MATTHEW PALAVIDIS
VICTOR FATTORETTO
MATTHEW SHIELDS

Iglu Mascot, 6-8 John Street & 13B Church Avenue, Mascot

Development Application Acoustic Assessment

SYDNEY
9 Sarah St
MASCOT NSW 2020
(02) 8339 8000

ABN 11 068 954 343
www.acousticlogic.com.au

Project ID	20191049.1
Document Title	Development Application Acoustic Assessment
Attention To	Iglu Pty Ltd

Revision	Date	Document Reference	Prepared By	Checked By	Approved By
0	11/09/2019	20191049.1/1109B/R0/JM	JM	MS	TA
1	9/04/2020	20191049.1/0904B/R1/JM	JM		JM

TABLE OF CONTENTS

1 INTRODUCTION

Acoustic Logic Consultancy (ALC) have been engaged to conduct an acoustic assessment of potential noise impacts associated with the proposed student accommodation, Iglu Mascot, 6-8 John Street & 13B Church Avenue, Mascot.

This document addresses the following:

- Traffic noise impacts from John Street and Church Avenue;
- Aircraft noise impacts from aircraft movements associated with Sydney Kingsford Airport; and
- Noise emissions from mechanical plant to service the project site.

ALC have utilised the following documents and regulations in the noise assessment of the development:

- Botany Bay Council Development Control Plan (DCP) 2013;
- Australian Standard AS 2021:2015 *'Acoustics – Aircraft noise intrusion – building siting and construction'*;
- NSW, Environmental Protection Agency document – Noise Policy for Industry (NPfI) 2017.

This assessment has been conducted using the Bates Smart's architectural drawings (Project: S12324, Rev A, Date: 23/08/2019).

2 SITE DESCRIPTION

The proposed development is 13 stories high and accommodates 435 student rooms, (51% in 6-bedroom clusters, and 49% as studio apartments). Loading dock and other building facilities are located on ground floor at the rear of the development. The loading dock is accessed via Church Avenue.

There are multiple communal spaces for the students on ground floor (gym, lounge, meeting spaces, media and library), level 7 (south side landscaped roof terrace), and level 10 (north side landscaped roof terrace and half basketball court).

The nearest residential noise receivers around the project site include:

- Receiver 1 – Approved 12 storey residential development at 13A & 15-17 Church Ave, Mascot, situated to the north of the site;
- Receiver 2 – Residential development 'Rina Apartments' located at 3-9 Church Ave, Mascot, situated to the east of the site, receivers are multi-storey;
- Receiver 3 – Residential development located at 208-220 Coward Street, Mascot, situated to the south of the site over John Street, receivers are multi-storey;
- Receiver 4 – Residential development located at 10-16 John Street / 19-21 Church Street, Mascot, situated to the west of the site, receivers are multi-storey;

A site map, measurement description and surrounding receivers are presented in Figure 1 below.

Figure 1 – Aerial View of Site & Receivers
(Sourced from Six Maps 2019)

3 EXISTING ACOUSTIC ENVIRONMENT

3.1 ENVIRONMENTAL NOISE DESCRIPTORS

Environmental noise constantly varies. Accordingly, it is not possible to accurately determine prevailing environmental noise conditions by measuring a single, instantaneous noise level.

To accurately determine the environmental noise a 15-20 minute measurement interval is utilised. Over this period, noise levels are monitored on a continuous basis and statistical and integrating techniques are used to determine noise description parameters.

In analysing environmental noise, three-principle measurement parameters are used, namely L_{10}, L_{90} and L_{eq}.

The L_{10} and L_{90} measurement parameters are statistical levels that represent the average maximum and average minimum noise levels respectively, over the measurement intervals.

The L_{10} parameter is commonly used to measure noise produced by a particular intrusive noise source since it represents the average of the loudest noise levels produced by the source.

Conversely, the L_{90} level (which is commonly referred to as the background noise level) represents the noise level heard in the quieter periods during a measurement interval. The L_{90} parameter is used to set the allowable noise level for new, potentially intrusive noise sources since the disturbance caused by the new source will depend on how audible it is above the pre-existing noise environment, particularly during quiet periods, as represented by the L_{90} level.

The L_{eq} parameter represents the average noise energy during a measurement period. This parameter is derived by integrating the noise levels measured over the 15 minute period. L_{eq} is important in the assessment of environmental noise impact as it closely corresponds with human perception of a changing noise environment; such is the character of environmental noise.

3.2 BACKGROUND NOISE LEVELS

Background noise levels which will be used as a basis for this assessment are detailed in the following sections.

3.2.1 Measurement Equipment

Unattended noise monitoring was conducting using one Acoustic Research Laboratories Pty Ltd noise logger. The logger was programmed to store 15-minute statistical noise levels throughout the monitoring period. The equipment was calibrated at the beginning and the end of each measurement using a Rion NC-73 calibrator; no significant drift was detected. All measurements were taken on A-weighted fast response mode.

3.2.2 Measurement Location

An unattended noise monitor was installed on the north-eastern corner of the project site. For a detailed location refer to Figure 1.

3.2.3 Measurement Period

Unattended noise monitoring was conducted from Monday the 2nd to Tuesday the 10th of September 2019.

3.2.4 Measured Background Noise Levels

NSW EPA's RBL assessment procedure requires determination of background noise level for each day (the ABL) then the median of the individual days as set out for the entire monitoring period.

Appendix 1 provides the results of the unattended noise monitoring. Weather affected data was excluded from the assessment. The processed Rating Background Noise Levels (lowest 10th percentile noise levels during operation time period) are presented in the table below.

Table 1 – Rating Background Noise Level

Location	Time of day	Rating Background Noise Level dB(A)L_{90}
Iglu Mascot, 6-8 John Street & 13B Church Avenue, Mascot (See Figure 1)	Day (7:00am – 6:00pm)	43
	Evening (6:00pm – 10:00pm)	43
	Night (10:00pm – 7:00am)	39

3.3 TRAFFIC NOISE MEASUREMENTS

This section of the report details noise measurements conducted at the site to establish traffic noise levels impacting the development.

3.3.1 Measurement Equipment

Attended short term measurements of traffic and train noise which were undertaken by this office, to supplement the unattended noise monitoring. Measurements were conducted using a Norsonic 140 Sound Analyser. The analyser was set to fast response and calibrated before and after the measurements using a Norsonic Sound Calibrator type 1251. No significant drift was noted.

3.3.2 Measurement Locations

Attended noise measurements where at the following locations;

1. **John Street** – Attended traffic noise measurement conducted on John Street was located along the southern boundary of the project site. See figure 1 for measurement location. Noise measurement location had a 180° view of John Street and was 4m from the kerb.

2. **Rear of Development** – Attended traffic noise measurement conducted at the rear, northern side, of the development near Church Avenue. See figure 1 for measurement location. Noise measurement location had a 45° view of Church Avenue and was 64m from the kerb.

3.3.3 Measurement Period

Attended noise measurements were undertaken during traffic peak hour, between the hours of 4:00pm and 6:00pm on Tuesday the 10th of September 2019.

3.3.4 Measured Traffic Noise Measurements

Attended noise measurements have been summarised below for each location.

Table 2 – Attended Traffic and Rail Noise Measurements

Location	Time of Measurement	Measured Noise Level dB(A)$L_{eq,15mins}$
1. John Street	4:00pm – 6:00pm Tuesday, 10/09/2019	61
2. Rear of Development	4:00pm – 6:00pm Tuesday, 10/09/2019	54

3.4 AIRCRAFT NOISE LEVELS

Aircraft noise levels at the site were determined using AS2021:2015. The Standard gives aircraft noise levels for aircraft landing and taking off for locations near airports. The location of the runways was obtained from the Sydney Airport ANEF 2033.

Based on the distance from the site to the runways, the flight path and the site elevation, AS2021:2015 predicts that the loudest typical aircraft movement will be from an A330 aircraft taking off the third runway. The noise level at the site as indicated by the standard is 81dB(A). This noise level will be used to predict the resultant internal noise levels.

4 EXTERNAL NOISE INTRUSION ASSESSMENT CRITERIA

Site investigation indicates that the external noise sources around project site are below:

- Traffic noise impacts from John Street & Church Street;
- Aircraft noise impacts from aircraft taking off from the Sydney Airport.

4.1 NOISE INTRUSION CRITERIA

A traffic and aircraft noise intrusion assessment has been conducted based off the requirements of the following acoustic noise criteria/standards:

- Botany Bay Council Development Control Plan (DCP) 2013;
- Australian Standard AS 2021:2015 *'Acoustics – Aircraft noise intrusion – building siting and construction'*;

4.1.1 City of Botany Bay Development Control Plan (DCP) - 2013

4C.4.5 Acoustic Privacy

General

C1 *An acoustic report prepared by a certified acoustic consultant will be submitted with the development application addressing the requirements detailed in Controls C2, C3 and C4 below.*

C2 New dwellings will be designed and constructed to comply with the criteria specified in Table 7 for all noise intrusion from external noise sources (including mechanical services noise from within the development itself).

C3 Where the height of the proposed development is higher than the existing height of the localised building stock (and the proposed development has a direct line of sight to the seaport and/or the airport) an acoustic assessment by an accredited acoustic consultant is required which takes into account noise from the operations of Port Botany and Sydney Kingsford Smith Airport.

C4 Where multiple dwellings are provided within the same building, the building will be designed and constructed to comply with the requirements of the BCA regarding acoustic insulation and noise transmission of walls and floors. To meet these requirements, the following design measures maybe incorporated: Buildings are designed and rooms positioned to reduce noise transmission within and between dwellings;

(i) Bedrooms are designed so that wardrobes act as sound buffers between rooms or dwellings;

(ii) Windows and doors are located away from external noise sources, or buffers used where separation cannot be achieved;

(iii) Materials with low noise penetration properties are used where practical;

(iv) Locate bedrooms and private open spaces away from noise sources such as garages, driveways, mechanical equipment and recreation areas; and

(v) Locate mechanical equipment, such as pumps, lifts or air conditioners away from bedrooms or living rooms of dwellings on adjoining properties.

Table 3 – DCP Table 7: External Noise Intrusion Criteria

Internal area	Time	Repeatable Maximum $L_{Aeq,(1\ Hour)}$ with closed windows and doors	Repeatable Maximum $L_{Aeq,(1\ Hour)}$ with open windows and doors
Living Areas	Day or Night	< 40dBA	<50dBA
Sleeping Areas	Day or Night	< 40dBA	<50dBA

Aircraft Noise

C5 New dwellings on land within the Australian Noise Exposure Forecast (ANEF) Contour 20 or higher will be designed and constructed in accordance with current Australian Standard AS 2021 (Acoustic Aircraft Noise Intrusion-Building siting and Construction) and Part 3J - Development Affecting Operations at Sydney Airport. Applicants are to address the compliance in the Development Application.

C6 New or higher density residential development which, in the opinion of Council is considered to be aircraft noise sensitive will be not supported where the property is located within the 30+ ANEF contour.

C7 The introduction of noise abatement measures to achieve compliance with the current AS 2021 must be integrated into the design of the building.

Road and Rail Noise

C8 Development on land which is on or is within 100 metres of a railway corridor, a classified road or any other road with an annual average daily traffic volume of more than 40,000 vehicles (based on the traffic volume data published on the website of the RMS) must consider the requirements of the Development Near Rail Corridors and Busy Roads - Interim Guideline (19 December 2008) in accordance with cl.87(3) and cl.102(3) of SEPP (Infrastructure) 2007. An acoustic report prepared by a certified acoustic consultant must be submitted at development application stage to demonstrate compliance with this Guideline.

Note: This development is not within 100m of a rail corridor or major road, as such, the requirements of Clause C4 listed in Table 7 above will be adopted for this project.

4.1.2 AS2021:2015 'Aircraft Noise Intrusion - Building Siting and Construction'

As the proposed site is located between ANEF 20 and 25 contours, AS2021 states that a full evaluation of internal noise levels is carried out. This evaluation requires an examination of the likely levels of internal noise from aircraft flyovers.

AS2021 stipulates the internal noise levels listed in the Table 2 below for residential buildings. These levels will be used to assess aircraft noise intrusion into the residential levels of the development.

Table 4 – Indoor Design Sound Levels for Aircraft Noise Reduction Assessment

ACTIVITY	Indoor Design Sound Level from Aircraft Flyover dB(A) L_{max}
Sleeping areas, dedicated lounges	50
Other habitable spaces	55
Bathrooms, toilets, laundries	60
Private Office, Meeting rooms	55
Open Plan Offices	65

4.1.3 Summary of Criteria

The governing project criteria is presented in the table below.

Table 5 – Summary of Internal Noise Level Criteria

Space	Noise Level
Sleeping Areas (10pm – 7am)	40 dB(A) $L_{eq(1hour)}$
Living Spaces	40 dB(A) $L_{eq(1hour)}$

Note 1: Based on apartments suitably furnished ready for occupation

Table 6 – Summary of Internal Noise Level Criteria Aircraft

Space	Aircraft Noise Intrusion Criteria dB(A) L_{max}
Sleeping Areas	50 dB(A) L_{max}
Living Spaces	55 dB(A) L_{max}
Bathrooms	60 dB(A) L_{max}
Private Office, Meeting	55 dB(A) L_{max}
Open Plan Offices	65 dB(A) L_{max}

5 ASSESSMENT - NOISE INTRUSION

Aircraft and traffic noise intrusion into the proposed development was assessed using the measured traffic noise levels and the predicted aircraft noise level presented above.

Calculations were undertaken taking into account the orientation of windows, barrier effects *(where applicable)*, the total area of glazing, facade transmission loss and room sound absorption characteristics. In this way, the likely interior noise levels can be predicted.

5.1 RECOMMENDED CONSTRUCTIONS

5.1.1 Glazed Windows and Doors

The following constructions are recommended to comply with the project noise objectives. Aluminium framed/sliding glass doors and windows will be satisfactory provided they meet the following criteria. All external windows and doors listed are required to be fitted with Q-lon type acoustic seals. (**Mohair Seals are unacceptable**).

Thicker glazing may be required for structural, safety or other purposes. Where it is required to use thicker glazing than scheduled, this will also be acoustically acceptable.

The recommended constructions are listed in the table below.

Table 7 – Recommended Glazing Construction

Space	Recommended Construction	Acoustic Seals
All Bedrooms	10.38mm Laminate	Yes
All Living Spaces	10.38mm Laminate	Yes
Gym, Games, Media	10.38mm Laminate	Yes
Library	10.38mm Laminate	Yes
Office, Meeting Rooms	10.38mm Laminate	Yes
Communal Area, Lounge	10.38mm Laminate	Yes

It is recommended that only window systems having test results indicating compliance with the required ratings obtained in a certified laboratory be used where windows with acoustic seals have been recommended.

In addition to complying with the minimum scheduled glazing thickness, the R_w rating of the glazing fitted into open-able frames and fixed into the building opening should not be lower than the values listed in Table 8 for all rooms. Where nominated, this will require the use of acoustic seals around the full perimeter of open-able frames and the frame will need to be sealed into the building opening using a flexible sealant.

Table 8 - Minimum R_w of Glazing

Glazing Assembly	Minimum R_w of Installed Window
10.38mm Laminate	35

5.1.2 External Roof/Ceiling

External roof construction will be constructed from concrete or masonry elements, this proposed structure will not require any further acoustic upgrading. In the event that any penetrations are required thru the external skin, an acoustic grade sealant should be used to minimise all gaps.

5.1.3 External Walls

External wall construction will be constructed from concrete or masonry elements, this proposed structure will not require any further acoustic upgrading. In the event that any penetrations are required thru the external skin, an acoustic grade sealant should be used to minimise all gaps.

5.1.4 Mechanical Ventilation

AS2021-2015 requires the installation of ventilation or air conditioning system where aircraft noise exposure exceeds ANEF 20. As internal noise levels cannot be achieved with windows open it is required that an in **all areas** to have alternative outside air supply system or air conditioning be installed. These should be in accordance with AS 1668.2 requirements. Any mechanical ventilation system that is installed should be acoustically designed such that the acoustic performance of the recommended constructions is not reduced by any duct or pipe penetrating the wall/ceiling/roof. Noise emitted to the property boundaries by any ventilation system shall comply with Council requirements.

5.1.5 Development Application Stage Advice

The façade treatments and recommendations listed within this section above are for the purpose of obtaining authority approval only, and all façade treatments must be reviewed at CC stage by the builder's acoustic consultant to ensure compliance with the development consent.

6 NOISE EMISSION ASSESSMENT CRITERIA

Noise emissions from the site have been assessed for noise emitted from base building mechanical plant and loading dock facilities.

The noise emission from the project site shall comply with the requirements of the following documents;

- Botany Bay Council Development Control Plan (DCP) 2013;
- NSW, Environmental Protection Agency document – Noise Policy for Industry (NPfI) 2017.

6.1 CITY OF BOTANY BAY DEVELOPMENT CONTROL PLAN (DCP) – 2013

The Botany Bay DCP does not specify any criteria for noise emission from the development. As such, the following criteria will be adopted.

6.2 NSW EPA NOISE POLICY FOR INDUSTRY (NPFI) - 2017

The NPfI provides guidelines for assessing noise impacts from developments. The recommended assessment objectives vary depending on the potentially affected receivers, the time of day, and the type of noise source. The NPfI has two requirements which both have to be complied with, namely an intrusiveness criterion and an amenity criterion.

6.2.1 Intrusiveness Criterion

Section 2.3: Project Intrusiveness Noise Level

"The intrusiveness of an industrial noise source may generally be considered acceptable if the level of noise from the source (represented by the L_{Aeq} descriptor), measured over a 15-minute period, does not exceed the background noise level by more than 5 dB when beyond a minimum threshold. This intrusiveness noise level seeks to limit the degree of change a new noise source introduces to an existing environment.

Table 9 – NPfI Intrusiveness – Project Noise Trigger Level

Receiver	Time of day	Background Noise Level dB(A)L_{90}	Intrusiveness Criteria Project Noise Trigger Level (Background + 5dB(A)
Residential Receivers	Day	43	48
	Evening	43	48
	Night	39	44

6.2.2 Amenity Criterion

Section 2.4: Amenity Noise Levels and Project Amenity Noise Levels

"To limit continuing increases in noise levels from application of the intrusiveness level alone, the ambient noise level within an area from all industrial noise sources combined should remain below the recommended amenity noise levels specified in Table 2.2 where feasible and reasonable. The recommended amenity noise levels will protect against noise impacts such as speech interference, community annoyance and some sleep disturbance.

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

Table 2.2 on page 11 of the policy has four categories to distinguish different residential areas. They are rural, suburban, urban and urban/industrial interface. The subject site has been assessed against noise emission criteria in accordance with the 'urban' category.

Table 10 – NPfI Amenity Criteria

Type of Receiver	Time of day	Amenity Project Noise Trigger Level dB(A) L_{eq}
Residential (urban)	Day	58
	Evening	48
	Night	43
Commercial	When in Use	63

6.2.3 Summarised Plant Noise Emission Criteria

Summary for noise emission criteria for all plant associated with the development has been summarised below.

Table 11 – Summary of Project Noise Trigger Levels

Receiver	Time of day	Amenity Criteria dB(A) L_{eq}	Intrusiveness Criteria (Background + 5dB(A)
Residential Receivers	Day	58	**48**
	Evening	48	**48**
	Night	**43**	44
Commercial Receivers	When in Use	**63**	N/A*

*Intrusiveness Criteria only applies to Residential.

7 NOISE EMISSION ASSESSMENT

7.1 MECHANICAL PLANT NOISE

Detailed plant selection has not been undertaken at this stage, as plant selections have not been determined. Detailed acoustic review should be undertaken at CC stage to determine acoustic treatments to control noise emissions to satisfactory levels. Satisfactory levels will be achievable through appropriate plant selection and location and, if necessary, standard acoustic treatments such as duct lining, acoustic silencers and enclosures.

Noise emissions from all mechanical services to the closest residential receiver should comply with the requirements of section 5.1.

7.2 LOADING DOCK

The proposed loading dock is externally located on lower. The nearest noise receiver for this loading dock is the student rooms which overlook the loading dock, and the residential apartment building, which also has apartments from level 3 which overlook the loading dock) located to the west of the development.

An assessment of noise from a garbage truck or large delivery vehicle (i.e. a semi) entering, existing and idling within the loading zone was conducted assuming the following:

- Vehicle is travelling at 10km/hr
- Each truck has a sound power level of 100dB(A).
- Each small delivery van has a sound power level of 90dB(A).
- 1 minute to manoeuvre in/out of the loading dock.
- Recommendations outlined in section 7.2.1 have been implemented.

The potentially most affected receiver with regards to this noise source is receiver 4 at 19-21 Church Street, Mascot. Predicted noise levels to this receiver have been presented below. If a compliant noise levels are achieved at this receiver, compliant noise levels will be achieved at all remaining residential receivers

Table 12 - Noise Source Emission Levels

Receiver	Predicted Noise Level dB(A)$L_{eq,15min}$	Criteria dB(A)$L_{eq,15min}$	Complies
Receiver 4 19-21 Church Street, Mascot	48	≤ 48 (Daytime)	Yes
	48	≤ 48 (Evening)	Yes
	(Not in operation)	≤ 43 (Night)	Yes

7.3 ROOF TOP BASKETBALL COURT

It is proposed to have half court basketball court located on the northern side of level 10. The Basketball court will be external, with varying barriers around all four sides.

The court is a recreation area for the students available between 8:00am and 6:00pm, and will not accommodate planned classes.

An assessment of noise from students using the court was conducted assuming the following:

- The court is at full capacity, 10 players yelling.
- The sound power level of students playing on a court is 95dB(A)L_{eq}.
- The court will only be open between the hours of 7:00am and 10:00pm.
- Recommendations outlined in section 7.2.1 have been implemented.

The potentially most affected receiver with regards to this noise source is receiver 1 at 13A Church Street, Mascot. This future development is proposed to be 12 storeys high and will therefore be able to overlook the basketball court. Predicted noise levels to this receiver have been presented below. If a compliant noise levels are achieved at this receiver, compliant noise levels will be achieved at all remaining residential receivers

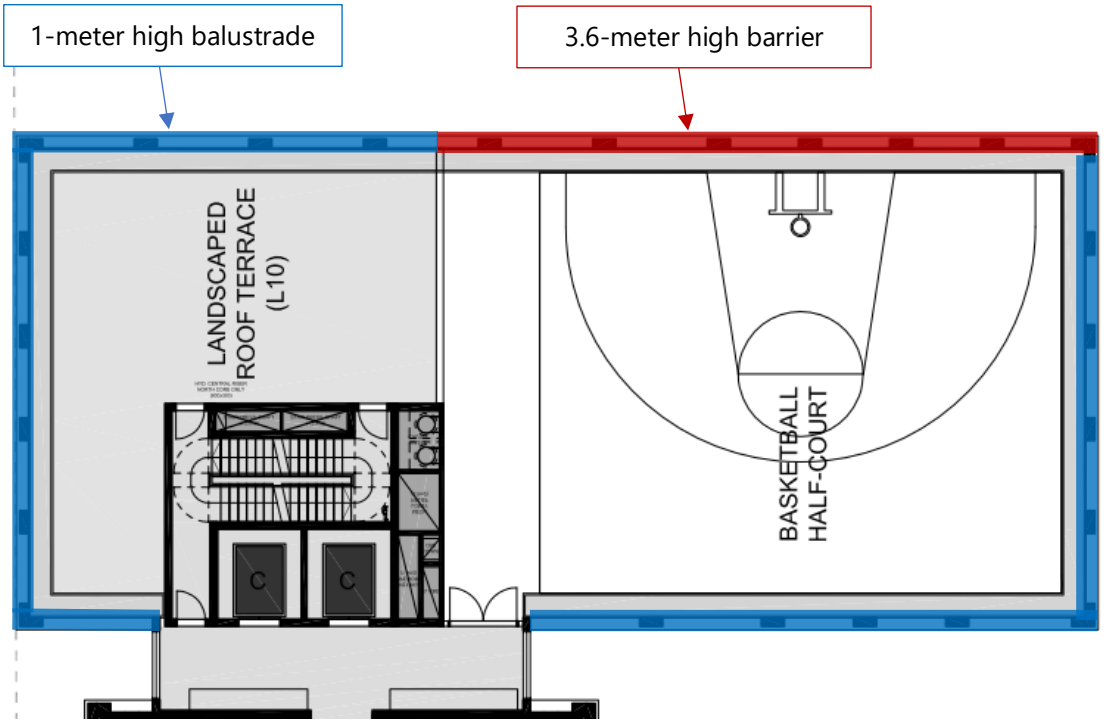
Table 13 - Noise Source Emission Levels

Receiver	Predicted Noise Level dB(A)$L_{eq,15min}$	Criteria dB(A)$L_{eq,15min}$	Complies
Receiver 1 13A Church Street, Mascot	45	≤ 48 (Daytime)	Yes
	45	≤ 48 (Evening)	Yes
	(Not in operation)	≤ 43 (Night)	Yes

7.3.1 Recommendations

Recommended acoustic treatments of loading dock are below:

- The loading dock shall only operate between the following hours
    - 7am to 10pm Monday to Saturday, or
    - 8am to 10pm Sunday or public holidays.
- Trucks within the loading dock shall ensure that engines and refrigeration units are turned off while located within the dock area apart from when entering and departing the dock area.
- The Basketball court is to only be open between the hours of 7:00am and 10:00pm in order to maintain acoustic compliance. However, we note that an even more stringent time frame of 8:00am to 6:00pm will be implemented.
- A 3.6-meter high solid barrier is to be constructed along the northern side of the basketball court as shown in red below. The barrier can be constructed from Perspex, glass, wood, metal or masonry materials. The remaining sides of the rooftop court are to have a minimum 1-meter high solid balustrade as shown in blue below. We note that plans currently show a 1-meter high planter box in these areas, this will be acoustically acceptable.



8 CONCLUSION

This report presents an acoustic assessment of noise impacts associated with the proposed student accommodation. Iglu Mascot, 6-8 John Street & 13B Church Avenue, Mascot.

Provided that the treatments set out in section 4 of this report are employed, internal noise levels shall comply with the requirements below:

- Botany Bay Council Development Control Plan (DCP) 2013;
- Australian Standard AS 2021:2015 *'Acoustics – Aircraft noise intrusion – building siting and construction'*;

External noise emissions criteria have been setup in this report to satisfy the requirements from the following documents;

- Botany Bay Council Development Control Plan (DCP) 2013;
- NSW, Environmental Protection Agency document – Noise Policy for Industry (NPfI) 2017.

Loading dock and roof top court noise controls have been detailed in Section 5.2.2 while noise emission from plant service project building will be determined at CC stage.

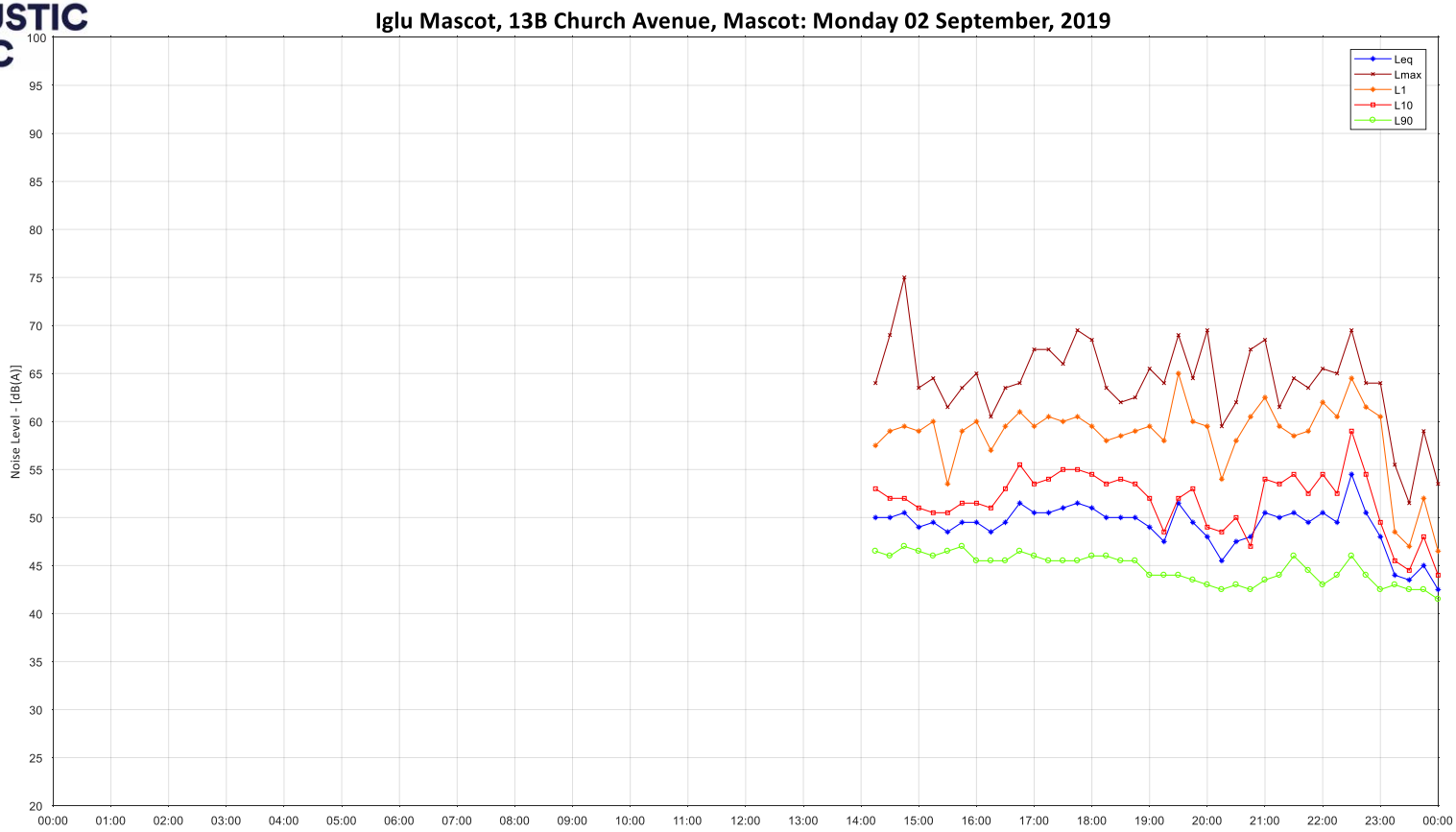
Please contact us should you have any further queries.

We trust this information is satisfactory. Please contact us should you have any further queries.

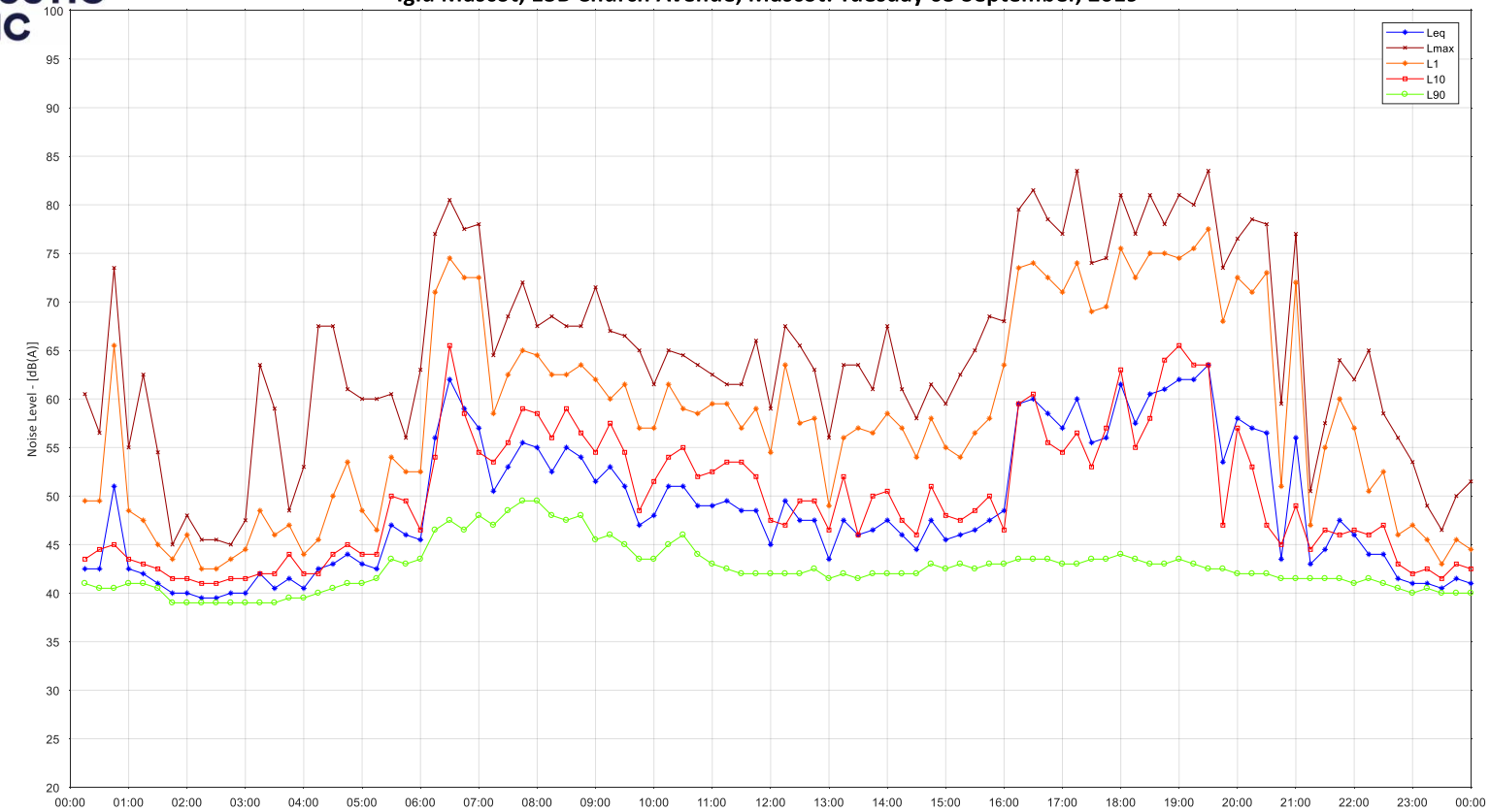
Yours faithfully,

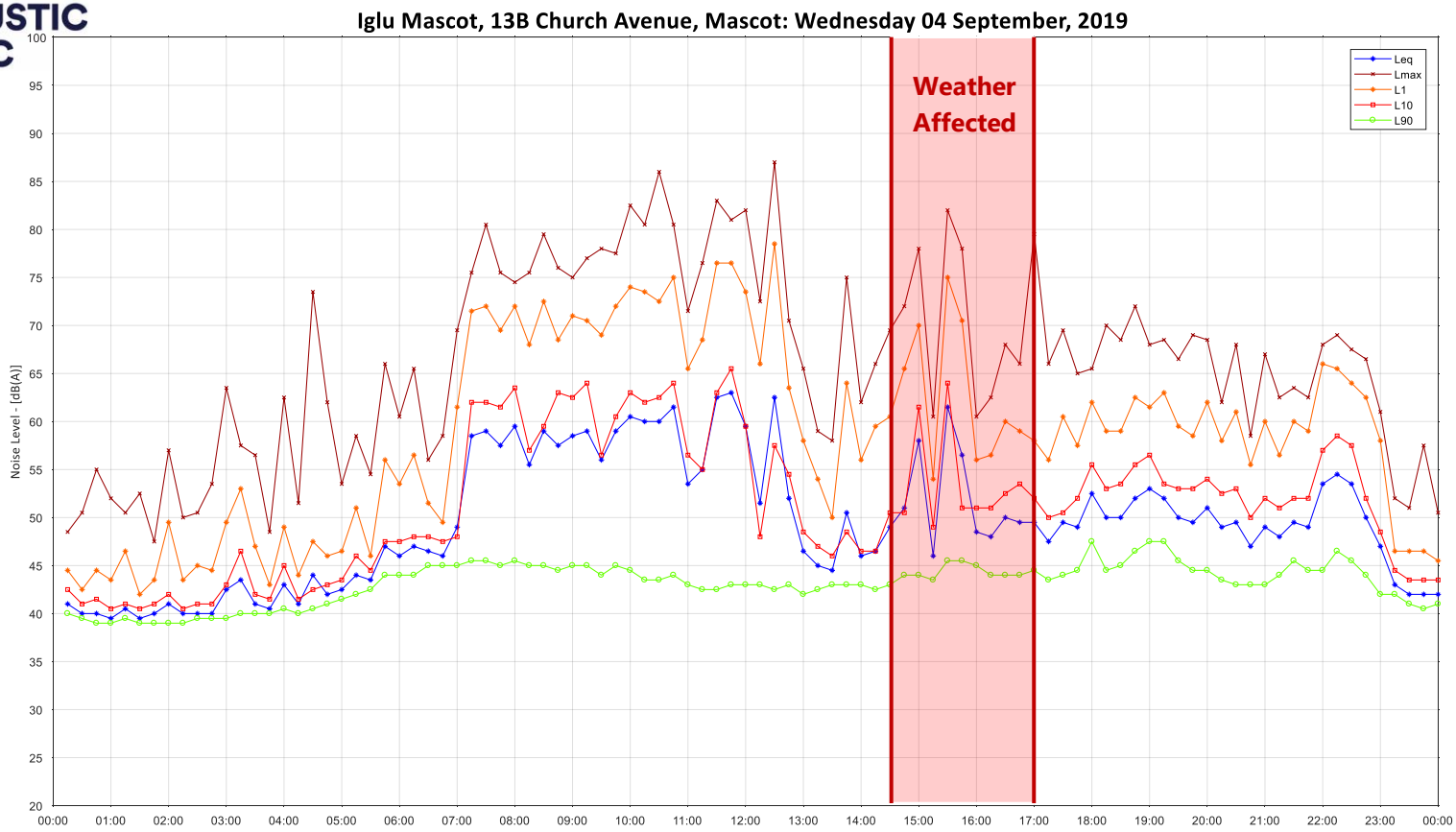
Acoustic Logic Consultancy Pty Ltd
Jenna MacDonald

APPENDIX ONE:
UNATTENDED NOISE MONITORING DATA

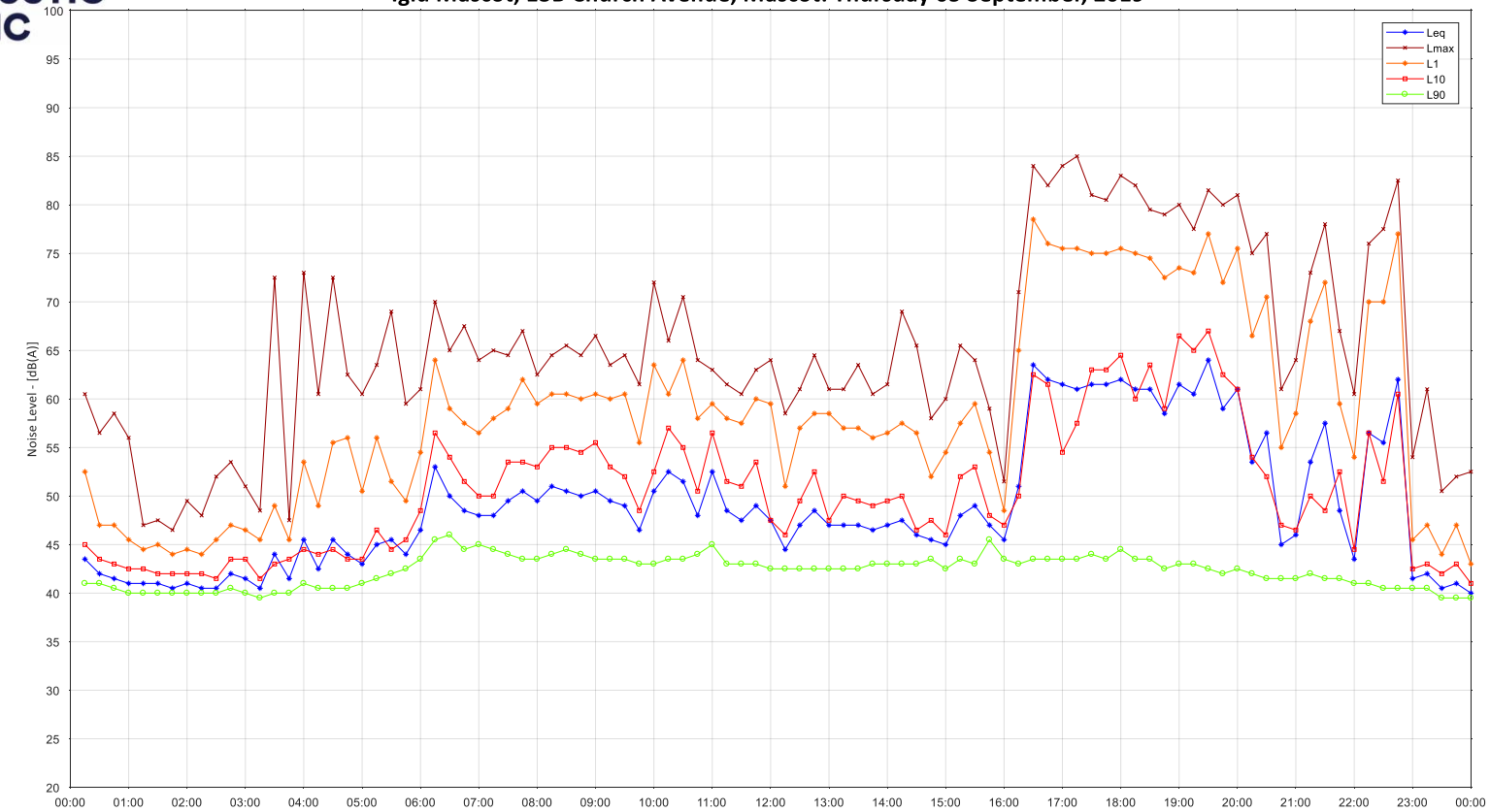

Iglu Mascot, 13B Church Avenue, Mascot: Monday 02 September, 2019
Noise Level - [dB(A)]
Leq
Lmax
L1
L10
L90
100
95
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00

Iglu Mascot, 13B Church Avenue, Mascot: Tuesday 03 September, 2019

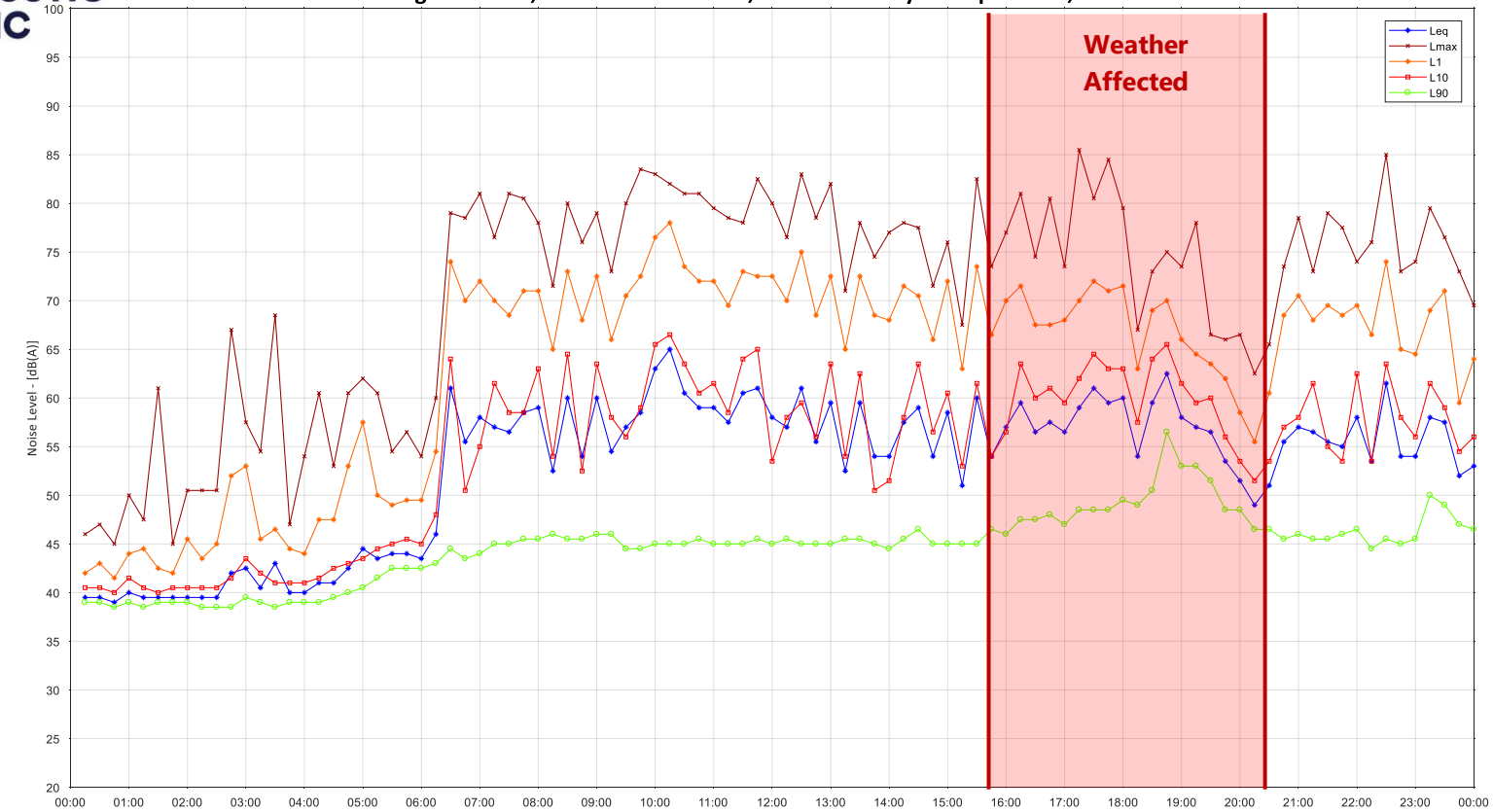


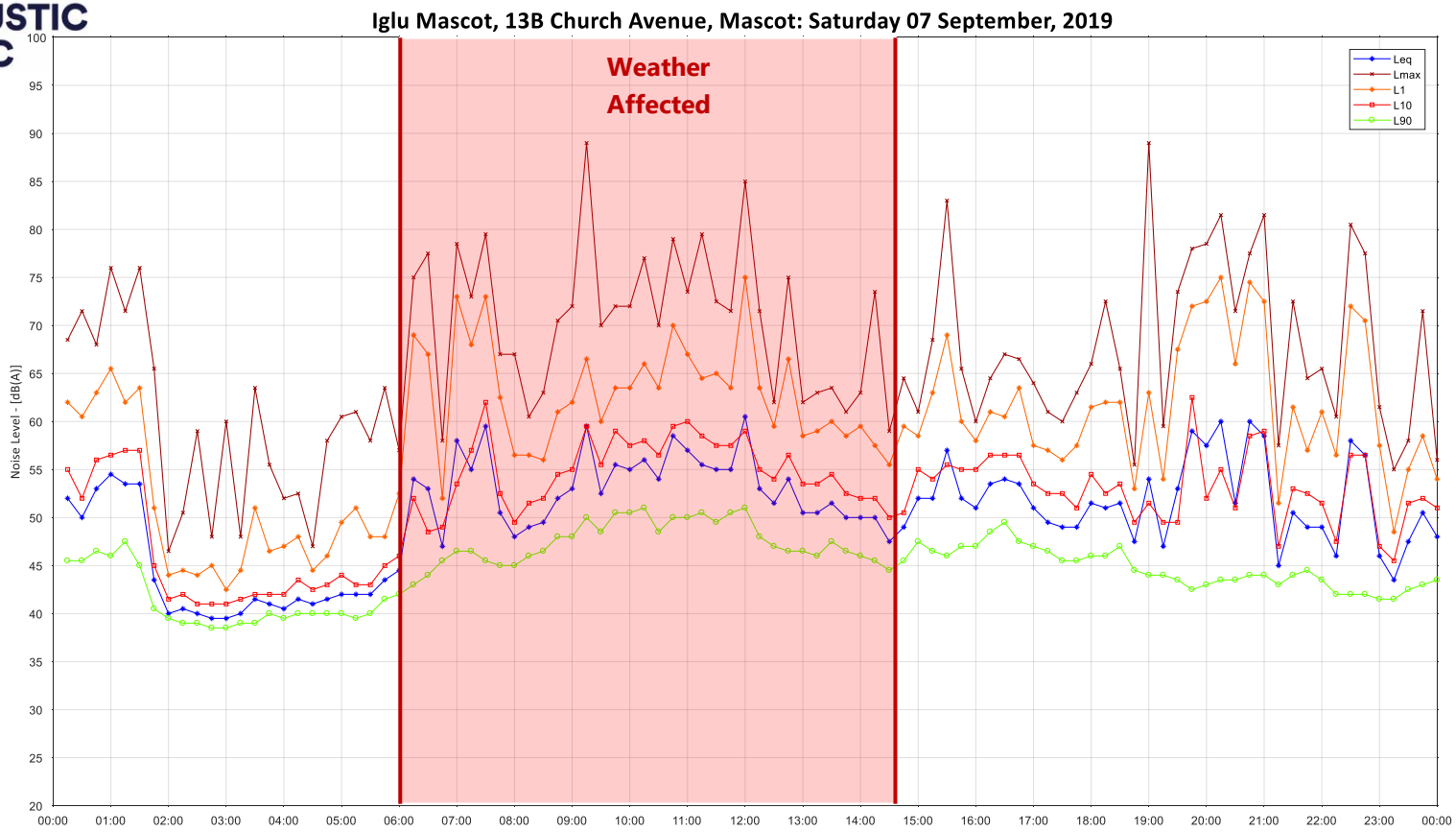

Iglu Mascot, 13B Church Avenue, Mascot: Wednesday 04 September, 2019
Weather Affected
Leq
Lmax
L1
L10
L90
Noise Level - [dB(A)]
100
95
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00

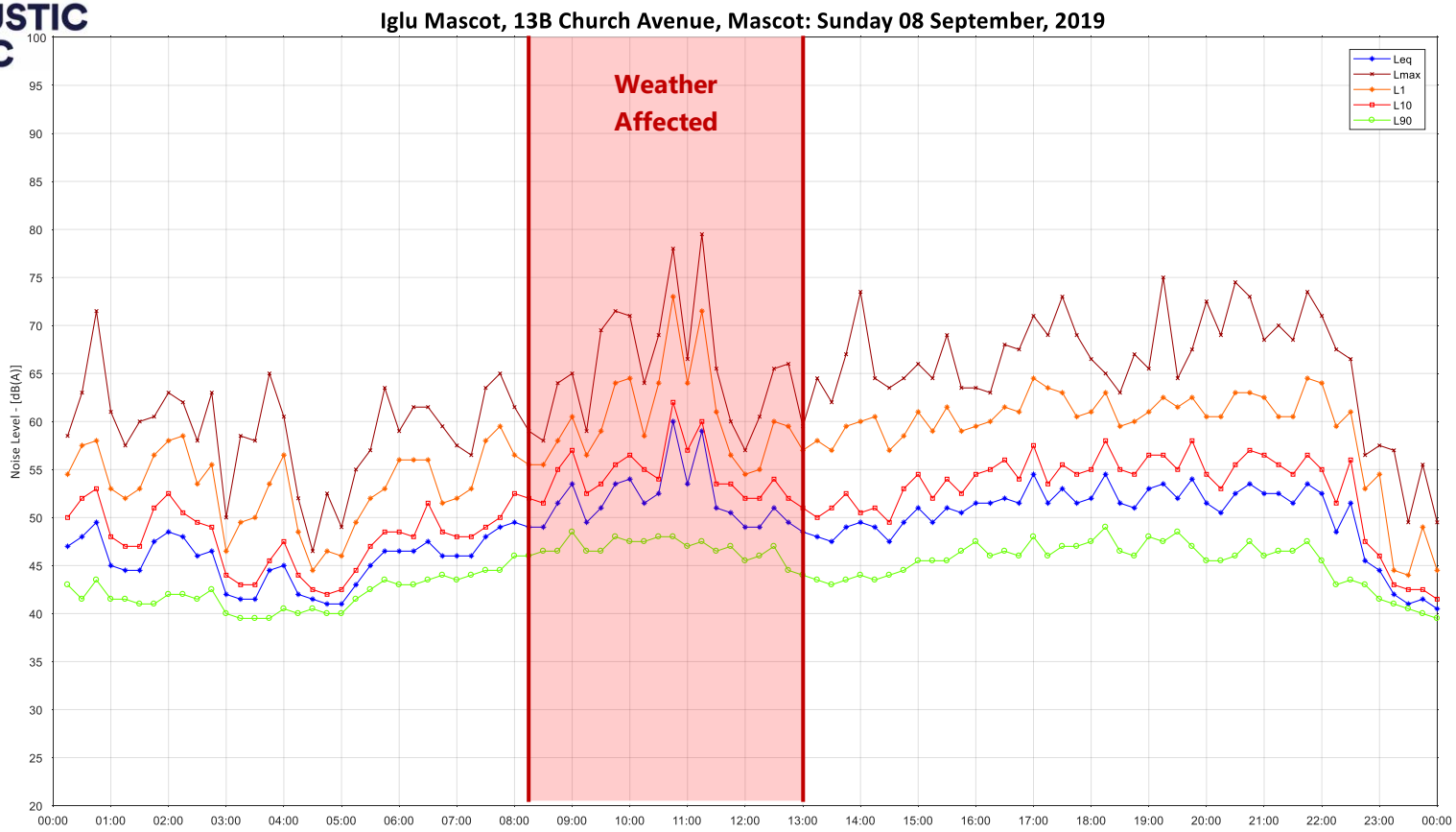
Iglu Mascot, 13B Church Avenue, Mascot: Thursday 05 September, 2019

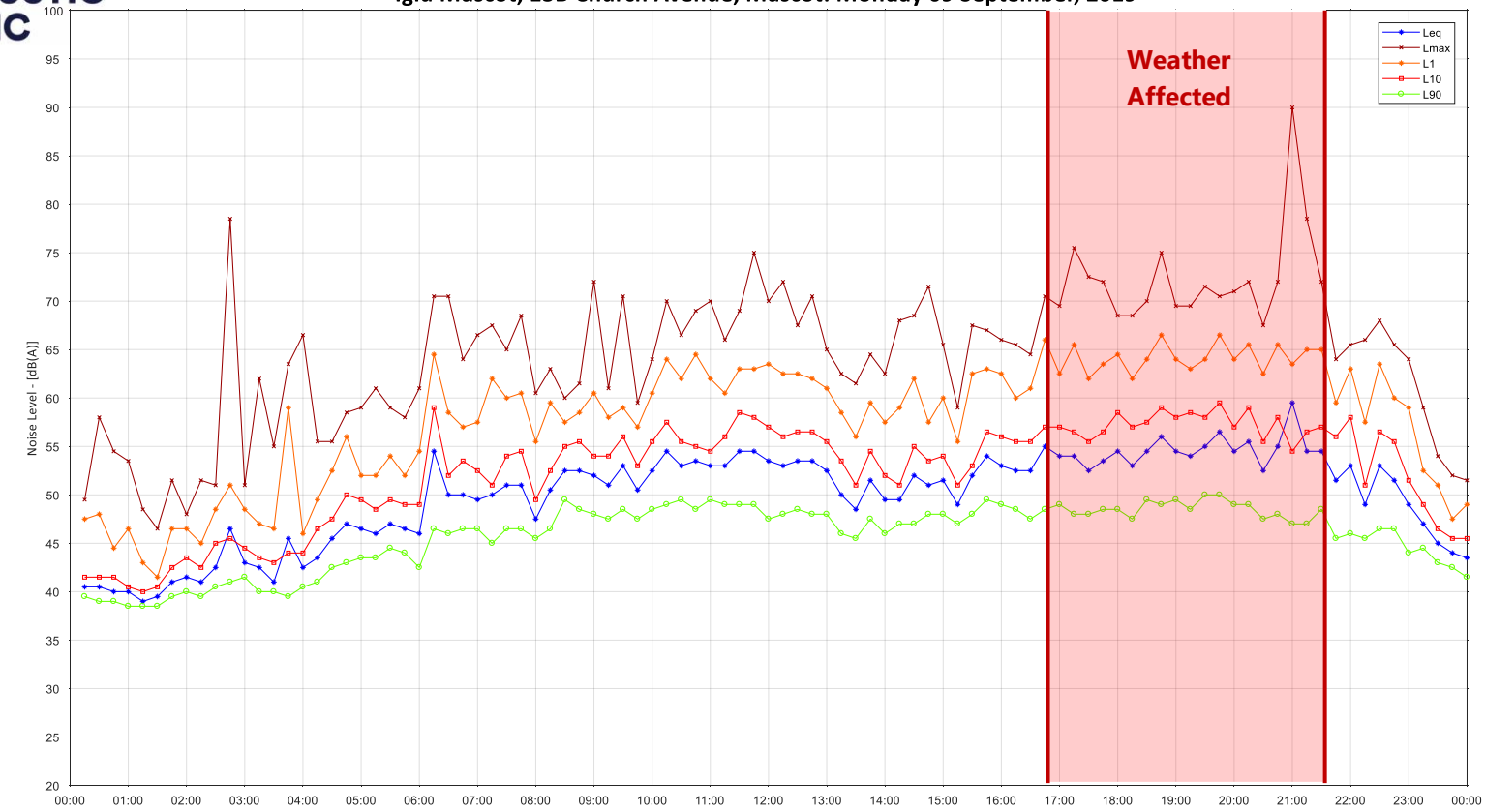


Iglu Mascot, 13B Church Avenue, Mascot: Friday 06 September, 2019




Iglu Mascot, 13B Church Avenue, Mascot: Saturday 07 September, 2019
Weather Affected
Leq
Lmax
L1
L10
L90
Noise Level - [dB(A)]
100
95
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00


Iglu Mascot, 13B Church Avenue, Mascot: Sunday 08 September, 2019
Weather Affected
Leq
Lmax
L1
L10
L90
Noise Level - [dB(A)]
100
95
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00


Iglu Mascot, 13B Church Avenue, Mascot: Monday 09 September, 2019
Weather Affected
Leq
Lmax
L1
L10
L90
Noise Level - [dB(A)]
100
95
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00

Iglu Mascot, 13B Church Avenue, Mascot: Tuesday 10 September, 2019