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19-29 THE CORSO, MANLY, IVANHOE HOTEL

Acoustic Assessment of Alterations and Additions

29 August 2022

Iris Capital

TM424-01D02 Acoustic Report for DA Gaming (r3)

35 1982-2017 ACOUSTIC ENGINEERING EXCELLENCE

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1 Introduction

Renzo Tonin & Associates have been engaged to conduct a noise emission assessment of proposed alterations and additions to the Ivanhoe Hotel, Manly (23-29 The Corso). This report examines the operational noise impact as a result of the proposed alterations/additions.

The key areas of the new works with respect to noise emissions are:

- The relocation of an indoor (but naturally ventilated) gaming area on the northern façade (ground floor).
- Creation of a new sports bar (ground floor, southern façade).
- In order to provide natural ventilation to the indoor gaming area, ventilation openings are proposed on the northern façade (facing Market Place) and via chimney structures (penetration in the slab over the ground floor), allowing air movement from ground floor areas to roof level. Noise emitted via these ventilation openings is the key acoustic issue relating to the proposed new works.

Noise emissions will be assessed with reference to relevant Office of Liquor and Gaming noise emission requirements. Where necessary, building and/or management controls will be identified to ensure that noise emissions associated with operation following the new works will comply with relevant requirements.

The Ivanhoe Hotel Pty Ltd is the Applicant for two modification applications, lodged concurrently, but applying to the same premises, and made in accordance with s.4.55(2) of the Environmental Planning & Assessment Act 1979 (EP & A Act). The concurrent modification applications seek to amend Development Consent 2019/0574 and Development Consent 2008/196.

The Development Consents approved the following:

> *Change of use to a pub, alteration and additions to the premises, fitout and signage.*, and
>
> *Alterations and additions to the Ivanhoe Hotel and extend to adjoining premises, including new façade, coffee shop, poker machine area, bottle shop and TAB.*

The land to which the application relates is legally described as:

- Strata Plan 12989,
- Lot 2, Deposited Plan 877793,
- Lot 1, Deposited Plan 877793,

and is known as (part) 19-23, 25, 27-29 The Corso, Manly.

No. 31 The Corso does not form part of these applications.

In both cases, the modification application seeks to amend **Condition 1** which provides the **Approved Plans and Supporting Documentation**, by modifying the approved layout of the premises, along with some minor modifications to the approved elevations to both The Corso and Market Lane.

While, legally, these two modification applications are required to be lodged separately, given that the premises operates across these allotments as one premises, for the purpose of establishing the overall impact, all of the consultant reports consider the impacts on a combined basis.

The proposed modifications do not alter the approved use of the land, with all changes falling squarely within the approved use of the premises as a *pub*, which is defined in the Manly Local Environmental Plan 2013, as:

> ***pub*** *means licensed premises under the Liquor Act 2007 the principal purpose of which is the retail sale of liquor for consumption on the premises, whether or not the premises include hotel or motel accommodation and whether or not food is sold or entertainment is provided on the premises.*
>
> ***Note—*** Pubs are a type of ***food and drink premises***—see the definition of that term in this Dictionary.

The work documented in this report was carried out in accordance with the Renzo Tonin & Associates Quality Assurance System, which is based on Australian Standard / NZS ISO 9001.

This report is based on drawings by Paul Kelly Design dated February 2022.

2 Site and Surrounds

The Ivanhoe Hotel is located at 23-29 The Corso, Manly.

The site adjoining the Hotel to the west (19-21 The Corso) is also owned by the Applicant.

The site is surrounded by:

- Manly Library and Whistler Street carpark to the North, retail/commercial buildings
- Commercial development to the east.
- To the south by The Corso. A mixture of retail/commercial, residential and St Matthew's Church opposite on Darley Road / The Corso.

Aerial photo below show site surrouds and location of long-term noise monitoring locations.

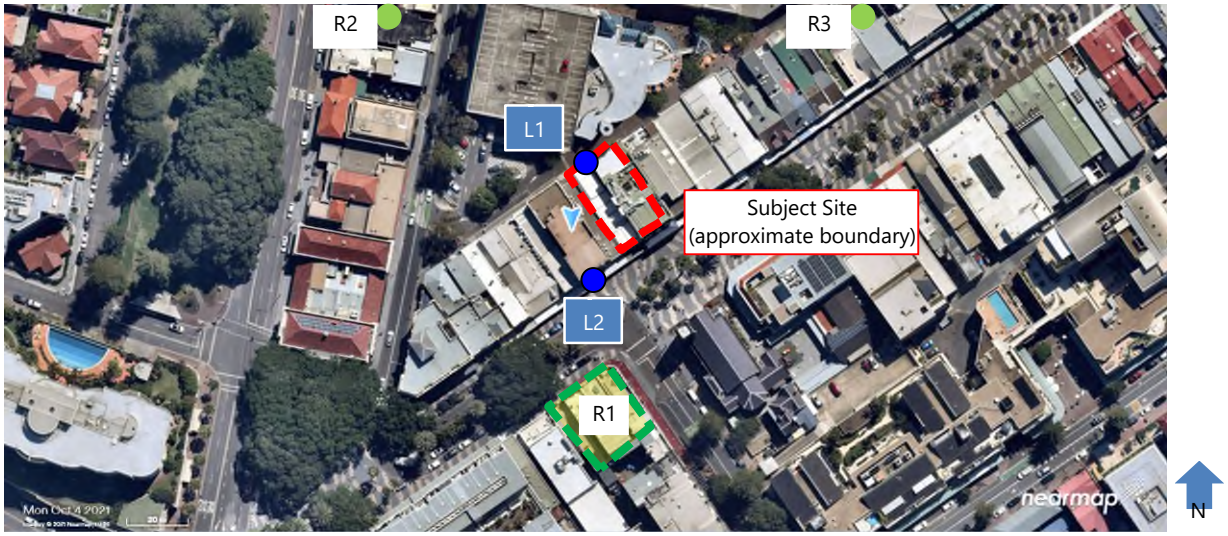

Figure 1 - Aerial view of subject site, including monitoring locations and nearest receivers

Nearest residential noise receivers are as follows:

- Receiver 1 (R1) – Apartments at 2 Darley Street.
- Receiver 2 (R2) -Apartments at 5 and 7 Whistler Street.
- Receiver 3 (R3) – Apartments at 63 The Corso.

Trading hours are as follows:

- The premises may trade 24 hours per day Monday to Saturday and 5am on mindnight on Sundays. Subject to the following:

  - The first floor bar and outdoor areas shall be closed to patrons between 3am and 7am Tuesday to Sunday and between midnight Sunday and 7am the following day, other than for the purposes of egress by partons to and from the upper levels, and

  - Entry to the Hotel through the TAB must not be permitted from the Corso between 11pm and 9am the following day.

- The bottleshop may trade between 9am and midnight, daily

- The Coffee Shop may trade between 7am and 2.30am the following day, 7 days a week, but from 1am daily, only partons of the Hotel are permitted to access these facilities.

- From 1am daily the Pizza Shop shall serve only patons of the Hotel and no takeaway service is permitted.

The proposed modifications are as indicated on the application plans and include reconfiguration of the approved internal layout of the premises, as set out below:

- Demolition of existing improvements within 23, 25 and 27 The Corso including removal of the ground floor kitchen of 25 The Corso.

- Relocaiton of the bottle shop from within No. 25 The Corso, to the south-western side of the site, at No. 23, facing The Corso and thus improving street activation.

- Positioning of a new Sports Bar in 25 The Corso.

- Reconfiguration to the approved layout of the gaming area to the rear of the bottle shop at No. 23 The Corso and part of the internal area contained within No. 25 The Corso.

- Remocal of the approved voids contained within No. 23 The Corso.

- Creation of new voids within No 25 The Corso.

- Modified internal seating area on the eastern side of the internal gaming area within No. 25 The Corso.

- Change of the ancillary use of Level 1 of 23 The Corso from storage to ancillary office area, consistent with the approved use as a pub.

- Reconfiguration of approved improvements to Level 1 of 23 The Corso

- Reconfiguration of existing layout to Level 1, 25 The Corso

- Miscellaneous structural works

- Additional signage to The Corso and Market Lane

- Alterations to building access and services, including stairs and floor finishes

The modifications also seek to alter the approved facades as follows:

- Modification to the approved front façade, facing The Corso, across No. 23, with two additional glazed openings to match the existing treatment to improve the active frontage facing the street

- Modification to the approved rear façade of No. 23 The Corso, facing Market Lane, with new metal louvre panels and an entry door, along with a new fire escape door

The proposed changes are not anticipated to change the Hotel capacity (900 people).

3 Noise Survey

The noise environment at the site was determined using long term noise logging.

Long term unattended noise monitoring was undertaken on the roof of 25 The Corso and out a window of 19-23 The Corso, Manly from 27/10/2021 to 03/11/2021.

The noise loggers recorded noise levels on a continuous basis and stored data every fifteen minutes. The noise loggers were calibrated before and after measurements and no significant deviation in calibration was noted. The noise monitoring equipment used here complies with Australian Standard 1259.2-1990 "Acoustics - Sound Level Meters" and is designated as Type 1 instruments suitable for field use.

The results of the long-term noise monitoring have been summarised in accordance with Noise Policy for Industry requirements published by Environment Protection Authority's Noise Policy for Industry and are presented in the tables below.

Table 1: Measured Site Background Noise Levels

Noise Monitoring		Representative L_{A90} Background Noise Levels in dB(A)		
Location	**Duration**	**Day[1]**	**Evening[2]**	**Night[3]**
L1: 25 The Corso - facing Market Place. Representative of development facing Market Place (R2 and R3)	27/10/2021 to 03/11/2021	53	55 (58)[4]	47
L2: 19-21 The Corso -facing The Corso (Representative of development facing the Corso (R1)	27/10/2021 to 03/11/2021	55	55	45

Notes:

Day, Evening & Night assessment periods are defined in accordance NSW EPA's Noise Policy for Industry as follows.

1. Day is defined as 7:00am to 6:00pm, Monday to Saturday; 8:00am to 6:00pm Sundays & Public Holidays.
2. Evening is defined as 6:00pm to 10:00pm, Monday to Sunday & Public Holidays
3. Night is defined as 10:00pm to 7:00am, Monday to Saturday; 10:00pm to 8:00am Sundays & Public Holidays
4. Majority of evening time periods were impacted by noise from the Ivanhoe Hotel. Noise logger L2 used in this period

The measured background (L_{A90}) noise levels are representative of surrounding residential neighbours and are used in setting operational noise emission goals from the development such as mechanical ventilation and air-conditioning systems in accordance to EPA Noise Policy for Industry (NPfI).

Given the existing trading hours are up to 6am, it is the overnight time period (10pm-7am) that is critical.

The noise loggers also recorded an octave band noise spectrum. This is relevant to the assessment of operational noise from the Hotel. The measured background noise spectrum is presented below.

Table 2: Octave band long-term noise monitoring results – 10PM to 7AM

Assessment locations	Assessment period	Rating Background Level (L_{90}) Octave band centre frequency – Hz (dBZ)									
		31.5	**63**	**125**	**250**	**500**	**1k**	**2k**	**4k**	**8k**	**A-wt**
L1 Representative of development facing Market Place (R2 and R3)	10pm-7am	54	52	52	48	45	42	37	29	22	**47**
L2 Representative of development facing The Corso (R1)	10pm-7am	46	44	46	44	43	39	34	26	21	**45**

4 Noise Emission Goals

This section sets out noise emission criteria for:

- Mechanical plant and equipment (based on the EPA Noise Policy for Industry) and
- Patron/Music noise (based on the noise emission requirements of the Office of Liquor and Gaming).

4.1 Mechanical plant noise criteria (EPA Noise Policy for Industry)

Noise from plant and equipment is assessed in accordance with the NSW 'Noise Policy for Industry' (NPfI), 2017. The assessment procedure has two components:

- Intrusive Criteria/Trigger Levels and
- Amenity Criteria/Trigger Levels

In accordance with the NPfI, noise impact should be assessed against the project noise trigger level which is the lower value of the project intrusiveness noise levels and project amenity noise levels.

4.1.1 Project intrusive noise levels

According to the NPfI, the intrusiveness of a noise source may generally be considered acceptable if the equivalent continuous (energy-average) A-weighted level of noise from the source (represented by the $L_{Aeq,15min}$ descriptor) does not exceed the background noise level measured in the absence of the source by more than 5dB(A).

The intrusiveness noise levels for residential receivers are reproduced in Table 3 below.

Table 3: Intrusiveness noise levels

Assessment locations	Assessment period	Intrusiveness noise level, $L_{Aeq,15min}$		
		Day (7am-10pm)	Evening (6pm-10pm)	Night (10pm-7am)
L1 - Representative of development facing Market Place (R2 and R3)	10pm-7am	58	60	52
L2 - Representative of development facing The Corso (R1)	10pm-7am	60	60	50

4.1.2 Amenity noise levels

The project amenity noise levels for different time periods of day are determined in accordance with Section 2.4 of the NPfI. The NPfI recommends amenity noise levels ($L_{Aq,period}$) for various receivers including residential, commercial, industrial receivers and sensitive receivers such as schools, hotels,

hospitals, churches and parks. These "recommended amenity noise levels" represent the objective for total industrial noise experienced at receiver location. However, when assessing a single development and its impact on an area, "project amenity noise levels" apply.

The recommended amenity noise levels applicable for the subject area are reproduced in Table 4 below.

Table 4: Project amenity noise levels

Type of Receiver	Noise Amenity Area	Time of Day	Recommended amenity noise level, L_{Aeq}, dB(A)
Residential	Rural	Day	50
		Evening	45
		Night	40
	Suburban	Day	55
		Evening	45
		Night	40
	Urban	Day	60
		Evening	50
		Night	45
Commercial premises	All	When in use	65

Notes:
1. Daytime 7.00am to 6.00 pm; Evening 6.00pm to 10.00pm; Night-time 10.00pm to 7.00am.
2. On Sundays and Public Holidays, Daytime 8.00am - 6.00 pm; Evening 6.00pm - 10.00pm; Night-time 10.00pm - 8.00am.
3. The L_{Aeq} noise descriptor is the level of noise equivalent to the energy average of noise levels occurring over a measurement period.

To ensure that the total industrial noise level (existing plus new) remain within the recommended amenity noise levels for an area, the project amenity noise level that applies for each new industrial noise source is determined as follows:

$$L_{Aeq,period}\ \text{Project amenity noise level} = L_{Aeq,period}\ \text{Recommended amenity noise level} - 5\text{dB(A)}$$

Furthermore, given that the intrusiveness noise level is based on a 15 minute assessment period and the project amenity noise level is based on day, evening and night assessment periods, the NPfI provides the following guidance on adjusting the $L_{Aeq,period}$ level to a representative $L_{Aeq,15minute}$ level in order to standardise the time periods.

$$L_{Aeq,15minute} = L_{Aeq,period} + 3\text{dB(A)}$$

The project amenity noise levels ($L_{Aeq,,15min}$) applied for this project are presented in Table 5 below.

Table 5: Project amenity noise levels

Type of Receiver	Noise Amenity Area	Time of Day	Recommended Noise Level, dB(A)	
			$L_{Aeq, Period}$	$L_{Aeq, 15min}$
Residence	Urban	Day	60 – 5 = 55	55 + 3 = **58**
		Evening	50 – 5 = 45	45 + 3 = **48**
		Night	45 – 5 = 40	40 + 3 = **43**

Notes:
1. Daytime 7.00 am to 6.00 pm; Evening 6.00 pm to 10.00 pm; Night-time 10.00 pm to 7.00 am.
2. On Sundays and Public Holidays, Daytime 8.00 am - 6.00 pm; Evening 6.00 pm - 10.00 pm; Night-time 10.00 pm - 8.00 am.
3. The LAeq index corresponds to the level of noise equivalent to the energy average of noise levels occurring over a measurement period.

4.1.3 Project noise trigger levels

In accordance with the NPfI the project noise trigger levels, which are the lower (i.e. more stringent) value of the project intrusiveness noise level and project amenity noise level, have been determined as shown in Table 6 below.

Table 6: Project noise trigger levels

Receiver Location	Project noise trigger levels, dB(A)$L_{eq(15min)}$		
	Day	Evening	Night
L1 - Representative of development facing Market Place (R2 and R3)	58	48	43
L2 - Representative of development facing The Corso (R1)	58	48	43
Commercial Receivers	65	65	65

4.2 Patron/Music/Gaming Noise Criteria (Liquor &Gaming NSW)

Noise emission from licensed premises in NSW, such as restaurants, bars and clubs, should aim to comply with the standard noise criteria set by Liquor & Gaming NSW (L&GNSW). The L&GNSW criteria apply to all noise emission associated with activities from the licensed area of the premises, including music and patron noise, but excludes mechanical services equipment.

The L&GNSW, through the Liquor Act 2007, is the regulatory authority that deals with noise pollution issues pertaining to licensed premises. The L&GNSW recommends the use of their standard noise criteria when assessing noise impact from licensed premises and when determining the occurrence of noise nuisance and annoyance. Noise emissions are assessed in terms of the noise limits set out in the L&GNSW's 'Standard Noise Condition' which states as follows:

"The LA10 noise level emitted from the licensed premises shall not exceed the background noise level in an Octave Band Centre Frequency (31.5Hz – 8kHz inclusive) by more than 5dB between 7:00am and 12:00 midnight at the boundary of any affected residence.*

The LA10 noise level emitted from the licensed premises shall not exceed the background noise level in an Octave Band Centre Frequency (31.5Hz – 8kHz inclusive) between 12:00 midnight and 7:00am at the boundary of any affected residence.*

Notwithstanding compliance with the above, the noise from the licensed premises shall not be audible within any habitable room in any residential premises between the hours of 12:00 midnight and 7:00am.

Interior noise levels which still exceed safe hearing levels are in no way supported or condoned by the Liquor Administration Board.

This is a minimum standard. In some instances, the Board may specify a time earlier than midnight in respect of the above condition.

**For the purposes of this condition, the LA10 can be taken as the average maximum deflection of the noise emission from the licensed premises."*

The operational noise goals for the patron and music noise are presented below. The noise emission goals are based on the ambient noise spectrums presented in table 2.

Given the gaming area and sports bar will operate after midnight, it is the post-midnight period (inaudibility criteria) that is critical with respect to setting operational noise emission goals. For the purpose of determining if a given noise emission is inaudible – if the predicted noise level at the noise receiver is calculated to be at least 10dB below the ambient noise level when measured in octave bands, the emitted noise is assumed to be inaudible. This is a typical practice in noise emission assessment.

Table 7: 12am-6am Octave band noise emission goals – Patrons and Music, dBL_{10}

Assessment locations	Criteria	Octave band centre frequency									
		31.5	**63**	**125**	**250**	**500**	**1k**	**2k**	**4k**	**8k**	**A-wt**
L1 - Development facing Market Place (R2 and R3)	Inaudibility (47dB Background – 10dB)	44	42	42	38	35	32	27	19	12	**37**
L2 - Development facing The Corso (R1)	Inaudibility (45dB Background – 10dB)	36	34	36	34	33	29	24	16	11	**35**

5 Analysis

Operational noise associated with the proposed new works is set out in the following section.

5.1 Assumptions

For the purpose of noise emission predictions, the following assumptions are adopted:

- Assumed noise levels within internal areas as follows:

Table 8: Assumed Bar Operating Noise Levels (Sound Pressure Level within Bar Area)

Noise Source	Sound Pressure Level Within Hotel (dB L_{10})									
	31.5	63	125	250	500	1k	2k	4k	8k	A-wt
Sports Bar - Crowded area, moderate background noise music	72	74	86	88	84	75	75	75	64	**85**
Gaming Area - Crowded gaming area, with background noise music	68	70	73	75	80	75	71	66	59	**80**

- In our experience, these assumed sound pressure levels are:
    - For the Bar/Sports Bar Area – representative of a crowded bar with moderate music and some noise absorptive lining to underside of ceiling.
    - For the Gaming Area – gaming areas are typically significantly quieter than the 80dB(A) sound pressure outlined above (they are typically 70-75dB(A)L_{10}). The 80dB(A) noise level has been adopted as noise bleed from the Sports Bar/Bar Area (that connects to part of the Gaming Area) will potentially elevate the Gaming Area noise level above what would typically be expected.
- All ventilation openings (Gaming Area louvred wall to Market Place and roof void openings) are assumed to be open (and acoustically treated as per section 6).
- Existing glazing to Sports Bar Area (previously kitchen) is assumed to be 6mm thick (standard minimum thickness for shop front glazing). Glass thickness fro any new glazed elements set out in Section 6.
- All noise emission predictions are made on the assumption that the acoustic treatments detailed in Section 6 are adopted.

Predicted operational noise from the operation of the proposed new areas (new Sports Bar and Gaming Area) are detailed below. Given the 24 hour licence for the Hotel, noise emissions from the use of the

Sports Bar/Gaming Room will be assessed with reference to the most stringent (post-midnight) noise emission goals.

5.2 Post Midnight Noise Emission Assessment

Following the proposed alternatives/additions, the noise emissions for bar operations are predicted and assessed below.

Noise emissions are primarily via the ventilation openings (louvres facing Market Place and the roof void/chimneys). To a lesser degree, noise will also be emitted via the existing and proposed new glazed elements of the Sports Bar (Corso façade).

All predictions are made on the assumption that the acoustic treatments detailed in section 6 are adopted.

Predictions are made to top floor windows of the residential developments as these are the most affected locations (closest to overlooking the ventilation chimneys).

Noise emission predictions to R1 (2 Darley Street, top floor windows)

Table 9: Gaming area and Sports Bar Noise Breakout Analysis to R1

Noise Source	Noise Level Within Café									
	31.5	**63**	**125**	**250**	**500**	**1k**	**2k**	**4k**	**8k**	**A-wt**
Contribution 1 - (Noise via Market Place Louvres)	22	20	21	20	22	14	6	0	0	21
Contribution 2 - (Noise via Roof Void Ventilation Openings)	26	24	36	33	13	8	8	5	0	26
Contribution 3 - (Noise via Sports Bar Glazing)	18	16	28	36	17	5	10	0	0	21
Total Noise Level at Resident - dBL$_{10}$	***28***	***26***	***36***	***34***	***24***	***14***	***13***	***6***	***0***	***28***
Permissible Noise Level (45BG-10dB)	36	34	36	34	33	29	24	16	11	**35**
Complies?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

Noise emission predictions to R2 (7 Whistler Street, top floor windows)

Table 10: Gaming area and Sports Bar Noise Breakout Analysis to R2

Noise Source	Noise Level Within Café									
	31.5	**63**	**125**	**250**	**500**	**1k**	**2k**	**4k**	**8k**	**A-wt**
Contribution 1 - (Noise via Market Place Louvres)	25	23	26	28	32	27	22	15	2	32
Contribution 2 - (Noise via Roof Void Ventilation Openings)	23	23	34	32	12	0	6	3	0	25
Contribution 2 - (Noise via Sports Bar Glazing)	7	5	15	11	0	0	0	0	0	4
Total Noise Level at Resident - dBL$_{10}$	***26***	***26***	***35***	***33***	***32***	***27***	***22***	***15***	***2***	***33***
Permissible Noise Level (47BG-10dB)	44	42	42	38	35	32	27	19	12	**37**
Complies?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

Noise emission predictions to R3 (63 The Corso, top floor windows)

Table 11: Gaming area and Sports Bar Noise Breakout Analysis to R3

Noise Source	Noise Level Within Café									
	31.5	**63**	**125**	**250**	**500**	**1k**	**2k**	**4k**	**8k**	**A-wt**
Contribution 1 - (Noise via Market Place Louvres)	23	21	24	25	30	25	20	12	0	30
Contribution 2 - (Noise via Roof Void Ventilation Openings)	33	31	33	30	10	0	4	1	0	23
Contribution 2 - (Noise via Sports Bar Glazing)	24	22	24	21	12	0	4	0	0	16
Total Noise Level at Resident - dBL_{10}	***34***	***32***	***34***	***31***	***30***	***25***	***20***	***13***	***0***	***31***
Permissible Noise Level (47BG-10dB)	44	42	42	38	35	32	27	19	12	**37**
Complies?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

Looking at the tables above, provided that the recommendations set out in section 6 are adopted, noise emissions from the operation of the new sports bar and gaming area will comply with Office of Liquor and Gaming noise emission requirements.

6 Recommendations

The acoustic treatments necessary to ensure that compliant noise emissions from the operation of the new Sports Bar and Gaming Area are as follows:

- Acoustic lining (minimum NRC 0.8) to be installed to underside of 70% of ceiling area in new Indoor Gaming and Sports Bar areas.
- New glazed elements to the Sports Bar façade to be minimum 6.38mm laminated (R_w 33). Any operable element to have acoustic seals (q-lon or equal).
- Gaming area to have background music only (70dB(A)L_{10} noise limit) when measured at the Market Place external louvres. Noise levels on gaming machines are to be set such that the 70dB(A)L_{10} noise limit is not exceeded. Gaming machines not to have coin drop trays.
- Sports bar can have moderate music noise levels (77dB(A)L_{10} noise limit). Base/low frequency contribution to music to be limited as per table below.
- Allowable music noise spectrums:

Table 12: Music Noise Limits

Noise Source	Permissible Music Noise Level Within Bar (dB L_{10})									
	31.5	**63**	**125**	**250**	**500**	**1k**	**2k**	**4k**	**8k**	**A-wt**
Sports Bar	62	67	69	72	77	72	68	63	56	**77**
Gaming Area (at Market Place Louvres)	55	60	62	65	70	65	61	56	49	**70**

- The inside face of the chimney/ventilation voids are to be lined with noise absorptive material (other than where they are louvred for ventilation purposes). Lining to consist of 50mm Echosoft or similar material suitable for outdoor use with NRC no less than 0.8.
- Any new mechanical plant that is installed as part of the refurbishment works is to be acoustically treated such that compliance with the noise emission goals in section 4.1 are achieved. Detailed review should be conducted at CC stage once plant selections are finalised.
- No queuing in external areas after midnight.
- Bar should trade with windows and doors closed on the Corso façade after midnight.
- Garbage/bottles should not be taken outside for disposal after 10pm.
- Signage to be installed reminding patrons to be quiet when entering or leaving the premises.

7 Conclusion

Renzo Tonin & Associates has completed an acoustic assessment of operational noise for proposed fit out works (relocation of indoor gaming area and new Sports Bar on ground floor) at the Ivanhoe Hotel, at the Carso, Manly.

Provided that the recommendations in Section 6 are adopted, operational noise from the bar will comply with the noise emission requirements of the Office of Liquor and Gaming and the EPA Noise Policy for Industry.

APPENDIX A Results of unattended noise monitoring

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Structural Dynamics

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Rear Boundary Facing Market Place

Background & Ambient Noise Monitoring Results - NSW 'Noise Policy for Industry', 2017

Periods with insufficient results excluded	L_{A90} Background Noise Levels[4]			L_{Aeq} Ambient Noise Levels		
Date	**Day[1]**	**Evening[2]**	**Night[3]**	**Day[1]**	**Evening[2]**	**Night[3]**
Wednesday-27-October-2021	-	54	47	-	56	58
Thursday-28-October-2021	53	56	45	57	59	58
Friday-29-October-2021	54	59	47	59	71	75
Saturday-30-October-2021	52	68	49	61	75	78
Sunday-31-October-2021	55	56	44	60	58	58
Monday-01-November-2021	52	58	45	71	63	55
Tuesday-02-November-2021	53	60	50	62	63	62
Wednesday-03-November-2021	-	-	-	-	-	-
Representative Weekday[5]	**53**	**58**	**47**	**66**	**66**	**69**
Representative Weekend[5]	**54**	**62**	**47**	**61**	**72**	**75**
Representative Week[5]	**53**	**58**	**47**	**65**	**69**	**71**

Notes:

1. Day is 7:00am to 6:00pm on all days except Sundays and Public Holidays when it is 8:00am to 6:00pm 2. Evening is 6:00pm to 10:00pm

3. Night is the remaining periods 4. Assessment Background Level (ABL) for individual days 5. Rating Background Level (RBL) for L_{A90} and logarithmic average for L_{Aeq} 6. Leq is calculated in the free field. 2.5dB is subtracted from results if logger is placed at façade 7. Number in brackets represents the measured (actual) RBL value, which is below the minimum policy value of 30 dB(A) during the evening or night period or 35 dB(A) during the day period.

Rear Boundary Facing Market Place

Road / Rail Noise Monitoring Results (at one metre from façade)

Periods with insufficient results excluded	L_{Aeq} Noise Levels		$L_{Aeq\ 1hr}$ Noise Levels			
Date	**Day[1]**	**Night[2]**	**Day - Up[4]**	**Day - Low[5]**	**Night - Up[4]**	**Night - Low[5]**
Wednesday-27-October-2021	-	61	-	-	63	52
Thursday-28-October-2021	60	60	62	58	63	51
Friday-29-October-2021	69	78	70	60	82	53
Saturday-30-October-2021	72	81	74	58	84	60
Sunday-31-October-2021	62	60	64	59	64	46
Monday-01-November-2021	72	57	73	60	60	52
Tuesday-02-November-2021	65	65	67	59	67	58
Wednesday-03-November-2021	-	-	-	-	-	-
Representative Weekday[3]	**67**	**61**	**68**	**59**	**63**	**52**
Representative Weekend[3]	**67**	**70**	**69**	**59**	**74**	**53**
Representative Week[3]	**67**	**61**	**68**	**59**	**64**	**52**

Notes:

1. Day is 7:00am to 10:00pm 2. Night is 10:00pm to 7:00am 3. Median of daily L_{Aeq}

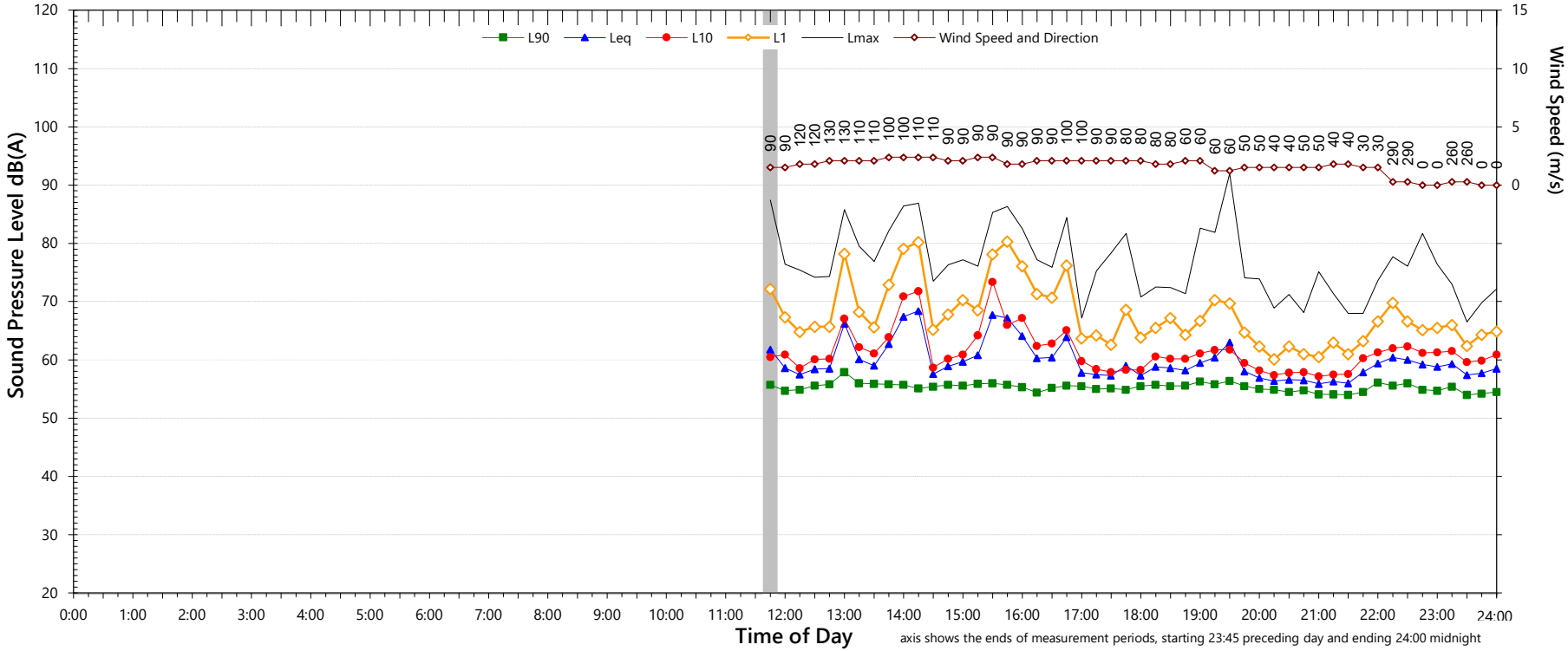
4. Upper 10th percentile $L_{Aeq\ 1hr}$ 5. Lower 10th percentile $L_{Aeq\ 1hr}$

6. Values are calculated at the facade. 2.5dB is added to results if logger is placed in the free field

Unattended Noise Monitoring Results

Rear Boundary Facing Market Place

Wednesday, 27 October 2021



NSW Noise Policy for Industry (Free Field)				
Descriptor		**Day[2]**	**Evening[3]**	**Night[4 5]**
L_{A90} ABL		-	54	47
L_{Aeq}	(see note 6)	-	56	58

Night Time Maximum Noise Levels			(see note 7)
L_{AFMax} (Range)	72	to	90
L_{AFMax} - L_{Aeq} (Range)	17	to	29

NSW Road Noise Policy (1m from facade)		
Descriptor	**Day**	**Night[5]**
	7am-10pm	**10pm-7am**
$L_{Aeq\ 15\ hr}$ and $L_{Aeq\ 9\ hr}$	-	61
$L_{Aeq\ 1hr}$ upper 10 percentile	-	63
$L_{Aeq\ 1hr}$ lower 10 percentile	-	52

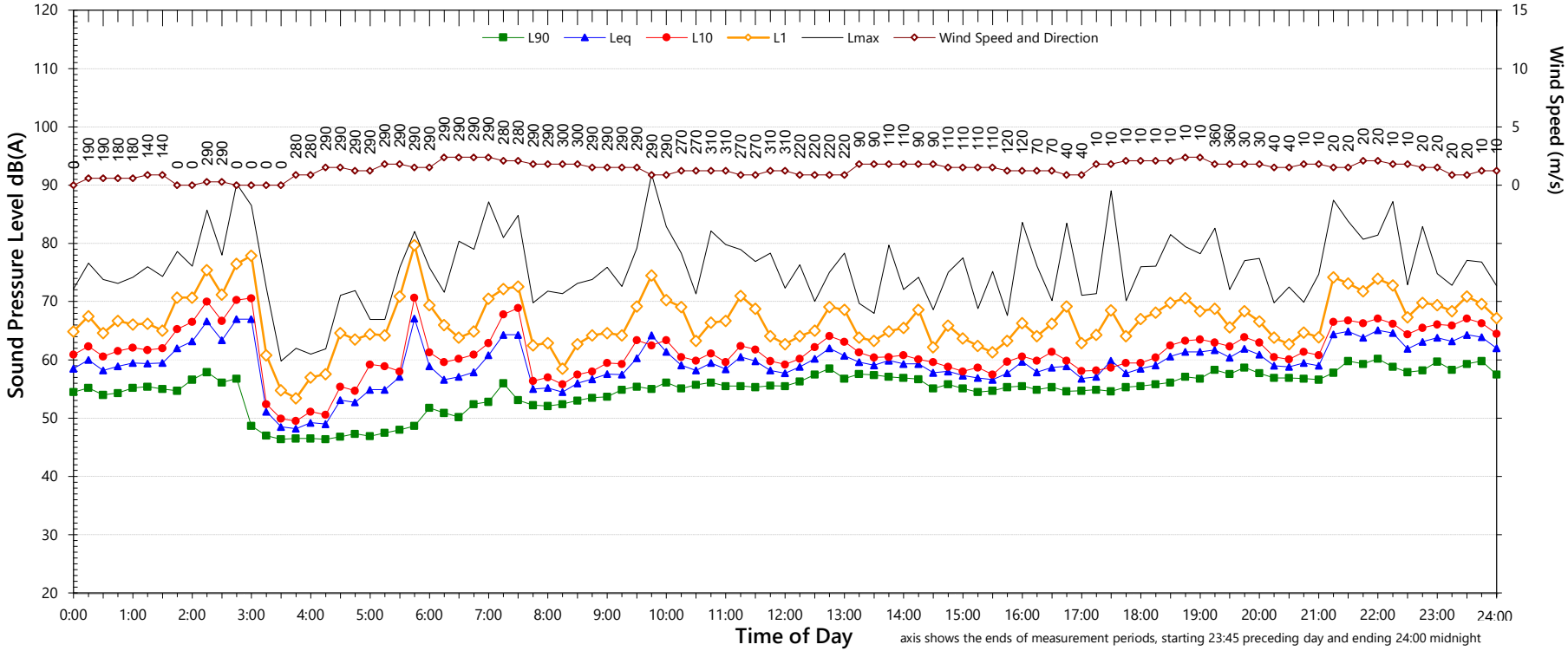
Notes:

1. Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.
2. "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days
3. "Evening" is the period from 6pm till 10pm
4. "Night" relates to the remaining periods
5. "Night" relates to period from 10pm on this graph to morning on the following graph.
6. Graphed data measured 1m from facade; tabulated results free-field corrected
7. 1-hour values for L_{AFMax} are shown only where L_{AFMax} >65dB(A) and where L_{AFMax}- L_{Aeq} ≥15dB(A)

Unattended Noise Monitoring Results

Rear Boundary Facing Market Place

Thursday, 28 October 2021



NSW Noise Policy for Industry (Free Field)				
Descriptor		**Day**[2]	**Evening**[3]	**Night**[4 5]
L_{A90} ABL		53	56	45
L_{Aeq}	(see note 6)	57	59	58

Night Time Maximum Noise Levels			(see note 7)
L_{AFMax} (Range)	68	to	87
L_{AFMax} - L_{Aeq} (Range)	16	to	24

NSW Road Noise Policy (1m from facade)		
Descriptor	**Day**	**Night**[5]
	7am-10pm	**10pm-7am**
$L_{Aeq\ 15\ hr}$ and $L_{Aeq\ 9\ hr}$	60	60
$L_{Aeq\ 1hr}$ upper 10 percentile	62	63
$L_{Aeq\ 1hr}$ lower 10 percentile	58	51

Notes:

1. Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.
2. "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days
3. "Evening" is the period from 6pm till 10pm
4. "Night" relates to the remaining periods
5. "Night" relates to period from 10pm on this graph to morning on the following graph.
6. Graphed data measured 1m from facade; tabulated results free-field corrected
7. 1-hour values for L_{AFMax} are shown only where L_{AFMax} >65dB(A) and where L_{AFMax}- L_{Aeq} ≥15dB(A)

Data File: 2021-10-27_SLM_000_123_Rpt_Report.txt

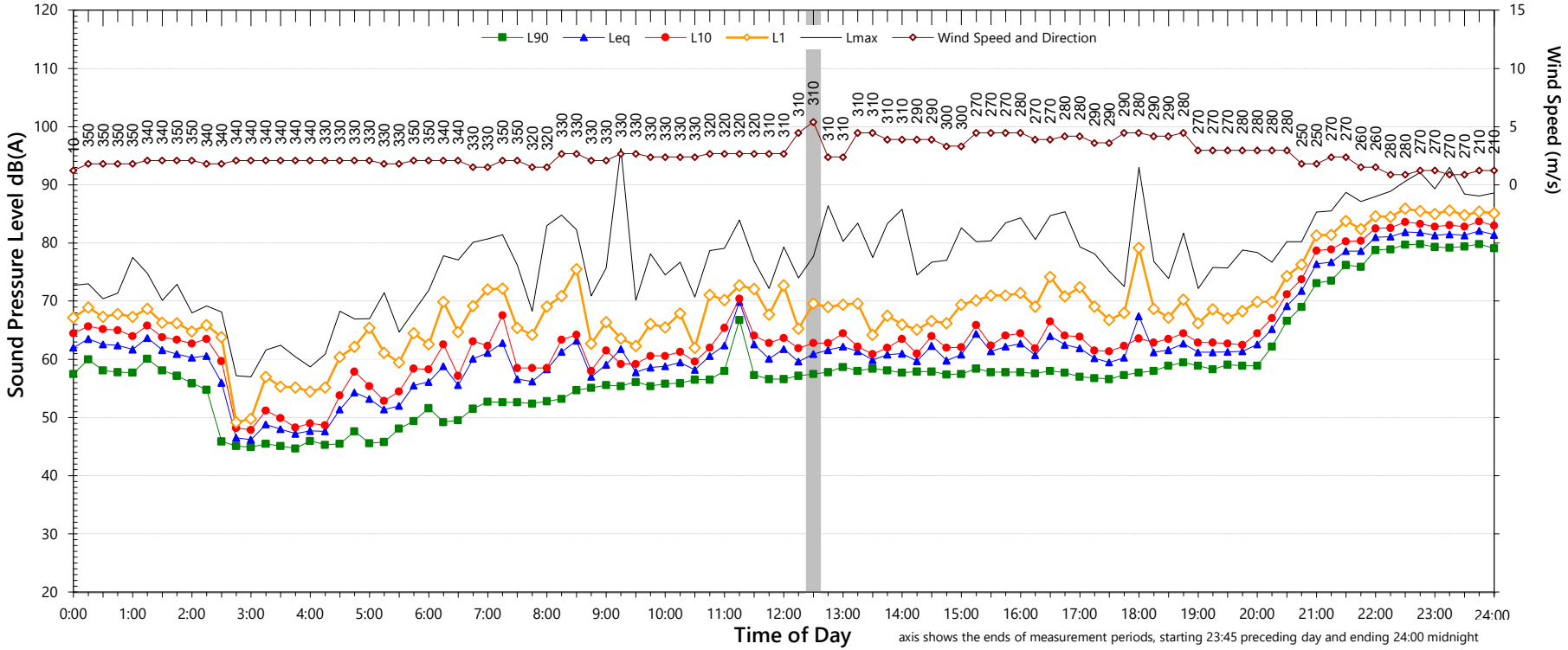
TM424-01L01 rear boundary facing market place (r0)

QTE-26 Logger Graphs Program (r38)

Unattended Noise Monitoring Results

Rear Boundary Facing Market Place

Friday, 29 October 2021



NSW Noise Policy for Industry (Free Field)				
Descriptor		**Day**[2]	**Evening**[3]	**Night**[4 5]
L_{A90} ABL		54	59	47
L_{Aeq}	(see note 6)	59	71	75

Night Time Maximum Noise Levels			(see note 7)
L_{AFMax} (Range)	72	to	104
L_{AFMax} - L_{Aeq} (Range)	20	to	35

NSW Road Noise Policy (1m from facade)		
Descriptor	**Day**	**Night**[5]
	7am-10pm	**10pm-7am**
$L_{Aeq\ 15\ hr}$ and $L_{Aeq\ 9\ hr}$	69	78
$L_{Aeq\ 1hr}$ upper 10 percentile	70	82
$L_{Aeq\ 1hr}$ lower 10 percentile	60	53

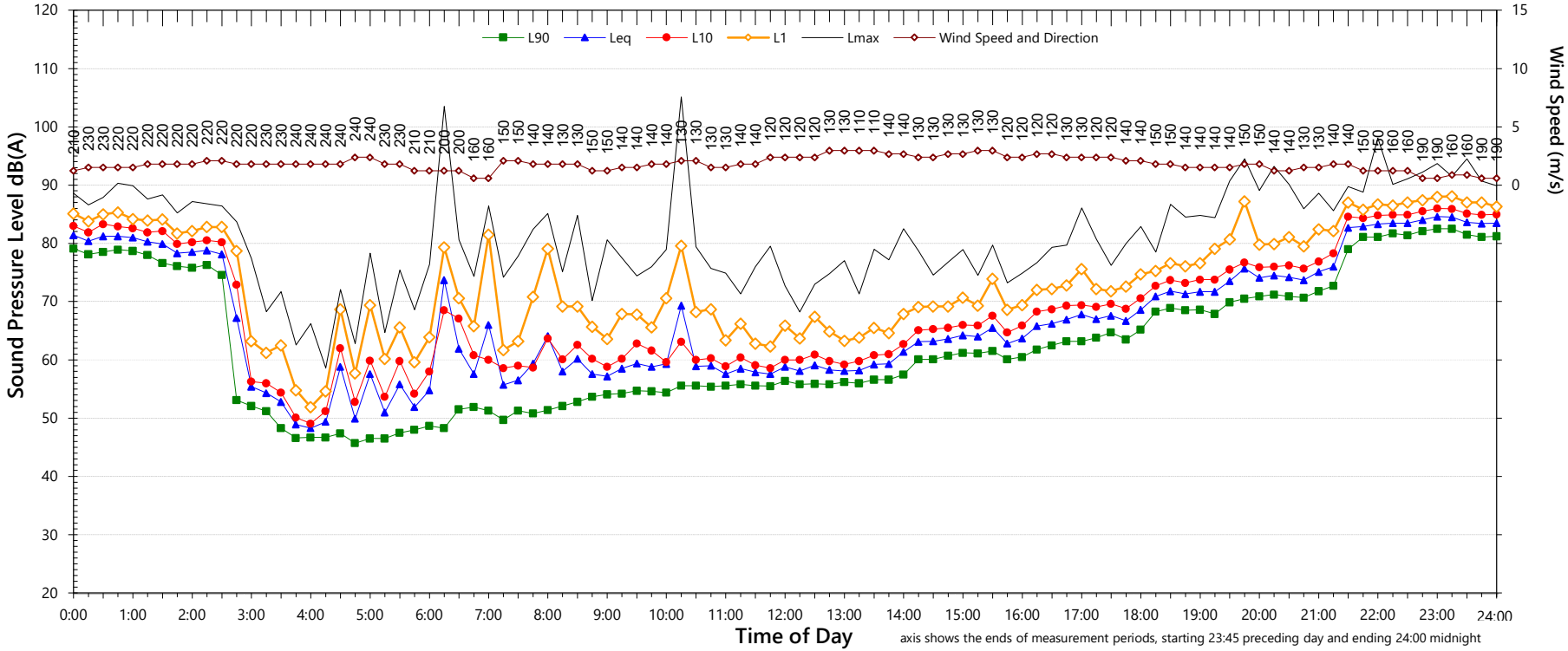
Notes:

1. Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.
2. "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days
3. "Evening" is the period from 6pm till 10pm
4. "Night" relates to the remaining periods
5. "Night" relates to period from 10pm on this graph to morning on the following graph.
6. Graphed data measured 1m from facade; tabulated results free-field corrected
7. 1-hour values for L_{AFMax} are shown only where L_{AFMax} >65dB(A) and where L_{AFMax}- L_{Aeq} ≥15dB(A)

Unattended Noise Monitoring Results

Rear Boundary Facing Market Place

Saturday, 30 October 2021



NSW Noise Policy for Industry (Free Field)				
Descriptor		**Day**[2]	**Evening**[3]	**Night**[4 5]
L_{A90} ABL		52	68	49
L_{Aeq}	(see note 6)	61	75	78

Night Time Maximum Noise Levels			(see note 7)
L_{AFMax} (Range)	78	to	86
L_{AFMax} - L_{Aeq} (Range)	19	to	25

NSW Road Noise Policy (1m from facade)		
Descriptor	**Day**	**Night**[5]
	7am-10pm	**10pm-7am**
$L_{Aeq\ 15\ hr}$ and $L_{Aeq\ 9\ hr}$	72	81
$L_{Aeq\ 1hr}$ upper 10 percentile	74	84
$L_{Aeq\ 1hr}$ lower 10 percentile	58	60

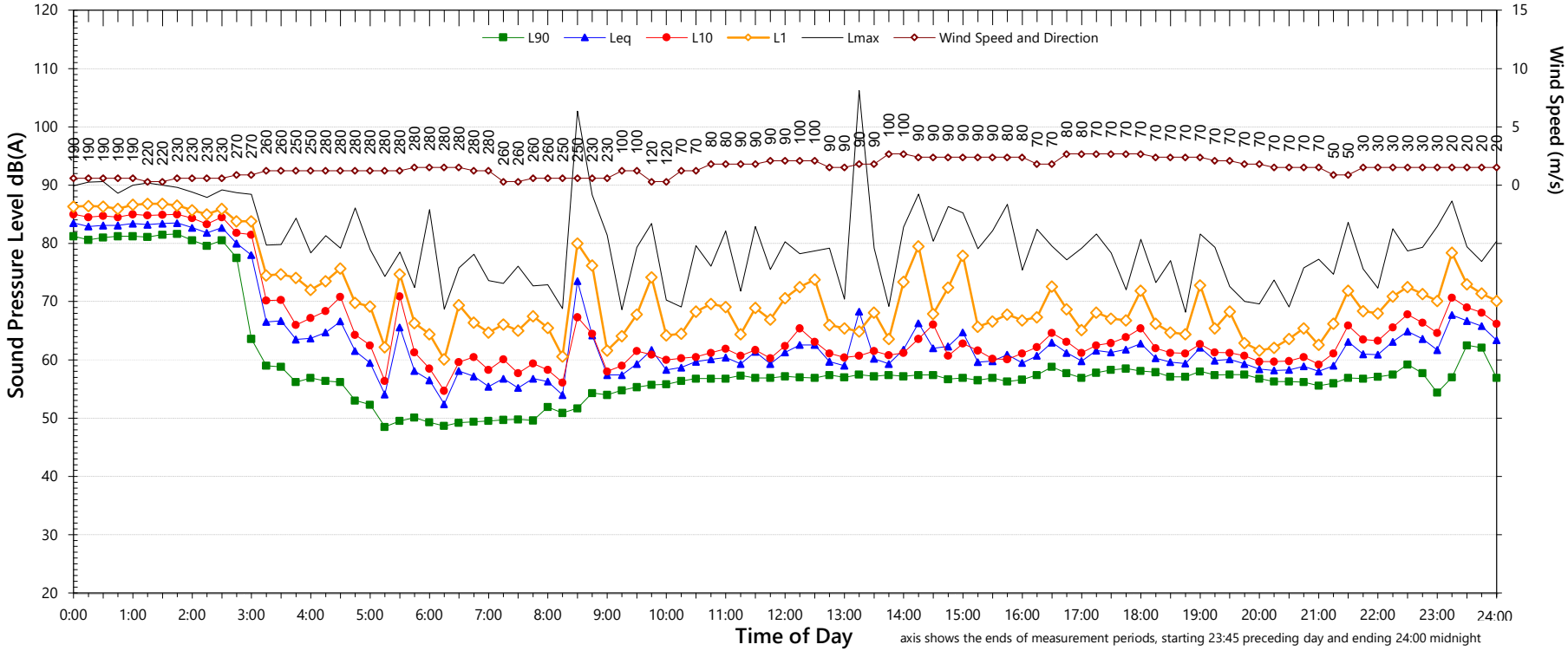
Notes:

1. Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.
2. "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days
3. "Evening" is the period from 6pm till 10pm
4. "Night" relates to the remaining periods
5. "Night" relates to period from 10pm on this graph to morning on the following graph.
6. Graphed data measured 1m from facade; tabulated results free-field corrected
7. 1-hour values for L_{AFMax} are shown only where L_{AFMax} >65dB(A) and where L_{AFMax}- L_{Aeq} ≥15dB(A)

Unattended Noise Monitoring Results

Rear Boundary Facing Market Place

Sunday, 31 October 2021



NSW Noise Policy for Industry (Free Field)				
Descriptor		**Day**[2]	**Evening**[3]	**Night**[4 5]
L_{A90} ABL		55	56	44
L_{Aeq}	(see note 6)	60	58	58

Night Time Maximum Noise Levels			(see note 7)
L_{AFMax} (Range)	69	to	87
L_{AFMax} - L_{Aeq} (Range)	17	to	30

NSW Road Noise Policy (1m from facade)		
Descriptor	**Day**	**Night**[5]
	7am-10pm	**10pm-7am**
$L_{Aeq\ 15\ hr}$ and $L_{Aeq\ 9\ hr}$	62	60
$L_{Aeq\ 1hr}$ upper 10 percentile	64	64
$L_{Aeq\ 1hr}$ lower 10 percentile	59	46

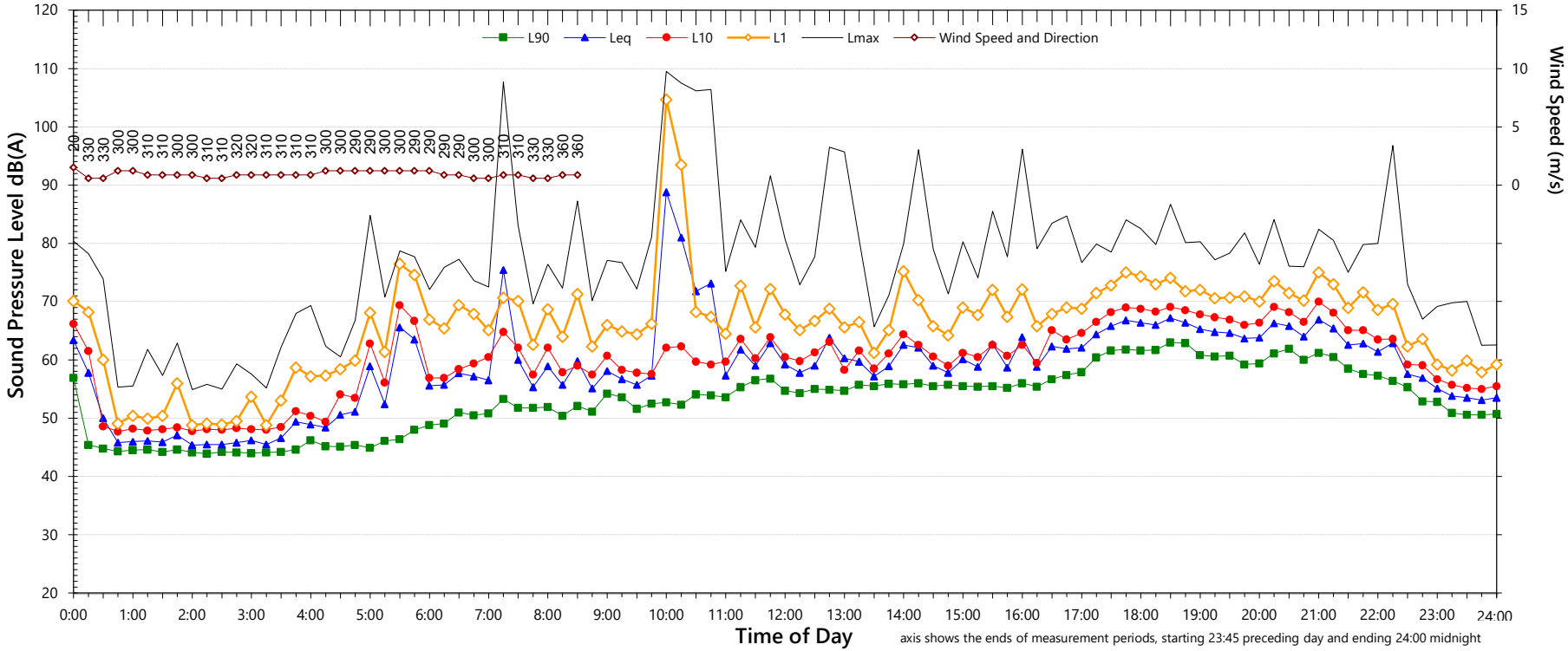
Notes:

1. Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.
2. "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days
3. "Evening" is the period from 6pm till 10pm
4. "Night" relates to the remaining periods
5. "Night" relates to period from 10pm on this graph to morning on the following graph.
6. Graphed data measured 1m from facade; tabulated results free-field corrected
7. 1-hour values for L_{AFMax} are shown only where L_{AFMax} >65dB(A) and where L_{AFMax}- L_{Aeq} ≥15dB(A)

Unattended Noise Monitoring Results

Rear Boundary Facing Market Place

Monday, 1 November 2021



NSW Noise Policy for Industry (Free Field)				
Descriptor		**Day**[2]	**Evening**[3]	**Night**[4 5]
L_{A90} ABL		52	58	45
L_{Aeq}	(see note 6)	71	63	55

Night Time Maximum Noise Levels			(see note 7)
L_{AFMax} (Range)	67	to	100
L_{AFMax} - L_{Aeq} (Range)	15	to	43

NSW Road Noise Policy (1m from facade)		
Descriptor	**Day**	**Night**[5]
	7am-10pm	**10pm-7am**
$L_{Aeq\ 15\ hr}$ and $L_{Aeq\ 9\ hr}$	72	57
$L_{Aeq\ 1hr}$ upper 10 percentile	73	60
$L_{Aeq\ 1hr}$ lower 10 percentile	60	52

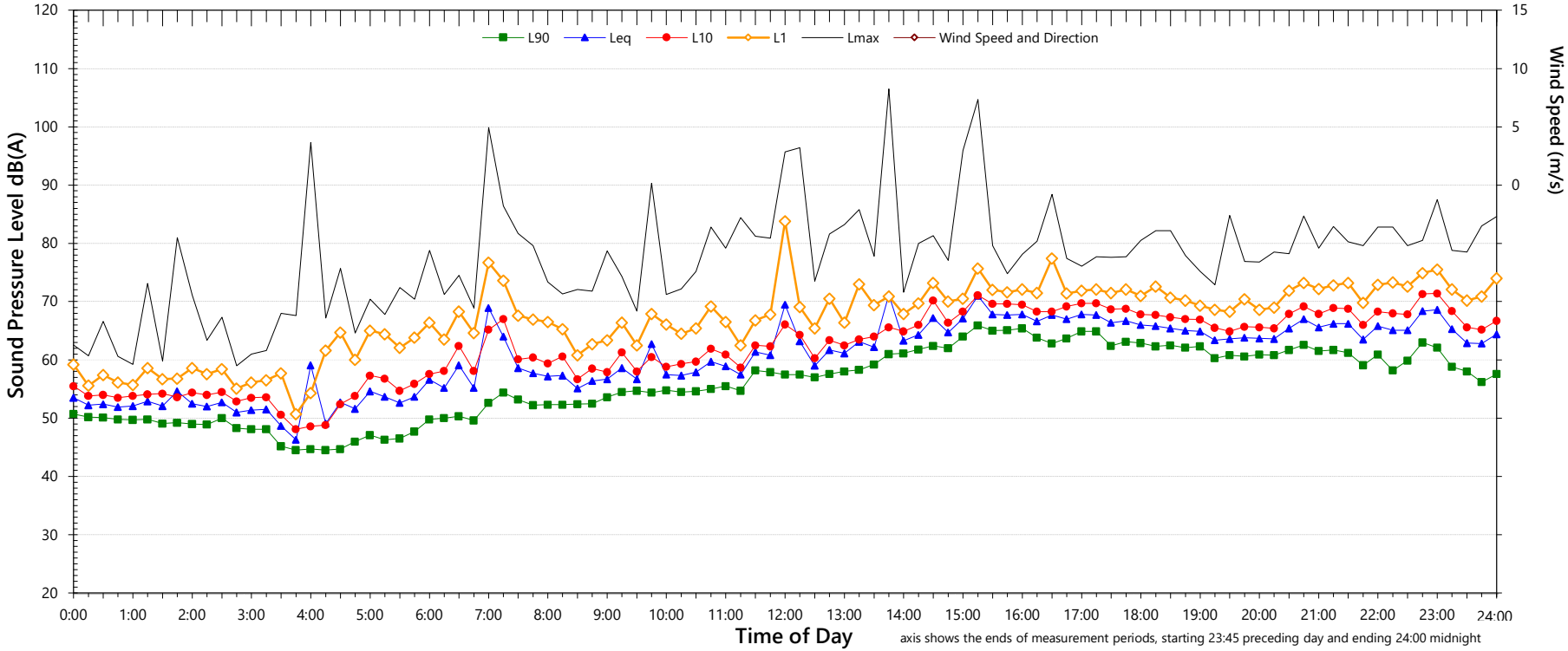
Notes:

1. Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.
2. "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days
3. "Evening" is the period from 6pm till 10pm
4. "Night" relates to the remaining periods
5. "Night" relates to period from 10pm on this graph to morning on the following graph.
6. Graphed data measured 1m from facade; tabulated results free-field corrected
7. 1-hour values for L_{AFMax} are shown only where L_{AFMax} >65dB(A) and where L_{AFMax}- L_{Aeq} ≥15dB(A)

Unattended Noise Monitoring Results

Rear Boundary Facing Market Place

Tuesday, 2 November 2021



NSW Noise Policy for Industry (Free Field)				
Descriptor		**Day**[2]	**Evening**[3]	**Night**[4 5]
L_{A90} ABL		53	60	50
L_{Aeq}	(see note 6)	62	63	62

Night Time Maximum Noise Levels			(see note 7)
L_{AFMax} (Range)	82	to	107
L_{AFMax} - L_{Aeq} (Range)	18	to	43

NSW Road Noise Policy (1m from facade)		
Descriptor	**Day**	**Night**[5]
	7am-10pm	**10pm-7am**
$L_{Aeq\ 15\ hr}$ and $L_{Aeq\ 9\ hr}$	65	65
$L_{Aeq\ 1hr}$ upper 10 percentile	67	67
$L_{Aeq\ 1hr}$ lower 10 percentile	59	58

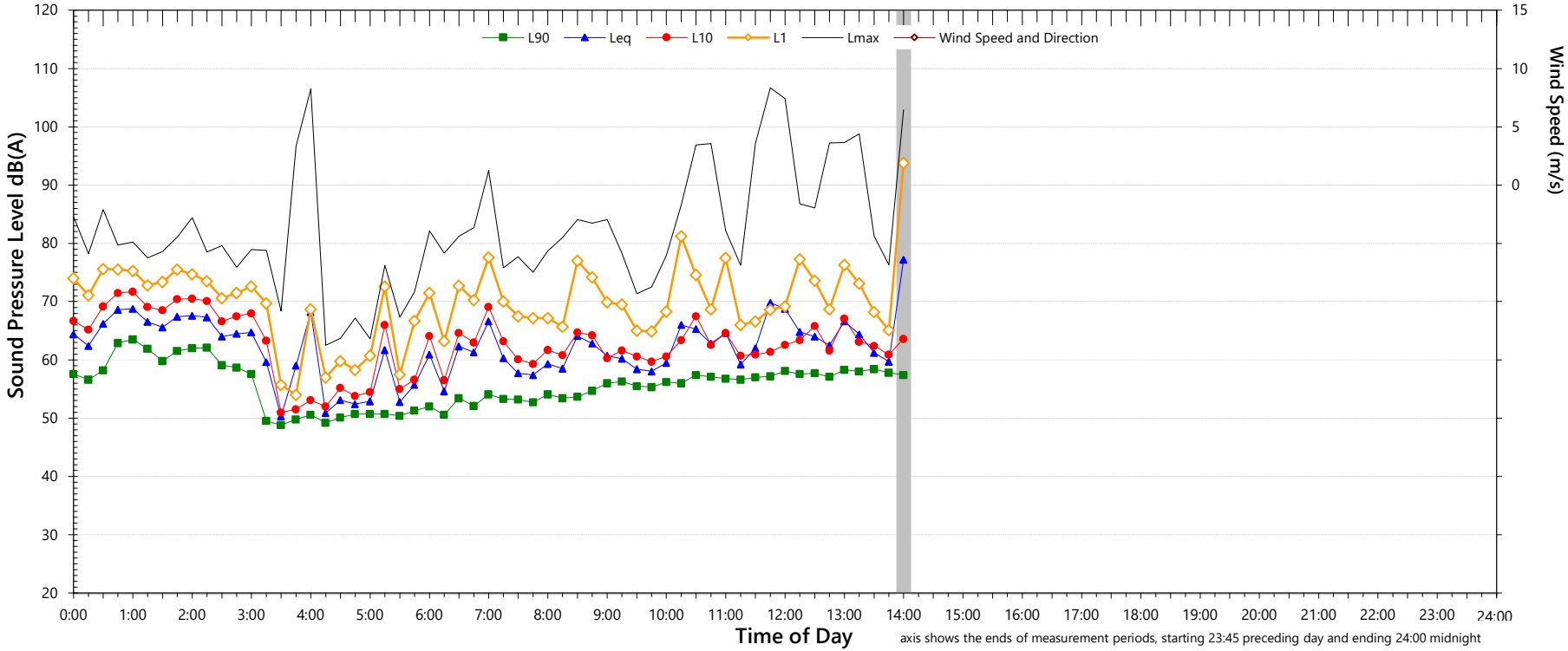
Notes:

1. Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.
2. "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days
3. "Evening" is the period from 6pm till 10pm
4. "Night" relates to the remaining periods
5. "Night" relates to period from 10pm on this graph to morning on the following graph.
6. Graphed data measured 1m from facade; tabulated results free-field corrected
7. 1-hour values for L_{AFMax} are shown only where L_{AFMax} >65dB(A) and where L_{AFMax}- L_{Aeq} ≥15dB(A)

Unattended Noise Monitoring Results

Rear Boundary Facing Market Place

Wednesday, 3 November 2021



NSW Noise Policy for Industry (Free Field)				
Descriptor		**Day**[2]	**Evening**[3]	**Night**[4 5]
L_{A90} ABL		-	-	-
L_{Aeq}	(see note 6)	-	-	-

Night Time Maximum Noise Levels			**(see note 7)**
L_{AFMax} (Range)	-	to	-
L_{AFMax} - L_{Aeq} (Range)	-	to	-

NSW Road Noise Policy (1m from facade)		
Descriptor	**Day**	**Night**[5]
	7am-10pm	**10pm-7am**
$L_{Aeq\ 15\ hr}$ and $L_{Aeq\ 9\ hr}$	-	-
$L_{Aeq\ 1hr}$ upper 10 percentile	-	-
$L_{Aeq\ 1hr}$ lower 10 percentile	-	-

Notes:

1. Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.
2. "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days
3. "Evening" is the period from 6pm till 10pm
4. "Night" relates to the remaining periods
5. "Night" relates to period from 10pm on this graph to morning on the following graph.
6. Graphed data measured 1m from facade; tabulated results free-field corrected
7. 1-hour values for L_{AFMax} are shown only where L_{AFMax} >65dB(A) and where L_{AFMax}- L_{Aeq} ≥15dB(A)

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Front Facade Facing The Corso

Background & Ambient Noise Monitoring Results - NSW 'Noise Policy for Industry', 2017

Periods with insufficient results excluded	L_{A90} Background Noise Levels[4]			L_{Aeq} Ambient Noise Levels		
Date	**Day[1]**	**Evening[2]**	**Night[3]**	**Day[1]**	**Evening[2]**	**Night[3]**
Wednesday-27-October-2021	-	50	44	-	57	55
Thursday-28-October-2021	56	55	45	58	58	54
Friday-29-October-2021	55	58	47	61	60	60
Saturday-30-October-2021	55	58	47	60	62	60
Sunday-31-October-2021	55	56	44	59	58	55
Monday-01-November-2021	55	51	45	58	56	57
Tuesday-02-November-2021	55	54	46	62	58	55
Wednesday-03-November-2021	-	-	-	-	-	-
Representative Weekday[5]	**55**	**54**	**45**	**60**	**58**	**57**
Representative Weekend[5]	**55**	**57**	**46**	**59**	**61**	**58**
Representative Week[5]	**55**	**55**	**45**	**60**	**59**	**57**

Notes:

1. Day is 7:00am to 6:00pm on all days except Sundays and Public Holidays when it is 8:00am to 6:00pm 2. Evening is 6:00pm to 10:00pm

3. Night is the remaining periods 4. Assessment Background Level (ABL) for individual days 5. Rating Background Level (RBL) for L_{A90} and logarithmic average for L_{Aeq} 6. Leq is calculated in the free field. 2.5dB is subtracted from results if logger is placed at façade 7. Number in brackets represents the measured (actual) RBL value, which is below the minimum policy value of 30 dB(A) during the evening or night period or 35 dB(A) during the day period.

Front Facade Facing The Corso

Road / Rail Noise Monitoring Results (at one metre from façade)

Periods with insufficient results excluded	L_{Aeq} Noise Levels		$L_{Aeq\ 1hr}$ Noise Levels			
Date	**Day[1]**	**Night[2]**	**Day - Up[4]**	**Day - Low[5]**	**Night - Up[4]**	**Night - Low[5]**
Wednesday-27-October-2021	-	58	-	-	62	47
Thursday-28-October-2021	61	57	62	60	60	49
Friday-29-October-2021	64	62	64	60	64	57
Saturday-30-October-2021	63	63	65	60	65	59
Sunday-31-October-2021	61	57	62	59	61	47
Monday-01-November-2021	60	59	62	58	61	47
Tuesday-02-November-2021	64	58	68	60	61	51
Wednesday-03-November-2021	-	-	-	-	-	-
Representative Weekday[3]	**62**	**58**	**63**	**60**	**61**	**49**
Representative Weekend[3]	**62**	**60**	**64**	**60**	**63**	**53**
Representative Week[3]	**62**	**58**	**63**	**60**	**61**	**49**

Notes:

1. Day is 7:00am to 10:00pm 2. Night is 10:00pm to 7:00am 3. Median of daily L_{Aeq}

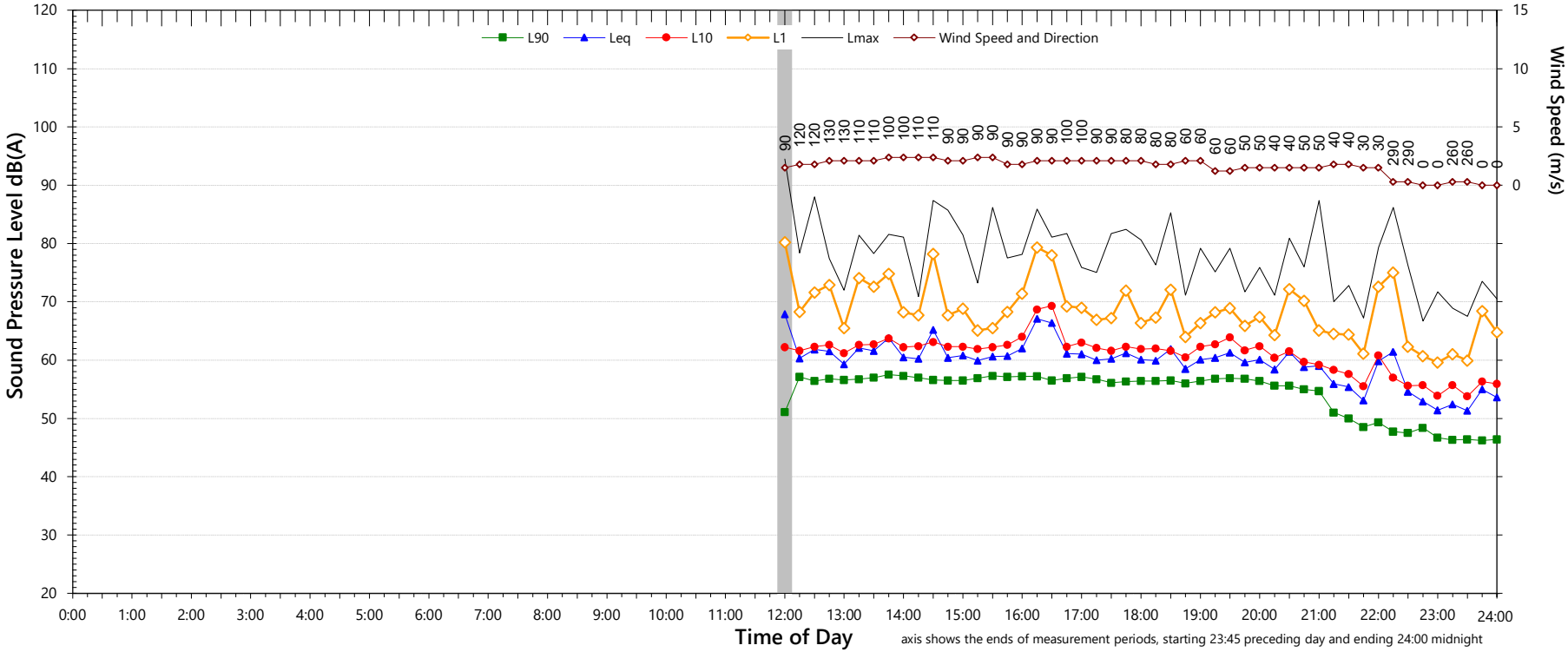
4. Upper 10th percentile $L_{Aeq\ 1hr}$ 5. Lower 10th percentile $L_{Aeq\ 1hr}$

6. Values are calculated at the facade. 2.5dB is added to results if logger is placed in the free field

Unattended Noise Monitoring Results

Front Facade Facing The Corso

Wednesday, 27 October 2021



NSW Noise Policy for Industry (Free Field)				
Descriptor		**Day**[2]	**Evening**[3]	**Night**[4 5]
L_{A90} ABL		-	50	44
L_{Aeq}	(see note 6)	-	57	55

Night Time Maximum Noise Levels			(see note 7)
L_{AFMax} (Range)	71	to	98
L_{AFMax} - L_{Aeq} (Range)	15	to	35

NSW Road Noise Policy (1m from facade)		
Descriptor	**Day**	**Night**[5]
	7am-10pm	**10pm-7am**
$L_{Aeq\ 15\ hr}$ and $L_{Aeq\ 9\ hr}$	-	58
$L_{Aeq\ 1hr}$ upper 10 percentile	-	62
$L_{Aeq\ 1hr}$ lower 10 percentile	-	47

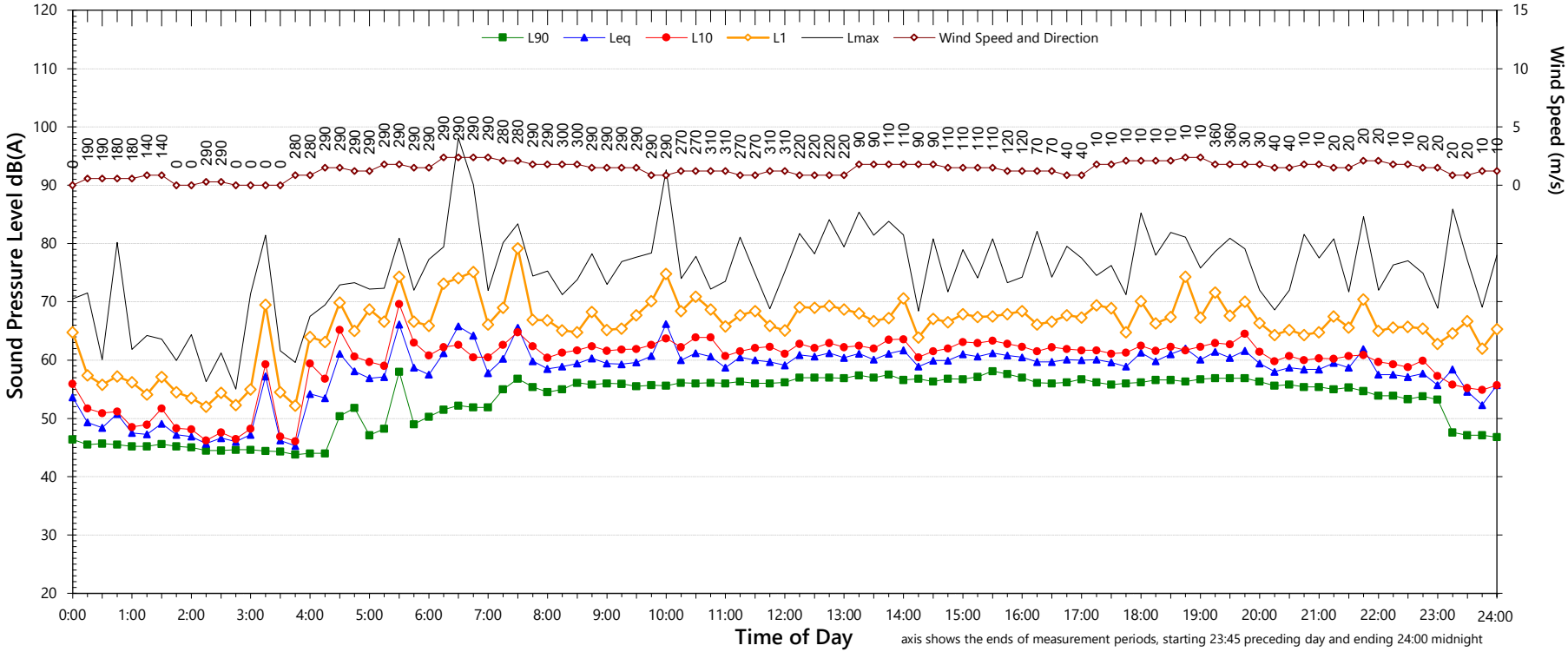
Notes:

1. Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.
2. "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days
3. "Evening" is the period from 6pm till 10pm
4. "Night" relates to the remaining periods
5. "Night" relates to period from 10pm on this graph to morning on the following graph.
6. Graphed data measured 1m from facade; tabulated results free-field corrected
7. 1-hour values for L_{AFMax} are shown only where L_{AFMax} >65dB(A) and where L_{AFMax}- L_{Aeq} ≥15dB(A)

Unattended Noise Monitoring Results

Front Facade Facing The Corso

Thursday, 28 October 2021



NSW Noise Policy for Industry (Free Field)				
Descriptor		**Day**[2]	**Evening**[3]	**Night**[4 5]
L_{A90} ABL		56	55	45
L_{Aeq}	(see note 6)	58	58	54

Night Time Maximum Noise Levels			(see note 7)
L_{AFMax} (Range)	66	to	86
L_{AFMax} - L_{Aeq} (Range)	15	to	30

NSW Road Noise Policy (1m from facade)		
Descriptor	**Day**	**Night**[5]
	7am-10pm	**10pm-7am**
$L_{Aeq\ 15\ hr}$ and $L_{Aeq\ 9\ hr}$	61	57
$L_{Aeq\ 1hr}$ upper 10 percentile	62	60
$L_{Aeq\ 1hr}$ lower 10 percentile	60	49

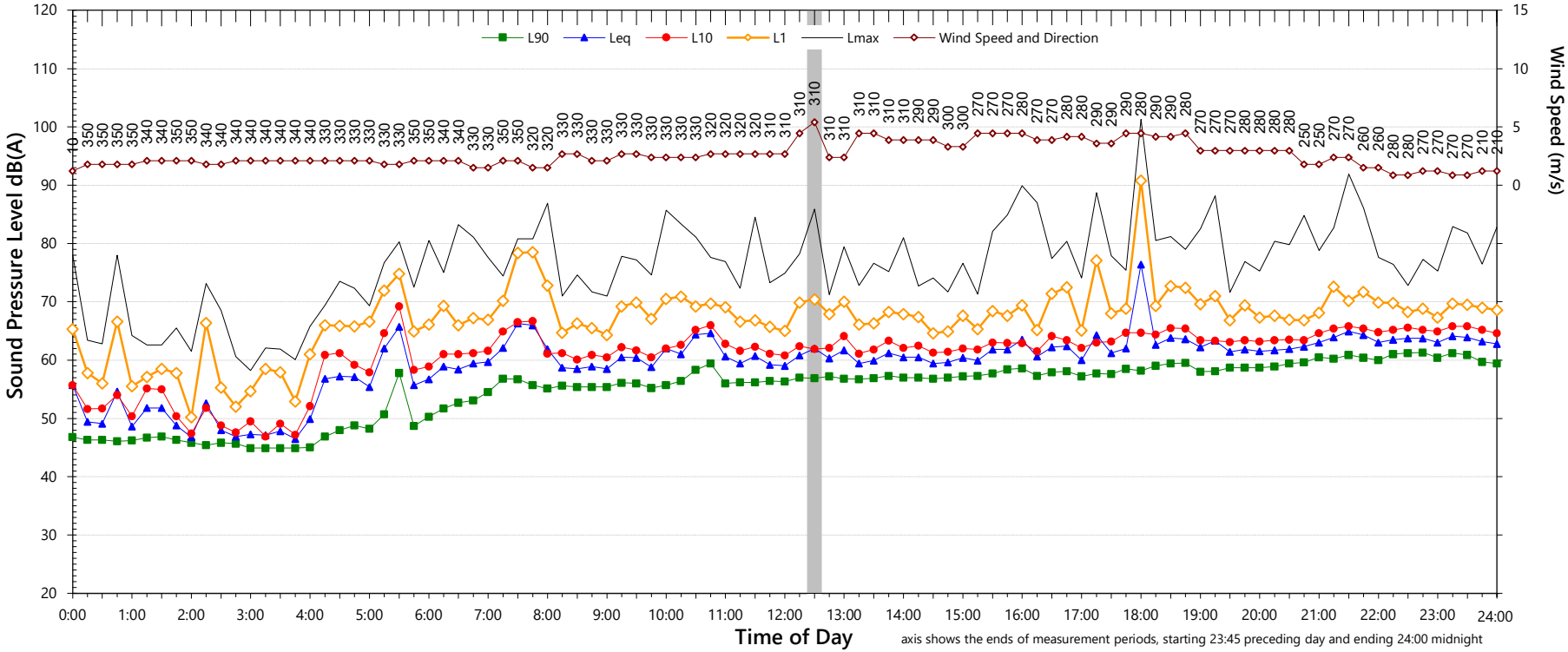
Notes:

1. Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.
2. "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days
3. "Evening" is the period from 6pm till 10pm
4. "Night" relates to the remaining periods
5. "Night" relates to period from 10pm on this graph to morning on the following graph.
6. Graphed data measured 1m from facade; tabulated results free-field corrected
7. 1-hour values for L_{AFMax} are shown only where L_{AFMax} >65dB(A) and where L_{AFMax}- L_{Aeq} ≥15dB(A)

Unattended Noise Monitoring Results

Front Facade Facing The Corso

Friday, 29 October 2021



NSW Noise Policy for Industry (Free Field)				
Descriptor		**Day**[2]	**Evening**[3]	**Night**[4 5]
L_{A90} ABL		55	58	47
L_{Aeq}	(see note 6)	61	60	60

Night Time Maximum Noise Levels			(see note 7)
L_{AFMax} (Range)	70	to	90
L_{AFMax} - L_{Aeq} (Range)	16	to	29

NSW Road Noise Policy (1m from facade)		
Descriptor	**Day**	**Night**[5]
	7am-10pm	**10pm-7am**
$L_{Aeq\ 15\ hr}$ and $L_{Aeq\ 9\ hr}$	64	62
$L_{Aeq\ 1hr}$ upper 10 percentile	64	64
$L_{Aeq\ 1hr}$ lower 10 percentile	60	57

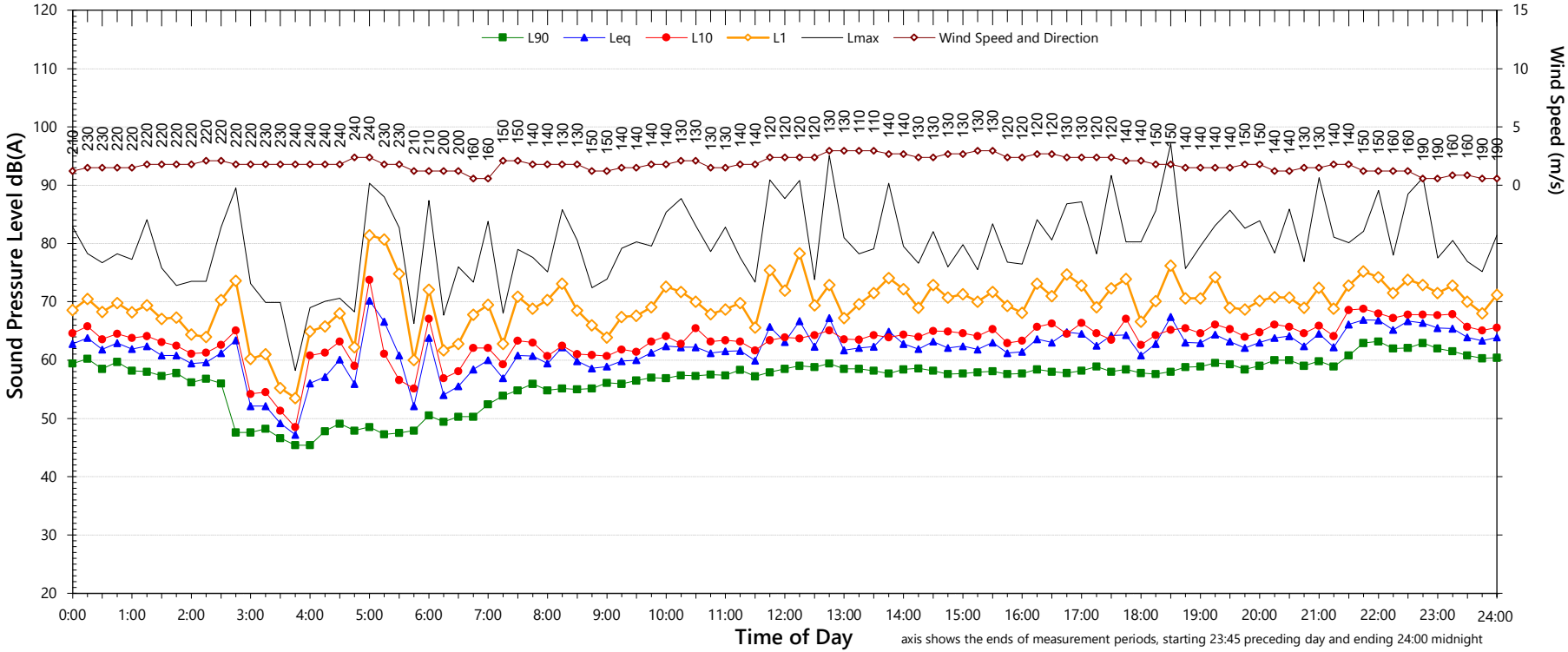
Notes:

1. Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.
2. "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days
3. "Evening" is the period from 6pm till 10pm
4. "Night" relates to the remaining periods
5. "Night" relates to period from 10pm on this graph to morning on the following graph.
6. Graphed data measured 1m from facade; tabulated results free-field corrected
7. 1-hour values for L_{AFMax} are shown only where L_{AFMax} >65dB(A) and where L_{AFMax}- L_{Aeq} ≥15dB(A)

Unattended Noise Monitoring Results

Front Facade Facing The Corso

Saturday, 30 October 2021



axis shows the ends of measurement periods, starting 23:45 preceding day and ending 24:00 midnight

NSW Noise Policy for Industry (Free Field)				
Descriptor		**Day**[2]	**Evening**[3]	**Night**[4 5]
L_{A90} ABL		55	58	47
L_{Aeq}	(see note 6)	60	62	60

Night Time Maximum Noise Levels			(see note 7)
L_{AFMax} (Range)	79	to	93
L_{AFMax} - L_{Aeq} (Range)	16	to	33

NSW Road Noise Policy (1m from facade)		
Descriptor	**Day**	**Night**[5]
	7am-10pm	**10pm-7am**
$L_{Aeq\ 15\ hr}$ and $L_{Aeq\ 9\ hr}$	63	63
$L_{Aeq\ 1hr}$ upper 10 percentile	65	65
$L_{Aeq\ 1hr}$ lower 10 percentile	60	59

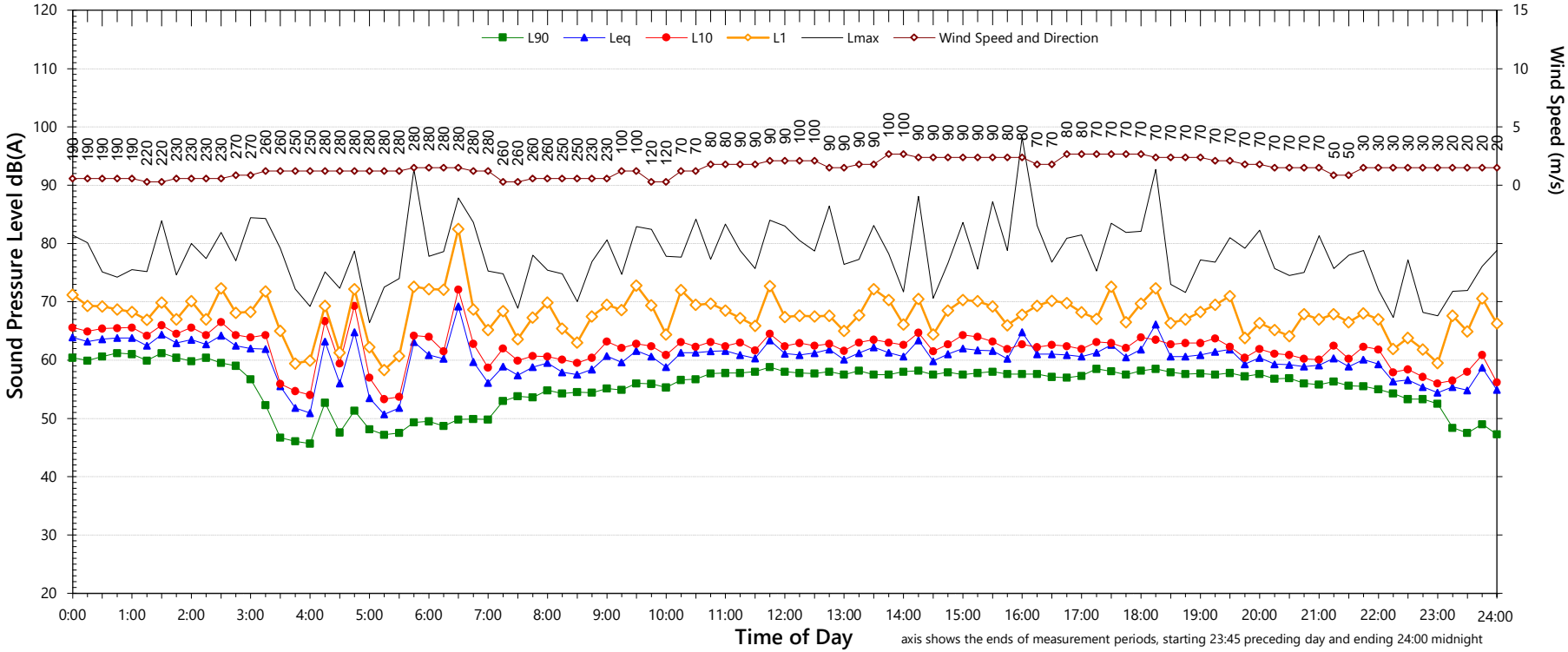
Notes:

1. Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.
2. "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days
3. "Evening" is the period from 6pm till 10pm
4. "Night" relates to the remaining periods
5. "Night" relates to period from 10pm on this graph to morning on the following graph.
6. Graphed data measured 1m from facade; tabulated results free-field corrected
7. 1-hour values for L_{AFMax} are shown only where L_{AFMax} >65dB(A) and where L_{AFMax}- L_{Aeq} ≥15dB(A)

Unattended Noise Monitoring Results

Front Facade Facing The Corso

Sunday, 31 October 2021



NSW Noise Policy for Industry (Free Field)				
Descriptor		**Day**[2]	**Evening**[3]	**Night**[4 5]
L_{A90} ABL		55	56	44
L_{Aeq}	(see note 6)	59	58	55

Night Time Maximum Noise Levels			(see note 7)
L_{AFMax} (Range)	66	to	84
L_{AFMax} - L_{Aeq} (Range)	16	to	27

NSW Road Noise Policy (1m from facade)		
Descriptor	**Day**	**Night**[5]
	7am-10pm	**10pm-7am**
$L_{Aeq\ 15\ hr}$ and $L_{Aeq\ 9\ hr}$	61	57
$L_{Aeq\ 1hr}$ upper 10 percentile	62	61
$L_{Aeq\ 1hr}$ lower 10 percentile	59	47

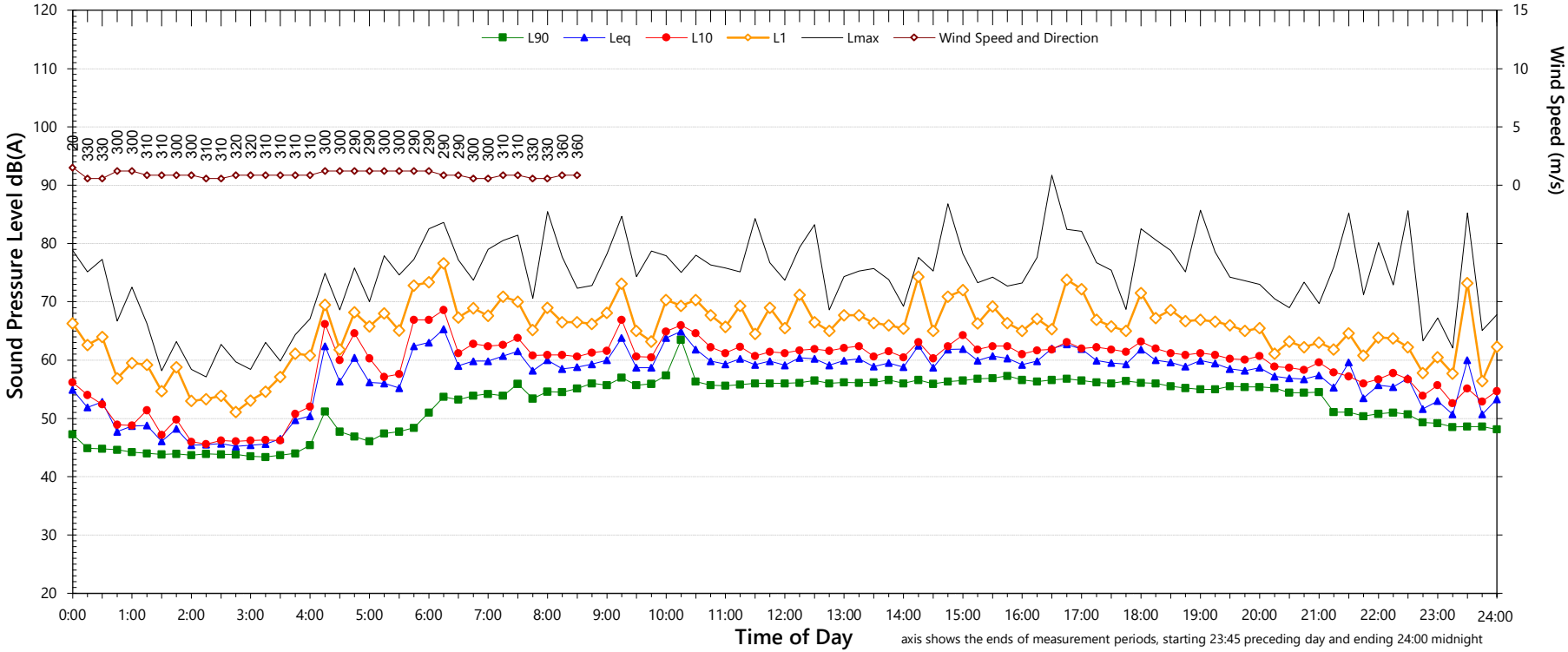
Notes:

1. Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.
2. "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days
3. "Evening" is the period from 6pm till 10pm
4. "Night" relates to the remaining periods
5. "Night" relates to period from 10pm on this graph to morning on the following graph.
6. Graphed data measured 1m from facade; tabulated results free-field corrected
7. 1-hour values for L_{AFMax} are shown only where L_{AFMax} >65dB(A) and where L_{AFMax}- L_{Aeq} ≥15dB(A)

Unattended Noise Monitoring Results

Front Facade Facing The Corso

Monday, 1 November 2021



NSW Noise Policy for Industry (Free Field)				
Descriptor		**Day**[2]	**Evening**[3]	**Night**[4 5]
L_{A90} ABL		55	51	45
L_{Aeq}	(see note 6)	58	56	57

Night Time Maximum Noise Levels			**(see note 7)**
L_{AFMax} (Range)	66	to	90
L_{AFMax} - L_{Aeq} (Range)	16	to	31

NSW Road Noise Policy (1m from facade)		
Descriptor	**Day**	**Night**[5]
	7am-10pm	**10pm-7am**
$L_{Aeq\ 15\ hr}$ and $L_{Aeq\ 9\ hr}$	60	59
$L_{Aeq\ 1hr}$ upper 10 percentile	62	61
$L_{Aeq\ 1hr}$ lower 10 percentile	58	47

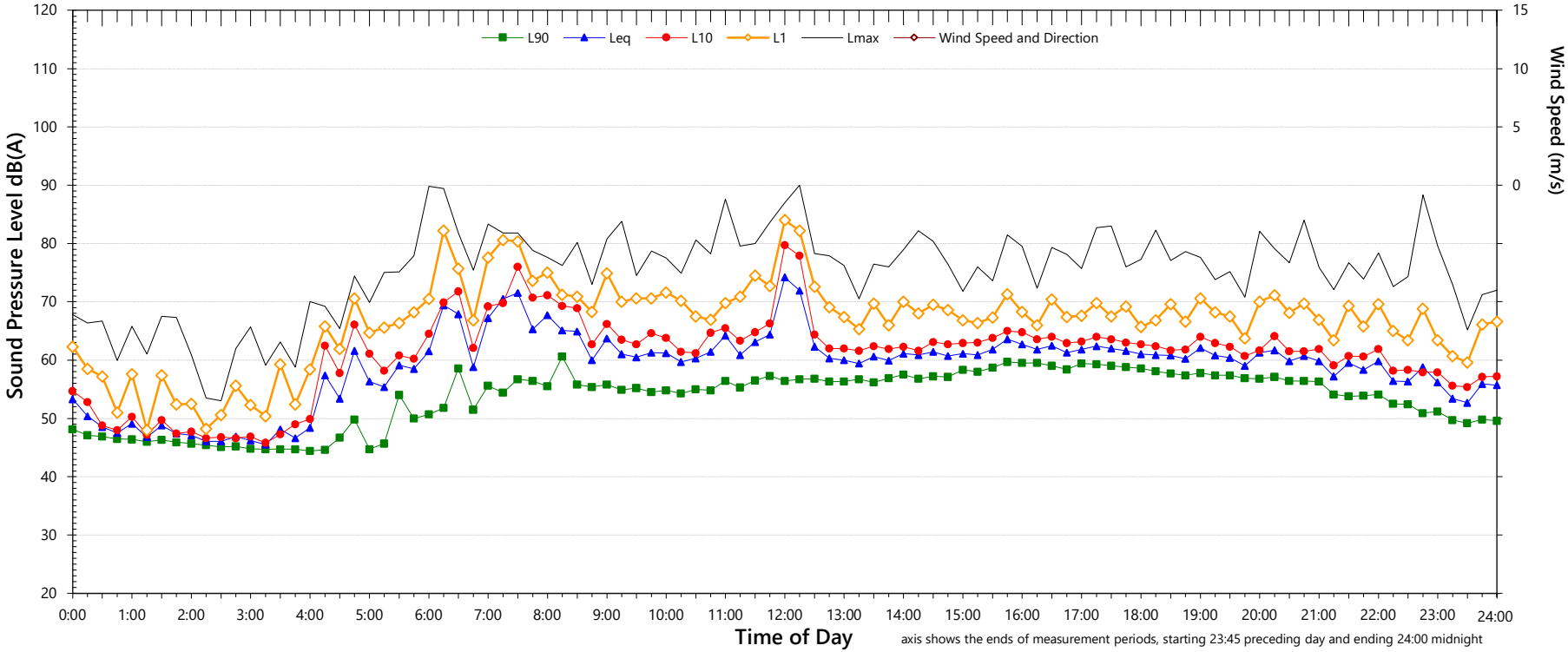
Notes:

1. Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.
2. "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days
3. "Evening" is the period from 6pm till 10pm
4. "Night" relates to the remaining periods
5. "Night" relates to period from 10pm on this graph to morning on the following graph.
6. Graphed data measured 1m from facade; tabulated results free-field corrected
7. 1-hour values for L_{AFMax} are shown only where L_{AFMax} >65dB(A) and where L_{AFMax}- L_{Aeq} ≥15dB(A)

Unattended Noise Monitoring Results

Front Facade Facing The Corso

Tuesday, 2 November 2021



NSW Noise Policy for Industry (Free Field)				
Descriptor		**Day**[2]	**Evening**[3]	**Night**[4 5]
L_{A90} ABL		55	54	46
L_{Aeq}	(see note 6)	62	58	55

Night Time Maximum Noise Levels			(see note 7)
L_{AFMax} (Range)	73	to	88
L_{AFMax} - L_{Aeq} (Range)	15	to	31

NSW Road Noise Policy (1m from facade)		
Descriptor	**Day**	**Night**[5]
	7am-10pm	**10pm-7am**
$L_{Aeq\ 15\ hr}$ and $L_{Aeq\ 9\ hr}$	64	58
$L_{Aeq\ 1hr}$ upper 10 percentile	68	61
$L_{Aeq\ 1hr}$ lower 10 percentile	60	51

Notes:

1. Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.
2. "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days
3. "Evening" is the period from 6pm till 10pm
4. "Night" relates to the remaining periods
5. "Night" relates to period from 10pm on this graph to morning on the following graph.
6. Graphed data measured 1m from facade; tabulated results free-field corrected
7. 1-hour values for L_{AFMax} are shown only where L_{AFMax} >65dB(A) and where L_{AFMax}- L_{Aeq} ≥15dB(A)

Data File: 2021-10-27_SLM_000_123_Rpt_Report.txt

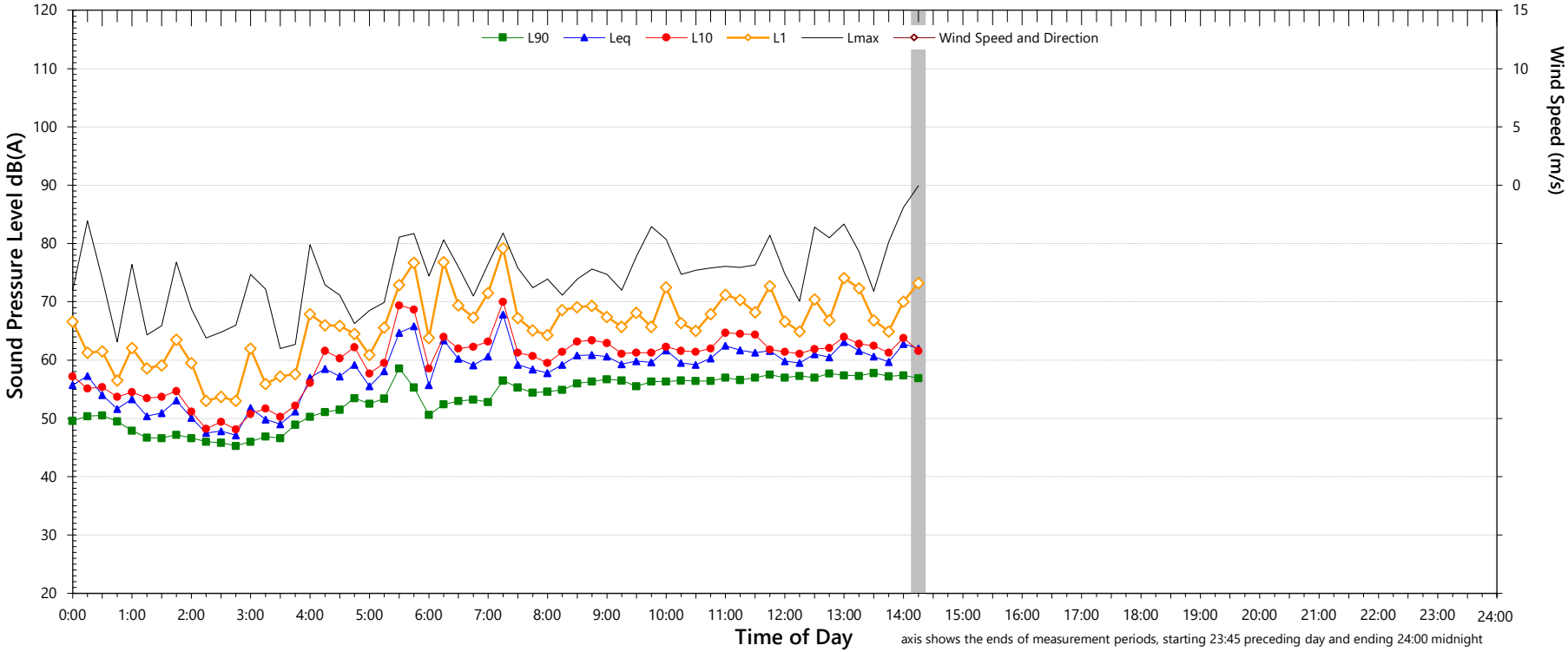
TM424-01L02 Front Facade facing The Corso (r0)

QTE-26 Logger Graphs Program (r38)

Unattended Noise Monitoring Results

Front Facade Facing The Corso

Wednesday, 3 November 2021



NSW Noise Policy for Industry (Free Field)				
Descriptor		**Day**[2]	**Evening**[3]	**Night**[4 5]
L_{A90} ABL		-	-	-
L_{Aeq}	(see note 6)	-	-	-

Night Time Maximum Noise Levels			(see note 7)
L_{AFMax} (Range)	-	to	-
L_{AFMax} - L_{Aeq} (Range)	-	to	-

NSW Road Noise Policy (1m from facade)		
Descriptor	**Day**	**Night**[5]
	7am-10pm	**10pm-7am**
$L_{Aeq\ 15\ hr}$ and $L_{Aeq\ 9\ hr}$	-	-
$L_{Aeq\ 1hr}$ upper 10 percentile	-	-
$L_{Aeq\ 1hr}$ lower 10 percentile	-	-

Notes:

1. Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.
2. "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days
3. "Evening" is the period from 6pm till 10pm
4. "Night" relates to the remaining periods
5. "Night" relates to period from 10pm on this graph to morning on the following graph.
6. Graphed data measured 1m from facade; tabulated results free-field corrected
7. 1-hour values for L_{AFMax} are shown only where L_{AFMax} >65dB(A) and where L_{AFMax}- L_{Aeq} ≥15dB(A)