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Eastern Creek Retail Centre, Stage 1

Noise Impact Assessment

Extended Loading Dock Hours

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2	2/10/2020	20200716.1/0210A/R2/AW	AW		AW
3	5/02/2021	20200716.1/0502A/R3/AW	AW		AW

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1 INTRODUCTION

Acoustic Logic has been engaged to conduct an acoustic assessment of potential noise impacts from the proposed extended hours of the loading dock area associated with the Woolworths tenancy of the Eastern Creek Retail development. This report considers impacts during the proposed extended hours period only – an assessment of noise impacts during the currently approved hours was subject to a separate assessment and approval.

The assessments and recommendations detailed in this report have been based on the architectural plans prepared by i2C Architects (job number 2015-088, Drawing DA-38, Issue P6 19.02.20).

2 SITE DESCRIPTION & PROPOSED WORKS

Eastern Creek Retail Centre is an approved retail development which contains supermarkets, a medical centre, specialty shops as well as food and beverage tenancies. There is a loading dock located on the southern portion of the site to service the various uses; the loading dock is recessed approximately 2.5m below the level of the roadway.

It is proposed that the loading dock associated with the Woolworths tenancy (located along the western boundary) be operated between 5am – 10pm. A summary of the approved and proposed hours for the site are detailed in Section 2.1. Figures 1 & 2 detail the location of the site and areas where extended trading hours is proposed.

Noise sensitive receivers are generally located west of the proposed development across Rooty Hill Road. Dwellings at this location are typically single storey, however there are two storey dwellings immediately opposite the approved loading dock location. A single residential dwelling is also located at the northern edge of the loading dock area. Refer to Figures 1 & 2 for detailed location.

2.1 PROPOSED HOURS OF OPERATION

Approved hours of operation are detailed in conditions F1 & F2 of the development consent for SSD 8588. A summary of the approved and proposed modified hours are detailed in the table below.

Table 1 – Currently Approved and Proposed Hours

Tenancy	Currently Approved Hours	Proposed Modification
Supermarket	7am – 12am	No Change
Liquor Store	9am – 10pm (Mon – Sat) 10am – 10pm (Sun)	No Change
Gym	24 Hours	No Change
Pharmacy	7am – 10pm	No Change
Medical Centre	7am – 10pm	No Change
Specialty Shops*	7am – 10pm	No Change
Western Loading Dock (Woolworths Tenancy)	7am – 6pm (Mon – Sat) 8am – 5pm (Sun)	5am – 10pm, 7 days
Southern Loading Dock		No Change

Project Site

Residential Receivers

Figure 1 – Site & Measurement Location

Unattended Noise Monitor

Figure 2 – Approved Layout of Eastern Creek Retail Centre, Stage 1

Figure 3 – Approved Masterplan (Stage 1 Site Indicated as '2')

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_{Max}, L_{90} and L_{eq}.

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 traffic noise impact as it closely corresponds with human perception of a changing noise environment; such is the character of environmental noise.

L_{Max} levels represent is the loudest noise event during a measurement period.

4 SURVEY OF EXISTING NOISE CONDITIONS

4.1 SURVEY OF AMBIENT NOISE

Both long term unattended noise monitoring and attended noise measurements were conducted to quantify the existing acoustic environmental at the site.

Unattended noise monitoring was conducted over an eleven-day period between 17th to the 27th July, 2020 using Acoustic Research Laboratories monitors set on A-weighted fast response mode. The monitor was calibrated before and after the measurements using a Rion Type NC-73 calibrator. No significant drift was recorded. Weather affected data has been excluded in line with the requirements of Factsheets A & B of the NSW EPA Noise Policy for Industry. Noise monitoring data is presented in Appendix One.

One monitor was installed on the site across from the closest residential receivers. The monitor was installed with a similar setback from the roadway as the adjacent residents. This monitoring location was selected as it was both secure for monitoring equipment and would provide background noise data representative of the nearest noise receivers.

4.1.1 Measured Noise Levels

Measured noise levels are presented in Table 2 below.

Table 2 – Long Term Noise Logging Data (L_{eq} and Rating Background Noise Levels)

Location	Measured Noise Level - Time of Day			
	Early Morning Shoulder Period (5am – 7am)	**Daytime (7am-6pm)**	**Evening (6pm-10pm)**	**Night (10pm-7am)**
Eastern Creek Retail, Stage 1	60 dB(A)$L_{eq(Period)}$ 55 dB(A)L_{90}	60 dB(A)$L_{eq(Period)}$ 49 dB(A)L_{90}	59 dB(A)$L_{eq(Period)}$ 49 dB(A)L_{90}	57 dB(A)$L_{eq(Period)}$ 45 dB(A)L_{90}

4.1.2 Early Morning Shoulder Period (5am – 7am)

Where operation is proposed only during a restricted part of an assessment period, in this case the early morning shoulder period, the NSW EPA Noise Policy for Industry recognises that the prevailing noise level may be substantially different to the overall noise level for the entire assessment period. In this case, traffic noise along Rooty Hill Road generate an elevated background noise level during the morning shoulder period, as traffic volumes increase to the morning peak.

In these instances, the NPI recommends that noise level targets be made with reference to the existing background noise level during this time, rather than the assessment period as a whole. We also note that the early morning shoulder background noise level on weekends is markedly different than during regular weekdays, as the peak traffic flows are not experienced. As such, the following early morning shoulder period background noise levels are proposed to be applied:

- Monday – Friday – 56 dB(A) L_{90}
- Saturdays – 49 dB(A) L_{90}
- Sundays - 45 dB(A) L_{90}

5 NOISE EMISSION CRITERIA

5.1 DEVELOPMENT CONSENT FOR SSD 8588

There is no specific criteria relating to noise emissions from the loading dock area of the development, however reference is made throughout to the NSW EPA *Industrial Noise Policy* (B20, F18). We note that this policy has been superseded by the NSW EPA *Noise Policy for* Industry (2017), and this assessment will be based on the requirements of the updated policy.

5.2 NSW EPA NOISE POLICY FOR INDUSTRY (NPI) 2017

The EPA NPI has two criteria which are both required to be satisfied, namely Intrusiveness and amenity. The NPI sets out acceptable noise levels for various localities. The policy indicates four categories to assess the appropriate noise level at a site. They are rural, suburban, urban and urban/industrial interface. Under the policy the nearest residential receivers would be assessed against the suburban criteria.

Noise levels are to be assessed at the property boundary or nearby dwelling, or at the balcony or façade of an apartment.

5.2.1 Intrusiveness Criterion

The guideline is intended to limit the audibility of noise emissions at residential receivers and requires that noise emissions measured using the L_{eq} descriptor not exceed the background noise level by more than 5dB(A). Where applicable, the intrusive noise level should be penalised (increased) to account for any annoying characteristics such as tonality.

Background noise levels adopted are presented in Table 2. Noise emissions from the site should comply with the noise levels presented below when measured at nearby property boundary.

5.2.2 Project Amenity Criterion

The guideline is intended to limit the absolute noise level from all noise sources to a level that is consistent with the general environment.

The EPA's NPI sets out acceptable noise levels for various localities. The recommended noise amenity area is based upon the measured background noise levels at the sensitive receiver. Based on the measured background noise levels detailed in Table 2, the Noise Policy for Industry suggests the adoption of the 'suburban' categorisation.

The NPI requires project amenity noise levels to be calculated in the following manner;

$$L_{Aeq,15min} = \textit{Recommended Amenity Noise Level} - 5\ dB(A) + 3\ dB(A)$$

The amenity levels appropriate for the receivers surrounding the project site are presented in Table 3

Table 3 – EPA NPI Amenity Noise Levels

Type of Receiver	Time of day	Recommended Noise Level dB(A)$L_{eq(period)}$	Project Amenity Noise Level dB(A)$L_{eq(15min)}$
Residential – Suburban	Day	55	53
	Evening	45	43
	Night	40	38
Commercial Premises	When in use	65	63
Industrial Premises	When in use	70	68

The NSW EPA Noise Policy for Industry (2017) defines;

- Day as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public Holidays;
- Evening as the period from 6pm to 10pm.
- Night as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sundays and Public Holidays

5.2.3 Sleep Arousal Criteria

The Noise Policy for Industry recommends the following noise limits to mitigate sleeping disturbance:

Where the subject development / premises night -time noise levels at a residential location exceed:

- *$L_{eq,15min}$ 40 dB(A) or the prevailing RBL plus 5 dB, whichever is the greater, and/or*
- *L_{Fmax} 52 dB(A) or the prevailing RBL plus 15 dB, whichever is the greater,*

a detailed maximum noise level even assessment should be undertaken.

The following sleep emergence noise objectives then apply.

Table 4 - Sleep Arousal Criteria for Residential Receivers

Receiver	Day / Time Period	Rating Background Noise Level (Night) dB(A)L_{90}	Emergence Level
Residential Dwellings Surrounding Site	Monday – Friday (5am – 7am)	56	61 dB(A) $L_{eq,\ 15min}$; 71 dB(A) L_{Fmax}
	Saturdays (5am – 7am)	49	54 dB(A) $L_{eq,\ 15min}$; 64 dB(A) L_{Fmax}
	Sundays (5am – 7am)	45	50 dB(A) $L_{eq,\ 15min}$; 60 dB(A) L_{Fmax}
	Monday – Sunday (10pm – 5am	45	50 dB(A) $L_{eq,\ 15min}$; 60 dB(A) L_{Fmax}

If there are noise events that could exceed the emergence levels detailed in the table above, then an assessment of sleep arousal impact is required to be carried out, taking into account the level and frequency of noise events during the night, existing noise sources, etc. This more detailed sleep arousal test is conducted using the guidelines in the EPA *Road Noise Policy*. Most relevantly, the *Road Noise Policy* states:

For the research on sleep disturbance to date it can be concluded that:

- *Maximum internal noise levels below 50-55dB(A) are unlikely to awaken people from sleep.*
- *One to two noise events per night with maximum internal noise levels of 65-70dB(A) are not likely to affect health and wellbeing significantly.*

5.2.4 Summarised NPI Noise Emission Criteria

Table 5 – EPA NPI Project Noise Target Level (PNTL) (Residents Surrounding)

Receiver	Time Period	Assessment Background Noise Level dB(A)L_{90}	Project Amenity Criteria dB(A) $L_{eq(15min)}$	Intrusiveness Criteria dB(A) $L_{eq(15min)}$	NPfI Criteria for Sleep Disturbance
Residential	Day	49	53	55	N/A
	Evening	49	43	51	N/A
	Night (10pm – 5am)	45	38	50	50 dB(A) $L_{eq, 15min}$; 60 dB(A) L_{Fmax}
	Morning Shoulder Monday – Friday (5am – 7am)	56	-	-	61 dB(A) $L_{eq, 15min}$; 71 dB(A) L_{Fmax}
	Morning Shoulder Saturdays (5am – 7am)	49	-	-	54 dB(A) $L_{eq, 15min}$; 64 dB(A) L_{Fmax}
	Morning Shoulder Sundays (5am – 7am)	45	-	-	50 dB(A) $L_{eq, 15min}$; 60 dB(A) L_{Fmax}
Commercial Premises	When in Use	-	63	-	-
Industrial Premises	When in Use	-	68	-	-

6 NOISE EMISSION ASSESSMENT

6.1 ASSESSMENT OF EXTENDED HOURS LOADING DOCK ACTIVITIES

It is proposed that the Woolworths loading dock is to operate between 5am – 10pm 7 days per week. Operational noise from proposed use of the loading dock during the extended hours must comply with the requirements of the EPA *Noise Policy for Industry*, the criteria for which has been detailed in Section 5.2.4. The primary source of noise expected to be emitted through the use of the loading dock will be from truck movements entering/exiting the facility.

The *Noise Policy for Industry* requires that noise levels are assessed at the closest façade of a habitable space, e.g. a bedroom or living area. The assessment will cover the following activities:

- Average / $L_{eq(15min)}$ noise events (noise from cars manoeuvring, petrol pumps etc) and;
- Intermittent peak noise events (truck air brake / door close etc) and their potential impact on sleep disturbance.

The analysis presented in this section of the report has been based on drawings issued by i2C Architects (job number 2015-088, Drawing DA-38, Issue P6 19.02.20), construction details for retaining walls (drawing number A7060, dated 06.02.20) and estimated usage of the site. Noise emissions will be assessed with reference to the evening and night time criteria outlined in Section 5.2.4, as this is considered to be the most sensitive time of use.

6.1.1 Acoustic Data

Operational noise emissions are predicted to the closest residential receivers based on the noise levels detailed in Table 6 (average noise levels) & Table 7 (peak noise levels).

Table 6 – Average (L_{eq}) Noise Levels Associated with Loading Dock

Noise Source	Sound Power Level
Large Delivery Truck (Semi Trailer or Similar) Slowly Manoeuvring	100 dB(A) L_{eq}
Smaller Delivery Trucks (Medium Rigid < 10m) Travelling at 10 km/h	90 dB(A) L_{eq}
Car / Van Travelling at 10 km/h	84 dB(A) L_{eq}

Table 7 – Peak (L_{max}) Noise Levels Associated with Loading Dock

Noise Source	Sound Power Level
Truck Air Brake (large/articulated trucks)	114 dB(A) L_{max}
Truck Reversing Beeper (inclusive of tonal penalty)	102 dB(A) L_{max}
Truck Engine Starting	100 dB(A) L_{max}
Vehicle Door Closing	95 dB(A) L_{max}

Noise levels detailed in the above tables have been previously measured by this office from similar studies.

6.1.2 Assumptions for Loading Dock Operation

There are two docks to service the site, being a recessed loading dock to service the supermarket only and a regular loading dock located further south to service the remainder of the tenancies. Refer to Figure 3 for detail. Additionally, all loading docks are recessed below the typical street level by approximately 2.5m. It is noted that this assessment applies to only the loading dock associated with the Woolworths tenancy only.

Access to and from the loading dock area is via Beggs Road at the northern tip of the site – all delivery vehicles will enter and exit from this location.

Assumed vehicle movements during the morning shoulder and evening period are to be managed/restricted to the following volumes:

- Morning Shoulder Period (5am – 7am): Up to one large truck/heavy vehicle delivery **OR** three small delivery trucks (home delivery trucks)/car/vans in a given 1 hour period
- Evening Period (6pm – 10pm): Up to one large truck/heavy vehicle delivery **AND** three small delivery trucks (home delivery trucks)/car/vans in a given 1 hour period
- A 2.2m high fence has been constructed on the southern boundary of the site, with a 2.5m high fence adjoining the residential property adjacent the loading dock.

6.1.3 Predicted Noise Levels From Loading Dock at Most Affected Receivers

Table 8 – Predicted Average (L_{eq}) Noise Levels from Extended Hours Loading Dock Operation

Noise Source	Receiver	Time of Operation	Predicted Sound Level dB(A)$L_{eq(15min)}$	Criteria*	Complies
Loading Dock Operation	R1 Residence to the North	Morning Shoulder (5am – 7am)	35dB(A) $L_{eq(15min)}$	≤ 38 dB(A) $L_{eq(15min)}$ (Night Time Amenity)	Yes
	R2 Residences West		37dB(A) $L_{eq(15min)}$	≤ 38 dB(A) $L_{eq(15min)}$ (Night Time Amenity)	Yes
Loading Dock Operation	R1 Residence to the North	Evening (6pm – 10pm)	38 dB(A) $L_{eq(15min)}$	≤ 43 dB(A) $L_{eq(15min)}$ (Evening Amenity)	Yes
	R2 Residences West		40 dB(A) $L_{eq(15min)}$	≤ 43 dB(A) $L_{eq(15min)}$ (Evening Amenity)	Yes

Provided that the recommendations in Section 6.1.5 are adopted, noise emission are predicted to achieve the $L_{eq(15min)}$ criteria set out in Section 5.2.4 during the proposed extended hours period.

Table 9 – Predicted Peak (L_{max}) Noise Levels from Extended Hours Loading Dock Operation

Noise Source	Receiver	Time of Operation	Predicted Sound Level dB(A)L_{Fmax}	Trigger Level	Complies
Truck Air Brake	R1 Residence to the North	Night (10pm – 7am)	60 dB(A) L_{Fmax}	≤ 71 dB(A) L_{Fmax} Mon-Fri ≤ 64 dB(A) L_{Fmax} Sat ≤ 60 dB(A) L_{Fmax} Sun	Yes
	R2 Residences West (Ground Level)		60 dB(A) L_{Fmax}		Yes
	R2 Residences West (First Level)		64 dB(A) L_{Fmax}		Yes, Except for Sundays Refer Discussion Section 6.1.4
Truck Reversing Alarm	R1 Residence to the North	Night (10pm – 7am)	48 dB(A) L_{Fmax}	≤ 71 dB(A) L_{Fmax} Mon-Fri ≤ 64 dB(A) L_{Fmax} Sat ≤ 60 dB(A) L_{Fmax} Sun	Yes
	R2 Residences West (Ground Level)		48 dB(A) L_{Fmax}		Yes
	R2 Residences West (First Level)		53 dB(A) L_{Fmax}		Yes
Truck Engine Starting	R1 Residence to the North	Night (10pm – 7am)	46 dB(A) L_{Fmax}	≤ 71 dB(A) L_{Fmax} Mon-Fri ≤ 64 dB(A) L_{Fmax} Sat ≤ 60 dB(A) L_{Fmax} Sun	Yes
	R2 Residences West (Ground Level)		46 dB(A) L_{Fmax}		Yes
	R2 Residences West (First Level)		51 dB(A) L_{Fmax}		Yes
Vehicle Door Closing	R1 Residence to the North	Night (10pm – 7am)	43 dB(A) L_{Fmax}	≤ 71 dB(A) L_{Fmax} Mon-Fri ≤ 64 dB(A) L_{Fmax} Sat ≤ 60 dB(A) L_{Fmax} Sun	Yes
	R2 Residences West (Ground Level)		43 dB(A) L_{Fmax}		Yes
	R2 Residences West (First Level)		48 dB(A) L_{Fmax}		Yes

*Predicted peak noise event exceeds the sleep disturbance trigger level. Detailed assessment as required by criteria in Section 5.2.3 is contained in Section 6.1.4.

6.1.4 Detailed Assessment of Sleep Disturbance Potential

We note that exceedances of the "Background+15" initial test are anticipated only for a truck airbrake discharge, and only if occurring during the Sunday morning shoulder period (where background noise levels are the lowest for the proposed extended operation times).

Use of truck airbrakes are anticipated to generate a noise level of up to 64dB(A)L_{max} at the first floor façade of residences located to the west, and up to 60dB(A)L_{max} for surrounding ground floor residences.

All other typical vehicle movements are expected to produce maximum noise levels below the required trigger level for the site.

The potential for sleep disturbance during this time is discussed in detail below.

Truck Airbrakes

- The predicted noise associated with a truck airbrake is 64 dB(A)L_{max} at the building façade of the most affected receiver (upper levels of R2) and 60 dB(A) L_{max} to surrounding ground floor receivers (R1 & R2).
- Typically, there is a 10dB(A) noise reduction between an external noise level and the noise level *inside* the residence (assuming that the windows are left open).
- This being the case, it would be expected that the noise level generated by a truck airbrake would be between 50-55 dB(A)L_{max} (depending on the receiver in question) *inside* the residence, even if the windows are left open.
- We note the EPA guidance in this regard contained in the *Road Noise Policy* states:

  Maximum internal noise levels below 50 – 55 dB(A) are unlikely to awaken people from sleep
- Given that the peak noise events in question are 50-55 dB(A) or less (and within the range identified by the EPA), in our opinion this noise generation should be considered reasonable.
- Further to this we note:
  - It is anticipated that there would only be 1-2 trucks utilising the loading dock in the period between 5am – 7am, in which the sleep disturbance trigger levels apply.
  - Generally, only articulated trucks would be expected to be equipped with a pneumatic airbrake – smaller rigid vehicles and any light vehicles would not provide an exceedance.

6.1.5 Recommended Controls for the Use of the Loading Docks During Extended Hours

It is recommended that the following management and physical controls be implemented into the operation of the Woolworths loading dock to accommodate the extended operational hours:

- Operating hours for the loading docks, deliveries etc will be restricted within the hours of 5am to 10pm.
- Any garbage removal is to occur within the currently approved hours of the site - 9am – 5pm Monday to Sunday.
- Use of the loading dock within the extended hours is to be limited as follows:
    - Morning Shoulder Period (5am – 7am): Up to one large truck/heavy vehicle delivery **OR** three small delivery trucks (home delivery trucks)/car/vans in a given 1 hour period
    - Evening Period (6pm – 10pm): Up to one large truck/heavy vehicle delivery **AND** three small delivery trucks (home delivery trucks)/car/vans in a given 1 hour period
- Bail and/or garbage compactors are to be used only within the loading dock areas, and are not to be used between the hours of 5am – 7am.
- Vehicles associated with the loading dock should not arrive/depart to the loading dock outside of the hours of 5am to 10pm.
- Vehicle engines are to be switched off during loading and unloading within the dock.

7 CONCLUSION

This report presents the assessment of noise impacts from the proposed extended trading hours for the loading dock associated with the Woolworths tenancy of the Eastern Creek Retail Centre development. This report has considered impacts during the proposed extended hours period only – an assessment of noise impacts during the currently approved hours was subject to a separate assessment and approval.

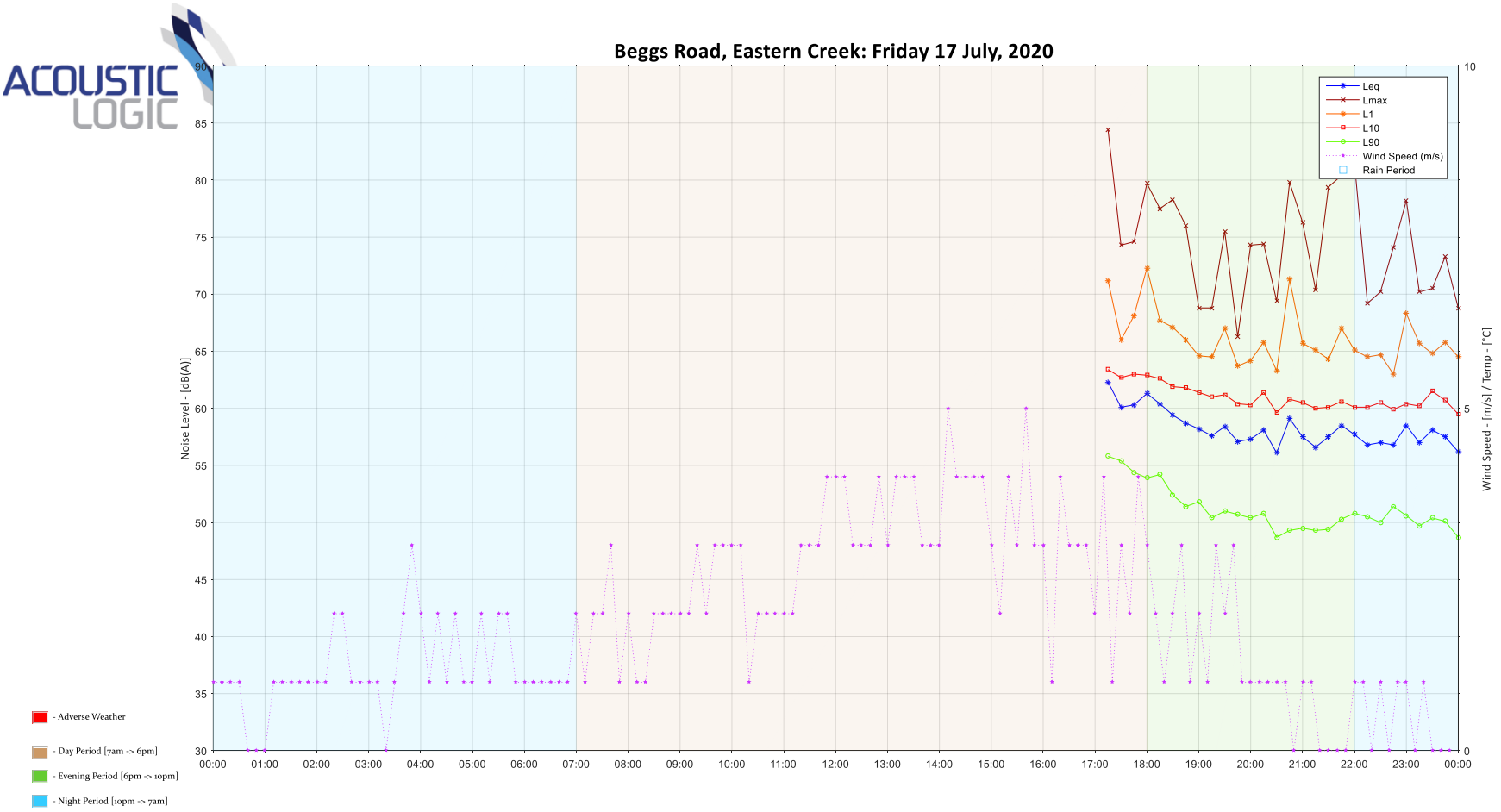
Provided the recommendations/management controls detailed in Sections 6.1.5 of this report are implemented, the site is capable of achieving the relevant noise emission requirements for the extended hours period.

Please contact us should you have any further queries.

Yours faithfully,

Acoustic Logic Pty Ltd
Alex Washer

APPENDIX ONE – UNATTENDED NOISE MONITORING DATA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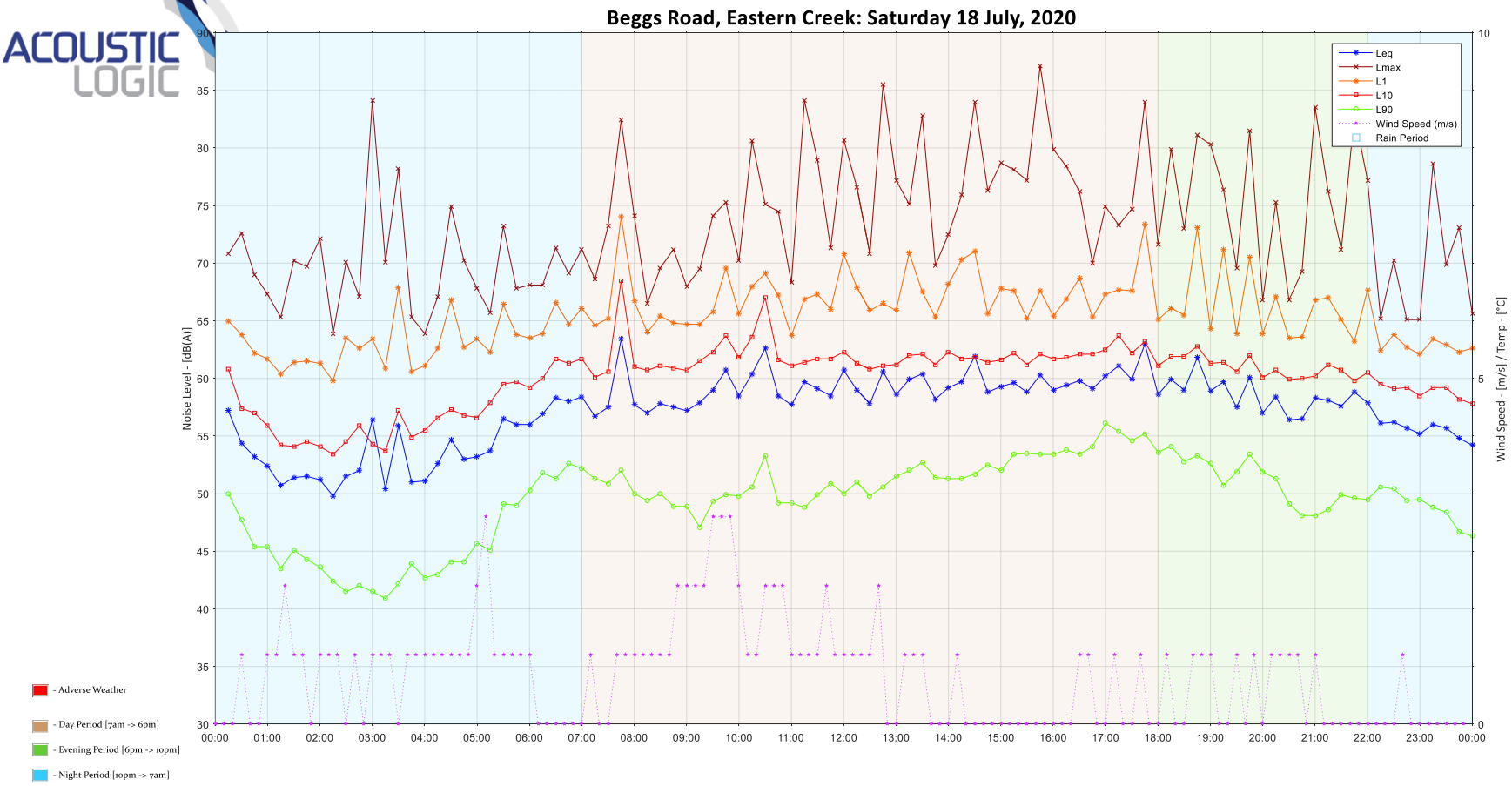
Wind Speed - [m/s] / Temp - [°C]
Leq
Lmax
L1
L10
L90
Wind Speed (m/s)
Rain Period
- Adverse Weather
- Day Period [7am -> 6pm]
- Evening Period [6pm -> 10pm]
- Night Period [10pm -> 7am]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Wind Speed - [m/s] / Temp - [°C]
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Lmax
L1
L10
L90
Wind Speed (m/s)
Rain Period
- Adverse Weather
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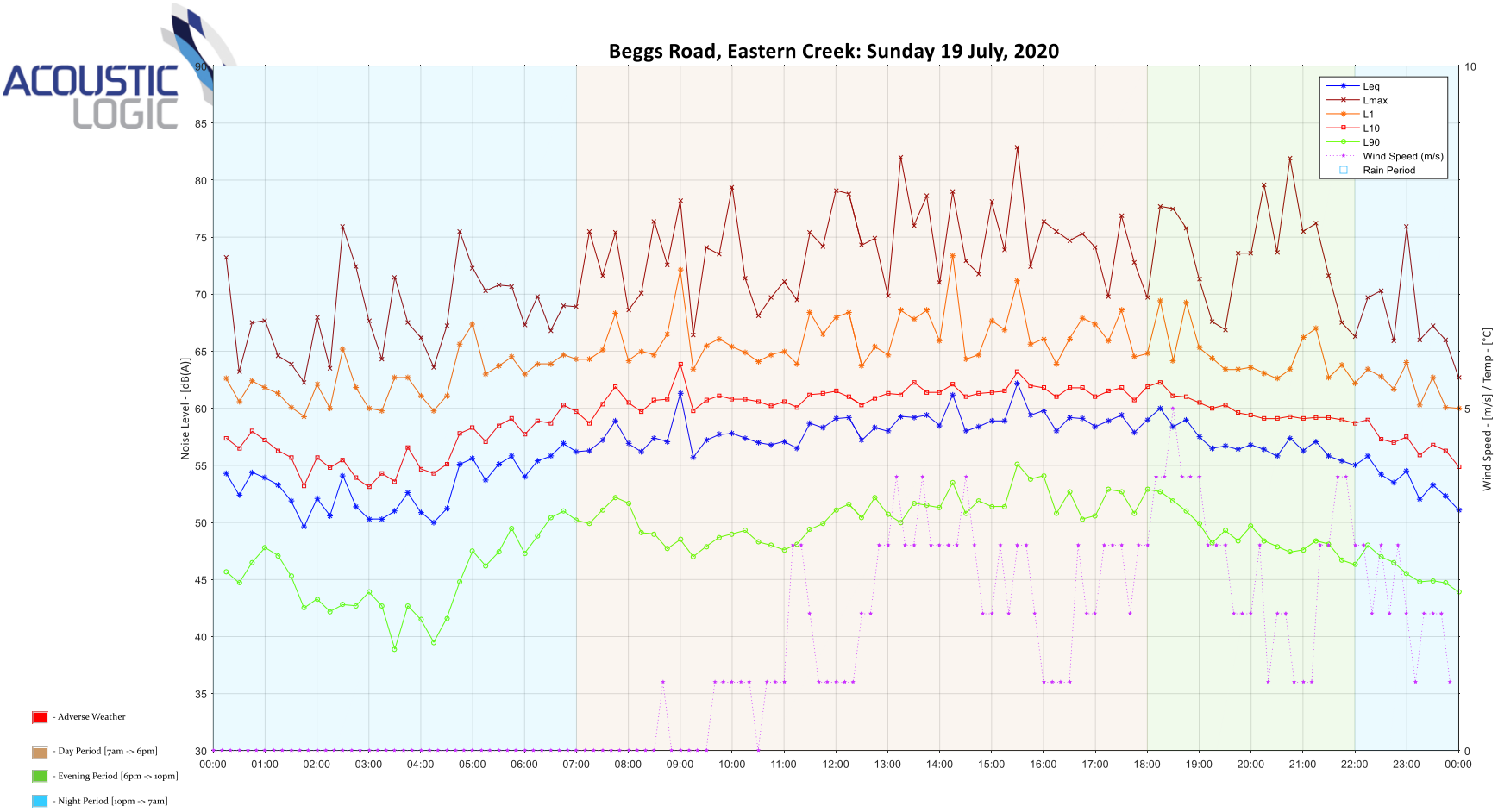
- Evening Period [6pm -> 10pm]
- Night Period [10pm -> 7am]


Beggs Road, Eastern Creek: Sunday 19 July, 2020
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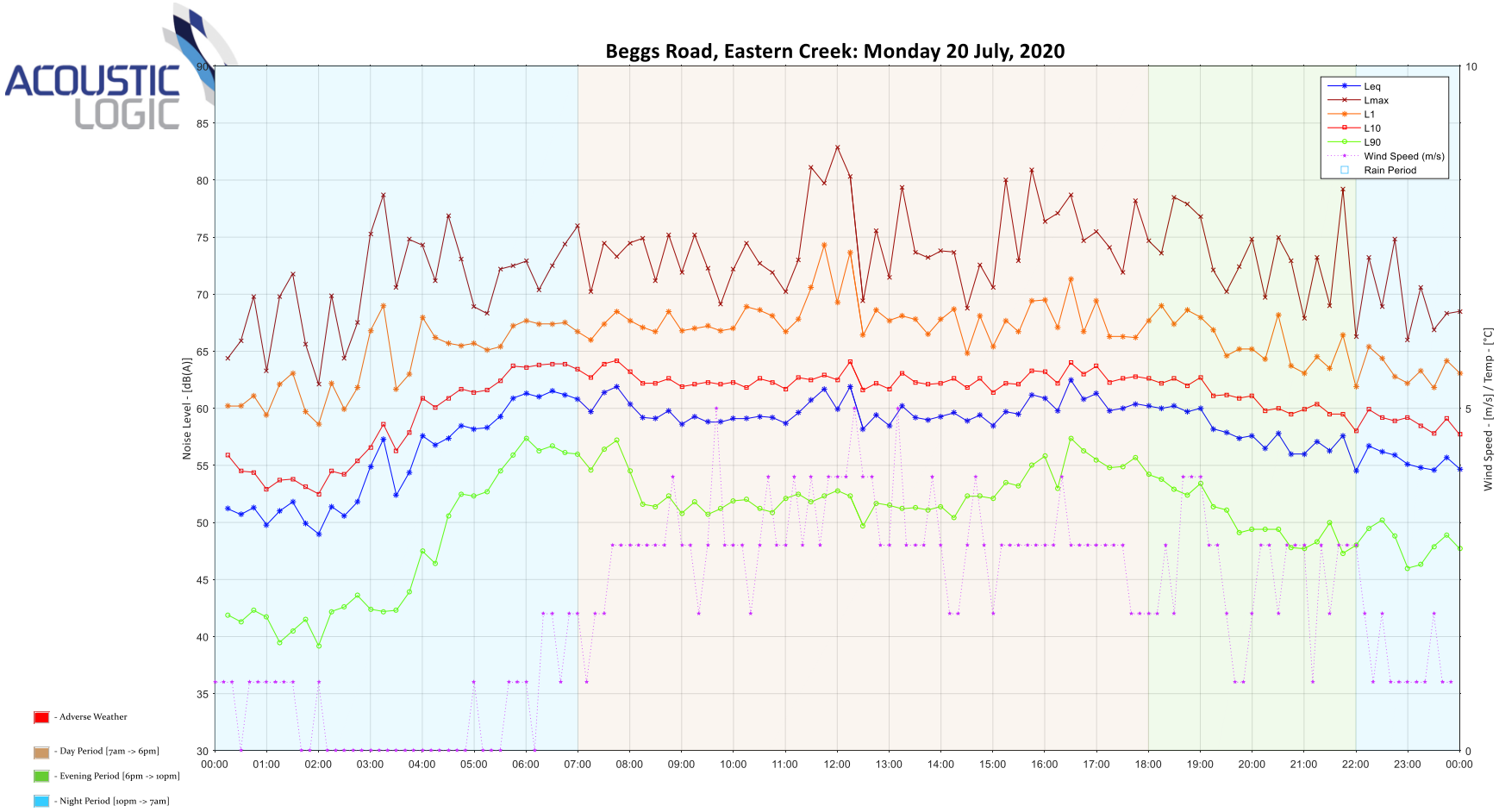
Leq
Lmax
L1
L10
L90
Wind Speed (m/s)
Rain Period
- Adverse Weather
- Day Period [7am -> 6pm]
- Evening Period [6pm -> 10pm]
- Night Period [10pm -> 7am]


Beggs Road, Eastern Creek: Monday 20 July, 2020
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Wind Speed - [m/s] / Temp - [°C]
Leq
Lmax
L1
L10
L90
Wind Speed (m/s)
Rain Period
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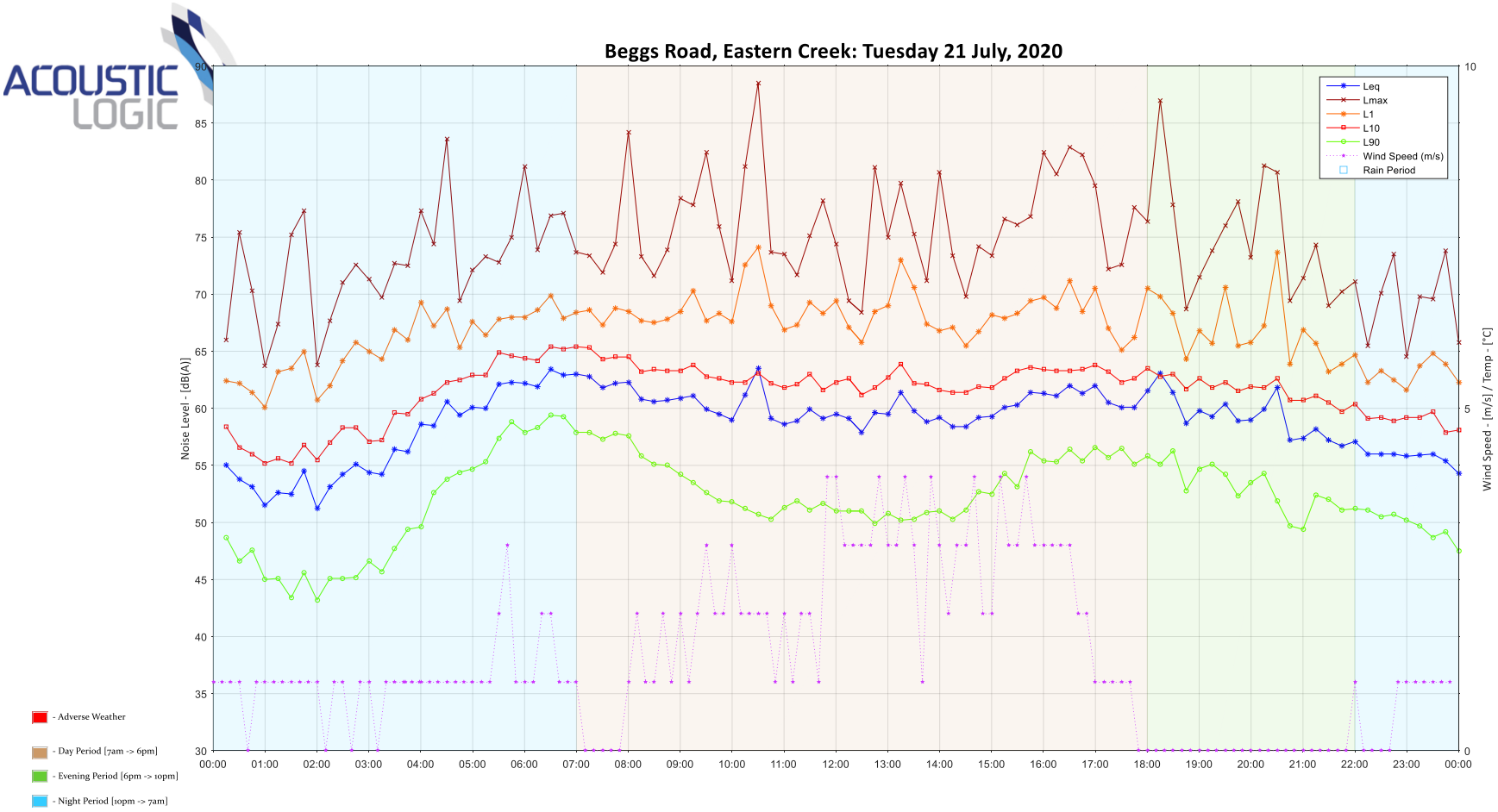
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Rain Period
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- Day Period [7am -> 6pm]
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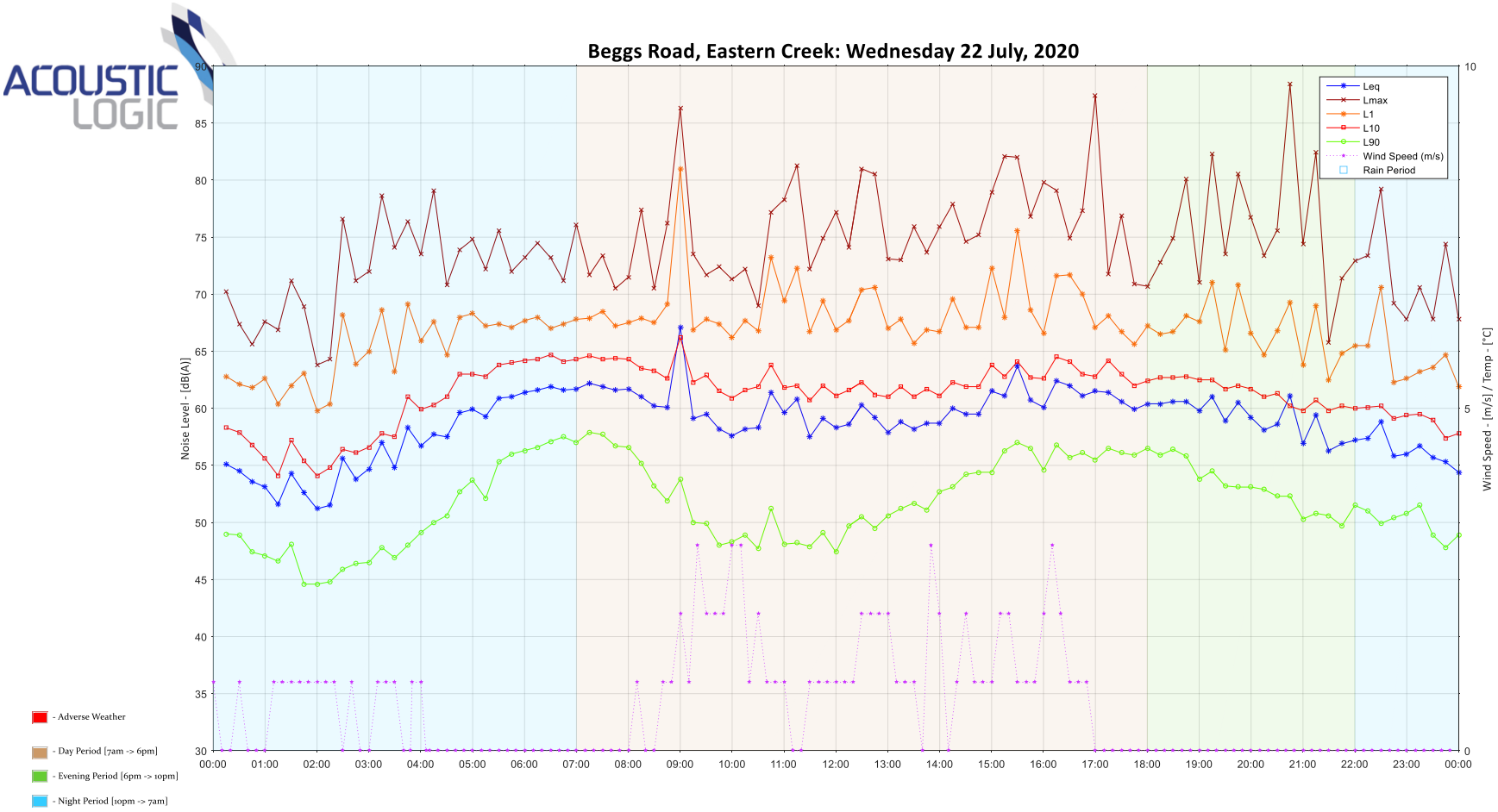
- Night Period [10pm -> 7am]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Lmax
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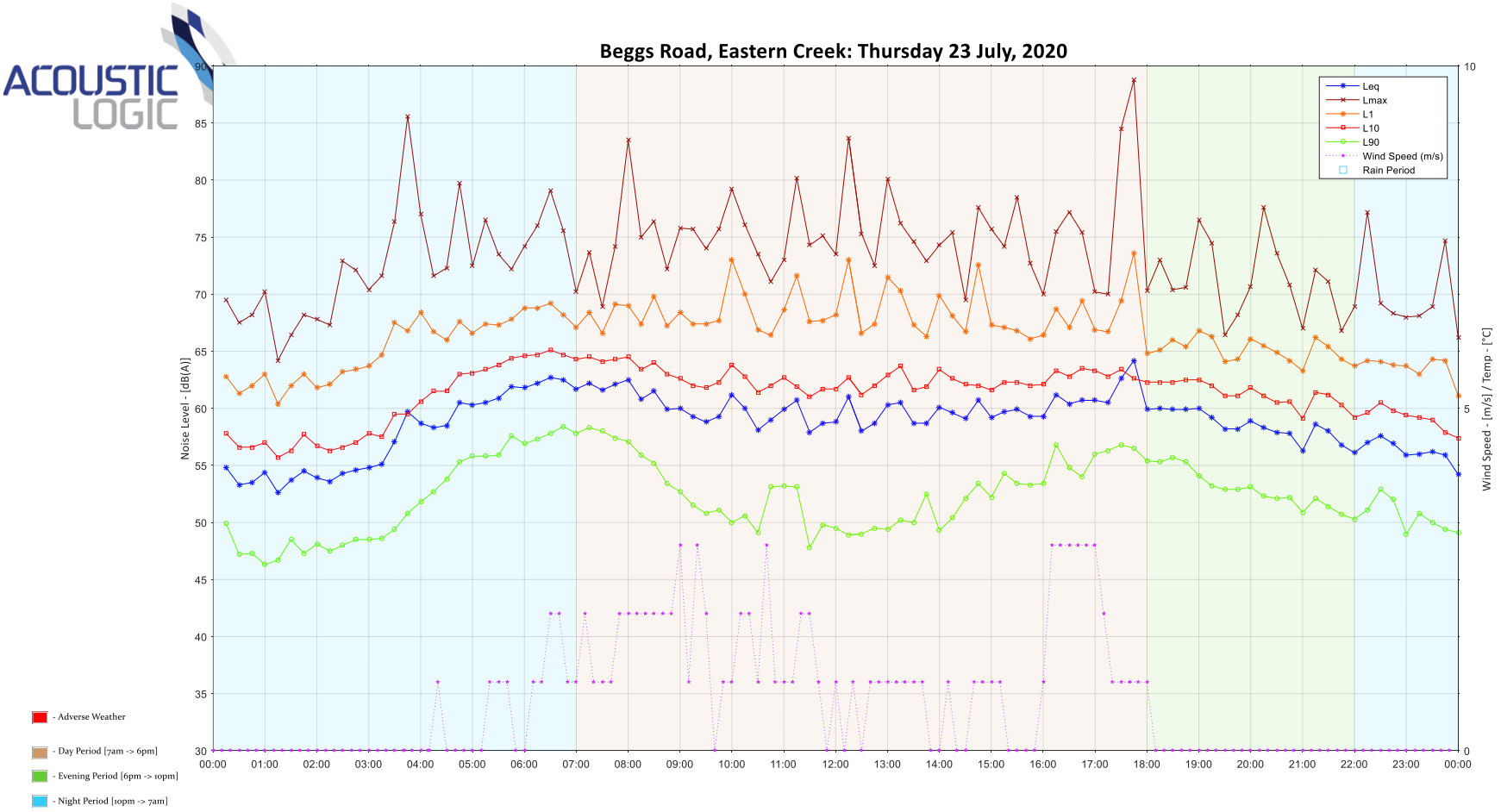
L90
Wind Speed (m/s)
Rain Period
- Adverse Weather
- Day Period [7am -> 6pm]
- Evening Period [6pm -> 10pm]
- Night Period [10pm -> 7am]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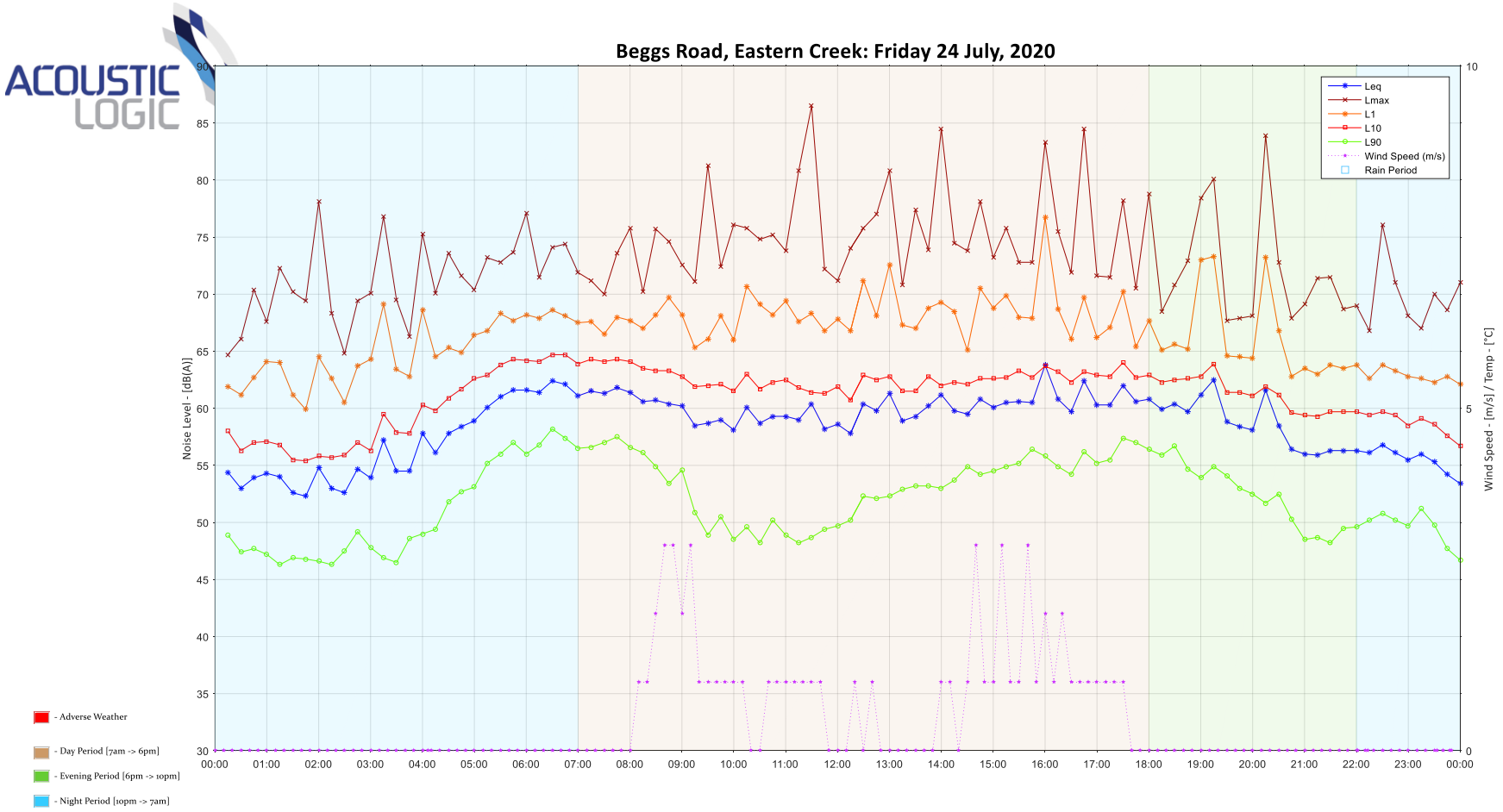
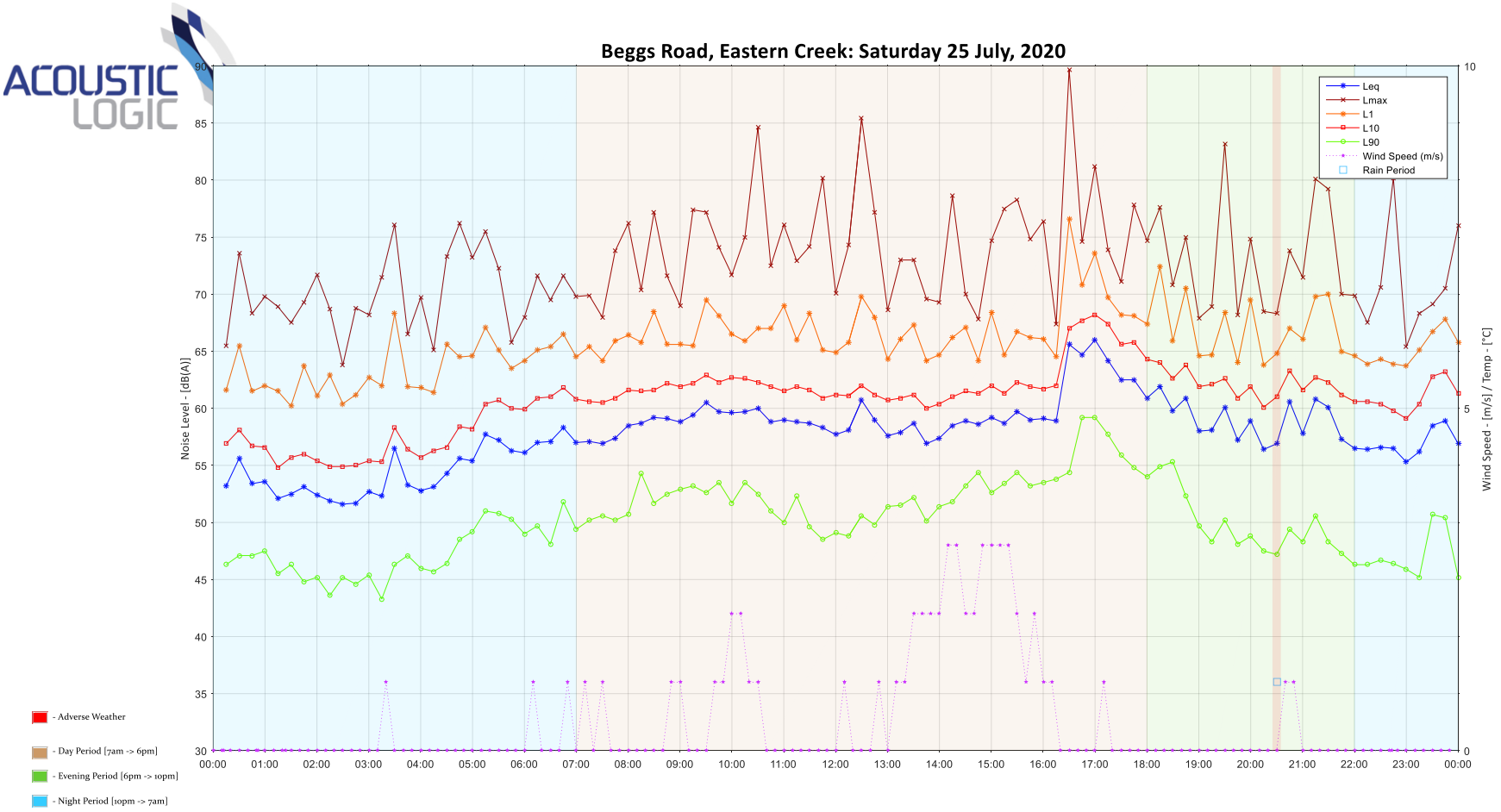
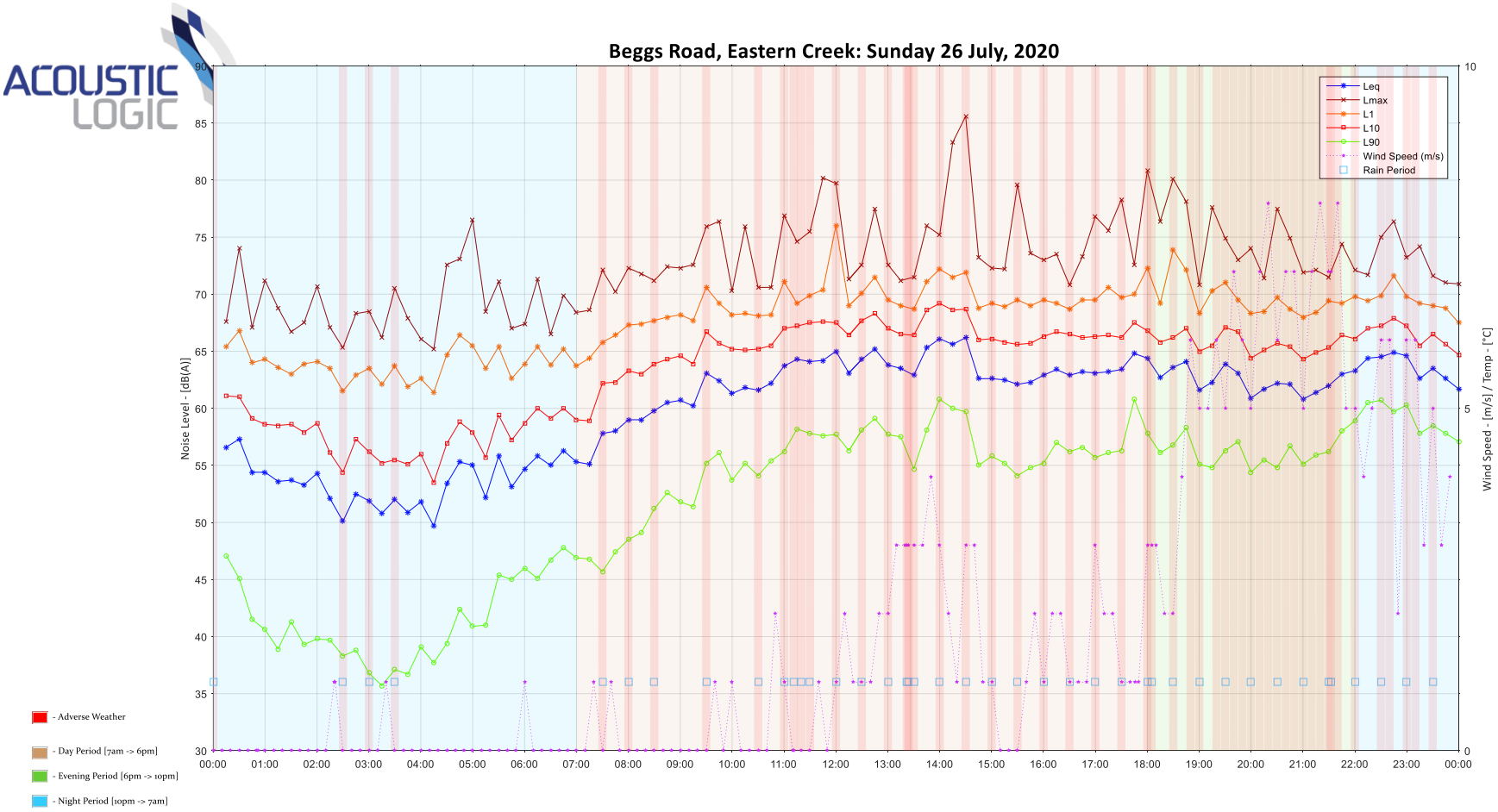
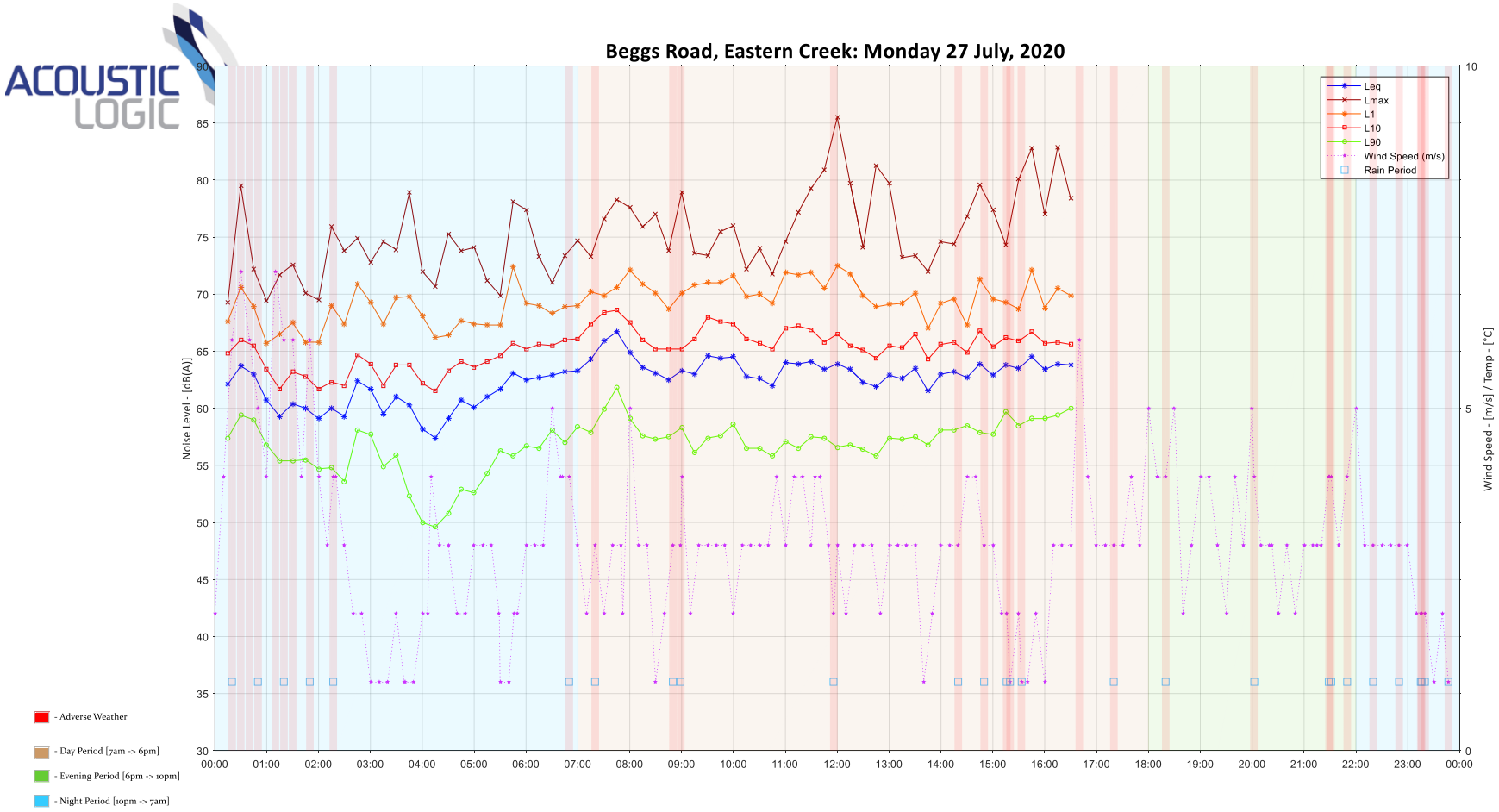
Wind Speed - [m/s] / Temp - [°C]
Leq
Lmax
L1
L10
L90
Wind Speed (m/s)
Rain Period
- Adverse Weather
- Day Period [7am -> 6pm]
- Evening Period [6pm -> 10pm]
- Night Period [10pm -> 7am]


Beggs Road, Eastern Creek: Friday 24 July, 2020
Noise Level - [dB(A)]
Wind Speed - [m/s] / Temp - [°C]
Leq
Lmax
L1
L10
L90
Wind Speed (m/s)
Rain Period
- Adverse Weather
- Day Period [7am -> 6pm]
- Evening Period [6pm -> 10pm]
- Night Period [10pm -> 7am]


Beggs Road, Eastern Creek: Saturday 25 July, 2020
Noise Level - [dB(A)]
Wind Speed - [m/s] / Temp - [°C]
Leq
Lmax
L1
L10
L90
Wind Speed (m/s)
Rain Period
- Adverse Weather
- Day Period [7am -> 6pm]
- Evening Period [6pm -> 10pm]
- Night Period [10pm -> 7am]


Beggs Road, Eastern Creek: Sunday 26 July, 2020
Noise Level - [dB(A)]
Wind Speed - [m/s] / Temp - [°C]
Leq
Lmax
L1
L10
L90
Wind Speed (m/s)
Rain Period
- Adverse Weather
- Day Period [7am -> 6pm]
- Evening Period [6pm -> 10pm]
- Night Period [10pm -> 7am]


Beggs Road, Eastern Creek: Monday 27 July, 2020
Noise Level - [dB(A)]
Wind Speed - [m/s] / Temp - [°C]
Leq
Lmax
L1
L10
L90
Wind Speed (m/s)
Rain Period
- Adverse Weather
- Day Period [7am -> 6pm]
- Evening Period [6pm -> 10pm]
- Night Period [10pm -> 7am]