

764 Forest Road, Peakhurst

DA Acoustic Assessment

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Attention To	Sonia Fenton

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1 INTRODUCTION

Acoustic Logic (AL) has been engaged to conduct an acoustic assessment of potential noise impacts associated with the proposed hostel to be located at 764 Forest Road, Peakhurst.

This document addresses noise impacts associated with the following:

- Noise intrusion to project site from adjacent roadways; and
- Noise emissions from mechanical plant to service the project site (in principle).

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

- Georges River Council Development Control Plan (DCP) 2018;
- NSW Department of Planning and Environment document – ‘Developments near Rail Corridors or Busy Roads – Interim Guideline’;
- Australian Standard AS/NZS 3671:1989 ‘Acoustics—Road traffic noise intrusion—Building siting and Construction’;
- Australian Standard AS2107:2016 – ‘Recommended Design Sound Levels and Reverberation Times for Building Interiors,’ and
- NSW Department of Environment and Heritage, Environmental Protection Authority document – ‘Noise Policy for Industry’ (NPI) 2017.

This assessment has been conducted using the Innovate Architects architectural drawings for D.A Submission, see details below.

Table 1-1 – Architectural Sheet Information

Drawing Owner	Drawing No.	Drawing Title	Revision	Date
Innovate Architects	02	Basement Floor Plan	A	OCT 20
	03	Ground Floor Plan		
	04	First Floor Plan		
	05	Second Floor Plan		
	06	Elevations		
	07	Elevations		

2 SITE DESCRIPTION

The proposed hotel is to be located at 764 Forest Road, Peakhurst and contains 71 rooms across two levels with one level of basement car parking providing 16 car parking spaces. The ground floor also contains an existing dining room, sitting room and WC facilities with level 1 providing a lounge area, office and music room.

Investigation has been carried out by this office in regard to the existing properties and noise impacts surrounding the proposed development, which is detailed below:

The nearest noise sensitive receivers around the project site include:

- **Receiver 1:** Residential receivers located at 24 and 26 Prospect Road to the north-west across Prospect Road. Residential receivers are single storey.
- **Receiver 2:** Residential receivers located at 667 and 667A Forest Road to the south across Forest Road. Residential receivers are double storey.
- **Receiver 3:** Residential receiver located at 665 Forest Road to the south across Forest Road. Residential receiver is single storey.
- **Receiver 4:** Residential receiver located at 760A Forest Road to the east. Residential receiver is double storey.
- **Receiver 5:** Residential receiver located at 21 Prospect Road to the north-east. Residential receiver is single storey.
- **Receiver 6:** Residential receiver located at 23 Prospect Road to the north-west. Residential receiver is single storey.
- **Receiver 7:** Residential receiver located at 768 Forest Road to the south-west. Residential receiver is single storey.

An aerial site map, measurement locations and surrounding nearest receivers are presented in Figure 1 below.



- = Unattended Noise Monitoring Location
- = Attended Noise Measurement Location

Figure 1: Aerial Site Map and Noise Measurement Locations

= Residential Receivers

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

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

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

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

4 AMBIENT NOISE SURVEY

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

Appendices in this report present results of unattended noise monitoring conducted at the project site. Weather affected data was excluded from the assessment. The processed RBL (lowest 10th percentile noise levels during operation time period) are presented in Table 4-1.

4.1 MEASUREMENT POSITION

One unattended noise monitor was located along the northern boundary of the project site.

4.2 MEASUREMENT PERIOD

Unattended noise monitoring was conducted between Friday, 20th November 2020 to Monday, 30th, November 2020.

Attended noise measurements were undertaken between the hours of 3:00pm to 4:00pm on Friday, 20th November 2020.

4.3 MEASUREMENT EQUIPMENT

Equipment used consisted of an Acoustic Research Laboratories Pty Ltd noise logger. The logger was set to A-weighted fast response and was programmed to store 15-minute statistical noise levels throughout the monitoring period. The monitor was calibrated at the start and end of the monitoring period using a Rion NC-73 calibrator. No significant drift was noted. Noise logger data is provided in Appendix A of this report.

4.4 SUMMARISED RATING BACKGROUND NOISE LEVELS

Summarised rating background noise levels for the project site and immediate surroundings are presented below.

Table 4-1 – Measured Noise Levels

Noise Monitor Location	Time of day	Rating Background Noise Level dB(A) _{L90(Period)}
764 Forest Road, Peakhurst Northern Boundary	Day (7am – 6pm)	46
	Evening (6pm – 10pm)	45
	Night (10pm – 7am)	40

On review of the monitoring data, the measured L₉₀ noise levels during high wind speed days do not increase background noise levels significantly as periods with little to no wind. This demonstrates that even though wind speeds measured at Sydney Airport exceed EPA guidelines, either:

- The wind speed on site at this time was significantly lower than at Sydney Airport (which is likely given that Sydney Airport is located in a very exposed area) and/or
- The wind on site was not sufficiently consistent to increase background noise levels compared to calm periods.

Therefore, only periods of adverse weather that were determined to have affected the noise data have been eliminated when determining the rating background noise level at the site, which is presented above.

5 EXTERNAL NOISE INTRUSION ASSESSMENT

Site investigation indicates that the major external noise source around the project site is from traffic movements along Forest Road, south of the project site.

5.1 NOISE INTRUSION CRITERIA

A noise intrusion assessment has been conducted based on the requirements of the following acoustic noise criteria and standards:

- Georges River Council Development Control Plan (DCP) 2018;
- NSW Department of Planning and Environment document – ‘Developments near Rail Corridors or Busy Roads – Interim Guideline’;
- Australian Standard AS/NZS 3671:1989 ‘Acoustics—Road traffic noise intrusion—Building siting and Construction’; and
- Australian Standard AS2107:2016 – ‘Recommended Design Sound Levels and Reverberation Times for Building Interiors.’

5.1.1 Georges River Council Development Control Plan (DCP) 2018

Section 4.1: Residential Flat Buildings

Noise	
PC10. Development is sited, designed and constructed to: a. minimise the intrusion of noise from external sources into habitable rooms, in particular bedrooms b. minimise noise transmission between dwellings within the development and from the development to adjoining dwelling houses	DS10.1. Windows of adjacent dwellings are separated by a distance of at least 3m Note: this can be achieved by an offset.
	DS10.2. Site layout separates active recreation areas, parking areas, vehicle access-ways and service equipment areas from bedroom areas.
	DS10.3. Dwellings are designed so that the internal noise level from outside sources does not exceed the parameters established by the NSW Environment Protection Authority (EPA).
	DS10.4. Habitable rooms located within 60m of a railway or facing a classified major road satisfy the acoustic criteria contained within the NSW Government’s Development Near Rail Corridors and Busy Roads – Interim Guideline (2008), or the most recent version
	DS10.5. Where development is likely to be subject to noise from a railway line, arterial or state road or Sydney airport flight path, council may require the submission of a report prepared by a qualified acoustic engineer to demonstrate that internal noise levels will be acceptable.

5.1.2 NSW Department of Planning and Environment document – ‘Developments near Rail Corridors or Busy Roads – Interim Guideline (2008)’

Section 3.5

The following provides an overall summary of the assessment procedure to meet the requirements of clauses 87 and 102 of the Infrastructure SEPP. The procedure covers noise at developments for both Road and Rail.

- If the development is for the purpose of a building for residential use, the consent authority must be satisfied that appropriate measures will be taken to ensure that the following L_{Aeq} levels are not exceeded:
 - in any bedroom in the building: 35dB(A) at any time 10pm-7am
 - anywhere else in the building (other than a garage, kitchen, bathroom or hallway): 40dB(A) at any time.”

5.1.3 Australian Standard AS/NZS 3671:1989 ‘Acoustics—Road traffic noise intrusion—Building siting and Construction’

Australian Standard AS 3671-1989 notes the following in relation to traffic noise:

- Internal noise levels should be determined in accordance with AS/NZS 2107:2016 ‘Acoustics – Recommended design sound levels and reverberation times for building interiors’.
- A suitable descriptor should be adopted relevant to the use of the development. As AS2107:2016 adopts the L_{eq} descriptor, AL shall also use this descriptor.
- AS3671 does not specifically recommend a time interval. On this basis, AL have adopted the interval used by the EPA Road Noise Policy for main/arterial roads, that being:
 - Day – 7am to 10pm (15 hour); and
 - Night – 10pm to 7am (9 hour).
- AL have applied the daytime interval to the living areas of the apartment and the night time interval to the bedrooms of the apartment.

Internal noise levels have been selected in accordance with AS 2107:2016.

5.1.4 Australian and New Zealand AS/NZS 2107:2016 ‘Recommended design sound levels and reverberation times for building interiors’

AS2107:2016: Recommended design sound levels and reverberation times for building interiors specifies allowable internal noise levels for internal spaces within residential and commercial buildings. Table 1, in Section 5 of AS2107:2016, gives the following maximum internal noise levels for commercial buildings and residential buildings near major roads.

Table 5-1 – Recommended Design Sound Levels

Space /Activity Type	Recommended Design Sound Levels
Sleeping Areas	35-40 dB(A) $L_{eq}(10pm-7am)$
Living Areas	35-45 dB(A) $L_{eq}(anytime)$
Common Area	40-45 dB(A) $L_{eq}(anytime)$

5.1.5 Summarised External Noise Intrusion Criteria

The internal noise criteria adopted for each internal space is therefore summarised below based on the relevant State, Council and Australian Standard requirements.

Table 5-2 – Adopted Internal Noise Levels

Space / Activity Type	Required Internal Noise Level
Sleeping Areas	35 dB(A) $L_{eq}(10pm-7am)$
Living Areas	40 dB(A) $L_{eq}(worst\ 1hr)$

5.2 EXTERNAL NOISE MEASUREMENTS

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

5.2.1 Measurement Equipment

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

5.2.2 Measurement Location

Attended noise measurements were undertaken along the southern boundary. The sound level meter had an unobstructed view of traffic and was approximately 4m from the kerb. Refer to Figure 1 for a detailed location.

5.2.3 Measurement Period

Attended noise measurements were undertaken between the hours of 3:00pm to 4:00pm on Friday, 20th November 2020.

5.2.4 Attended Noise Measurements

Attended noise measurements have been summarised below for each location.

Table 5-3 – Attended Noise Measurements

Noise Measurement Location	Measured Noise Level dB(A) L_{eq} (15 minute)
764 Forest Road, Peakhurst Southern Boundary (Approximately 4m from kerb)	72 dB(A) $L_{eq}(15min)$

5.2.5 Summarised External Noise Levels

The following noise levels for the site have been established based on short term attended measurements and long-term noise monitoring.

Table 5-4 – Measured Traffic Noise Levels

Noise Measurement Location	Time of Day	Noise Level – L _{eq}
764 Forest Road, Peakhurst Southern Boundary (Approximately 4m from kerb)	Daytime 7am – 10pm	72 dB(A) L _{eq} (15hr)
	Night-time 10pm – 7am	65 dB(A) L _{eq} (9hr)

5.3 RECOMMENDED CONSTRUCTIONS

Assessment of façade requirements to achieve required indoor noise levels has been undertaken. Dimensions of rooms, setbacks from roadways, window openings and floor areas have been used.

5.3.1 Glazed Windows and Doors

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

Thicker glazing may be required for structural, safety or other purposes. Where it is required to use thicker glazing than scheduled, this will also be acoustically acceptable. The recommended constructions are detailed in Appendix B "Glazing Mark-Up".

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

In addition to complying with the minimum scheduled glazing thickness, the R_w rating of the glazing fitted into open-able frames and fixed into the building opening should not be lower than the values listed in Table 5-5 for all areas. Where nominated, this will require the use of acoustic seals around the full perimeter of open-able frames and the frame will need to be sealed into the building opening using a flexible sealant.

Table 5-5 – Minimum R_w of Glazing Assembly (with Acoustic Seals)

Glazing Assembly	Minimum R_w of Installed Window
6mm Float	29
6.38mm Laminated	31
10.38mm Laminated	35
12.5mm VLam Hush	40

5.3.2 External Roof/Ceiling Construction

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

5.3.3 External Wall Construction

External wall construction from concrete or masonry elements will not require acoustic upgrading. There should not be vents on the internal skin of external walls. In the event that any penetrations are required through the external skin, an acoustic sealant should be used to minimise all gaps.

5.3.4 Mechanical Ventilation

With respect to natural ventilation of a dwelling, the NSW Department of Planning document 'Development near Busy Roads and Rail Corridors - Interim Guideline' dictates that:

"If internal noise levels with windows or doors open exceed the criteria by more than 10dB(A), the design of the ventilation for these rooms should be such that occupants can leave windows closed, if they so desire, and also to meet the ventilation requirements of the Building Code of Australia."

With windows open, the allowable internal noise goal is permitted to be 10dB(A) higher than when the windows are closed (i.e. – allowable level in bedrooms becomes 45dB(A) $L_{eq(9hr)}$, and 50dB(A) $L_{eq(9hr)}$ in living rooms.

Refer to Appendix C for hostel rooms that should consider mechanical ventilation.

Although windows on the façades can be openable, the required internal noise level is only achieved when the windows are closed.

Any supplementary ventilation system proposed to be installed should be acoustically designed to ensure that the acoustic performance of the acoustic treatments outlined above is not reduced and does not exceed Council criteria for noise emission to nearby properties. A mechanical engineer is to confirm if supplementary ventilation (to meet Australian Standard AS1668.2 requirements) will be required to these rooms.

6 NOISE EMISSION CRITERIA

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

- Georges River Council Development Control Plan (DCP) 2018; and
- NSW Department of Environment and Heritage, Environmental Protection Authority document – ‘Noise Policy for Industry’ (NPI) 2017.

6.1 GEORGES RIVER COUNCIL DEVELOPMENT CONTROL PLAN (DCP) 2018

The Georges River Council Development Control Plan has no specific controls in relation to noise emissions criteria, therefore the EPA Noise Policy for Industry shall be adopted.

6.2 NSW EPA NOISE POLICY FOR INDUSTRY (NPI) 2017

The EPA NPI has two criteria which both are 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.

6.2.1 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 4-1. Noise emissions from the site should comply with the noise levels presented below when measured at nearby property boundary.

6.2.2 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 4-1, 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;

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

The amenity levels appropriate for the receivers surrounding the site are presented in Table 6-1.

Table 6-1 – EPA Amenity Noise Levels

Type of Receiver	Time of day	Recommended Noise Level dB(A) $L_{eq}(\text{period})$	Project Amenity Noise Level dB(A) $L_{eq}(15 \text{ minute})$
Residential – Suburban	Day (7am – 6pm)	55	53
	Evening (6pm – 10pm)	45	43
	Night (10pm – 7am)	40	38

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.

6.2.3 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.

Table 6-2 – Sleep Arousal Criteria for Residential Receivers

Receiver	Rating Background Noise Level (Night) dB(A) L_{90}	Emergence Level
Residences Surrounding Site Night (10pm – 7am)	40 dB(A) L_{90}	45 dB(A) $L_{eq, 15min}$; 55 dB(A) L_{Fmax}

6.3 SUMMARISED NOISE EMISSION CRITERIA

Table 6-3 – EPA NPfI Noise Emission Criteria

Receiver	Time Period	Assessment Background Noise Level dB(A) L_{90}	Project Amenity Criteria dB(A) L_{eq}	Intrusiveness Criteria $L_{eq}(15min)$	NPI Criteria for Sleep Disturbance
Residential	Day (7am – 6pm)	46	53	51	N/A
	Evening (6pm – 10pm)	45	43	50	N/A
	Night (10pm – 7am)	40	38	45	45 dB(A)$L_{eq, 15min}$; 55 dB(A)L_{Fmax}

The project noise trigger levels are indicated by the bolded values in the table above.

7 NOISE EMISSION ASSESSMENT

It is noted that the outdoor terrace, music room and lounge areas form part of the existing development situated at the project site and are therefore not included in the noise emission assessment.

7.1 NOISE FROM GROUND FLOOR COMMON AREA

Noise generated by usage of the ground floor common area is assessed in this section.

7.1.1 Combined Patron and Music Noise

The main noise source within the ground floor common area are predominately background music and patrons talking. It is assumed that the operation of the activity room would only operate during daytime hours of 7am-10pm.

The combined internal noise from background music and patrons talking has been predicted to the nearest receivers. The noise level predicted at each receiver is based on an internal Sound Pressure Level of up to 70dB(A) L_{10} and is detailed in table 7-1 below.

Table 7-1 – L_{10} Sound Power Level of Background Music & Speech

Music Type	Sound Pressure Level dB(A) L_{10}
Music and Speech	Up to 70 dB(A)

7.2 NOISE FROM MECHANICAL PLANT WITHIN PROPOSED SITE GENERALLY

Detailed plant selection and location has not been undertaken at this stage. Satisfactory levels will be achievable through appropriate plant selection, location and if necessary, standard acoustic treatments such as duct lining, acoustic silencers and enclosures.

Noise emissions from all mechanical services to the closest residential receiver should comply with the requirements of Section 6.

Detailed acoustic review should be undertaken at CC stage to determine acoustic treatments to control noise emissions to satisfactory levels.

7.3 RECOMMENDATIONS

Noise emissions from operation of project site has been analysed and the following acoustic treatments are recommended to ensure that the external noise emissions comply with the criteria in Section 6. Noise emission from plant service project site shall be carried out at CC stage to ensure that the overall noise emission satisfy the requirements in Section 6.

Ground Floor Common Room

- Combined internal noise levels from patrons and music is to be limited to 70 dB(A) L₁₀ sound pressure level.
- Speakers are to be vibration isolated by NRD mounts or equal.
- The common room should only operate during daytime hours of 7am-6pm and evening time 6pm-10pm.
- Management controls shall be implemented to minimise noise levels from usage of the common room.

8 CONCLUSION

This report presents an acoustic assessment of noise impacts associated with the proposed hostel to be located at 764 Forest Road, Peakhurst.

Provided that the recommendations presented in this report are adopted, internal noise levels for the development will comply with the acoustic requirements of the following documents:

- Georges River Council Development Control Plan (DCP) 2018;
- NSW Department of Planning and Environment document – ‘Developments near Rail Corridors or Busy Roads – Interim Guideline’;
- Australian Standard AS/NZS 3671:1989 ‘Acoustics—Road traffic noise intrusion—Building siting and Construction’; and
- Australian Standard AS2107:2016 – ‘*Recommended Design Sound Levels and Reverberation Times for Building Interiors.*’

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

- Georges River Council Development Control Plan (DCP) 2018; and
- NSW Department of Environment and Heritage, Environmental Protection Authority document – ‘*Noise Policy for Industry*’ (NPI) 2017.

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

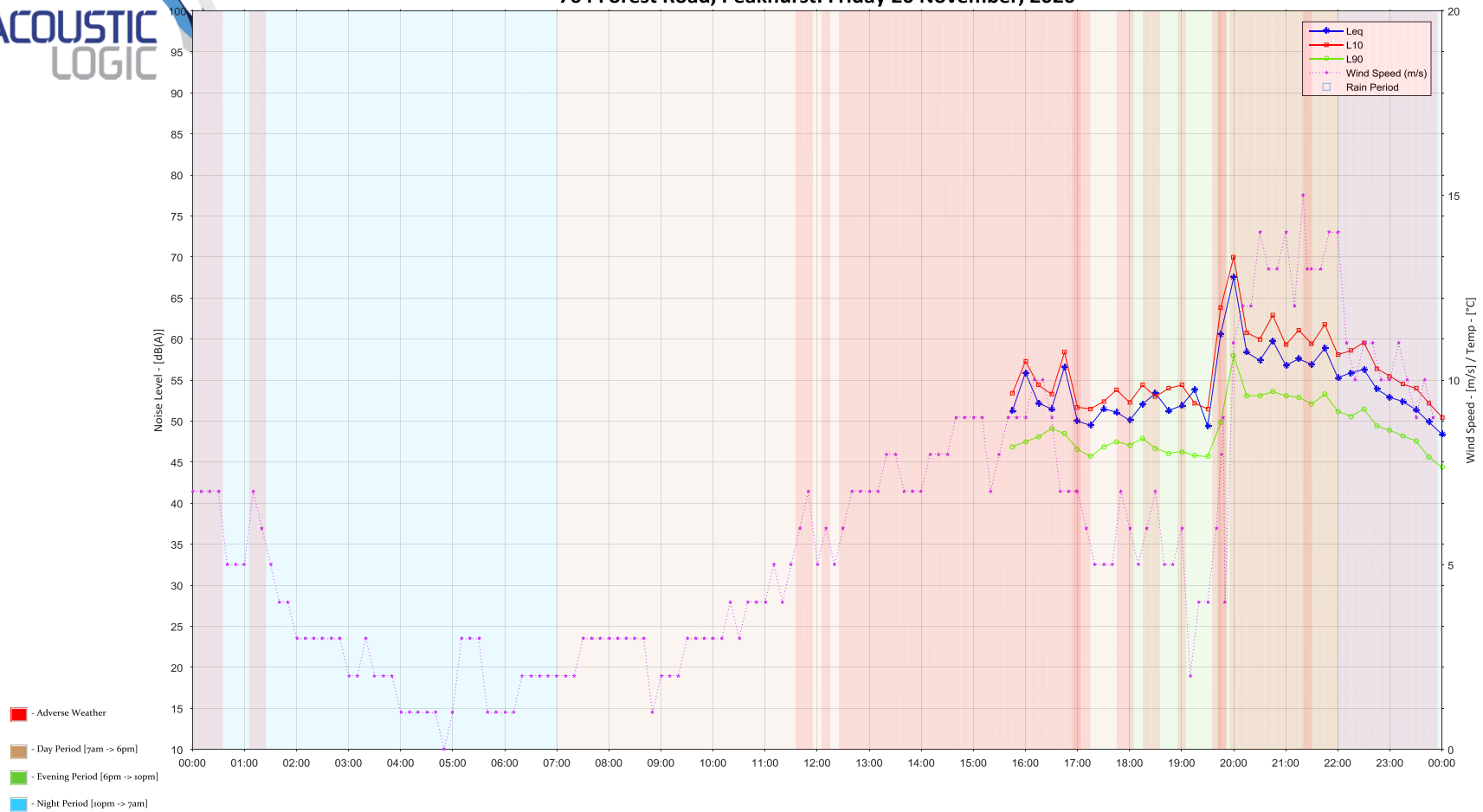
Yours faithfully,

A handwritten signature in black ink, appearing to read 'S. Nichols'.

Acoustic Logic Pty Ltd
Shane Nichols

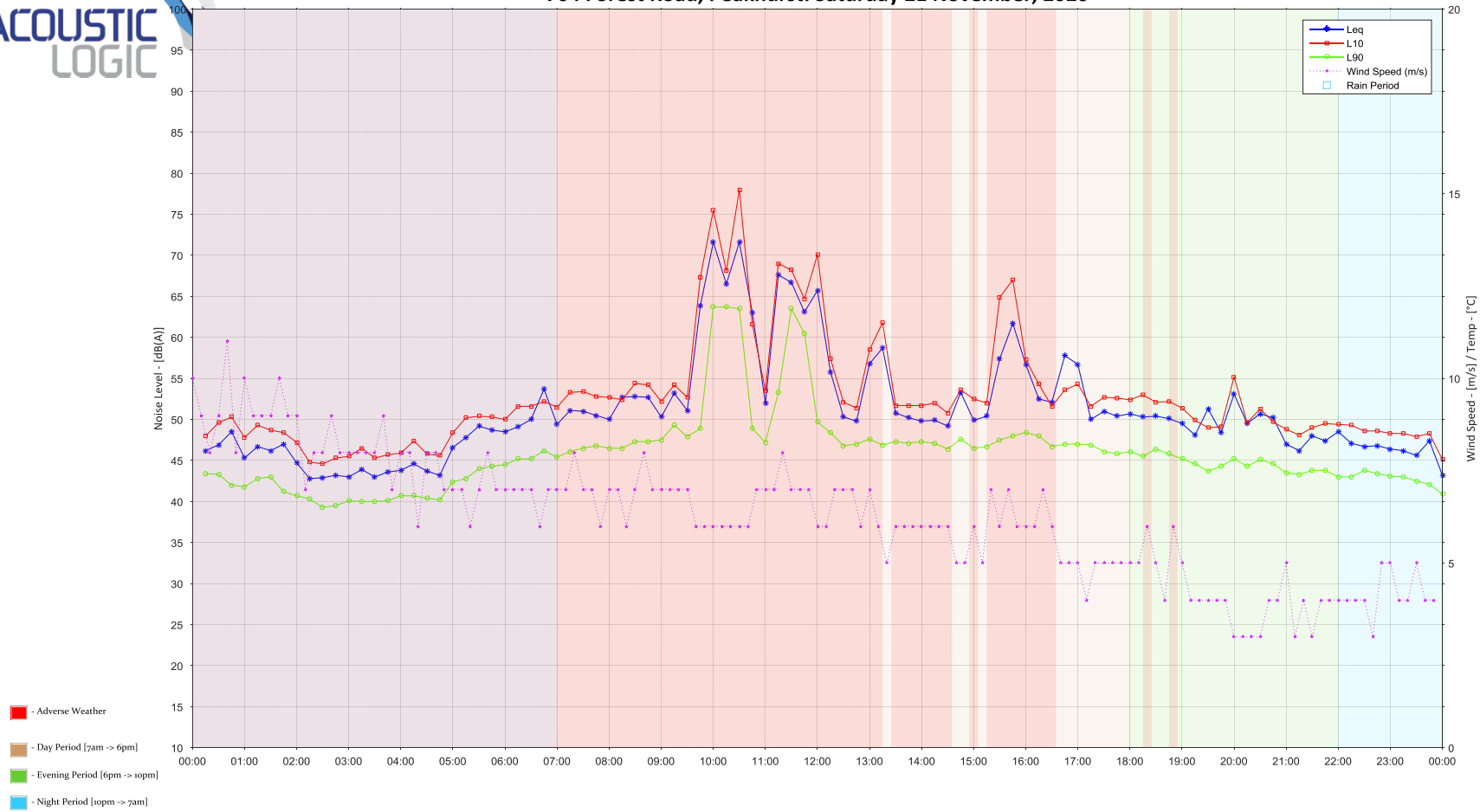
APPENDIX A – UNATTENDED NOISE MONITORING DATA

764 Forest Road, Peakhurst: Friday 20 November, 2020

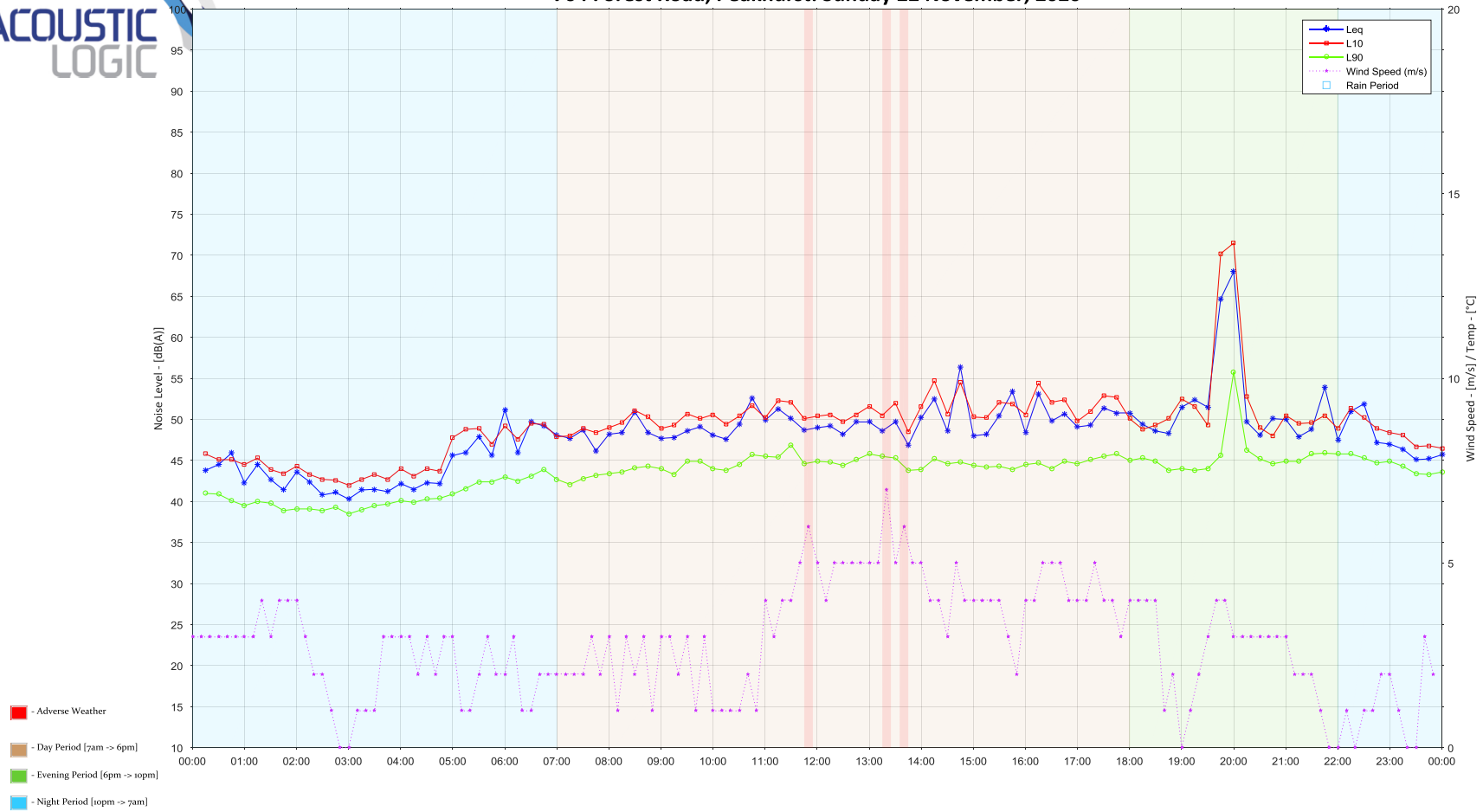




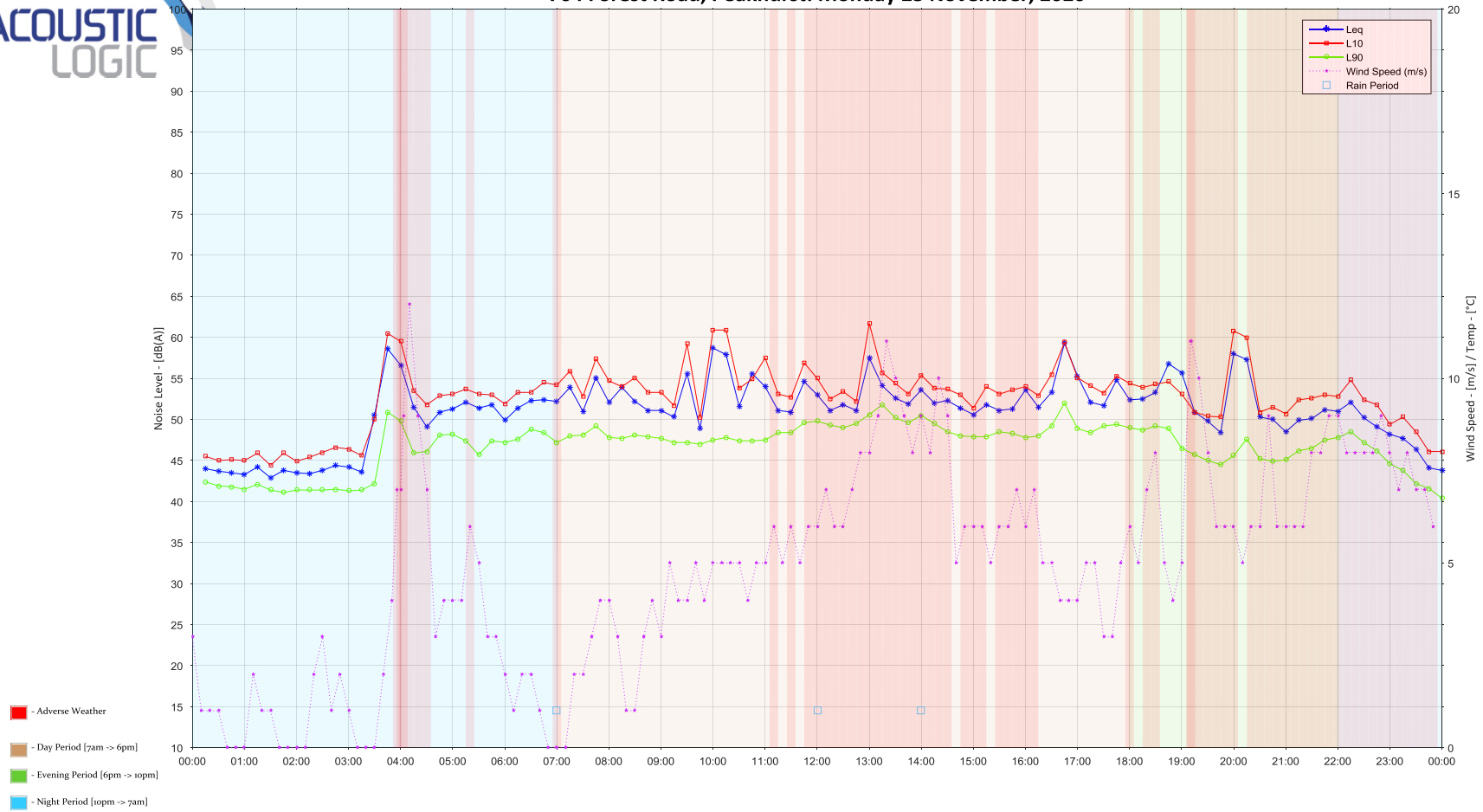
764 Forest Road, Peakhurst: Saturday 21 November, 2020



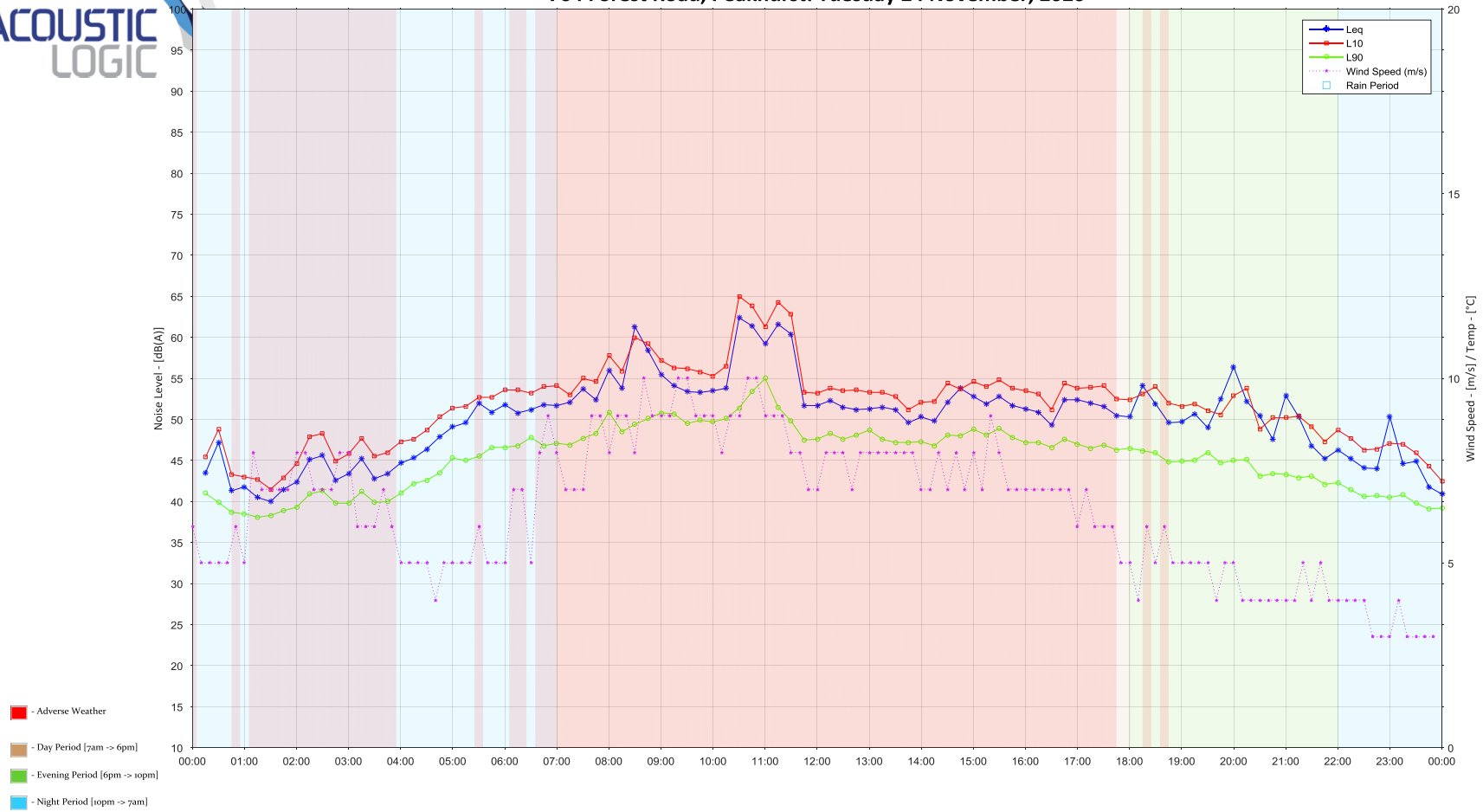
764 Forest Road, Peakhurst: Sunday 22 November, 2020



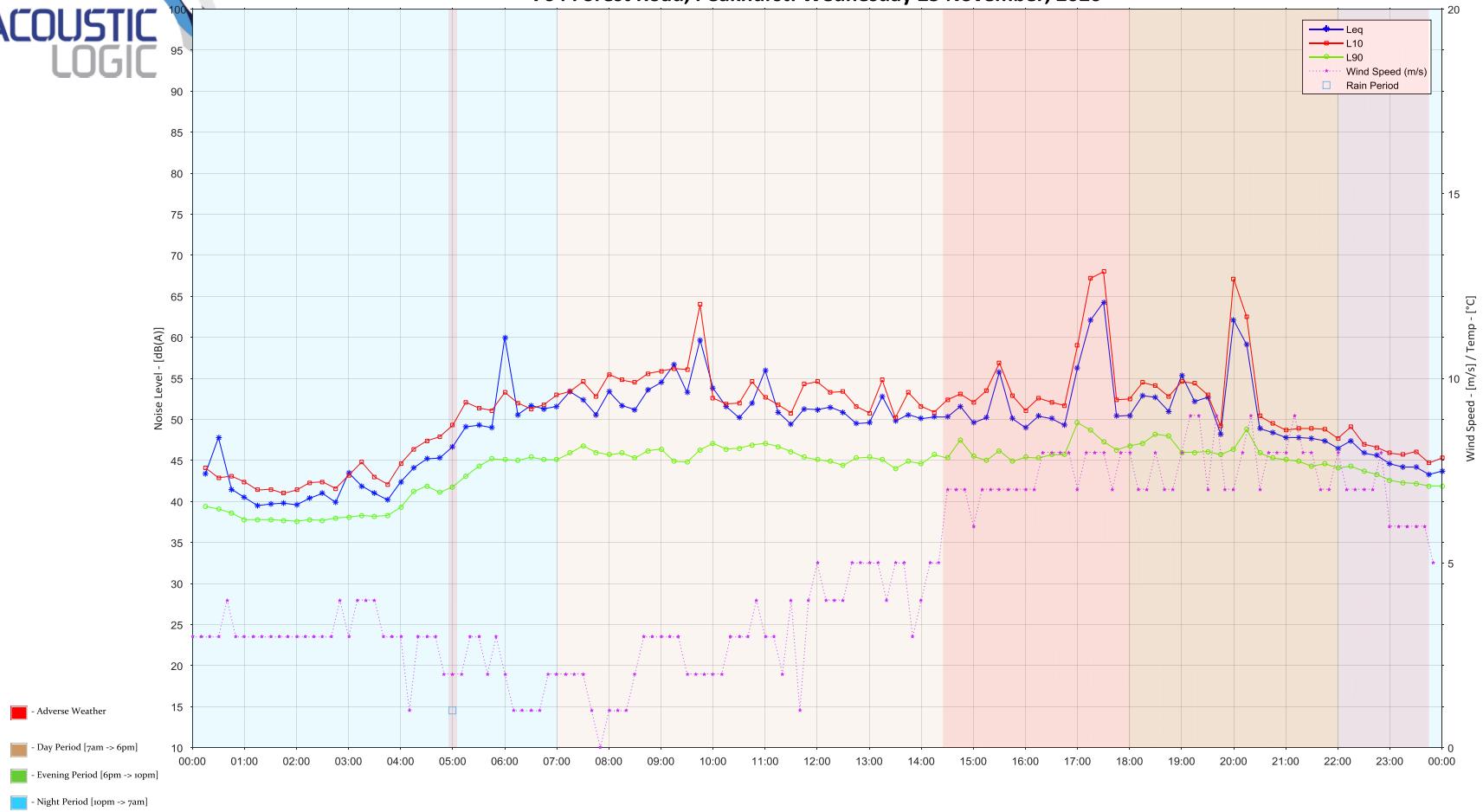
764 Forest Road, Peakhurst: Monday 23 November, 2020



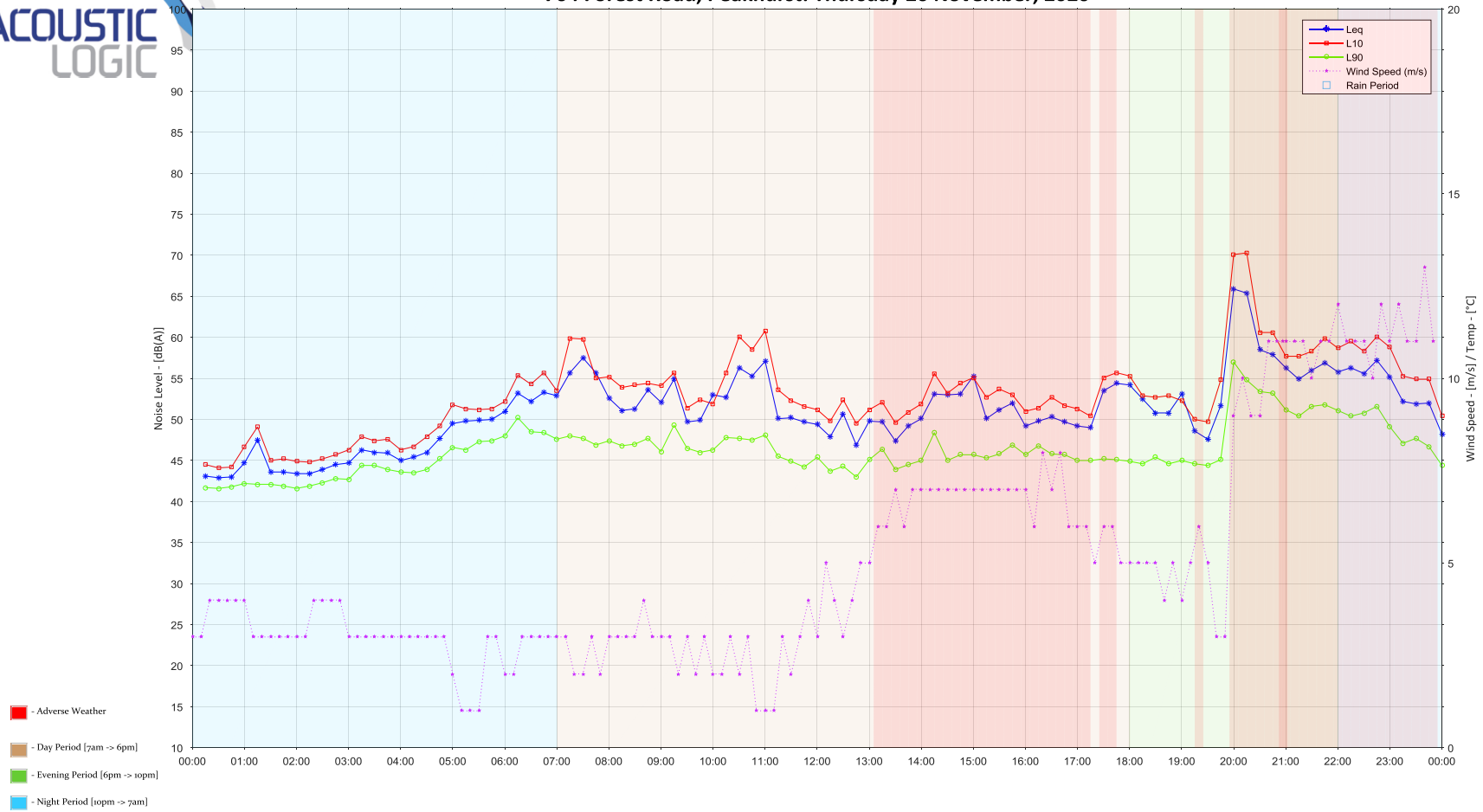
764 Forest Road, Peakhurst: Tuesday 24 November, 2020



764 Forest Road, Peakhurst: Wednesday 25 November, 2020

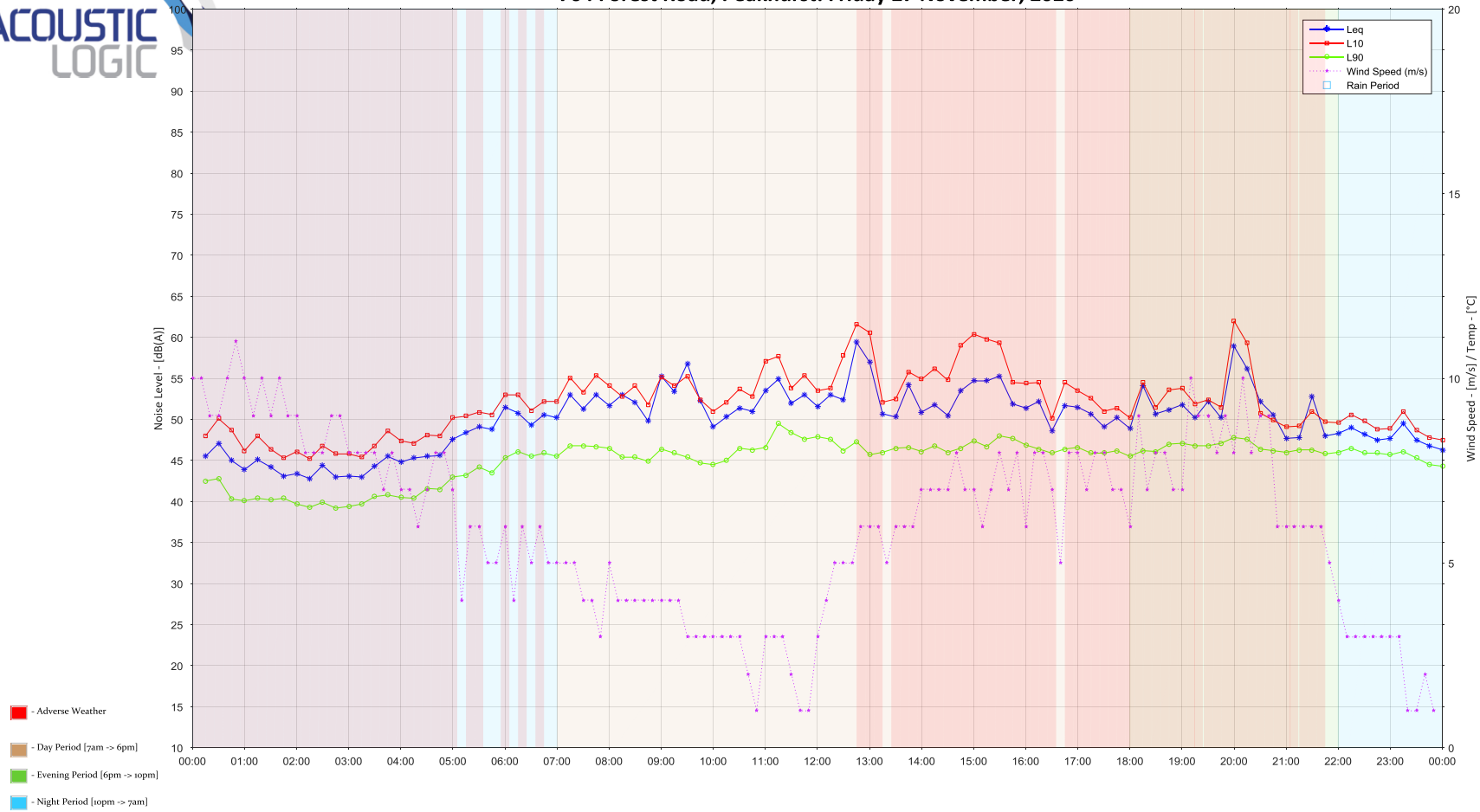


764 Forest Road, Peakhurst: Thursday 26 November, 2020

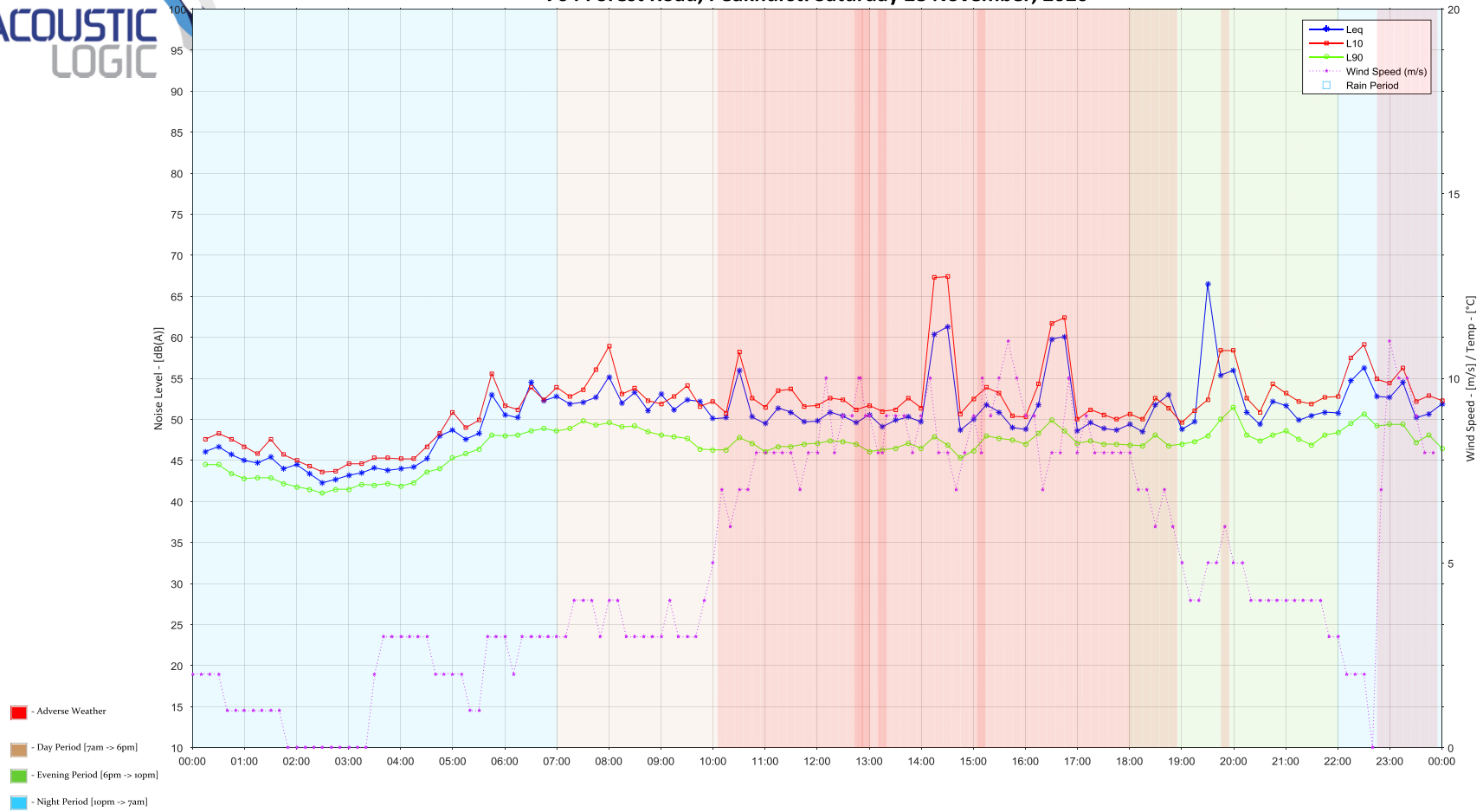




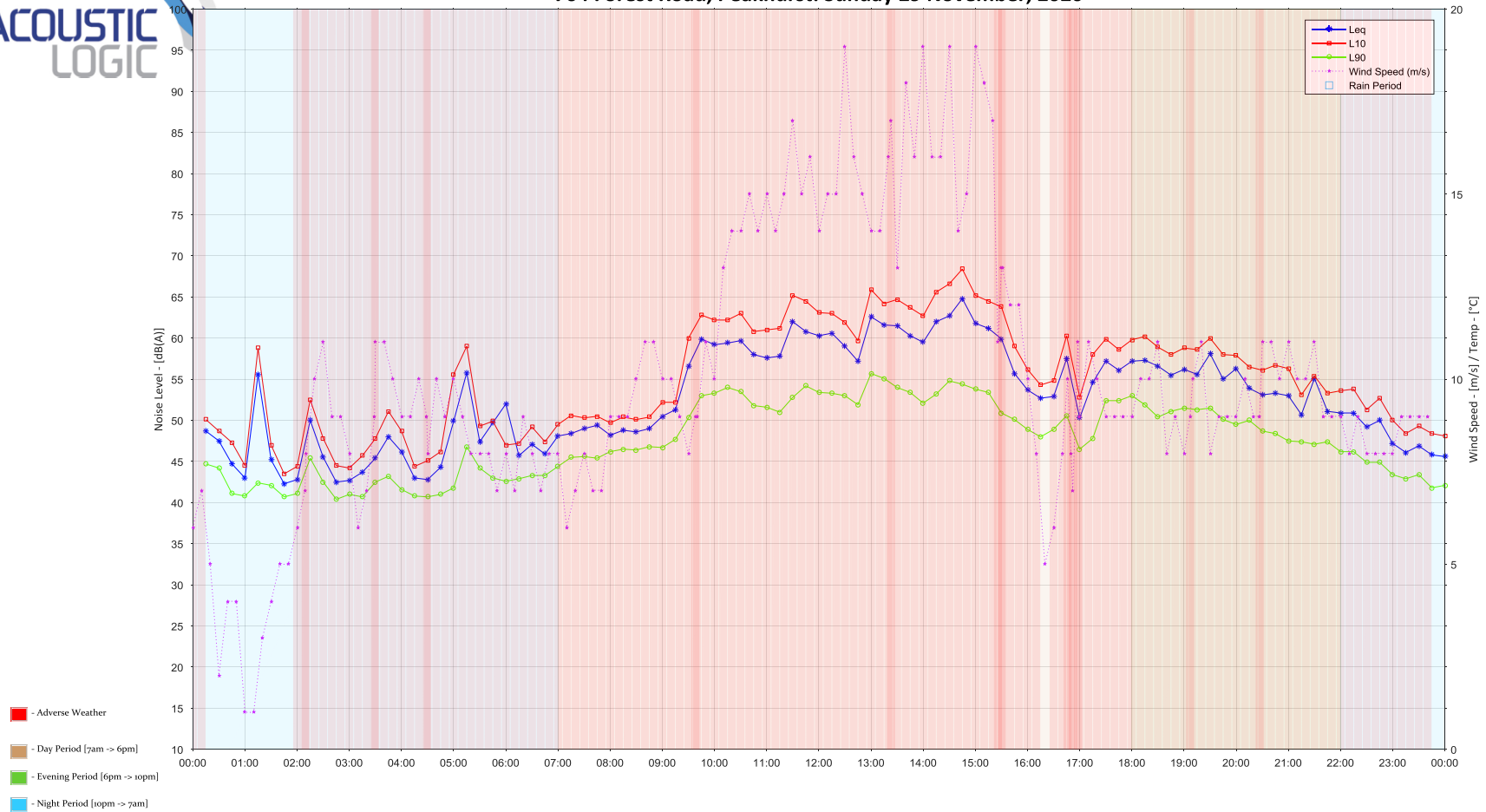
764 Forest Road, Peakhurst: Friday 27 November, 2020



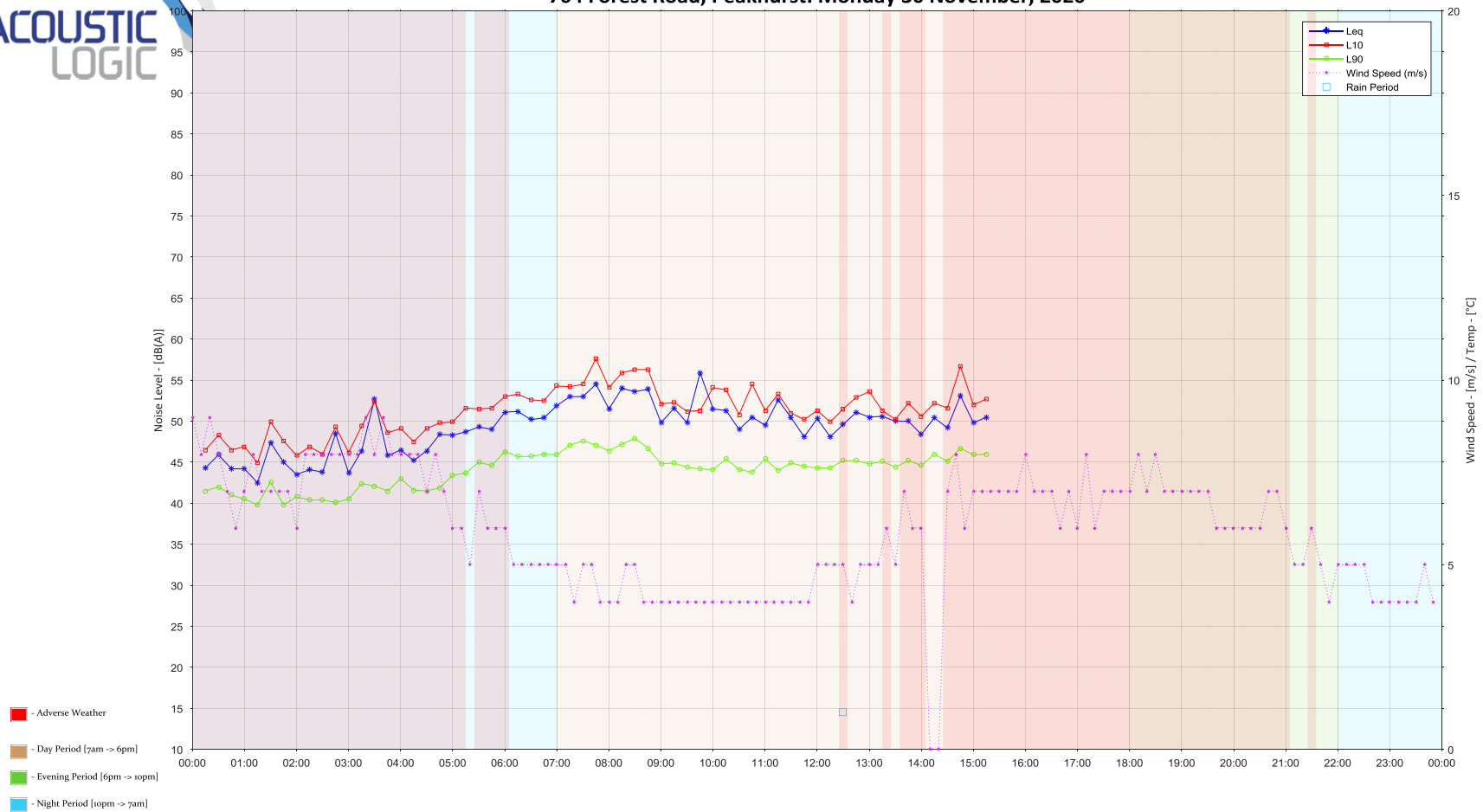
764 Forest Road, Peakhurst: Saturday 28 November, 2020



764 Forest Road, Peakhurst: Sunday 29 November, 2020



764 Forest Road, Peakhurst: Monday 30 November, 2020



APPENDIX B – GLAZING MARK-UP



1 FIRST FLOOR PLAN
SCALE 1 : 100



Glazing Mark-Up

- = 6mm Float
- = 6.38mm Laminated
- = 10.38mm Laminated
- = 12.5mm VLam Hush

SITE CALCULATIONS	
SITE AREA	= 2685.8m ²
PERMISSIBLE FSR	= 1 : 1
	= 2685.8m ²
PROPOSED FLOOR AREAS	
GROUND FLOOR AREA:	= 1011.3m ²
FIRST FLOOR AREA:	= 957.4m ²
SECOND FLOOR AREA:	= 691.3m ²
SUBTOTAL:	= 2660m ²
PROPOSED FSR:	= 0.99 : 1
PROPOSED LANDSCAPED AREAS	
AREA	= 1391.0m ²
%	= 51.8%

PRELIMINARY
NOT FOR CONSTRUCTION

NOTE:
All existing & overall dimensions are nominal & subject to verification on site, where any discrepancy occurs between new work & existing dimensions - existing dimensions/work should take preference where necessary - otherwise notify Innovate Architects Pty Ltd.

Selected termite protection to be used on site in accordance with local council's requirements, B.C.A and all relevant Australian Standards.

Smoke detectors to comply with requirements of specification e1.7 (NSW) fire and smoke alarms shall comply with AS 3786 and be connected to the main power supply.

GENERAL NOTES:
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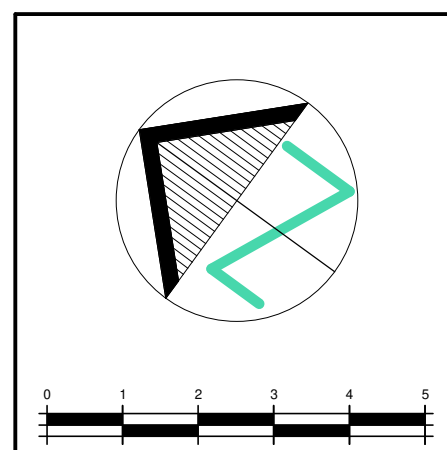
All structural work and site drainage to be subject to Engineer's details or certification where required by Council. This shall include i.e. slabs and footings, i.e. and steel beams and columns, wind bracing to AS 1170 and AS4055, anchor rods or bolts, tie downs, fixings etc., driveway slabs and drainage to Council's satisfaction.

All timbers to be in accordance with SAA Timber Structure Code AS1720 and SAA Timber Framing Code AS 1684. All work to be carried out in a professional and workmanship like manner according to the plans and specification.

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A	PRELIM DA ISSUE	11/12/2020	GJ
ISSUE	AMENDMENT	DATE	INT.




Client
FENTON

Project
PROPOSED HOSTEL DEVELOPMENT

Address
**764 FOREST ROAD
PEAKHURST**

Drawing Title
FIRST FLOOR PLAN

Innovate
Suite 90, 32 Frederick Street
Culley NSW 2223
PO BOX 214 Culley NSW
02 9585 1855
02 9585 1844
mail@innovate.com.au
www.innovate.com.au
REGISTERED ARCHITECTS
Nominated Architect
Cameron Jones
7143
Architects

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	AI	1 : 100@A1	
	Check	Issue	
	DM	A	
Date	OCT 20	Sheet	
Job Number			
2699		04	



1 SECOND FLOOR PLAN
SCALE 1 : 100



Glazing Mark-Up

- 6mm Float
- 6.38mm Laminated
- 10.38mm Laminated
- 12.5mm VLam Hush

SITE CALCULATIONS	
SITE AREA	= 2685.8m ²
PERMISSIBLE FSR	= 1 : 1
	= 2685.8m ²
PROPOSED FLOOR AREAS	
GROUND FLOOR AREA:	= 1011.3m ²
FIRST FLOOR AREA:	= 957.4m ²
SECOND FLOOR AREA:	= 691.3m ²
SUBTOTAL:	= 2660m ²
PROPOSED FSR:	= 0.99 : 1
PROPOSED LANDSCAPED AREAS	
AREA	= 1391.0m ²
%	= 51.8%

PRELIMINARY
NOT FOR CONSTRUCTION

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ISSUE	AMENDMENT	DATE	INT.

Client
FENTON

Project
PROPOSED HOSTEL DEVELOPMENT

Address
**764 FOREST ROAD
PEAKHURST**

Drawing Title
SECOND FLOOR PLAN

Innovate Architects
Suite 90, 32 Frederick Street
Culley NSW 2223
PO BOX 214 Culley NSW
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02 9585 1844
mail@innovate.com.au
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REGISTERED ARCHITECTS
Nominated Architect
Cameron Jones
7143

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	Check GJ	Issue A	
Date OCT 20		Job Number 2699	
Sheet 05			

APPENDIX C – MECHANICAL VENTILATION MARK-UP



Mechanical Ventilation

= Rooms to consider mechanical ventilation

SITE CALCULATIONS	
SITE AREA	= 2685.8m ²
PERMISSIBLE FSR	= 1 : 1
	= 2685.8m ²
PROPOSED FLOOR AREAS	
GROUND FLOOR AREA:	= 1011.3m ²
FIRST FLOOR AREA:	= 957.4m ²
SECOND FLOOR AREA:	= 691.3m ²
SUBTOTAL:	= 2660m ²
PROPOSED FSR:	= 0.99 : 1
PROPOSED LANDSCAPED AREAS	
AREA	= 1391.0m ²
%	= 51.8%

1 FIRST FLOOR PLAN
SCALE 1 : 100

PRELIMINARY

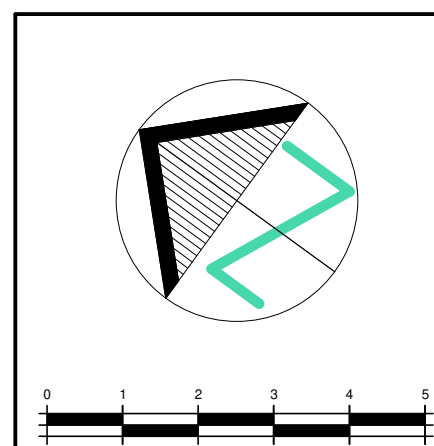
NOT FOR CONSTRUCTION

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Client	FENTON	Address	764 FOREST ROAD PEAKHURST
Project	PROPOSED HOSTEL DEVELOPMENT	Drawing Title	FIRST FLOOR PLAN

Innovate

Suite 90, 32 Frederick Street
Culley NSW 2223

PO BOX 214 Culley NSW

02 9585 1855
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mail@innovate.com.au
www.innovate.com.au

REGISTERED ARCHITECTS
Nominated Architect
Cameron Jones
7143

Architects

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Check	DM	Issue	A
Date	OCT 20	Job Number	2699
Sheet	04	FENTON PRELIM DA ISSUE	



1 SECOND FLOOR PLAN
SCALE 1 : 100



Mechanical Ventilation

 = Rooms to consider mechanical ventilation

SITE CALCULATIONS	
SITE AREA	= 2685.8m ²
PERMISSIBLE FSR	= 1 : 1
	= 2685.8m ²
PROPOSED FLOOR AREAS	
GROUND FLOOR AREA:	= 1011.3m ²
FIRST FLOOR AREA:	= 957.4m ²
SECOND FLOOR AREA:	= 691.3m ²
SUBTOTAL:	= 2660m ²
PROPOSED FSR:	= 0.99 : 1
PROPOSED LANDSCAPED AREAS	
AREA	= 1391.0m ²
%	= 51.8%

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Client: **FENTON**

Project: **PROPOSED HOSTEL DEVELOPMENT**

Address: **764 FOREST ROAD PEAKHURST**

Drawing Title: **SECOND FLOOR PLAN**

Innovate Architects

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REGISTERED ARCHITECTS
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	Check: GJ	Issue: A	
Date: OCT 20		Job Number: 2699	Sheet: 05