



RE.GROUP DUNMORE

NOISE IMPACT ASSESSMENT

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PREPARED FOR

RE.GROUP
LEVEL 19, 100 MILLER STREET
NORTH SYDNEY NSW 2060

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TABLE OF CONTENTS

	Page
GLOSSARY OF ACOUSTIC TERMS	
1 INTRODUCTION	6
1.1 Proposal Background	6
1.2 Purpose of this Report	6
2 THE SITE	8
2.1 Site Description	8
2.2 Surrounding Land Use and Sensitive Receivers	8
2.3 Site Features	9
3 CURRENT OPERATION	12
4 THE PROPOSAL	14
4.1 Construction and Installation	14
4.2 Operations	14
4.2.1 Hours of Operation	14
5 EXISTING NOISE ENVIRONMENT	15
6 OPERATIONAL NOISE ASSESSMENT	17
6.1 Operational Noise Trigger Levels	17
6.1.1 Project Intrusiveness Noise Level	17
6.1.2 Project Amenity Noise Levels	18
6.1.3 Project Noise Trigger Levels	21
6.2 Noise Modelling Methodology and Assumptions	21
6.2.1 Meteorological Effects	21
6.3 Operational Noise Sources	22
6.4 Assessment Scenarios	22
6.5 Predicted Noise Levels	23
7 CONCLUSION	24

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

A modification application has been prepared on behalf of Re.Grow Pty Ltd [as owned by Re.Hold Pty Ltd (Re.Group)] who is seeking approval to modify the development consent (DA 523/2014) for the existing food and garden organics waste processing facility (FOGO facility) at 44 Buckleys Road, Dunmore NSW (the Modification Proposal). This modification application has been prepared pursuant to Section 4.55 (2) of the Environmental Planning and Assessment Act 1979 (EP&A Act).

1.1 Proposal Background

Re.Grow has operated the Dunmore FOGO facility since 2017. The site operates under DA523/2014. The facility is licensed to receive up to 50,000 tonnes per annum under Environment Protection License (EPL) number 12903.

The site forms part of the Council-owned and operated Dunmore Recycling and Waste Disposal Depot (DRWDD), which consists of a tip shop (also referred to as Reviva Dunmore, formerly the Revolve Centre), a transfer station for mixed waste as well as self-haul separate streams such as metals, electronic waste, mattresses, batteries and oils, a putrescible and non-putrescible landfill, and the FOGO processing facility.

Re.Group has been engaging with Council and NSW EPA regarding the management of external stockpiles of maturing compost material and finished compost product. In 2022, the EPA completed a compliance audit of the premises and a consistent issue identified was the “excessive quantity of material on the maturation pad”, which “limits equipment access and proper aeration and turning of material.” NSW EPA enacted a Pollution Reduction Program to reduce the volume of externally stored material to less than 7,400 cubic metres, which was met at the end of February 2024. Whilst developing the program, Council, NSW EPA, and Re.Group discussed how the latter could reduce stockpiles expeditiously and the option to extend the permitted operating hours was, in principle, noted as a potential solution.

In order to better manage the volumes of externally stored material, Re.Group is seeking to extend the approved hours of operation at the facility (the subject of this Modification Proposal).

Under this Modification Proposal, no construction works are proposed at the site. Similarly, there is no requirement for additional equipment or plant and as such, no installation works are proposed at the site. No changes are proposed to the built form of the facility.

1.2 Purpose of this Report

SoundIN Pty Ltd (SoundIN) was engaged by Arcadis, on behalf of Re.Group to prepare a Noise Impact Assessment for the Modification Proposal.

Council have advised that development consent has been granted for a dwelling on an adjacent parcel of land at 57 Buckleys Road and have requested that this dwelling is included as a receiver in the noise assessment.

SoundIN has been engaged by Re.Group to prepare an updated noise impact assessment report (this report).

This report presents an assessment of potential noise impacts associated with the operation of the FOGO facility at nearby sensitive receivers. The assessment has been conducted in general accordance with the *Noise Policy for Industry* (EPA, 2017).

No significant sources of vibration are associated with the operation of the FOGO facility. Accordingly, no detailed assessment of vibration impacts is warranted.

2 THE SITE

2.1 Site Description

The site is located at 44 Buckleys Road, Dunmore NSW (refer to **Figure 2-1**). The site is accessed by both vehicles and pedestrians from Buckleys Road.

2.2 Surrounding Land Use and Sensitive Receivers

The nearest and most potentially affected sensitive receivers to the site are summarised in **Table 2-1** and shown in **Figure 2-1**.

Table 2-1 Sensitive receivers

Receiver ID	Description	Distance ¹	Direction
R1	Dunmore Road residences	590	Northwest
R2	Residence at 21 Buckleys Road	550	North
R3	Augusta Parkway residences	890	Northeast
R4	Killalea campgrounds	530	East
R5	Approved dwelling on adjacent industrial site	500	Northeast

1. Distance measured from pre-treatment building to nearest receiver.

It is noted that the adjacent land to the northeast of the site (57 Buckleys Road) is occupied by Dunmore Resources and Recycling – a construction and demolition (C&D) waste management facility and landscaping supplier – and is also the land upon which consent has been granted for a dwelling.

Noting the existing industrial use of the land at 57 Buckleys Road, for assessment purposes, the approved dwelling on this land will be treated as a caretaker's residence.

2.3 Site Features

The site is located on 3 hectares (ha) of land and comprises the following features:

- Gatehouse and two weighbridges
- Shed for FOGO receival, decontamination and shredding, with four enclosed composting tunnels and an ancillary office
- External storage bunkers
- Maturation pad (6,700 m²)
- Detention pond (1,350 m²)
- Car parking areas

The site features some screening vegetation and landscaped areas and is not visible from public roads or other public areas.

An overview of the site's features is shown in **Figure 2-2**.

Figure 2-1 Site and Sensitive Receivers

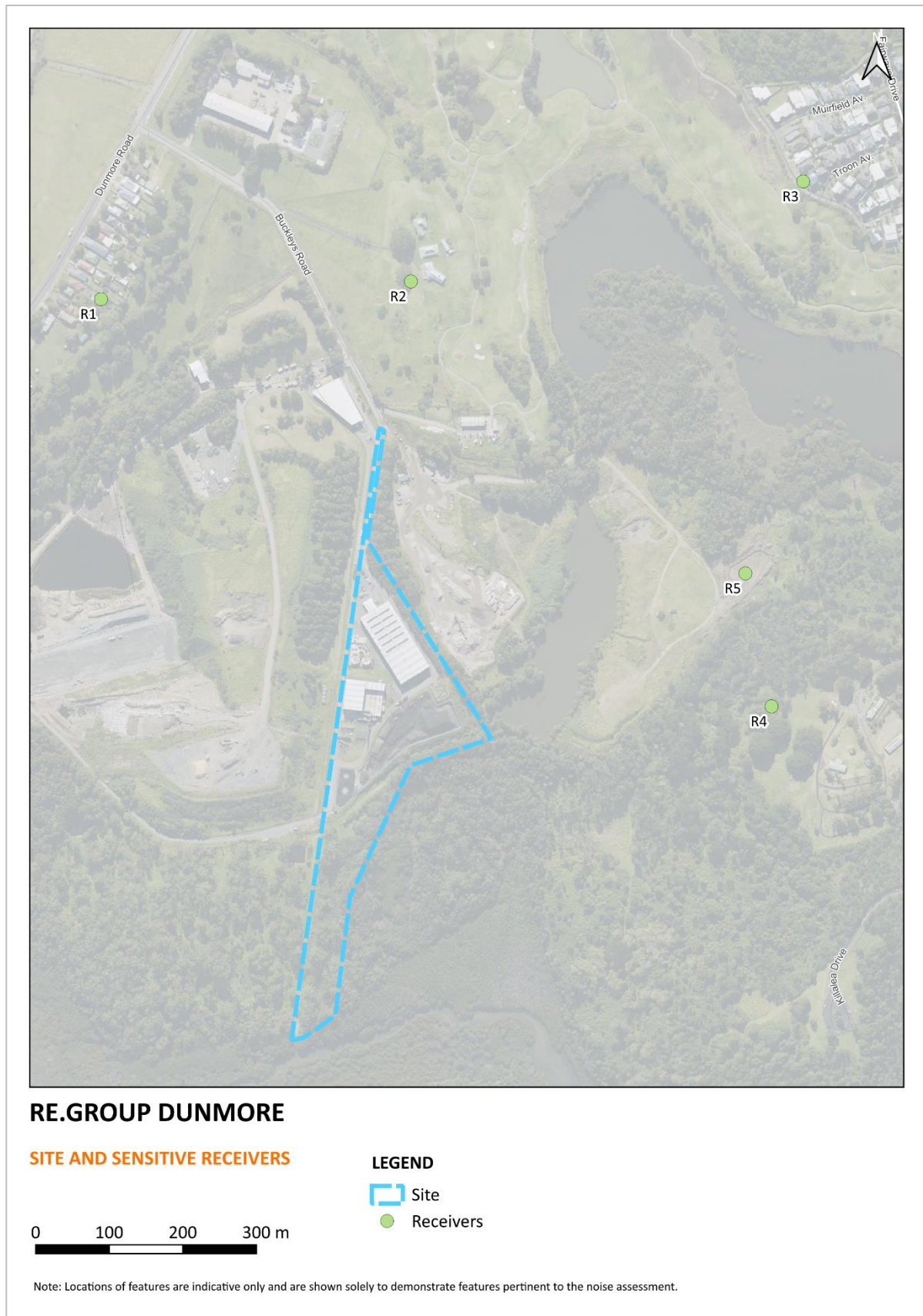


Figure 2-2 Site Features



3 CURRENT OPERATION

The site processes up to 50,000tpa of domestic food and garden organic waste material, including self-haul garden organics. Waste acceptance and operation of the site is managed under an Operational Environmental Management Plan (OEMP) and a Quality Management Plan.

Current site operations are described in **Table 3-1**.

Table 3-1 Description of current site operation

Stage of operation	Description
Weighbridge, receival and acceptance	Vehicles enter the site via the weighbridge from Buckleys Road. Organics material is brought to the site primarily by Council's waste collection fleet, being rear-loading medium rigid vehicles. Self-haul garden organics is also aggregated at the DRWDD in the shed north of the organics processing shed and brought to the site on smaller trucks. Receival of organics occurs solely in the site shed, in a receival area marked in Figure 2-2. Vehicle drivers are directed by the operator of the front-end loader (FEL) in this receival area to unload. Waste loads are inspected visually for contamination. If unacceptable levels of contamination are detected, the truck would be re-loaded and directed to a suitably licensed facility for disposal. Load rejections are recorded and feedback is provided to Council on the nature and type of contamination in deliveries. When vehicles are leaving the premises following offloading, the vehicle enters the same weighbridge where the weighbridge operator will record the tare weight of the vehicle, the date of delivery, and the origin and type of waste delivered. Weighbridge operations are managed by Council.
Pre-processing	Received material is pre-processed through decontamination to remove non-organic material, which is done by hand-picking visible contamination. Contaminants are transferred into a bunker within the building for temporary storage. Metals are separated and stored in a bin. The remaining organic material is shredded to end up with pre-processed organics of a uniform size. Pre-processed material is directly and immediately loaded into the enclosed compost tunnels.
Composting	There are four enclosed tunnels of 720m³ capacity each for composting of pre-processed organic material. Tunnels are loaded using a FEL and are

Stage of operation	Description
	monitored via temperature probes, oxygen probes, air pressure monitoring. Material is loaded into tunnels for composting where key variables are monitored to ensure pasteurisation occurs in the tunnels. The material in the tunnels is aerated using aeration pipes in order to prevent anaerobic breakdown of organic material (i.e. rotting, which produces methane – a potent greenhouse gas). Odour emissions from composting are prevented by the biofilter, which captures odours. Compost piles remain in the enclosed tunnels for a period averaging two weeks. Unloading of tunnels is done by FEL, and successfully composted material is transferred to the external maturation pad via FEL. Compost material is tested in accordance with the NSW EPA Resource Recovery Order (The compost order 2016). Should any batch fail this testing, the batch would remain in the tunnel for further composting.
Maturation	Composted materials are stored on the maturation pad in defined batches, which are monitored for moisture and temperature for a further four weeks, with turning of the batches occurring to manage the stockpiles. Total maturation time on the maturation pad is six, following which time, the product is ready for sale. Turning of the materials is undertaken by a Mulchmaster or FEL and staff monitor and record temperatures daily; moisture is also monitored and maintained. As the movement of compost to the maturation area and the turning of windrows are key odour risk activities for the site, these activities may be restricted during periods of inappropriate weather conditions, such as inversion layers or very light southerly winds. Successful piles are screened using a trommel to separate oversized material. Oversized material is transferred to the receival hall to undergo another round of pre-processing, composting and maturation. Finished compost product (< 15 mm) is separately stored for offtake, marked on Figure 2-2.
Offtake of compost	Finished compost material is loaded onto a truck and dog. Approximately 33 trucks are loaded for off-take a month, amounting 1,000t of compost.
Offtake of other material	Residual waste is stored in a bunker and collected by a local site truck as required. This is then disposed of at an appropriately licensed landfill facility.

4 THE PROPOSAL

4.1 Construction and Installation

Under this Modification Proposal, no construction works are proposed at the site. Similarly, there is no requirement for additional equipment or plant and as such, no installation works are proposed at the site. No changes are proposed to the built form of the facility.

4.2 Operations

The operation at the site would largely remain the same, utilising the same equipment with material undergoing the same process (refer to Section 3).

4.2.1 Hours of Operation

To allow for sufficient processing utilising existing plant and equipment at the site, Re.Group proposes to extend the hours of operation of the FOGO processing facility as shown in **Table 4-1**.

Table 4-1 Proposed hours of operation (FOGO processing facility only)

Type of Activity	Hours of Operation	Days of Operation
Receipt of incoming material Processing of material Dispatch of material	External operations: 7am to 6pm Internal operations: 6am to 6pm	Monday to Friday
Receipt of incoming material Processing of material Dispatch of material	External operations: 7am to 4pm Internal operations: 6am to 6pm	Saturday, Sunday, and Public Holidays (excluding Good Friday and Christmas Day)

No changes to hours of operation for the weighbridge, landfill, disposal depot or Reviva tip shop are proposed; these are owned and operated by Council.

5 EXISTING NOISE ENVIRONMENT

Unattended noise monitoring was conducted between Friday 8 and Tuesday 19 December 2023 to establish the existing background noise levels at the most potentially affected nearby receivers. Monitoring was conducted at 33 Dunmore Road (L1) and 21 Buckleys Road (L2). Location L1 is considered representative of residences along Dunmore Road, which are subject to noise from the Princes Highway, such as R1. Location L2 is considered representative of residences further east and well set back from the Princes Highway such as R2 and R3.

The noise monitoring locations are shown in **Figure 5-1**.

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 5-1**.

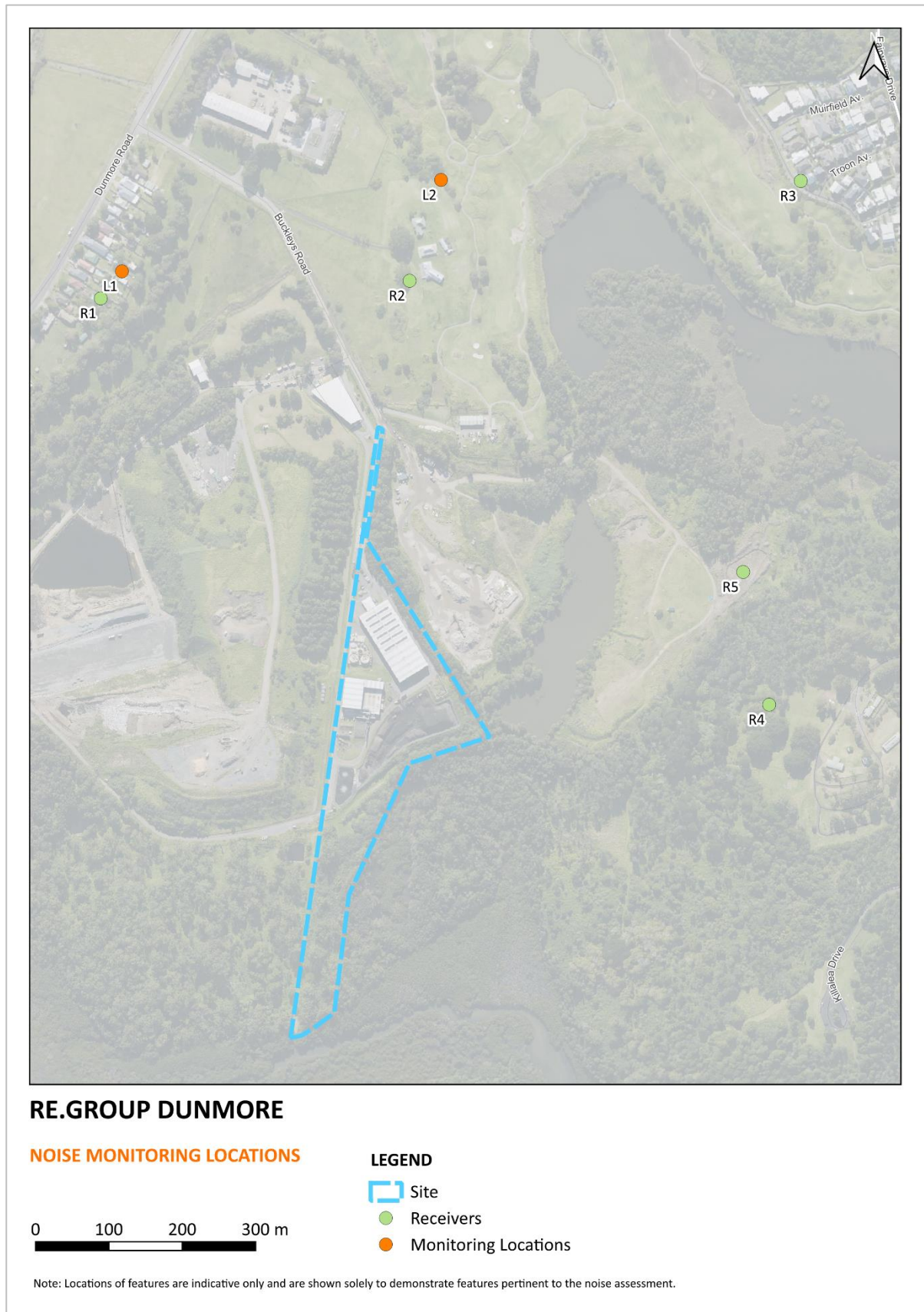
As outlined in Section 4.2.1, operations are proposed to commence from 6am. In accordance with the NPfI, a “shoulder period” has been defined to cover the period between 6am and 7am. As shown in Table 5-1, the RBLs calculated for the morning shoulder period are slightly higher than the daytime RBLs at both monitoring locations. These higher RBL in the morning shoulder period would lead to higher (i.e. less stringent) noise criteria in the morning shoulder period than during the remainder of the daytime period. For simplicity of assessment, rather than defining a morning shoulder period, a conservative approach has been taken where the daytime assessment period is taken to begin at 6am.

Table 5-1 Rating Background Levels (RBL)

Monitoring Location	Rating background level (dBA)			
	Morning Shoulder (6am – 7am)	Day (7am – 6pm)	Evening (6pm – 10pm)	Night (10pm – 6am)
33 Dunmore Road (L1)	44	42	41	33
21 Buckleys Road (L2)	39	38	37	35

Daily plots of the noise logger data are provided in Appendix A.

Figure 5-1 Noise Monitoring Locations



6 OPERATIONAL NOISE ASSESSMENT

6.1 Operational Noise Trigger Levels

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 project noise trigger level is the lower value of the project intrusiveness noise level and the project amenity noise level. The project intrusiveness noise level assesses the likelihood of noise being intrusive above the ambient noise level and is applied to residential receivers only. The project amenity noise level ensures the total industrial noise from all sources in the area does not rise above a maximum acceptable level.

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.

6.1.1 Project Intrusiveness Noise Level

The intrusiveness noise level is the noise level 5 dBA above the rating background noise level (RBL) for each time period (daytime, evening or night time) of interest at a residential receiver. The RBL is derived from the measured L_{A90} noise levels.

The NPfI stipulates that project intrusiveness noise levels should not be set below 40 dBA during the daytime and 35 dBA in the evening and night time. Additionally, the NPfI recommends that the project intrusiveness noise level for evening is set at no greater than that for the daytime, and that the project intrusiveness level for night time is set at no greater than that for the evening and daytime.

Project intrusiveness noise levels, based on the RBL presented in Section **Table 5-1**, are summarised in **Table 6-1**.

Table 6-1 Project Intrusiveness Noise Levels

Receiver	Time of day ¹	RBL (dBA)	Project Intrusiveness noise level – $L_{Aeq,15min}$ (dBA)
R1	Day	42	47
R2, R3	Day	38	43

1. Day – 6am – 6pm.

6.1.2 Project Amenity Noise Levels

Project amenity noise levels aim to set a limit on continuing increases in noise levels from all industrial noise sources affecting a variety of receiver types; that is, the ambient noise level in an area from all industrial noise sources remains below recommended amenity noise levels.

The amenity assessment is based on noise criteria specific to land use and associated activities. The criteria relate only to industrial-type noise and do not include transportation noise (when on public transport corridors), noise from motor sport, construction noise, community noise, blasting, shooting ranges, occupational workplace noise, wind farms, amplified music/patron noise.

The amenity noise level aims to limit continuing increases in noise levels which may occur if the intrusiveness level alone is applied to successive development within an area.

The recommended amenity noise level represents the objective for total industrial noise at a receiver location. The project amenity noise level represents the objective for noise from a single industrial development at a receiver location.

To prevent increases in industrial noise due to the cumulative effect of several developments, the project amenity noise level for each new source of industrial noise is set at 5dBA below the recommended amenity noise level.

The following exceptions apply to determining the project amenity noise level:

- For high-traffic areas the amenity criterion for industrial noise becomes the $L_{Aeq,period(traffic)}$ minus 15dBA.
- In proposed developments in major industrial clusters.
- If the resulting project amenity noise level is at least 10 dB lower than the existing industrial noise level, the project amenity noise level can be set at 10 dB below existing industrial noise levels if it can be demonstrated that existing industrial noise levels are unlikely to reduce over time.
- Where cumulative industrial noise is not a consideration because no other industries are present in, or likely to be introduced into the area, the relevant amenity noise level is assigned as the project amenity noise level for the development.

Amenity noise levels are not used directly as regulatory limits. They are used in combination with the

project intrusiveness noise level to assess the potential impact of noise, assess mitigation options and determine achievable noise requirements.

The project amenity noise levels are calculated from the recommended amenity noise levels presented in **Table 6-2**.

Table 6-2 Recommended Amenity Noise Levels

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
Hotels, motels, caretaker's quarters, holiday accommodation, permanent resident caravan parks	See column 4	See column 4	5 dBA above the recommended amenity noise level for a residence for the relevant noise amenity area and time of day.
School classroom (internal)	All	Noisiest 1-hour period when in use	35
Hospital ward: Internal External	All	Noisiest 1-hour	35
	All	Noisiest 1-hour	50
Place of worship (internal)	All	When in use	40
Area specifically reserved for passive recreation (e.g., national park)	All	When in use	50

Receiver	Noise amenity area	Time of day ¹	Recommended amenity noise level – $L_{Aeq,period}$ (dBA)
Active recreation area (e.g., school playground, golf course)	All	When in use	55
Commercial premises	All	When in use	65
Industrial premises	All	When in use	70
Industrial interface (applicable only to residential noise amenity areas)	All	All	Add 5 dBA to recommended noise amenity area

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

Recommended amenity noise levels presented in **Table 6-2** represent the objective for total industrial noise at a receiver location. In the case of a single new noise source being proposed, the project amenity noise level represents the objective for noise from a single industrial development at the receiver location. This is typically calculated as the recommended amenity noise level minus 5 dBA.

Due to different averaging periods for the $L_{Aeq,15min}$ and $L_{Aeq,period}$ noise descriptors, the values of project intrusiveness and amenity noise levels cannot be compared directly when identifying noise trigger levels i.e. the most stringent values of each category. 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.

Residential receivers near the Proposal (R1 – R3) are classified as being in a “suburban” noise amenity area.

Recommended amenity noise levels for holiday accommodation and caretaker’s quarters have been applied to the Killalea Campground (R4) and R5.

The project amenity noise levels for the Proposal are presented in **Table 6-3**.

Table 6-3 Project Amenity Noise Levels

Receiver	Time of day ¹	Recommended amenity noise level – $L_{Aeq,period}$ (dBA)	Project amenity noise level – $L_{Aeq,15min}$ (dBA)
R1, R2, R3	Day	55	53
R4 & R5	Day	60	58

1. Day – 6am – 6pm.

6.1.3 Project Noise Trigger Levels

The project intrusiveness noise levels and project amenity noise levels for sensitive receivers are summarised in **Table 6-4**. The project noise trigger levels (PNTL) – which are the lower values of the project intrusiveness noise levels and the project amenity noise levels – are highlighted in bold.

Table 6-4 Project Noise Trigger Levels

Receiver	Time of day ¹	Project intrusiveness noise level – $L_{Aeq,15min}$ (dBA)	Project amenity noise level – $L_{Aeq,15min}$ (dBA)
R1	Day	47	53
R2, R3	Day	43	53
R4	Day	-	58

1. Day – 6am – 6pm.

6.2 Noise Modelling Methodology and Assumptions

Operational noise emissions from the Proposal have been modelled using SoundPLAN v8.2, using the CONCAWE prediction algorithm. The CONCAWE noise propagation model is used around the world and is widely accepted as an appropriate model for predicting noise over significant distances. Factors addressed in the noise modelling are:

- Equipment noise level emissions and locations
- Shielding from structures
- Noise attenuation due to geometric spreading
- Meteorological conditions
- Ground absorption
- Atmospheric absorption.

6.2.1 Meteorological Effects

At relatively large distances from a source, the resultant noise levels at receivers can be influenced by meteorological conditions, particularly temperature inversions and gradient winds. Where these factors are a feature of an area, their effect on resultant noise levels should be taken into account.

In accordance with the NPfI, the following default conditions have been modelled to account for potential noise-enhancing meteorology:

- Stability category F with 2.0 m/s source-to-receiver winds during the early morning (i.e. during internal operations).

- Stability category D with 3.0 m/s source-to-receiver winds during the remainder of the daytime period (i.e. for all operations)

The SoundPLAN noise modelling software includes a feature that allows the model to be run with the “worst-case wind direction”. This option produces the highest noise level for each receiver due to noise-enhancing winds and has been used in the modelling.

6.3 Operational Noise Sources

A site visit was conducted on 11 December 2023 to identify major noise sources associated with the operation of the FOGO facility. **Table 6-5** presents the major operational noise sources and their continuous sound power levels (SWL) based on attended noise measurements.

Table 6-5 Measured Noise Sources

Source	Continuous SWL (dBA)
Front End Loader (FEL)	107
Biofilter blower motor	98
Trommel	100
Trommel dust collector	109
Mulchmaster	105
Pre-treatment building	95
Truck – idling	95
Truck – moving	103

6.4 Assessment Scenarios

Two operational scenarios have been developed for assessment purposes, representing “internal operations” only and “all operations”.

During the “internal operations” scenario, the pre-treatment building is operational along with the biofilter blower motor, which is located outside, on the southern side of the pre-treatment building.

During the “all operations” scenario, all sources identified in **Table 6-5** are operating simultaneously. This is a very conservative modelling approach since it would be most unlikely that all mobile plant on the site would be operating at the same time.

6.5 Predicted Noise Levels

The predicted $L_{Aeq,15min}$ noise levels at nearby residential receivers associated with internal operations are presented in **Table 6-6**.

Table 6-6 Predicted $L_{Aeq,15min}$ Noise Levels – Internal Operations

Receiver	Predicted Noise Level (dBA)		PNTL (dBA)	Complies?
	Calm	Noise Enhancing		
R1	<20	<20	47	Yes
R2	26	30	43	Yes
R3	<20	23	43	Yes
R4	28	32	58	Yes
R5	29	33	58	Yes

The results in **Table 6-6** indicate that worst-case $L_{Aeq,15min}$ noise levels associated with internal operations are predicted to comply with the PNTL at all nearby residential receivers.

The predicted $L_{Aeq,15min}$ noise levels at nearby residential receivers associated with all operations are presented in **Table 6-7**.

Table 6-7 Predicted $L_{Aeq,15min}$ Noise Levels – All Operations

Receiver	Predicted Noise Level (dBA)		PNTL (dBA)	Complies?
	Calm	Noise Enhancing		
R1	30	35	47	Yes
R2	39	43	43	Yes
R3	34	39	43	Yes
R4	42	47	58	Yes
R5	41	46	58	Yes

The results in **Table 6-7** indicate that worst-case $L_{Aeq,15min}$ noise levels associated with all operations are predicted to comply with the PNTL at all nearby residential receivers.

7 CONCLUSION

Re.Group has operated the Dunmore FOGO facility since 2017. The site operates under DA523/2014. The facility is licensed to receive up to 50,000 tonnes per annum under EPL #12903.

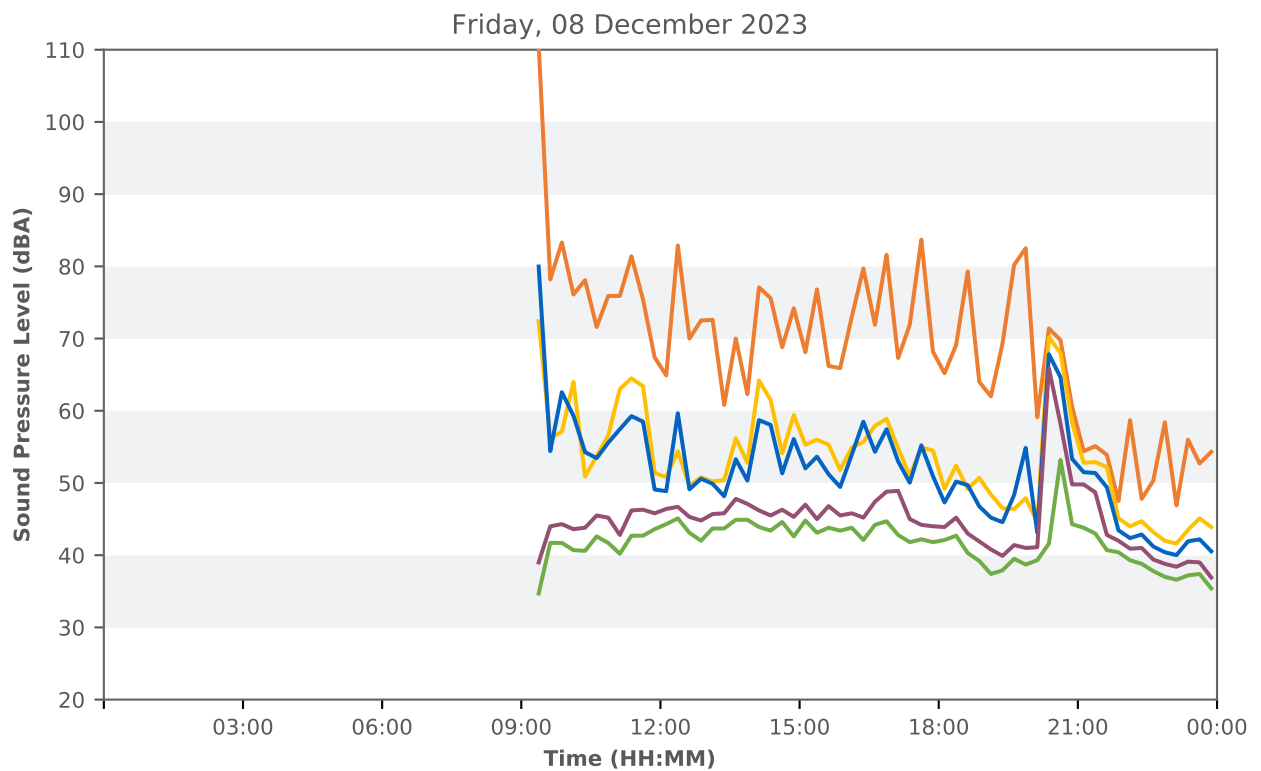
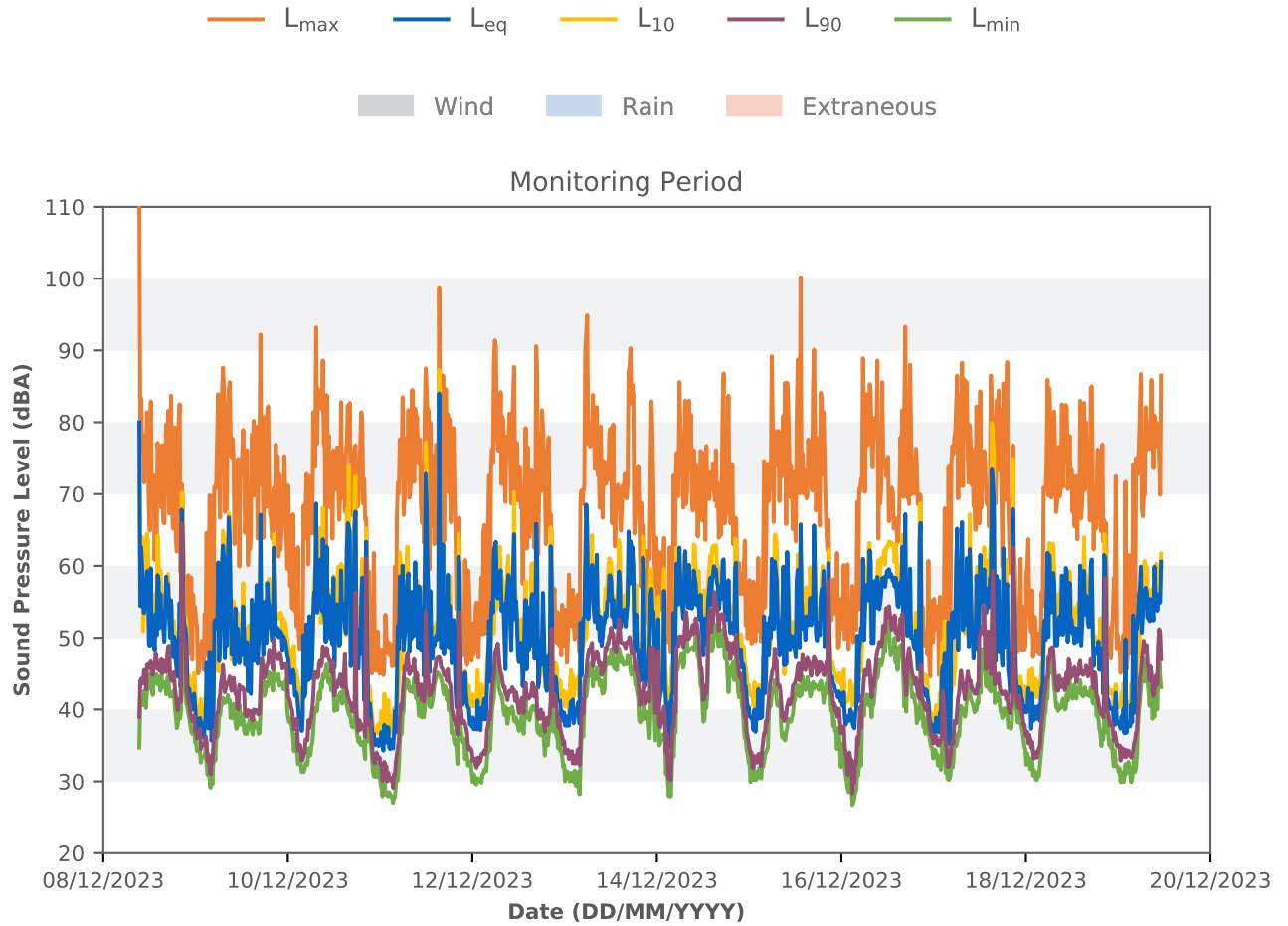
In order to better manage the volumes of externally stored material, Re.Group is seeking to extend the approved hours of operation at the facility (the subject of this Modification Proposal).

Noise impacts associated with the operation of the FOGO facility, under the Modification Proposal, have been assessed in general accordance with the NPfI. A computer noise model has been developed to predict operational noise levels at sensitive receivers. Noise modelling indicates that worst-case $L_{Aeq,15min}$ noise levels are predicted to comply with the PNTL at all nearby receivers. On this basis, the noise mitigation and management measures currently employed at the site are considered appropriate for both the existing operations and those proposed under the Modification Proposal, and no additional measures are recommended.

APPENDIX A

NOISE MONITORING RESULTS

Location A - 33 Dunmore Road

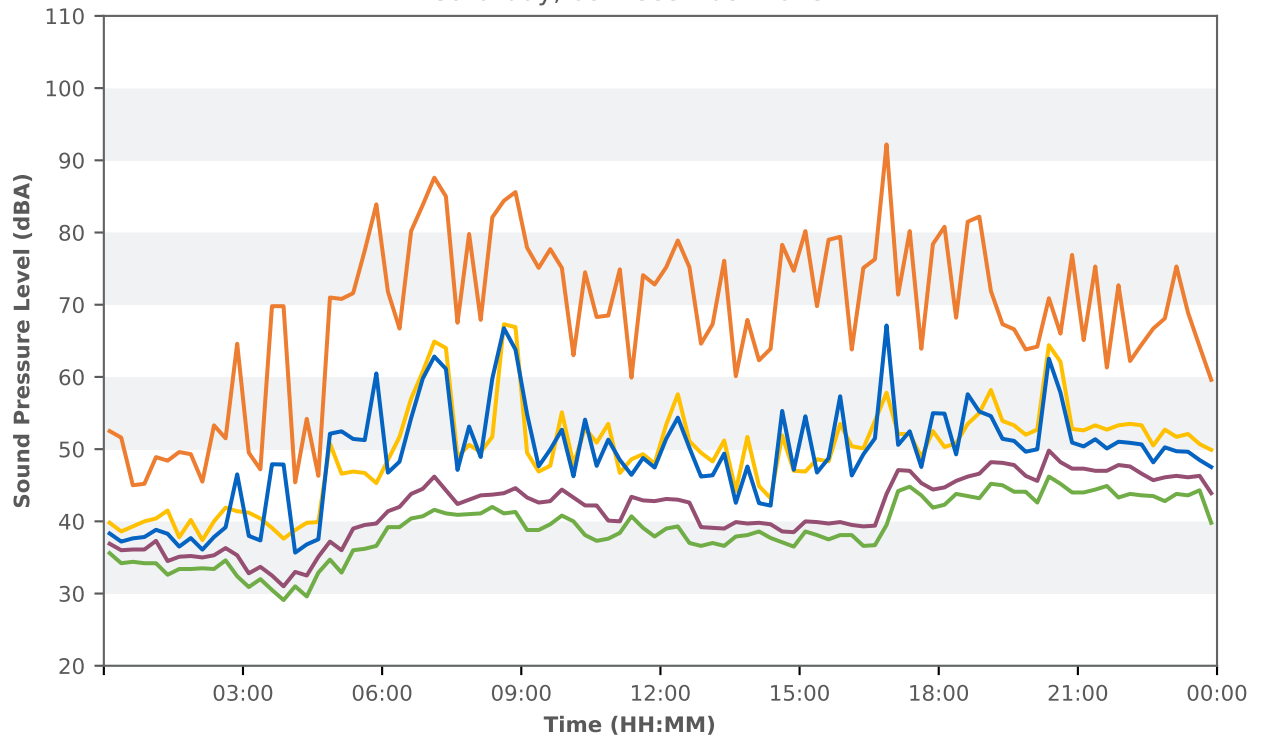


Location A - 33 Dunmore Road

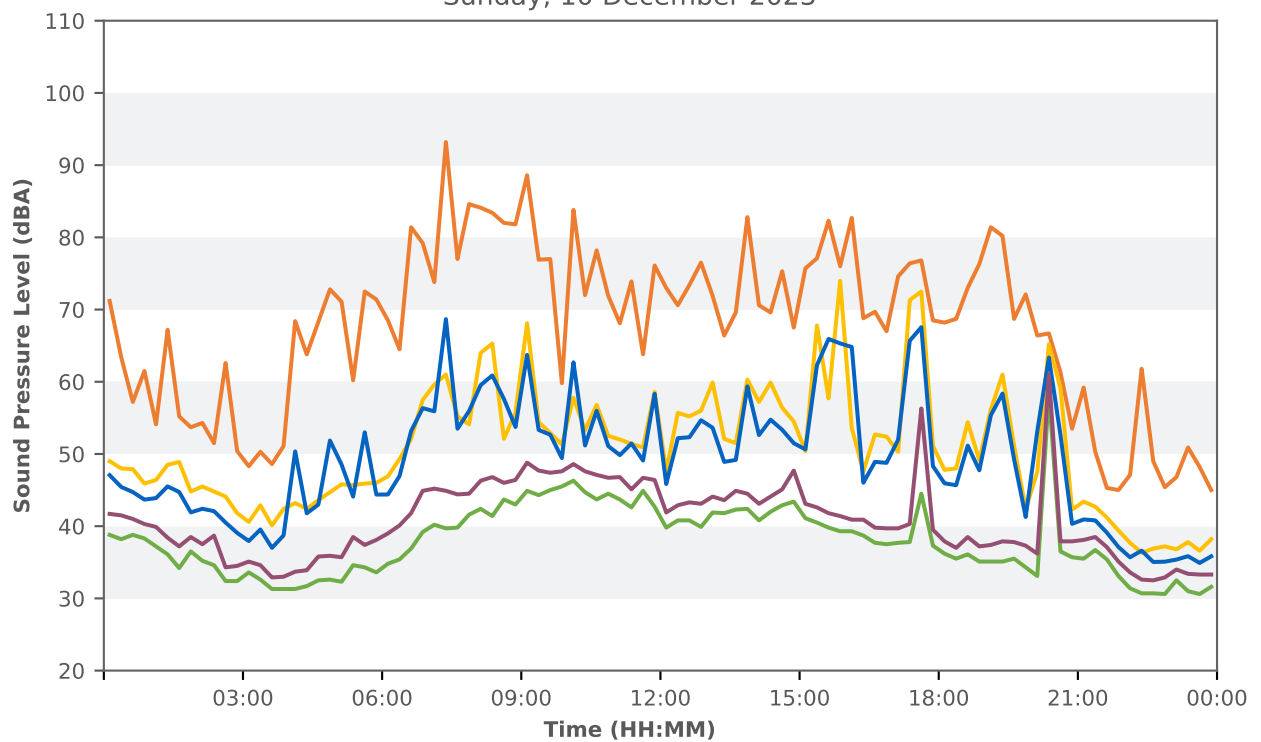
$L_{\max}$ L_{eq} L_{10} L_{90} $L_{\min}$

Wind Rain Extraneous

Saturday, 09 December 2023



Sunday, 10 December 2023

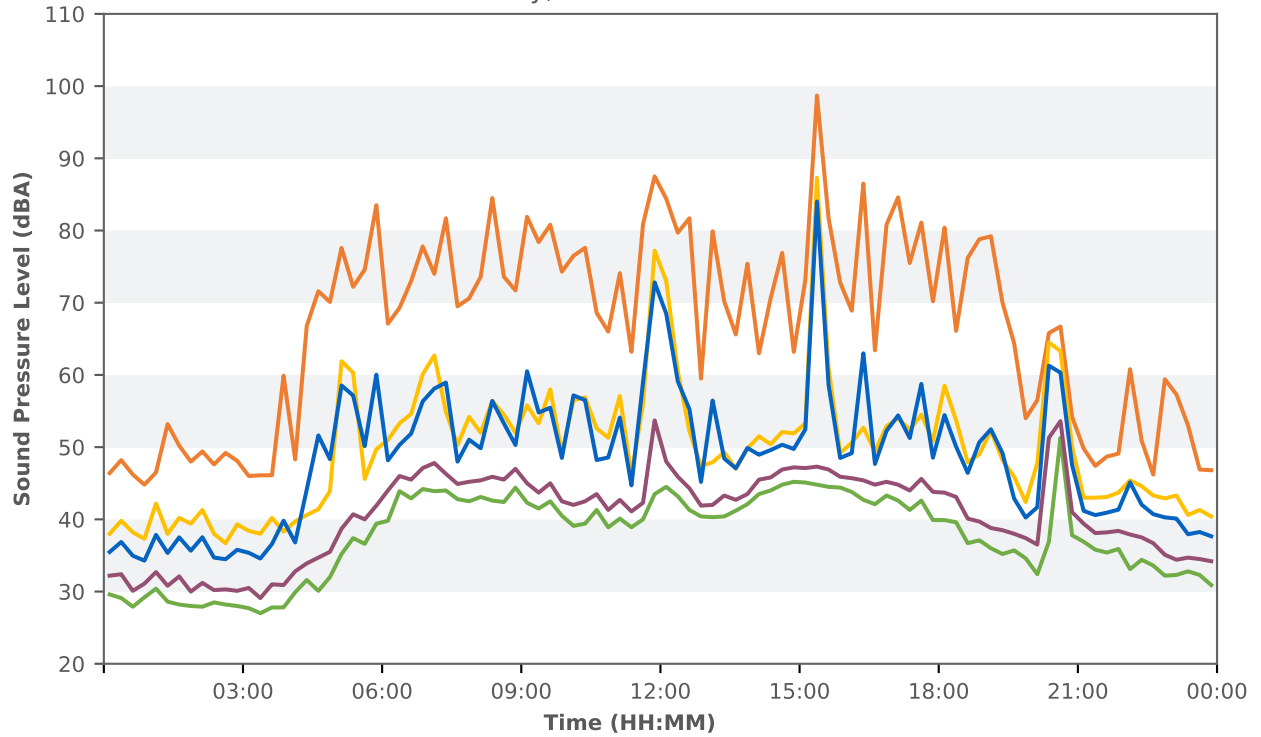


Location A - 33 Dunmore Road

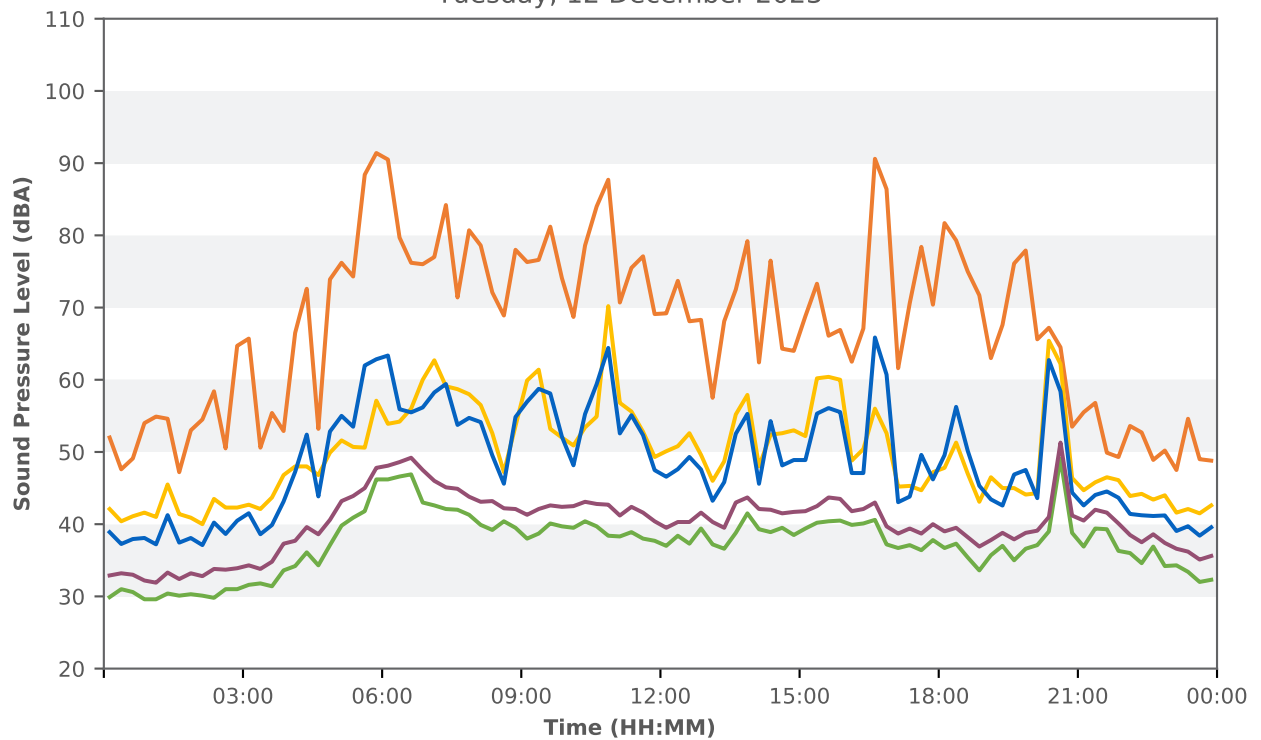
$L_{\max}$ L_{eq} L_{10} L_{90} $L_{\min}$

Wind Rain Extraneous

Monday, 11 December 2023



Tuesday, 12 December 2023

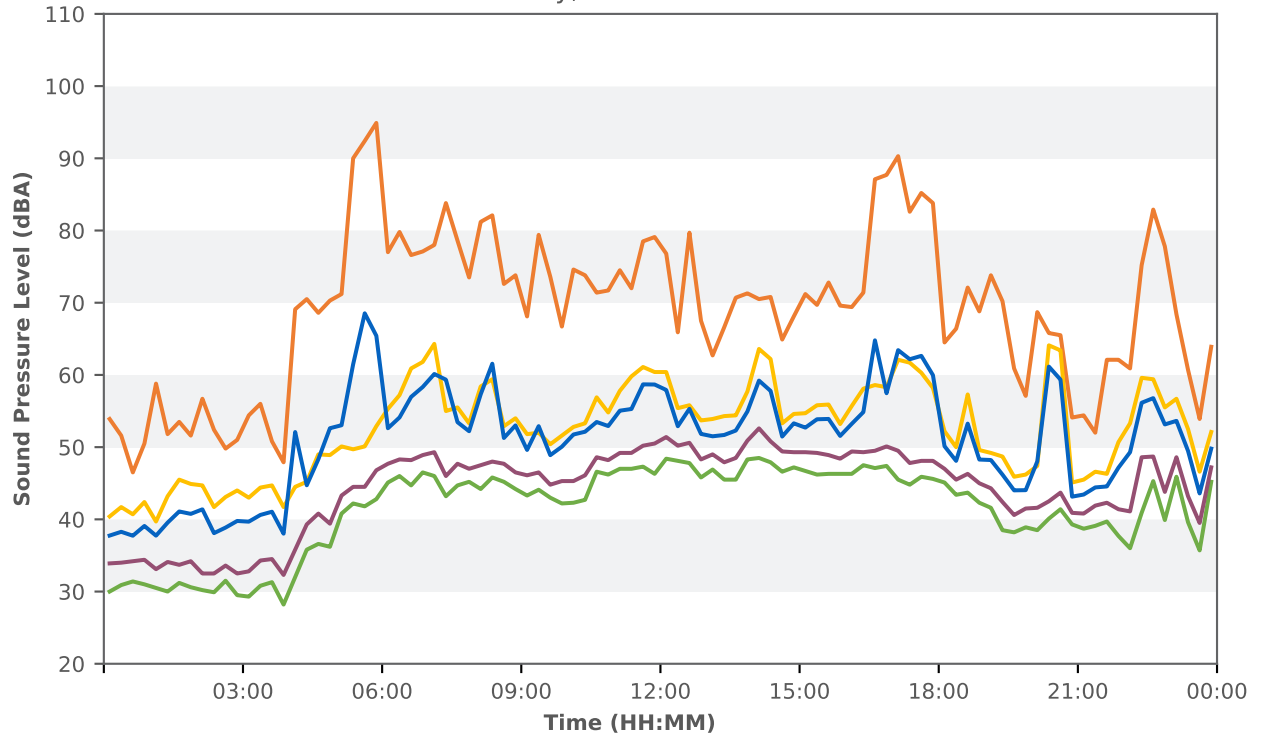


Location A - 33 Dunmore Road

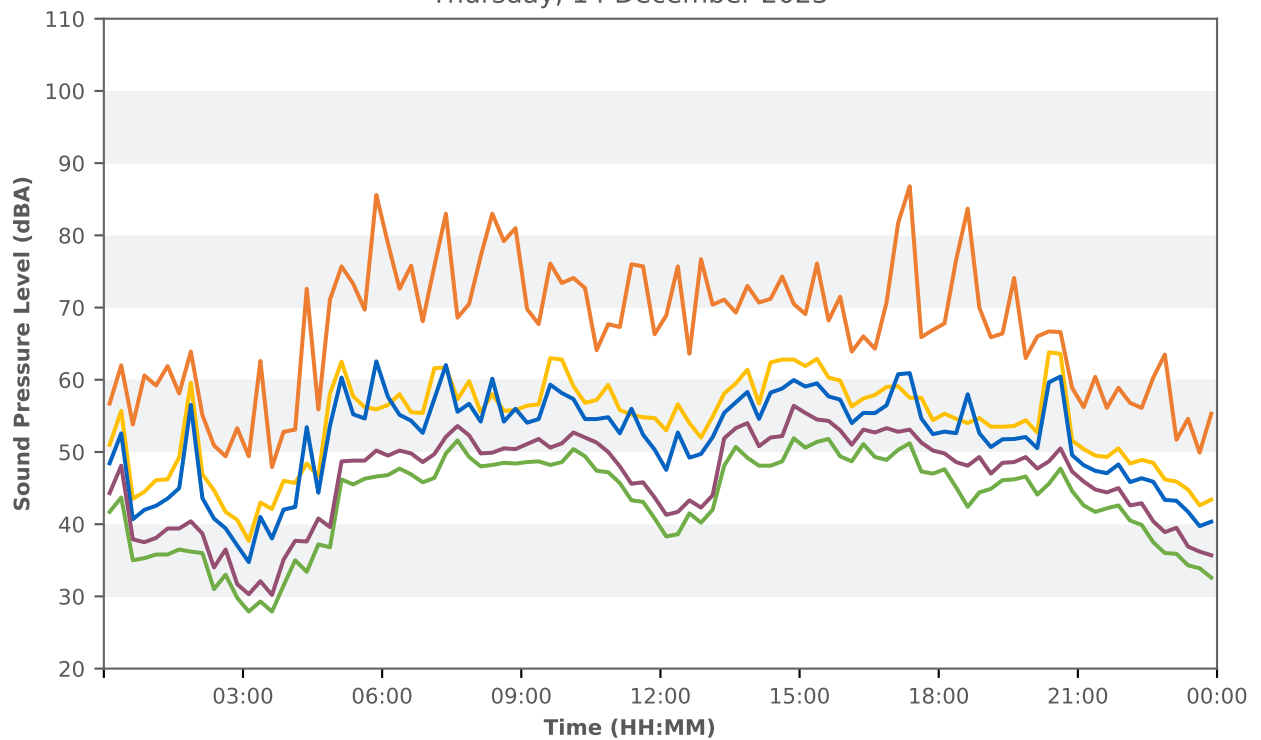
L_{max} L_{eq} L_{10} L_{90} L_{min}

Wind Rain Extraneous

Wednesday, 13 December 2023



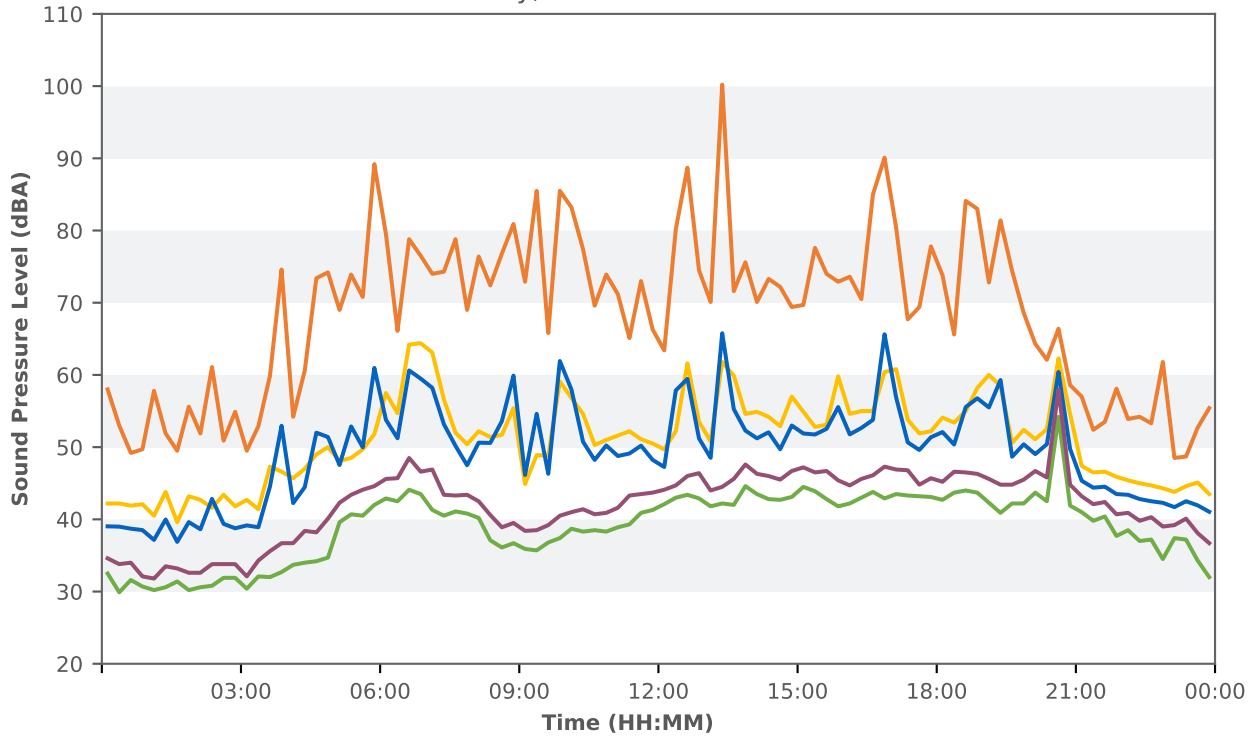
Thursday, 14 December 2023



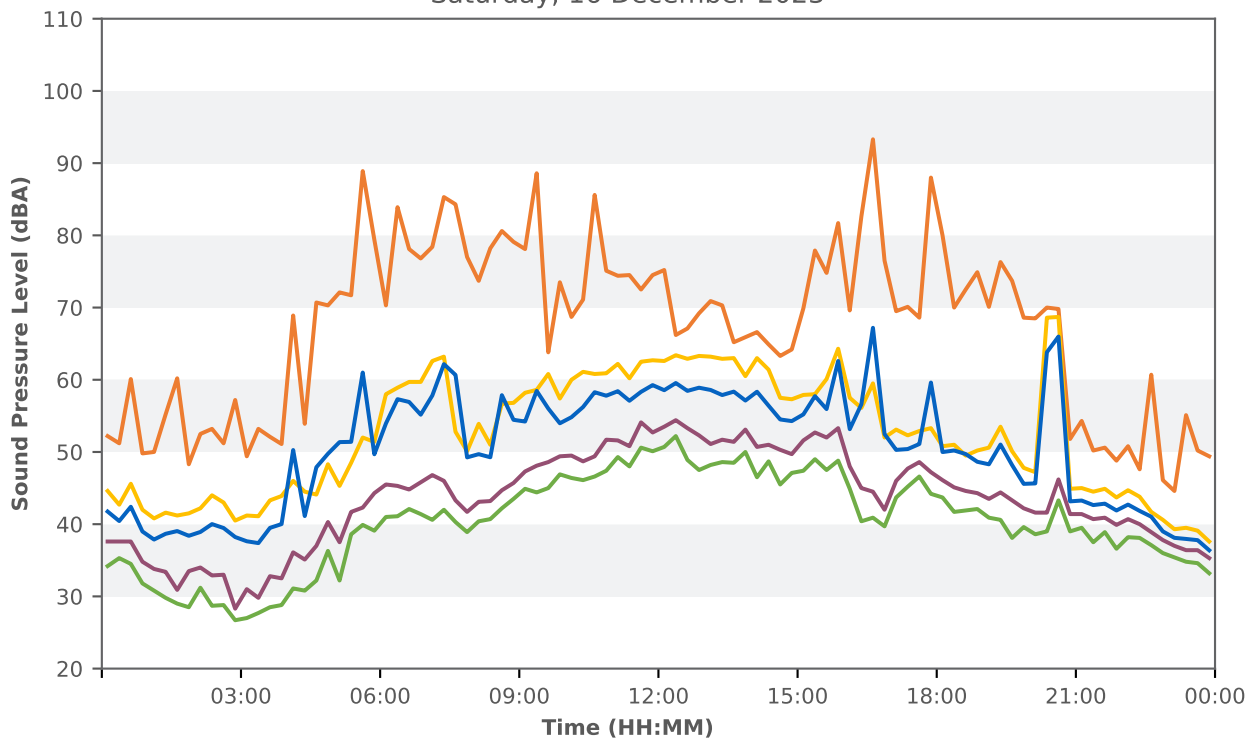
Location A - 33 Dunmore Road

$L_{\max}$ L_{eq} L_{10} L_{90} $L_{\min}$
Wind Rain Extraneous

Friday, 15 December 2023



Saturday, 16 December 2023

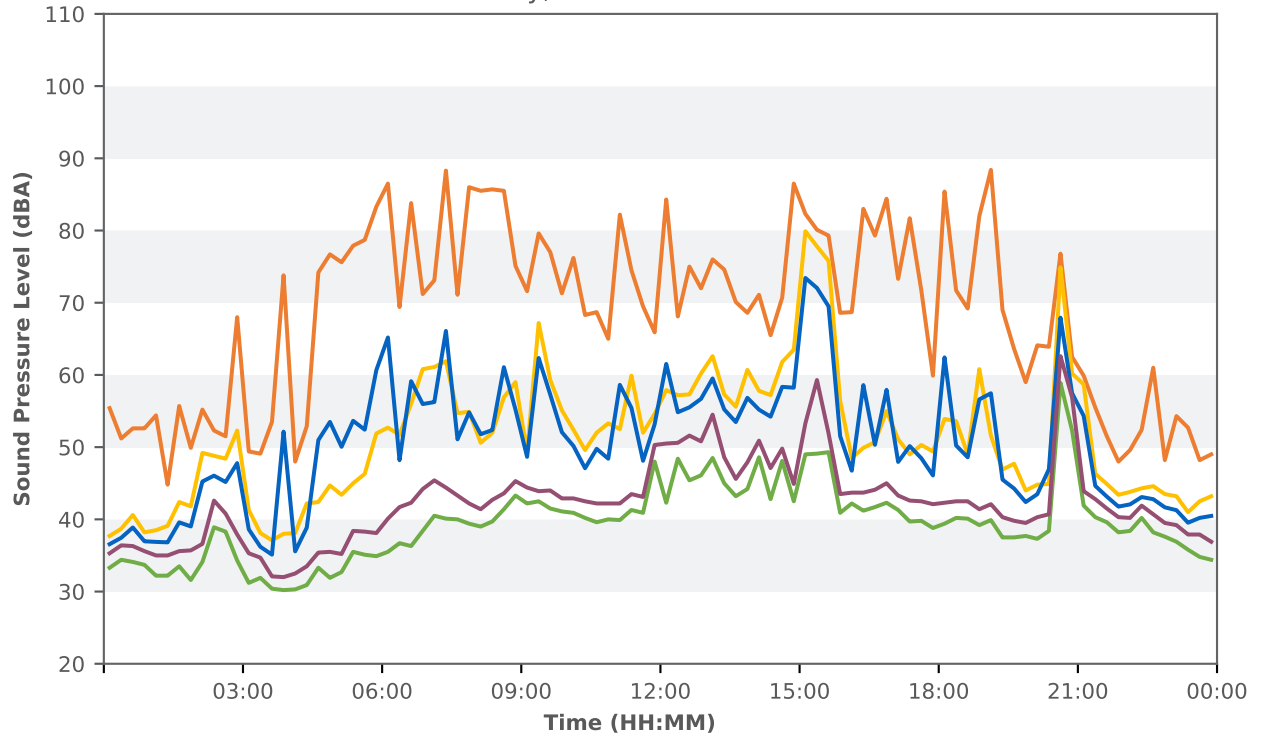


Location A - 33 Dunmore Road

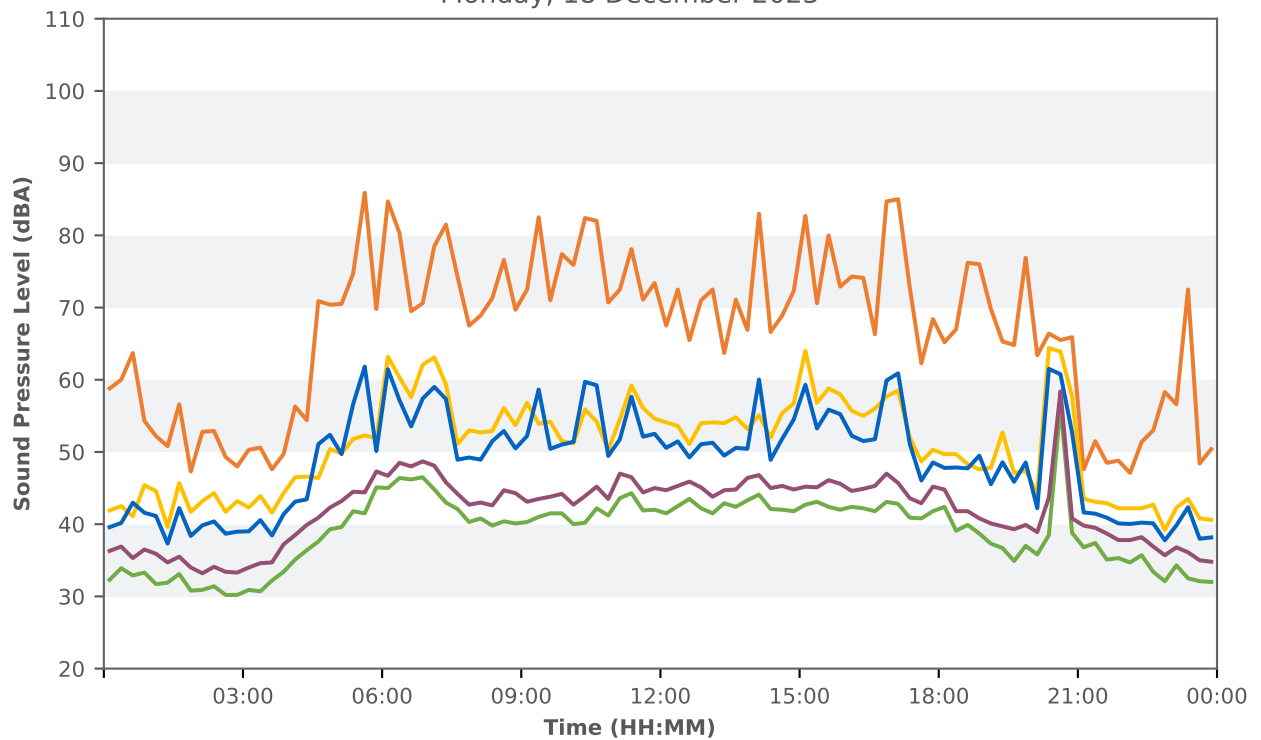
$L_{\max}$ L_{eq} L_{10} L_{90} $L_{\min}$

Wind Rain Extraneous

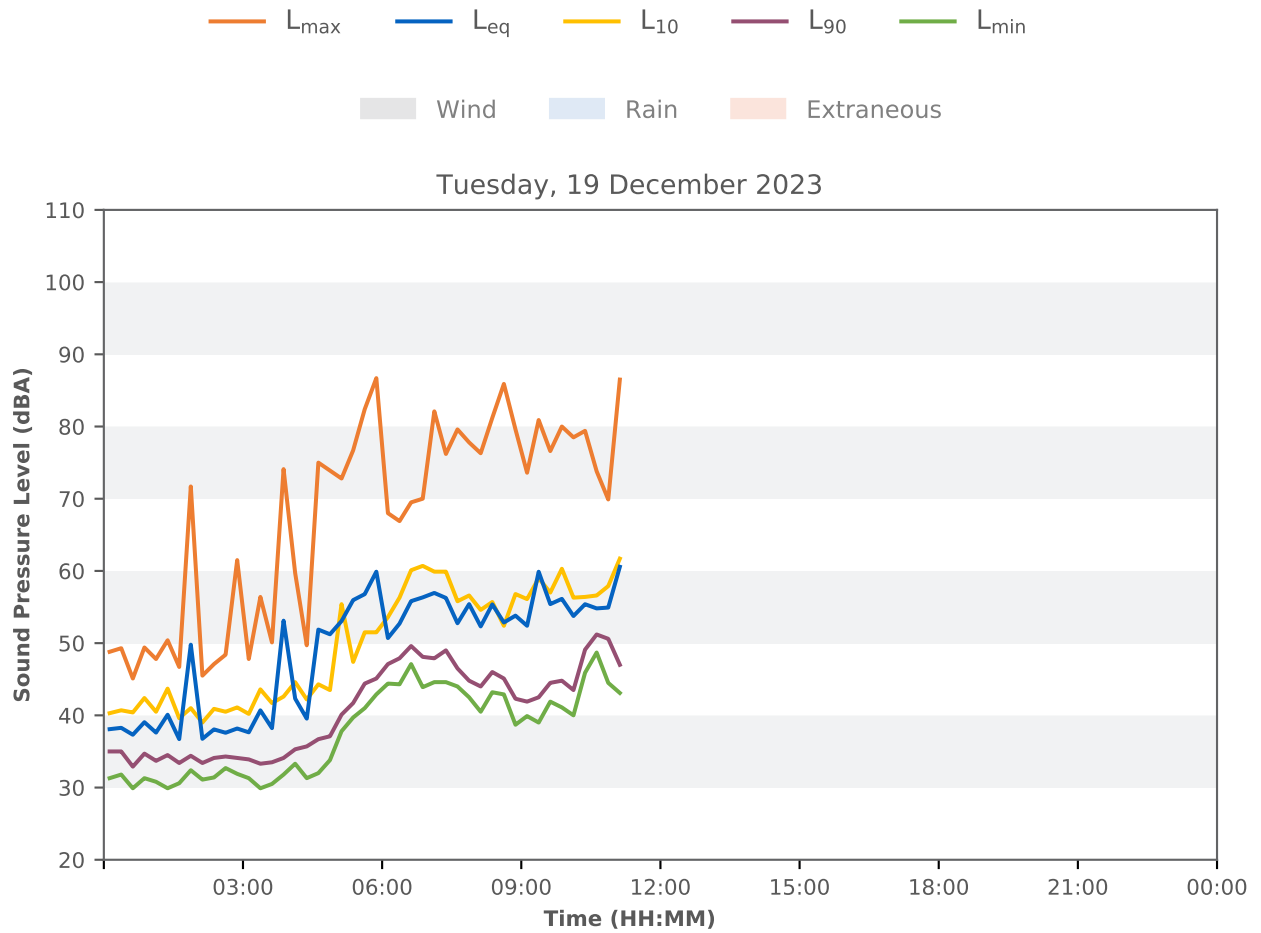
Sunday, 17 December 2023



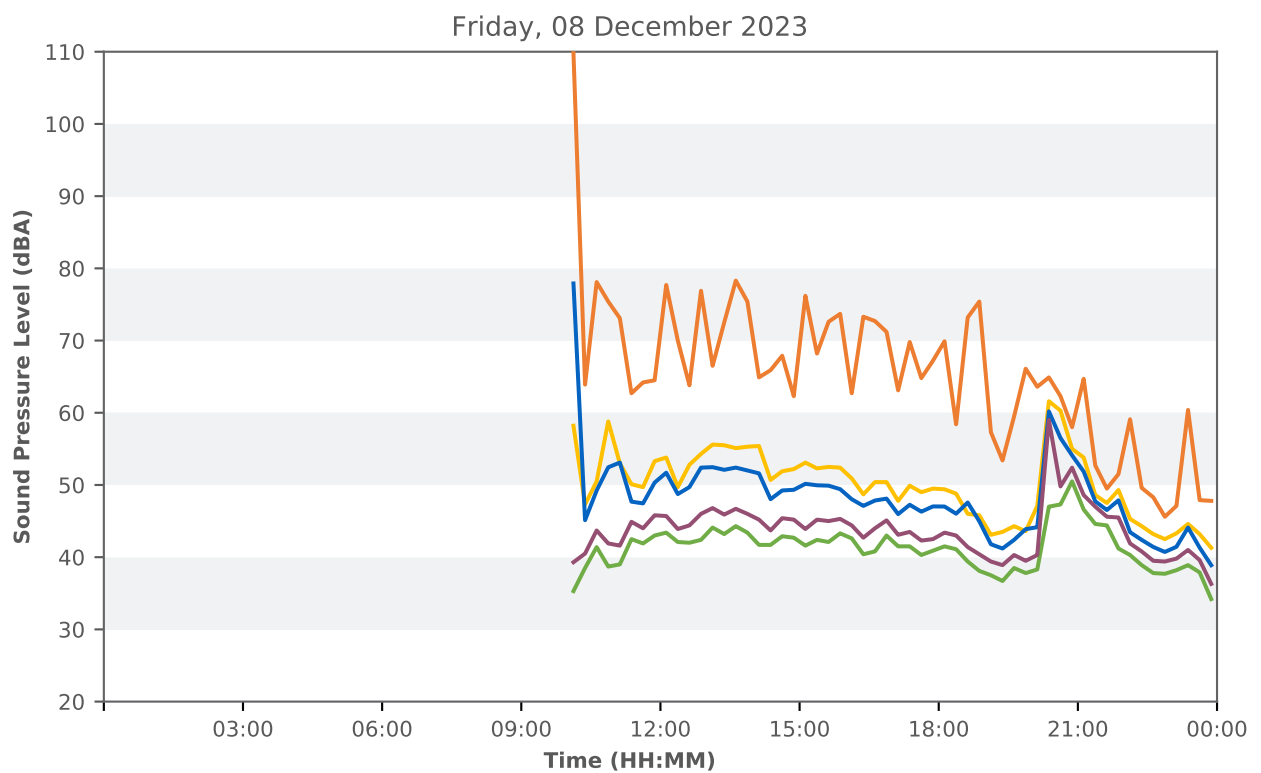
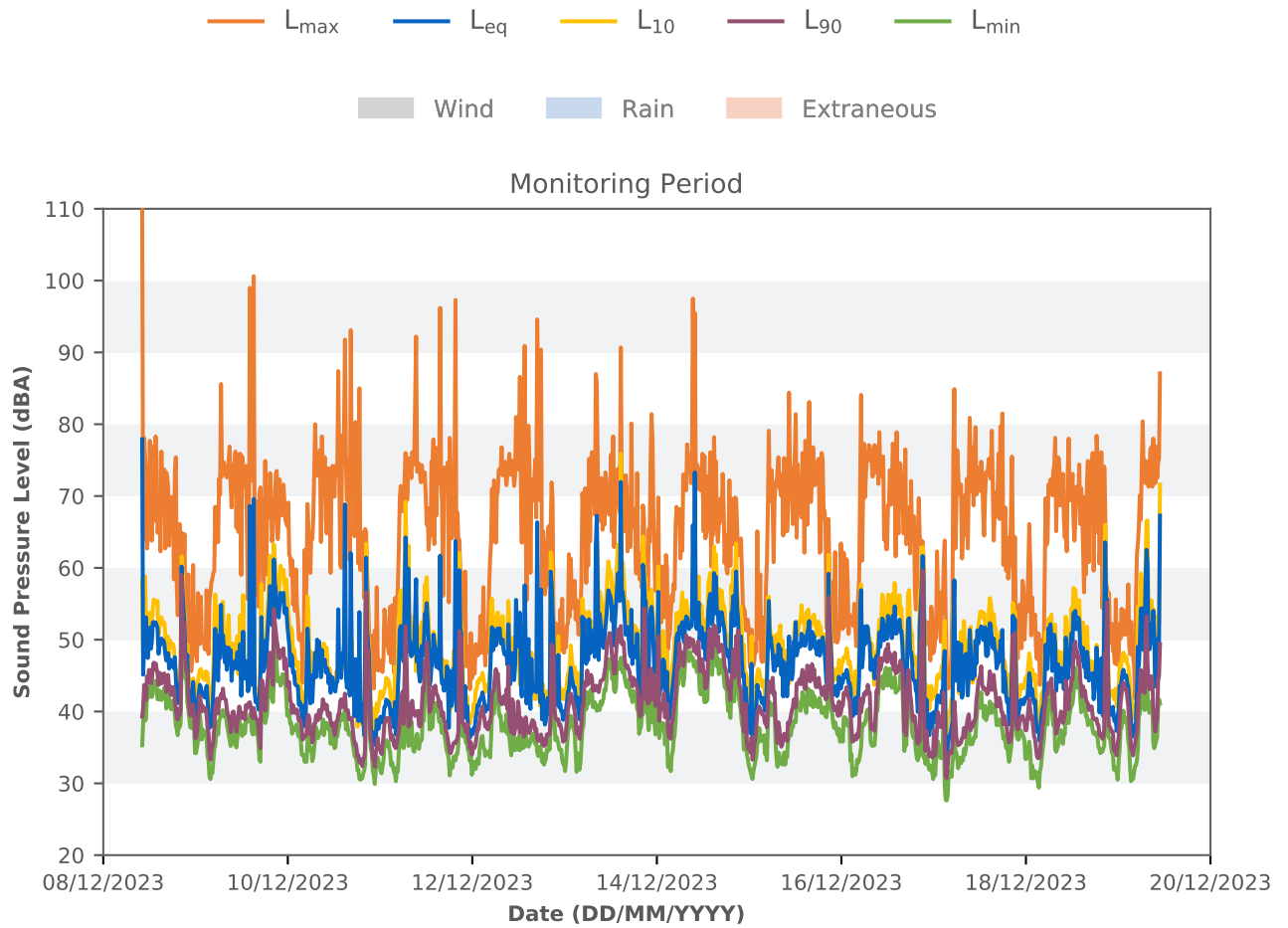
Monday, 18 December 2023



Location A - 33 Dunmore Road



Location B - 21 Buckleys Road

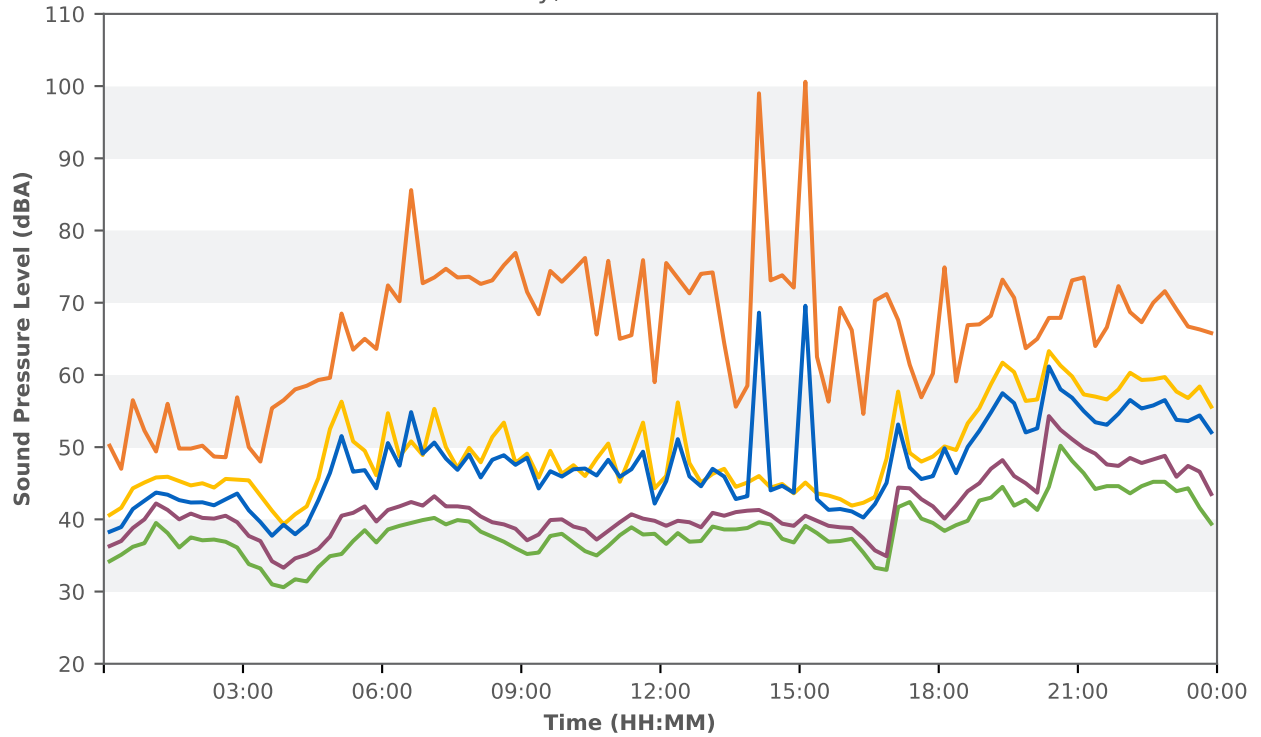


Location B - 21 Buckleys Road

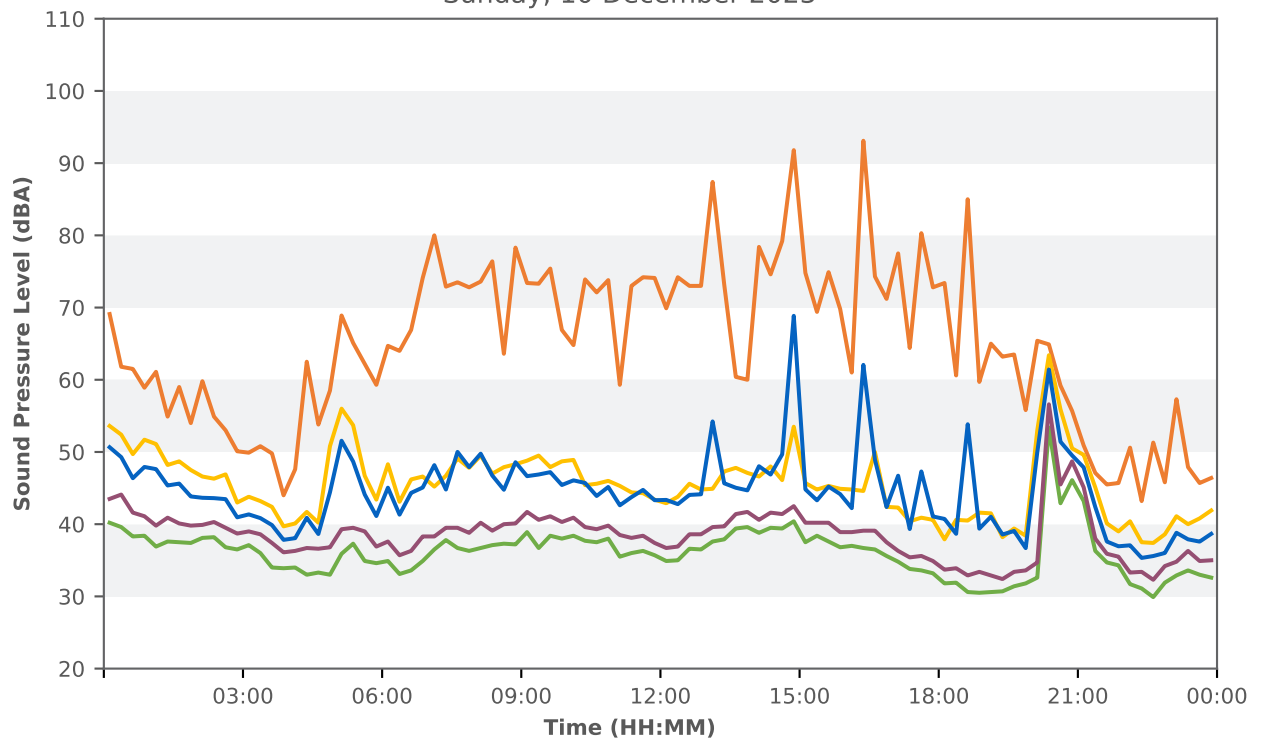
$L_{\max}$ L_{eq} L_{10} L_{90} $L_{\min}$

Wind Rain Extraneous

Saturday, 09 December 2023



Sunday, 10 December 2023

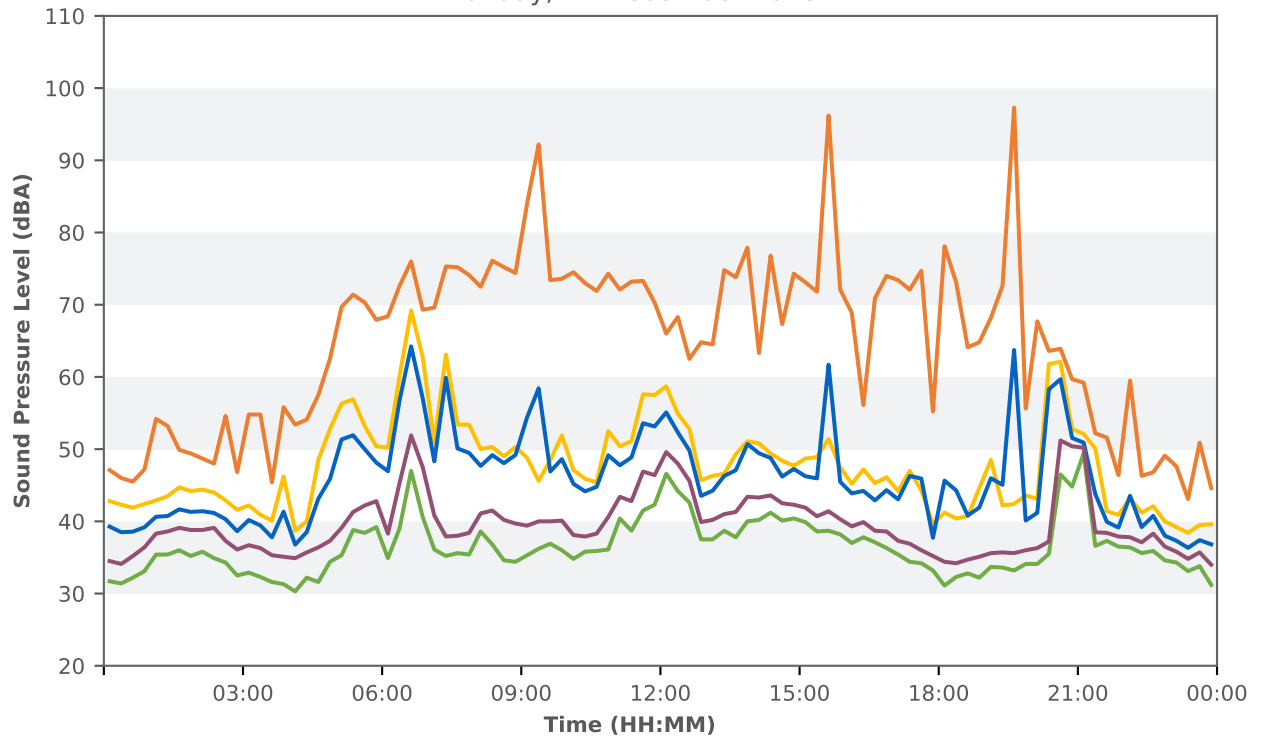


Location B - 21 Buckleys Road

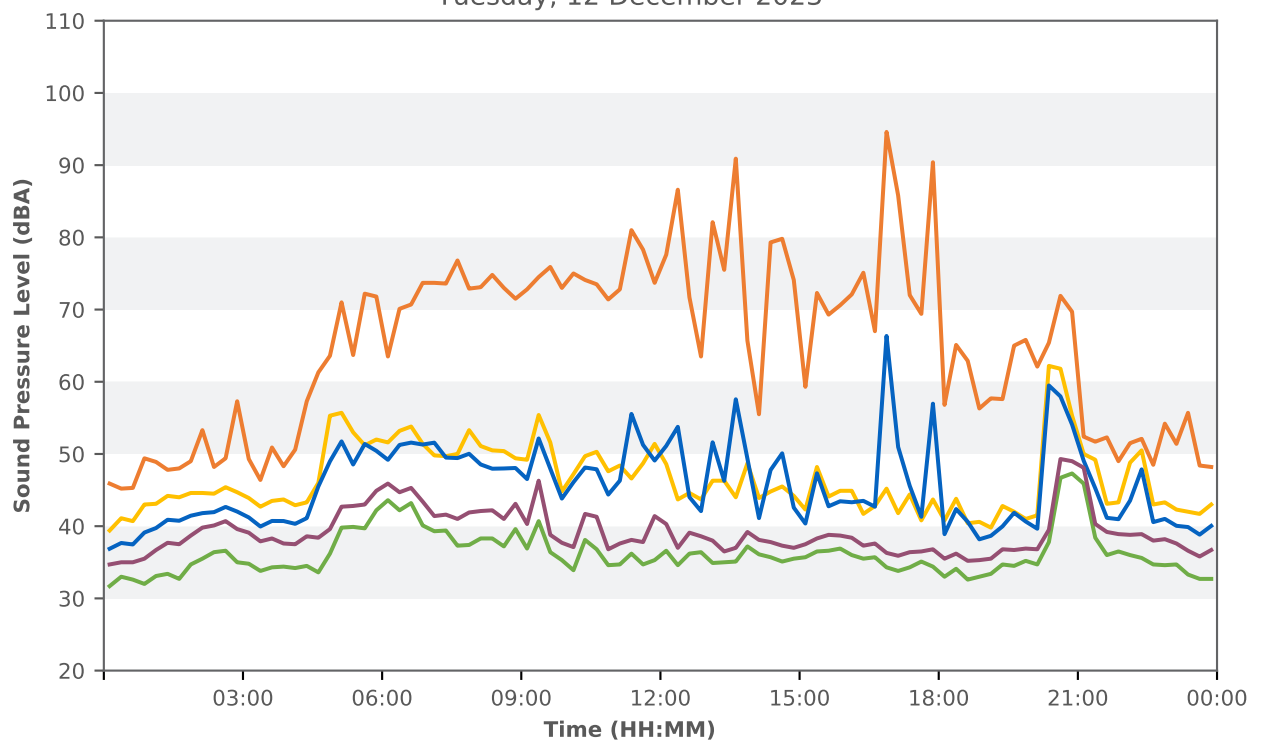
$L_{\max}$ L_{eq} L_{10} L_{90} $L_{\min}$

Wind Rain Extraneous

Monday, 11 December 2023



Tuesday, 12 December 2023

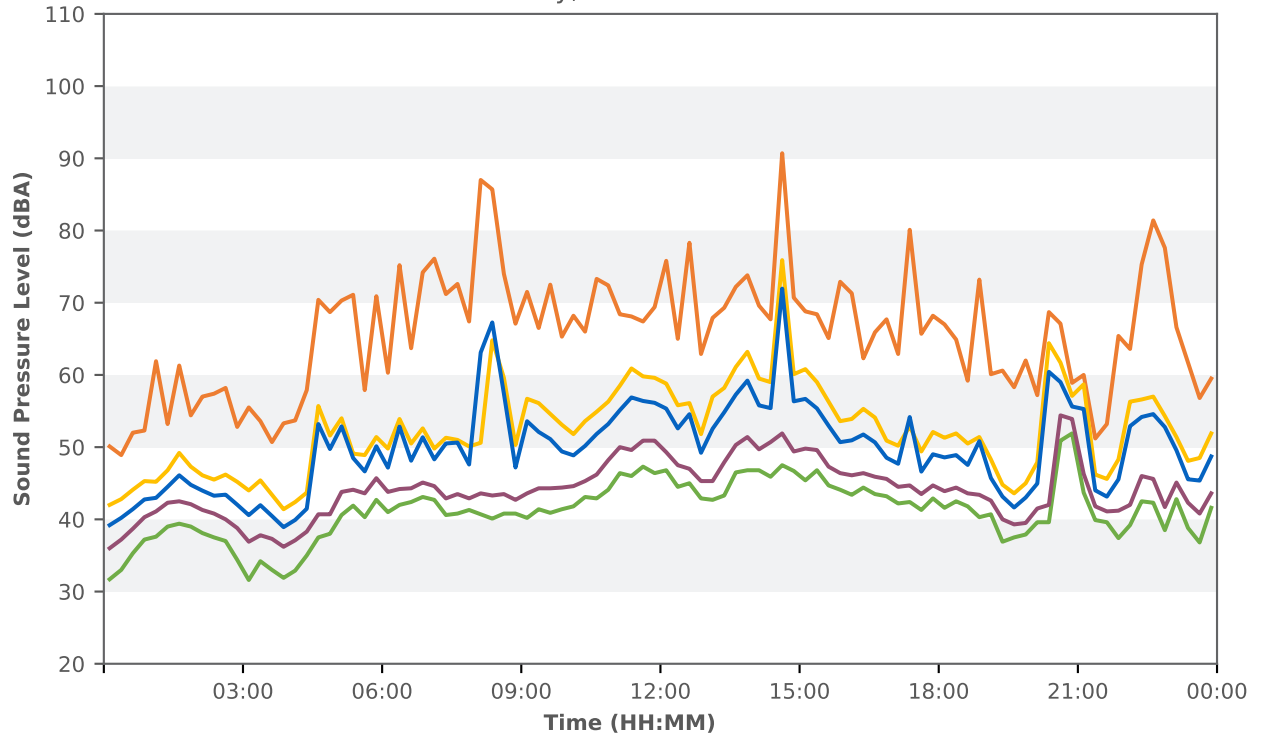


Location B - 21 Buckleys Road

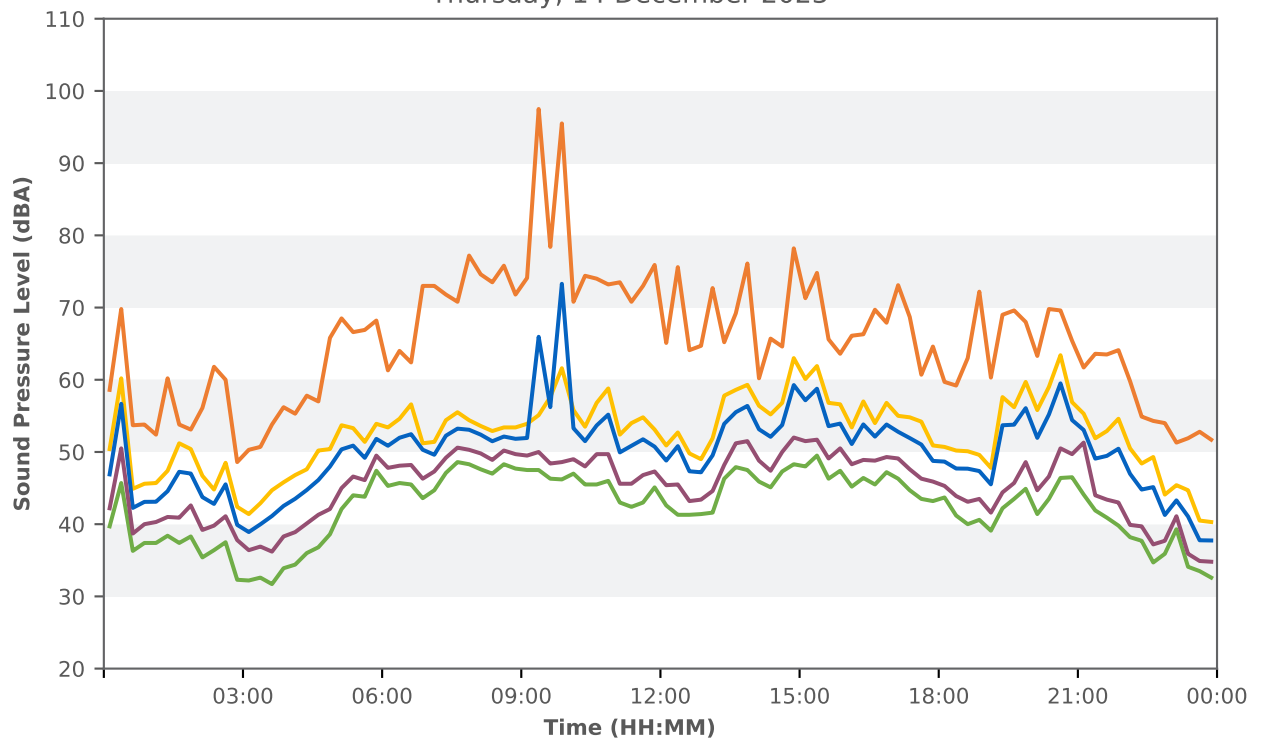
$L_{\max}$ L_{eq} L_{10} L_{90} $L_{\min}$

Wind Rain Extraneous

Wednesday, 13 December 2023



Thursday, 14 December 2023

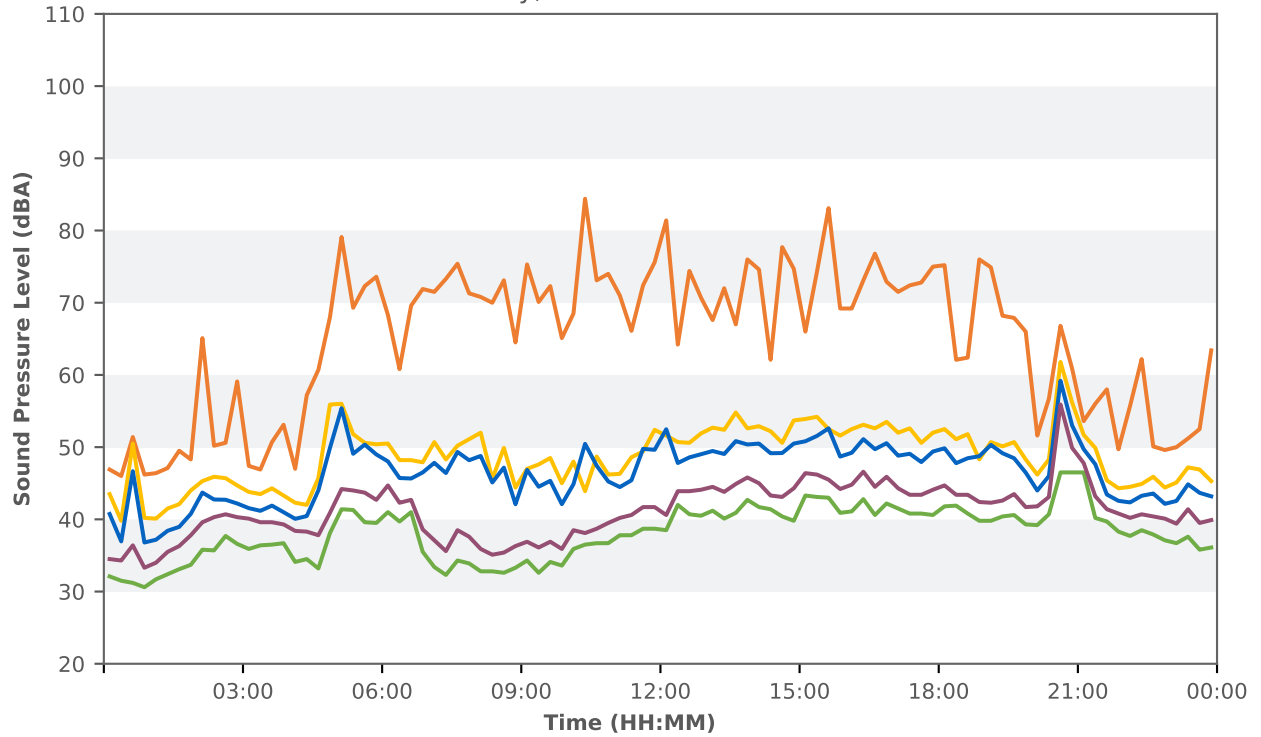


Location B - 21 Buckleys Road

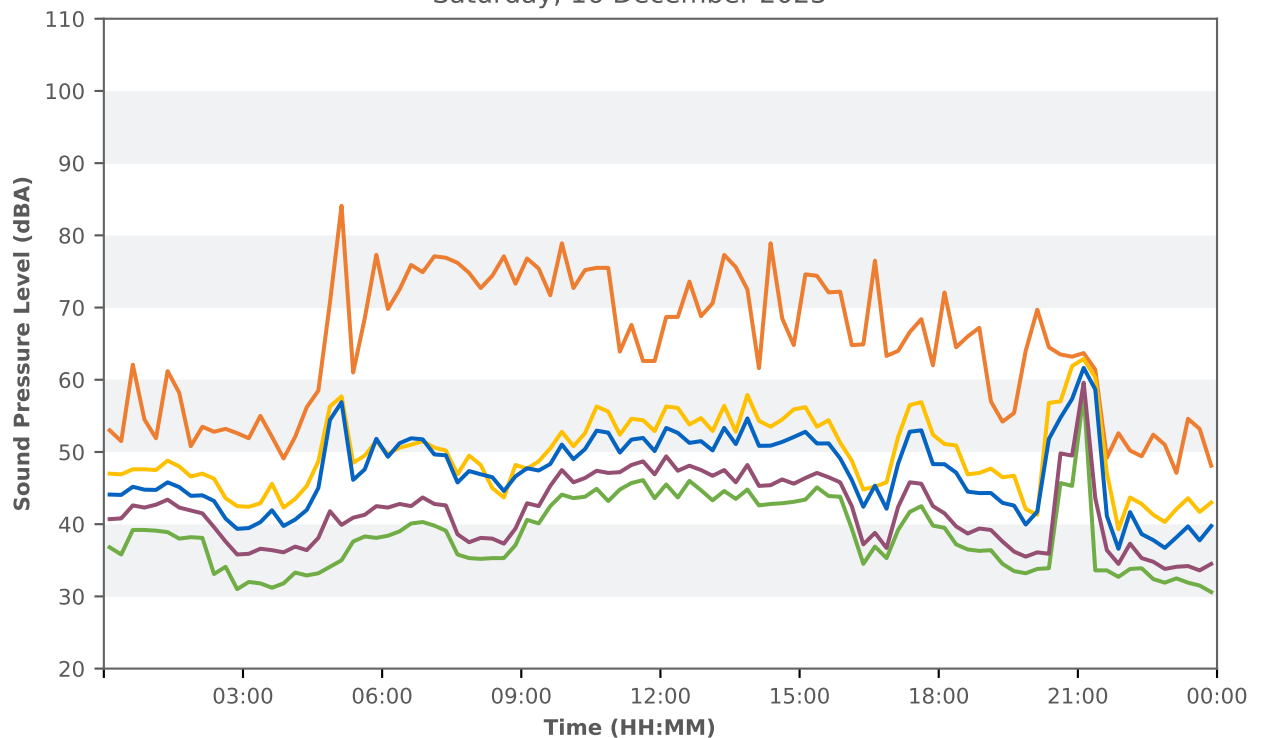
$L_{\max}$ L_{eq} L_{10} L_{90} $L_{\min}$

Wind Rain Extraneous

Friday, 15 December 2023



Saturday, 16 December 2023

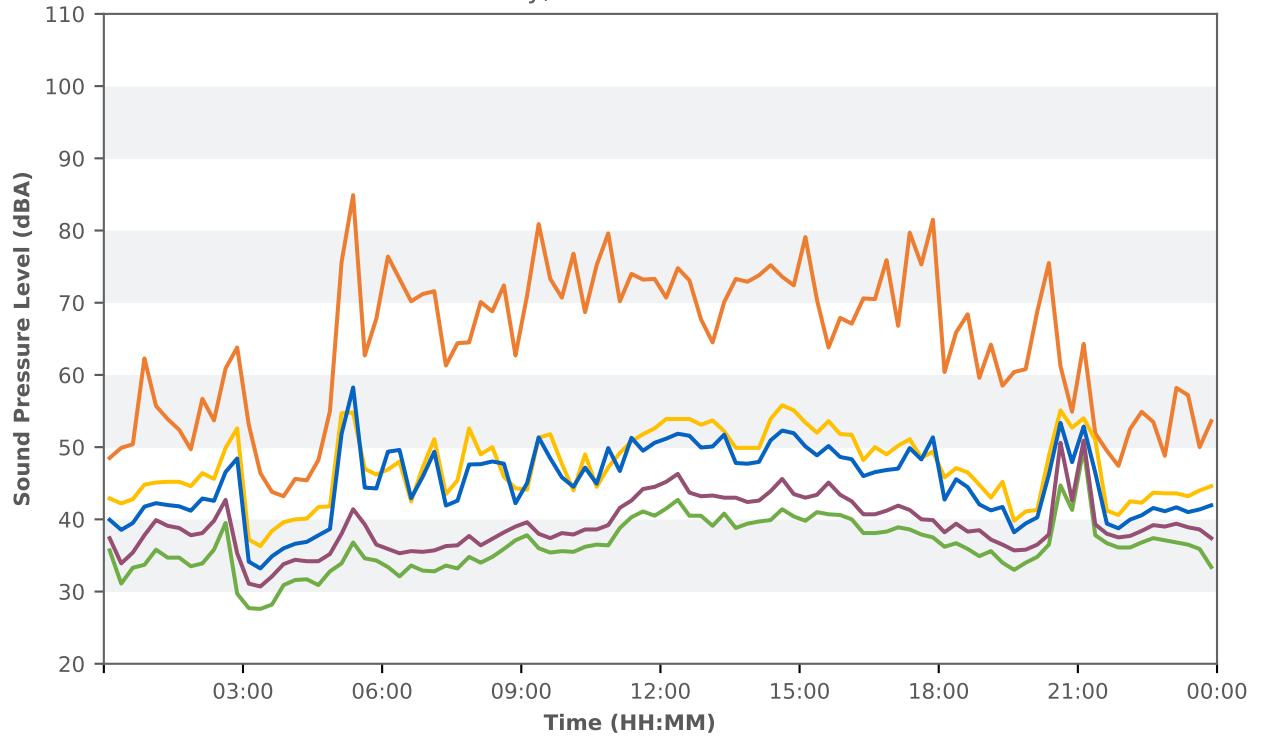


Location B - 21 Buckleys Road

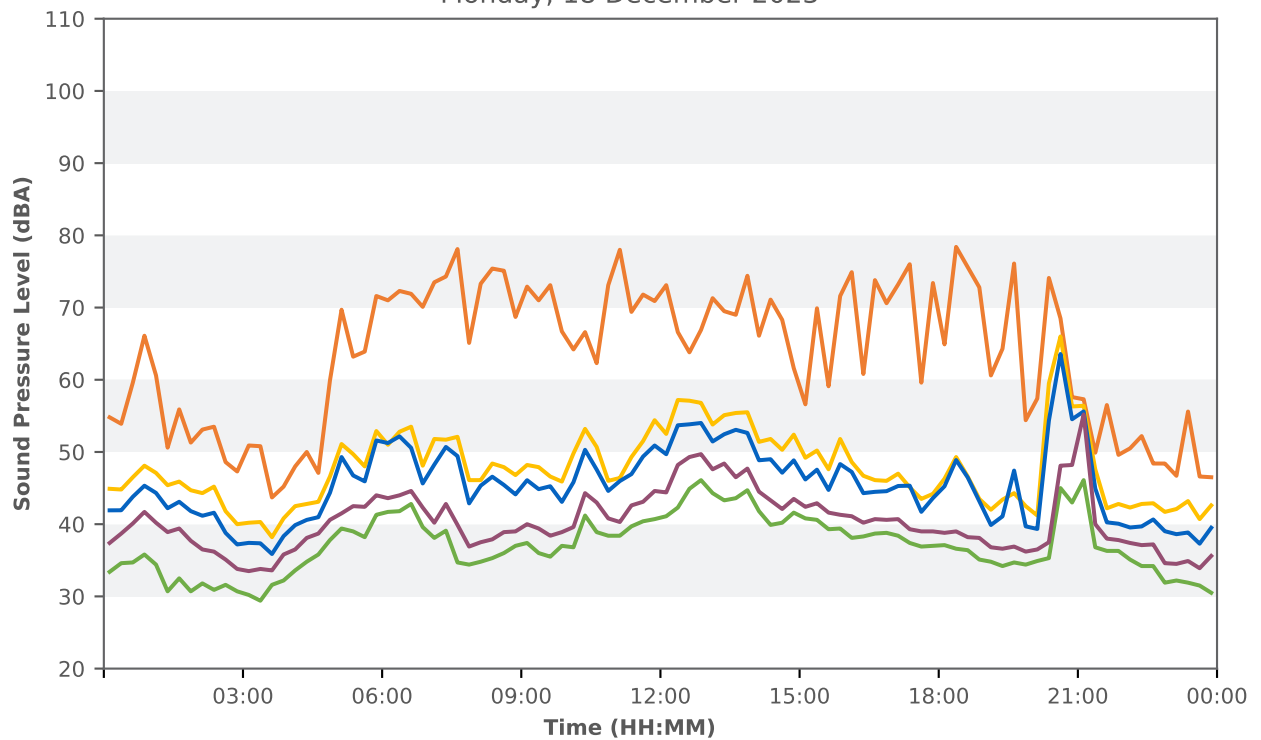
$L_{\max}$ L_{eq} L_{10} L_{90} $L_{\min}$

Wind Rain Extraneous

Sunday, 17 December 2023



Monday, 18 December 2023



Location B - 21 Buckleys Road

