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DELIVERING SOUND ADVICE

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ACOUSTICAL REPORT

PROPOSED PLACE OF WORSHIP

5 – 9 BENAROON ROAD, BELMORE NSW

Date: 6 May 2024

File Reference: 6198R20240506ak5-9BenaroonRoadBelmore_DA.docx

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Date	**Author**	**Review**	**Notes**
06/05/2024	AK	NK	Report available for issue
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ACOUSTICAL REPORT

PROPOSED PLACE OF WORSHIP

5 – 9 BENAROON ROAD, BELMORE NSW

CONTENTS

TABLE OF APPENDICES

1.0 INTRODUCTION

Koikas Acoustics Pty Ltd was commissioned by Maximus Developments Australia to conduct a noise impact assessment of the proposed development at 5 – 9 Benaroon Road, Belmore seeking approval for the proposed place of worship.

For this DA, the acoustical adequacy of the proposed design must be assessed in terms of standard planning guidelines issued by the Canterbury Bankstown Council in their Local Environment Plan (LEP), Development Control Plan (DCP), and other standard planning guidelines related to common sources of noise.

As per the Council guidelines and other standard planning instruments, Koikas Acoustics has determined the following acoustical components require an assessment at the current DA stage:

- Noise egress from the building and its occupation/services;
- Mechanical plant noise emission from the proposed development to neighbouring dwellings.

This report presents the results and findings of an acoustical assessment of the subject proposal.

In-principle acoustic treatments and noise control measures detailed within this report are deemed necessary for the development to comply with the nominated acoustical planning levels/project noise objectives.

2.0 THE PROPOSED DEVELOPMENT

The development is proposed to occupy the site at 5 – 9 Benaroon Road, Belmore.

This location is situated in an industrial area classified as IN2 'Light Industrial' as per relevant land zoning maps included in the Canterbury – Bankstown Local Environment Plan 2023.

Surrounding properties are predominantly industrial in classification, also located within IN2 'Light Industrial' zoning and suburban residential in classification, located within R3 'Medium Density Residential' zoning.

The subject site and surrounding properties are identified in the aerial photograph in Figure 1.

Figure 1. Aerial photo of the subject site and surrounding area – Image from SixMaps

Prevailing ambient noise conditions on-site and in the local area are generally the result of typical environmental noise such as distant traffic, localised domestic noise sources and industrial noises.

This acoustic report and any associated recommendations are based solely on the architectural design and drawings prepared by 3DA (their Project No. 2024 12, dated 2024). Any changes to the design may impact the findings of this report and associated noise control recommendations.

As per the architectural drawings, the proposed development will include:

- A place of worship with 70 seats,
- An altar stage,
- 4 speakers,
- A storage section, and
- Three bathrooms.

3.0 NOISE SURVEYS

3.1 UNATTENDED AMBIENT NOISE SURVEY

An unattended noise logging survey was conducted at the front of 119 Lakemba Street, Lakemba between the 8th of April and the 14th of April 2024. The measurement microphone was set at a height of 2 metres above the ground and was clear of any sound-reflective surfaces (excl. the ground) by at least 3.5 metres. This satisfies the requirements for a free-field measurement under AS1055-2018 and Fact Sheet B of the NSW EPA Noise Policy for Industry.

Figure 2. Noise logging location – Image from SixMaps

A Type 2 nsrt Noise Sentry noise logger was used for this noise survey. The instrument was set up to measure sound pressure levels as 'A' frequency weighting and 'Fast' time response. Noise levels were saved on the quarter-hour within the logger memory.

A NATA-calibrated and certified Larson Davis CAL200 precision acoustic calibrator was used to field calibrate the sound level meter before and after the noise survey. No system drift was observed for this sound level meter.

BOM weather records for the nearest available weather station indicate that inclement weather conditions may have impacted the noise survey. Noise data from affected periods throughout the survey were removed as per the recommendations of the NSW EPA Noise Policy for Industry. BOM weather records are attached in **Appendix A**.

A summary of the noise survey data is presented below.

Table 1. Summary of noise logger results [dB]

Location	Period, T [1]	Ambient noise level L_{Aeq}	Rating background level L_{A90}	Traffic noise level[2] $L_{Aeq, Period}$
50119 Lakemba Road, Lakemba	Day	63	53	63
	Evening	62	50	
	Night	56	40	56

Notes

1. The **NSW EPA Noise Policy for Industry (NPfI)** refers to:
   Daytime: 7 am – 6 pm Monday to Saturday and 8 am to 6 pm Sunday and public holidays.
   Evening: 6 pm – 10 pm Monday to Sunday
   Night: 10 pm - 7 am Monday to Saturday and 10 pm to 8 am Sunday and public holidays.
2. The **EPA/RMS/NSW DoP** refers to:
   Daytime: 7 am – 10 pm seven days per week.
   Night: 10 pm - 7 am seven days per week

Daily logger graphs are attached in **Appendix B**.

3.2 ATTENDED ENVIRONMENTAL NOISE MONITORING

Ambient and ambient background noise levels are generally taken to determine the noise profile of the subject area. Due to particular site constraints and safety concerns, Koikas Acoustics was unable to locate a noise logger on-site. As such, attended noise surveys were conducted for representative periods related to the subject development.

Noise level measurements were taken with a NATA-calibrated Type 1 NTi XL2 sound level meter. The instrument was set up to measure sound pressure levels as 'A' frequency weighting and 'Fast' time response.

Sound level measurements were taken for durations deemed sufficient to represent the underlying ambient and background noise environment without the influence of extraneous noise or noise from the subject's development.

Noise surveys were conducted in areas surrounding the proposed development such that the ambient noise levels could be quantified (See Figure 3):

- 10 Benaroon Road, Lakemba – Site Location 1

The sound level meter microphone was placed 1.5 metres above the natural ground in 'free-field' conditions, ie. ≥ 3.5 metres from any reflective façade.

Figure 3. Noise survey – Monitoring Site Locations – Image from SixMaps

A summary of the noise survey results is provided in Table 3. Detailed 1/1 octave band ambient and background noise level data is presented in Table 2.

Table 2. Summary of measured environmental noise levels [dB]

Location	Date	Measurement period	EPA assessment period	L_{A90}	L_{Aeq}
10 Benaroon Road, Belmore	08.04.2024	12:35 pm – 12:50 pm	Daytime	47	62

From the above, the minimum reported environmental noise level at the survey location at 10 Benaroon Road, Belmore is identified below. Minimum L_{A90} background levels as shown below are adopted as the rating background level (RBL) for the assessment as per the assessment procedures of the EPA Noise Policy for Industry 2017 (NPfI):

Table 3. Rating background noise levels [dB]

Location / Address	EPA assessment period	L_{A90}
10 Benaroon Road, Belmore	Daytime	47

4.0 NOISE ASSESSMENT GUIDELINES

4.1 EPA NOISE POLICY FOR INDUSTRY

Noise emission design targets have been referenced from the *NSW Environmental Protection Authority (EPA) Noise Policy for Industry (NPfI)*.

The NPfI is designed to assess environmental noise impacts associated with scheduled activities prescribed within the Protection of the *Environment Operations Act 1997*, Schedule 1. It is also used as a reference tool for establishing suitable planning levels for noise generated by mechanical plant and equipment and noise emission from commercial operations.

For residential receivers, the guideline applies limits on the short-term intrusive nature of a noise or noise-generating development (project intrusive noise level), as well as applying an upper limit on cumulative industrial noise emissions from all surrounding development/industry (project amenity noise level).

The most stringent of the project intrusive noise level and project amenity noise level is applied as the **project noise trigger level (PNTL)**. To determine which of the intrusive and amenity noise criteria is more stringent, the underlying noise metrics must be the same.

As the intrusive noise level is defined in terms of an $L_{Aeq,\ 15\ minutes}$ and the amenity noise level is defined in terms of an $L_{Aeq,\ Period}$, a +3 dB correction is applied to the project amenity noise level to equate the $L_{Aeq,\ Period}$ to $L_{Aeq,\ 15\ minutes}$.

Non-residential receivers are assessed to project amenity noise levels relevant to the applicable receiver category (industrial).

Where noise is measured or predicted below the project noise trigger level, the noise outcome is deemed acceptable. Above the project noise trigger level, management responses such as applying reasonable and feasible noise mitigation measures are to be recommended, along with assessing any residual noise impacts once noise mitigation has been considered.

The policy is designed in such a way that the assessing authority would consider the project noise trigger levels, reasonable and feasible mitigation measures, and any residual noise impacts when

deciding on acceptable noise outcomes.

The site-specific project noise trigger levels need only be considered for the hours under which the noise or activity occurs.

Table 4. NPfI planning levels – $L_{Aeq,\ 15\ minutes}$ [dB]

Period,T (Note 1)	Intrusive		Amenity					Project noise trigger level
	RBL	RBL + 5	Area classification	Recommended amenity noise level	High traffic area	[2]Project amenity noise level	+3dB correction	
Day	53	58	Suburban	55	No	50	53	53
	53	58	Industrial	70	No	65	68	58
	53	58	Commercial	65	No	60	63	58
Evening	50	55	Suburban	45	No	40	43	43
Night	40	45	Suburban	40	No	35	38	38

Notes:

1. **EPA** defines the following periods:
   Day: 7 am to 6 pm Mon to Sat and 8 am to 6 pm Sun and public holidays,
   Evening: 6 pm to 10 pm Mon to Sun,
   Night: 10 pm to 7 am Mon to Sat and 10 pm to 8 am Sun and public holidays.
2. Project noise amenity level = recommended noise amenity level – 5 dB, except where specific circumstances are met, such as high traffic.

5.0 NOISE MODEL

5.1 CADNA-A

Noise breakout from the proposed place of worship when being used for prayer and bible studies is assessed with the assistance of predictive modelling conducted using CadnaA.

The program predicts noise levels to receiver points and provides a graphical representation of noise level contours for a defined area of interest. The input parameters to this model include the source sound power levels, ground contours, ground absorption/reflections, and the presence of any acoustic shielding objects.

Noise propagation calculations are determined under *ISO 9613 Acoustics – Attenuation of sound during propagation outdoors*. The sound propagation algorithms adopted in the ISO standard result in the calculation of a downwind sound pressure level which constitutes an assessment of noise-enhancing weather conditions.

Appendix C includes CadnaA noise calculations.

6.0 OPERATIONAL NOISE ASSESSMENT

6.1 DESIGN PARAMETERS

The assessment adopts the following design parameters and assumptions:

1. Prayer and bible studies occur during the following times:
   - Monday to Friday: 7 PM – 8:30 PM
   - Saturday: 5 PM – 6:30 PM
   - Sunday" 10 AM – 11:30 AM
2. 70 people within the place of worship during the busiest of the proposed periods of operation.
3. one speaker talking into a microphone connected to a sound system powering four speakers.
4. A design reverberation time of 0.6 seconds within the auditorium.

6.2 SOURCE NOISE LEVELS

Prayer and bible study groups/classes are low-noise activities. The internal reverberant room noise level is calculated on the basis that there is a maximum occupancy of 70 people and one speaker is talking into a microphone connected to a sound system powering four speakers.

Source noise levels measured at a previous site with similar room characteristics and a similar number of patrons were considered for this assessment.

Table 3. Source noise levels ($L_{Aeq\ 15\text{-}minutes}$, dB)

Source	1/1 octave band centre frequency [Hz]								Total
	63	125	250	500	1000	2000	4000	8000	
Reverberant room level in the prayer/study room	35	40	55	69	71	67	61	50	74

Notes:
1. SWL = Sound Power Level / SPL = Sound Pressure Level

6.3 CALCULATED RECEIVER NOISE LEVELS

Noise breakout from the room and the resulting levels at each surrounding residential receiver have been modelled in CadnaA. **Table 4** presents the resulting noise levels at each receiver. **Figure 3** identifies each assessment location for all neighbouring receivers.

Table 4. Predicted receiver levels ($L_{Aeq\ 15\text{-}minutes}$, dB) – Day Time			
Receiver location	**Noise objective**	**Predicted noise level**	
		Windows open	**Windows closed**
R1: 10 Benaroon Road	53	43	34
R2: 3 Benaroon Road	53	51	43
C1: 115 Lakemba Street	58	46	38
I1: 5-9 Benaroon Road	58	53	44
Notes: 1. To accord with the EPA NPfI, Receiver levels are assessed at the most noise-affected point on or within the residential property boundary. Where that location is further than 30 m away from the residence, then it is taken as the most noise-affected point within 30 m of the residence.			

Table 5. Predicted receiver levels ($L_{Aeq\ 15\text{-}minutes}$, dB) – EveningTime			
Receiver location	**Noise objective**	**Predicted noise level**	
		Windows open	**Windows closed**
R1: 10 Benaroon Road	43	43	34
R2: 3 Benaroon Road	43	51	43
C1: 115 Lakemba Street	58	46	38
I1: 5-9 Benaroon Road	58	53	44
Notes: 1. To accord with the EPA NPfI, Receiver levels are assessed at the most noise-affected point on or within the residential property boundary. Where that location is further than 30 m away from the residence, then it is taken as the most noise-affected point within 30 m of the residence.			

What can be established from analysing the data within **Tables 4 and 5** is that the predicted operational noise levels meet the required noise emission objectives under the NPfI with windows open and closed during daytime hours, however, it can only meet the criteria when the windows are closed during the evening.

6.4 RECOMMENDATIONS

Outside of complying with the room occupancy limits during prayer and bible study classes, no other specific noise controls are required for the proposed use to comply with the project noise criteria during the daytime when windows are open and closed, and during the evening when the windows are closed. During the evening, the garage door must also be kept closed to comply with the defined objectives.

7.0 CONCLUSION

Koikas Acoustics was requested to conduct an acoustical assessment and prepare a report for the proposed place of worship located at 5 – 9 Benaroon Road, Belmore. The acoustical report is to accompany a development application to be submitted to Canterbury Bankstown Council.

The assessment considers potential noise impacts on surrounding residents of the development, such that acceptable acoustic amenity is maintained.

Acoustic planning levels have been referenced from current EPA acoustic planning guidelines and requirements.

The included recommendations are based on designs prepared by 3DA.

The conclusions reached in this acoustical report should assist the Council in making their determination of the proposal. A further detailed acoustical report may be required for the CC submission should the building design be amended, or as required by Council.

Of the assessed components of noise, the following conclusions have been reached:

- The proposed place of worship can operate during the scheduled hours whilst maintaining the acoustic amenity for neighbouring residents.

In our professional opinion, there is sufficient scope within the proposed building design to achieve the applied acoustic planning guidelines.

APPENDIX A

APPENDIX A

APPENDIX A

Daily Rainfall (millimetres)

CANTERBURY RACECOURSE AWS

Station Number: 066194 · State: NSW · Opened: 1995 · Status: Open · Latitude: 33.91°S · Longitude: 151.11°E · Elevation: 3 m

2024	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1st	6.0	0	0	0	9.0							
2nd	0.2	0	0	0	8.8							
3rd	0	0	1.0	1.4	8.4							
4th	0	0	0.2	0	8.0							
5th	1.2	0	0	61.8	4.6							
6th	0	23.6	0	160.6	34.6							
7th	0	0	0	0.2								
8th	0	0	0	0								
9th	7.4	0	0	0								
10th	0	3.2	0	19.4								
11th	0	1.4		0								
12th	3.4	0	0.2	0								
13th	0.2	0		0								
14th	0.4	1.0	0	0								
15th	27.2	7.2	4.2	0								
16th	0.8	47.4	1.0	0								
17th	0.6	0.2	35.6	0								
18th	24.2	0	1.2	0								
19th	0	0.2	6.2	6.4								
20th		28.0	0.2	0.8								
21st	0	38.0	0.6	2.6								
22nd	0	0	0	0.2								
23rd	2.4	0	0.2	0								
24th	0.2	6.4	0.2	0								
25th	0	0	0.2	0								
26th	0	0	0	0								
27th	0.6	0	0	0								
28th	0.4	0.2	0	0								
29th	0.2	0	0	0								
30th	0.4		0	0								
31st	0		0									
Highest daily	27.2	47.4	35.6	160.6	34.6							
Monthly Total	75.8	156.8		253.4								

↓ This day is part of an accumulated total
Quality control: 12.3 Done & acceptable, 12.3 Not completed or unknown

Product code: IDCJAC0009 reference: 106912540

Australian Government
Bureau of Meteorology

Daily Rainfall (millimetres)

CANTERBURY RACECOURSE AWS

Station Number: 066194 · State: NSW · Opened: 1995 · Status: Open · Latitude: 33.91°S · Longitude: 151.11°E · Elevation: 3 m

Statistics for this station calculated over all years of data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean	82.2	128.3	115.1	104.6	75.2	98.6	65.9	61.8	49.6	65.7	74.8	65.0
Median	64.6	115.3	72.8	74.4	45.8	75.9	49.4	41.8	46.8	37.0	56.6	66.4
Highest daily	*128.0*	*189.2*	*125.2*	*160.6*	*84.8*	*110.0*	*111.4*	*121.0*	*70.2*	*121.2*	*64.6*	*67.0*
Date of highest daily	31st 2001	10th 2020	8th 2022	6th 2024	14th 2003	5th 2016	3rd 2022	31st 1996	7th 2006	15th 2014	5th 2010	11th 2002

1) Calculation of statistics

Summary statistics, other than the Highest and Lowest values, are only calculated if there are at least 20 years of data available.

2) Gaps and missing data

Gaps may be caused by a damaged instrument, a temporary change to the site operation, or due to the absence or illness of an observer.

3) Further information

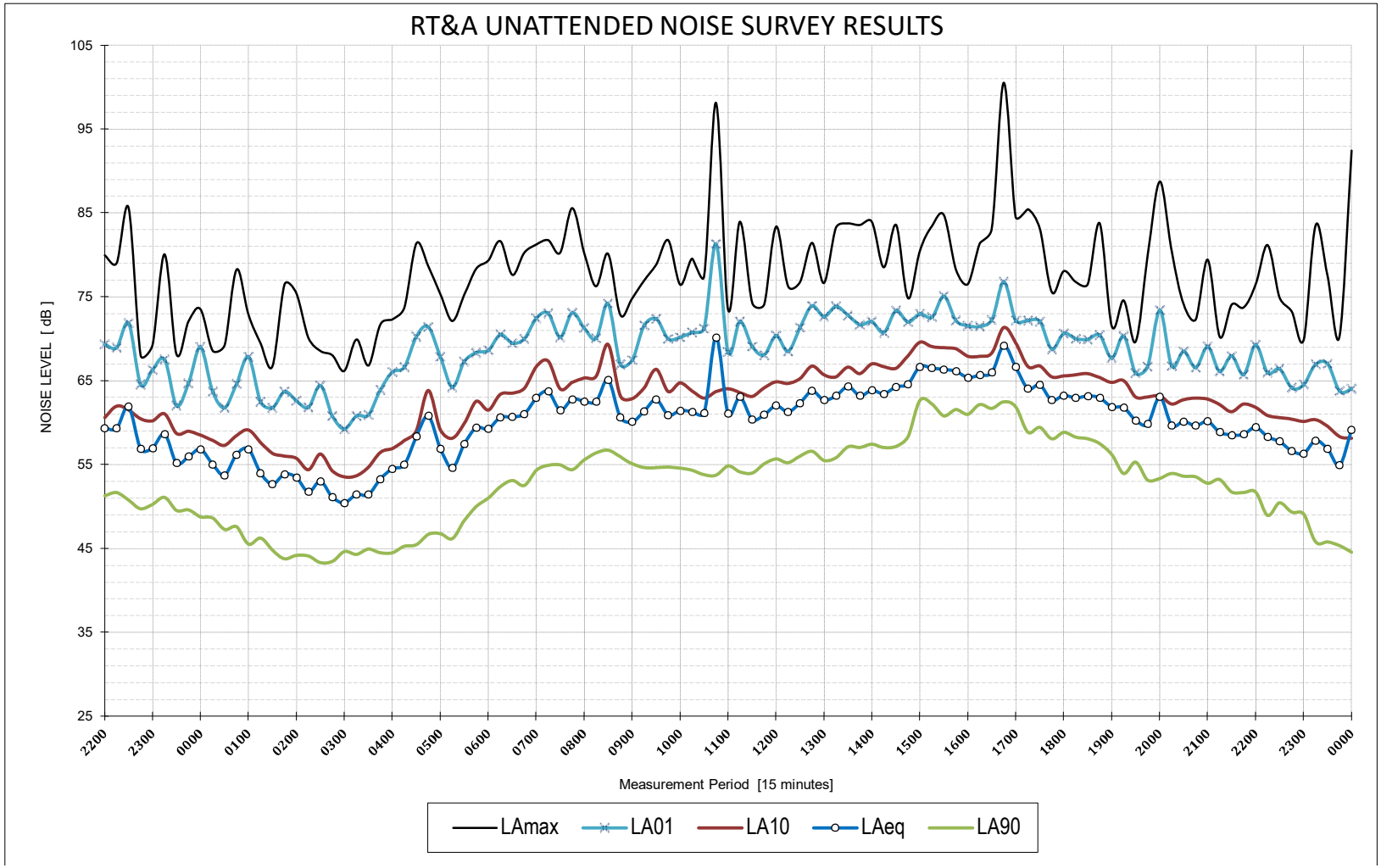
http://www.bom.gov.au/climate/cdo/about/about-rain-data.shtml.

APPENDIX B

APPENDIX B

APPENDIX B

DAY 1 **LOGGER LOCATION:** 119 Lakemba Street, Lakemba **DATE:** Monday, 8 April 2024



AMBIENT BACKGROUND NOISE METRICS

Descriptor	Period	Level	Units
LA90 Daytime	0700-1800	54	dB
LA90 Evening	1800-2200	52	dB
LA90 Night-time	2200-0700	44	dB

AMBIENT NOISE METRICS

LAeq Daytime	0700-1800	64	dB
LAeq Evening	1800-2200	61	dB
LAeq Night-time	2200-0700	57	dB

TRAFFIC & MISC. NOISE METRICS

LAeq 15 hours	0700-2200	64	dB
LAeq 9 hours	2200-0700	57	dB
Max LAeq 1 hour	0700-2200	66	dB
Max LAeq 1 hour	2200-0700	59	dB

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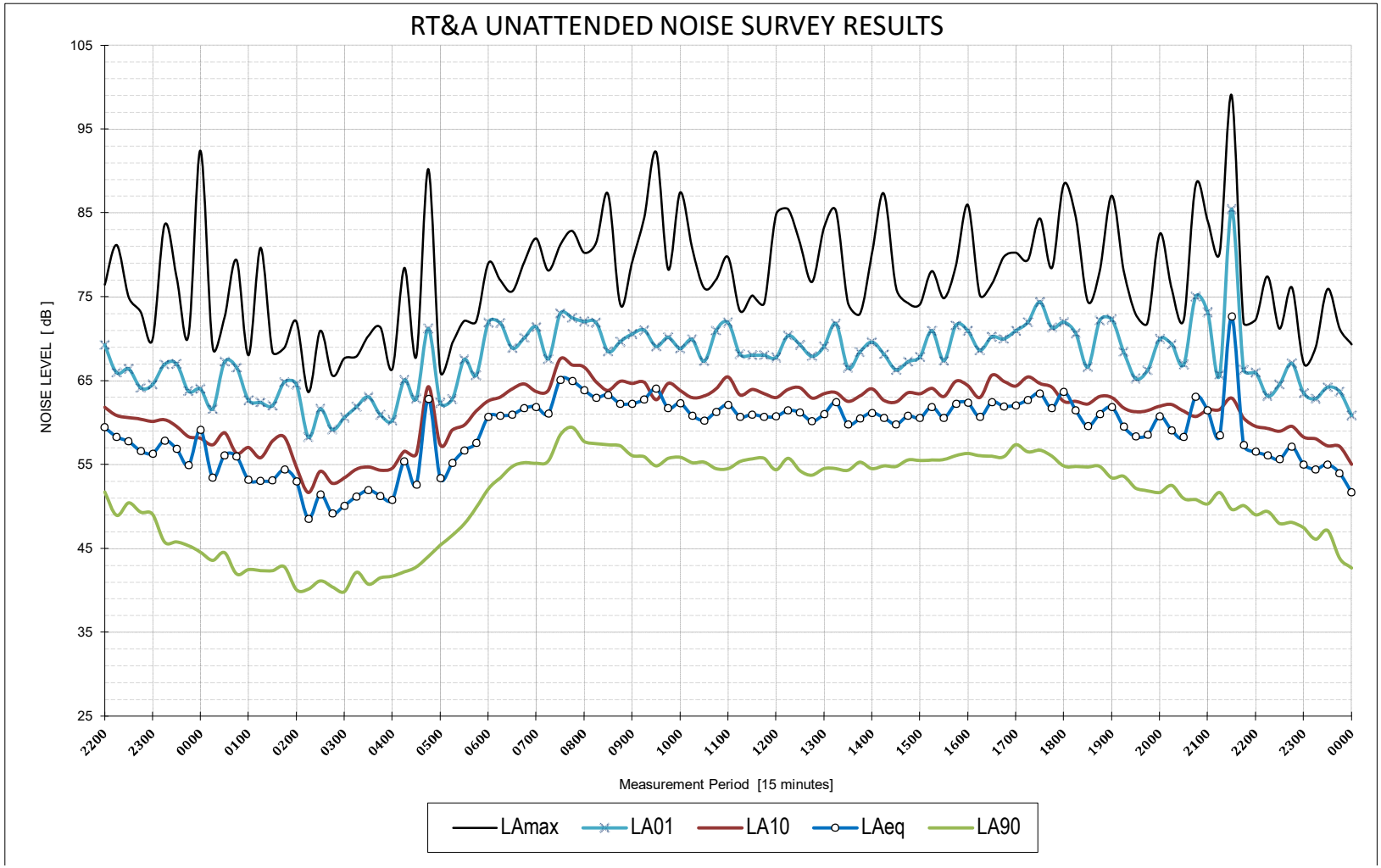
DAY 2 **LOGGER LOCATION:** 119 Lakemba Street, Lakemba **DATE:** Tuesday, 9 April 2024



AMBIENT BACKGROUND NOISE METRICS

Descriptor	Period	Level	Units
LA90 Daytime	0700-1800	55	dB
LA90 Evening	1800-2200	50	dB
LA90 Night-time	2200-0700	41	dB

AMBIENT NOISE METRICS

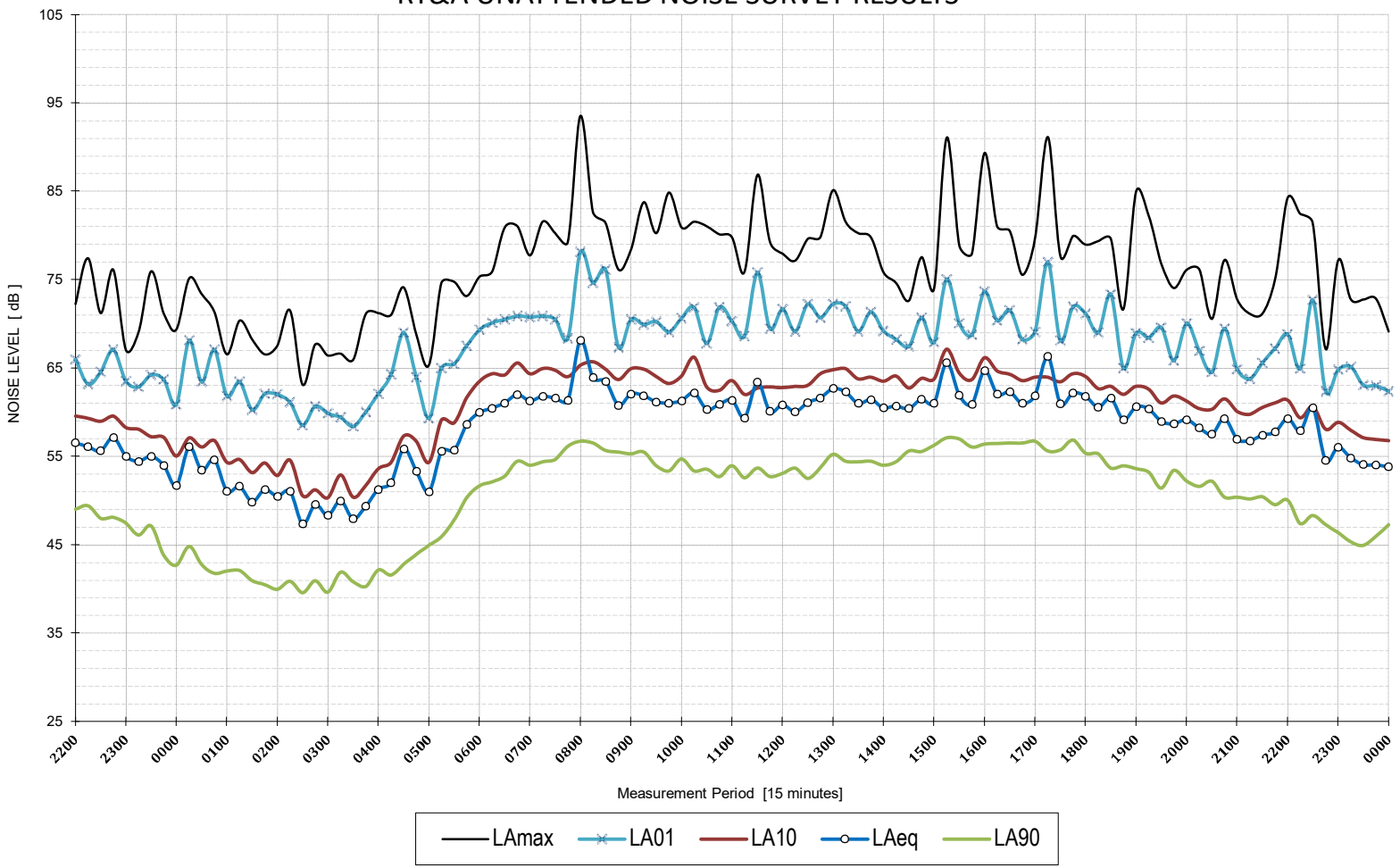
LAeq Daytime	0700-1800	62	dB
LAeq Evening	1800-2200	63	dB
LAeq Night-time	2200-0700	57	dB

TRAFFIC & MISC. NOISE METRICS

LAeq 15 hours	0700-2200	62	dB
LAeq 9 hours	2200-0700	57	dB
Max LAeq 1 hour	0700-2200	63	dB
Max LAeq 1 hour	2200-0700	59	dB

DAY 3 **LOGGER LOCATION:** 119 Lakemba Street, Lakemba **DATE:** Wednesday, 10 April 2024

RT&A UNATTENDED NOISE SURVEY RESULTS



AMBIENT BACKGROUND NOISE METRICS

Descriptor	Period	Level	Units
LA90 Daytime	0700-1800	53	dB
LA90 Evening	1800-2200	50	dB
LA90 Night-time	2200-0700	40	dB

AMBIENT NOISE METRICS

LAeq Daytime	0700-1800	62	dB
LAeq Evening	1800-2200	59	dB
LAeq Night-time	2200-0700	55	dB

TRAFFIC & MISC. NOISE METRICS

LAeq 15 hours	0700-2200	62	dB
LAeq 9 hours	2200-0700	55	dB
Max LAeq 1 hour	0700-2200	63	dB
Max LAeq 1 hour	2200-0700	58	dB

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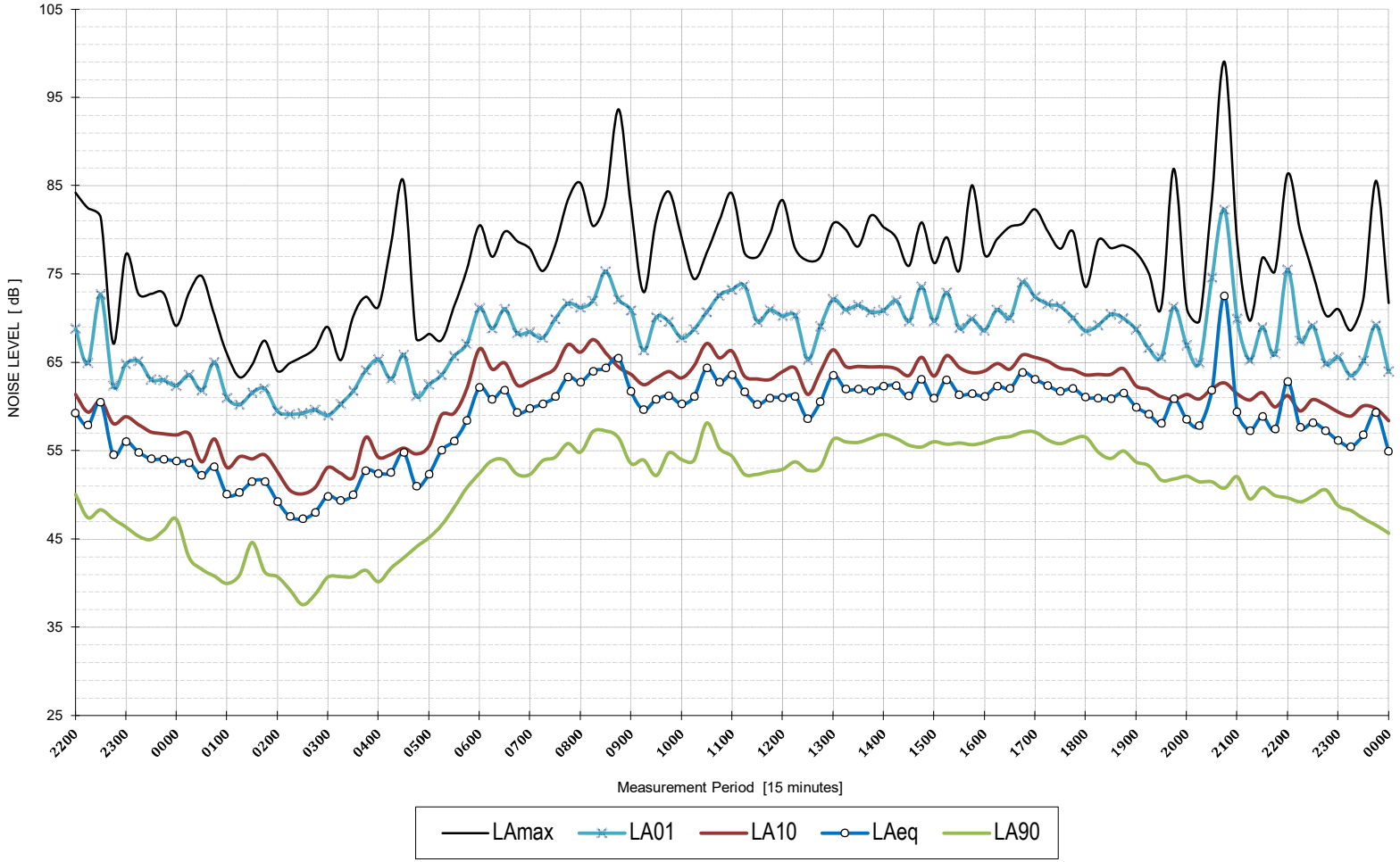
DAY 4 **LOGGER LOCATION:** 119 Lakemba Street, Lakemba **DATE:** Thursday, 11 April 2024

RT&A UNATTENDED NOISE SURVEY RESULTS



AMBIENT BACKGROUND NOISE METRICS

Descriptor	Period	Level	Units
LA90 Daytime	0700-1800	53	dB
LA90 Evening	1800-2200	50	dB
LA90 Night-time	2200-0700	40	dB

AMBIENT NOISE METRICS

LAeq Daytime	0700-1800	62	dB
LAeq Evening	1800-2200	63	dB
LAeq Night-time	2200-0700	56	dB

TRAFFIC & MISC. NOISE METRICS

LAeq 15 hours	0700-2200	62	dB
LAeq 9 hours	2200-0700	56	dB
Max LAeq 1 hour	0700-2200	64	dB
Max LAeq 1 hour	2200-0700	59	dB

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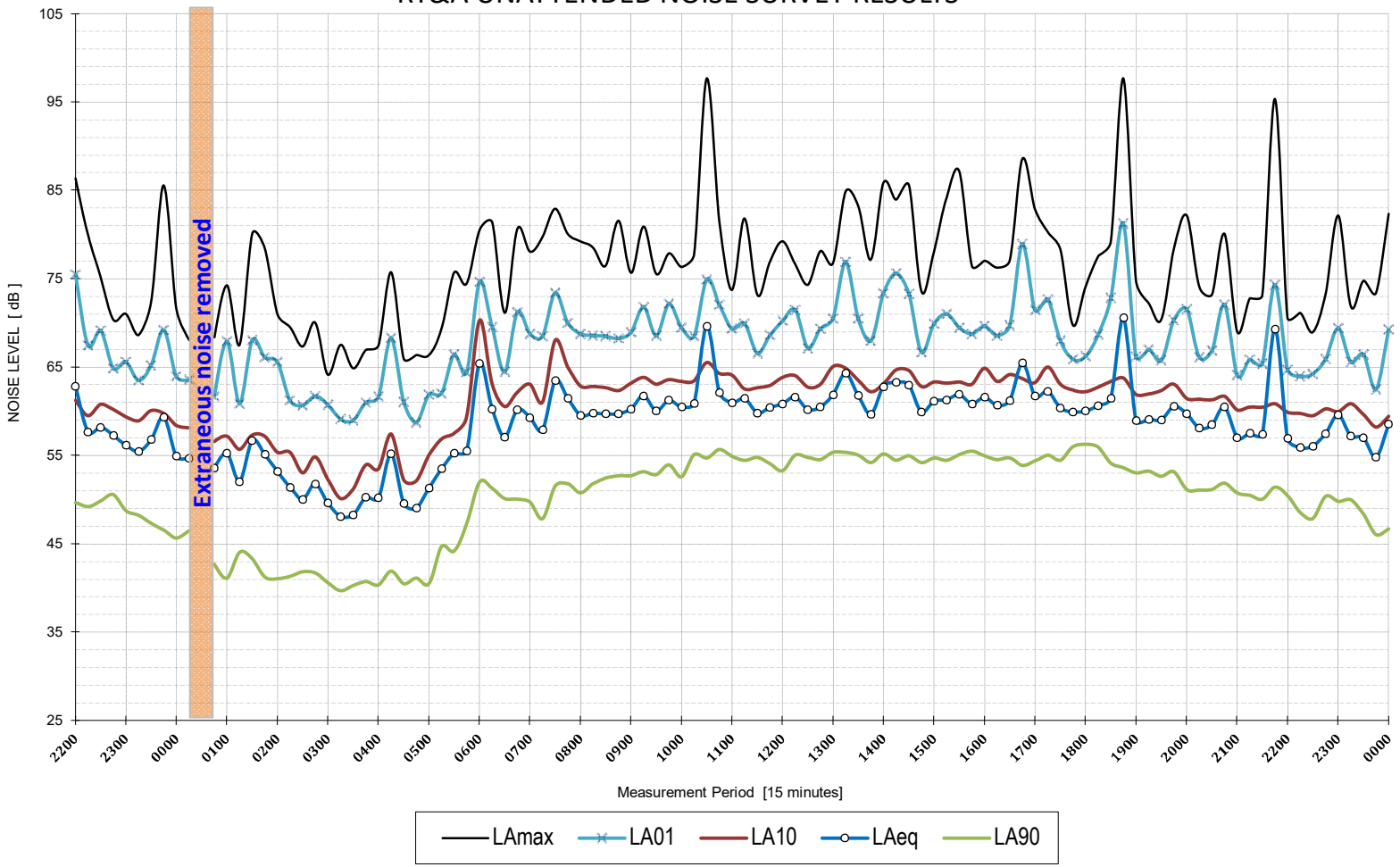
DAY 5 **LOGGER LOCATION:** 119 Lakemba Street, Lakemba **DATE:** Friday, 12 April 2024

RT&A UNATTENDED NOISE SURVEY RESULTS



AMBIENT BACKGROUND NOISE METRICS

Descriptor	Period	Level	Units
LA90 Daytime	0700-1800	52	dB
LA90 Evening	1800-2200	51	dB
LA90 Night-time	2200-0700	40	dB

AMBIENT NOISE METRICS

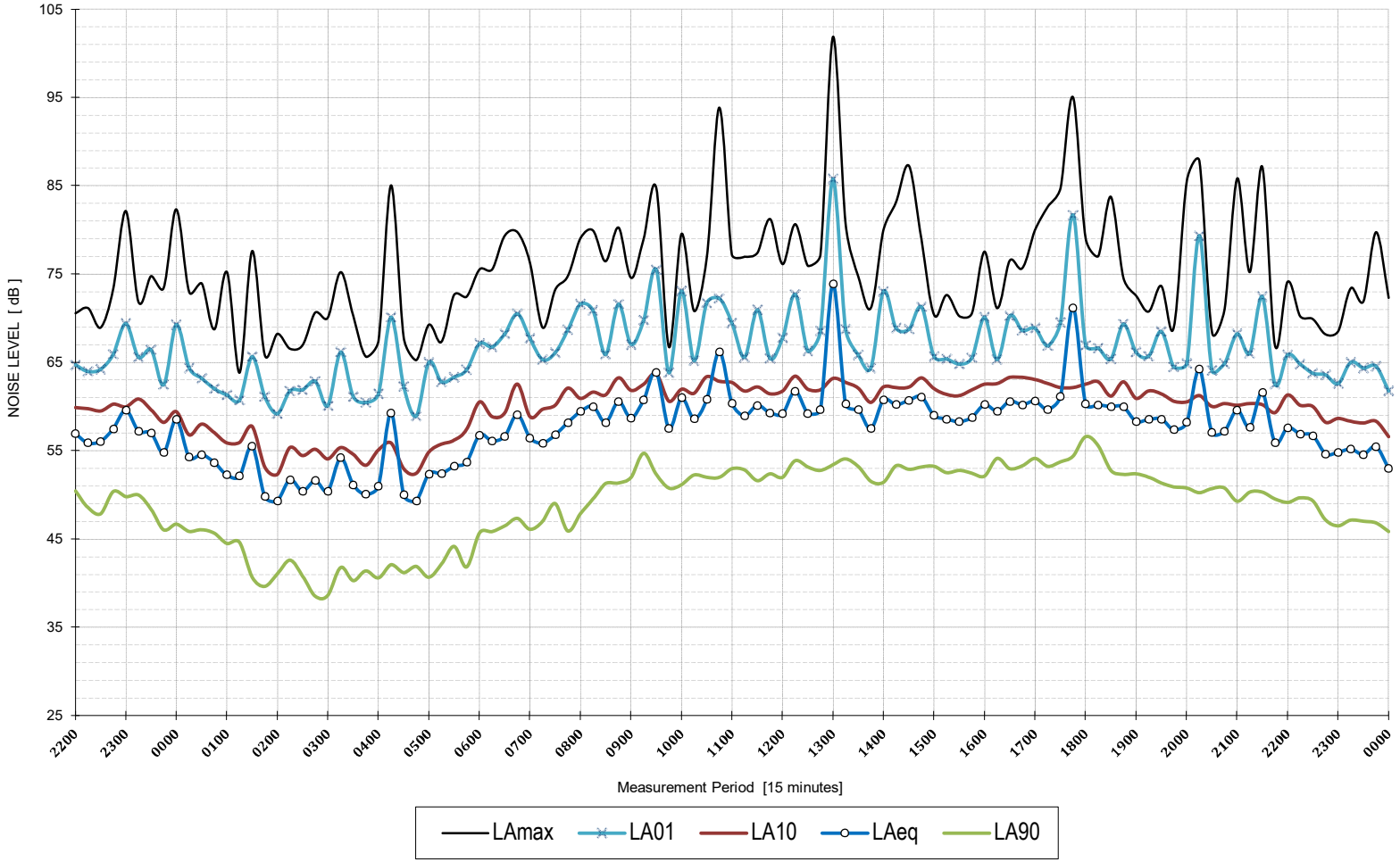
LAeq Daytime	0700-1800	62	dB
LAeq Evening	1800-2200	63	dB
LAeq Night-time	2200-0700	57	dB

TRAFFIC & MISC. NOISE METRICS

LAeq 15 hours	0700-2200	62	dB
LAeq 9 hours	2200-0700	57	dB
Max LAeq 1 hour	0700-2200	65	dB
Max LAeq 1 hour	2200-0700	60	dB

DAY 6 **LOGGER LOCATION:** 119 Lakemba Street, Lakemba **DATE:** Saturday, 13 April 2024

RT&A UNATTENDED NOISE SURVEY RESULTS



AMBIENT BACKGROUND NOISE METRICS

Descriptor	Period	Level	Units
LA90 Daytime	0800-1800	51	dB
LA90 Evening	1800-2200	50	dB
LA90 Night-time	2200-0800	41	dB

AMBIENT NOISE METRICS

LAeq Daytime	0800-1800	63	dB
LAeq Evening	1800-2200	60	dB
LAeq Night-time	2200-0800	55	dB

TRAFFIC & MISC. NOISE METRICS

LAeq 15 hours	0700-2200	62	dB
LAeq 9 hours	2200-0700	55	dB
Max LAeq 1 hour	0700-2200	66	dB
Max LAeq 1 hour	2200-0700	57	dB

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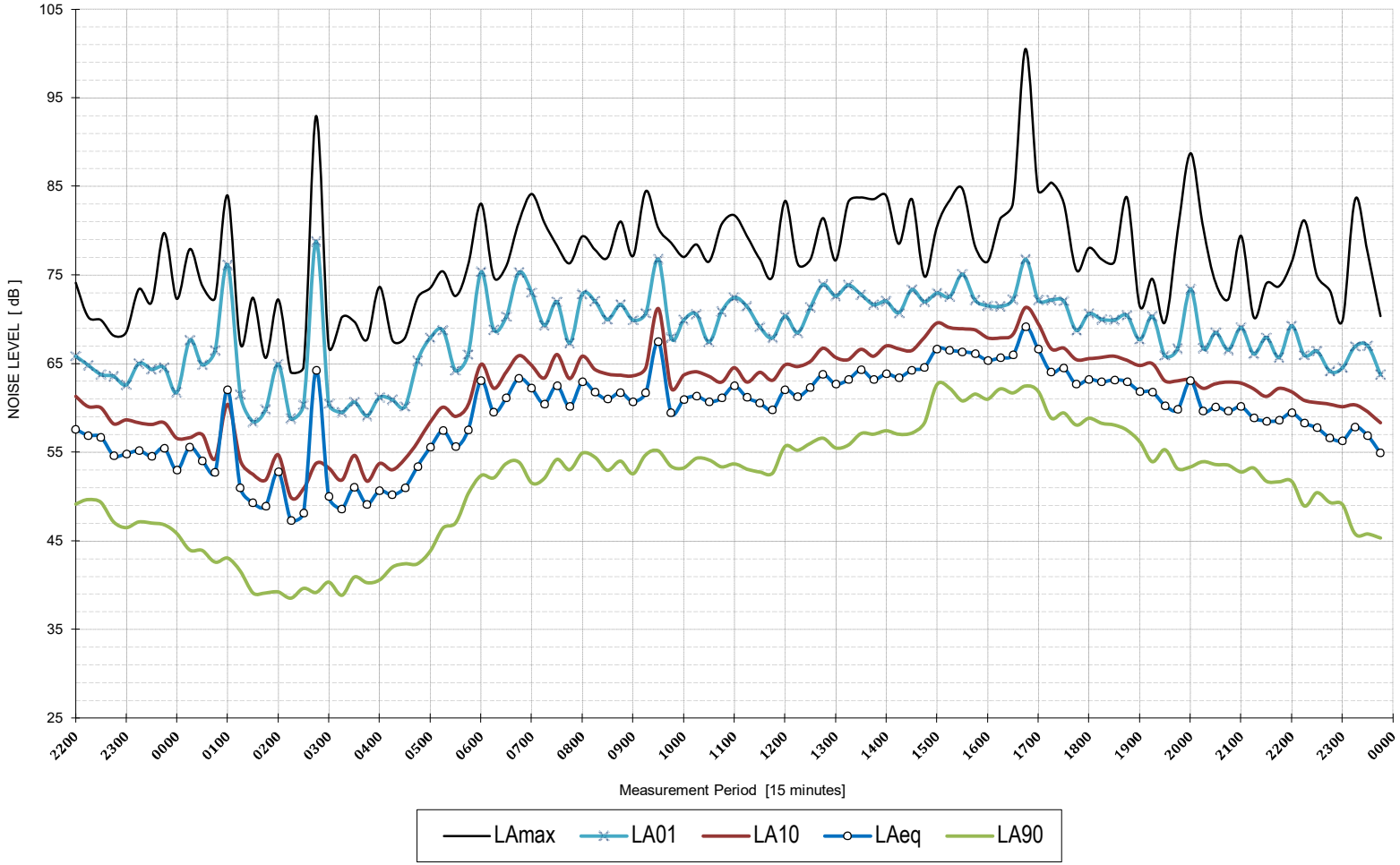
DAY 7 **LOGGER LOCATION:** 119 Lakemba Street, Lakemba **DATE:** Sunday, 14 April 2024

RT&A UNATTENDED NOISE SURVEY RESULTS



AMBIENT BACKGROUND NOISE METRICS

Descriptor	Period	Level	Units
LA90 Daytime	0700-1800	53	dB
LA90 Evening	1800-2200	52	dB
LA90 Night-time	2200-0700	39	dB

AMBIENT NOISE METRICS

LAeq Daytime	0700-1800	64	dB
LAeq Evening	1800-2200	61	dB
LAeq Night-time	2200-0700	57	dB

TRAFFIC & MISC. NOISE METRICS

LAeq 15 hours	0700-2200	63	dB
LAeq 9 hours	2200-0700	57	dB
Max LAeq 1 hour	0700-2200	66	dB
Max LAeq 1 hour	2200-0700	59	dB

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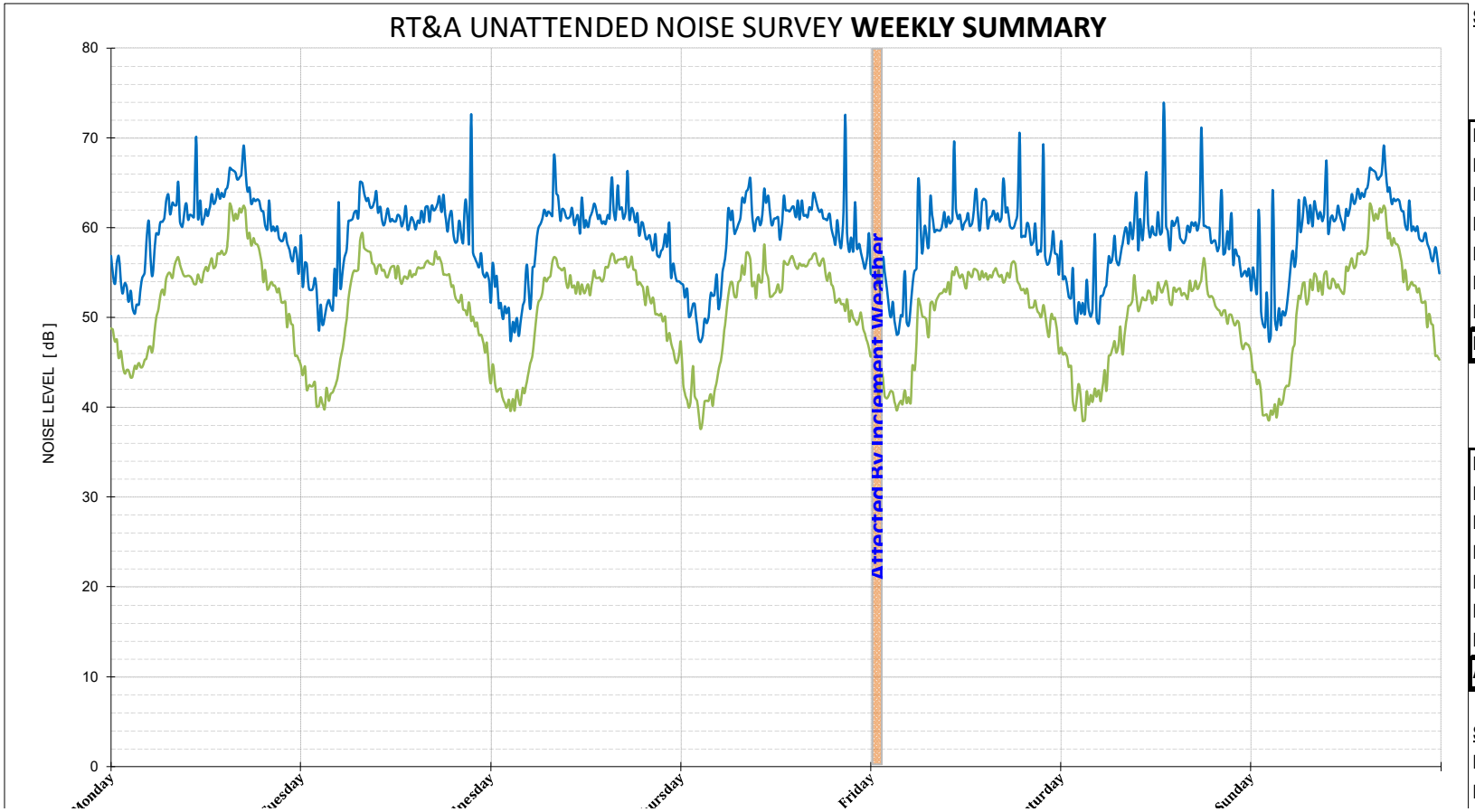
CONSULTANTS IN NOISE & VIBRATION

WEEKLY SUMMARY **LOGGER LOCATION:** 119 Lakemba Street, Lakemba **PERIOD:** 8th to the 14th of April 2024



SUMMARY OF AMBIENT NOISE LEVELS

	LA90 Daytime	*LA90* Evening	*LA90* Night-time
Day 1	54	52	44
Day 2	55	50	41
Day 3	53	50	40
Day 4	53	50	40
Day 5	52	51	40
Day 6	51	50	41
Day 7	53	52	39
RBL	**53**	**50**	**40**

	LAeq Daytime	*LAeq* Evening	*LAeq* Night-time
Day 1	64	61	57
Day 2	62	63	57
Day 3	62	59	55
Day 4	62	63	56
Day 5	62	63	57
Day 6	63	60	55
Day 7	64	61	57
Average	**63**	**62**	**56**

SUMMARY OF TRAFFIC & MISC. NOISE LEVELS

LAeq 15 hrs	0700-2200	63	dB
LAeq 9 hrs	2200-0700	56	dB

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APPENDIX C

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Roller Door Open
Commercial/Industrial
Daytime (0700 - 1800)

Noise Sources:

~ Noise through open Roller Door

Note:

- Receiver points are at a height 1.5 m above the ground or relevant balcony.

PRINT DATE: 27/05/2024

vert. Area Source
Building
3D-Reflector
Contour Line
Receiver
Vertical Grid

> 55.0 dB
> 60.0 dB
> 65.0 dB
> 70.0 dB
> 75.0 dB
> 80.0 dB
> 85.0 dB

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CONSULTANTS IN NOISE & VIBRATION

JOB NUMBER: 6198
CLIENT: William Poveda
SITE ADDRESS: 5-9 Benaroon Road, Belmore
ASSESSED TO: Noise Policy for Industry criteria
LIMITING CRITERIA: See acoustic report

N
W E
S

Roller Door Closed
Residential
Daytime (0700 - 1800)

Noise Sources:

~ Noise through closed Roller Door

Note:

- Receiver points are at a height 1.5 m above the ground or relevant balcony.

PRINT DATE: 27/05/2024

vert. Area Source
Building
3D-Reflector
Contour Line
Receiver
Vertical Grid

> 50.0 dB
> 55.0 dB
> 60.0 dB
> 65.0 dB
> 70.0 dB
> 75.0 dB
> 80.0 dB
> 85.0 dB

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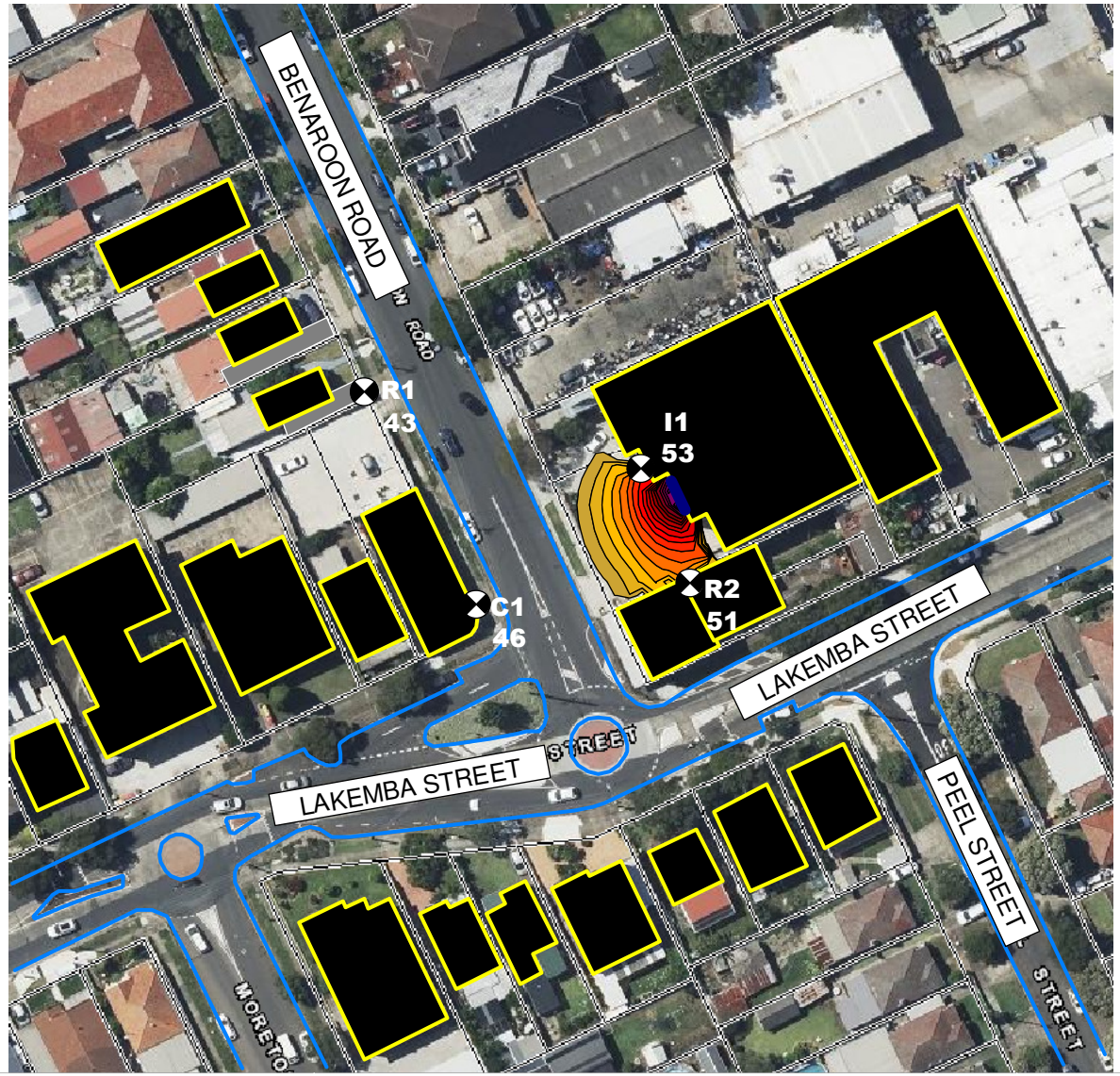

Roller Door Open
Residential
Daytime (0700 - 1800)

Noise Sources:

~ Noise through open Roller Door

Note:

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Receiver
Vertical Grid

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W E
S

Roller Door Closed
Residential
Evening (1800 - 2200)

Noise Sources:

~ Noise through closed Roller Door

Note:

- Receiver points are at a height 1.5 m above the ground or relevant balcony.

PRINT DATE: 27/05/2024

vert. Area Source
Building
3D-Reflector
Contour Line
Receiver
Vertical Grid

> 40.0 dB
> 45.0 dB
> 50.0 dB
> 55.0 dB
> 60.0 dB
> 65.0 dB
> 70.0 dB
> 75.0 dB
> 80.0 dB
> 85.0 dB

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Evening (1800 - 2200)

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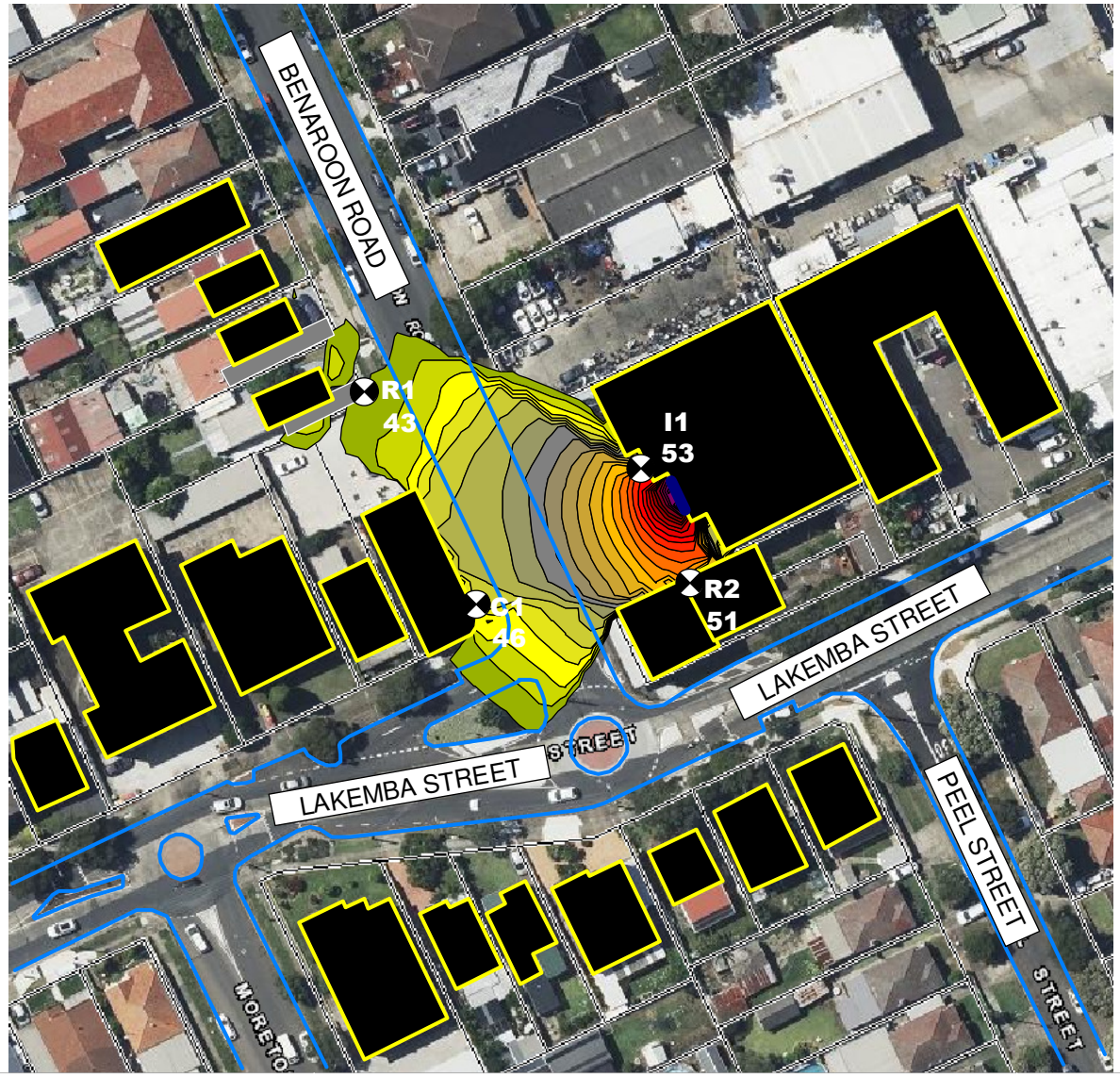

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Receiver
Vertical Grid

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