



**NOISE IMPACT ASSESSMENT**

**TRANSPORT DEPOT USE**

**4696-4754 MOUNT LINDESAY HIGHWAY**

**NORTH MACLEAN**

**Prepared For:**  
MBIUT  
c/- Wolter Consulting

**Prepared By:**  
MWA Environmental

**22 August 2023**

**DOCUMENT CONTROL SHEET****MWA Environmental**

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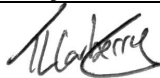
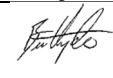
Title: Noise Impact Assessment – Transport Depot Use – 4696-4754  
Mount Lindesay Highway, North Maclean

Principal Author: Mr Travis Carberry

Client: MBIUT  
c/- Wolter Consulting Group

Client Contact: Mr Gary Savins

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**FIGURES****ATTACHMENTS**

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## 1.0 INTRODUCTION

### 1.1 STUDY BRIEF

MWA Environmental has been engaged to prepare a Noise Impact Assessment for a transport depot use at 4696-4754 Mount Lindesay Highway, North Maclean.

The assessment has considered the potential noise amenity impact of the transport depot use upon nearby sensitive receptors. The assessment is based on ambient noise monitoring conducted on site, noise measurements conducted of the existing site operations, noise measurements previously conducted for typical sources associated with the use and detailed noise propagation modelling.

### 1.2 SITE DESCRIPTION

The subject site is located at 4696-4754 Mount Lindesay Highway, North Maclean and has a real property description of Lot 1 on RP218191.

The site is zoned Rural under the Logan Planning Scheme. The adjacent land to the north, east and south is zoned Rural Residential under the Logan Planning Scheme. Mount Lindesay Highway adjoins the site to the west with land beyond falling under the Greater Flagstone Urban Priority Development Area. Review of the Greater Flagstone Urban Priority Development Area Development Scheme indicates that land to the west is intended for Industry and Business development.

The site location and surrounding land uses are shown on **Figure 1**, with the site and surrounding land use zoning shown on **Figure 2**.

### 1.3 DESCRIPTION OF TRANSPORT DEPOT USE

The proposed development is to re-use existing facilities on the site as a transport depot use that is to be located on the western part of the subject site. Existing site buildings are located to the east and south of the depot area with these buildings providing acoustic shielding to adjacent sensitive land uses. The depot area is located centrally on the site and well separated from adjoining sensitive land use boundaries by vacant land.

The transport depot activities will include light vehicle movements, light vehicle carparking, truck operations (i.e. startup, idling, trailer connection/disconnection, reversing beepers) and mechanical workshop activities.

The transport operations will be undertaken on an existing hardstand area. Access to the depot area is via an existing driveway to Mount Lindesay Highway.

The mechanical workshop activities will be conducted within an existing building to the northeast of the depot area with the building having three roller door openings facing west (facing away from adjoining sensitive land uses).

The client has advised that the hours of operation will generally be within the hours of 6am to 10pm Monday to Saturday for truck operations and for the mechanical workshop. As such, typically the site operates during the early morning (6am to 7am), day (7am to 6pm) and evening (6pm to 10pm) periods of the day Monday to Saturday. However, it is noted that some truck operations may occur during the night period (10pm to 6am) and on Sundays and thus 24 hour / 7 day operation basis has been assessed in this report.

For the purpose of the noise modelling assessment, we have applied the following peak 1 hour trip rates for the early morning, day and evening periods (6am to 10pm) Monday to Saturday and for limited use during the night period (10pm to 6am) and Sundays:

- 6am to 10pm Monday to Saturday - 20 truck trips per hour (total of departure and arrival trips) and 20 light vehicle trips per hour (total of departure and arrival trips)
- 10pm to 6am Monday to Saturday- 5 truck trips per hour (total of departure and arrival trips) and 5 light vehicle trips per hour (total of departure and arrival trips)
- 6am to 10pm Sunday - 5 truck trips per hour (total of departure and arrival trips) and 5 light vehicle trips per hour (total of departure and arrival trips)
- 10pm to 6am Sunday - 5 truck trips per hour (total of departure and arrival trips) and 5 light vehicle trips per hour (total of departure and arrival trips)

The site layout plan is included as **Attachment 1**.

## 2.0 EXISTING NOISE ENVIRONMENT

Site inspections reveal that the dominant noise influence at the subject site is road traffic on Mount Lindesay Highway.

To enable an assessment of the existing noise environment at the subject site, noise measurements have been undertaken using a noise datalogger placed on the southern part of the site over an 8 day period from 9 to 16 June 2023. The noise datalogger location is shown on **Figure 3**.

The noise datalogger used was a Norsonic Nor139 with NATA calibration, programmed to provide statistical analysis results based on 15 minute sampling periods. The datalogger was pre-calibrated to 94 dB at 1kHz using a Bruel & Kjaer Sound Level Calibrator, Type 4231, and displayed a deviation of less than  $\pm 0.5$  dB from this level at post-calibration. Weather conditions during the monitoring period were generally fine with light to moderate winds.

The noise levels recorded by the noise datalogger for the daytime, evening and night periods are provided in **Table 1**. The recorded noise levels are presented as statistical components, which are described as:

- $L_{max}$ : The maximum noise level exceeded during the measurement period, referred to as the maximum sound pressure level.
- $L_{10}$ : Noise level exceeded for 10 percent of the measurement period, referred to as the averaged maximum sound pressure level.
- $L_{90}$ : Noise level exceeded for 90 percent of the measurement period. AS1055-2018<sup>1</sup> notes that the  $L_{90}$  is described as the background sound pressure level.
- $L_{eq}$ : An “average” measurement, and as per AS1055–2018 defined as the value of the sound pressure level of a continuous steady sound state, that within a measurement period, has the same mean square sound pressure as a sound under consideration whose level varies with time.

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<sup>1</sup> Australian Standard AS 1055-2018 *Acoustics – Description and measurement of environmental noise*

**Table 1: Datalogger Recorded Noise Levels – dB(A)  
9 to 16 June 2023**

PARAMETER	PERIOD	RECORDED NOISE LEVELS – dB(A)		
		MINIMUM	MAXIMUM	AVERAGE
L <sub>max</sub>	Daytime (7am-6pm)	53.5	93.6	65.2
	Evening (6pm-10pm)	51.2	76.0	60.4
	Nighttime (10pm-7am)	50.7	73.6	59.6
L <sub>10</sub>	Daytime (7am-6pm)	47.9	58.4	52.6
	Evening (6pm-10pm)	47.4	57.8	52.5
	Nighttime (10pm-7am)	44.0	59.7	51.2
L <sub>90</sub>	Daytime (7am-6pm)	40.1	54.2	45.9
	Evening (6pm-10pm)	37.1	50.4	45.0
	Nighttime (10pm-7am)	26.7	55.4	40.5
L <sub>eq</sub>	Daytime (7am-6pm)	45.7	56.9	50.6
	Evening (6pm-10pm)	44.4	54.7	49.8
	Nighttime (10pm-7am)	39.9	58.0	48.1

The datalogger recorded noise levels are included as graphical traces of noise level versus time for the statistical noise level descriptors L<sub>max</sub>, L<sub>10</sub>, L<sub>90</sub> and L<sub>eq</sub> as **Attachment 2**.

Other key recorded statistical noise level parameters are presented below.

Monday to Saturday Average L <sub>90</sub> 1 hour– 6am to 7am	= 52 dB(A)
Monday to Saturday Average L <sub>90</sub> – 7am to 6pm	= 46 dB(A)
Monday to Saturday Average L <sub>90</sub> – 6pm to 10pm	= 45 dB(A)
Monday to Saturday Average L <sub>90</sub> – 10pm to 6am	= 39 dB(A)
Sunday Average L <sub>90</sub> – 6am to 7am	= 45 dB(A)
Sunday Average L <sub>90</sub> – 7am to 6pm	= 44 dB(A)
Sunday Average L <sub>90</sub> – 6pm to 10pm	= 44 dB(A)
Sunday Average L <sub>90</sub> – 10pm to 6am	= 37 dB(A)

Observations on-site and the noise monitoring data demonstrate that background noise levels are elevated in the early morning period due to high volumes of free-flowing traffic on Mount Lindesay Highway during this period.

### 3.0 NOISE CRITERIA

#### 3.1 LOGAN PLANNING SCHEME POLICY 3.2.1: NOISE EMISSION AND NOISE IMMISSION STANDARDS

Under the Logan Planning Scheme 2015 (LPS 2015) the relevant surrounding land use zones adopted for the purpose of this noise assessment are as follows:

- Rural residential land located to the north, east and south.
- Land intended for Industry and Business development<sup>2</sup> to the west, beyond Mount Lindesay Highway.

The LPS 2015 includes separate noise criteria standards for Monday to Saturday and for Sunday.

The relevant noise criteria for the protection of residential amenity apply as per Table 3.2.1.1 (below) of the LPS 2015 at the surrounding Rural Residential uses to the north, east and south:

**Table 3.2.1.1—Noise emission standards for the protection of residential amenity**

Noise level at the boundary of premises			
Noise type	Time period	Monday to Saturday	Sunday and public holidays
Non-steady sound*	Day 7:00am – 6:00pm	$L_{Aeq,adj,T} \leq L_{A90} \text{ plus } 5 \text{ dB(A)}$	$L_{Aeq,adj,T} \leq L_{A90} \text{ plus } 5 \text{ dB(A)}$
	Evening 6:00pm to 10:00pm	$L_{Aeq,adj,T} \leq L_{A90} \text{ plus } 5 \text{ dB(A)}$	$L_{Aeq,adj,T} \leq L_{A90} \text{ plus } 5 \text{ dB(A)}$
	Night 10:00 – 7:00am	$L_{Aeq,adj,T} \leq L_{A90} \text{ plus } 0 \text{ dB(A)}$ and $L_{Amax} \leq 60\text{dB(A)}$	$L_{Aeq,adj,T} \leq L_{A90} \text{ plus } 0 \text{ dB(A)}$ and $L_{Amax} \leq 60\text{dB(A)}$
Continuous noise*	Anytime	$L_{A90,T} \text{ plus } 0\text{dB(A)}$	$L_{A90,T} \text{ plus } 0\text{dB(A)}$

Editor's note—\* as defined in AS1055.1-1997 Acoustics –Description and measurement of environmental noise

Note—Adjustments for tonality and impulsiveness to be included in accordance with AS1055.1-1997 Acoustics— Description and measurement of environmental noise.

<sup>2</sup> As per the Greater Flagstone Urban Priority Development Area Development Scheme.

Given the intention for land to the west (beyond Mount Lindesay Highway) to be developed as Industry and Business uses, it is considered that the noise criteria for the protection of general amenity are relevant to these properties as per Table 3.2.1.2 (below) of the LPS 2015:

**Table 3.2.1.2 - Noise emission standards for the protection of general amenity**

Noise level at the boundary of premises			
Noise type	Time period	Monday to Saturday	Sunday and public holidays
Non-steady sound *	Day 7:00am - 6:00pm	$L_{Aeq,adj,T} \leq L_{A90} \text{ plus } 10 \text{ dB(A)}$	$L_{Aeq,adj,T} \leq L_{A90} \text{ plus } 5 \text{ dB(A)}$
	Evening 6:00pm to 10:00pm	$L_{Aeq,adj,T} \leq L_{A90} \text{ plus } 10 \text{ dB(A)}$	$L_{Aeq,adj,T} \leq L_{A90} \text{ plus } 5 \text{ dB(A)}$
	Night 10:00pm - 7:00am	$L_{Aeq,adj,T} \leq L_{A90} \text{ plus } 5 \text{ dB(A)}$ and $L_{Amax} \leq 80\text{dB(A)}$	$L_{Aeq,adj,T} \leq L_{A90} \text{ plus } 5 \text{ dB(A)}$ and $L_{Amax} \leq 80\text{dB(A)}$
Continuous noise*	Anytime	$L_{A90,T} \text{ plus } 5\text{dB(A)}$	$L_{A90,T} \text{ plus } 5\text{dB(A)}$

Note - Adjustments for tonality and impulsiveness to be included in accordance with AS1055.1-1997 Acoustics - Description and measurement of environmental noise.

### 3.2 APPLICABLE NOISE LIMITS

Based upon the measured ambient noise levels and applicable Logan Planning Scheme noise criteria, the following noise limits are adopted for this assessment:

**Table 2: Relevant Noise Criteria – Monday to Saturday Residential Amenity for Land Uses to the North, East and South**

Period	Early Morning (6am to 7am)	Day (7am to 6pm)	Evening (6pm to 10pm)	Night (10pm to 6am)
<b>Non-steady Sound</b> $L_{Aeq} \text{ (1hr) – dB(A)}$	52	51	50	39
<b>Non-steady Sound</b> $L_{Amax} \text{ – dB(A)}$	60	-	-	60

**Table 3: Relevant Noise Criteria – Sunday  
Residential Amenity for Land Uses to the North, East and South**

Period	Early Morning (6am to 7am)	Day (7am to 6pm)	Evening (6pm to 10pm)	Night (10pm to 6am)
Non-steady Sound $L_{Aeq}$ (1hr) – dB(A)	45	49	49	37
Non-steady Sound $L_{Amax}$ – dB(A)	60	-	-	60

**Table 4: Relevant Noise Criteria – Monday to Saturday  
General Amenity for Land Uses to the West**

Period	Early Morning (6am to 7am)	Day (7am to 6pm)	Evening (6pm to 10pm)	Night (10pm to 6am)
Non-steady Sound $L_{Aeq}$ (1hr) – dB(A)	57	56	55	44
Non-steady Sound $L_{Amax}$ – dB(A)	80	-	-	80

**Table 5: Relevant Noise Criteria – Sunday  
General Amenity for Land Uses to the West**

Period	Early Morning (6am to 7am)	Day (7am to 6pm)	Evening (6pm to 10pm)	Night (10pm to 6am)
Non-steady Sound $L_{Aeq}$ (1hr) – dB(A)	50	49	49	42
Non-steady Sound $L_{Amax}$ – dB(A)	80	-	-	80

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## 4.0 NOISE IMPACT ASSESSMENT

### 4.1 NEAREST NOISE SENSITIVE RECEPTORS

The seven (7) nearest sensitive boundaries that have been identified and considered as noise sensitive receptors for the purposes of this assessment are the following:

- R1: Industry and Business land to the west.
- R2: Industry and Business land to the northwest.
- R3: Rural Residential land to the north.
- R4: Rural Residential land to the northeast.
- R5: Rural Residential land to the east.
- R6: Rural Residential land to the southeast.
- R7: Rural Residential land to the south.

The nominated receptors are shown on an aerial image base on **Figure 4**.

### 4.2 NOISE ASSESSMENT OF TRANSPORT DEPOT USE

Overall noise emissions associated with the transport depot use have been assessed using the SoundPLAN 9.0 computer noise model.

The mechanical workshop building design includes blank sheet metal facades (no openings) to the north, east and south. Three roller doors are located on the western building façade. As such, mechanical workshop building openings face away from the nearest residential land uses, minimising potential noise impacts to these areas.

The noise model was established to represent noise emissions from typical mechanical workshop activities within the building.

The modelled reverberant internal noise level within the mechanical workshop building is provided in **Table 6** below based upon levels measured at similar facilities.

**Table 6: Modelled Internal Noise Levels for Mechanical Workshop**

NOISE SOURCE	SOUND PRESSURE LEVEL - dB(A)										LAeq dB(A)
	FREQUENCY BAND										
	31.5	63	125	250	500	1	2	4	8	16	
	Hz	Hz	Hz	Hz	Hz	kHz	kHz	kHz	kHz	kHz	
Reverberant Level within Mechanical Workshop	28	43	48	56	59	60	61	60	52	34	<b>73</b>

The Sound Transmission Losses through the walls, roof and open roller doors of the industrial building source were input to the model as per **Table 7**. The model was conservatively setup to represent all of the roller doors of the building as being open throughout the proposed operating hours. The mechanical workshop was modelled as operating during the advised hours of 6am to 10pm only.

**Table 7: Modelled Building Component Sound Transmission Loss**

CONSTRUCTION ELEMENT	SOUND TRANSMISSION LOSS - dB(A)								Rw
	FREQUENCY BAND (Hz)								
	63	125	250	500	1	2	4	8	
	Hz	Hz	Hz	Hz	kHz	kHz	kHz	kHz	
Walls and roof (metal sheeting)	-	15	18	22	28	32	36	-	<b>27</b>
Roller doors (Open)	0	0	0	0	0	0	0	0	<b>0</b>

Noise emissions from the intermittent external noise sources such as truck operations, car parking and vehicle movements are typically characterised by high level, short-duration noise emissions.

Typically, the site will operate during the early morning (6am to 7am), day (7am to 6pm) and evening (6pm to 10pm) periods Monday to Saturday. However, some truck operations may occur during the night period (10pm to 6am) and on Sundays. The following peak 1 hour trip rates have been applied to the noise modelling:

- 6am to 10pm Monday to Saturday - 20 truck trips per hour (total of departure and arrival trips) and 20 light vehicle trips per hour (total of departure and arrival trips)
- 10pm to 6am Monday to Saturday- 5 truck trips per hour (total of departure and arrival trips) and 5 light vehicle trips per hour (total of departure and arrival trips)

- 6am to 10pm Sunday - 5 truck trips per hour (total of departure and arrival trips) and 5 light vehicle trips per hour (total of departure and arrival trips)
- 10pm to 6am Sunday - 5 truck trips per hour (total of departure and arrival trips) and 5 light vehicle trips per hour (total of departure and arrival trips)

Measured noise levels for various noise generating activities associated with the transport depot use have been recorded by MWA Environmental and others and are summarised in **Table 8**.

**Table 8: Transport Depot Use External Noise Sources**

Noise Source	Modelled Source Type	Sound Power Level – dB(A)	
		L <sub>max</sub>	L <sub>eq</sub>
Slow moving cars	Line Source	89	49 dB/metre, 1hr <sup>3</sup>
Car Parking (includes car starts / door slams)	Area Source	89	63 dB, 1hr <sup>4</sup>
Truck Movement	Line Source	111	65 dB/metre, 1hr <sup>5</sup>
Truck Operations	Area Source	114	88 dB/1hr <sup>6</sup>

The SoundPLAN model has been setup to represent noise emissions from the noise sources presented in **Table 8** above and internal building noise as per **Table 6** above.

The predicted noise levels from the transport depot use at the nearest surrounding sensitive land use boundaries are summarised in **Table 9** below.

The results of the noise modelling are also presented in **Attachment 3** as contours of the predicted L<sub>Aeq</sub> and L<sub>Amax</sub> noise levels across the model domain.

<sup>3</sup> Per trip movement for a slow moving car.

<sup>4</sup> Per carpark turnover event represented at the site car parking areas.

<sup>5</sup> Per truck movement. Based upon measured levels on site by MWA Environmental.

<sup>6</sup> Per truck operation. Includes truck startup, truck idling, reversing, trailer connection/disconnection, reversing beepers and airbrake release etc. based upon measured levels on site by MWA Environmental.

**Table 9: Predicted Noise Levels**

RECEPTOR		PREDICTED NOISE LEVEL		
		PEAK OPERATIONS MON-SAT 6AM-10PM L <sub>Aeq(1hr)</sub> dB(A)	OFF-PEAK OPERATIONS MON-SAT 10PM-6PM L <sub>Aeq(1hr)</sub> dB(A) & SUNDAY L <sub>Aeq(1hr)</sub> dB(A)	L <sub>Amax</sub> dB(A) 10PM-7AM
R1		46	40	60
R2		43	37	55
GENERAL AMENITY CRITERIA	MON-SAT	55-57	44	80
	SUNDAY	-	42-50	80
	COMPLIANCE?	YES	YES	YES
R3		35	29	53
R4		29	23	41
R5		30	23	43
R6		29	23	41
R7		43	36	56
RESIDENTIAL AMENITY CRITERIA	MON-SAT	50-52	39	60
	SUNDAY	-	37-49	60
	COMPLIANCE?	YES	YES	YES

The predicted resultant noise levels readily satisfy all relevant noise criteria at the surrounding land use boundaries. All other surrounding land uses are predicted to experience lower noise levels than the nearest receptors summarised in **Table 9**.

## **5.0 CONCLUSION**

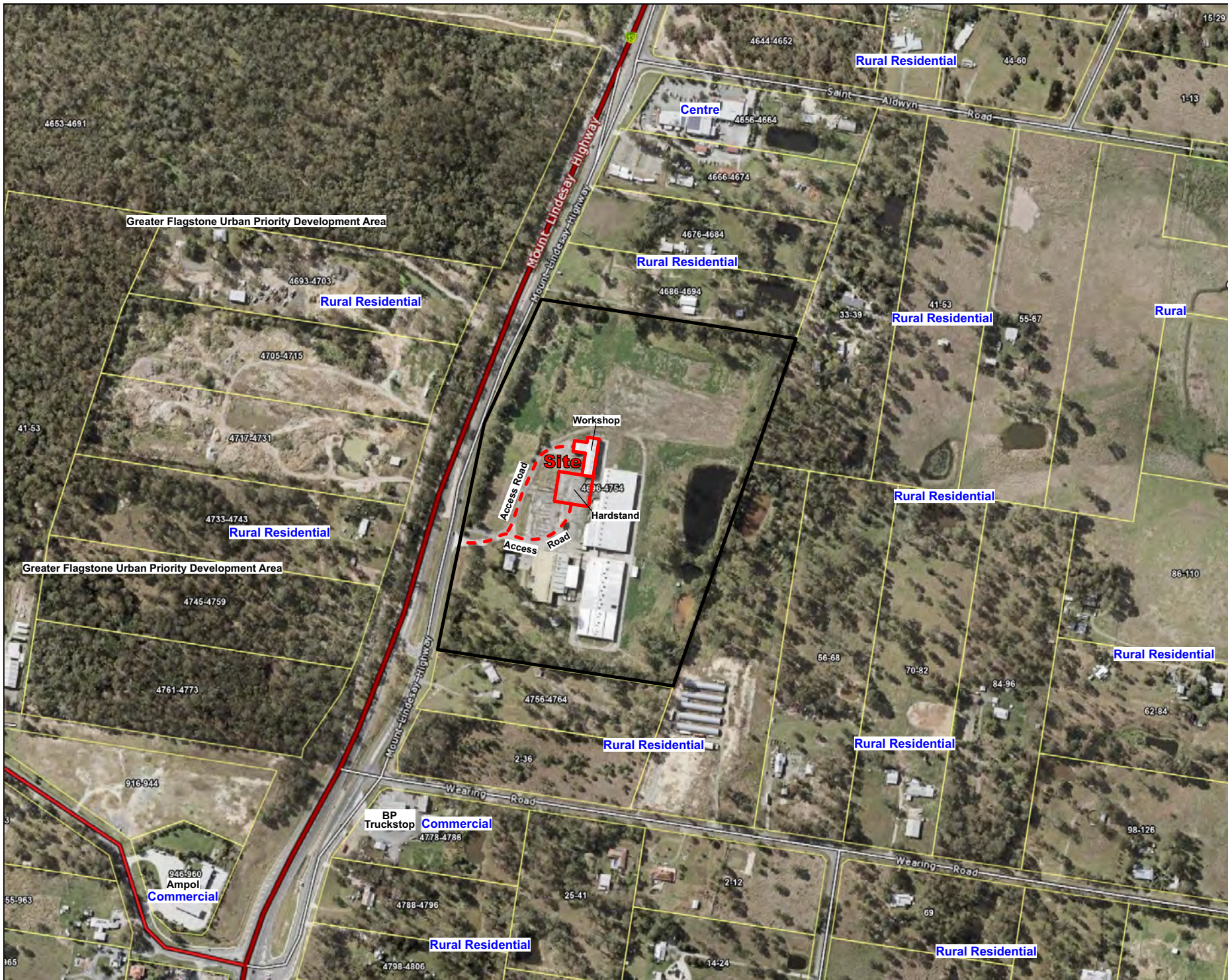
MWA Environmental has been engaged to prepare a Noise Impact Assessment for a transport depot use at 4696-4754 Mount Lindesay Highway, North Maclean.

The assessment has considered the potential noise amenity impact of the transport depot use upon nearby sensitive receptors against the relevant provisions of the Logan Planning Scheme 2015. The assessment is based on ambient noise monitoring conducted on site, noise measurements conducted of the existing site operations, noise measurements previously conducted on typical sources associated with the use and detailed noise propagation modelling.

Detailed noise modelling assessment undertaken demonstrates that the transport depot use satisfies all relevant noise amenity criteria at the nearest surrounding land use boundaries and is recommended for approval.

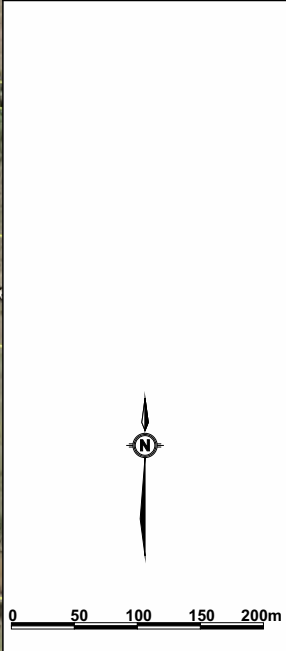
**MWA Environmental**  
**22 August 2023**

## FIGURES



**LEGEND**  
 SITE (TRANSPORT DEPOT)  
 PROPERTY BOUNDARY

**DRAWING REFERENCE**  
 © THE STATE OF QUEENSLAND  
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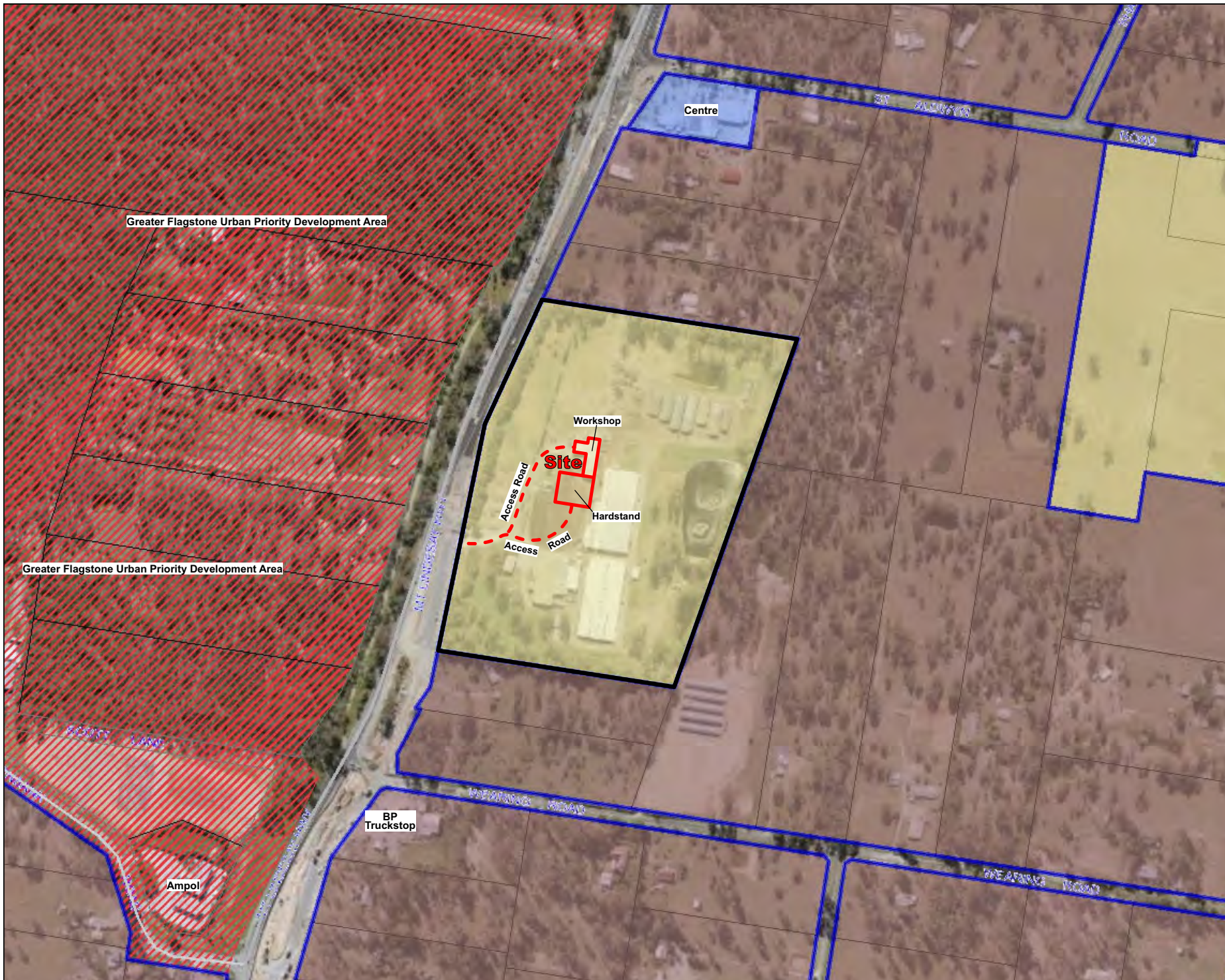
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**PROJECT**  
**NOISE IMPACT ASSESSMENT**  
**PROPOSED TRANSPORT DEPOT**  
 4696-4754 MOUNT LINDESAY HWY  
 NORTH MACLEAN QLD

**TITLE**  
**SITE LOCATION AND SURROUNDING LAND USES**

<b>JOB</b>	<b>NORTH MACLEAN</b>	<b>FIGURE 1</b>
<b>JOB NO.</b>	23051	<b>DWG NUMBER</b>
<b>DATE</b>	22/08/23	<b>23051-1</b>
<b>SCALE</b>	1:6000 (A4)	

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**LEGEND**

- SITE (TRANSPORT DEPOT)
- PROPERTY BOUNDARY

**Logan Planning Scheme 2015 Zones**

- Rural
- Rural residential
- Centre
- Priority development area

**DRAWING REFERENCE**  
 LOGAN CITY COUNCIL PLANNING SCHEME 2015, INTERACTIVE MAPPING, ZONING MAP.



0 50 100 150 200m

CLIENT  
**MBIUT**

PROJECT  
**NOISE IMPACT ASSESSMENT**  
**PROPOSED TRANSPORT DEPOT**  
 4696-4754 MOUNT LINDESAY HWY  
 NORTH MACLEAN QLD

TITLE  
**ZONING MAP**

JOB	NORTH MACLEAN	<b>FIGURE 2</b>
JOB NO.	23051	DWG NUMBER
DATE	22/08/23	<b>23051-2</b>
SCALE	1:6000 (A4)	

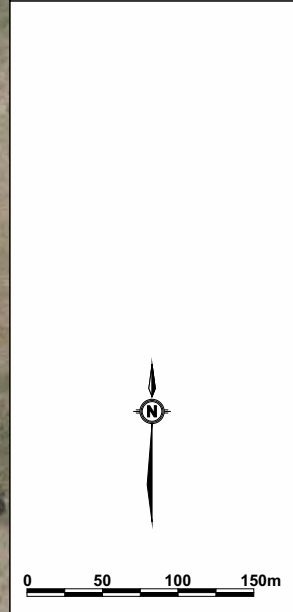


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**LEGEND**  
 — SITE (TRANSPORT DEPOT)  
 — PROPERTY BOUNDARY  
 ● NOISE DATALOGGER LOCATION

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**NOISE IMPACT ASSESSMENT**  
**PROPOSED TRANSPORT DEPOT**  
 4696-4754 MOUNT LINDESAY HWY  
 NORTH MACLEAN QLD

TITLE  
**NOISE MONITORING LOCATION**

JOB	NORTH MACLEAN	<b>FIGURE 3</b>
JOB NO.	23051	DWG NUMBER
DATE	22/08/23	<b>23051-3</b>
SCALE	1:5000 (A4)	


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**LEGEND**

- SITE (TRANSPORT DEPOT)
- PROPERTY BOUNDARY
- R6 NEAREST SENSITIVE RECEPTORS (R1-R6)

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**NOISE IMPACT ASSESSMENT**  
**PROPOSED TRANSPORT DEPOT**  
 4696-4754 MOUNT LINDESAY HWY  
 NORTH MACLEAN QLD

TITLE  
**SENSITIVE RECEPTOR LOCATIONS**

JOB	NORTH MACLEAN	<b>FIGURE 4</b>
JOB NO.	23051	DWG NUMBER
DATE	22/08/23	<b>23051-4</b>
SCALE	1:5000 (A4)	



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***Attachment 1***  
***Site Layout Plan***

**DEVELOPMENT ASSESSMENT**

**BUILDING & OUTDOOR AREAS**

- TRANSPORT DEPOT - 800m<sup>2</sup>
- OUTDOOR HARDSTAND - 1,500m<sup>2</sup>
- ACCESS DRIVEWAY - 2,910m<sup>2</sup>

**PROPERTY DESCRIPTION**

LOT 1 on RP218191

COUNCIL: LOGAN CITY



Consulting Engineer



- commercial / industrial / retail
- fast food restaurant design
- travel centre / service stations
- project concept to completion

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 Do not scale this drawing.  
 Check all dimensions on site prior commencement of works.

Revision and approvals			
Code	Date	By	Description
P2	08.08.2023	GN	PRELIMINARY ISSUE

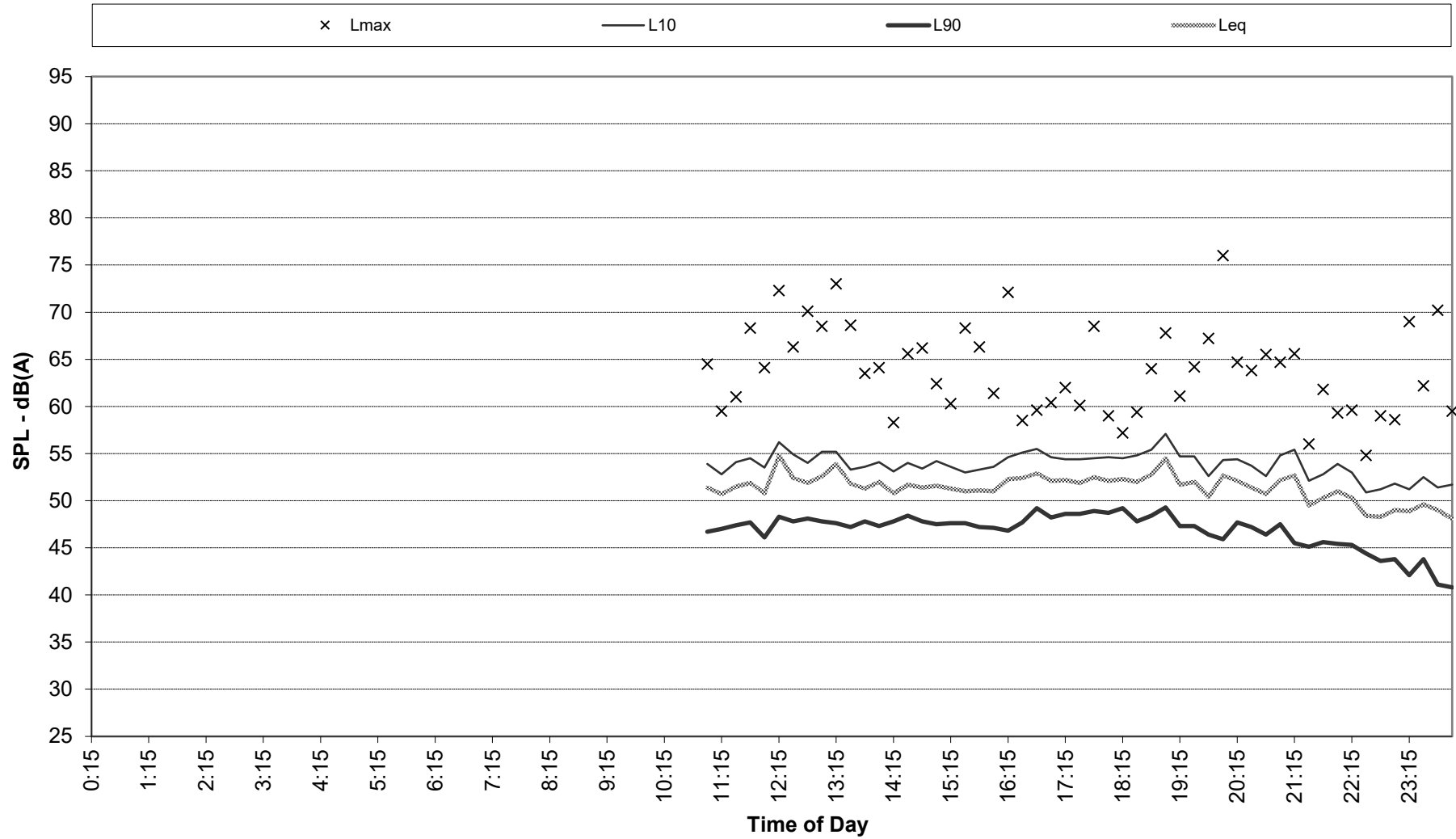
Project Description	
TRANSPORT DEPOT 4696-4754 MOUNT LINDSAY HWY, NORTH MACLEAN, QLD.	
Scale	Approved
1:500 @ A1 / 1:1000 @A3	
Drawn	Issued

Drawing Title	
SITE PLAN	
Drawing Number	Revision
22182-DA01	P2

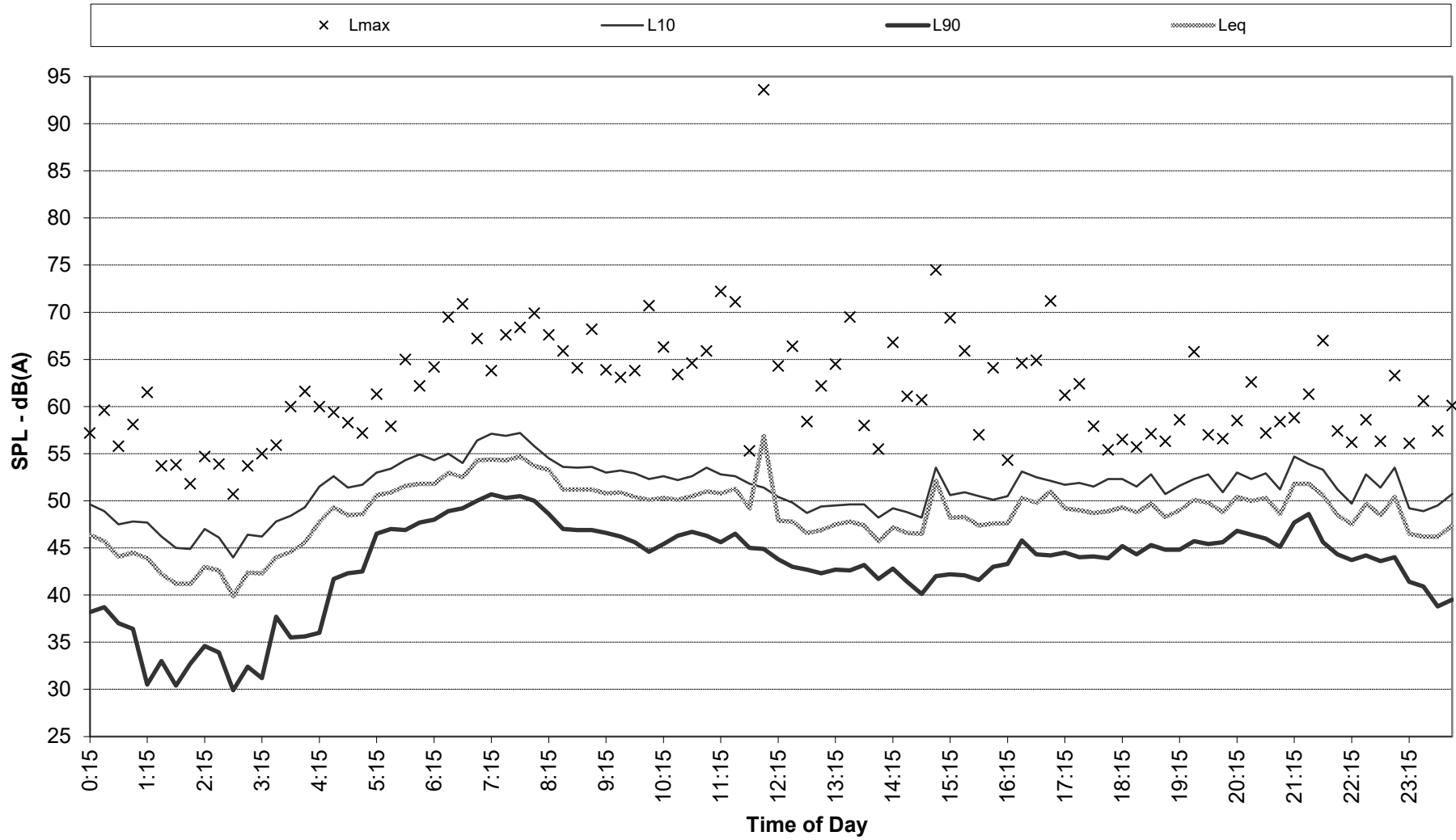
***Attachment 2***

***Data Logger Results***

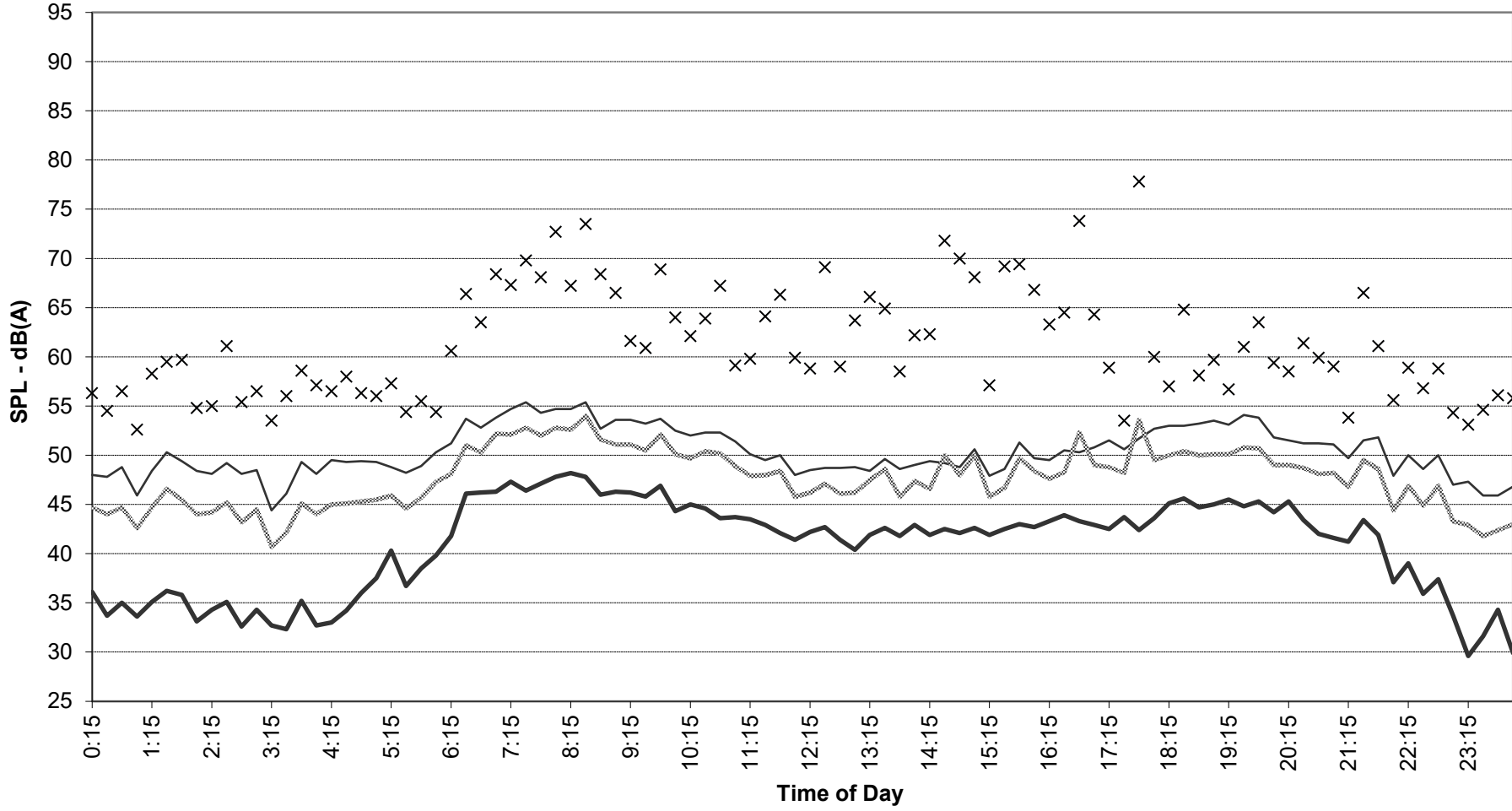
**Recorded Statistical Noise Levels for 23051\_North\_Maclean - Southern Site Boundary - 09-Jun-2023  
- Friday**



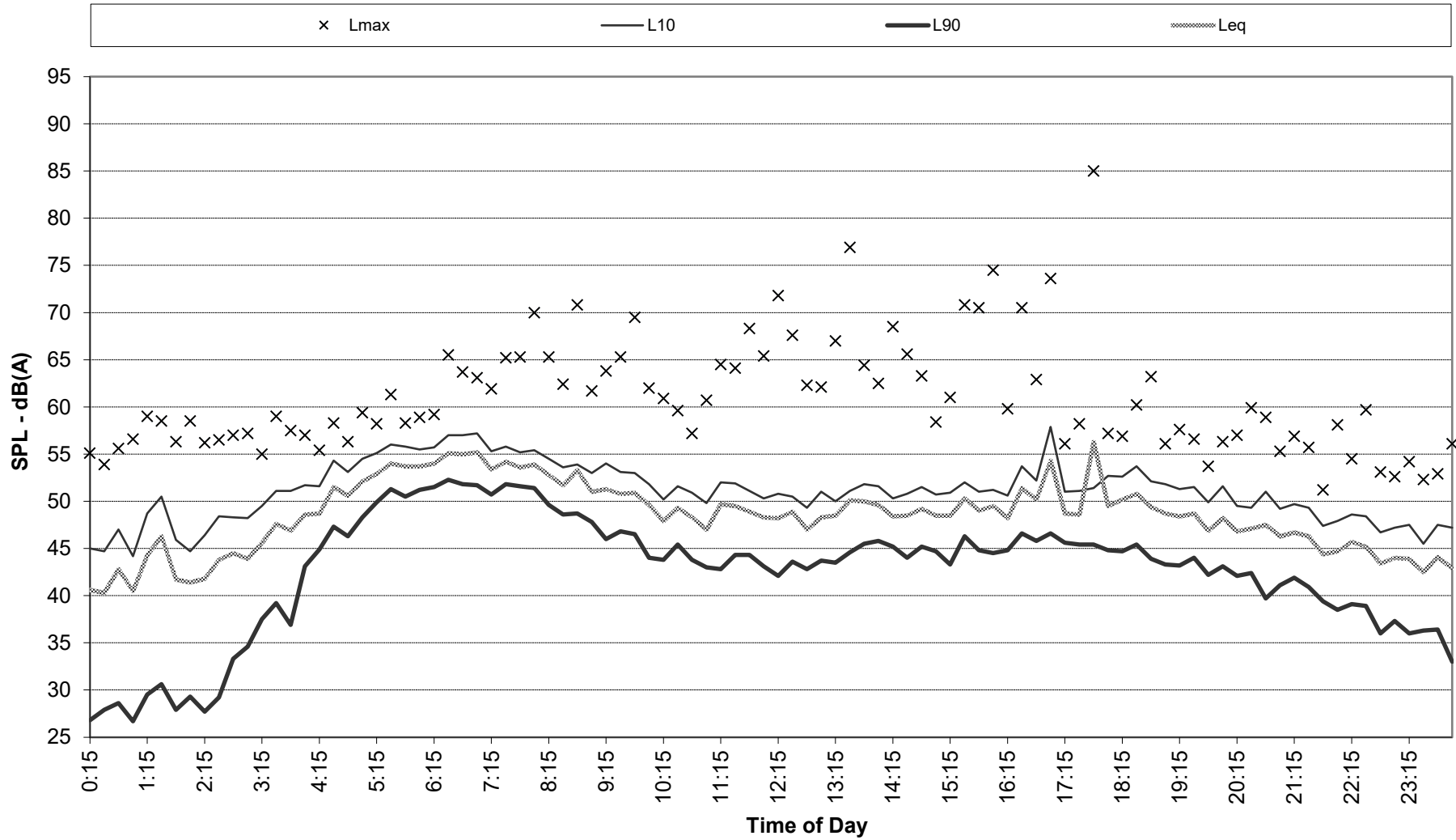
**Recorded Statistical Noise Levels for 23051\_North\_Maclean - Southern Site Boundary - 10-Jun-2023  
- Saturday**



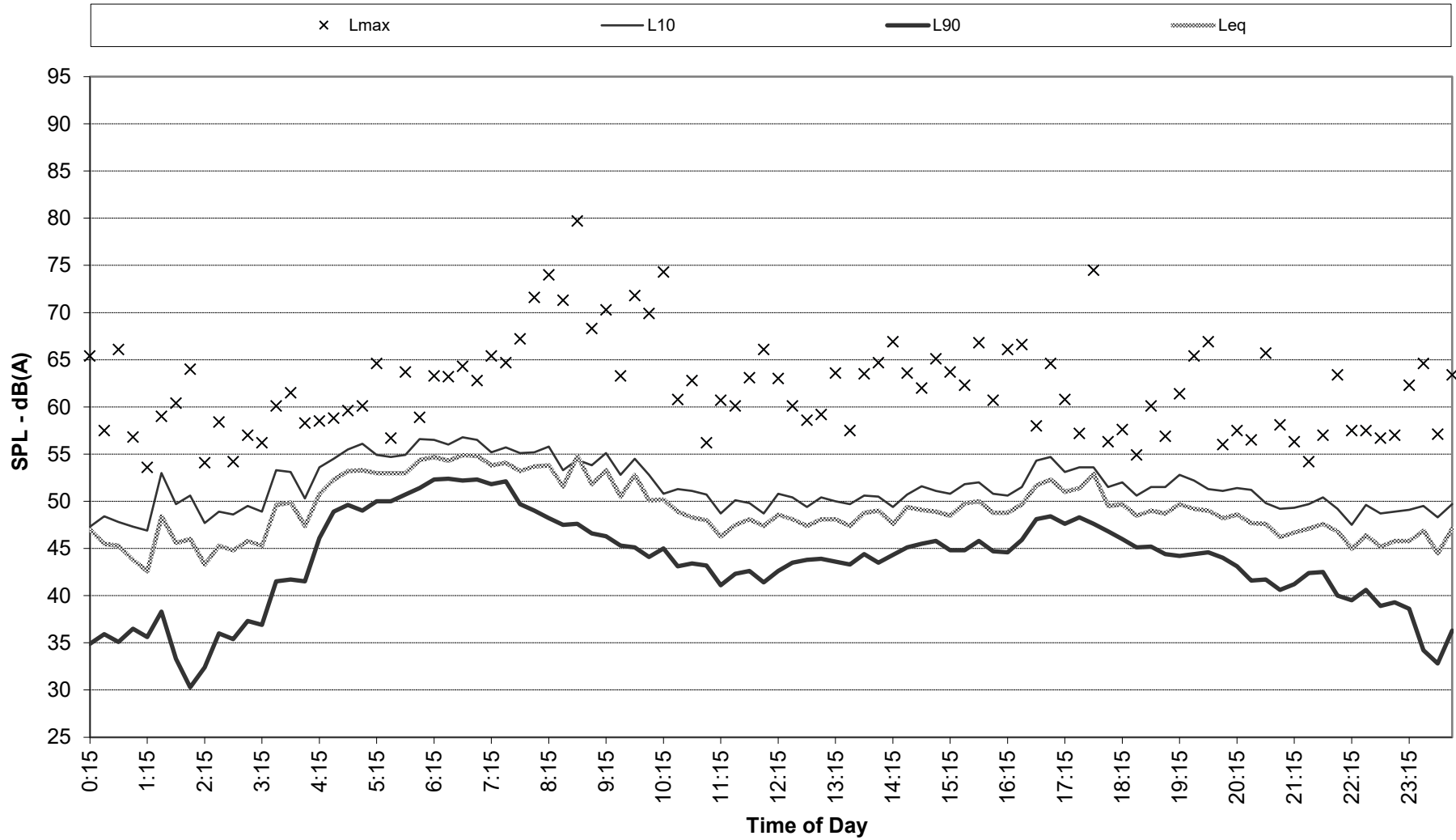
**Recorded Statistical Noise Levels for 23051\_North\_Maclean - Southern Site Boundary - 11-Jun-2023  
- Sunday**



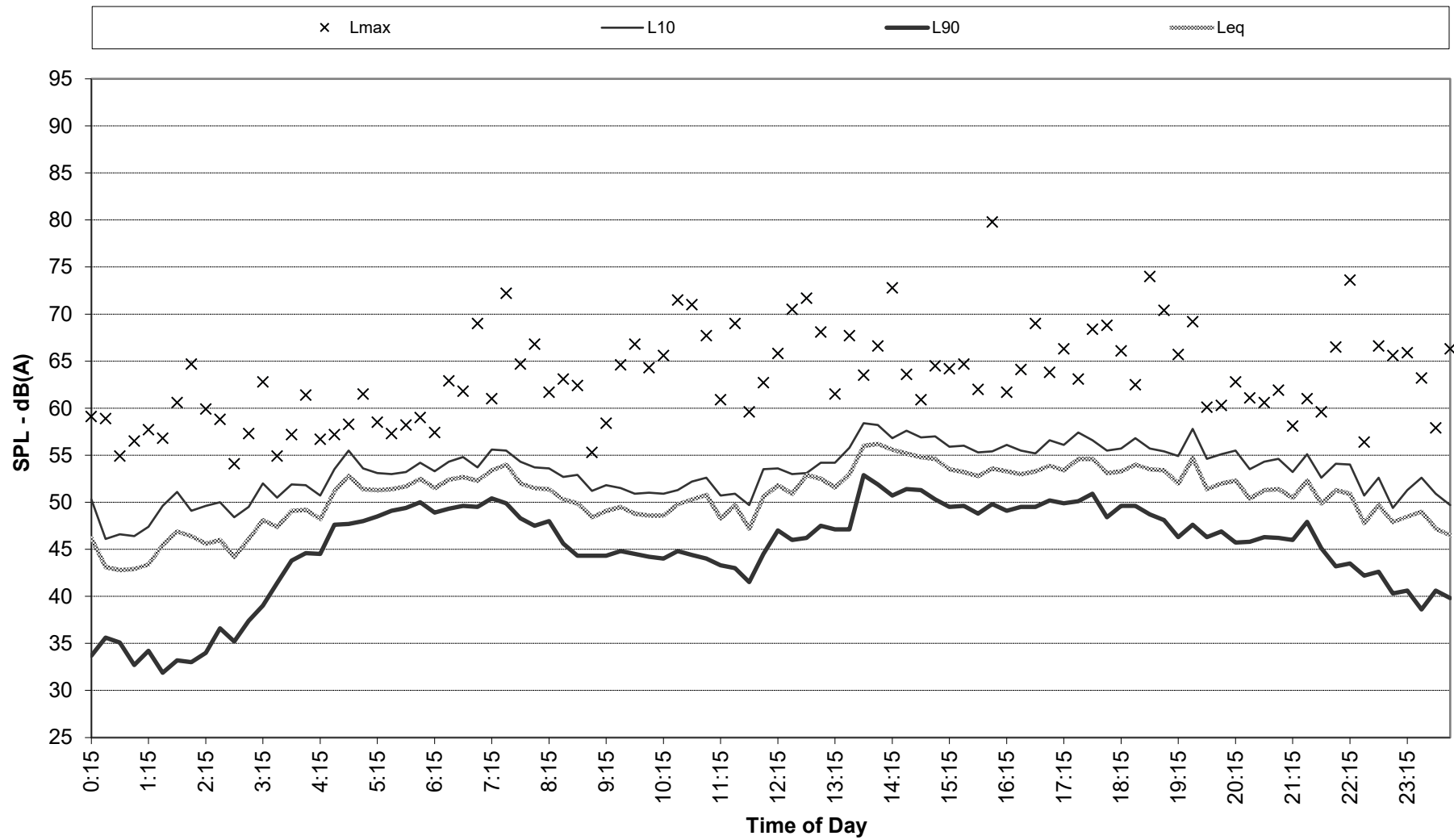
**Recorded Statistical Noise Levels for 23051\_North\_Maclean - Southern Site Boundary - 12-Jun-2023  
- Monday**



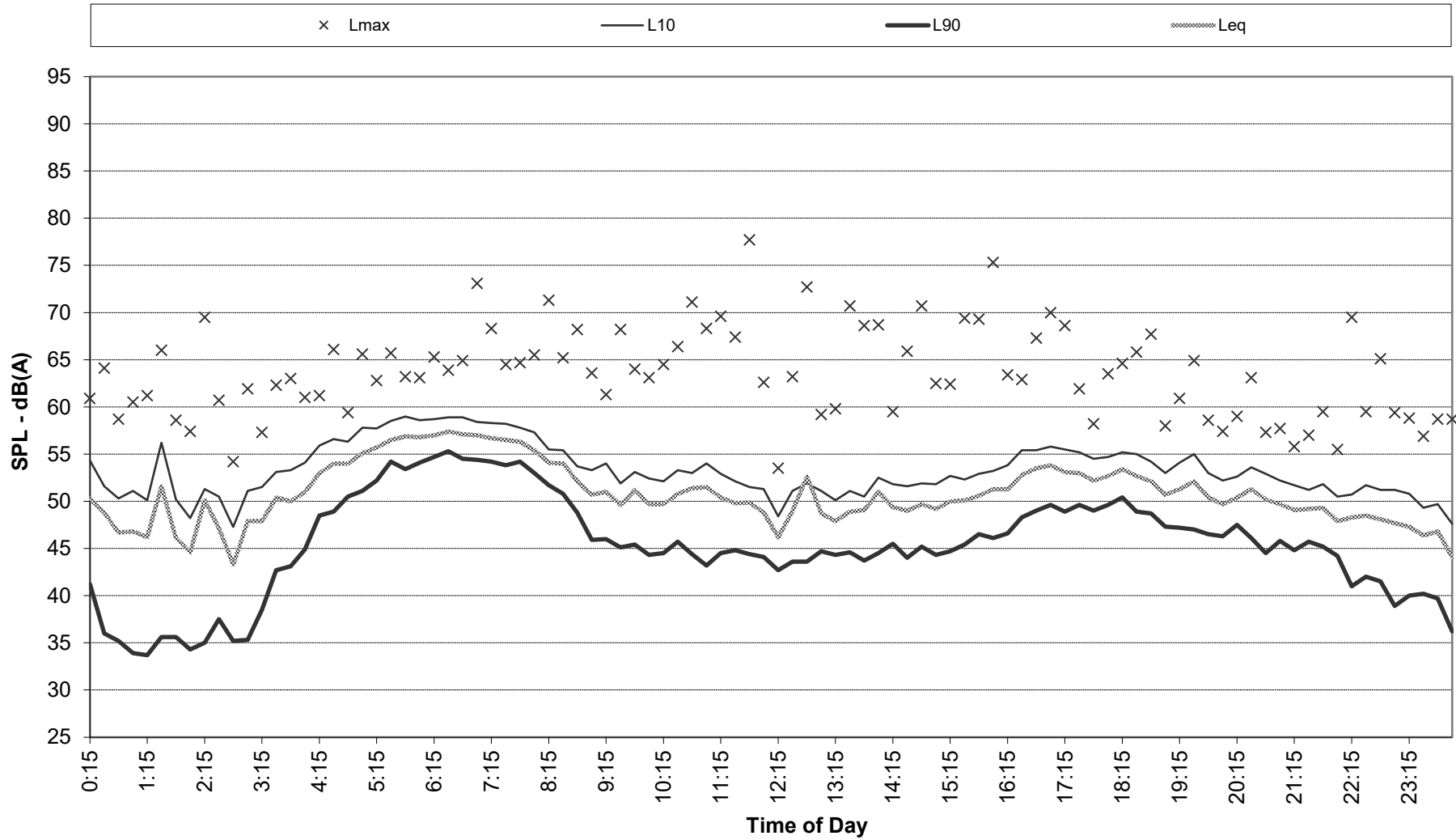
**Recorded Statistical Noise Levels for 23051\_North\_Maclean - Southern Site Boundary - 13-Jun-2023  
- Tuesday**



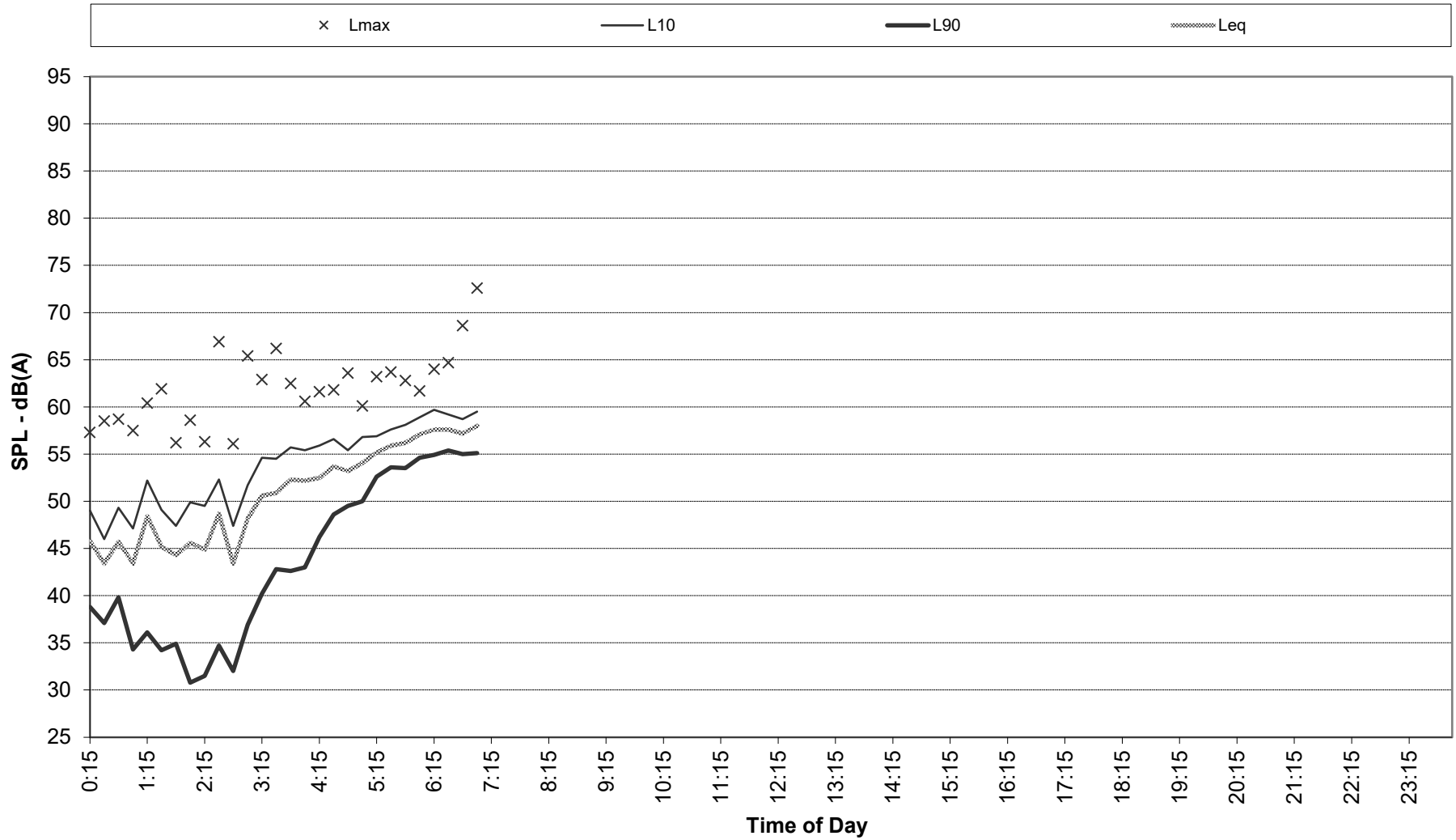
**Recorded Statistical Noise Levels for 23051\_North\_Maclean - Southern Site Boundary - 14-Jun-2023  
- Wednesday**



**Recorded Statistical Noise Levels for 23051\_North\_Maclean - Southern Site Boundary - 15-Jun-2023  
- Thursday**

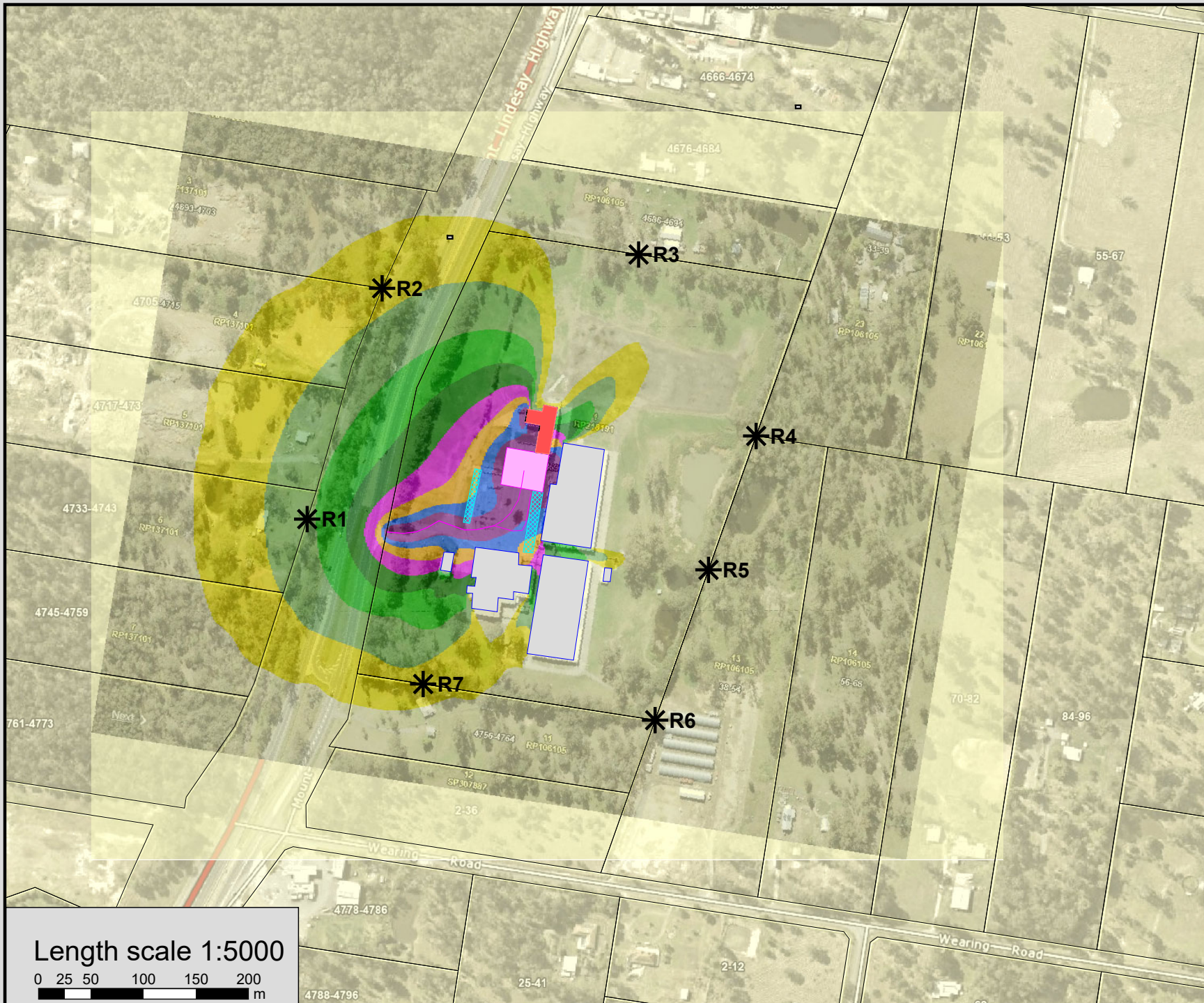


**Recorded Statistical Noise Levels for 23051\_North\_Maclean - Southern Site Boundary - 16-Jun-2023  
- Friday**

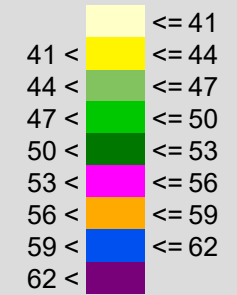


***Attachment 3***







*SoundPLAN 9.0  
Noise Model Results*



Noise level  
 LAeq,T  
 in dB(A)



**Legend**

-  Parking lot
-  Workshop
-  Vehicle movements
-  Truck operations
-  Buildings
-  Point receiver

**North Maclean 23051**

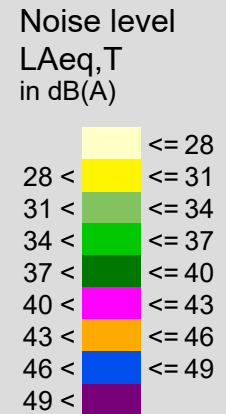
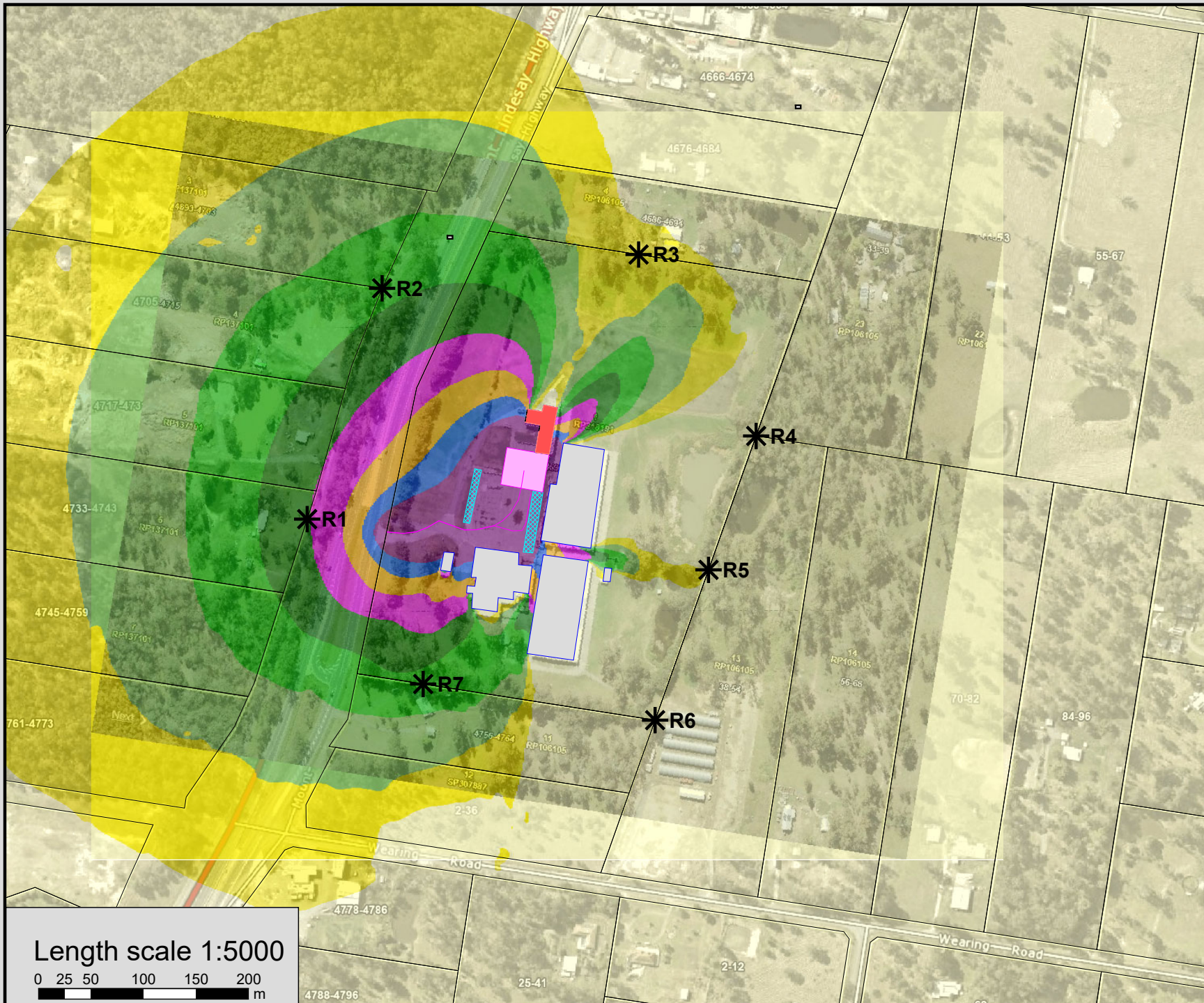
**LAeq Noise Predictions**

**Monday to Saturday  
 6am to 10pm**

**August 2023**

**Length scale 1:5000**





**North Maclean 23051**

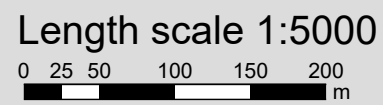
**LAeq Noise Predictions**

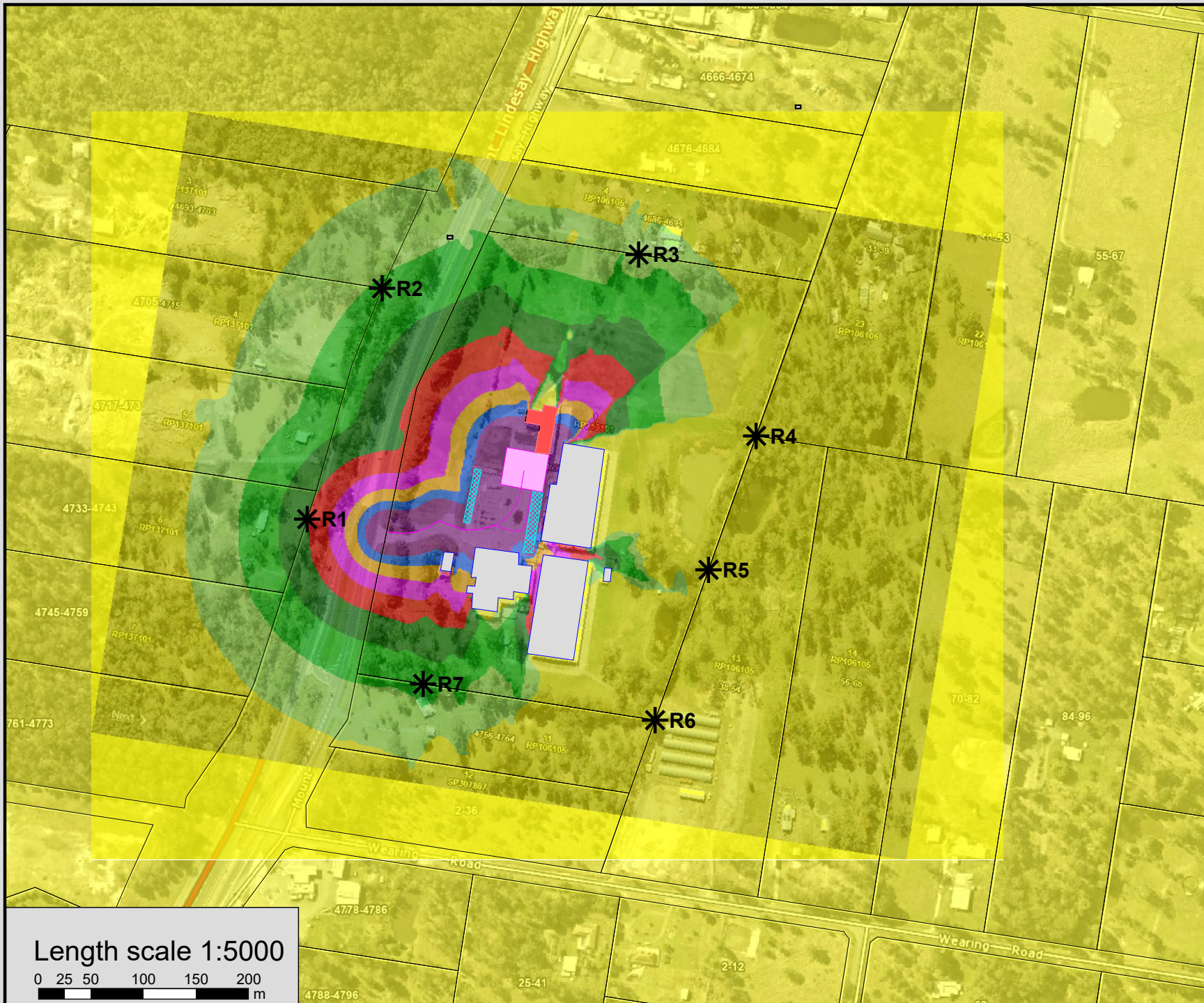
**Monday to Saturday**  
10pm to 6am

**AND**

**Sunday**

**August 2023**





Noise level  
L<sub>A</sub>max  
in dB(A)

	<= 51
	51 < <= 54
	54 < <= 57
	57 < <= 60
	60 < <= 63
	63 < <= 66
	66 < <= 69
	69 < <= 72
	> 72

Legend

- Parking lot
- Workshop
- Vehicle movements
- Truck operations
- Buildings
- \* Point receiver

**North Maclean 23051**  
**L<sub>A</sub>max Noise Predictions**  
**August 2023**

Length scale 1:5000

