



THE STAR

22 June 2021

Key Sites and Industry Assessments
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Dear Sir/Madam,

**ACOUSTIC COMPLIANCE ASSESSMENT
THE STAR, SYDNEY
20-80 PYRMONT ROAD, PYRMONT NSW 2009**

Please find **enclosed** for your records The Star's Acoustic Compliance Assessment dated 21 June 2021.

Yours sincerely



Stephen Sablatnig
Project Director (NSW)
The Star Entertainment Group

THE STAR
SYDNEY

TREASURY
BRISBANE

THE STAR
GOLD COAST



Acoustic Compliance Assessment

for The Star Sydney - MP 08_0098 MOD 14
80 Pyrmont St, Pyrmont, NSW



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The Star Sydney

21 June 2021



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GLOSSARY

NOISE

Noise is produced through rapid variations in air pressure at audible frequencies (20 Hz – 20 kHz). Most noise sources vary with time. The measurement of a variable noise source requires the ability to describe the sound over a particular duration of time. A series of industry standard statistical descriptors have been developed to describe variable noise, as outlined in **Section 2.1.2** below.

NOISE DESCRIPTORS

L_{eq} – The sound pressure level averaged over the measurement period. It can be considered as the equivalent continuous steady-state sound pressure level, which would have the same total acoustic energy as the real fluctuating noise over the same time period.

L_{Aeq(15 min)} – The A-weighted equivalent continuous sound level over a 15 minute period.

L_{A10} – The A-weighted noise level that has been exceeded for 10% of the measurement duration.

L_{A90} – The A-weighted noise level that has been exceeded for 90% of the measurement duration.

dB – Decibels. The fundamental unit of sound, a Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell. Probably the most common usage of the Decibel in reference to sound loudness is dB sound pressure level (SPL), referenced to the nominal threshold of human hearing. For sound in air and other gases, dB(SPL) is relative to 20 micropascals (μPa) = 2×10^{-5} Pa, the quietest sound a human can hear.

A-WEIGHTING

"A-weighting" refers to a prescribed amplitude versus frequency curve used to "weight" noise measurements in order to represent the frequency response of the human ear. Simply, the human ear is less sensitive to noise at some frequencies and more sensitive to noise at other frequencies. The A-weighting is a method to present a measurement or calculation result with a number representing how humans subjectively hear different frequencies at different levels.

NOISE CHARACTER, NOISE LEVEL AND ANNOYANCE

The perception of a given sound to be deemed annoying or acceptable is greatly influenced by the character of the sound and how it contrasts with the character of the background noise. A noise source may be measured to have only a marginal difference to the background noise level, but may be perceived as annoying due to the character of the noise. Acoustic Dynamics' analysis of noise considers both the noise level and sound character in the assessment of annoyance and impact on amenity.

1 INTRODUCTION

1.1 SUMMARY

Acoustic Dynamics is engaged by **The Star Sydney** to prepare an acoustic compliance assessment of noise emission associated with the use and operation of various areas of The Star Sydney, located at 80 Pyrmont St, Pyrmont, NSW, in relation to the compliance requirements of MP 08_0098 MOD 14 Consent Conditions (MOD 14).

This document provides an assessment of noise emission levels from the use of various areas of The Star Sydney, and is prepared in accordance with the Modification of Minister's Approval Conditions, detailed within Modification/Application Number MP 08_0098 MOD 14.

1.2 DESCRIPTION OF OPERATIONS AND LOCATION

1.2.1 THE STAR SYDNEY

The Star Sydney is at 80 Pyrmont Street, Pyrmont, NSW. The Star Sydney site is bounded by Pyrmont St, Union St, Edward St, Pirrama Rd and Jones Bay Rd. The subject site and surrounding areas are located in a mixed zone, including residential and commercial premises (see **Figure 1.1** and **Figure 1.2**).

Pyrmont Bay lies to the north-east of the site.

- **Receivers:**
 - For the purposes of this assessment receiver locations have been deemed to be the nearest potentially affected sensitive receiver locations for the purpose of compliance measurements in relation to the operation of MOD 14, located in the following locations/streets:
 - Union Street
 - Edward Streets;
 - Sydney Wharf 9 Residences;
 - Jones Bay Road; and
 - Pyrmont Street.

Acoustic Dynamics understands the following in respect of the operations of The Star Sydney:

- **Operating Hours:**
 - It is understood the normal operating hours (non-COVID-19 restricted) are:
 - 24 hours per day, 7 days per week.
 - It is understood the present operating hours, during COVID-19 restrictions are:
 - 10am to 6am, 7 days per week.

- **Patronage:**
 - The applicable normal and COVID-19 restricted patron maximum numbers are presented in **Table 1.1** below

Table 1.1 Maximum Patron Numbers

Area	Area Description	Normal Maximum Patron Number	COVID-19 Restricted Maximum Patron Number
01	Sovereign Room	1,494	300
02	Oasis Level 2	1,171	300
04	MGF Sport	12,000	300
05	MGF Central		300
06	MGF Union St		300
07	Sovereign Lakes	215	110
08	Oasis Level 1	900	300

- **Areas Subject of this Assessment:**
 - The areas of The Star Sydney, which are the subject of this assessment are presented in **Table 1.2** below, showing former and current area names and relevant comments in relation to the operation of the area.

Table 1.2 Areas Subject of this Assessment

Area	Original Name (Name in Mod 14 Approval)	Current Name	Comment	Internal Meas't Location ¹
1	Level 3 Unenclosed gaming area on Pyrmont St side	Level 3 Unenclosed gaming area on Pyrmont St side	-	-
2	Level 3 Unenclosed gaming area on Pirrama Road side	Level 3 Unenclosed gaming area on Pirrama Road side	-	-
3	Level 1 Unenclosed gaming area on Pirrama Road side	Level 1 Unenclosed gaming area on Pirrama Road side	-	8, 9 & 10
4	Level 3 Pre-function space on Pyrmont St side	Level 3 Sovereign Room	Not currently operating	-
5	Level 3 Sovereign Room Outdoor Terrace	Level 3 Sovereign Room Outdoor Terrace	-	7 & 14
6	Level 1 Pirrama Road Outdoor Gaming Area	Pirrama Road Level 1 Unenclosed Gaming Area	-	8, 9 & 10
7	Level 3 Pirrama Road Entertainment Deck	-	No longer operated	-
8	Level 2 Oasis Outdoor Gaming Area	Level 2 Oasis Outdoor Gaming Area	Ceased operations post survey	12 & 13

Note: 1) Note is made that internal measurement location 11, the Level 1 Outdoor Gaming Area, is not included.

- **Mechanical Equipment:**

- With the exception of any kitchen exhaust fans within areas not operating due to COVID-19 restrictions, Acoustic Dynamics understands that all other mechanical plant and equipment across the site, including air-conditioning, bathroom, garbage, kitchen and car park exhaust fans is operating under normal conditions.

Figure 1.1 Location Map Showing The Star Sydney and Surrounds

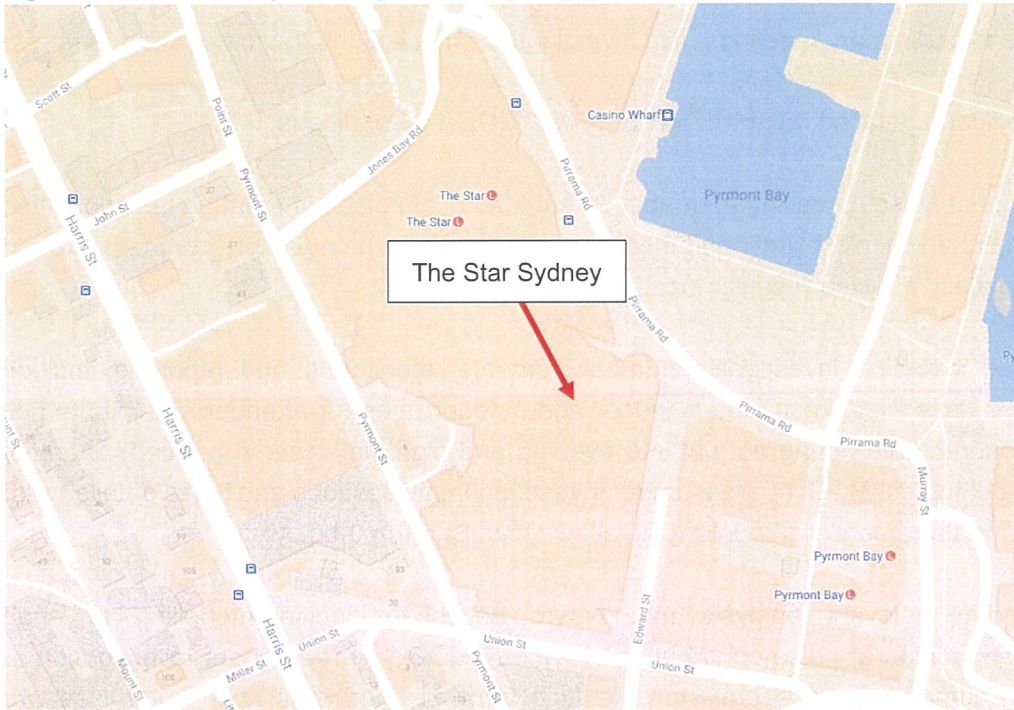


Figure 1.2 Aerial Image Showing The Star Sydney and Surrounds



1.3 SCOPE

Acoustic Dynamics has been engaged to provide an assessment of noise emission resulting from the operation of the site, in accordance with the requirements of MP 08_0098 MOD 14.

The scope of Acoustic Dynamics' engagement and the assessment is to include the following:

- Attend preliminary meetings, site investigations/inspections, review & arrangements;
- Conduct a detailed review of MP 08_0098 MOD 14 Conditions;
- Conduct noise modelling to enable determination of noise contribution of various items of mechanical plant and equipment around the site to the noise environment at nearby potentially affected receiver locations;
- Noise emission investigations, measurements, monitoring and reporting, including three visits with simultaneous indoor and outdoor operator-attended, 15-minute noise measurements during normal late evening and night-time (early morning) operations for the subject MOD 14 areas under investigation, at locations and times detailed within the measurement methodology detailed within **Section 3** below;
- Conduct relevant analysis and where necessary, noise modelling to enable determination of noise contribution of various MOD 14 areas under investigation and total cumulative noise emission resulting from all operations at the premises when assessed at nearby potentially affected receiver locations; and
- Prepare a concise report suitable for **submission to the relevant authorities**, detailing relevant noise criteria, our measurements, modelling and calculation results, and an assessment of the noise emission from the subject MOD 14 areas.

2 ASSESSMENT CRITERIA AND STANDARDS

To determine the criteria and requirements applicable to the subject development, Acoustic Dynamics has conducted a review of the criteria and requirements outlined in the Modification of Minister's Approval Conditions, detailed within Modification/Application Number MP 08_0098 MOD 14, and any other relevant noise emission requirements.

The relevant criteria and requirements are presented in below.

2.1 CONSENT CONDITIONS

2.1.1 MP 08_0098 MOD 14 CONSENT CONDITIONS (MOD 14)

A review of the MP 08_0098 MOD 14 Consent indicated the following conditions in relation to noise emission. Note is made that Condition F1 specifies the areas to be assessed under the requirements of Condition F1.

Part F - Post Occupation & Ongoing Operational

26. Condition F1 is amended by the insertion of **bold and underlined** words / numbers as follows:

F1 No Speakers or Music Outside

Speakers must not be installed and music must not be played in any of the outdoor areas associated with the premises including the public domain and outdoor terraces/decks/gaming areas, excluding the:

- a) *Level 3 Outdoor Pool Deck area of the hotel development;*
- b) *Level 3 Pirrama Road Entertainment Deck;*
- c) *Level 1 Pirrama Road Outdoor Gaming Areas;*
- d) **Oasis Outdoor Gaming Area fronting Pyrmont Street (as shown on Drawing No MOD-A9202A); and**
- e) **Sovereign Level 3 Outdoor Gaming Areas within the site and those fronting Pirrama Road and Pyrmont Streets (as shown on Drawing No MOD 14-A0703).**

Speakers located within the premises must not be placed so as to direct the playing of music towards the outdoor areas associated with the premises.

Note is made that the primary focus of the assessment is Condition F1E, together with Condition F6, with the assessment required to be submitted to the City of Sydney Council.

30. Condition F1E is amended by the insertion of **bold and underlined** words / numbers as follows:

F1E Monitoring

An appropriately qualified acoustic consultant who possesses the qualifications to render them eligible for membership of the Australian Acoustic Society, Institution of Engineers Australia or the Association of Australian Acoustic Consultants must be appointed **within two weeks of the approval of MPO8 0098 MOD 14 or prior to occupation of the areas nominated in Conditions F1 (b) to (e) and F3 (1) and (2) whichever is the sooner** and details of that appointment submitted to Council. During the first 90 days of entertainment and use of outdoor speakers in those outdoor areas identified in Conditions **F1 (b) to (e) and F3 (1) and (2)** the following acoustic measures must be undertaken:

1. The acoustic consultant must:
 - a) Measure and verify that the **cumulative** noise emanating from the premises complies with the noise criteria in Condition F5 Noise; and
 - b) If necessary, make recommendations to ensure that the **cumulative** noise emanating from the premises complies with the noise.
2. The noise measurements must be:
 - a) Undertaken without the knowledge of the Proponent, manager or operator of the premises;
 - b) Undertaken on at least three different occasions on three different days of the week (excluding Monday, Tuesday and Wednesday) for a time period which is deemed suitable by the acoustic consultant to determine if **cumulative** noise emanating from the premises complies with the noise criteria in Condition F5 Noise; and
 - c) Submitted to the City of Sydney Council, Health and Building Area Manager (West) within 7 days of the testing.
3. If the acoustic consultant recommends that additional treatment or works be undertaken under condition (1) (ii) above, those recommendations must be:
 - d) Submitted to the City of Sydney Council, Health and Building Area Manager (West) with the noise measurements as required in **(2)(b)** above; and
 - e) Implemented to the acoustic consultant's and the Council's satisfaction within one (1) month of the date of the acoustic consultant's report.
4. If the acoustic consultant's recommendations are not implemented in accordance with this condition, the premises must not use/operate speakers in outdoor areas until such time as the recommendations are implemented and verified.

The primary noise criterion for the assessment of all areas is provided by Condition F5, as follows.

32. Condition F5 is amended by the insertion of **bold and underlined** words / numbers as follows:

F5 Noise

Cumulative noise caused by the approved use including music and other activities must comply with the following criteria:

1. The use must not result in the transmission of "offensive noise" as defined in the Protection of the Environment Operations Act 1997 to any place of different occupancy **outside the boundary**;
 2. The L10 noise level emitted from the use must not exceed 5dB above the background (L90) noise level in any Octave Band Centre Frequency (31.5 Hz to 8kHz inclusive) between the hours of 7.00am and 12.00 midnight when assessed at the boundary of the nearest affected property. The background noise level must be measured in the absence of noise emitted from the use.
 3. The L10 noise level emitted from the use must not exceed the background (L90) noise level in any Octave Band Centre Frequency (31.5 Hz to 8kHz inclusive) between the hours of 12.00 midnight and 7.00am when assessed at the boundary of the nearest affected property. The background noise level must be measured in the absence of noise emitted from the use.
 4. Notwithstanding compliance with (1) and (2) above, the noise from the use must not be audible within any habitable room in any residential property between the hours of 12.00 midnight and 7.00am.
 5. The L10 noise level emitted from the use must not exceed the background noise level (L90) in any Octave Band Centre Frequency (31.5 Hz to 8kHz inclusive) by more than 3dB when assessed indoors at any affected commercial premises.
33. Condition F6 is amended by the insertion of **bold and underlined** words / numbers and deletion of the ~~struck-out~~ words / numbers as follows:

F6 Acoustic Review

Within 3 months **of operation of the approval of MPO8 0098 MOD 14, and within 3 months of the issue of an Occupation Certificate for the areas nominated below** ~~in condition F1A (b) to (e) and condition F1AC (1) and (2) whichever is the sooner,~~ acoustic review demonstrating compliance with the above conditions is to be submitted to the Department. The reviews are to include specific noise monitoring and testing at relevant times and in accordance with the Star's Noise Management Plan. Areas nominated are:

- **Level 3 Unenclosed gaming area on Pyrmont St side;**
- **Level 3 Unenclosed gaming area and Level 1 Unenclosed gaming area on Pirrama Road side**
- **Level 3 Pre-function space on Pyrmont St side;**
- **Level 3 Sovereign Room Outdoor Terrace;**
- **Level 1 Pirrama Road Outdoor Gaming Area;**
- **Level 3 Pirrama Road Entertainment Deck; and**
- **Level 2 Oasis Outdoor Gaming Area.**

Note is made that following consultation between Acoustic Dynamics and The Star Sydney, it is understood that several of the above nominated areas were either not constructed, or were constructed, operated for a period and are no longer operated, as detailed in **Table 1.2**.

Accordingly, Acoustic Dynamics and The Star Sydney have identified all relevant terrace and outdoor gaming areas within The Star Sydney. Acoustic Dynamics has performed compliance monitoring of these identified areas. Measurement locations are detailed within **Section 3** below.

3 MEASUREMENT METHODOLOGY

Further to a review of the applicable criteria as detailed within the MP 08_0098 MOD 14 Consent detailed in **Section 2** above, and following various site visits and inspections, a measurement and monitoring program was determined, whereby simultaneous operator-attended indoor and outdoor measurements would be undertaken by two engineers to enable determination of relevant internal information to correlate with external measurements and monitoring.

3.1.1 MEASUREMENT AND MONITORING PROCEEDURE

The measurement and monitoring procedure required the following:

1. Attendance of two (2) acoustic engineers to undertake concurrent internal and external measurements;
2. Each engineer was accompanied by a security guard at all times;
3. The measurement program was determined in advance of monitoring;
4. Sound level meter timer clocks were synchronised prior to the commencement of each night of monitoring;
5. A field calibration (93.8 dB @ 1kHz calibration tone) was performed on each sound level meter prior to the commencement and at the conclusion of monitoring for each night of monitoring;
6. Engineers communicated via WhatsApp messaging service;
7. Engineers proceeded between monitoring locations via foot;
8. With the exception of concurrent monitoring at locations 12 (internal) and 5 (external), each measurement was undertaken for 15 minutes duration. (At locations 12 (internal) and 5 (external), each measurement was undertaken for 5 minutes duration);
9. Concurrent measurements were conducted at internal locations and an external location representative of the nearest sensitive receiver;
10. All measurements were undertaken with sound level meter microphones positioned 1.5m above the ground for both internal and external measurements;
11. Internal monitoring and measurement locations were as described in **Table 3.1** and shown in **Figure 3.2** and **Figure 3.3**;

Table 3.1 Internal Measurement Locations

Loc ID	Measurement Location	Comment / Detailed Description
7	Sovereign Rivers Pit 99 (above Soky)	Loc ID 7 is on the Sovereign Rovers Pit 99 terrace area, around 1m from eastern balustrade
8	L1 Pirrama Rd OGA (Sth)	Loc ID 8 is in the southern part of the outdoor gaming area, around 1m from the north-eastern balustrade
9	L1 Pirrama Rd OGA (Nth)	Loc ID 9 is in the northern part of the outdoor gaming area, around 1m from the north-eastern balustrade
10	L1 Pirrama Rd OGA(O/A)	Loc ID 10 is within the outdoor gaming area, around 12m from the north-eastern balustrade
11	L1 OGA (above Porte C)	Loc ID 11 is in the outdoor gaming area, around 1m from the northern balustrade
12	L2 Oasis OGA (Nth)	Loc ID 12 is in the Oasis North outdoor gaming area, around 1m from the western balustrade
13	L2 Oasis OGA (Sth)	Loc ID 13 is in the Oasis south outdoor gaming area, around 1m from the western balustrade
14	Sovereign Rivers Pit 95 (above Antidote)	Loc ID 14 is on the Sovereign Rovers Pit 95 terrace area, around 1m from western balustrade

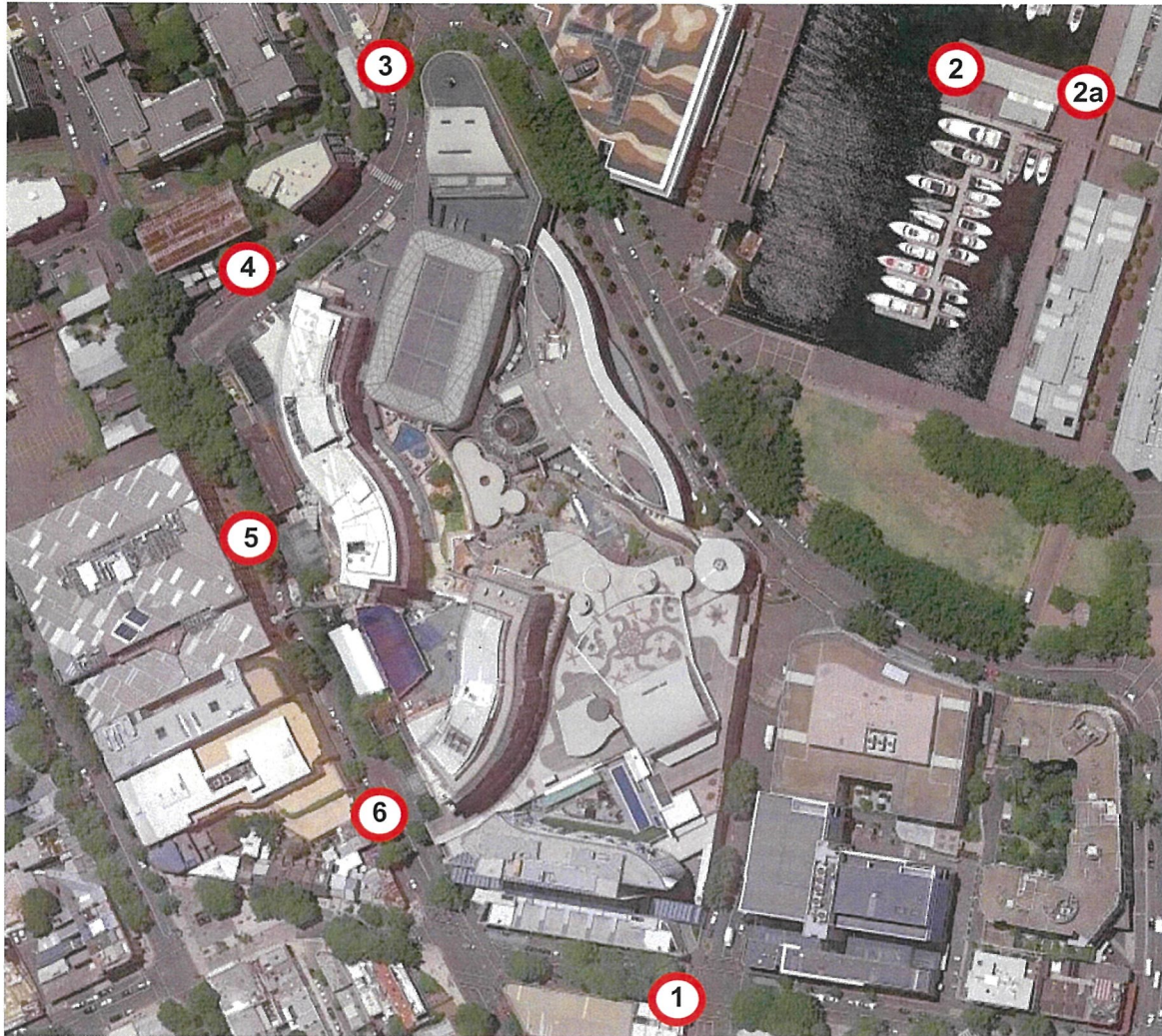
12. At internal locations, the engineer conducted a head count of the maximum number of patrons within the specific area during the 15 minute measurement;
13. External monitoring and measurement locations were all at ground or pavement level, and were as described in **Table 3.2** and shown in **Figure 3.1**;

Table 3.2 External Measurement Locations

Loc ID	Measurement Location	Comment / Detailed Description
1	31/33 Union Street & 65 Edward Street (Residential)	Loc ID 1 is at street corner, around 2.5m from the intersection of the northern and eastern facades Building description – 2 storey terrace dwellings
2	Sydney Wharf 9 Residences (Residential)	Loc ID 2a is adjacent to south-western entry foyer steps, at top of steps, around 2m from façade, however this location was controlled by noise emission from kitchen exhaust fan at LuMi Dining restaurant. As such, location was changed to Loc ID 2, around 7m from the north-western corner of the jetty Building description – 5 storey residential apartment building
3	8 Jones Bay Road (Residential)	Loc ID 3 is around 3m from the facade, and around 2m the parking/pay meter. Building description – 3 storey commercial building with residential apartment located on top (3 rd) floor
4	18 Pyrmont Street (Residential)	Loc ID 4 is around 2m from the facade, in line with the rear facade of the dwelling Building description – 2 storey terrace dwellings
5	55 Pyrmont Street (Commercial)	Loc ID 5 is around 2m from the facade, near the front door of the building Building description – 6 storey commercial building
6	93 Pyrmont Street (Residential)	Loc ID 6 is around 2m from the facade, near the front door of the dwelling Building description – 2 storey terrace dwellings

14. Due to the number of measurement locations, the late evening or early hour times of measurements and monitoring, the impracticality of entering and exiting a residential building quickly and efficiently at such times, it would be impractical to conduct such monitoring within residential apartments within these buildings. Accordingly, alternate representative locations have been selected as presented within **Table 3.2** above.
15. Note is made that the Watermark Tower, a residential building located at 2 Jones Bay Road, Pyrmont is a 9-storey residential building located between measurement locations 3 and 4. Given the location of source areas under investigation, locations 3 and 4 are considered to be more representative of the noise emission from the subject source areas.
16. At some external locations, extraneous noise emission was noted from sources including, but not limited to:
 - Near and distant unrelated road traffic;
 - Harbour activities including boats and boat parties;
 - Other unrelated venues and restaurants;
 - General unrelated pedestrians;
 - Unrelated mechanical services for other buildings; and
 - Birds.

Figure 3.1 The Star Sydney - External Operator-Attended Measurement Locations



17. As indicated in **Table 3.2**, following attendance at Location 2a, as shown in **Figure 3.1** above, note was made that the kitchen exhaust fan located in the eastern façade of the Lumi Bar & Dining restaurant was controlling the noise environment at that location. Accordingly, a decision was made to conduct noise monitoring at an alternate location, being Location 2 in **Figure 3.1**.
18. The various relevant terrace and outdoor gaming areas identified for Acoustic Dynamics' internal noise measurement and monitoring locations are shown in **Figure 3.2** and **Figure 3.3**.

Figure 3.2 The Star Sydney - Internal Measurement Locations – Level 01

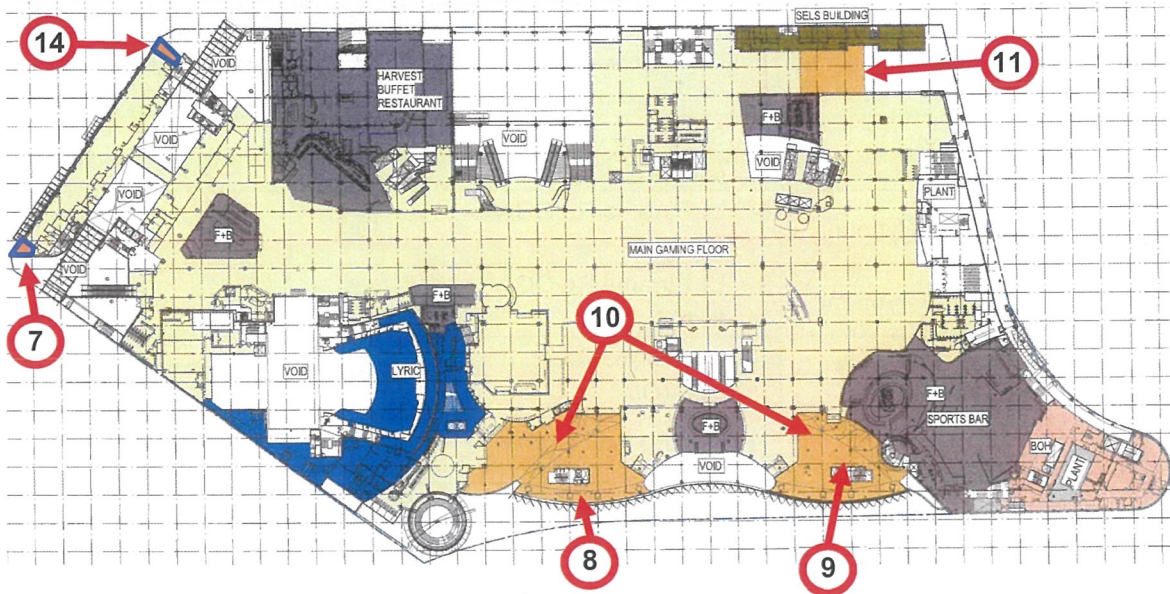
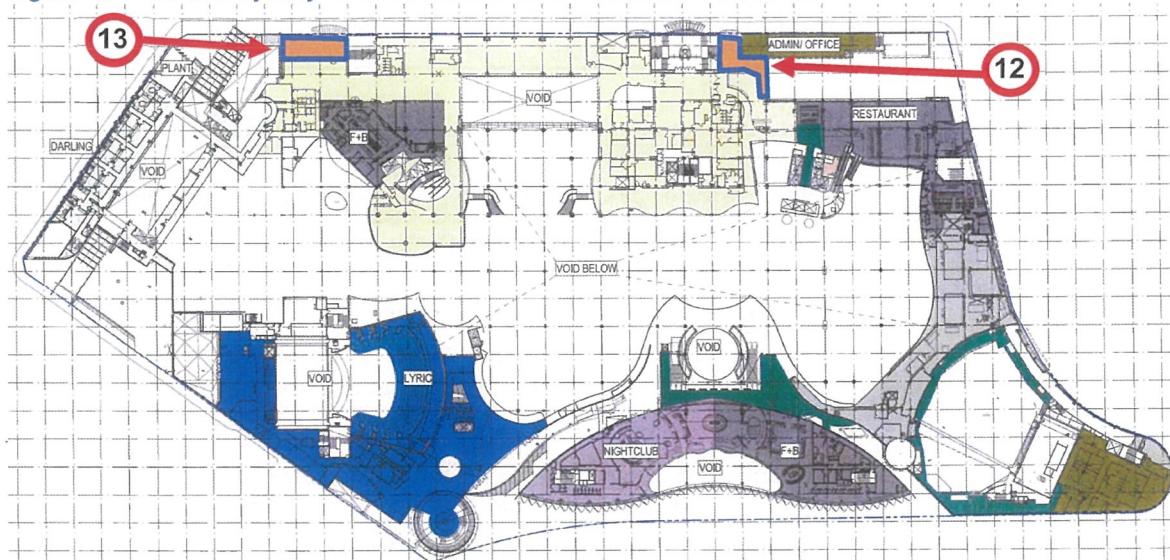


Figure 3.3 The Star Sydney - Internal Measurement Locations – Level 02



19. The relevant distances between measurement location and estimated maximum patron capacities for each respective area are shown in **Table 3.3**. Note should be made that the estimated patron capacities are not the patron capacities during our monitoring. The numbers of patrons present during our monitoring is presented within the measurement results, within **Table 5.2**, **Table 5.3** and **Table 5.4**.

Table 3.3 Distance Between Measurement Locations & Estimated Patron Capacity

Item	External Loc	Internal Loc	Approx. Distance [m]	Approx. Distance Loss [dB]	Estimated Patron Capacity
1	1. 31 Union / 65 Edward St	7. Sovereign Rivers Pit 99 (above Sokyō)	20	26	10-12
2	2. Wharf 9 Pyrmont	8. L1 Pirrama Rd OGA (Sth)	190	46	90-100
3	2. Wharf 9 Pyrmont	9. L1 Pirrama Rd OGA (Nth)	170	45	70-80
4	3. 8 Jones Bay Road	10. L1 Pirrama Rd OGA(O/A)	110	41	160-180
5	4. 18 Pyrmont St (Rear)	11. L1 OGA (above Porte C.)	50	34	70-80
6	5. 55 Pyrmont St	12. L2 Oasis OGA (Nth)	20	26	10-12
7	6. 93 Pyrmont St	13. L2 Oasis OGA (Sth)	30	30	20-25
8	6. 93 Pyrmont St	14. Sovereign Rivers Pit 95 (above Antidote)	50	34	13-16

Table 3.4 Measurement Locations and Times (Thu Night / Fri Morning) – 26/11-27/11/2020

Meas't No.	Day	Time	Internal Loc	External Loc
1	Thu	21:00-21:15	7. Sovereign Rivers Pit 99 (above Sokyō)	1. 31 Union / 65 Edward St
2		21:25-21:40	8. L1 Pirrama Rd OGA (Sth)	2. Wharf 9 Pyrmont
3		21:40-21:55	9. L1 Pirrama Rd OGA (Nth)	2. Wharf 9 Pyrmont
4		22:05-22:20	10. L1 Pirrama Rd OGA(O/A)	3. 8 Jones Bay Road
5		22:25-22:40	11. L1 OGA (above Porte C.)	4. 18 Pyrmont St (Rear)
6		22:45-22:50	12. L2 Oasis OGA (Nth)	5. 55 Pyrmont St
7		22:55-23:10	13. L2 Oasis OGA (Sth)	6. 93 Pyrmont St
8		23:15-23:30	14. Sovereign Rivers Pit 95 (above Antidote)	6. 93 Pyrmont St
9	Fri	00:00-00:15	7. Sovereign Rivers Pit 99 (above Sokyō)	1. 31 Union / 65 Edward St
10		00:25-00:40	8. L1 Pirrama Rd OGA (Sth)	2. Wharf 9 Pyrmont
11		00:40-00:55	9. L1 Pirrama Rd OGA (Nth)	2. Wharf 9 Pyrmont
12		01:05-01:20	10. L1 Pirrama Rd OGA(O/A)	3. 8 Jones Bay Road
13		01:25-01:40	11. L1 OGA (above Porte C.)	4. 18 Pyrmont St (Rear)
14		01:45-01:50	12. L2 Oasis OGA (Nth)	5. 55 Pyrmont St
15		01:55-02:10	13. L2 Oasis OGA (Sth)	6. 93 Pyrmont St
16		02:15-02:30	14. Sovereign Rivers Pit 95 (above Antidote)	6. 93 Pyrmont St

Table 3.5 Measurement Locations and Times (Sat Night / Sun Morning) – 28/11-29/11/2020

Meas't No.	Day	Time	Internal Loc	External Loc
1	Sat	21:00-21:15	7. Sovereign Rivers Pit 99 (above Sokyo)	1. 31 Union / 65 Edward St
2		21:25-21:40	8. L1 Pirrama Rd OGA (Sth)	2. Wharf 9 Pyrmont
3		21:40-21:55	9. L1 Pirrama Rd OGA (Nth)	2. Wharf 9 Pyrmont
4		22:05-22:20	10. L1 Pirrama Rd OGA(O/A)	3. 8 Jones Bay Road
5		22:25-22:40	11. L1 OGA (above Porte C.)	4. 18 Pyrmont St (Rear)
6		22:45-22:50	12. L2 Oasis OGA (Nth)	5. 55 Pyrmont St
7		22:55-23:10	13. L2 Oasis OGA (Sth)	6. 93 Pyrmont St
8		23:15-23:30	14. Sovereign Rivers Pit 95 (above Antidote)	6. 93 Pyrmont St
9	Sun	00:00-00:15	7. Sovereign Rivers Pit 99 (above Sokyo)	1. 31 Union / 65 Edward St
10		00:25-00:40	8. L1 Pirrama Rd OGA (Sth)	2. Wharf 9 Pyrmont
11		00:40-00:55	9. L1 Pirrama Rd OGA (Nth)	2. Wharf 9 Pyrmont
12		01:05-01:20	10. L1 Pirrama Rd OGA(O/A)	3. 8 Jones Bay Road
13		01:25-01:40	11. L1 OGA (above Porte C.)	4. 18 Pyrmont St (Rear)
14		01:45-01:50	12. L2 Oasis OGA (Nth)	5. 55 Pyrmont St
15		01:55-02:10	13. L2 Oasis OGA (Sth)	6. 93 Pyrmont St
16		02:15-02:30	14. Sovereign Rivers Pit 95 (above Antidote)	6. 93 Pyrmont St

Table 3.6 Measurement Locations and Times (Sun Night / Mon Morning) - 6/12-7/12/2020

Meas't No.	Day	Time	Internal Loc	External Loc
1	Sun	21:00-21:15	7. Sovereign Rivers Pit 99 (above Sokyo)	1. 31 Union / 65 Edward St
2		21:25-21:40	8. L1 Pirrama Rd OGA (Sth)	2. Wharf 9 Pyrmont
3		21:40-21:55	9. L1 Pirrama Rd OGA (Nth)	2. Wharf 9 Pyrmont
4		22:05-22:20	10. L1 Pirrama Rd OGA(O/A)	3. 8 Jones Bay Road
5		22:25-22:40	11. L1 OGA (above Porte C.)	4. 18 Pyrmont St (Rear)
6		22:45-22:50	12. L2 Oasis OGA (Nth)	5. 55 Pyrmont St
7		22:55-23:10	13. L2 Oasis OGA (Sth)	6. 93 Pyrmont St
8		23:15-23:30	14. Sovereign Rivers Pit 95 (above Antidote)	6. 93 Pyrmont St
9	Mon	00:00-00:15	7. Sovereign Rivers Pit 99 (above Sokyo)	1. 31 Union / 65 Edward St
10		00:25-00:40	8. L1 Pirrama Rd OGA (Sth)	2. Wharf 9 Pyrmont
11		00:40-00:55	9. L1 Pirrama Rd OGA (Nth)	2. Wharf 9 Pyrmont
12		01:05-01:20	10. L1 Pirrama Rd OGA(O/A)	3. 8 Jones Bay Road
13		01:25-01:40	11. L1 OGA (above Porte C.)	4. 18 Pyrmont St (Rear)
14		01:45-01:50	12. L2 Oasis OGA (Nth)	5. 55 Pyrmont St
15		01:55-02:10	13. L2 Oasis OGA (Sth)	6. 93 Pyrmont St
16		02:15-02:30	14. Sovereign Rivers Pit 95 (above Antidote)	6. 93 Pyrmont St

4 NOISE MEASUREMENT EQUIPMENT & STANDARDS

All measurements were conducted in general accordance with Australian Standard 1055:2018, *"Acoustics - Description and Measurement of Environmental Noise"*. Acoustic Dynamics' sound measurements were carried out using precision sound level meters conforming to the requirements of IEC 61672.1:2019 *"Electroacoustics: Sound Level Meters – Part 1: Specifications"*. The survey instrumentation used during the survey is set out in **Table 3.1**.

Table 4.1 Noise Survey Instrumentation

Type	Serial Number	Instrument Description
2250	2679541	Brüel & Kjaer Modular Precision Sound Level Meter
4189	2670479	Brüel & Kjaer 12.5 mm Prepolarised Condenser Microphone
4230	1234136	Brüel & Kjaer Acoustic Calibrator
2270	2664115	Brüel & Kjaer Modular Precision Sound Level Meter
4189	2650956	Brüel & Kjaer 12.5 mm Prepolarised Condenser Microphone
4230	623588	Brüel & Kjaer Acoustic Calibrator

All measurement equipment used has current NATA certification. The reference sound pressure level was checked prior to and after the measurements using the acoustic calibrator (93.8 dB @ 1kHz) and with negligible drift. The Bruel & Kjaer 2250 Sound Level Meter listed above was used for all internal measurements within The Star Sydney, while the Bruel & Kjaer 2270 Sound Level Meter listed above was used for all outdoor measurements.

5 NOISE MEASUREMENTS AND ASSESSMENT

The following section provides the results of operator attended noise measurements and, where appropriate, noise emission prediction calculations and modelling, as well as an assessment of contributed noise emission levels from noise sources associated with The Star Sydney's Mod 14 development at nearby sensitive receiver locations.

5.1 PATRON NUMBERS

During our noise measurements surveys, the following patron numbers were obtained from the duty security managers at various times.

These numbers are maintained in real-time via staff members on each entry and exit point to each designated area. Staff enter the patron numbers into an App ("The Guest Count") and the duty security manager can view numbers in real-time. These numbers were requested several times throughout our monitoring and screenshot images were provided to confirm the numbers as detailed in **Table 5.1**.

Table 5.1 Patron Numbers During Noise Measurement Surveys

Location	Date [DD/MM] / Time [HH:MM]										
	26/11	26/11	27/11	27/11	28/11	28/11	29/11	6/12	6/12	7/12	7/12
	21:35	23:08	01:48	02:25	21:14	23:57	01:55	21:15	22:57	00:30	01:55
01 Sovereign Rm	283	253	174	139	299	273	269	285	286	216	159
02 Oasis Level 2	21	11	4	4	173	117	91	62	47	31	16
04 MGF Sports	177	205	86	64	269	272	207	271	166	164	130
05 MGF Central	234	233	128	105	286	275	289	179	178	107	54
06 MGF Union St	126	101	30	33	270	266	196	101	75	38	8
07 Sovereign Lakes	21	21	6	3	55	38	25	33	23	10	8
08 Oasis Level 1	221	182	118	104	280	245	176	229	211	137	78
Total Patrons	1083	1006	546	452	1632	1486	1253	1160	986	703	453

The following maximum patron numbers were applicable during Acoustic Dynamics' surveys:

- Areas 01, 02, 04, 05, 06, 08 – Maximum Patrons = 300 (in each)
- Area 07 – Maximum patrons = 110

Note is made that the designated areas listed above do not align with the measurement locations indicated in **Figure 3.2** and **Figure 3.3**, however the numbers provided in the above table provide an indication of area capacity and patron numbers during our measurements and monitoring. Additionally, an indication of patron numbers within each of the subject areas of monitoring is included within the measurement results in **Table 5.2** to **Table 5.4**.

5.2 NOISE EMISSION MEASUREMENTS – RAW MEASUREMENTS

The measured noise levels at the respective measurement locations, as raw measurement data without any data exclusion are presented in **Table 5.2**, **Table 5.3** and **Table 5.4** as follows:

- **Table 5.2** – Thursday night 26/11 and Friday morning 27/11;
- **Table 5.3** – Saturday night 28/11 and Sunday morning 29/11; and
- **Table 5.4** – Sunday night 6/12 and Monday morning 7/12.

Where noise emission was identified from The Star Sydney, the tables include a description of measured L_{A10} noise emission levels, or measured L_{Aeq} noise emission levels, in the case of mechanical noise emission.

Table 5.2 Overall Measurement Results [dB] - Thu Night / Fri Morning – 26/11-27/11/2020

Meas't No.	Measurement Location		Measurement Start Time		Descriptor					Description of Measured L _{A10} Noise Emission Levels [dB]
	Internal	External	Day	Time	Internal		External			
					L _{Aeq}	L _{A10}	L _{Aeq}	L _{A10}	L _{A90}	
1	(1) 31 Union / 65 Edward	(7) Sov'n Rivers Pit 99	Thu	21:00	62	62	61	63	55	Patrons: 0 Music: None Other: No mech, music, gaming or patron noise emission from The Star
2	(2) Wharf 9 Pymont	(8) L1 Pirrama Rd OGA (Sth)	Thu	21:25	60	62	52	53	51	Patrons: 10-14 Music: None Other: No mech, music, gaming or patron noise emission from The Star
3	(2) Wharf 9 Pymont	(9) L1 Pirrama Rd OGA (Nth)	Thu	21:40	66	70	52	53	51	Patrons: 0 Music: None Other: No mech, music, gaming or patron noise emission from The Star
4	(3) 8 Jones Bay Rd	(10) L1 Pirrama Rd OGA (O/A)	Thu	22:05	65	69	61	64	52	Patrons: 46 Music: None Other: No music, gaming or patron noise emission from The Star Some Star mech audible (est L _{Aeq} 47 dB)
5	(4) 18 Pymont St (Rear)	(11) L1 OGA (above Porte C.)	Thu	22:25	65	67	58	61	55	Patrons: 25 Music: None Other: No music, gaming or patron noise emission from The Star Some Star mech audible (est L _{Aeq} 48 dB)
6	(5) 55 Pymont St	(12) L2 Oasis OGA (Nth)	Thu	22:45	60	62	63	67	56	Patrons: 1 Music: None Other: No mech, music, gaming or patron noise emission from The Star
7	(6) 93 Pymont St	(13) L2 Oasis OGA (Sth)	Thu	22:55	58	61	63	66	56	Patrons: 0 Music: None Other: No mech, music, gaming or patron noise emission from The Star
8	(6) 93 Pymont St	(14) Sov'n Rivers Pit 95	Thu	23:15	65	67	64	66	57	Patrons: 0 Music: None Other: No mech, music, gaming or patron noise emission from The Star

Meas't No.	Measurement Location		Measurement Start Time		Descriptor					Description of Measured L _{A10} Noise Emission Levels [dB]
	Internal	External	Day	Time	Internal		External			
					L _{Aeq}	L _{A10}	L _{Aeq}	L _{A10}	L _{A90}	
9	(1) 31 Union / 65 Edward	(7) Sov'n Rivers Pit 99	Fri	00:00	59	60	59	62	52	Patrons: 0 Music: None Other: No mech, music, gaming or patron noise emission from The Star
10	(2) Wharf 9 Pymont	(8) L1 Pirrama Rd OGA (Sth)	Fri	00:25	60	63	56	51	47	Patrons: 20 Music: None Other: No mech, music, gaming or patron noise emission from The Star
11	(2) Wharf 9 Pymont	(9) L1 Pirrama Rd OGA (Nth)	Fri	00:40	60	57	49	49	47	Patrons: 4 Music: None Other: No mech, music, gaming or patron noise emission from The Star
12	(3) 8 Jones Bay Rd	(10) L1 Pirrama Rd OGA (O/A)	Fri	01:05	56	59	58	61	49	Patrons: 19 Music: None Other: No music, gaming or patron noise emission from The Star Some Star mech audible (est L _{Aeq} 47 dB)
13	(4) 18 Pymont St (Rear)	(11) L1 OGA (above Porte C.)	Fri	01:25	62	64	57	60	53	Patrons: 10 Music: None Other: No music, gaming or patron noise emission from The Star Some Star mech audible (est L _{Aeq} 48 dB)
14	(5) 55 Pymont St	(12) L2 Oasis OGA (Nth)	Fri	01:45	58	59	61	64	56	Patrons: 1 Music: None Other: No mech, music, gaming or patron noise emission from The Star
15	(6) 93 Pymont St	(13) L2 Oasis OGA (Sth)	Fri	01:55	58	58	65	62	54	Patrons: 0 Music: None Other: No mech, music, gaming or patron noise emission from The Star
16	(6) 93 Pymont St	(14) Sov'n Rivers Pit 95	Fri	02:15	61	63	59	61	54	Patrons: 0 Music: None Other: No mech, music, gaming or patron noise emission from The Star

Table 5.3 Overall Measurement Results [dB] - Sat Night / Sun Morning – 28/11-29/11/2020

Meas't No.	Measurement Location		Measurement Start Time		Descriptor					Description of Measured L _{A10} Noise Emission Levels [dB]
	Internal	External	Day	Time	Internal		External			
					L _{Aeq}	L _{A10}	L _{Aeq}	L _{A10}	L _{A90}	
1	(1) 31 Union / 65 Edward	(7) Sov'n Rivers Pit 99	Sat	21:00	62	62	63	65	55	Patrons: 0 Music: None Other: No mech, music, gaming or patron noise emission from The Star
2	(2) Wharf 9 Pymont	(8) L1 Pirrama Rd OGA (Sth)	Sat	21:25	61	63	56	56	51	Patrons: 27 Music: None Other: No mech, music, gaming or patron noise emission from The Star
3	(2) Wharf 9 Pymont	(9) L1 Pirrama Rd OGA (Nth)	Sat	21:40	59	61	55	57	52	Patrons: 4 Music: None Other: No mech, music, gaming or patron noise emission from The Star
4	(3) 8 Jones Bay Rd	(10) L1 Pirrama Rd OGA (O/A)	Sat	22:05	62	64	63	66	56	Patrons: 40 Music: None Other: No music, gaming or patron noise emission from The Star Some Star mech audible (est Contrib L _{Aeq} 48 dB)
5	(4) 18 Pymont St (Rear)	(11) L1 OGA (above Porte C.)	Sat	22:25	66	67	61	63	55	Patrons: 40 Music: None Other: No music, gaming or patron noise emission from The Star Some Star mech audible (est Contrib L _{Aeq} 48 dB)
6	(5) 55 Pymont St	(12) L2 Oasis OGA (Nth)	Sat	22:45	65	66	75	69	58	Patrons: 5 Music: None Other: No mech, music, gaming or patron noise emission from The Star
7	(6) 93 Pymont St	(13) L2 Oasis OGA (Sth)	Sat	22:55	58	61	64	66	58	Patrons: 0 Music: None Other: No mech, music, gaming or patron noise emission from The Star
8	(6) 93 Pymont St	(14) Sov'n Rivers Pit 95	Sat	23:15	63	65	64	67	59	Patrons: 0 Music: None Other: No mech, music, gaming or patron noise emission from The Star

Meas't No.	Measurement Location		Measurement Start Time		Descriptor					Description of Measured L _{A10} Noise Emission Levels [dB]
	Internal	External	Day	Time	Internal		External			
					L _{Aeq}	L _{A10}	L _{Aeq}	L _{A10}	L _{A90}	
9	(1) 31 Union / 65 Edward	(7) Sov'n Rivers Pit 99	Sun	00:00	62	63	64	66	55	Patrons: 0 Music: None Other: No mech, music, gaming or patron noise emission from The Star
10	(2) Wharf 9 Pyrmont	(8) L1 Pirrama Rd OGA (Sth)	Sun	00:25	61	62	53	54	49	Patrons: 14 Music: None Other: No mech, music, gaming or patron noise emission from The Star
11	(2) Wharf 9 Pyrmont	(9) L1 Pirrama Rd OGA (Nth)	Sun	00:40	59	61	51	53	46	Patrons: 8 Music: None Other: No mech, music, gaming or patron noise emission from The Star
12	(3) 8 Jones Bay Rd	(10) L1 Pirrama Rd OGA (O/A)	Sun	01:05	59	62	60	63	50	Patrons: 51 Music: None Other: No music, gaming or patron noise emission from The Star Some Star mech audible (est Contrib L _{Aeq} 48 dB)
13	(4) 18 Pyrmont St (Rear)	(11) L1 OGA (above Porte C.)	Sun	01:25	70	69	63	62	54	Patrons: 32 Music: None Other: No music, gaming or patron noise emission from The Star Some Star mech audible (est Contrib L _{Aeq} 48 dB)
14	(5) 55 Pyrmont St	(12) L2 Oasis OGA (Nth)	Sun	01:45	59	61	62	66	55	Patrons: 2 Music: None Other: No mech, music, gaming or patron noise emission from The Star
15	(6) 93 Pyrmont St	(13) L2 Oasis OGA (Sth)	Sun	01:55	56	59	62	65	55	Patrons: 0 Music: None Other: No mech, music, gaming or patron noise emission from The Star
16	(6) 93 Pyrmont St	(14) Sov'n Rivers Pit 95	Sun	02:15	61	61	61	63	56	Patrons: 0 Music: None Other: No mech, music, gaming or patron noise emission from The Star

Table 5.4 Overall Measurement Results [dB] - Sun Night / Mon Morning – 6/12-7/12/2020

Meas't No.	Measurement Location		Measurement Start Time		Descriptor					Description of Measured L _{A10} Noise Emission Levels [dB]
	Internal	External	Day	Time	Internal		External			
					L _{Aeq}	L _{A10}	L _{Aeq}	L _{A10}	L _{A90}	
1	(1) 31 Union / 65 Edward	(7) Sov'n Rivers Pit 99	Sat	21:00	60	61	62	65	55	Patrons: 0 Music: None Other: No mech, music, gaming or patron noise emission from The Star
2	(2) Wharf 9 Pymont	(8) L1 Pirrama Rd OGA (Sth)	Sat	21:25	64	66	50	51	48	Patrons: 44 Music: None Other: No mech, music, gaming or patron noise emission from The Star
3	(2) Wharf 9 Pymont	(9) L1 Pirrama Rd OGA (Nth)	Sat	21:40	59	62	51	54	49	Patrons: 12 Music: None Other: No mech, music, gaming or patron noise emission from The Star
4	(3) 8 Jones Bay Rd	(10) L1 Pirrama Rd OGA (O/A)	Sat	22:05	62	64	59	61	50	Patrons: 40 Music: None Other: No music, gaming or patron noise emission from The Star Some Star mech audible (est Contrib L _{Aeq} 46 dB)
5	(4) 18 Pymont St (Rear)	(11) L1 OGA (above Porte C.)	Sat	22:25	64	66	60	62	54	Patrons: 39 Music: None Other: No music, gaming or patron noise emission from The Star Some Star mech audible (est Contrib L _{Aeq} 47 dB)
6	(5) 55 Pymont St	(12) L2 Oasis OGA (Nth)	Sat	22:45	59	62	62	66	54	Patrons:1 Music: None Other: No mech, music, gaming or patron noise emission from The Star
7	(6) 93 Pymont St	(13) L2 Oasis OGA (Sth)	Sat	22:55	56	59	59	62	52	Patrons: 0 Music: None Other: No mech, music, gaming or patron noise emission from The Star
8	(6) 93 Pymont St	(14) Sov'n Rivers Pit 95	Sat	23:15	63	63	70	69	54	Patrons: 0 Music: None Other: No mech, music, gaming or patron noise emission from The Star

Meas't No.	Measurement Location		Measurement Start Time		Descriptor					Description of Measured L _{A10} Noise Emission Levels [dB]
	Internal	External	Day	Time	Internal		External			
					L _{Aeq}	L _{A10}	L _{Aeq}	L _{A10}	L _{A90}	
9	(1) 31 Union / 65 Edward	(7) Sov'n Rivers Pit 99	Sun	00:00	60	60	64	63	51	Patrons: 0 Music: None Other: No mech, music, gaming or patron noise emission from The Star
10	(2) Wharf 9 Pymont	(8) L1 Pirrama Rd OGA (Sth)	Sun	00:25	57	59	46	47	45	Patrons: 15 Music: None Other: No mech, music, gaming or patron noise emission from The Star
11	(2) Wharf 9 Pymont	(9) L1 Pirrama Rd OGA (Nth)	Sun	00:40	55	57	47	47	44	Patrons: 4 Music: None Other: No mech, music, gaming or patron noise emission from The Star
12	(3) 8 Jones Bay Rd	(10) L1 Pirrama Rd OGA (O/A)	Sun	01:05	58	60	60	62	47	Patrons: 8 Music: None Other: No music, gaming or patron noise emission from The Star Some Star mech audible (est Contrib L _{Aeq} 46 dB)
13	(4) 18 Pymont St (Rear)	(11) L1 OGA (above Porte C.)	Sun	01:25	62	64	57	58	53	Patrons: 8 Music: None Other: No music, gaming or patron noise emission from The Star Some Star mech audible (est Contrib L _{Aeq} 47 dB)
14	(5) 55 Pymont St	(12) L2 Oasis OGA (Nth)	Sun	01:45	59	60	58	61	54	Patrons: 2 Music: None Other: No mech, music, gaming or patron noise emission from The Star
15	(6) 93 Pymont St	(13) L2 Oasis OGA (Sth)	Sun	01:55	55	56	58	62	51	Patrons: 0 Music: None Other: No mech, music, gaming or patron noise emission from The Star
16	(6) 93 Pymont St	(14) Sov'n Rivers Pit 95	Sun	02:15	60	60	57	61	51	Patrons: 0 Music: None Other: No mech, music, gaming or patron noise emission from The Star

5.3 OCTAVE BAND NOISE EMISSION MEASUREMENTS & ASSESSMENT

The measured noise levels at the respective measurement locations, are presented as raw measurement data, without any data exclusion in **Table 5.5**, **Table 5.6** and **Table 5.7**.

In each table, the first column titled “No.”, or number, indicates the measurement number. Measurements 1 to 8 were conducted before midnight, hence a background (L_{A90}) plus 5 dB criterion applies, while measurements 9 to 16 were conducted after midnight, hence a background (L_{A90}) plus 0 dB criterion applies.

The second column of each table, titled “Loc” indicates the measurement location, as shown in **Figure 3.1**, **Figure 3.2** and **Figure 3.3**, with the first four (4) rows representing the internal noise level and the following 4 rows representing the corresponding external noise level at the representative receiver location.

The measured L_{A10} is presented, while the calculated received L_{A10} noise level (“LAF(Calc)”) incorporates an adjustment for distance loss alone (see **Table 3.1**), assuming point source sound propagation from the measured internal level, and makes no allowance for any shielding or barrier losses.

Octave band criteria are presented within **Table 5.5**, **Table 5.6** and **Table 5.7**, within the rows presented as “LAF90+5dB” and “LAF90+0dB”. Note should be made that these rows are based upon the measured L_{A90} presented in the row above, assuming no contribution to the prevailing L_{A90} noise environment from The Star Sydney.

The calculated received L_{A10} noise level (“LAF(Calc)”) is then compared with the Octave band criteria, presented as “LAF90+5dB” or “LAF90+0dB”, depending upon whether it is assessed before midnight or after midnight, with an indication provided as to whether the determined octave band L_{A10} noise emission level is calculated to comply with the applicable criterion.

With internal locations sources 8 and 9, a cumulative calculation is performed in lieu of a calculation based upon each location, as the contributed noise received at the representative receiver location results from both source locations 8 and 9. This cumulative octave band noise level is then compared with the more stringent of the two determined octave band “LAF90+5dB” or “LAF90+0dB” criteria for conservatism.

Table 5.5 Octave Band Noise Levels [dB] & Assessment of Calculated Compliance – Thu 26/11 - Fri 27/11

No.	Loc	Int/ Ext	Day / Date	Time	Meas't Descr	32	63	125	250	500	1K	2K	4K	8K	OA
1	7	Int	Thu 26/11/20	21:00-21:15	LAeq	29	41	49	54	56	57	54	49	39	62
1	7	Int	Thu 26/11/20	21:00-21:15	LAF10	31	41	49	54	57	58	54	49	41	63
1	7	Int	Thu 26/11/20	21:00-21:15	LAF90	26	36	44	51	51	52	47	44	33	57
1	7	Int	Thu 26/11/20	21:00-21:15	LAF10(Calc)	5	15	23	28	31	32	28	23	15	37
1	1	Ext	Thu 26/11/20	21:00-21:15	LAeq	27	42	51	53	55	56	53	48	40	61
1	1	Ext	Thu 26/11/20	21:00-21:15	LAF10	30	42	49	52	57	57	55	50	43	62
1	1	Ext	Thu 26/11/20	21:00-21:15	LAF90	22	32	40	44	48	49	46	41	32	53
1	1	Ext	Thu 26/11/20	21:00-21:15	LAF90+5dB	27	37	45	49	53	54	51	46	37	58
Calculated to Comply with Criterion? (Y/N)						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
2	8	Int	Thu 26/11/20	21:25-21:40	LAeq	24	37	44	49	54	55	53	47	39	59
2	8	Int	Thu 26/11/20	21:25-21:40	LAF10	26	38	46	50	56	57	55	49	41	62
2	8	Int	Thu 26/11/20	21:25-21:40	LAF90	18	31	39	44	49	50	49	42	34	55
2	8	Int	Thu 26/11/20	21:25-21:40	LAF10(Calc)	-20	-8	0	4	10	11	9	3	-5	16
2	2	Ext	Thu 26/11/20	21:25-21:40	LAeq	17	30	38	46	47	46	45	35	24	52
2	2	Ext	Thu 26/11/20	21:25-21:40	LAF10	20	31	40	47	48	48	46	36	26	54
2	2	Ext	Thu 26/11/20	21:25-21:40	LAF90	13	26	35	43	44	44	42	33	21	50
2	2	Ext	Thu 26/11/20	21:25-21:40	LAF90+5dB	18	31	40	48	49	49	47	38	26	55
3	9	Int	Thu 26/11/20	21:40-21:55	LAeq	45	59	57	58	62	55	52	46	37	66
3	9	Int	Thu 26/11/20	21:40-21:55	LAF10	49	64	62	63	66	59	55	49	39	70
3	9	Int	Thu 26/11/20	21:40-21:55	LAF90	19	33	38	42	48	48	45	39	30	53
3	9	Int	Thu 26/11/20	21:40-21:55	LAF10(Calc)	4	19	17	18	21	14	10	4	-6	25
3	2	Ext	Thu 26/11/20	21:40-21:55	LAeq	17	29	38	45	46	46	45	36	26	52
3	2	Ext	Thu 26/11/20	21:40-21:55	LAF10	18	31	40	46	48	48	46	37	27	53
3	2	Ext	Thu 26/11/20	21:40-21:55	LAF90	13	26	36	43	44	44	42	33	21	50
3	2	Ext	Thu 26/11/20	21:40-21:55	LAF90+5dB	18	31	41	48	49	49	47	38	26	55
Cumulative LAF10(Calc) (Loc7+Loc8)						4	19	17	18	21	16	13	7	-2	26
Calculated to Comply with (Most stringent) Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
4	10	Int	Thu 26/11/20	22:05-22:20	LAeq	41	55	55	58	60	57	55	49	41	65
4	10	Int	Thu 26/11/20	22:05-22:20	LAF10	46	60	58	62	63	60	58	52	44	68
4	10	Int	Thu 26/11/20	22:05-22:20	LAF90	23	37	43	49	52	51	49	43	34	57
4	10	Int	Thu 26/11/20	22:05-22:20	LAF10(Calc)	5	19	17	21	22	19	17	11	3	27
4	3	Ext	Thu 26/11/20	22:05-22:20	LAeq	28	39	45	50	53	57	53	47	38	61
4	3	Ext	Thu 26/11/20	22:05-22:20	LAF10	30	42	47	53	57	61	57	50	42	64
4	3	Ext	Thu 26/11/20	22:05-22:20	LAF90	20	33	40	43	45	47	45	37	28	52
4	3	Ext	Thu 26/11/20	22:05-22:20	LAF90+5dB	25	38	45	48	50	52	50	42	33	57
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
5	11	Int	Thu 26/11/20	22:25-22:40	LAeq	31	38	47	53	58	60	59	55	47	65
5	11	Int	Thu 26/11/20	22:25-22:40	LAF10	30	41	49	55	60	62	61	58	50	67
5	11	Int	Thu 26/11/20	22:25-22:40	LAF90	21	33	43	48	54	56	55	52	43	61
5	11	Int	Thu 26/11/20	22:25-22:40	LAF10(Calc)	-4	7	15	21	26	28	27	24	16	33
5	4	Ext	Thu 26/11/20	22:25-22:40	LAeq	29	41	45	48	52	54	51	47	40	58
5	4	Ext	Thu 26/11/20	22:25-22:40	LAF10	31	42	47	50	54	56	53	50	42	61
5	4	Ext	Thu 26/11/20	22:25-22:40	LAF90	22	33	40	44	49	50	47	43	35	54
5	4	Ext	Thu 26/11/20	22:25-22:40	LAF90+5dB	27	38	45	49	54	55	52	48	40	59
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-

No.	Loc	Int/ Ext	Day / Date	Time	Meas't Descr	32	63	125	250	500	1K	2K	4K	8K	OA
6	12	Int	Thu 26/11/20	22:45-22:50	LAeq	26	34	46	50	52	55	53	49	43	60
6	12	Int	Thu 26/11/20	22:45-22:50	LAF10	29	37	48	52	54	58	55	51	44	62
6	12	Int	Thu 26/11/20	22:45-22:50	LAF90	22	30	43	47	50	53	51	47	40	57
6	12	Int	Thu 26/11/20	22:45-22:50	LAF10(Calc)	3	11	22	26	28	32	29	25	18	36
6	5	Ext	Thu 26/11/20	22:45-22:50	LAeq	27	37	45	51	55	59	57	51	42	63
6	5	Ext	Thu 26/11/20	22:45-22:50	LAF10	29	40	47	54	58	64	61	54	44	67
6	5	Ext	Thu 26/11/20	22:45-22:50	LAF90	20	32	41	44	47	50	51	48	39	56
6	5	Ext	Thu 26/11/20	22:45-22:50	LAF90+5dB	25	37	46	49	52	55	56	53	44	61
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
7	13	Int	Thu 26/11/20	22:55-23:10	LAeq	24	34	44	47	50	54	52	49	43	58
7	13	Int	Thu 26/11/20	22:55-23:10	LAF10	27	36	46	49	53	57	55	52	46	61
7	13	Int	Thu 26/11/20	22:55-23:10	LAF90	17	29	40	43	46	49	47	44	36	53
7	13	Int	Thu 26/11/20	22:55-23:10	LAF10(Calc)	-3	6	16	19	23	27	25	22	16	31
7	6	Ext	Thu 26/11/20	22:55-23:10	LAeq	30	39	46	50	55	58	57	53	47	63
7	6	Ext	Thu 26/11/20	22:55-23:10	LAF10	33	41	47	53	58	62	60	56	50	66
7	6	Ext	Thu 26/11/20	22:55-23:10	LAF90	20	32	38	43	47	50	51	48	41	56
7	6	Ext	Thu 26/11/20	22:55-23:10	LAF90+5dB	25	37	43	48	52	55	56	53	46	61
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
8	14	Int	Thu 26/11/20	23:15-23:30	LAeq	24	36	47	52	56	59	59	57	51	65
8	14	Int	Thu 26/11/20	23:15-23:30	LAF10	26	36	49	54	57	60	62	59	54	67
8	14	Int	Thu 26/11/20	23:15-23:30	LAF90	22	29	44	50	54	56	52	48	40	60
8	14	Int	Thu 26/11/20	23:15-23:30	LAF10(Calc)	-8	2	15	20	23	26	28	25	20	33
8	6	Ext	Thu 26/11/20	23:15-23:30	LAeq	33	44	52	52	56	59	58	55	47	64
8	6	Ext	Thu 26/11/20	23:15-23:30	LAF10	34	44	49	53	57	61	59	56	50	65
8	6	Ext	Thu 26/11/20	23:15-23:30	LAF90	21	32	39	44	47	51	52	49	42	57
8	6	Ext	Thu 26/11/20	23:15-23:30	LAF90+5dB	26	37	44	49	52	56	57	54	47	62
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
9	7	Int	Fri 27/11/20	00:00-00:15	LAeq	26	34	45	53	53	54	49	45	35	59
9	7	Int	Fri 27/11/20	00:00-00:15	LAF10	28	36	47	55	55	56	51	47	38	61
9	7	Int	Fri 27/11/20	00:00-00:15	LAF90	24	31	43	51	51	52	46	42	30	57
9	7	Int	Fri 27/11/20	00:00-00:15	LAF10(Calc)	2	10	21	29	29	30	25	21	12	35
9	1	Ext	Fri 27/11/20	00:00-00:15	LAeq	26	37	46	49	53	54	52	47	39	59
9	1	Ext	Fri 27/11/20	00:00-00:15	LAF10	28	38	45	50	56	58	56	51	43	62
9	1	Ext	Fri 27/11/20	00:00-00:15	LAF90	18	30	38	42	45	46	43	38	29	51
9	1	Ext	Fri 27/11/20	00:00-00:15	LAF90+0dB	18	30	38	42	45	46	43	38	29	51
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
10	8	Int	Fri 27/11/20	00:25-00:40	LAeq	22	36	46	50	56	54	53	49	41	60
10	8	Int	Fri 27/11/20	00:25-00:40	LAF10	23	40	49	54	59	57	55	51	44	63
10	8	Int	Fri 27/11/20	00:25-00:40	LAF90	18	30	39	45	49	49	47	42	32	54
10	8	Int	Fri 27/11/20	00:25-00:40	LAF10(Calc)	-23	-6	3	8	13	11	9	5	-2	17
10	2	Ext	Fri 27/11/20	00:25-00:40	LAeq	24	32	39	46	52	51	47	40	32	56
10	2	Ext	Fri 27/11/20	00:25-00:40	LAF10	24	30	38	44	45	45	43	37	28	51
10	2	Ext	Fri 27/11/20	00:25-00:40	LAF90	12	24	33	39	40	41	37	27	14	46
10	2	Ext	Fri 27/11/20	00:25-00:40	LAF90+0dB	12	24	33	39	40	41	37	27	14	46
11	9	Int	Fri 27/11/20	00:40-00:55	LAeq	24	33	39	41	48	55	57	48	36	60

No.	Loc	Int/ Ext	Day / Date	Time	Meas't Descr	32	63	125	250	500	1K	2K	4K	8K	OA
11	9	Int	Fri 27/11/20	00:40-00:55	LAF10	27	35	40	43	50	52	51	45	35	56
11	9	Int	Fri 27/11/20	00:40-00:55	LAF90	19	27	32	36	42	42	39	33	22	47
11	9	Int	Fri 27/11/20	00:40-00:55	LAF10(Calc)	-18	-10	-5	-2	5	7	6	0	-10	11
11	2	Ext	Fri 27/11/20	00:40-00:55	LAeq	20	28	38	41	42	44	41	32	18	49
11	2	Ext	Fri 27/11/20	00:40-00:55	LAF10	23	30	38	42	44	44	40	31	20	49
11	2	Ext	Fri 27/11/20	00:40-00:55	LAF90	14	24	33	39	40	41	36	27	14	46
11	2	Ext	Fri 27/11/20	00:40-00:55	LAF90+0dB	14	24	33	39	40	41	36	27	14	46
Cumulative LAF10(Calc) (Loc7+Loc8)						-17	-4	4	8	14	12	11	6	-2	18
Calculated to Comply with (Most stringent) Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
12	10	Int	Fri 27/11/20	01:05-01:20	LAeq	20	37	46	48	50	50	49	45	37	56
12	10	Int	Fri 27/11/20	01:05-01:20	LAF10	22	41	49	51	52	53	52	48	40	59
12	10	Int	Fri 27/11/20	01:05-01:20	LAF90	16	28	33	39	43	44	42	37	27	49
12	10	Int	Fri 27/11/20	01:05-01:20	LAF10(Calc)	-19	0	8	10	11	12	11	7	-1	18
12	3	Ext	Fri 27/11/20	01:05-01:20	LAeq	23	33	40	46	50	54	51	45	37	58
12	3	Ext	Fri 27/11/20	01:05-01:20	LAF10	26	35	43	49	53	58	53	46	36	61
12	3	Ext	Fri 27/11/20	01:05-01:20	LAF90	16	27	35	39	42	43	42	34	23	48
12	3	Ext	Fri 27/11/20	01:05-01:20	LAF90+0dB	16	27	35	39	42	43	42	34	23	48
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
13	11	Int	Fri 27/11/20	01:25-01:40	LAeq	27	35	46	50	56	57	56	53	45	62
13	11	Int	Fri 27/11/20	01:25-01:40	LAF10	27	38	48	53	58	59	58	55	47	64
13	11	Int	Fri 27/11/20	01:25-01:40	LAF90	22	30	42	47	53	55	53	50	42	60
13	11	Int	Fri 27/11/20	01:25-01:40	LAF10(Calc)	-7	4	14	19	24	25	24	21	13	30
13	4	Ext	Fri 27/11/20	01:25-01:40	LAeq	24	34	42	47	51	53	49	43	36	57
13	4	Ext	Fri 27/11/20	01:25-01:40	LAF10	26	36	44	50	54	56	52	46	37	60
13	4	Ext	Fri 27/11/20	01:25-01:40	LAF90	18	28	37	42	48	47	44	40	30	52
13	4	Ext	Fri 27/11/20	01:25-01:40	LAF90+0dB	18	28	37	42	48	47	44	40	30	52
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
14	12	Int	Fri 27/11/20	01:45-01:50	LAeq	26	35	45	47	51	54	52	49	42	58
14	12	Int	Fri 27/11/20	01:45-01:50	LAF10	29	36	46	49	52	55	53	50	44	60
14	12	Int	Fri 27/11/20	01:45-01:50	LAF90	21	28	42	45	50	52	50	47	40	57
14	12	Int	Fri 27/11/20	01:45-01:50	LAF10(Calc)	3	10	20	23	26	29	27	24	18	34
14	5	Ext	Fri 27/11/20	01:45-01:50	LAeq	28	38	43	49	53	57	55	50	40	61
14	5	Ext	Fri 27/11/20	01:45-01:50	LAF10	29	38	45	51	56	61	58	51	42	64
14	5	Ext	Fri 27/11/20	01:45-01:50	LAF90	18	29	39	44	47	49	50	47	37	55
14	5	Ext	Fri 27/11/20	01:45-01:50	LAF90+0dB	18	29	39	44	47	49	50	47	37	55
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
15	13	Int	Fri 27/11/20	01:55-02:10	LAeq	23	37	44	49	53	53	51	46	37	58
15	13	Int	Fri 27/11/20	01:55-02:10	LAF10	25	34	45	46	49	53	51	46	38	57
15	13	Int	Fri 27/11/20	01:55-02:10	LAF90	15	25	39	40	43	46	45	41	32	51
15	13	Int	Fri 27/11/20	01:55-02:10	LAF10(Calc)	-5	4	15	16	19	23	21	16	8	27
15	6	Ext	Fri 27/11/20	01:55-02:10	LAeq	26	44	49	56	61	58	58	53	43	65
15	6	Ext	Fri 27/11/20	01:55-02:10	LAF10	28	40	46	50	54	58	56	51	43	62
15	6	Ext	Fri 27/11/20	01:55-02:10	LAF90	17	29	38	41	44	48	49	46	37	54
15	6	Ext	Fri 27/11/20	01:55-02:10	LAF90+0dB	17	29	38	41	44	48	49	46	37	54
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
16	14	Int	Fri 27/11/20	02:15-02:30	LAeq	23	29	48	51	56	56	53	50	44	61
16	14	Int	Fri 27/11/20	02:15-02:30	LAF10	24	31	50	53	57	57	56	54	49	63
16	14	Int	Fri 27/11/20	02:15-02:30	LAF90	20	27	45	50	54	55	50	46	34	59
16	14	Int	Fri 27/11/20	02:15-02:30	LAF10(Calc)	-10	-3	16	19	23	23	22	20	15	29
16	6	Ext	Fri 27/11/20	02:15-02:30	LAeq	23	33	42	46	51	55	53	48	39	59
16	6	Ext	Fri 27/11/20	02:15-02:30	LAF10	25	35	44	49	54	57	56	49	40	61
16	6	Ext	Fri 27/11/20	02:15-02:30	LAF90	16	28	38	41	44	47	49	46	37	53
16	6	Ext	Fri 27/11/20	02:15-02:30	LAF90+0dB	16	28	38	41	44	47	49	46	37	53
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-

Table 5.6 Octave Band Noise Levels [dB] & Assessment of Calculated Compliance – Sat 28/11 – Sun 29/11

No.	Loc	Int/ Ext	Day / Date	Time	Meas't Descr	32	63	125	250	500	1K	2K	4K	8K	OA
1	7	Int	Sat 28/11/20	21:00-21:15	LAeq	27	38	49	55	56	57	52	48	35	62
1	7	Int	Sat 28/11/20	21:00-21:15	LAF10	29	40	49	56	56	57	53	47	36	62
1	7	Int	Sat 28/11/20	21:00-21:15	LAF90	25	33	44	52	53	53	48	43	30	58
1	7	Int	Sat 28/11/20	21:00-21:15	LAF10(Calc)	3	14	23	30	30	31	27	21	10	36
1	1	Ext	Sat 28/11/20	21:00-21:15	LAeq	33	45	53	55	58	58	56	50	40	63
1	1	Ext	Sat 28/11/20	21:00-21:15	LAF10	37	46	52	54	60	60	57	52	42	65
1	1	Ext	Sat 28/11/20	21:00-21:15	LAF90	25	35	41	44	48	49	46	39	27	54
1	1	Ext	Sat 28/11/20	21:00-21:15	LAF90+5dB	30	40	46	49	53	54	51	44	32	59
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
2	8	Int	Sat 28/11/20	21:25-21:40	LAeq	28	40	48	51	55	56	54	50	43	61
2	8	Int	Sat 28/11/20	21:25-21:40	LAF10	30	42	50	53	58	58	57	52	44	63
2	8	Int	Sat 28/11/20	21:25-21:40	LAF90	23	35	43	47	52	52	50	44	35	57
2	8	Int	Sat 28/11/20	21:25-21:40	LAF10(Calc)	-16	-4	4	7	12	12	11	6	-2	17
2	2	Ext	Sat 28/11/20	21:25-21:40	LAeq	28	38	43	45	50	51	48	40	27	56
2	2	Ext	Sat 28/11/20	21:25-21:40	LAF10	31	41	45	46	50	51	48	40	29	56
2	2	Ext	Sat 28/11/20	21:25-21:40	LAF90	23	33	38	42	45	45	41	32	18	50
2	2	Ext	Sat 28/11/20	21:25-21:40	LAF90+5dB	28	38	43	47	50	50	46	37	23	55
3	9	Int	Sat 28/11/20	21:40-21:55	LAeq	29	40	46	48	53	54	51	47	38	59
3	9	Int	Sat 28/11/20	21:40-21:55	LAF10	32	41	47	50	55	56	54	49	41	61
3	9	Int	Sat 28/11/20	21:40-21:55	LAF90	24	34	40	44	49	49	46	39	29	54
3	9	Int	Sat 28/11/20	21:40-21:55	LAF10(Calc)	-13	-4	2	5	10	11	9	4	-4	16
3	2	Ext	Sat 28/11/20	21:40-21:55	LAeq	28	39	44	45	49	50	48	39	25	55
3	2	Ext	Sat 28/11/20	21:40-21:55	LAF10	31	42	46	47	51	52	49	41	28	57
3	2	Ext	Sat 28/11/20	21:40-21:55	LAF90	24	35	39	42	46	46	42	33	18	51
3	2	Ext	Sat 28/11/20	21:40-21:55	LAF90+5dB	29	40	44	47	51	51	47	38	23	56
Cumulative LAF10(Calc) (Loc7+Loc8)						-11	-1	7	9	14	14	13	8	0	20
Calculated to Comply with (Most stringent) Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
4	10	Int	Sat 28/11/20	22:05-22:20	LAeq	27	40	48	52	56	56	55	50	42	62
4	10	Int	Sat 28/11/20	22:05-22:20	LAF10	30	43	51	54	58	58	57	52	44	64
4	10	Int	Sat 28/11/20	22:05-22:20	LAF90	22	34	42	45	50	52	50	44	37	56
4	10	Int	Sat 28/11/20	22:05-22:20	LAF10(Calc)	-11	2	10	13	17	17	16	11	3	23
4	3	Ext	Sat 28/11/20	22:05-22:20	LAeq	33	44	50	53	56	59	54	48	37	63
4	3	Ext	Sat 28/11/20	22:05-22:20	LAF10	36	46	52	56	58	62	57	50	41	66
4	3	Ext	Sat 28/11/20	22:05-22:20	LAF90	25	37	43	46	48	51	48	40	29	55
4	3	Ext	Sat 28/11/20	22:05-22:20	LAF90+5dB	30	42	48	51	53	56	53	45	34	60
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
5	11	Int	Sat 28/11/20	22:25-22:40	LAeq	29	43	50	54	59	62	59	55	47	66
5	11	Int	Sat 28/11/20	22:25-22:40	LAF10	33	45	52	55	61	62	61	57	49	67
5	11	Int	Sat 28/11/20	22:25-22:40	LAF90	23	37	46	50	56	58	55	52	44	62
5	11	Int	Sat 28/11/20	22:25-22:40	LAF10(Calc)	-1	11	18	21	27	28	27	23	15	33
5	4	Ext	Sat 28/11/20	22:25-22:40	LAeq	30	42	47	52	54	56	53	47	41	61
5	4	Ext	Sat 28/11/20	22:25-22:40	LAF10	33	44	49	53	55	59	55	48	39	62
5	4	Ext	Sat 28/11/20	22:25-22:40	LAF90	24	37	41	45	49	50	48	42	33	55
5	4	Ext	Sat 28/11/20	22:25-22:40	LAF90+5dB	29	42	46	50	54	55	53	47	38	60
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-

No.	Loc	Int/ Ext	Day / Date	Time	Meas't Descr	32	63	125	250	500	1K	2K	4K	8K	OA
6	12	Int	Sat 28/11/20	22:45-22:50	LAeq	28	39	48	52	58	62	57	48	39	64
6	12	Int	Sat 28/11/20	22:45-22:50	LAF10	29	39	50	54	60	64	59	50	40	67
6	12	Int	Sat 28/11/20	22:45-22:50	LAF90	26	36	46	50	57	62	58	48	39	64
6	12	Int	Sat 28/11/20	22:45-22:50	LAF10(Calc)	3	13	24	28	34	38	33	24	14	41
6	5	Ext	Sat 28/11/20	22:45-22:50	LAeq	38	51	62	67	69	70	67	62	53	75
6	5	Ext	Sat 28/11/20	22:45-22:50	LAF10	35	50	55	58	62	66	62	56	46	69
6	5	Ext	Sat 28/11/20	22:45-22:50	LAF90	25	34	42	46	50	52	51	45	35	57
6	5	Ext	Sat 28/11/20	22:45-22:50	LAF90+5dB	30	39	47	51	55	57	56	50	40	62
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
7	13	Int	Sat 28/11/20	22:55-23:10	LAeq	27	38	45	48	52	54	51	45	35	58
7	13	Int	Sat 28/11/20	22:55-23:10	LAF10	30	40	47	49	54	58	54	47	38	61
7	13	Int	Sat 28/11/20	22:55-23:10	LAF90	19	31	41	43	48	49	46	40	30	54
7	13	Int	Sat 28/11/20	22:55-23:10	LAF10(Calc)	0	10	17	19	24	28	24	17	8	31
7	6	Ext	Sat 28/11/20	22:55-23:10	LAeq	33	41	51	55	56	59	57	51	42	64
7	6	Ext	Sat 28/11/20	22:55-23:10	LAF10	36	44	52	55	58	63	60	53	44	66
7	6	Ext	Sat 28/11/20	22:55-23:10	LAF90	26	34	42	46	52	53	52	46	35	58
7	6	Ext	Sat 28/11/20	22:55-23:10	LAF90+5dB	31	39	47	51	57	58	57	51	40	63
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
8	14	Int	Sat 28/11/20	23:15-23:30	LAeq	28	36	49	52	57	58	57	53	48	63
8	14	Int	Sat 28/11/20	23:15-23:30	LAF10	29	37	50	53	58	59	60	56	51	65
8	14	Int	Sat 28/11/20	23:15-23:30	LAF90	22	29	46	50	55	56	52	48	39	60
8	14	Int	Sat 28/11/20	23:15-23:30	LAF10(Calc)	-5	3	16	19	24	25	26	22	17	31
8	6	Ext	Sat 28/11/20	23:15-23:30	LAeq	34	43	51	53	57	60	57	53	45	64
8	6	Ext	Sat 28/11/20	23:15-23:30	LAF10	37	45	51	55	59	63	60	55	48	67
8	6	Ext	Sat 28/11/20	23:15-23:30	LAF90	26	35	42	46	52	54	53	49	40	59
8	6	Ext	Sat 28/11/20	23:15-23:30	LAF90+5dB	31	40	47	51	57	59	58	54	45	64
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
9	7	Int	Sun 29/11/20	00:00-00:15	LAeq	29	42	49	57	55	56	53	49	35	62
9	7	Int	Sun 29/11/20	00:00-00:15	LAF10	31	44	50	58	56	57	53	47	36	63
9	7	Int	Sun 29/11/20	00:00-00:15	LAF90	27	33	44	53	52	54	48	42	30	59
9	7	Int	Sun 29/11/20	00:00-00:15	LAF10(Calc)	5	18	24	32	30	31	27	21	10	37
9	1	Ext	Sun 29/11/20	00:00-00:15	LAeq	30	49	55	57	57	57	56	52	41	64
9	1	Ext	Sun 29/11/20	00:00-00:15	LAF10	34	47	53	55	59	60	58	52	43	65
9	1	Ext	Sun 29/11/20	00:00-00:15	LAF90	23	33	40	44	48	49	45	38	27	53
9	1	Ext	Sun 29/11/20	00:00-00:15	LAF90+0dB	23	33	40	44	48	49	45	38	27	53
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
10	8	Int	Sun 29/11/20	00:25-00:40	LAeq	26	39	44	48	53	57	54	50	41	61
10	8	Int	Sun 29/11/20	00:25-00:40	LAF10	29	41	47	50	55	57	55	52	45	62
10	8	Int	Sun 29/11/20	00:25-00:40	LAF90	20	32	39	44	49	50	48	43	34	55
10	8	Int	Sun 29/11/20	00:25-00:40	LAF10(Calc)	-17	-5	1	4	9	11	9	6	-1	16
10	2	Ext	Sun 29/11/20	00:25-00:40	LAeq	24	37	44	43	46	48	44	36	25	53
10	2	Ext	Sun 29/11/20	00:25-00:40	LAF10	26	41	48	45	48	49	45	37	26	54
10	2	Ext	Sun 29/11/20	00:25-00:40	LAF90	18	31	36	40	43	42	38	30	18	48
10	2	Ext	Sun 29/11/20	00:25-00:40	LAF90+0dB	18	31	36	40	43	42	38	30	18	48
11	9	Int	Sun 29/11/20	00:40-00:55	LAeq	27	37	45	45	52	54	52	47	39	59

No.	Loc	Int/ Ext	Day / Date	Time	Meas't Descr	32	63	125	250	500	1K	2K	4K	8K	OA
11	9	Int	Sun 29/11/20	00:40-00:55	LAF10	29	40	48	48	55	57	56	51	42	61
11	9	Int	Sun 29/11/20	00:40-00:55	LAF90	21	31	37	40	47	48	46	40	30	53
11	9	Int	Sun 29/11/20	00:40-00:55	LAF10(Calc)	-16	-5	3	3	10	12	11	6	-3	16
11	2	Ext	Sun 29/11/20	00:40-00:55	LAeq	23	37	45	41	44	44	40	33	23	50
11	2	Ext	Sun 29/11/20	00:40-00:55	LAF10	26	41	49	43	46	47	42	35	25	54
11	2	Ext	Sun 29/11/20	00:40-00:55	LAF90	17	27	33	38	40	41	36	28	17	46
11	2	Ext	Sun 29/11/20	00:40-00:55	LAF90+0dB	17	27	33	38	40	41	36	28	17	46
Cumulative LAF10(Calc) (Loc7+Loc8)						-14	-2	5	7	13	14	13	9	1	19
Calculated to Comply with (Most stringent) Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
12	10	Int	Sun 29/11/20	01:05-01:20	LAeq	24	37	45	49	53	53	53	49	41	59
12	10	Int	Sun 29/11/20	01:05-01:20	LAF10	27	41	49	52	56	56	55	52	44	62
12	10	Int	Sun 29/11/20	01:05-01:20	LAF90	19	29	38	41	48	48	47	42	33	53
12	10	Int	Sun 29/11/20	01:05-01:20	LAF10(Calc)	-14	0	8	11	15	15	14	11	3	21
12	3	Ext	Sun 29/11/20	01:05-01:20	LAeq	27	38	45	49	53	57	53	46	39	60
12	3	Ext	Sun 29/11/20	01:05-01:20	LAF10	30	41	48	52	55	60	55	49	39	63
12	3	Ext	Sun 29/11/20	01:05-01:20	LAF90	18	30	37	41	44	46	42	35	24	50
12	3	Ext	Sun 29/11/20	01:05-01:20	LAF90+0dB	18	30	37	41	44	46	42	35	24	50
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
13	11	Int	Sun 29/11/20	01:25-01:40	LAeq	28	46	54	60	64	65	65	59	50	70
13	11	Int	Sun 29/11/20	01:25-01:40	LAF10	30	45	53	57	63	64	64	59	51	69
13	11	Int	Sun 29/11/20	01:25-01:40	LAF90	21	35	46	50	57	58	56	53	44	63
13	11	Int	Sun 29/11/20	01:25-01:40	LAF10(Calc)	-4	11	19	23	29	30	30	25	17	35
13	4	Ext	Sun 29/11/20	01:25-01:40	LAeq	29	43	47	53	56	57	57	51	41	63
13	4	Ext	Sun 29/11/20	01:25-01:40	LAF10	32	41	48	52	56	58	53	47	37	62
13	4	Ext	Sun 29/11/20	01:25-01:40	LAF90	23	30	39	43	49	49	46	41	31	54
13	4	Ext	Sun 29/11/20	01:25-01:40	LAF90+0dB	23	30	39	43	49	49	46	41	31	54
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
14	12	Int	Sun 29/11/20	01:45-01:50	LAeq	29	32	47	49	51	55	52	47	40	59
14	12	Int	Sun 29/11/20	01:45-01:50	LAF10	31	34	49	50	53	57	54	48	41	61
14	12	Int	Sun 29/11/20	01:45-01:50	LAF90	24	28	45	47	49	53	50	46	39	57
14	12	Int	Sun 29/11/20	01:45-01:50	LAF10(Calc)	5	8	23	24	27	31	28	22	15	35
14	5	Ext	Sun 29/11/20	01:45-01:50	LAeq	30	37	46	50	54	59	55	48	39	62
14	5	Ext	Sun 29/11/20	01:45-01:50	LAF10	33	40	49	53	58	63	59	51	41	66
14	5	Ext	Sun 29/11/20	01:45-01:50	LAF90	21	30	42	44	47	49	48	44	35	54
14	5	Ext	Sun 29/11/20	01:45-01:50	LAF90+0dB	21	30	42	44	47	49	48	44	35	54
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
15	13	Int	Sun 29/11/20	01:55-02:10	LAeq	25	33	43	45	50	52	49	43	33	56
15	13	Int	Sun 29/11/20	01:55-02:10	LAF10	27	35	45	47	52	55	52	44	34	59
15	13	Int	Sun 29/11/20	01:55-02:10	LAF90	16	29	40	42	45	46	44	39	30	51
15	13	Int	Sun 29/11/20	01:55-02:10	LAF10(Calc)	-3	5	15	17	22	25	22	14	4	29
15	6	Ext	Sun 29/11/20	01:55-02:10	LAeq	28	39	45	50	55	58	55	53	40	62
15	6	Ext	Sun 29/11/20	01:55-02:10	LAF10	31	42	48	53	57	61	58	51	42	65
15	6	Ext	Sun 29/11/20	01:55-02:10	LAF90	20	33	40	45	48	49	49	45	36	55
15	6	Ext	Sun 29/11/20	01:55-02:10	LAF90+0dB	20	33	40	45	48	49	49	45	36	55
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
16	14	Int	Sun 29/11/20	02:15-02:30	LAeq	25	33	48	52	55	56	51	48	36	61
16	14	Int	Sun 29/11/20	02:15-02:30	LAF10	27	33	50	53	56	57	52	47	37	62
16	14	Int	Sun 29/11/20	02:15-02:30	LAF90	23	27	45	50	54	55	50	45	33	59
16	14	Int	Sun 29/11/20	02:15-02:30	LAF10(Calc)	-7	-1	16	19	22	23	18	13	3	28
16	6	Ext	Sun 29/11/20	02:15-02:30	LAeq	29	42	47	51	53	56	54	51	39	61
16	6	Ext	Sun 29/11/20	02:15-02:30	LAF10	31	45	49	52	55	59	57	51	41	63
16	6	Ext	Sun 29/11/20	02:15-02:30	LAF90	21	33	41	45	49	50	50	45	36	55
16	6	Ext	Sun 29/11/20	02:15-02:30	LAF90+0dB	21	33	41	45	49	50	50	45	36	55
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-

Table 5.7 Octave Band Noise Levels [dB] & Assessment of Calculated Compliance – Sun 6/12 – Mon 7/12

No.	Loc	Int/ Ext	Day / Date	Time	Meas't Descr	32	63	125	250	500	1K	2K	4K	8K	OA
1	7	Int	Sun 6/12/20	21:00-21:15	LAeq	27	37	44	53	54	55	50	46	33	60
1	7	Int	Sun 6/12/20	21:00-21:15	LAF10	29	39	46	54	55	57	52	47	35	61
1	7	Int	Sun 6/12/20	21:00-21:15	LAF90	24	32	42	51	52	54	47	41	27	58
1	7	Int	Sun 6/12/20	21:00-21:15	LAF10(Calc)	3	13	20	28	29	31	26	21	9	35
1	1	Ext	Sun 6/12/20	21:00-21:15	LAeq	32	41	49	50	54	57	56	52	41	62
1	1	Ext	Sun 6/12/20	21:00-21:15	LAF10	35	45	53	53	57	60	58	53	43	65
1	1	Ext	Sun 6/12/20	21:00-21:15	LAF90	25	34	40	44	48	50	47	41	29	54
1	1	Ext	Sun 6/12/20	21:00-21:15	LAF90+5dB	30	39	45	49	53	55	52	46	34	59
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
2	8	Int	Sun 6/12/20	21:25-21:40	LAeq	23	39	44	53	60	58	56	50	40	64
2	8	Int	Sun 6/12/20	21:25-21:40	LAF10	26	42	47	56	63	61	59	52	42	67
2	8	Int	Sun 6/12/20	21:25-21:40	LAF90	20	34	40	47	52	52	51	44	34	57
2	8	Int	Sun 6/12/20	21:25-21:40	LAF10(Calc)	-20	-4	1	10	17	15	13	6	-4	21
2	2	Ext	Sun 6/12/20	21:25-21:40	LAeq	21	33	38	41	45	46	42	34	20	50
2	2	Ext	Sun 6/12/20	21:25-21:40	LAF10	23	36	40	42	46	47	44	34	21	52
2	2	Ext	Sun 6/12/20	21:25-21:40	LAF90	17	28	34	39	42	43	38	27	13	47
2	2	Ext	Sun 6/12/20	21:25-21:40	LAF90+5dB	22	33	39	44	47	48	43	32	18	52
3	9	Int	Sun 6/12/20	21:40-21:55	LAeq	23	36	47	47	54	54	51	46	36	59
3	9	Int	Sun 6/12/20	21:40-21:55	LAF10	26	37	46	49	57	56	54	49	39	61
3	9	Int	Sun 6/12/20	21:40-21:55	LAF90	18	28	36	41	47	46	44	37	26	51
3	9	Int	Sun 6/12/20	21:40-21:55	LAF10(Calc)	-19	-8	1	4	12	11	9	4	-6	16
3	2	Ext	Sun 6/12/20	21:40-21:55	LAeq	22	34	42	43	46	46	42	33	18	51
3	2	Ext	Sun 6/12/20	21:40-21:55	LAF10	25	37	44	45	48	48	45	35	21	53
3	2	Ext	Sun 6/12/20	21:40-21:55	LAF90	18	29	35	40	43	43	38	27	13	48
3	2	Ext	Sun 6/12/20	21:40-21:55	LAF90+5dB	23	34	40	45	48	48	43	32	18	53
Cumulative LAF10(Calc) (Loc7+Loc8)						-17	-3	4	11	18	16	14	8	-1	22
Calculated to Comply with (Most stringent) Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
4	10	Int	Sun 6/12/20	22:05-22:20	LAeq	22	36	44	51	57	56	54	49	40	62
4	10	Int	Sun 6/12/20	22:05-22:20	LAF10	25	39	47	54	61	59	57	51	42	65
4	10	Int	Sun 6/12/20	22:05-22:20	LAF90	16	29	38	42	48	48	47	41	33	53
4	10	Int	Sun 6/12/20	22:05-22:20	LAF10(Calc)	-16	-2	6	13	20	18	16	10	1	24
4	3	Ext	Sun 6/12/20	22:05-22:20	LAeq	25	43	50	50	51	55	51	43	32	59
4	3	Ext	Sun 6/12/20	22:05-22:20	LAF10	27	41	46	50	53	58	53	46	35	61
4	3	Ext	Sun 6/12/20	22:05-22:20	LAF90	19	33	38	41	43	46	42	33	18	50
4	3	Ext	Sun 6/12/20	22:05-22:20	LAF90+5dB	24	38	43	46	48	51	47	38	23	55
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
5	11	Int	Sun 6/12/20	22:25-22:40	LAeq	27	41	50	53	58	59	57	54	45	64
5	11	Int	Sun 6/12/20	22:25-22:40	LAF10	29	42	50	55	60	61	59	55	46	66
5	11	Int	Sun 6/12/20	22:25-22:40	LAF90	20	33	44	49	56	57	54	52	41	61
5	11	Int	Sun 6/12/20	22:25-22:40	LAF10(Calc)	-5	8	16	21	26	27	25	21	12	32
5	4	Ext	Sun 6/12/20	22:25-22:40	LAeq	29	43	51	51	53	55	51	45	36	60
5	4	Ext	Sun 6/12/20	22:25-22:40	LAF10	32	44	49	53	55	58	54	48	37	62
5	4	Ext	Sun 6/12/20	22:25-22:40	LAF90	21	32	40	43	49	50	45	39	27	54
5	4	Ext	Sun 6/12/20	22:25-22:40	LAF90+5dB	26	37	45	48	54	55	50	44	32	59
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-

No.	Loc	Int/ Ext	Day / Date	Time	Meas't Descr	32	63	125	250	500	1K	2K	4K	8K	OA
6	12	Int	Sun 6/12/20	22:45-22:50	LAeq	26	34	45	48	52	56	52	47	37	59
6	12	Int	Sun 6/12/20	22:45-22:50	LAF10	29	37	47	51	54	58	54	48	38	62
6	12	Int	Sun 6/12/20	22:45-22:50	LAF90	23	29	42	46	50	53	50	45	36	57
6	12	Int	Sun 6/12/20	22:45-22:50	LAF10(Calc)	3	11	21	25	28	32	28	22	12	36
6	5	Ext	Sun 6/12/20	22:45-22:50	LAeq	29	42	46	50	54	59	56	49	38	62
6	5	Ext	Sun 6/12/20	22:45-22:50	LAF10	31	42	49	54	58	63	60	52	40	66
6	5	Ext	Sun 6/12/20	22:45-22:50	LAF90	21	30	39	43	46	48	48	43	34	53
6	5	Ext	Sun 6/12/20	22:45-22:50	LAF90+5dB	26	35	44	48	51	53	53	48	39	58
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
7	13	Int	Sun 6/12/20	22:55-23:10	LAeq	28	35	42	44	49	52	49	42	32	56
7	13	Int	Sun 6/12/20	22:55-23:10	LAF10	31	36	44	47	52	56	52	44	33	59
7	13	Int	Sun 6/12/20	22:55-23:10	LAF90	17	26	38	40	43	46	43	37	29	50
7	13	Int	Sun 6/12/20	22:55-23:10	LAF10(Calc)	1	6	14	17	22	26	22	14	3	29
7	6	Ext	Sun 6/12/20	22:55-23:10	LAeq	31	43	44	47	51	55	53	46	35	59
7	6	Ext	Sun 6/12/20	22:55-23:10	LAF10	33	43	47	50	54	59	56	48	36	62
7	6	Ext	Sun 6/12/20	22:55-23:10	LAF90	20	31	38	41	44	46	46	41	29	51
7	6	Ext	Sun 6/12/20	22:55-23:10	LAF90+5dB	25	36	43	46	49	51	51	46	34	56
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
8	14	Int	Sun 6/12/20	23:15-23:30	LAeq	26	37	52	56	57	58	54	49	38	63
8	14	Int	Sun 6/12/20	23:15-23:30	LAF10	27	38	52	54	57	59	55	49	37	63
8	14	Int	Sun 6/12/20	23:15-23:30	LAF90	23	28	46	50	54	55	50	45	32	59
8	14	Int	Sun 6/12/20	23:15-23:30	LAF10(Calc)	-7	4	18	20	23	25	21	15	3	29
8	6	Ext	Sun 6/12/20	23:15-23:30	LAeq	30	49	58	62	64	64	61	56	49	70
8	6	Ext	Sun 6/12/20	23:15-23:30	LAF10	33	49	57	59	62	64	62	55	44	69
8	6	Ext	Sun 6/12/20	23:15-23:30	LAF90	20	32	39	43	46	49	48	42	30	54
8	6	Ext	Sun 6/12/20	23:15-23:30	LAF90+5dB	25	37	44	48	51	54	53	47	35	59
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
9	7	Int	Mon 7/12/20	00:00-00:15	LAeq	26	35	45	54	53	54	49	44	29	60
9	7	Int	Mon 7/12/20	00:00-00:15	LAF10	28	37	47	56	55	56	50	44	31	61
9	7	Int	Mon 7/12/20	00:00-00:15	LAF90	24	32	43	52	51	52	46	41	26	57
9	7	Int	Mon 7/12/20	00:00-00:15	LAF10(Calc)	2	11	21	30	29	30	24	18	5	35
9	1	Ext	Mon 7/12/20	00:00-00:15	LAeq	28	37	47	56	59	59	54	47	38	64
9	1	Ext	Mon 7/12/20	00:00-00:15	LAF10	31	39	47	52	56	59	56	49	38	63
9	1	Ext	Mon 7/12/20	00:00-00:15	LAF90	20	29	38	41	44	46	42	34	22	50
9	1	Ext	Mon 7/12/20	00:00-00:15	LAF90+0dB	20	29	38	41	44	46	42	34	22	50
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
10	8	Int	Mon 7/12/20	00:25-00:40	LAeq	21	33	41	46	51	51	50	44	35	57
10	8	Int	Mon 7/12/20	00:25-00:40	LAF10	23	35	43	49	54	54	51	46	37	59
10	8	Int	Mon 7/12/20	00:25-00:40	LAF90	17	28	36	42	47	47	45	39	28	52
10	8	Int	Mon 7/12/20	00:25-00:40	LAF10(Calc)	-23	-11	-3	3	8	8	5	0	-9	13
10	2	Ext	Mon 7/12/20	00:25-00:40	LAeq	17	26	35	38	40	41	38	32	23	46
10	2	Ext	Mon 7/12/20	00:25-00:40	LAF10	19	28	36	40	41	42	39	32	22	47
10	2	Ext	Mon 7/12/20	00:25-00:40	LAF90	14	23	32	36	39	39	34	23	12	44
10	2	Ext	Mon 7/12/20	00:25-00:40	LAF90+0dB	14	23	32	36	39	39	34	23	12	44
11	9	Int	Mon 7/12/20	00:40-00:55	LAeq	21	30	39	41	49	50	49	45	31	55

No.	Loc	Int/ Ext	Day / Date	Time	Meas't Descr	32	63	125	250	500	1K	2K	4K	8K	OA
11	9	Int	Mon 7/12/20	00:40-00:55	LAF10	24	34	42	44	52	53	51	44	34	57
11	9	Int	Mon 7/12/20	00:40-00:55	LAF90	16	25	32	36	44	43	40	33	21	48
11	9	Int	Mon 7/12/20	00:40-00:55	LAF10(Calc)	-21	-11	-3	-1	7	8	6	-1	-11	12
11	2	Ext	Mon 7/12/20	00:40-00:55	LAeq	17	27	34	39	42	41	38	32	19	47
11	2	Ext	Mon 7/12/20	00:40-00:55	LAF10	19	29	36	40	42	42	39	32	21	47
11	2	Ext	Mon 7/12/20	00:40-00:55	LAF90	14	23	31	36	39	39	34	23	12	44
11	2	Ext	Mon 7/12/20	00:40-00:55	LAF90+0dB	14	23	31	36	39	39	34	23	12	44
Cumulative LAF10(Calc) (Loc7+Loc8)						-19	-8	0	4	10	11	9	2	-7	16
Calculated to Comply with (Most stringent) Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
12	10	Int	Mon 7/12/20	01:05-01:20	LAeq	22	36	42	47	52	52	51	47	38	58
12	10	Int	Mon 7/12/20	01:05-01:20	LAF10	25	39	46	50	55	55	54	49	40	60
12	10	Int	Mon 7/12/20	01:05-01:20	LAF90	15	25	35	40	46	47	45	39	28	52
12	10	Int	Mon 7/12/20	01:05-01:20	LAF10(Calc)	-16	-2	5	9	14	14	13	8	-1	19
12	3	Ext	Mon 7/12/20	01:05-01:20	LAeq	27	38	50	52	53	56	53	45	34	60
12	3	Ext	Mon 7/12/20	01:05-01:20	LAF10	29	40	46	52	54	59	54	46	35	62
12	3	Ext	Mon 7/12/20	01:05-01:20	LAF90	18	32	37	40	42	45	41	32	19	49
12	3	Ext	Mon 7/12/20	01:05-01:20	LAF90+0dB	18	32	37	40	42	45	41	32	19	49
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
13	11	Int	Mon 7/12/20	01:25-01:40	LAeq	24	33	45	50	57	58	55	53	42	62
13	11	Int	Mon 7/12/20	01:25-01:40	LAF10	24	35	47	52	59	59	56	53	43	64
13	11	Int	Mon 7/12/20	01:25-01:40	LAF90	20	30	43	47	54	56	53	51	41	60
13	11	Int	Mon 7/12/20	01:25-01:40	LAF10(Calc)	-10	1	13	18	25	25	22	19	9	30
13	4	Ext	Mon 7/12/20	01:25-01:40	LAeq	25	36	42	46	50	52	48	48	32	57
13	4	Ext	Mon 7/12/20	01:25-01:40	LAF10	27	37	44	48	51	54	50	43	32	58
13	4	Ext	Mon 7/12/20	01:25-01:40	LAF90	19	31	38	41	47	48	43	38	27	52
13	4	Ext	Mon 7/12/20	01:25-01:40	LAF90+0dB	19	31	38	41	47	48	43	38	27	52
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
14	12	Int	Mon 7/12/20	01:45-01:50	LAeq	24	30	44	48	52	55	53	48	40	59
14	12	Int	Mon 7/12/20	01:45-01:50	LAF10	26	32	46	50	54	56	55	49	41	61
14	12	Int	Mon 7/12/20	01:45-01:50	LAF90	22	27	42	46	50	53	51	47	39	57
14	12	Int	Mon 7/12/20	01:45-01:50	LAF10(Calc)	0	6	20	24	28	30	29	23	15	35
14	5	Ext	Mon 7/12/20	01:45-01:50	LAeq	24	32	41	47	51	54	52	45	33	58
14	5	Ext	Mon 7/12/20	01:45-01:50	LAF10	27	34	43	49	54	58	55	46	35	61
14	5	Ext	Mon 7/12/20	01:45-01:50	LAF90	18	28	38	43	45	48	48	43	31	53
14	5	Ext	Mon 7/12/20	01:45-01:50	LAF90+0dB	18	28	38	43	45	48	48	43	31	53
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
15	13	Int	Mon 7/12/20	01:55-02:10	LAeq	23	38	44	44	49	50	47	40	32	55
15	13	Int	Mon 7/12/20	01:55-02:10	LAF10	27	33	44	44	49	53	50	42	32	56
15	13	Int	Mon 7/12/20	01:55-02:10	LAF90	14	24	40	38	41	43	42	37	29	48
15	13	Int	Mon 7/12/20	01:55-02:10	LAF10(Calc)	-3	3	14	14	19	23	20	12	2	26
15	6	Ext	Mon 7/12/20	01:55-02:10	LAeq	25	40	42	46	51	55	52	46	35	58
15	6	Ext	Mon 7/12/20	01:55-02:10	LAF10	28	40	45	49	54	58	56	48	37	62
15	6	Ext	Mon 7/12/20	01:55-02:10	LAF90	16	30	36	40	43	45	46	42	30	51
15	6	Ext	Mon 7/12/20	01:55-02:10	LAF90+0dB	16	30	36	40	43	45	46	42	30	51
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
16	14	Int	Mon 7/12/20	02:15-02:30	LAeq	25	31	49	51	54	56	50	45	33	60
16	14	Int	Mon 7/12/20	02:15-02:30	LAF10	26	32	51	53	56	57	51	46	34	61
16	14	Int	Mon 7/12/20	02:15-02:30	LAF90	22	27	46	50	53	54	49	44	32	59
16	14	Int	Mon 7/12/20	02:15-02:30	LAF10(Calc)	-8	-2	17	19	22	23	17	12	0	27
16	6	Ext	Mon 7/12/20	02:15-02:30	LAeq	27	37	42	45	50	53	51	45	35	57
16	6	Ext	Mon 7/12/20	02:15-02:30	LAF10	27	39	44	48	53	57	54	47	36	60
16	6	Ext	Mon 7/12/20	02:15-02:30	LAF90	16	29	36	40	42	45	46	41	30	51
16	6	Ext	Mon 7/12/20	02:15-02:30	LAF90+0dB	16	29	36	40	42	45	46	41	30	51
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-

5.4 PREDICTED MAXIMUM OCTAVE BAND NOISE EMISSION & ASSESSMENT

To account for the reduced patron numbers present within The Star Sydney during Acoustic Dynamics' three nights monitoring due to COVID-19 restrictions, modelling and calculations have been performed for each of the relevant terrace and outdoor gaming areas to determine predicted maximum L_{A10} noise emission, from each area, under predicted maximum patronages, as indicated in **Table 3.1**. The predicted maximum L_{A10} noise emission for each area have been compared with the lowest measured L_{A90} noise level across any of the three nights surveys, for each respective receiver location.

The L_{A10} has been adjusted to maximum patronages based upon actual measurements and patron numbers, while the calculated received L_{A10} noise level ("LAF(Calc)") incorporates an adjustment for distance loss alone (see **Table 3.1**), assuming point source sound propagation, and makes no allowance for any shielding or barrier losses.

As with the previous tables, for internal locations sources 8 and 9, a cumulative calculation is performed in lieu of a calculation based upon each location, as the contributed noise received at the representative receiver location results from both source locations 8 and 9. This cumulative octave band noise level is then compared with the more stringent of the two determined octave band "LAF90+5dB" or "LAF90+0dB" criteria for conservatism.

The results of this analysis are presented within **Table 5.8** below.

Table 5.8 Predicted Maximum Octave Band Noise Emission Levels [dB] & Compliance Assessment

No.	Loc	Int/ Ext	Day / Date	Time	Meas't Descr	32	63	125	250	500	1K	2K	4K	8K	OA
1	7	Int	Sat 28/11/20	22:45-22:50	LAF10	32	42	53	57	63	67	62	53	43	70
1	7	Int			LAF10(Calc)	6	16	27	31	37	41	36	27	17	44
1	1	Ext	Mon 7/12/20	00:00-00:15	LAF90	20	29	38	41	44	46	42	34	22	50
1	1	Ext	Mon 7/12/20	00:00-00:15	LAF90+0dB	20	29	38	41	44	46	42	34	22	50
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
2	8	Int	Sun 6/12/20	21:25-21:40	LAF10	29	45	50	59	66	64	62	55	45	70
2	8	Int			LAF10(Calc)	-17	-1	4	13	20	18	16	9	-1	24
2	2	Ext	Mon 7/12/20	00:40-00:55	LAF90	14	23	31	36	39	39	34	23	12	44
2	2	Ext	Mon 7/12/20	00:40-00:55	LAF90+0dB	14	23	31	36	39	39	34	23	12	44
3	9	Int	Sun 6/12/20	21:25-21:40	LAF10	29	45	50	59	66	64	62	55	45	70
3	9	Int			LAF10(Calc)	-16	0	5	14	21	19	17	10	0	25
3	2	Ext	Mon 7/12/20	00:40-00:55	LAF90	14	23	31	36	39	39	34	23	12	44
3	2	Ext	Mon 7/12/20	00:40-00:55	LAF90+0dB	14	23	31	36	39	39	34	23	12	44
Cumulative LAF10(Calc) (Loc7+Loc8)						-14	2	8	17	24	21	19	13	3	27
Calculated to Comply with (Most stringent) Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
4	10	Int	Sun 6/12/20	21:25-21:40	LAF10	32	48	53	62	69	67	65	58	48	73
4	10	Int			LAF10(Calc)	-9	7	12	21	28	26	24	17	7	32
4	3	Ext	Fri 27/11/20	01:05-01:20	LAF90	16	27	35	39	42	43	42	34	23	48
4	3	Ext	Fri 27/11/20	01:05-01:20	LAF90+0dB	16	27	35	39	42	43	42	34	23	48
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
5	11	Int	Sat 28/11/20	22:25-22:40	LAF10	36	48	55	58	64	65	64	60	52	70
5	11	Int			LAF10(Calc)	2	14	21	24	30	31	30	26	18	36
5	4	Ext	Mon 7/12/20	01:25-01:40	LAF90	19	31	38	41	47	48	43	38	27	52
5	4	Ext	Mon 7/12/20	01:25-01:40	LAF90+0dB	19	31	38	41	47	48	43	38	27	52
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
6	12	Int	Sat 28/11/20	22:45-22:50	LAF10	32	42	53	57	63	67	62	53	43	70
6	12	Int			LAF10(Calc)	6	16	27	31	37	41	36	27	17	44
6	5	Ext	Mon 7/12/20	01:45-01:50	LAF90	18	28	38	43	45	48	48	43	31	53
6	5	Ext	Mon 7/12/20	01:45-01:50	LAF90+0dB	18	28	38	43	45	48	48	43	31	53
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
7	13	Int	Sun 29/11/20	01:25-01:40	LAF10	30	45	53	57	63	64	64	59	51	69
7	13	Int			LAF10(Calc)	0	15	23	27	33	34	34	29	21	39
7	6	Ext	Mon 7/12/20	02:15-02:30	LAF90	16	29	36	40	42	45	46	41	30	51
7	6	Ext	Thu 26/11/20	22:55-23:10	LAF90+0dB	16	29	36	40	42	45	46	41	30	51
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-
8	14	Int	Sat 28/11/20	22:45-22:50	LAF10	32	42	53	57	63	67	62	53	43	70
8	14	Int			LAF10(Calc)	-2	8	19	23	29	33	28	19	9	36
8	6	Ext	Mon 7/12/20	02:15-02:30	LAF90	16	29	36	40	42	45	46	41	30	51
8	6	Ext	Thu 26/11/20	23:15-23:30	LAF90+0dB	16	29	36	40	42	45	46	41	30	51
Calculated to Comply with Criterion?						Y	Y	Y	Y	Y	Y	Y	Y	Y	-

6 DISCUSSION & FINDINGS

Following Acoustic Dynamics' site visits, inspections and operator-attended measurements, the following findings and discussion is provided.

6.1 EXTERNAL NOISE EMISSION ASSESSMENT

6.1.1 ASSESSMENT OF EXISTING OPERATIONS BASED ON MEASUREMENTS

The measurement results and analysis presented within **Table 5.5**, **Table 5.6** and **Table 5.7** indicates L_{A10} noise emission associated with the existing operations and use of the various terrace and outdoor gaming areas of The Star Sydney during Acoustic Dynamics' monitoring complies with the requirements of Condition F5 of the MP 08_0098 MOD 14 Consent Conditions (MOD 14).

6.1.2 ASSESSMENT OF CAPACITY OPERATIONS BASED ON MODELLING

The measurement results and analysis presented within **Table 5.8** indicates predicted maximum L_{A10} noise emission associated with likely maximum capacity operations and use of the various terrace and outdoor gaming areas of The Star Sydney during Acoustic Dynamics' monitoring would comply with the requirements of Condition F5 of the MP 08_0098 MOD 14 Consent Conditions (MOD 14).

7 CONCLUSION

Acoustic Dynamics has conducted an acoustic compliance assessment of noise emission associated with the use and operation of various areas of The Star Sydney, located at 80 Pyrmont St, Pyrmont, NSW, in relation to the compliance requirements of MP 08_0098 MOD 14 Consent Conditions (MOD 14).

This document provides an assessment of noise emission levels from the use of various areas of The Star Sydney, and is prepared in accordance with Modification/Application Number MP 08_0098 MOD 14.

The relevant criteria and consent requirements used in the assessment are presented in **Section 2**, while the assessment itself is presented in **Section 5**. In addition, discussion and findings provided in **Section 6**.

Acoustic Compliance Statement

Acoustic Dynamics is satisfied and advises that the various terrace and outdoor gaming areas associated with The Star Sydney, are presently being operated in accordance with the various acoustic assessment requirements of Modification/Application Number MP 08_0098 MOD 14.