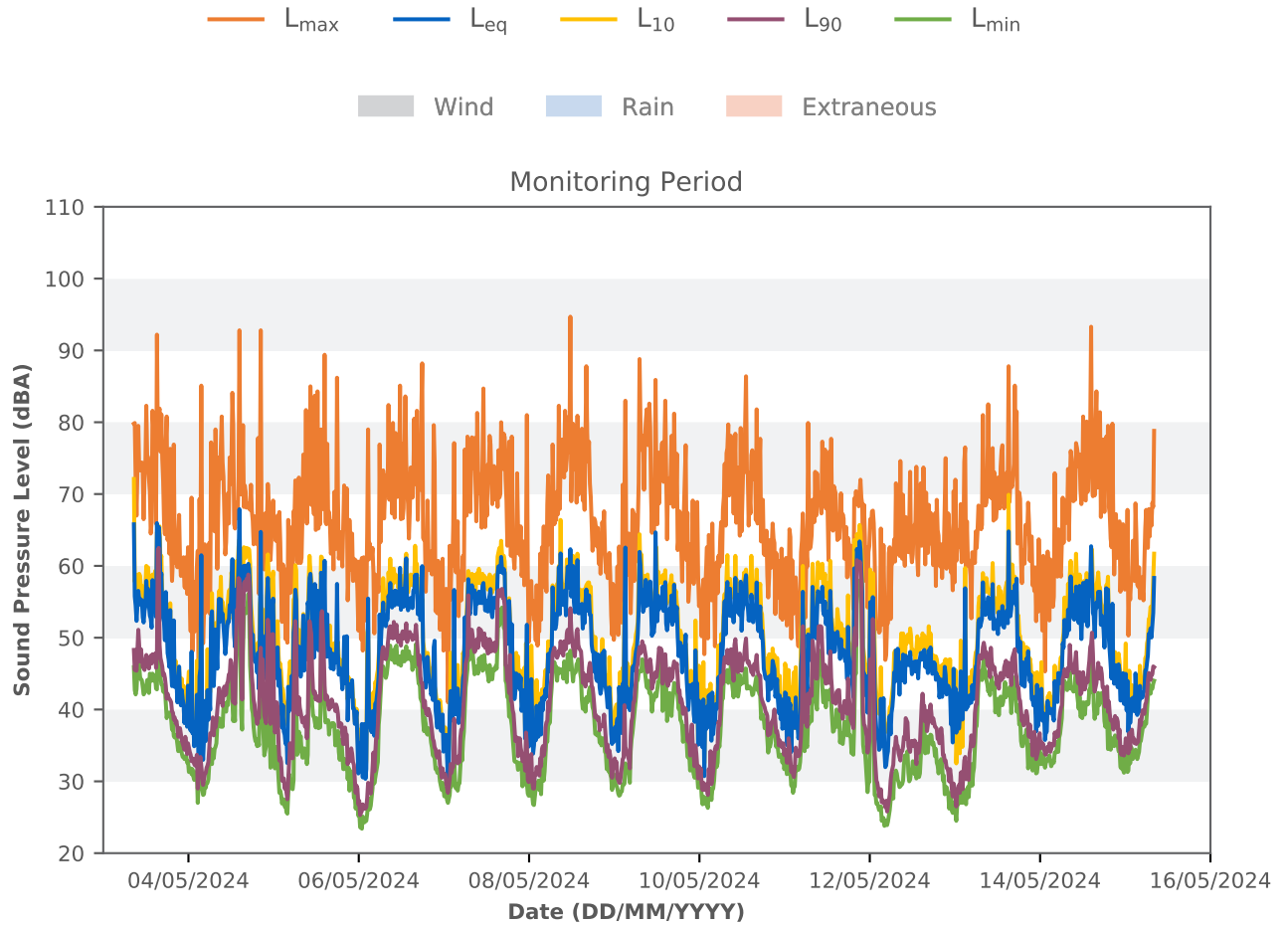
Industrial noise impacts from the adjacent mechanical workshop have been assessed, based on noise measurements conducted during a site visit. Subject to the adoption of recommended mitigation measures, noise levels associated with the workshop would comply with recommended amenity levels.

Based on the assessments presented herein, the proposed rezoning does not appear to give rise to any land use conflicts with respect to noise impacts.

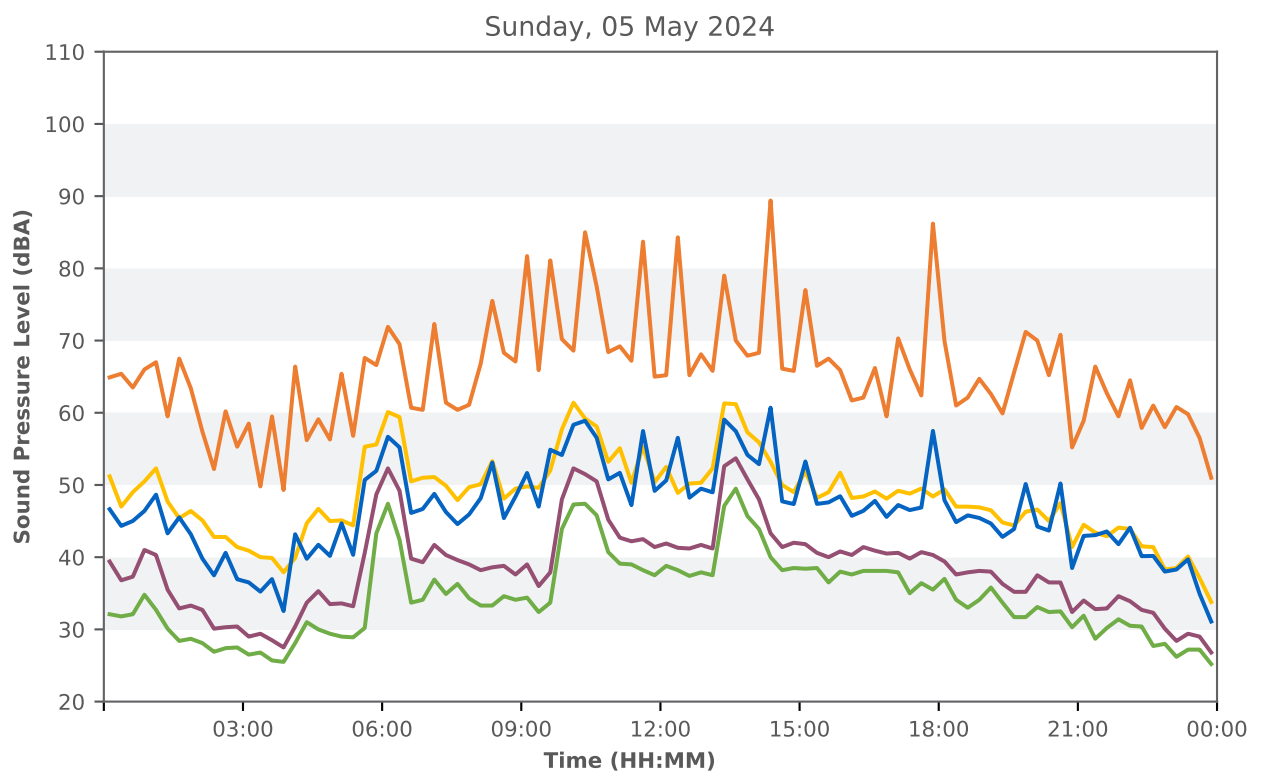
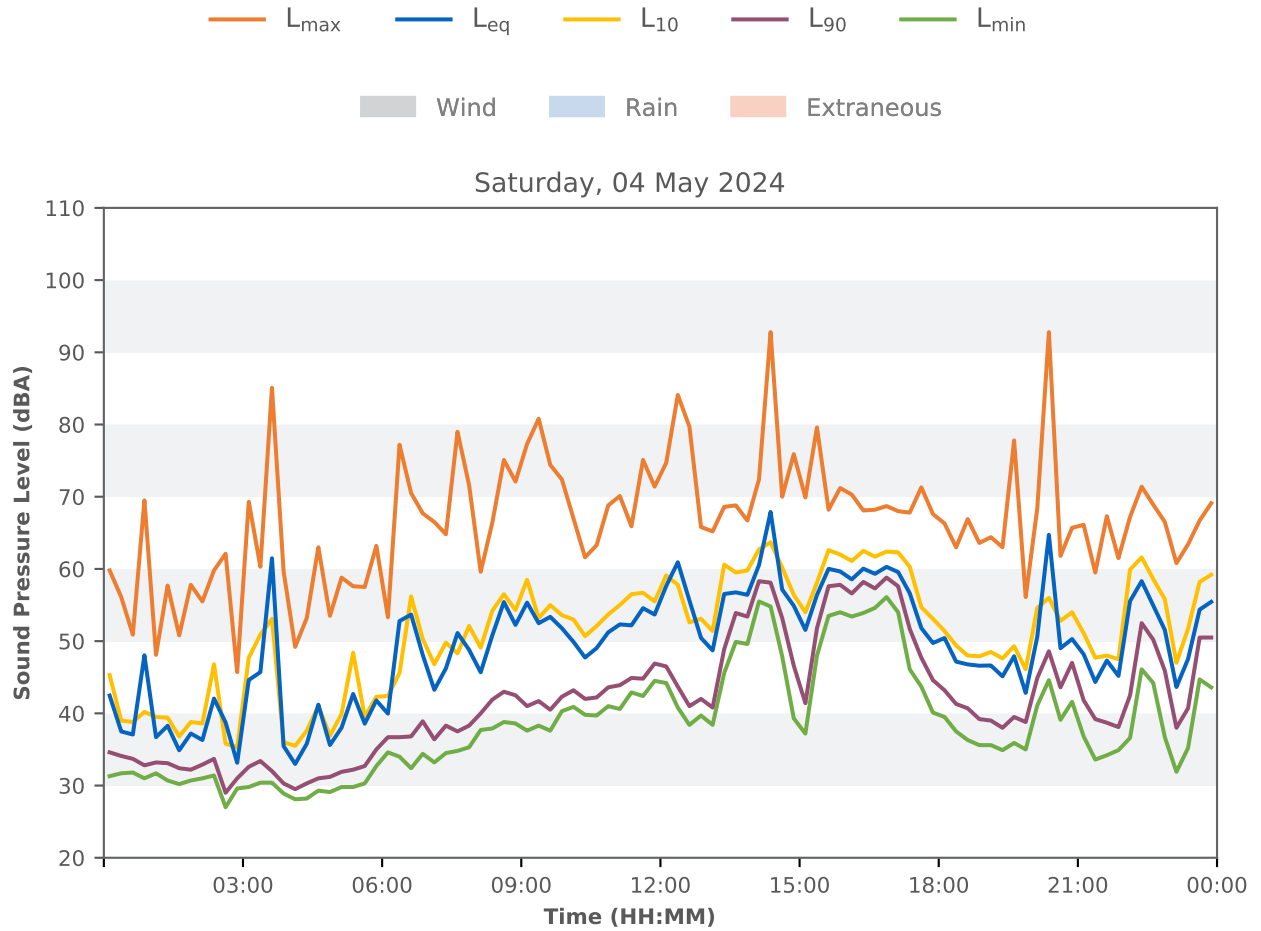
APPENDIX A

NOISE MONITORING RESULTS

Location 1 - 18-26 Lambert Street



Location 1 - 18-26 Lambert Street

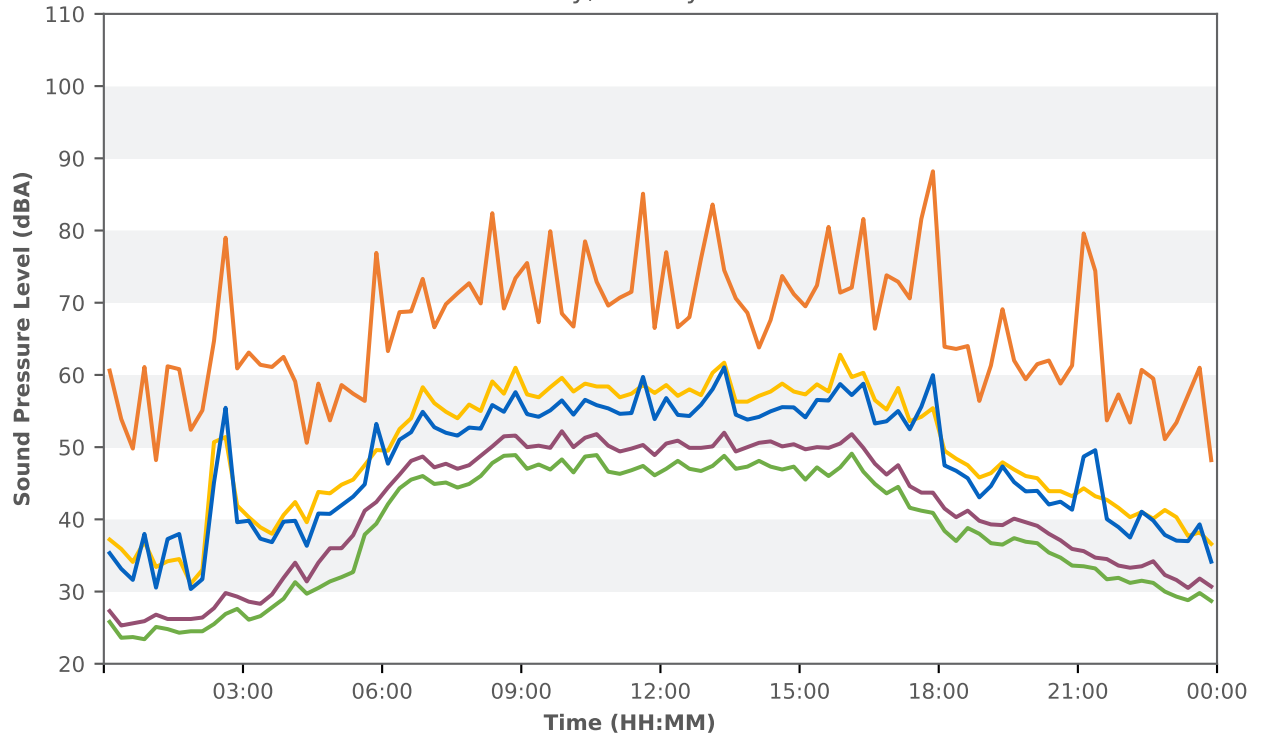


Location 1 - 18-26 Lambert Street

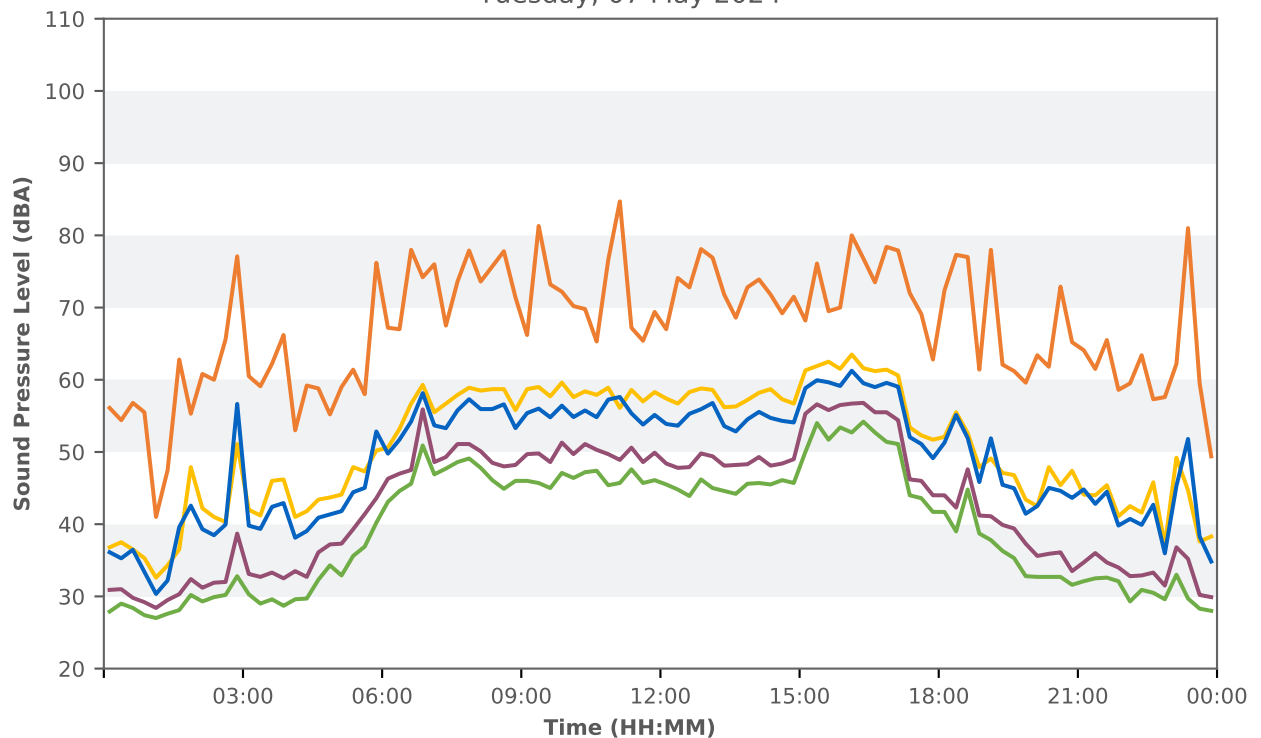
$L_{\max}$ L_{eq} L_{10} L_{90} $L_{\min}$

Wind Rain Extraneous

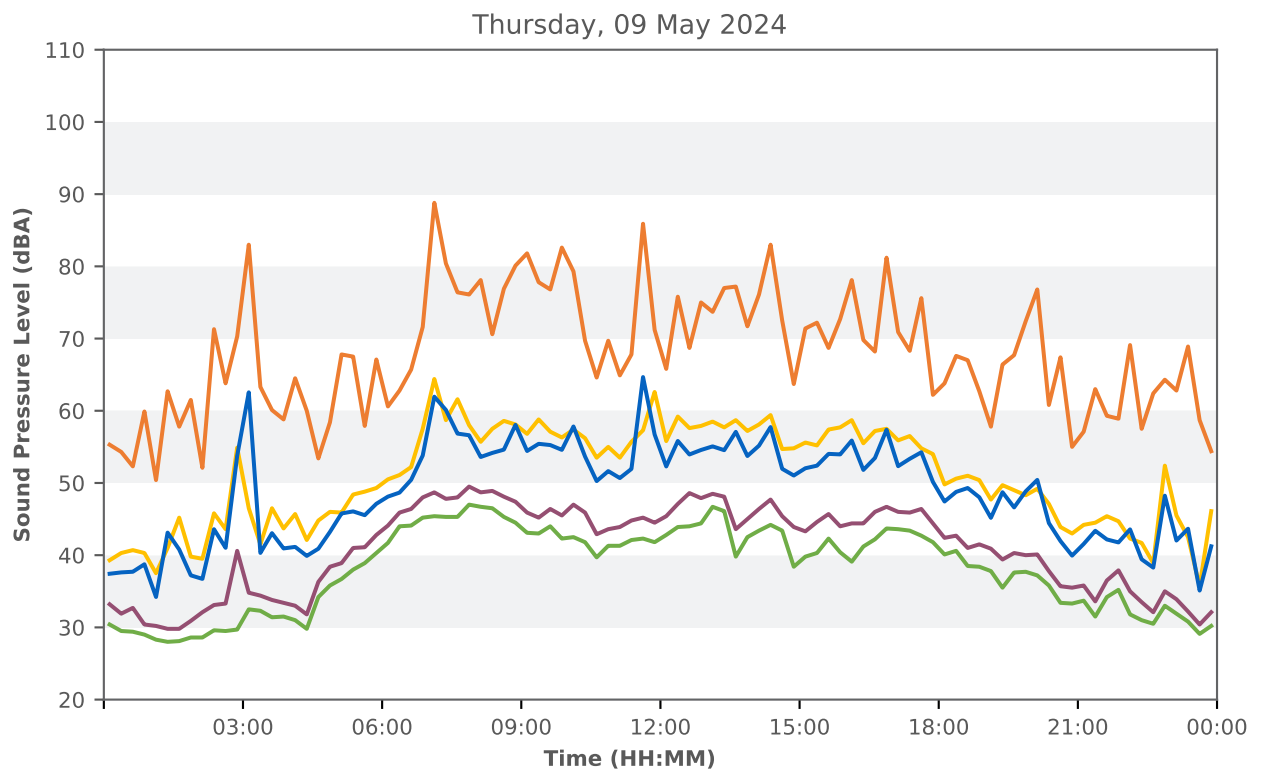
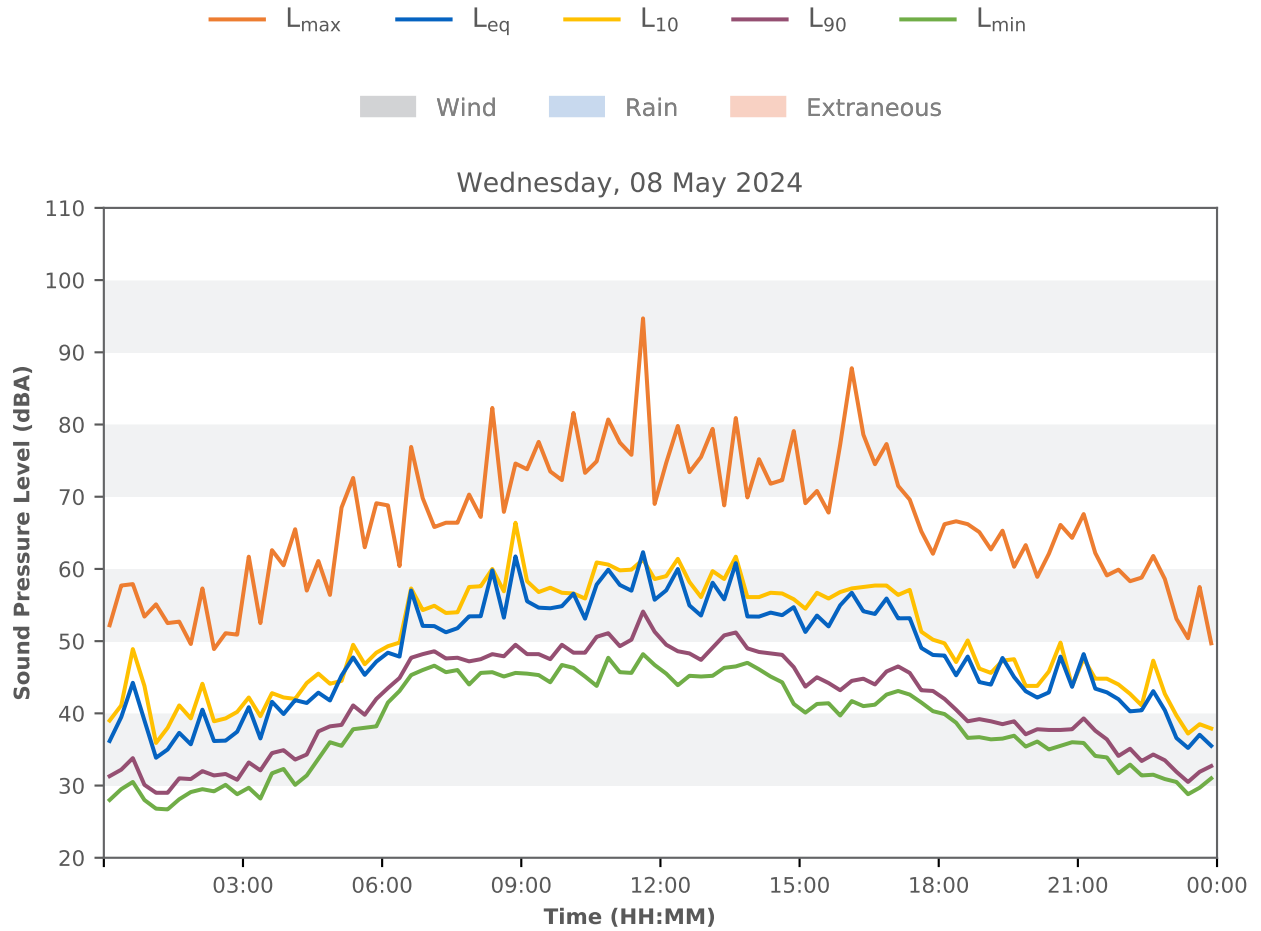
Monday, 06 May 2024



Tuesday, 07 May 2024



Location 1 - 18-26 Lambert Street

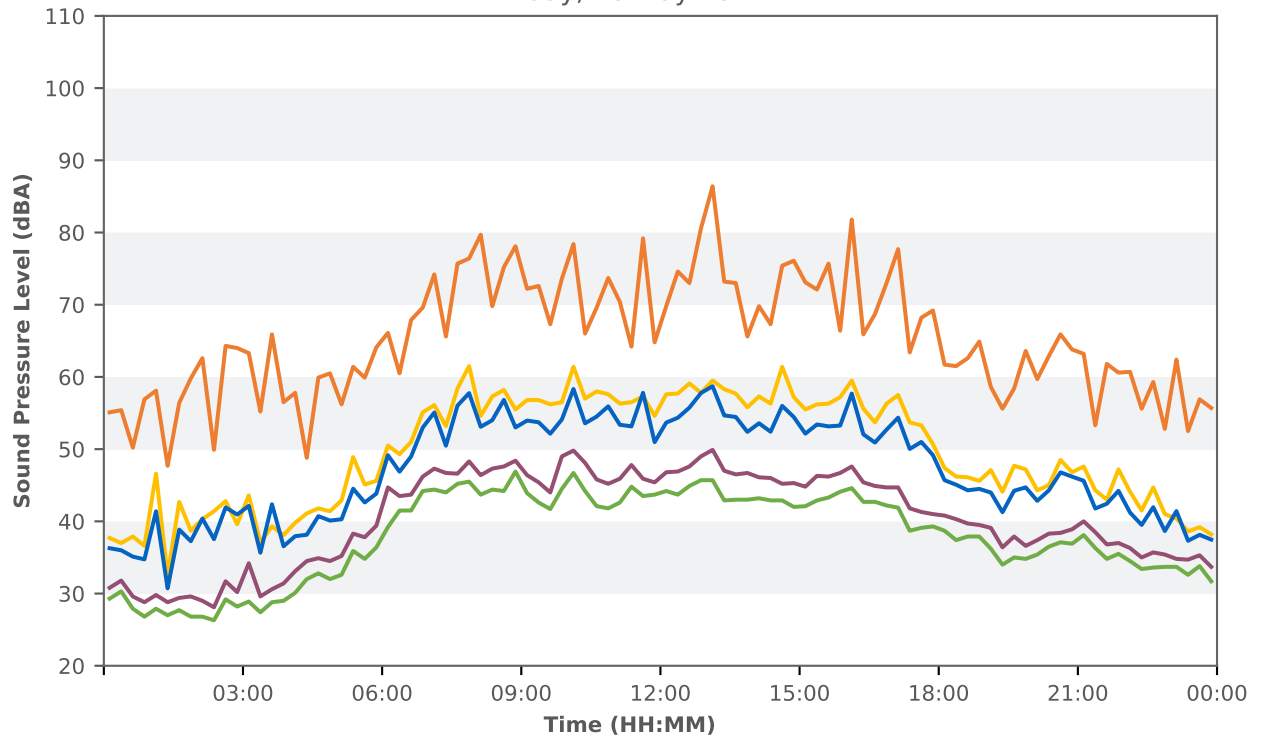


Location 1 - 18-26 Lambert Street

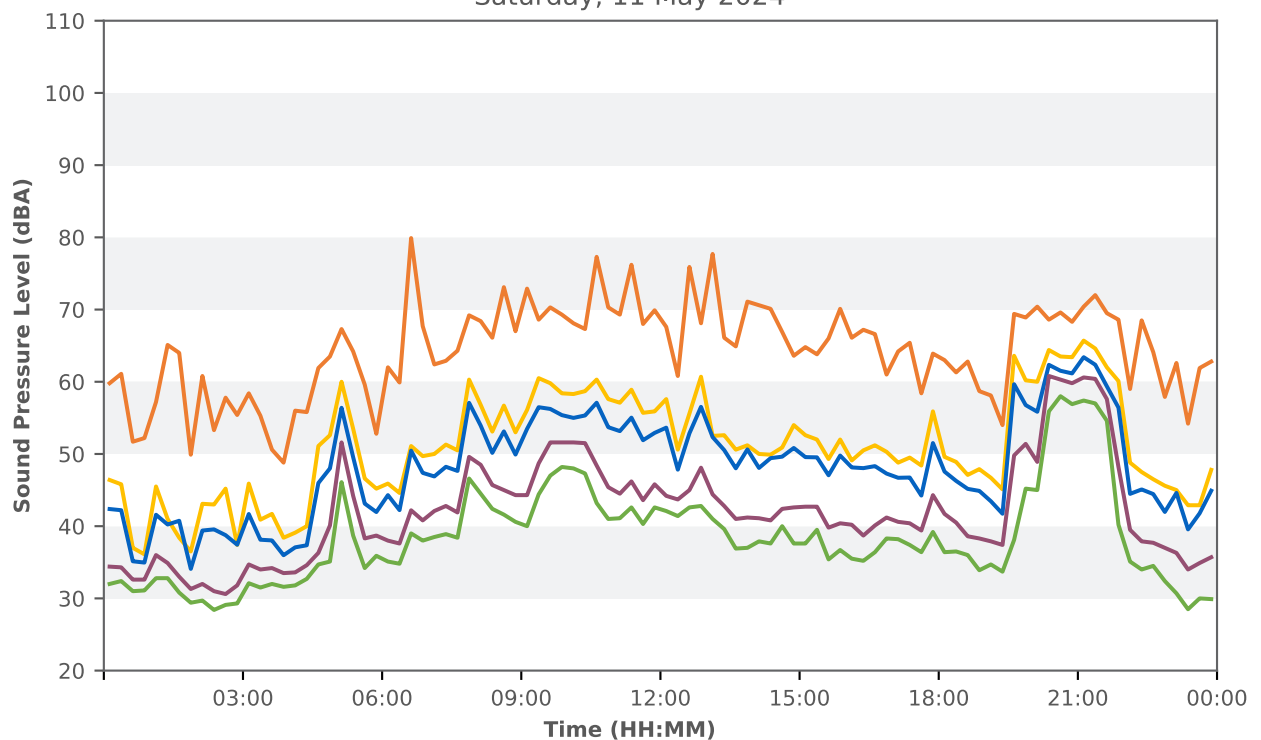
$L_{\max}$ L_{eq} L_{10} L_{90} $L_{\min}$

Wind Rain Extraneous

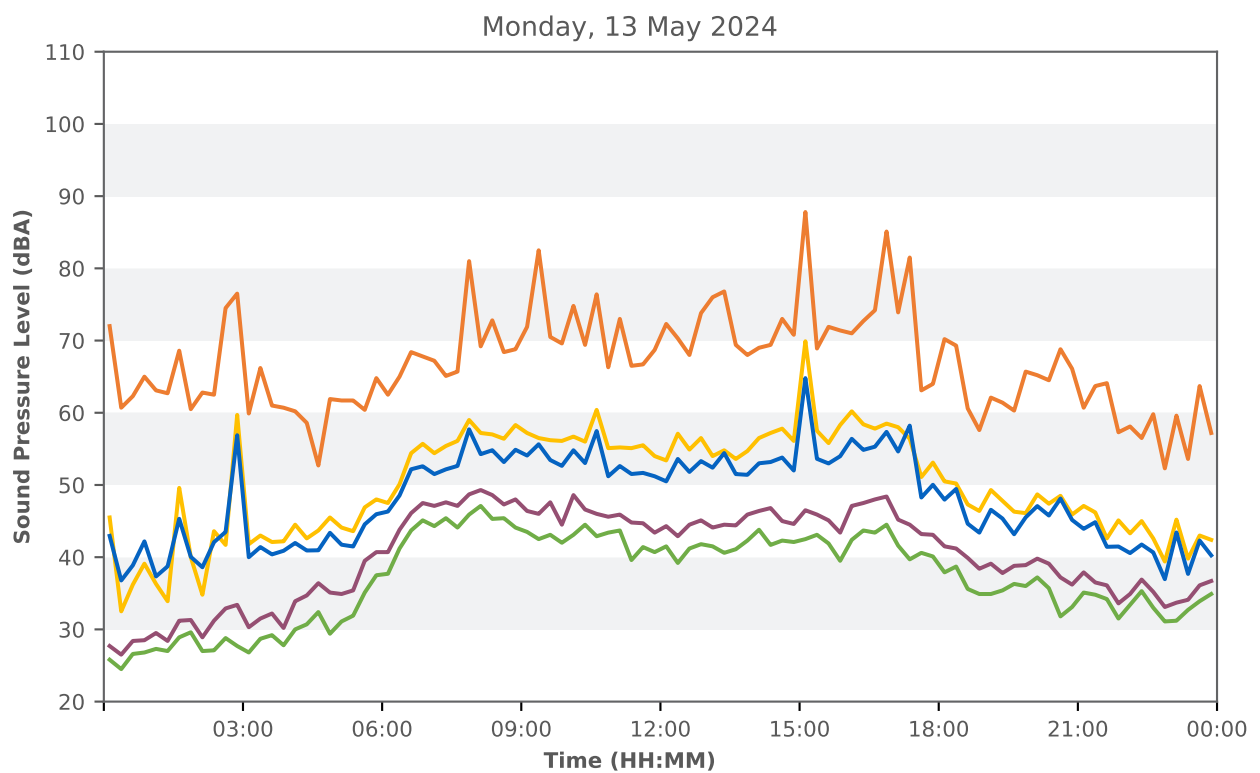
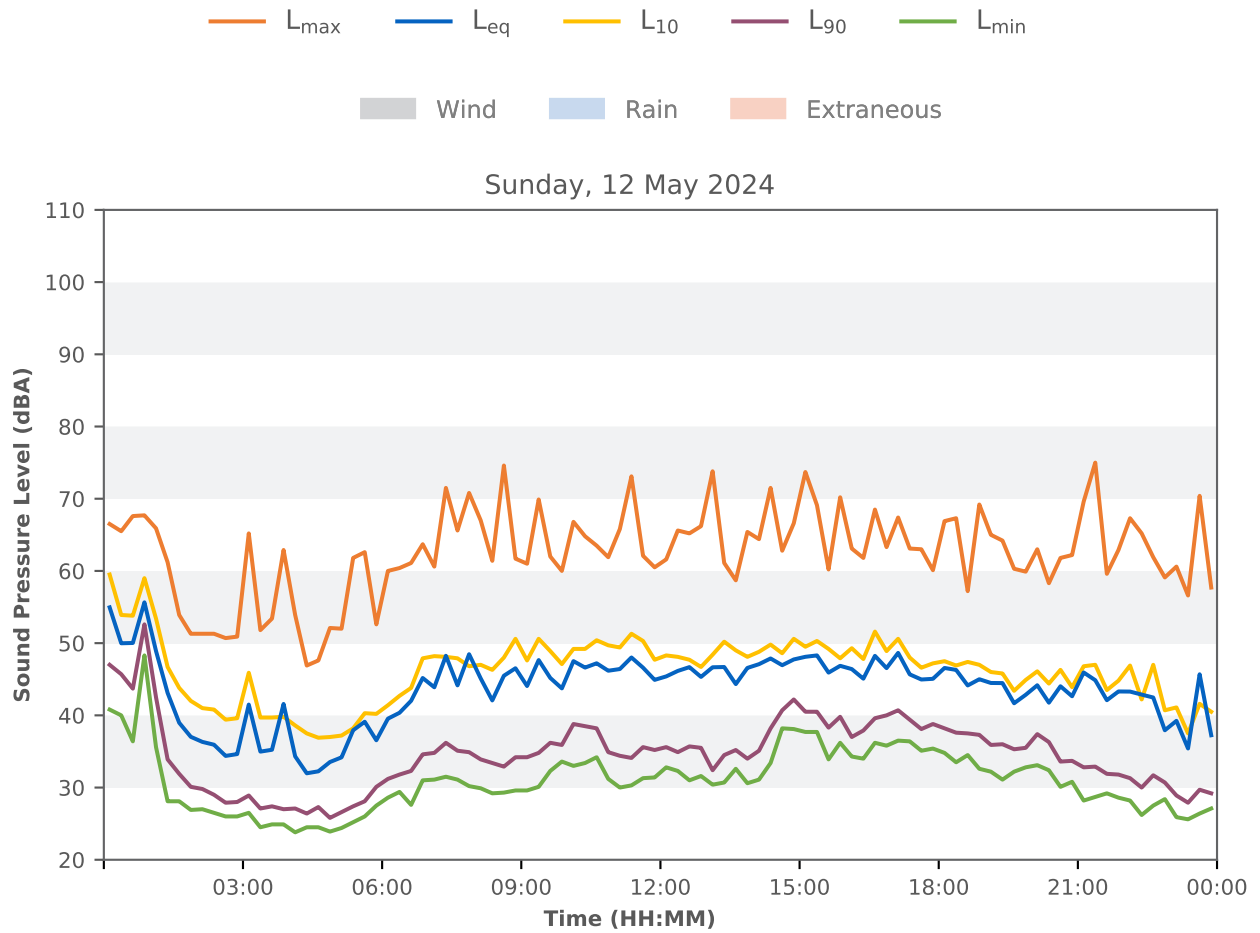
Friday, 10 May 2024



Saturday, 11 May 2024



Location 1 - 18-26 Lambert Street

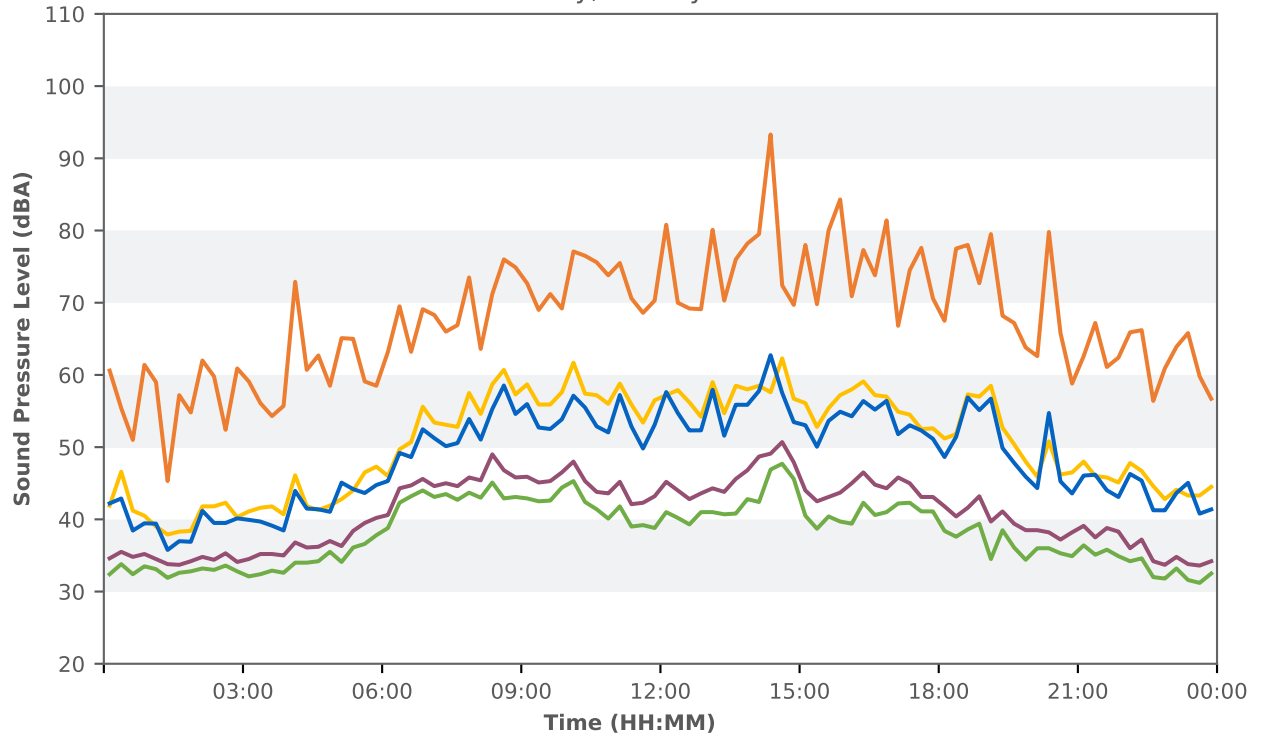


Location 1 - 18-26 Lambert Street

$L_{\max}$ L_{eq} L_{10} L_{90} $L_{\min}$

Wind Rain Extraneous

Tuesday, 14 May 2024



Wednesday, 15 May 2024

