

Hugos - Shop 1, Manly Wharf East Esplanade, Manly

Noise Impact Assessment

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1 INTRODUCTION

This report presents an acoustic assessment of the potential noise impacts associated with the proposed alterations and additions to the development located at Shop 1 Manly Wharf, East Esplanade, Manly, formally known as Hugo's.

This document addresses noise emissions associated with the operation of the site based on the proposed extensions to the outdoor patron areas.

Acoustic Logic Consultancy (ALC) have utilised the following documents and regulations in the noise assessment of the development:

- Northern Beaches Council (formerly Manly Council) *Development Control Plan (DCP) 2013*;
- NSW Office of Liquor and Gaming (OLG) guidelines; and
- NSW EPA *Noise Policy for Industry (NPfI) 2017*.

This assessment has been conducted using the Squillace architectural drawings for submission to council, dated 12th June 2020, Issue P9.

2 PROPOSED DEVELOPMENT AND SITE DESCRIPTION

The application seeks approval for additions and alterations to the existing bar/restaurant located at Shop 1 Manly Wharf, East Esplanade, Manly, formally known as Hugo's. The additions and alterations consist of the following:

- New outdoor seating area for patrons on the southern edge of the building façade. This area will have a capacity of 36 patrons, and the proposed hours of use are from 11:30am to 12:00am midnight seven days a week.
- Extension to the existing outdoor seating area on the western edge. The capacity of this area will be increased from 50 to 80 patrons. Current hours of use (11:30am-12:00am midnight) will not change.
- The current internal capacity of 150 patrons and associated hours of operation will not change.

Refer to the site layout in the figure below.

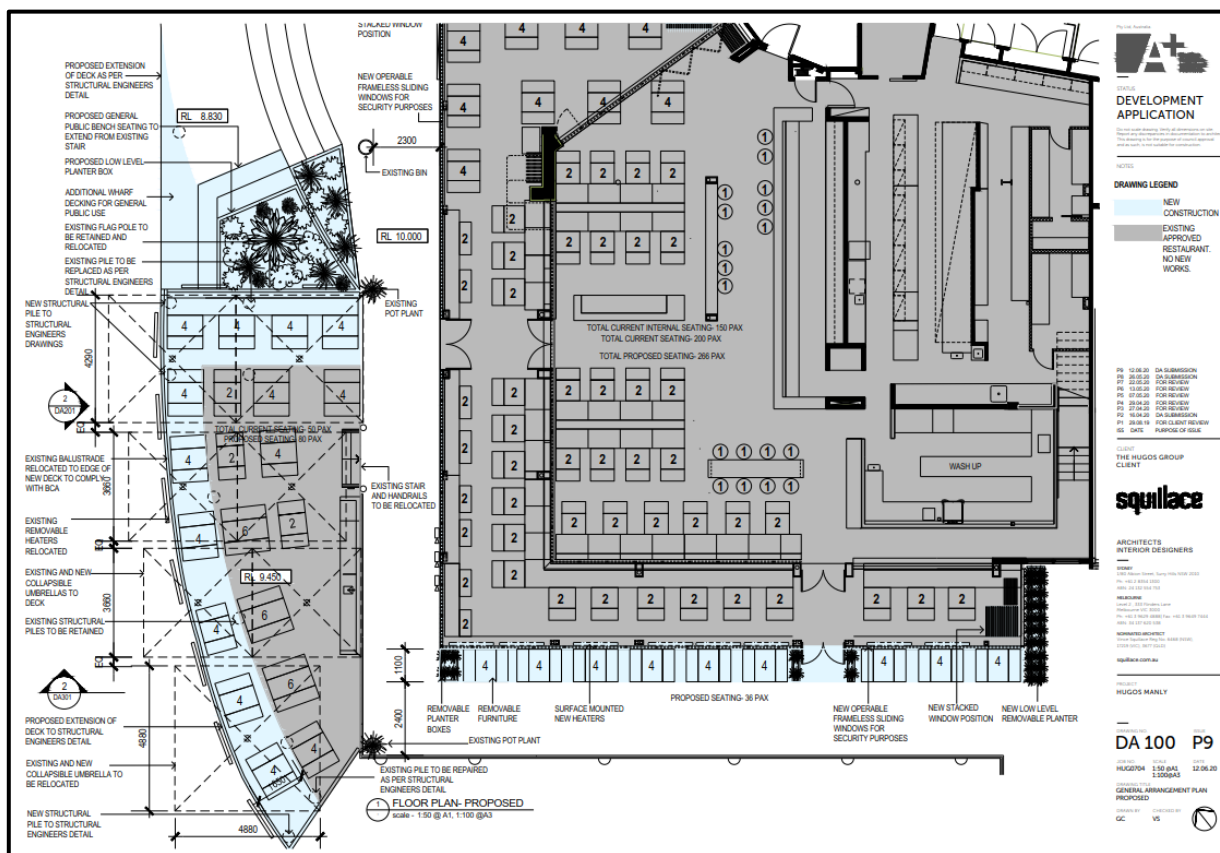
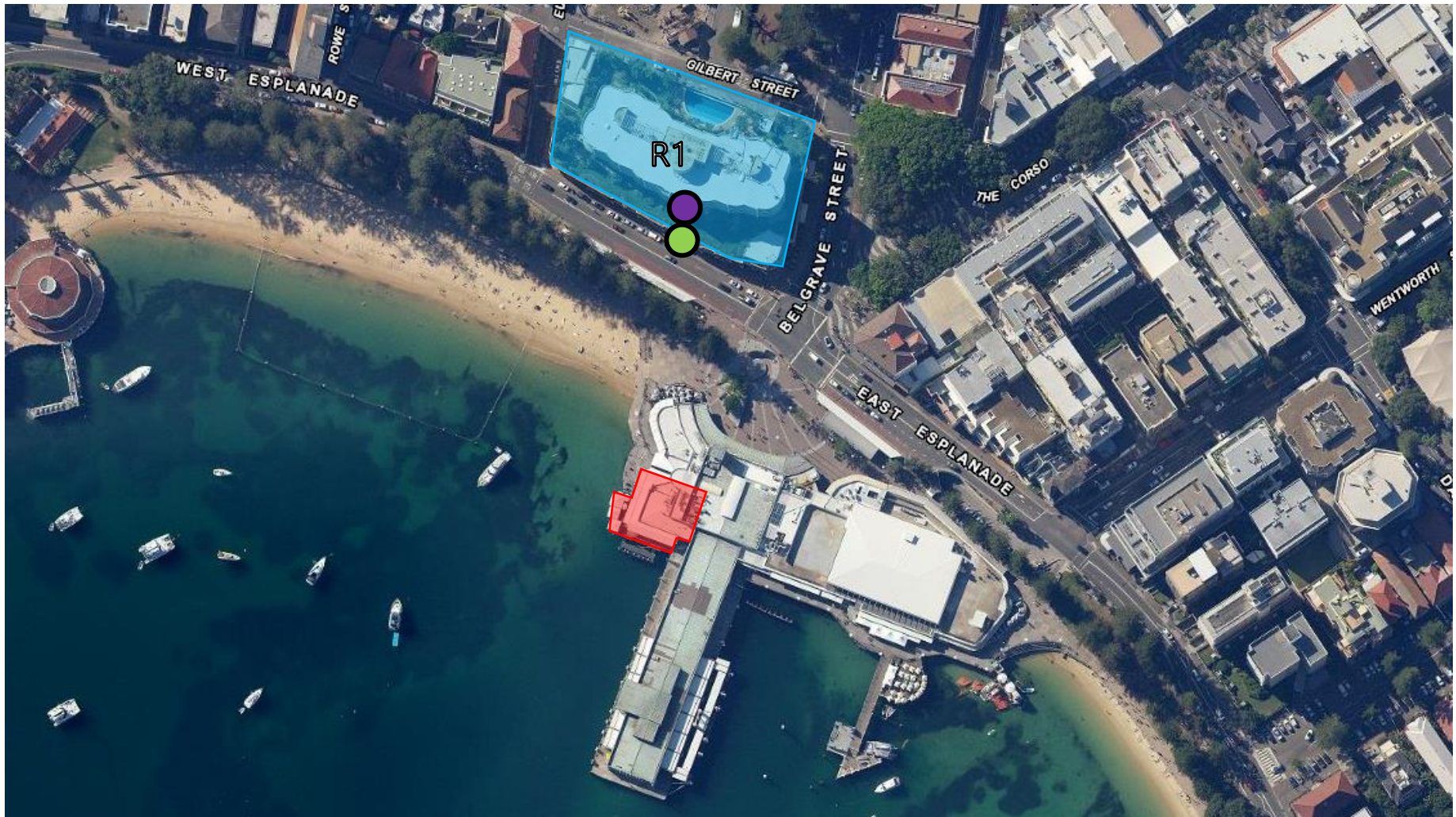


Figure 1 – Proposed Additions and Alterations to Outdoor Patron Areas

A site survey has been conducted by this office, and we note the following regarding the existing acoustic environment surrounding the proposed development:

- The nearest noise sensitive residential receivers are situated approximately 120m north of the project site on the corner of West Esplanade and Belgrave Street.
- Background noise levels at the residential receivers are governed by traffic movements along West Esplanade the operation of commercial developments in the area, and environmental noise along the shore line.

The nearest residential noise receiver has been identified in the site map presented in Figure 2, along with measurement locations.





-  Unattended Noise Monitor
-  Attended Noise Measurement

Figure 2 – Site Map, Receivers and Measurement Locations
Sourced from SIX Maps NSW

-  Residential Receiver
-  Project Site

3 NOISE DESCRIPTORS

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

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

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

The L_{90} measurement parameter is a statistical level that represents the average minimum noise levels over the measurement intervals.

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

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

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

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

4 BACKGROUND NOISE LEVELS

Long term unattended noise monitoring and attended measurements have been conducted by this office to quantify the existing acoustic environment at the project site.

Noise monitoring was undertaken using one (1) unattended noise logger provided by Acoustic research Laboratories Pty Ltd. The loggers were programmed to store 15-minute statistical noise levels throughout the monitoring period. The equipment was calibrated at the beginning of the measurement period using a Rion NC-73 calibrator. No significant drift was detected at the end of the measurement period. All measurements were taken on A-weighted fast response mode. Periods of adverse weather have been removed when determining the Rating Background Noise Level (RBL), as per the requirements of the NSW EPA *Noise Policy for Industry*.

Unattended noise monitoring was conducted from Tuesday 28th April 2020 to Thursday 7th May 2020. We note that the project site was not in operation during the measurement period.

Table 1 – Measured Rating Background Noise Levels

Monitor Location	Time of Day	Background Noise Level dB(A)L ₉₀ (period)
58 West Esplanade, Manly Level 6 Balcony on South Facade	Day (7am-6pm)	52
	Evening (6pm-10pm)	47
	Early Night (10pm-12am)	42
	Night (10pm-7am)	41

An attended measurement was conducted on Thursday 7th May 2020 in front of the residential/hotel accommodation building located at 58 West Esplanade. The following noise spectrum was recorded:

Table 2 – Measured Background Noise Spectrum

Frequency (Hz)	31.5	63	125	250	500	1k	2k	4k	8k	A-wt
Noise Level	66	65	59	56	54	54	49	43	34	58

5 NOISE EMISSION CRITERIA

The Northern Beaches Council (formerly Manly Council) *Development Control Plan* (DCP) 2013 states the following with regards to noise impacts from licensed premises:

3.4.2.3 Acoustical Privacy (Noise Nuisance)

- (g) *Noise control reports are to be submitted with DAs for licensed premises for the management of patron noise (including patrons exiting the premises) and other offensive noise (including amplified music and plant and equipment noise emissions) emitted over the life of the development. The Noise Control report is to demonstrate to the satisfaction of Council that the activities carried out and related to the operation of the premises will meet the following requirements:*
- i) *The LA10* noise level emitted from the licensed premises must not exceed the background of noise level in any octave band centre frequency (31.5Hz to 8kHz inclusive) by more than 5dB between 7am and 12am midnight at the boundary of any affected residence.*
 - ii) *The LA10* noise level emitted from the licensed premises must not exceed the background noise level in any octave band centre frequency (31.5Hz to 8kHz inclusive) between 12 midnight and 7am at the boundary of any affected residence.*
 - iii) *The noise level from the licensed premises must not be audible within any habitable room in any residential premises between the hours of 12 midnight and 7am or as otherwise required under conditions of development consent.*

In light of the information above, we note the following:

- Noise emission goals from the DCP detailed above are equivalent to the requirements of the NSW Office of Liquor and Gaming (OLG) guidelines for assessing noise emissions from the operation of a licensed venue.
- This assessment is to address noise impacts associated with the proposed alterations and additions to the outdoor seating areas located on the western and southern edges of the wharf.
- Given the outdoor seating areas will only be in use up to midnight, no assessment is required of noise impacts after midnight as the operation of the licensed premise during this time will not change from its current approved conditions.

Based on the points discussed above, the noise emission goals are summarised in the table below.

Table 3 – Noise Emission Criteria

Time	Noise Emission Criteria dB(A) _{L10(15-minute)}									
	31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	A-Wt
Day (7am-6pm)	64	64	58	56	54	53	49	42	33	57
Evening (6pm-10pm)	59	59	53	51	49	48	44	37	28	52
Early Night (10pm-12am)	54	54	48	46	44	43	39	32	23	47

6 NOISE EMISSION ASSESSMENT

An assessment of the operational noise impacts associated with project site is presented below. The primary noise sources will be internal and external patrons, and internal background music at the dining/bar areas.

Noise levels from the operation of the development have been made predicted based on the following assumptions:

- The internal dining/bar area is assumed to operate at a maximum capacity of 150 patrons.
- The western outdoor area is assumed to operate at a maximum capacity of 80 patrons.
- The southern outdoor area is assumed to operate at a maximum capacity of 36 patrons.
- No music is assumed to be played at either the western or southern outdoor areas.
- The outdoor areas are assumed to not be in use after 12am midnight.
- The plastic weather blinds on the western façade of the restaurant is assumed to be fully open during all hours of operation up to 12am midnight.
- The average sound power level per patron has been taken as 77dB(A)_{L10} sound power level (SWL) with the following spectrum.

Table 4 – Noise Spectrum for Patron Speech Sound Power Level

Frequency	31.5	63	125	250	500	1000	2000	4000	8000	A-wt
Patron Speech	61	61	66	69	73	74	69	60	47	77

- Background music within the restaurant/bar is assumed to be limited to a spatially averaged internal sound pressure level (SPL) of 80dB(A)_{L10} with the following spectrum.

Table 5 – Noise Spectrum for Background Music

Frequency	31.5	63	125	250	500	1000	2000	4000	8000	A-wt
Background Music	85	85	87	80	75	73	72	68	67	80

6.1 PREDICTED NOISE LEVELS

The predicted noise levels from the operation of the restaurant/bar between the hours of 7am to 12am midnight exclusively are presented in the table blow. Predicted noise levels are based on site investigations conducted by this office, the assumptions detailed above and losses due to distance attenuation and barrier effects (where applicable).

Table 6 – Predicted Noise Levels to Receiver 1

Noise Source	Time of Day		Octave Band Noise Levels, dB									
			31.5Hz	63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	A-wt
Internal Patrons Internal Background Music Western and Southern Outdoor Patron Areas		Predicted Noise Level L _{10(15min)} *	43	43	44	40	42	42	36	26	21	45
	Day (7am-6pm)	Criteria	64	64	58	56	54	53	49	42	33	57
		Exceedance	-21	-21	-14	-16	-12	-11	-13	-16	-12	-12
		Complies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Evening (6pm-10pm)	Criteria	59	59	53	51	49	48	44	37	28	52
		Exceedance	-16	-16	-9	-11	-7	-6	-8	-11	-7	-7
		Complies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Early Night (10pm-12am)	Criteria	54	54	48	46	44	43	39	32	23	47
		Exceedance	-11	-11	-4	-6	-2	-1	-3	-6	-2	-2
		Complies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table Note: *Predicted noise levels have been made on the assumption the recommendations in Section 7 are implemented.

6.2 DISCUSSION OF PREDICTED NOISE LEVELS

With respect to the predicted noise levels above, we note the following:

- The operation of the proposed extended outdoor patron areas are predicted to comply with the noise emission goals identified in Section 5 (assuming the recommendations in Section 7 are implemented).
- Based on noise modelling of the venue by this office, an increase of approximately 1-2dB is expected as a result of the proposed extension to the outdoor patron areas (as an A-weighted broadband noise level).
- In light of the above, the impacts on the acoustic amenity of nearby residential receivers would be minimal as a 1-2dB difference in noise is imperceptible, and compliance with the noise criteria is still achieved.

7 RECOMMENDATIONS

The following management controls are recommended to ensure compliance with the criteria listed in Section 5:

- A maximum of 80 patrons at any given time are allowed at the western outdoor area.
- A maximum of 36 patrons at any given time are allowed at the southern outdoor area.
- No amplified music is permitted at either the western or southern outdoor patron areas.
- The outdoor areas are not to be used between the hours of 12am midnight to 7am.

We note that any existing conditions of the approved development consent that apply to the operation of the development with respect to the internal dining/bar area after midnight must still be complied with.

In addition to the above, the following general recommendations are made:

- Management to ensure that patrons departing the premises do so in an orderly manner to minimise noise impacts, especially after 10pm.
- Garbage and bottle disposal should be undertaken prior to 10pm and not before 7am.

8 CONCLUSION

This report presents an acoustic assessment of the potential noise impacts associated with the proposed alterations and additions to the development located at Shop 1 Manly Wharf, East Esplanade, Manly, formally known as Hugo's.

This document addresses noise emissions associated with the operation of the site (patron noise and music) based on the proposed extensions to the outdoor patron areas, in order to achieve compliance with the following documents/guidelines:

- Northern Beaches Council (formerly Manly Council) *Development Control Plan (DCP) 2013*;
- NSW Office of Liquor and Gaming (OLG) guidelines; and
- NSW EPA *Noise Policy for Industry (NPfI) 2017*.

Provided that the recommendations listed in Section 7 of this report are adopted, noise emissions from the operation of the venue will comply with the acoustic criteria nominated in Section 5 of this report.

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

Yours faithfully,

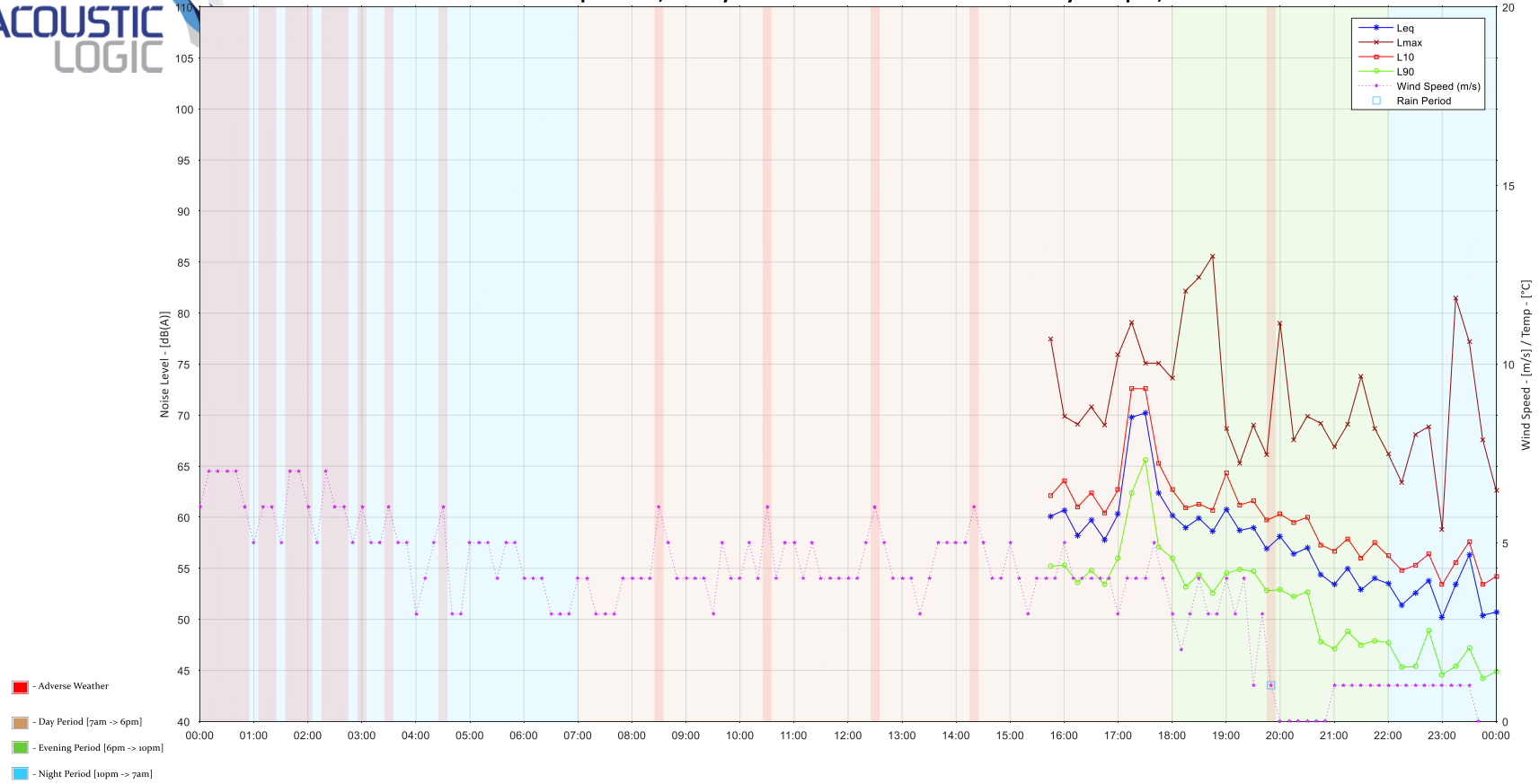
A handwritten signature in black ink, appearing to read 'Artie', with a stylized flourish at the end.

Acoustic Logic Consultancy Pty Ltd
Artie Rattananikom

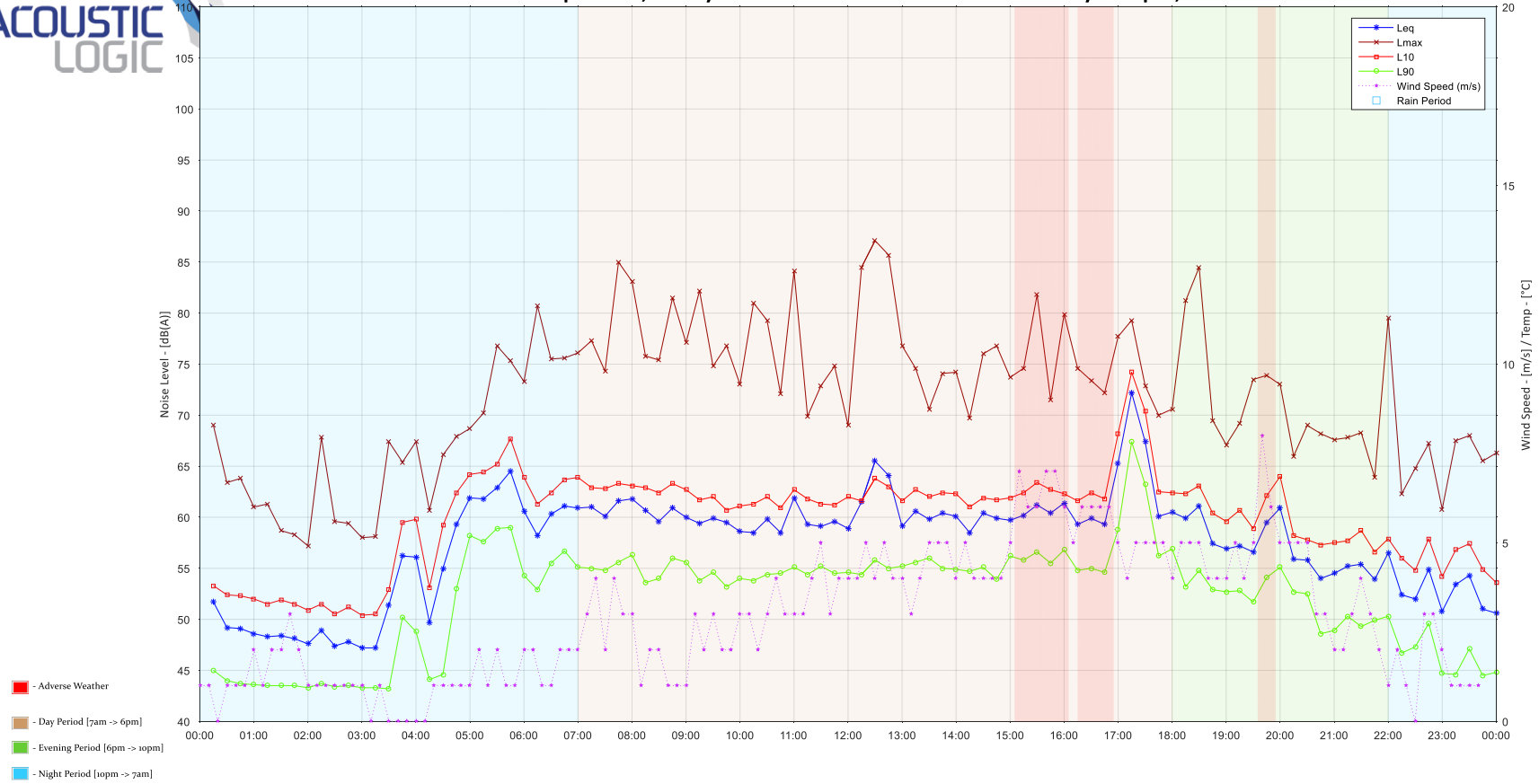
**APPENDIX A – UNATTENDED NOISE MONITORING DATA – LEVEL 6 SOUTH FAÇADE
AT 58 WEST ESPLANADE, MANLY.**



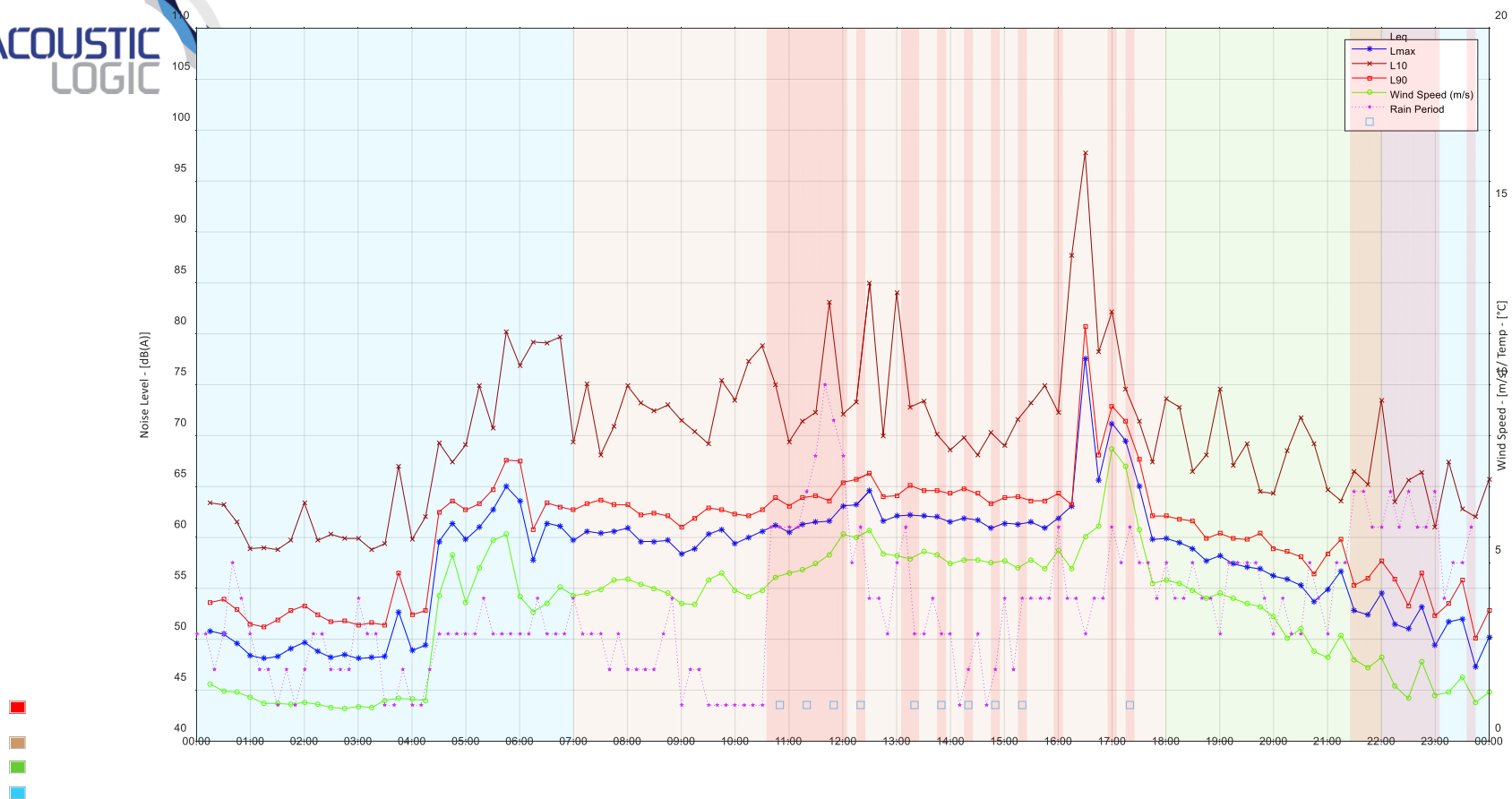
58 West Esplanade, Manly - Level 6 Southern Facade: Tuesday 28 April, 2020



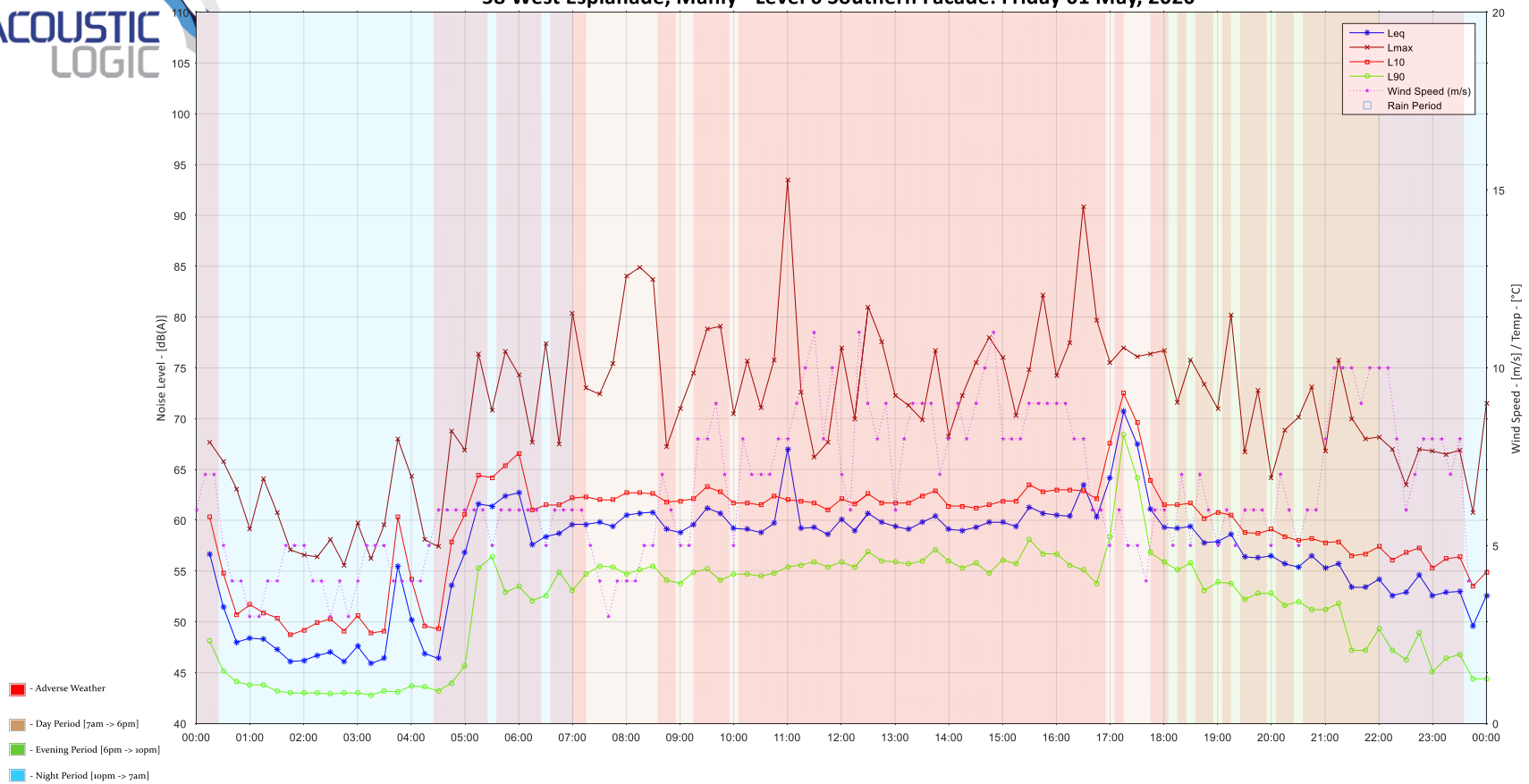
58 West Esplanade, Manly - Level 6 Southern Facade: Wednesday 29 April, 2020



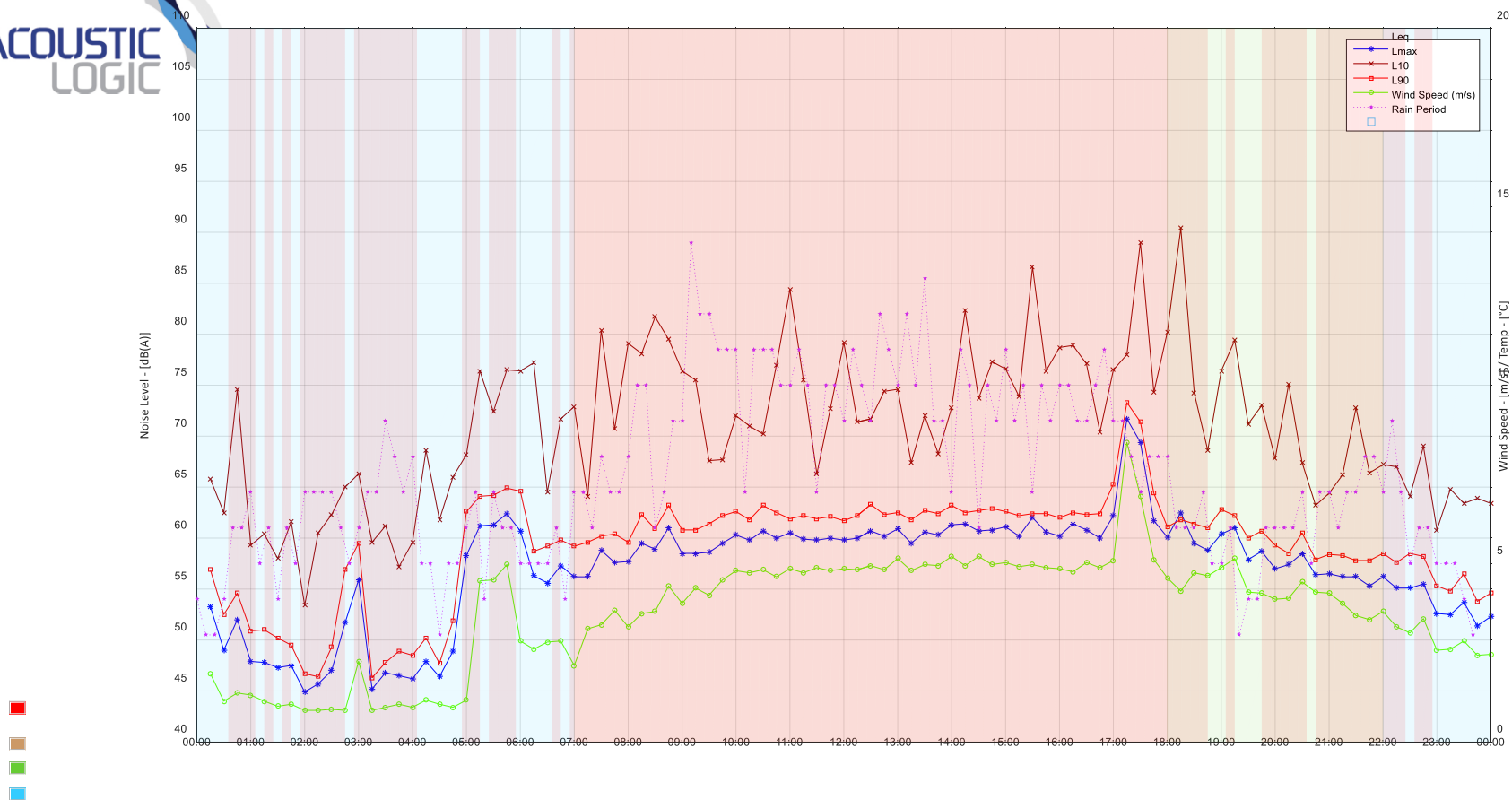
58 West Esplanade, Manly - Level 6 Southern Facade: Thursday 30 April, 2020



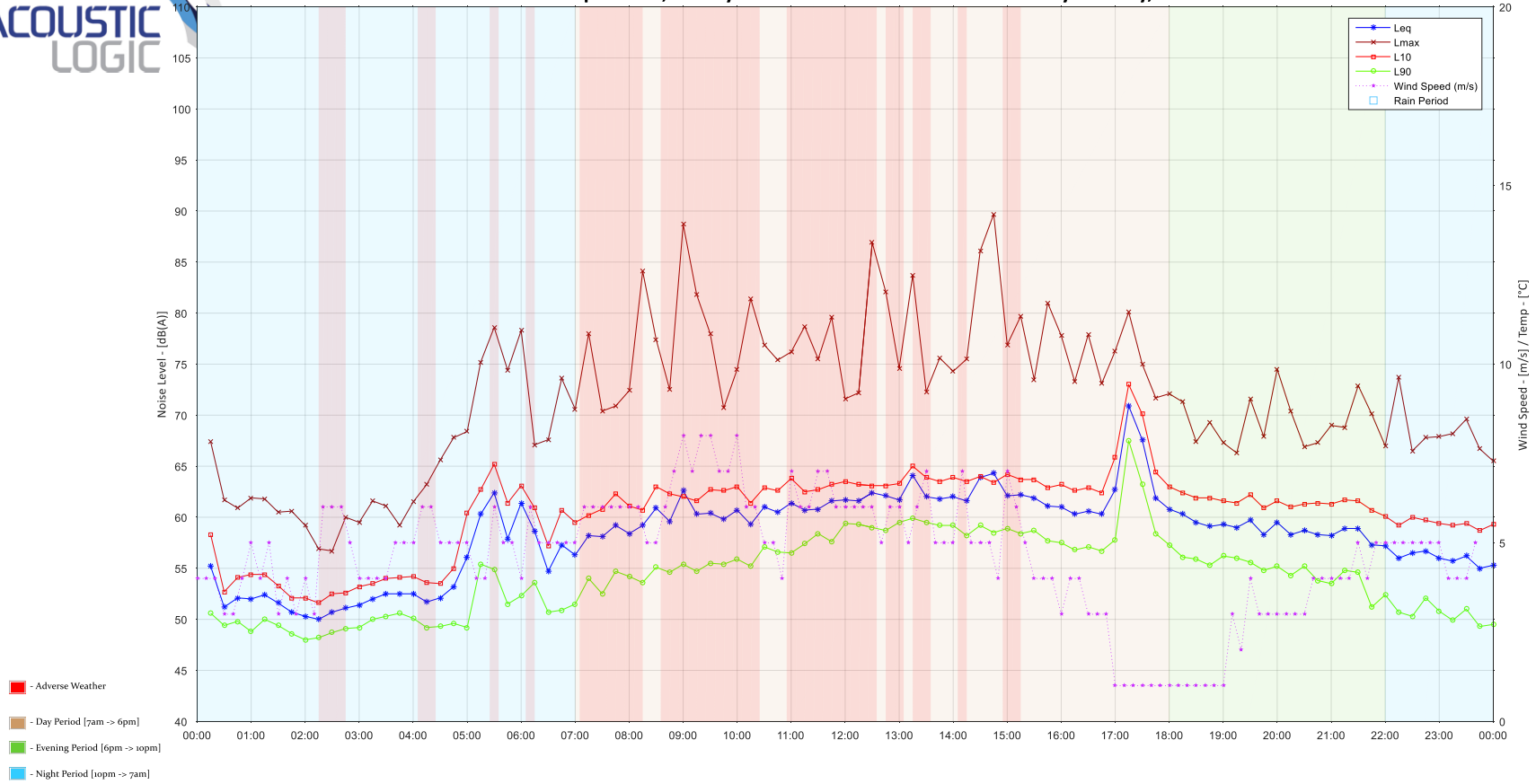
58 West Esplanade, Manly - Level 6 Southern Facade: Friday 01 May, 2020



58 West Esplanade, Manly - Level 6 Southern Facade: Saturday 02 May, 2020

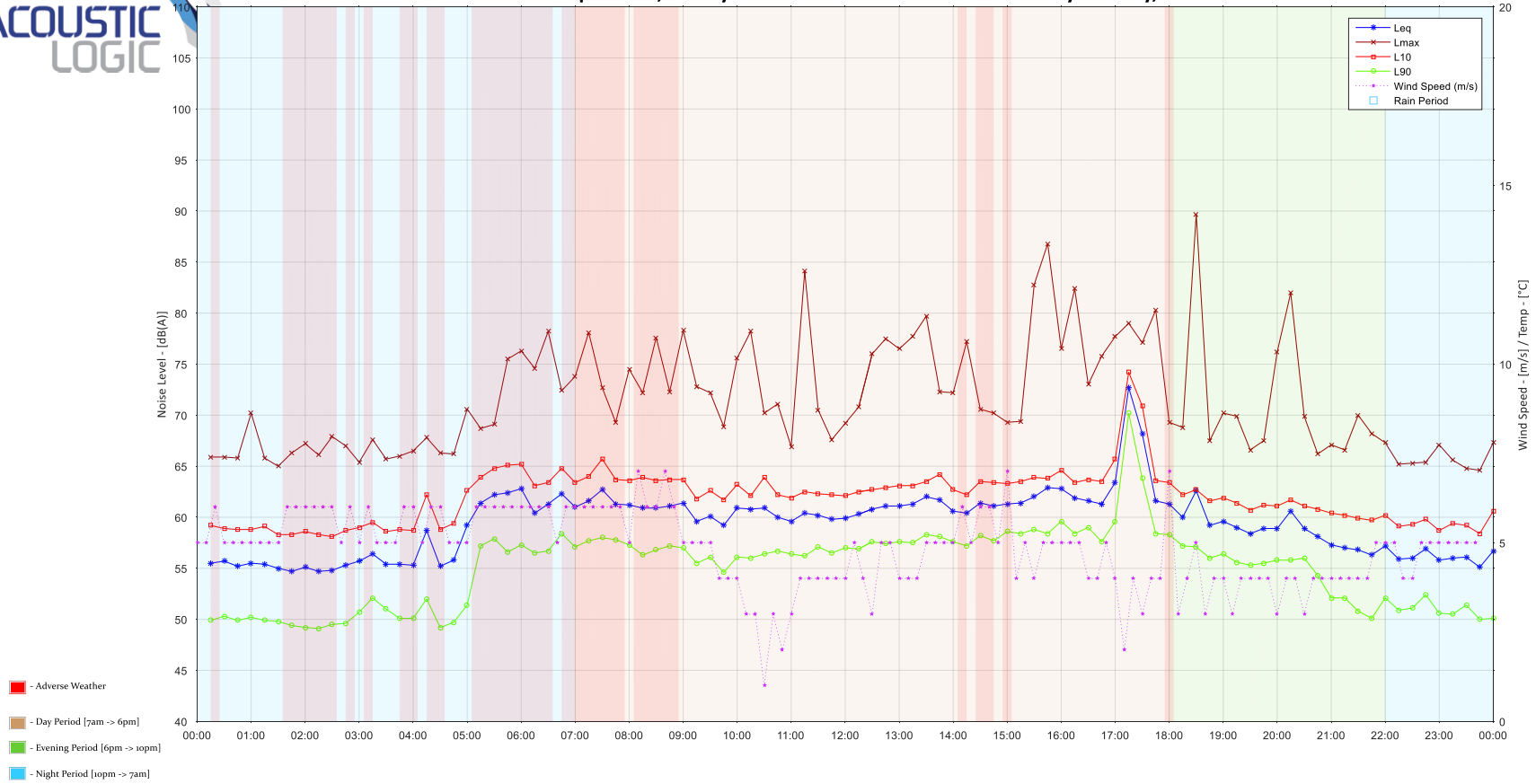


58 West Esplanade, Manly - Level 6 Southern Facade: Sunday 03 May, 2020



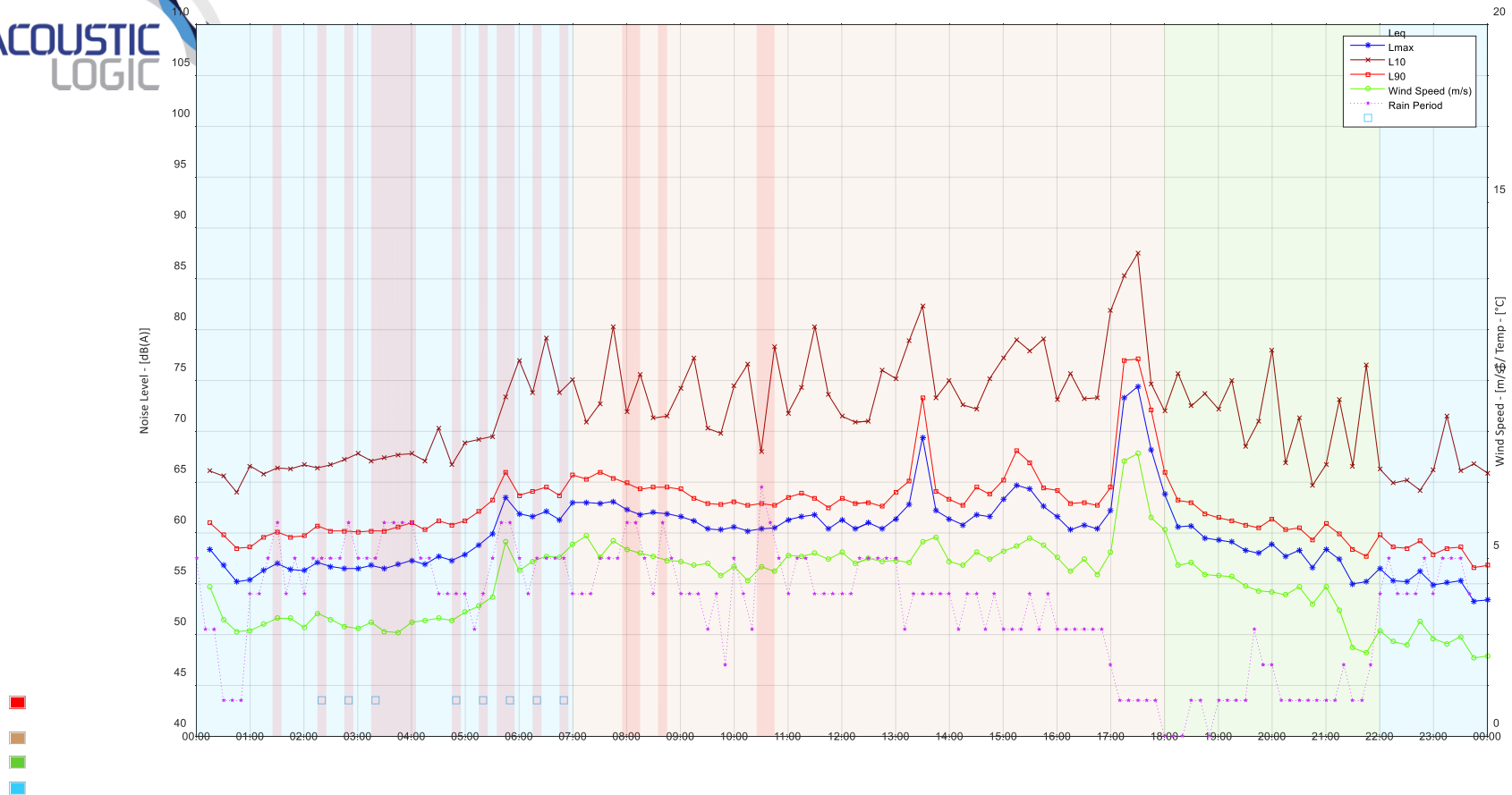


58 West Esplanade, Manly - Level 6 Southern Facade: Monday 04 May, 2020

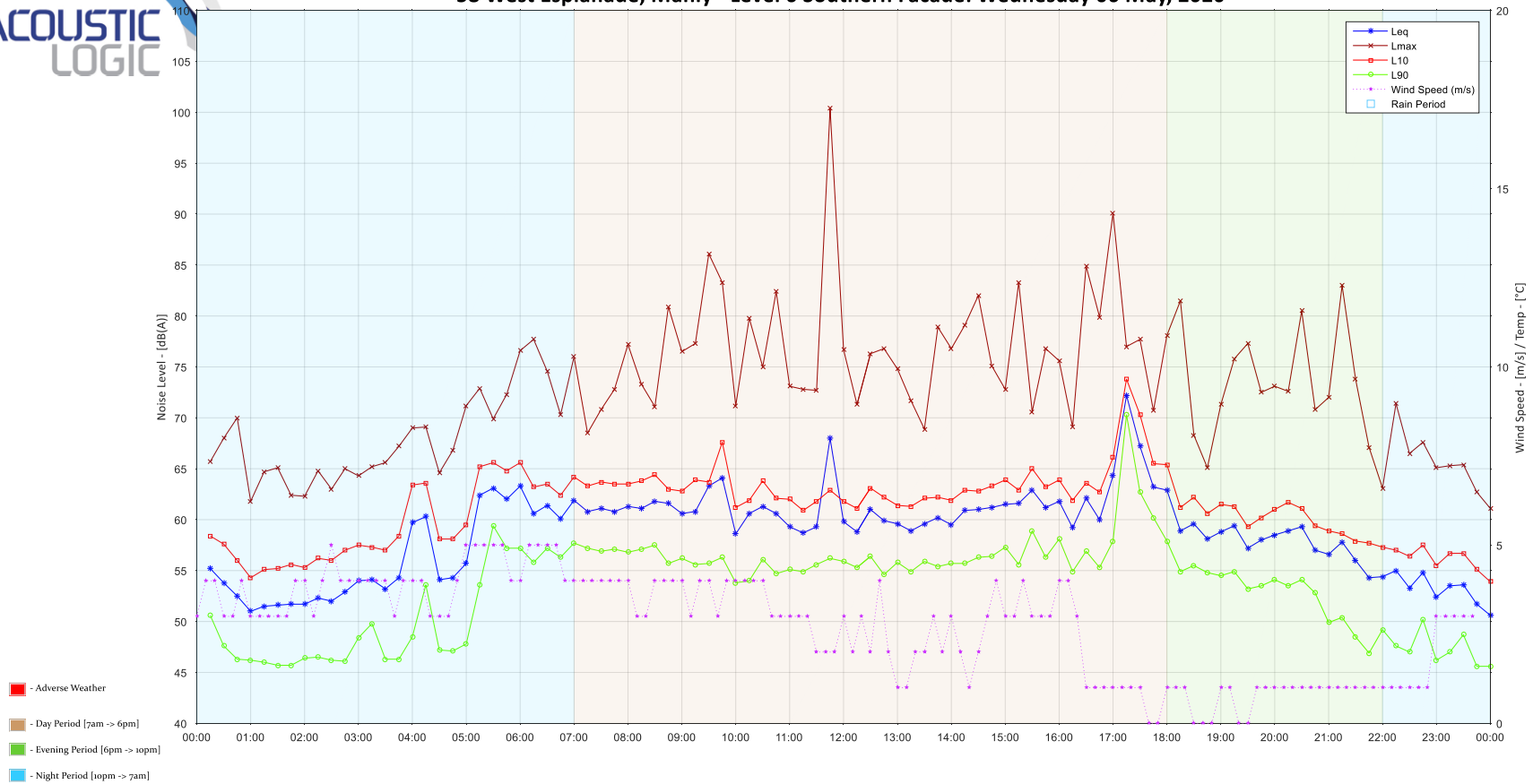




58 West Esplanade, Manly - Level 6 Southern Facade: Tuesday 05 May, 2020



58 West Esplanade, Manly - Level 6 Southern Facade: Wednesday 06 May, 2020



58 West Esplanade, Manly - Level 6 Southern Facade: Thursday 07 May, 2020

