

LAHC 1-7 Fergerson Avenue, Fairfield

DA Acoustic Assessment

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1 INTRODUCTION

Acoustic Logic (AL) have been engaged to conduct an acoustic assessment of potential noise impacts associated with the proposed aged care housing located at 1 – 7 Fergerson Avenue, Fairfield.

As part of this assessment, the following has been undertaken:

- Quantification of the existing noise environment
- Establishment of suitable noise criteria for the development
- Identification of nearby noise sensitive receivers and the noise intrusion and emission sources
- Recommendations to control noise to surrounding residential receivers.

This assessment has been conducted based on architectural drawings provided by *Kennedy Associates Architects*, Revision A dated 01st November 2023.

2 SITE DESCRIPTION AND THE PROPOSAL

The site is located within an R2 low density residential zone. The proposed development is to be a double storey aged care dwelling located at 1 – 7 Fergerson Avenue, Fairfield which is bounded by:

- The Horsley Drive (SP2 Classified Road) is situated to the Eastern Boundary of the site with existing double storey residential (442 – 446 The Horsley Drive, Fairfield) and single storey residential house (450 – 462 The Horsley Drive, Fairfield)
- Fergerson Avenue is situated to the west along with single storey buildings located further opposite.
- Existing single – storey residential buildings located along the northern side of the site (9 Fergerson Avenue, Fairfield)

The Horsley Drive carries high traffic volume and has been identified as a road with an average annual daily traffic (AADT) above 40,000 vehicles.

A site investigation has been conducted by this office and the nearest noise receivers around the project site include:

Residential Receiver 1 (**R1**): Residential houses located at 442 – 460 The Horsley Drive, situated to the east boundary of the project site.

Residential Receiver 2 (**R2**): Residential houses located at 9 Fergerson Avenue, situated to the north boundary of the project site.

Residential Receiver 3 (**R3**): Residential houses located at 2 - 8 Fergerson Avenue and 4 - 10 Polding Street, situated to the west boundary of the project site.

Commercial Receiver 1 (**C1**): Commercial development consisted of petroleum shop located at 436 The Horsley Drive, situated to the southeast of the project site.

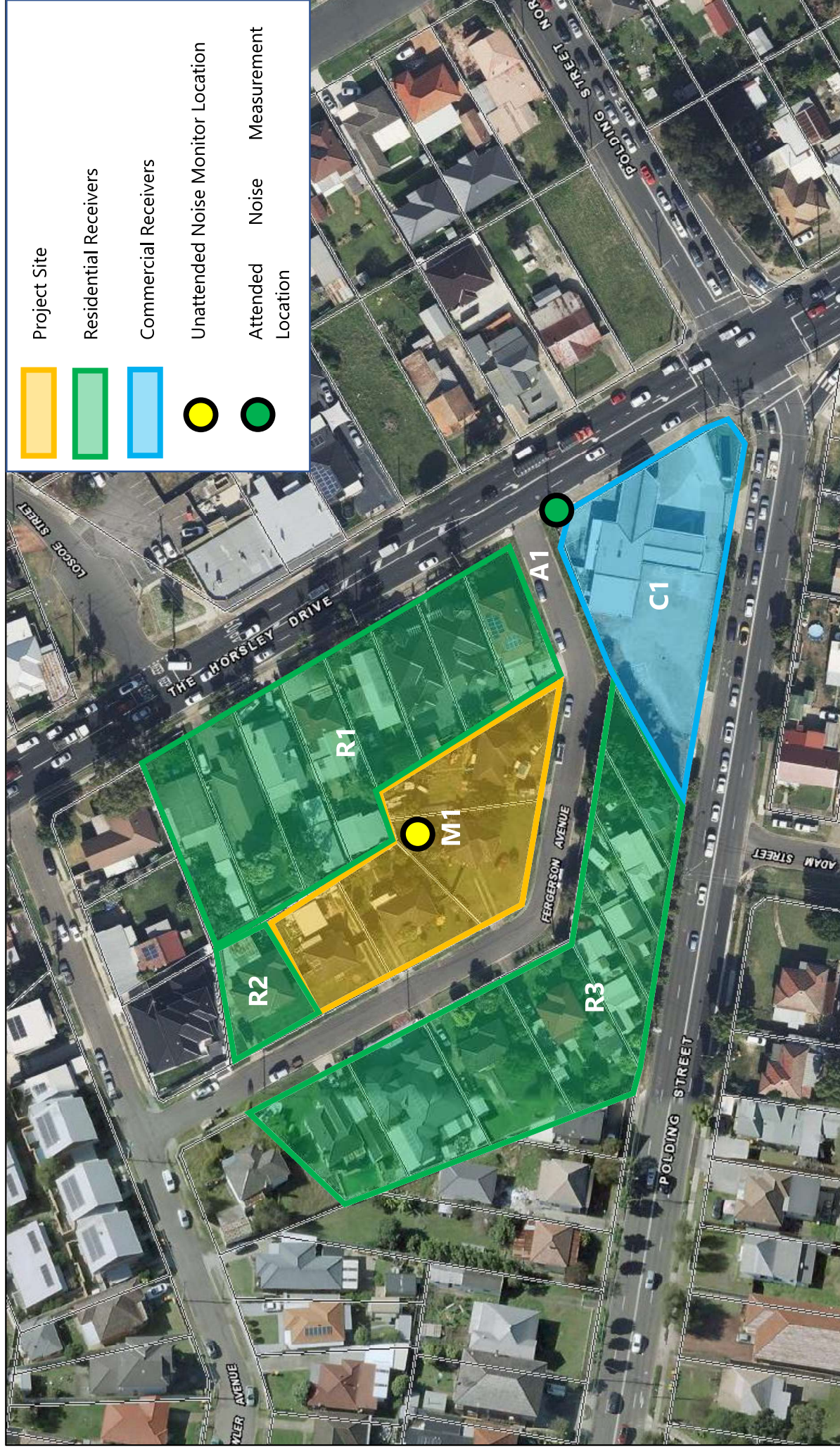


Figure 1 – Aerial view of the project site and surrounding sensitive receivers (Source: NSW SixMaps)

3 EXISTING AMBIENT NOISE SURVEY

Acoustic Logic have conducted an unattended noise survey and monitoring in 02nd of November to 13th of November 2023 as shown in Figure 1 above. This survey was conducted to measure the existing background noise level.

Equipment used consisted of an Acoustic Research Laboratories Pty Ltd noise monitor. Monitors were set to A-weighted fast response and programmed to store 15-minute statistical noise levels throughout the monitoring periods. The monitors were calibrated at the start and end of the monitoring period using a Rion NC-74 calibrator. No significant drift was noted.

Summarised rating background noise levels for surrounding the proposed development are presented below. 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 in accordance with Fact Sheets A & B of the NPfL. Appendices of this report present a graphical representation of the raw monitoring data.

Data affected by adverse meteorological conditions and by spurious and uncharacteristic events have been excluded from the results, and also excluded from the data used to determine the noise emission criteria. Meteorological information has been obtained from the Bankstown Airport AWS (ID 066137) which is located within 7.5 km. Noise levels presented below are processed results with extraneous weather events removed.

Table 1 – Measured Rating Background Noise Level

Monitor	Time of day	Rating Background Noise Level dB(A)L _{90(Period)}
1 – 7 Fergerson Avenue, Fairfield (M1)	Day (7am – 6pm)	43
	Evening (6pm – 10pm)	42
	Night (10pm – 7am)	35

The table below represent the road traffic noise and that were recorded during the period of unattended noise measurement. The noise monitor had a partial view of the traffic screened from the frontages dwelling along The Horsley Drive.

Table 2 – Measured Road Traffic Noise Levels

Monitor	Time of day	Environmental Noise Level dB(A)L _{eq(period)}
1 – 7 Fergerson Avenue, Fairfield (M1)	Day (7am – 10pm)	58 dB(A) L _{eq(15hr)}
	Night (10pm – 7am)	53 dB(A) L _{eq(9hr)}

3.1 ATTENDED NOISE MEASUREMENTS

3.1.1 Measurement Equipment

Short-term attended measurements of road traffic movement were undertaken in order to supplement the unattended noise monitoring and determine the façade noise level for the aged care development.

Attended noise monitoring was conducted using a Norsonic N-118 Type 1 sound level meter. Measurements were taken on "A" frequency weighting and fast time response unless noted otherwise.

All monitoring equipment used retains current calibration - either manufacturers' calibration or NATA certified calibration. The monitors were field calibrated at the beginning and the end of the measurement with no significant drift in calibration noted.

3.1.2 Measurement Locations & Period

These measurements were conducted at the frontages of 436 – 438 The Horsley Drive. The sound level meter had a full view of traffic. The details of the attended measurement location can be found below:

- Location A1 was approximately 3m away from the road curb.

Table 3 – Short Term Attended Noise Measurement Survey

Locations	Description	Noise Levels
A1	Short term measurement conduct on The Horsley Drive. Measurement was undertaken between 2:30pm to 2:45pm on the 13 th of November 2023. Dominant traffic noise sources are observed in these locations.	72 dB(A) _{Leq(15mins)}

4 ROAD TRAFFIC NOISE INTRUSION ASSESSMENT

Traffic noise intrusion into the proposed lots of the subject site have been assessed for traffic noise from The Horsley Drive in accordance with the following documents and guidelines:

- Fairfield Council Document – ‘Fairfield Citywide Development Control Plan’ (**DCP**) 2013; amendment 23;
- NSW Department of Planning State Environmental Planning Policy (**SEPP**) Transport and Infrastructure 2021; and
- NSW Department of Planning’s Developments near Rail Corridors or Busy Roads – Interim Guideline (**DNRCBR**)

4.1 PROJECT CRITERIA

4.1.1 Fairfield Council Fairfield Citywide Development Control Plan 2013, amendment 23

Section 9.10.6 of the Fairfield DCP has presented the following requirements regarding noise impact from residential development to residential receivers:

9.10.6 Noise and Vibration

a) Noise and/or vibration generating activities are to be located within buildings or orientated away from residential properties or other sensitive land uses such as child care centres or places of public worship.

b) An Acoustic Engineers Report may be required to be prepared as part of a development application where Council considers that the proposed development has the potential to produce an adverse noise and/or vibration impact.

In this regard, satisfaction of DNRCBR requirements is suitable in the assessment of minimising traffic noise impacts. Therefore, we will adopt the requirements from the documents outlined below.

4.1.2 NSW Department of Planning State Environmental Planning Policy Transport & Infrastructure (SEPT&I) 2021

Section 2.120 of the T&ISEPP has been applied, which requires the following:

- (1) *“This clause applies to development for any of the following purposes that is on land or adjacent to the road corridor for a freeway, a tollway or transit way or any other road with an annual average daily traffic volume of more than 20,000 vehicles (based on the traffic volume data published on the website of the RTA) and that the consent authority considers is likely to be adversely affected by road noise or vibration:*
 - (a) A building for residential use,*
 - (b) A place of public worship,*
 - (c) A hospital,*
 - (d) An education establishment or childcare centre.*
- (3) *If the development is for the purposes of a building for residential use, the consent authority must not grant consent to the development unless it is satisfied that appropriate measures will be taken to ensure that the following L_{Aeq} levels are not exceeded:*
 - (a) In any bedroom in the building – 35 dB(A) at any time between 10pm and 7am,*
 - (b) Anywhere else in the building (other than a garage, kitchen, bathroom or hallway) – 40 dB(A) at any time.”*

Based on Clause 2.120 item 1, it is expected that the stretch of The Horsley Drive is a road carrying an annual average daily traffic volume of more than 20,000. Therefore, the project site will be assessed based on the requirements of Clause 2.120 item 3 above.

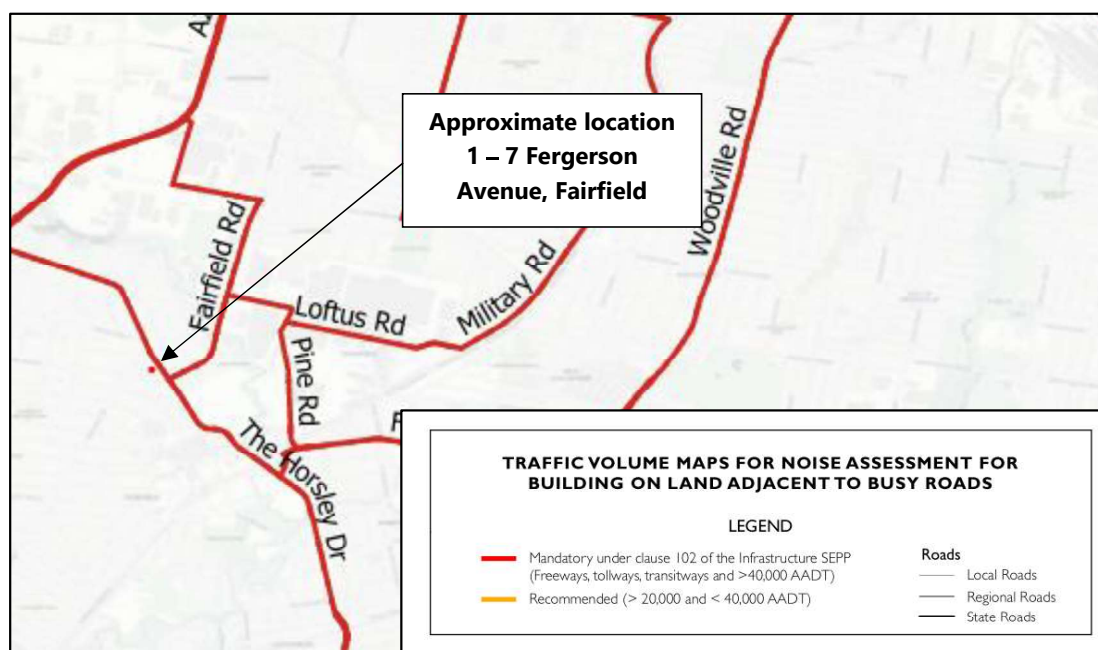


Figure 2 - RTA Map No. 11D and Approximate Location of Proposed Development

4.1.3 NSW Department of Planning – Development near Rail Corridors or Busy Roads – Interim Guideline

In conjunction with section 2.120 of the *T&ISEPP*, the development will need to ensure compliance with the Section 3.5 of the NSW Department of Planning's 'Development near Rail Corridors and Busy Roads (Interim Guideline)' (**DNRCBR**) which states the following:

If the development is for the purposes of a building for residential use, the consent authority must not grant consent to the development unless it is satisfied that appropriate measures will be taken to ensure that the following L_{Aeq} levels are not exceeded:

- (a) *In any bedroom in the building – 35 dB(A) at any time between 10pm and 7am,*
- (b) *Anywhere else in the building (other than a garage, kitchen, bathroom or hallway) – 40 dB(A) at any time."*

4.1.4 Summarised Internal Noise Level Criteria

The summarised criteria for all spaces of the development are summarised below.

Table 4 – Summarised Criteria for Internal Noise Levels

Space/Activity Type	Internal Traffic Noise Criteria dB(A) $L_{eq}(\text{period})$
Bedroom	35dB(A) $L_{eq}(9\text{hour})$ 45dB(A) $L_{eq}(9\text{hour})$ (with windows open)
Living Room	40dB(A) $L_{eq}(15\text{hour})$ 50dB(A) $L_{eq}(15\text{hour})$ (with windows open)

4.2 EVALUATION OF NOISE INTRUSION

Internal noise levels will primarily be as a result of noise transfer through the windows, doors and roof as these are relatively light building elements that offer less resistance to the transmission of sound. Walls that are proposed to be heavy masonry elements will not require upgrading.

The predicted noise levels through the windows, doors and roof are discussed below. The predicted noise levels have been based on the expected noise level at the façade of the building and spectral characteristics of the external noise, the area of building elements exposed to traffic noise, the absorption characteristics of the rooms and the noise reduction performance of the building elements.

Glazing/façade treatment has been determined based on the following.

- For each façade, the façade noise levels are predicted using the measured noise levels by using method developed by the United Kingdom Department of Environment entitled '*Calculation of Road Traffic Noise (1988)*' known as the CoRTN (1988) method. The method has been adapted to Australian conditions and extensively tested by the Australian Road Research Board. As a result, it is recognised and accepted by the NSW Environment Protection Authority (EPA).
- Transmission loss of façade element.

The constructions set out below are necessary for the satisfactory control of external noise.

4.2.1 Predicted Noise level at the Façade

The following table presents the resultant traffic noise levels at the façade of the development facing The Horsley Drive. The noise levels are based on the attended traffic noise measurement results adjusted by the difference with the unattended noise monitor results of time periods and distance attenuation to the build project boundary.

Table 5 – Predicted Noise Levels at the Facade

Facade	Units	Time of Day	Measured Noise Level dB(A)
Eastern Boundary Facing The Horsley Drive	Ground Level U01 – U06 (screening from 442 – 454 The Horsley Drive)	Daytime (7am-10pm) dB(A) $L_{eq}(15hour)$	58
		Night (10pm-7am) dB(A) $L_{eq}(9hour)$	53
	1 st Level U07 – U10	Daytime (7am-10pm) dB(A) $L_{eq}(15hour)$	65
		Night (10pm-7am) dB(A) $L_{eq}(9hour)$	60
	1 st Level U11 – U12 (double storey screening from 442 – 448 The Horsley Drive)	Daytime (7am-10pm) dB(A) $L_{eq}(15hour)$	57
		Night (10pm-7am) dB(A) $L_{eq}(9hour)$	52

Table 5 – Predicted Noise Levels at Façade (Continued)

Facade	Units	Time of Day	Measured Noise Level dB(A)
South - Eastern Boundary Facing The Horsley Drive	Ground Level U06	Daytime (7am-10pm) dB(A) $L_{eq}(15\text{hour})$	64
	1 st Level U12	Night (10pm-7am) dB(A) $L_{eq}(9\text{hour})$	59

4.3 COMPLYING CONSTRUCTIONS

4.3.1 Glazed Windows and Doors

The following constructions are required 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 not considered as acoustic seals**).

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.

Table 6 – Minimum Glazing Constructions

Location	Space / Facade	Minimum Complying Glazing Construction	Acoustic Seals
Ground Floor	Living Room, Bedroom, Kitchen and Bathroom (Eastern Boundary) (U01 – U06)	6mm Float	Yes
	Bedroom and Bathroom (South - Eastern Boundary) U06	10.38mm Laminated	
First Floor	Living Room, Bedroom, Kitchen and Bathroom (Eastern Boundary) (U07 – U11)	10mm Float	
	Bedroom and Bathroom (South - Eastern Boundary) U12	10.38mm Laminated	

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 6 for each indicated rooms. 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.

The window/door suppliers should provide evidence that the systems proposed have been tested in a registered laboratory with the recommended glass thicknesses and comply with the minimum listed R_w requirements. Also, the glazing installer should certify that the window/doors have been constructed and installed in a manner equivalent to the tested samples.

Table 7 - Minimum R_w of Glazing (with Acoustic Seals)

Glazing Assembly	Minimum R_w of Installed Window
6mm Float	29
6.38mm Laminated	31
10mm Float	33
10.38mm Laminated	35

4.3.2 Entry Doors

All entry doors shall have glazing thicknesses equal to those recommended in Section 4.3.1 above and are to have Raven RP10 to the top and sides and Raven RP38 to the underside of a swing door. **Note that mohair seals in windows and doors are not acceptable where acoustic seals are required.**

4.3.3 External Wall Construction

Any external walls constructed from masonry systems or Brick Veneer will not require further acoustic upgrading. In the event any penetrations are required through the external lining of any of the system for other building services, gaps should be filled with acoustic sealant to ensure compliance with acoustic criteria stipulated within this report. These elements are to be reviewed at CC stage to ensure that internal noise levels are satisfied.

4.3.4 External Roof/Ceiling Construction

The proposed roof is to be constructed from lightweight elements and will require further acoustic upgrading. A complying roof construction for lightweight roof/ceiling constructions is detailed below in the figure below. The following roof construction is recommended:

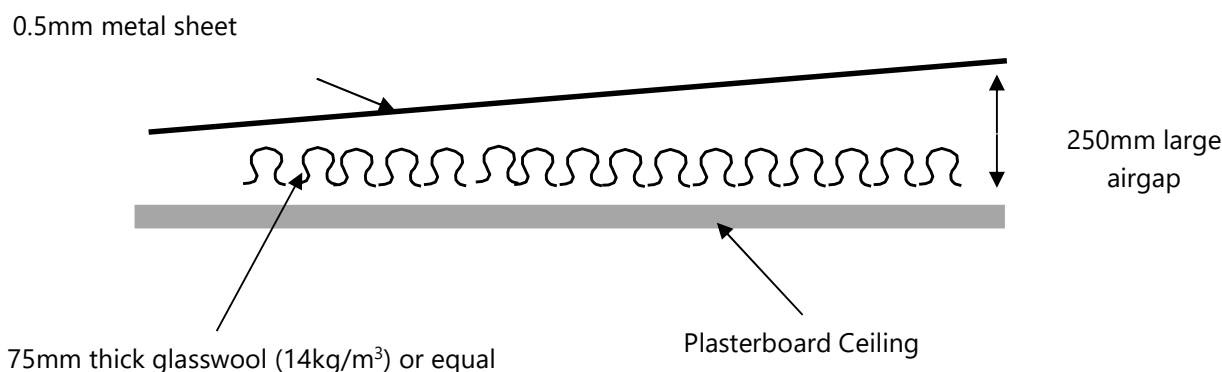


Figure 3 – Roof/Ceiling Construction

Table 8 – Recommended Light Weight Roof Construction

Site	Space	Internal Lining	Truss System	External Lining
First Floor	All Units	1x 16mm fire-rated Plasterboard	Minimum 250mm Truss with 75mm thick 14kg/m ³ glasswool insulation in truss cavity	0.56mm Steel Sheet Metal

In the event that any penetrations are required through the external skin, an acoustic sealant should be used to minimise all gaps.

These elements are to be reviewed at CC stage to ensure that internal noise levels are satisfied.

4.3.5 Ceiling/Roof Construction Details

The following recommended ceiling/roof construction options over the rooms are shown below. Ensure that the cavity is maintained regardless of roof angle.

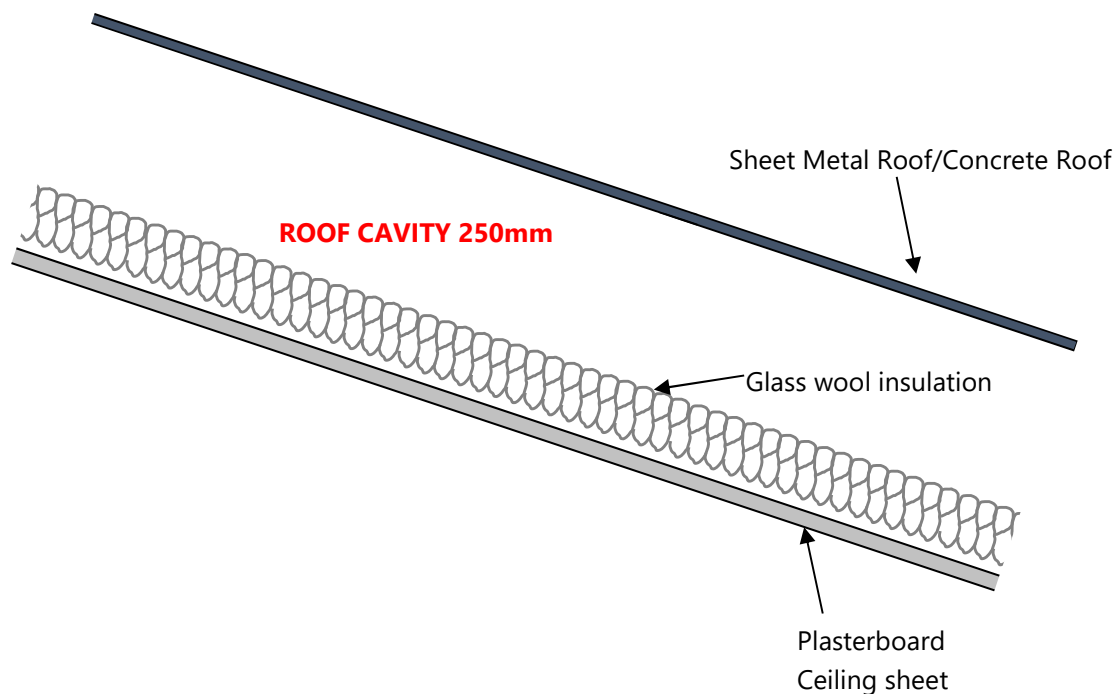


Figure 4 – Pitched Roof/Ceiling Construction

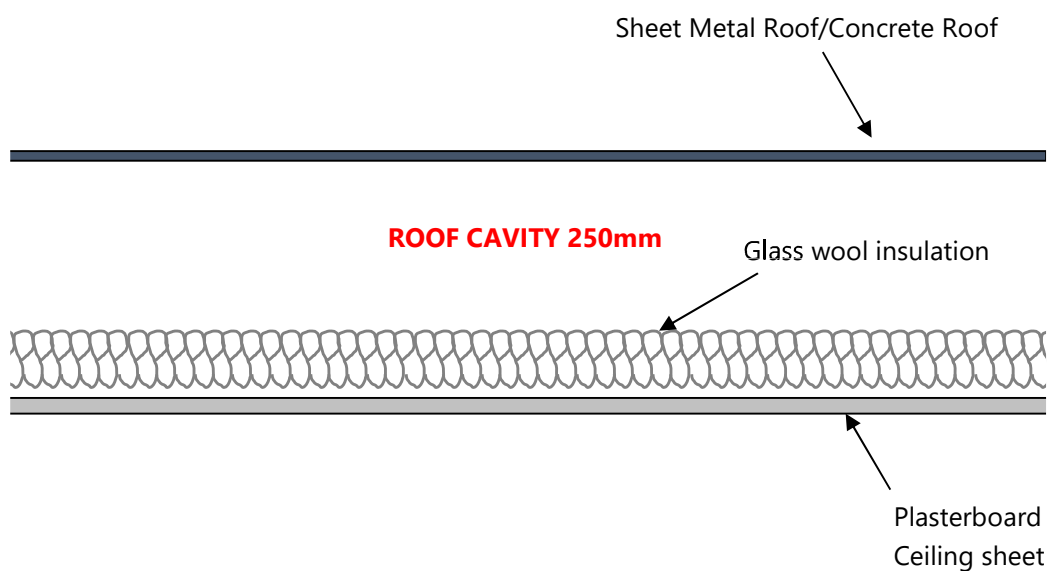
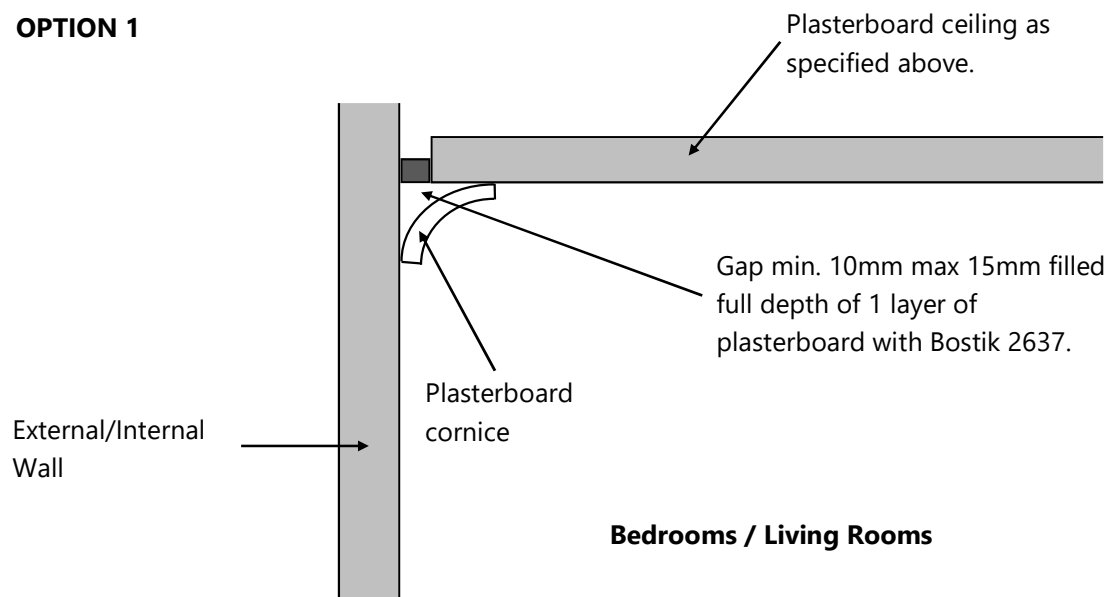


Figure 5 – Flat Roof/Ceiling Construction

4.3.6 Plasterboard Corner Details

The recommended internal ceiling to wall corner construction methods is shown in figure below.

OPTION 1



OPTION 2

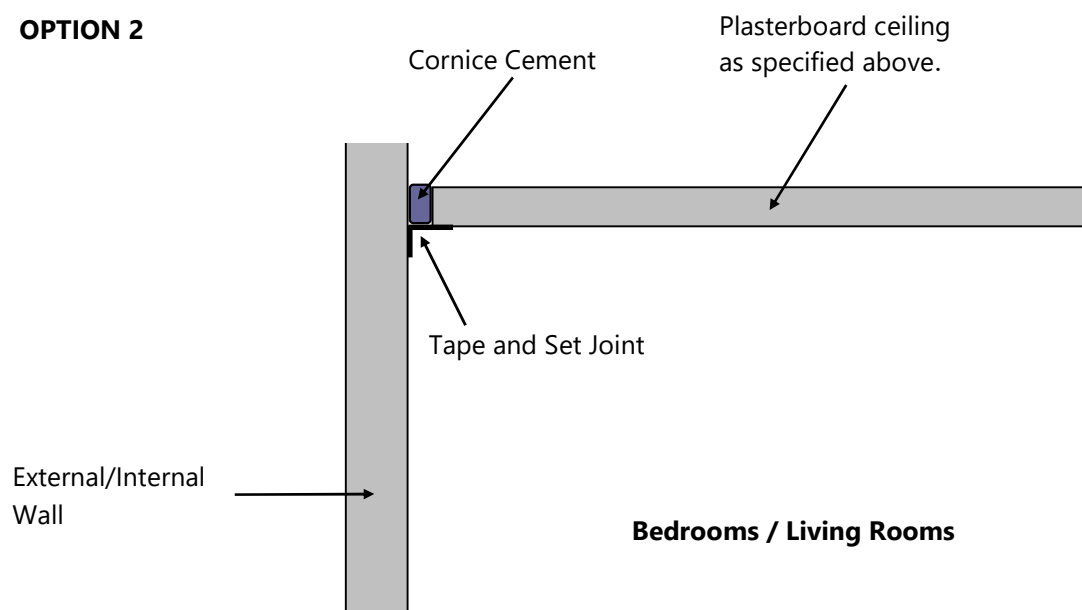


Figure 6 – Plasterboard Corner Options

4.4 VENTILATION REQUIREMENTS

With respect to natural ventilation of the 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), and 50dB(A) in living rooms).

Following our in – principle review, all habitable spaces that are exposed to The Horsley Drive will require to have windows closed to meet acoustic requirements.

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.

5 NOISE EMISSIONS ASSESSMENT

5.1 NOISE EMISSION CRITERIA

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

- Fairfield Council Document – 'Fairfield Citywide Development Control Plan' (**DCP**) 2013; amendment 23;
- NSW EPA Noise Policy for Industry (NPfI) 2017.

5.1.1 Fairfield Council Fairfield Citywide Development Control Plan 2013, amendment 23

Section 9.10.6 of the Fairfield DCP has presented the following requirements regarding noise impact from industrial development to residential receivers:

9.10.6 Noise and Vibration

a) Noise and/or vibration generating activities are to be located within buildings or orientated away from residential properties or other sensitive land uses such as child care centres or places of public worship.

b) An Acoustic Engineers Report may be required to be prepared as part of a development application where Council considers that the proposed development has the potential to produce an adverse noise and/or vibration impact.

In this regard, satisfaction of NPfI 2017 requirements is suitable in the assessment of noise emission impacts. Therefore, we will adopt the requirements from the documents outlined below.

5.1.2 NSW EPA Noise Policy for Industry (2017)

The EPA NPfI has two criteria which both are required to be satisfied, namely Intrusiveness and Amenity. The NPfI 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.

5.1.2.1 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. Noise emissions from the site should comply with the noise levels presented below when measured at nearby property boundary.

Table 9 – EPA NPfl Intrusiveness Criteria

Location	Time of Day	Measured Rating Background Noise Levels dB(A) $L_{90}(\text{period})$	Intrusiveness Noise Objective dB(A) $L_{eq}(15\text{min})$ (Background + 5dB)
1 – 7 Fergerson Avenue, Fairfield (M1)	Day (7am - 6pm)	43	48
	Evening (6pm - 10pm)	42	47
	Night (10pm - 7am)	35	40

5.1.2.2 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 NPfl 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 Section 3 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 10.

Table 10 – EPA NPfl Project 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
Commercial	When in use	65	63

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

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

5.1.3 Summarised Noise Emission Criteria

Table 11 – EPA NPfl 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)
Residential Receivers (R1, R2 and R3)	Day (7am - 6pm)	43	53	48
	Evening (6pm - 10pm)	42	43	47
	Night (10pm - 7am)	35	38	40
Commercial Premises	When in Use	-	63 (When in use)	-

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

5.2 NOISE EMISSION FROM MECHANICAL PLANT

Detailed plant selection has not been undertaken at this stage. All future plant and equipment are to be acoustically treated to ensure the noise levels at all surrounding receivers comply with noise emission criteria detailed within this report. Experience with similar projects indicates that it is both possible and practical to treat all mechanical equipment such that the relevant noise levels are achieved.

Examples of the possible acoustic treatments to mechanical equipment includes the following:

- Major supply and Exhaust Fans – location of fans within the building and treated using internally lined ductwork or acoustic silencers.
- General supply and exhaust fans – general exhaust and supply fans such as toilet, kitchen, lobby and other small mechanical fans can be acoustically treated using acoustic flex ducting or internally lined ducting.
- Residential Condensers – The project will include external residential condenser units which will be located on balconies, or on roof-tops. Providing condenser equipment is selected using suitable noise level data, then acoustic treatments can be implemented such as screening, enclosures, and treatment to exhaust to ensure that the relevant noise emission criteria will be achieved.

Noise emissions from all mechanical services to the closest residential and commercial receivers should comply with the requirements of Section 5. Detailed acoustic review should be undertaken at CC stage to determine acoustic treatments to control noise emissions to satisfactory levels.

6 ROAD TRAFFIC NOISE GENERATION

Road traffic noise impact is assessed in accordance with the NSW Road Noise Policy (RNP). The criterion (Table 3 – Road Traffic Noise Assessment Criteria for Residential Land Uses) divides land use developments into different categories and lists the respective criteria for each case. The category that is relevant to the proposed use of the site is shown below in Table 12.

Table 12 – Road Traffic Noise Criteria

Road Category	Type of Project / Land Use	Assessment Criteria – dB(A)	
		Day (7am – 10pm)	Night (10pm – 7am)
Freeway/arterial/sub-arterial roads	1. Existing residences affected by noise from new freeway/arterial/sub – arterial road corridors	L _{Aeq} , (15 hour) 55 (External)	L _{Aeq} , (9 hour) 50 (External)
	2. Existing residences affected by noise from redevelopment of existing freeway/arterial/sub-arterial roads	L _{Aeq} , (15 hour) 60 (External)	L _{Aeq} , (9 hour) 55 (External)
	3. Existing residences affected by additional traffic on existing freeways/arterial/sub-arterial roads generated by land use developments		
Local Roads	4. Existing residences affected by noise from new local road corridors	L _{Aeq} , (15 hour) 55 (External)	L _{Aeq} , (9 hour) 50 (External)
	5. Existing residences affected by noise from redevelopment of existing local roads		
	6. Existing residences affected by additional traffic on existing local roads generated by land use developments		

In the event that the traffic noise at the site is already in excess of the criteria noted above, the NSW RNP states that the primary objective is to reduce the existing level through feasible and reasonable measures to meet the criteria above.

If this is not achievable, Section 3.4.1 of the RNP states that for existing residences affected by additional traffic on existing roads generated by land use developments, any increase in the total traffic noise should be limited to 2 dB above that of the corresponding 'no build option'.

Based on TTPA (Transport and Traffic Planning Associates) traffic report (Ref: "Proposed LAHC Seniors Housing 1 – 7 Fergerson Avenue, Fairfield, Traffic and Parking Assessment, Issue C dated July 2023"), the proposed development will generate 5 – 6 vtp/h (vehicle trips per hour). The current traffic generation is estimated to be 3 vtp/h.

Therefore, in terms of additional traffic on nearby streets/roads, a marginal increase in traffic flow is expected due to the proposed development on 1 – 7 Fergerson Avenue, Fairfield. On this basis, the noise level contribution from additional vehicle movements on roads surrounding the proposed aged care development would be considered to be negligible, being less than 0.1 dB, and very unlikely to result in a change in the noise impact to the closest sensitive receivers.

7 CONCLUSION

This report presents an acoustic assessment of noise impacts associated with the aged care development located at the LAHC 1-7 Fergerson Avenue, Fairfield.

Provided that the complying controls presented in Section 4.3 and 5 are adopted, noise intrusion and operation noise emissions associated with the development will satisfy the requirements of the following documents:

- Fairfield Council *Fairfield Citywide Development Control Plan* 2013, amendment 23;
- NSW Department of Planning *State Environmental Planning Policy (SEPP) Transport and Infrastructure* 2021;
- NSW Department of Planning's *Developments near Rail Corridors or Busy Roads – Interim Guideline (DNRCBR)*;
- NSW EPA *Noise Policy for Industry (NPfI)* 2017; and
- NSW *Road Noise Policy (RNP)* 2011

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

Yours faithfully,



Acoustic Logic Pty Ltd
Ricky Lai

APPENDIX A – NOISE MONITORING DATA

The noise data for the day, evening and night periods have been processed to determine the period ambient noise levels at the monitoring locations.

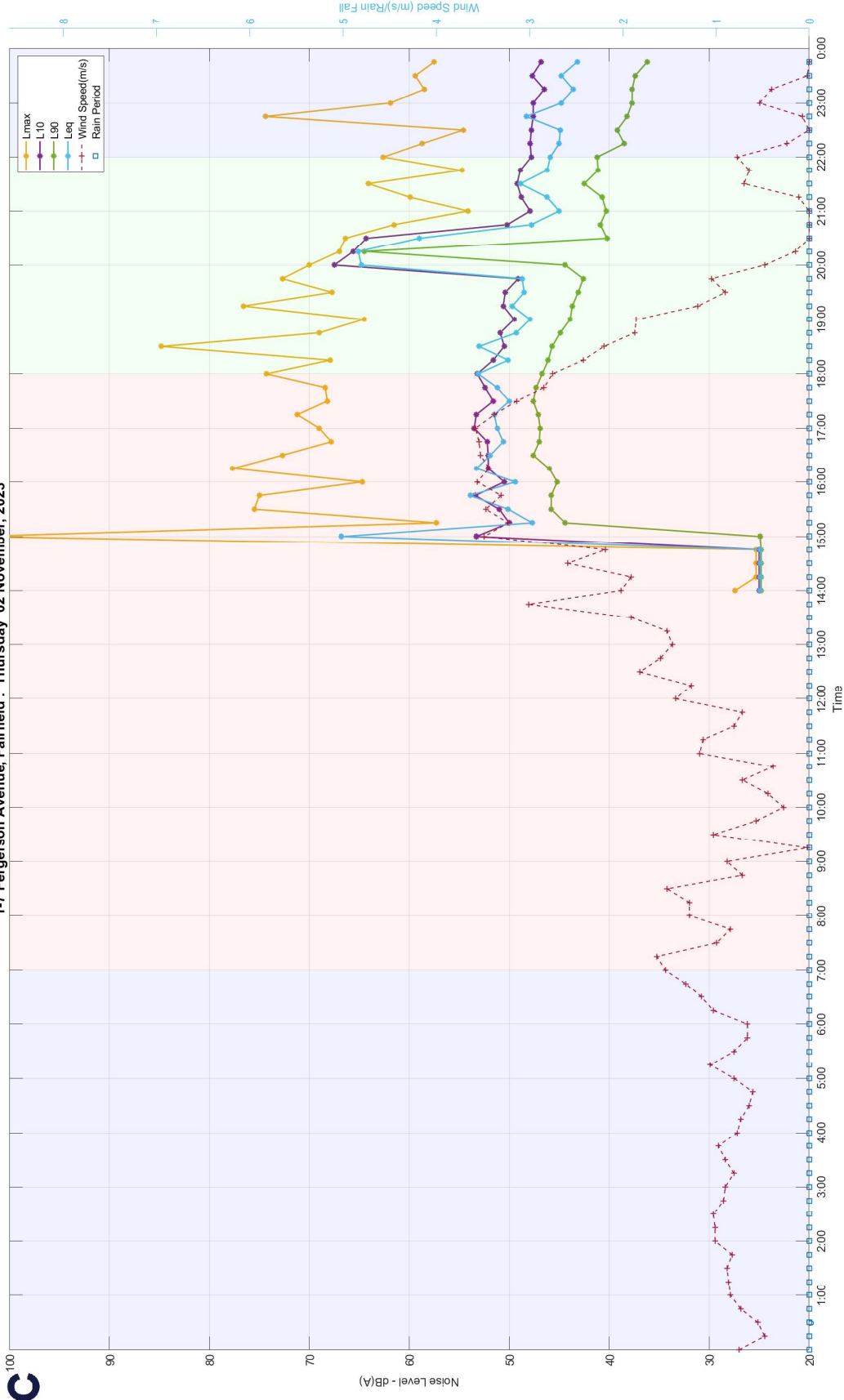
The following tables summarise the daily measurements and the representative rating background noise levels and traffic noise levels at the monitoring location.

Unattended noise monitoring locations are outlined in Section 2.

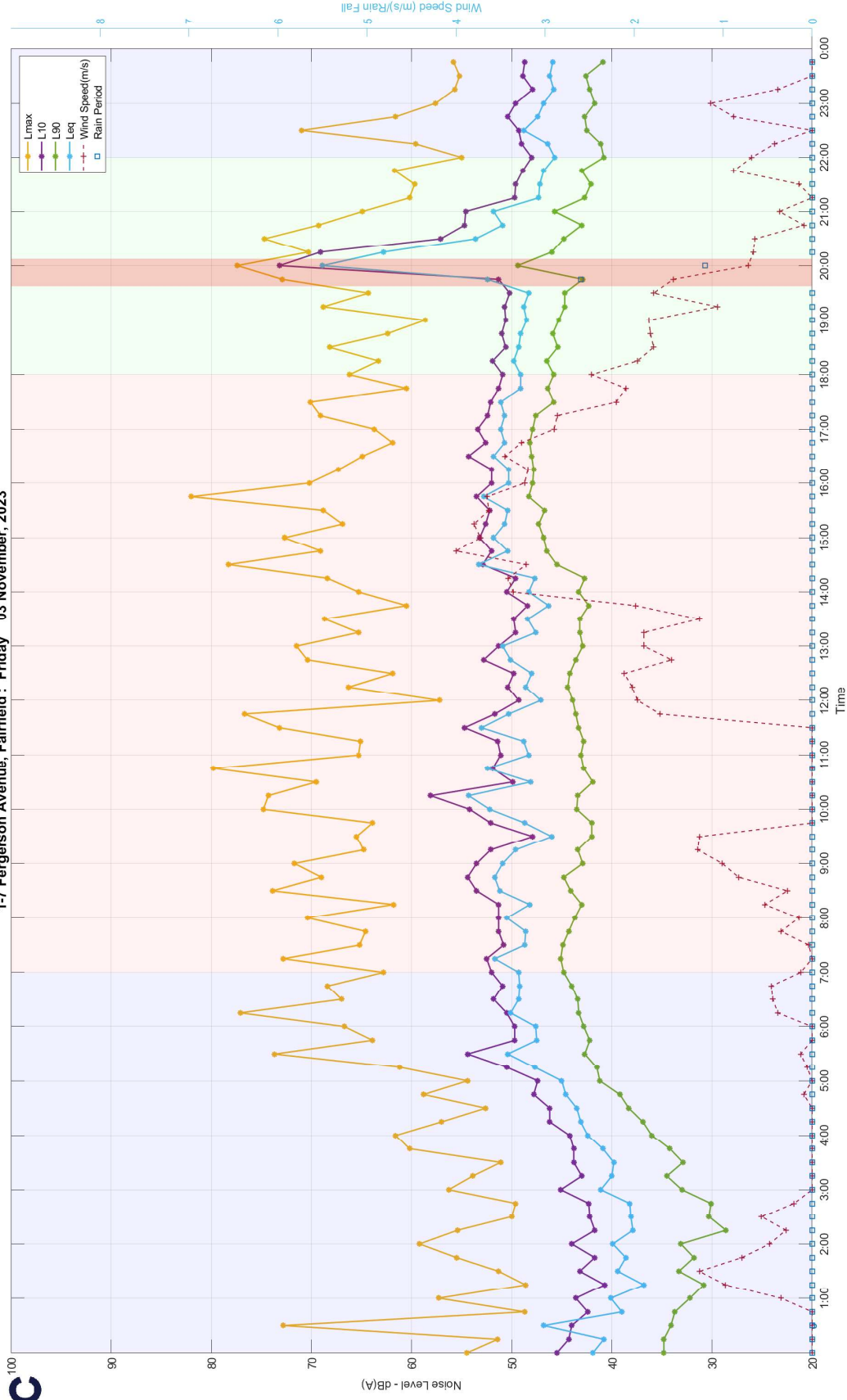
Table 13 – NPfI Assessment Background Noise Levels – Location M1

Location	Date	ABL		
		Day dB(A)L ₉₀	Evening dB(A)L ₉₀	Night dB(A)L ₉₀
1 – 7 Fergerson Avenue, Fairfield (M1)	Thursday, 2 November 2023	-	41	32
	Friday, 3 November 2023	43	42	37
	Saturday, 4 November 2023	43	43	-
	Sunday, 5 November 2023	-	40	33
	Monday, 6 November 2023	43	39	35
	Tuesday, 7 November 2023	43	41	37
	Wednesday, 8 November 2023	42	41	36
	Thursday, 9 November 2023	42	43	32
	Friday, 10 November 2023	43	43	33
	Saturday, 11 November 2023	42	44	35
	Sunday, 12 November 2023	41	44	35
	RBL	43	42	35

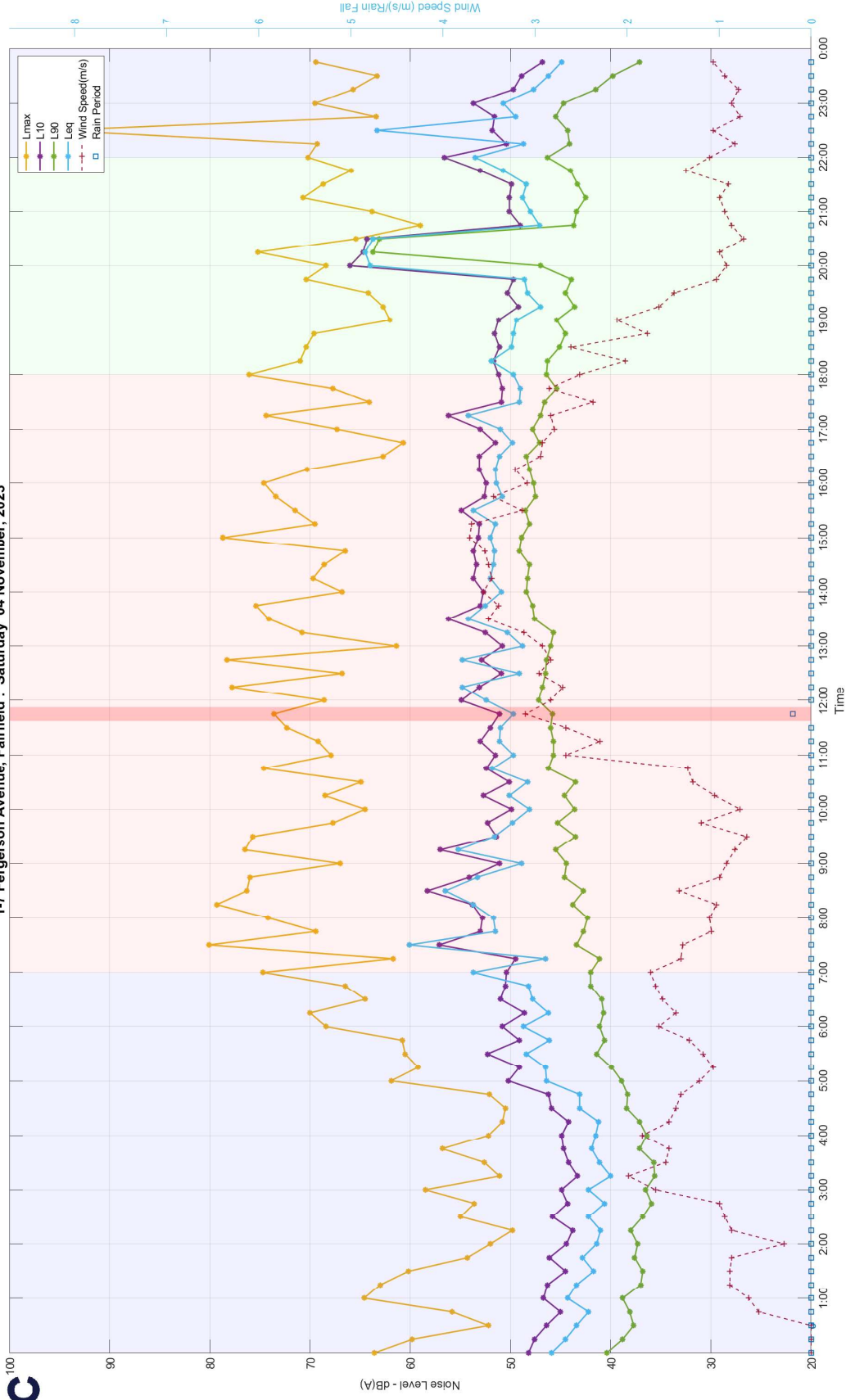
1-7 Fergerson Avenue, Fairfield : Thursday 02 November, 2023



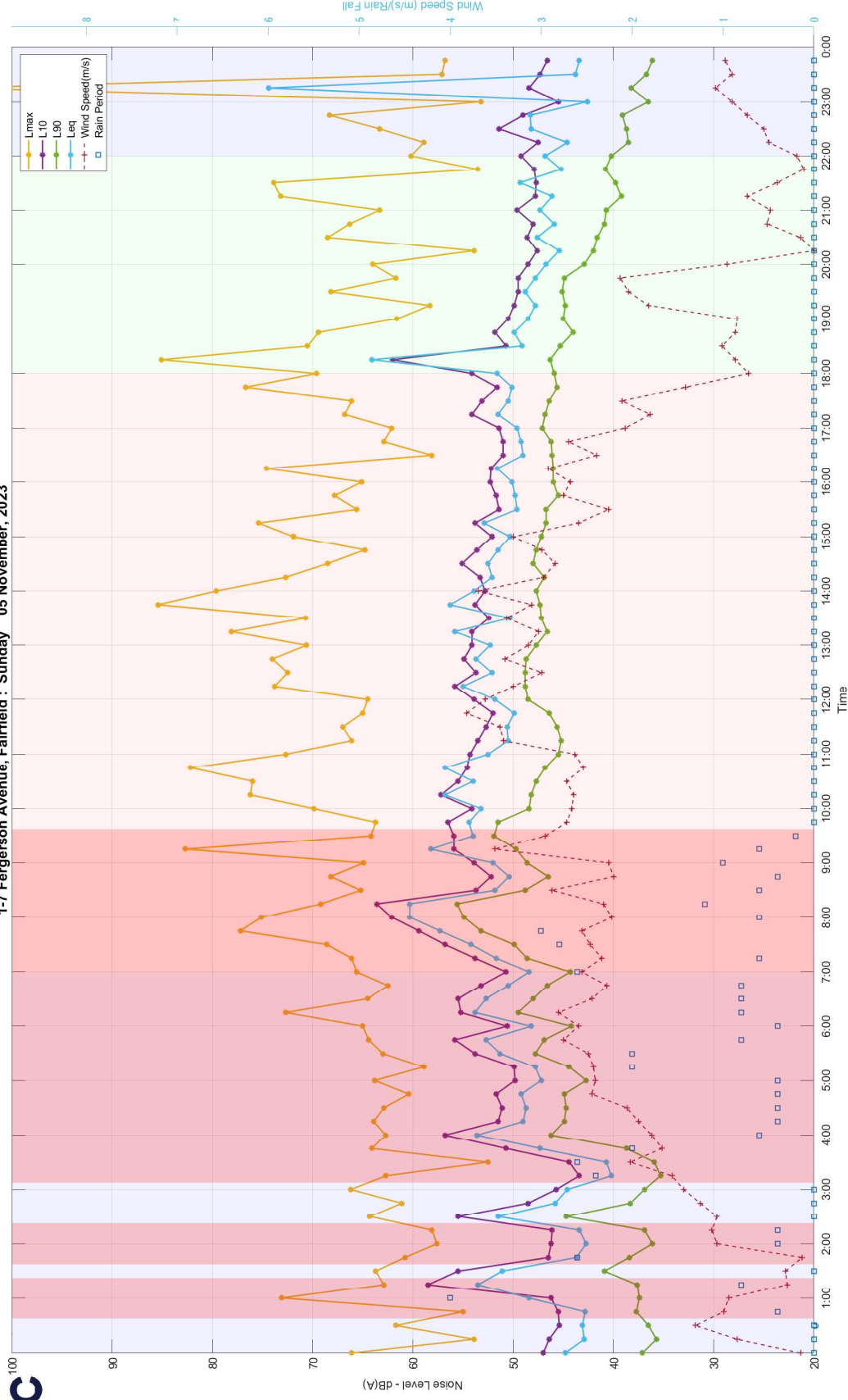
1-7 Fergerson Avenue, Fairfield : Friday 03 November, 2023



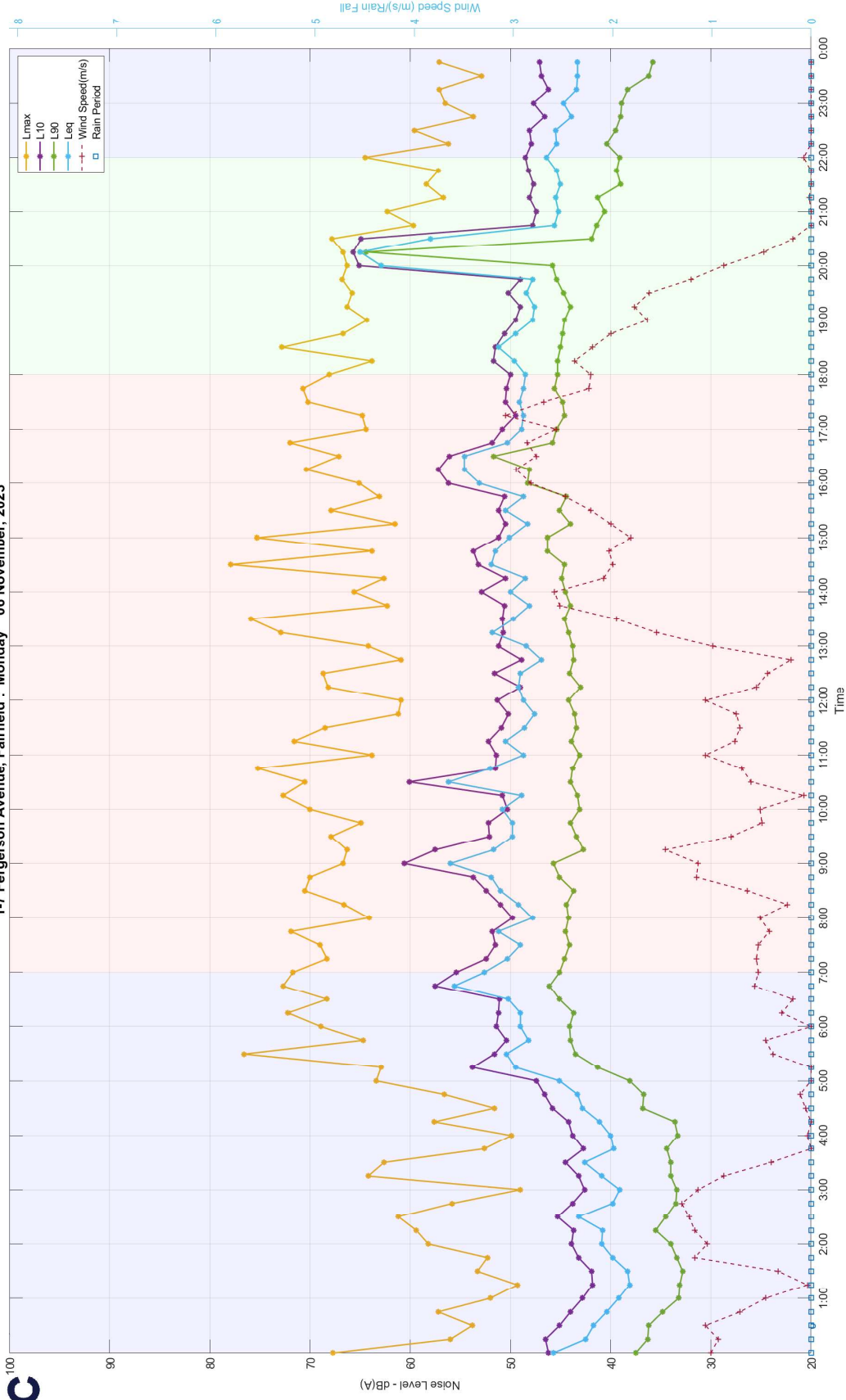
1-7 Fergerson Avenue, Fairfield : Saturday 04 November, 2023



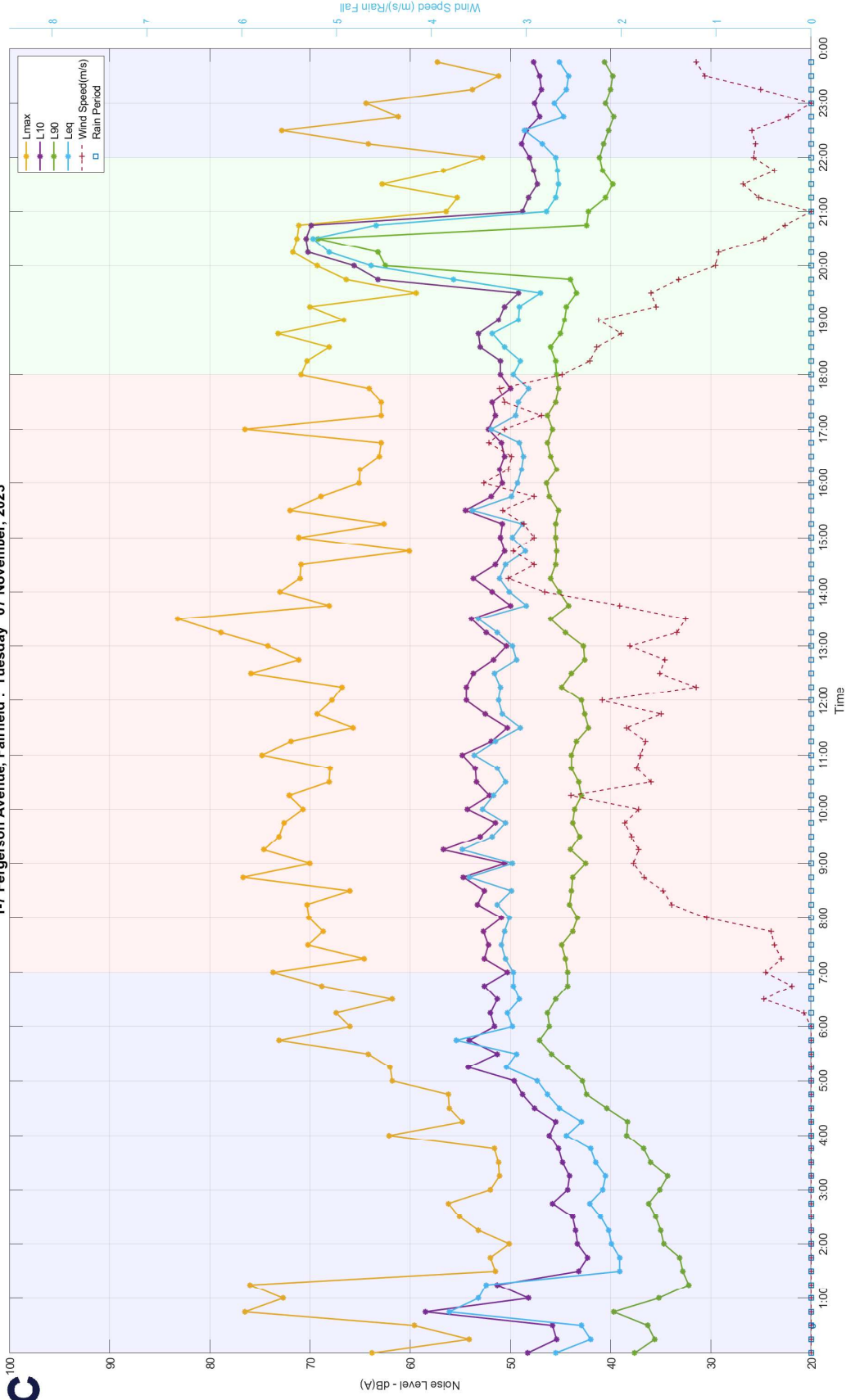
1-7 Fergerson Avenue, Fairfield : Sunday 05 November, 2023



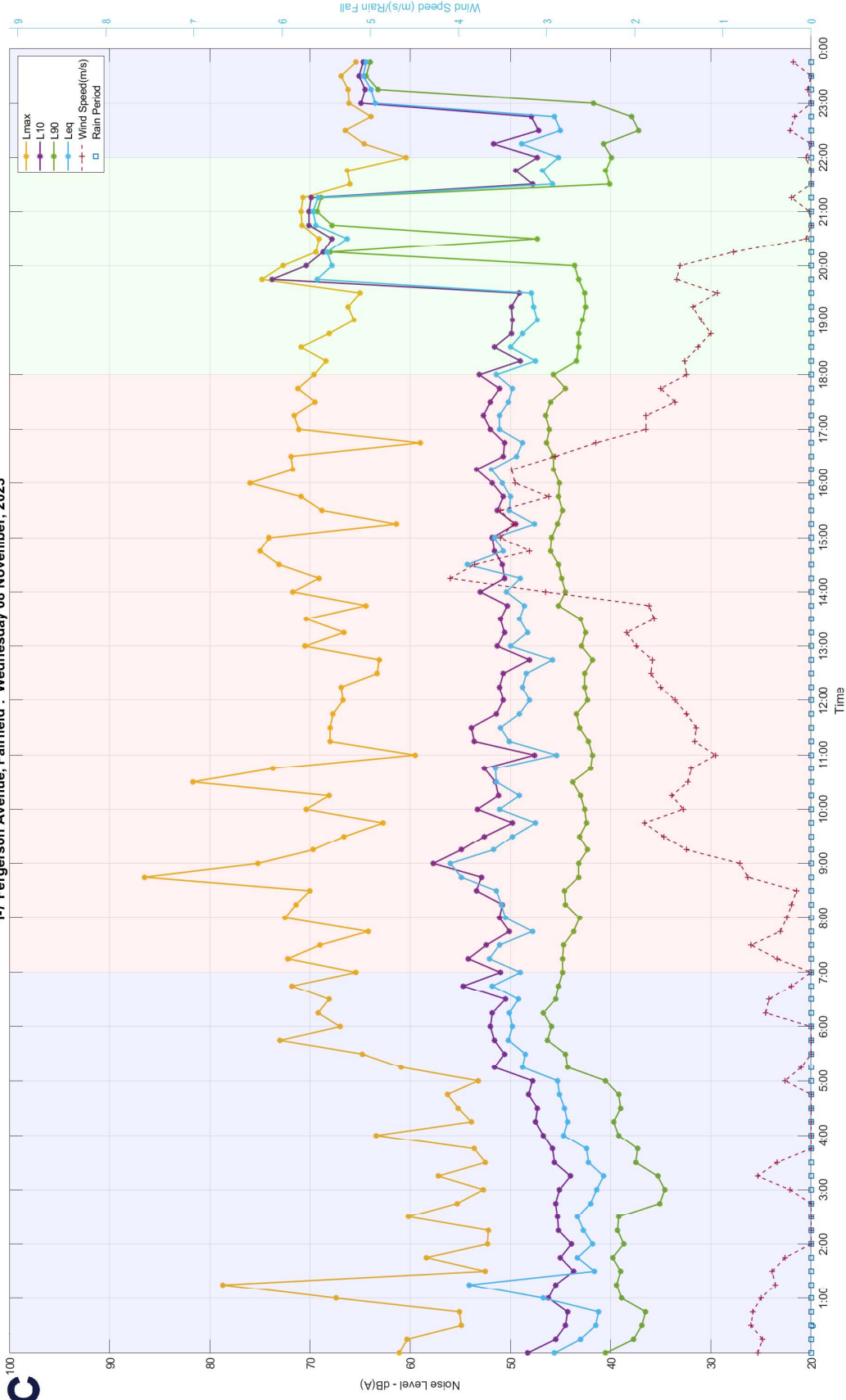
1-7 Fergerson Avenue, Fairfield : Monday 06 November, 2023



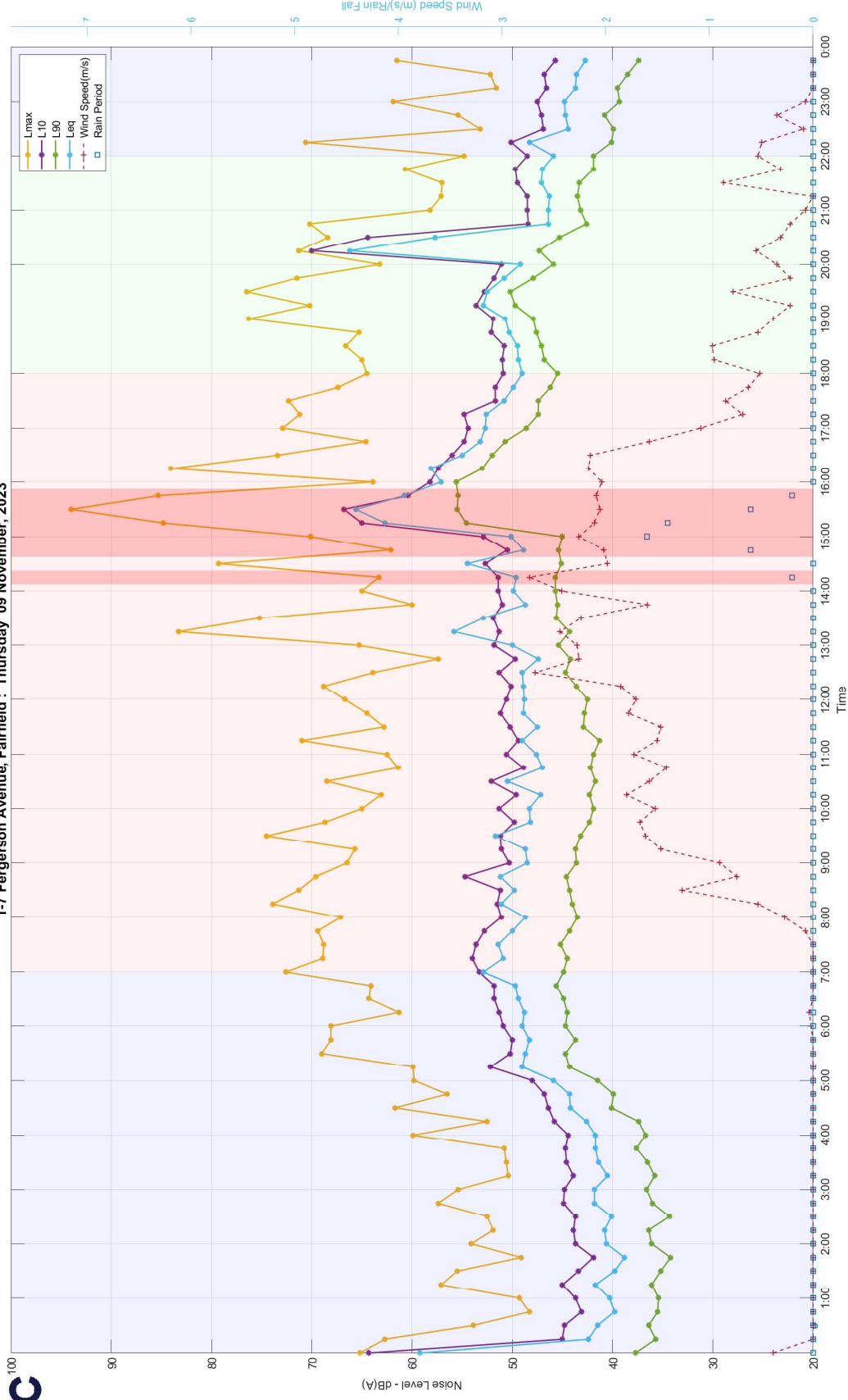
1-7 Fergerson Avenue, Fairfield : Tuesday 07 November, 2023



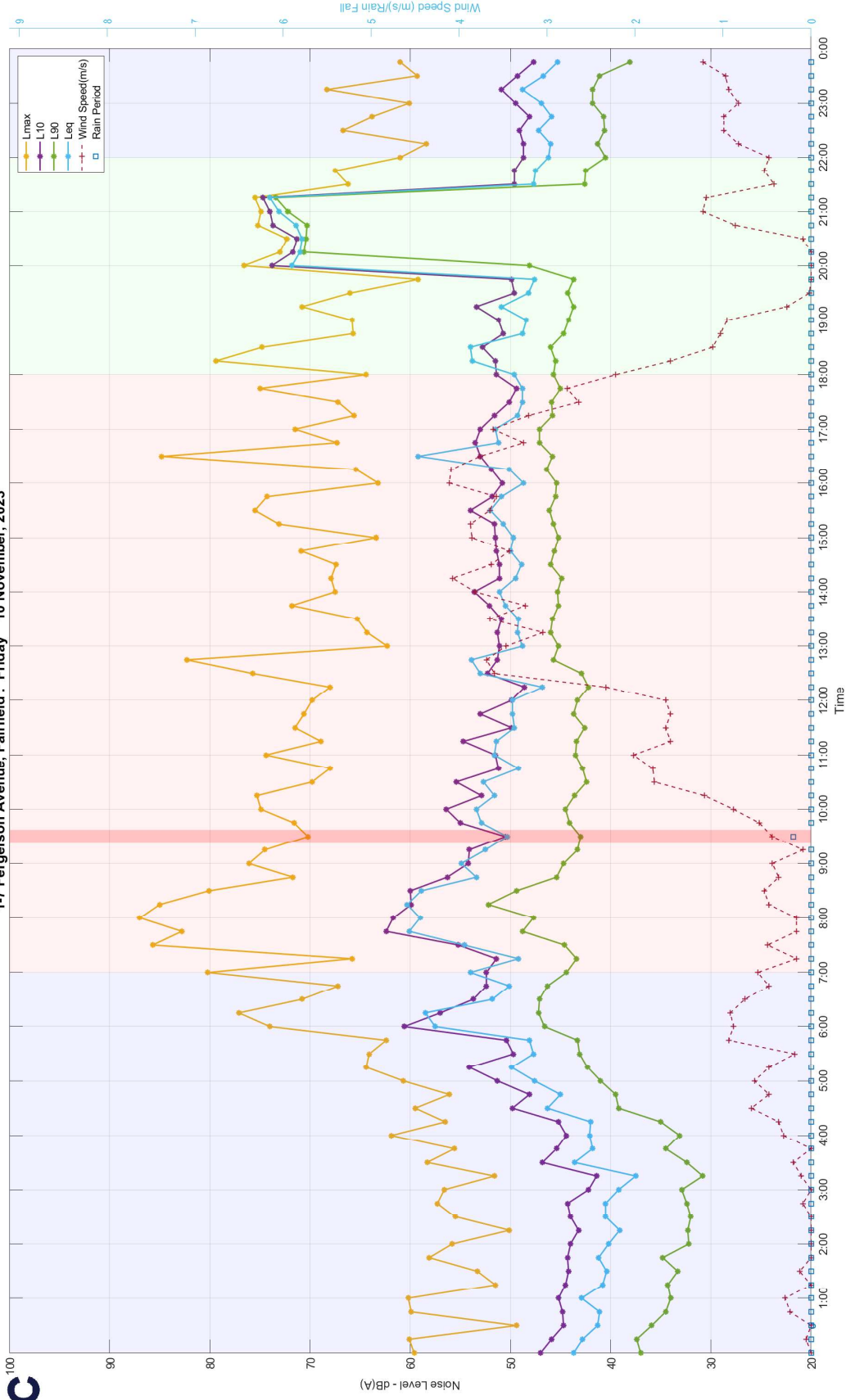
1-7 Fergerson Avenue, Fairfield : Wednesday 08 November, 2023



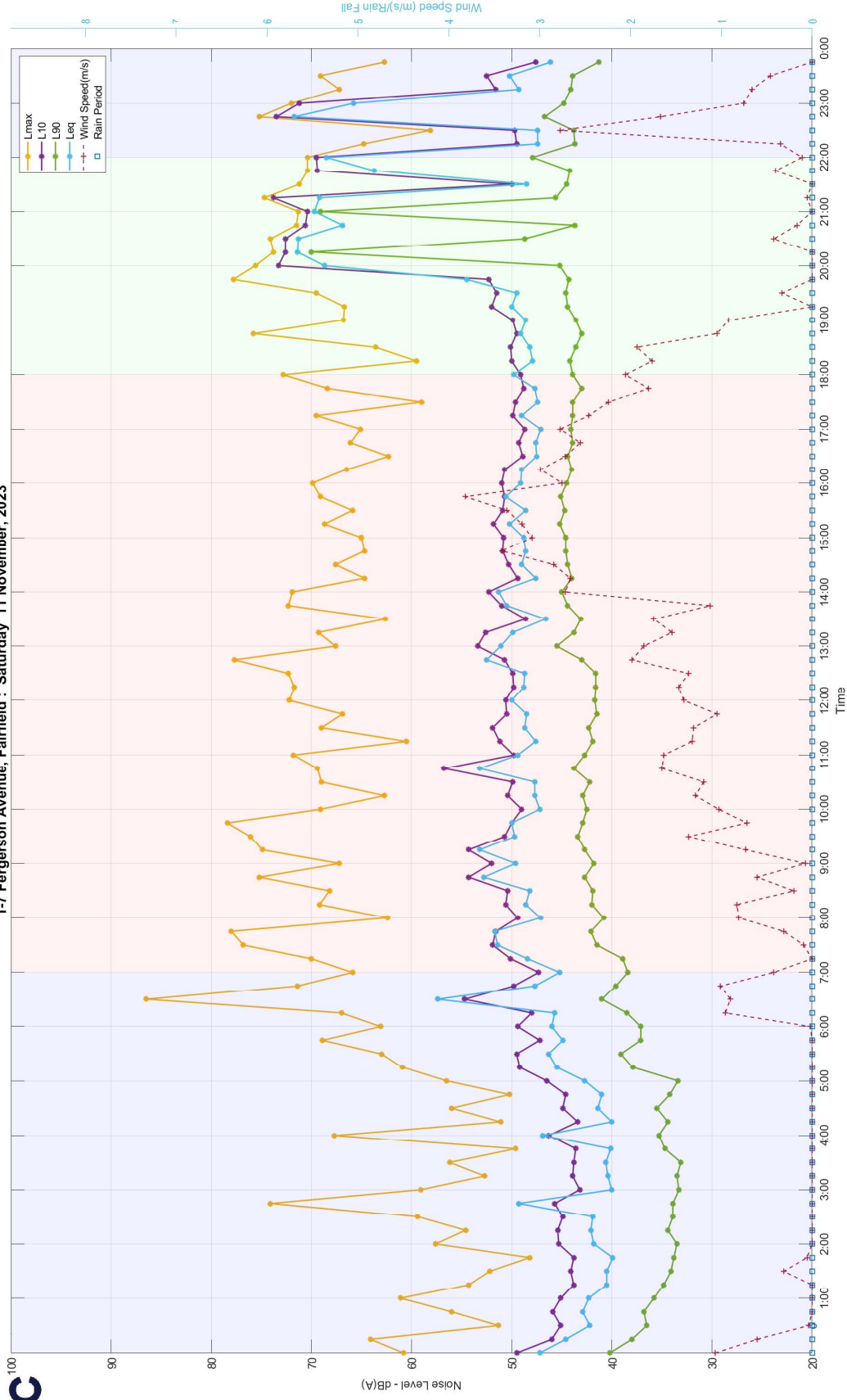
1-7 Fergerson Avenue, Fairfield : Thursday 09 November, 2023



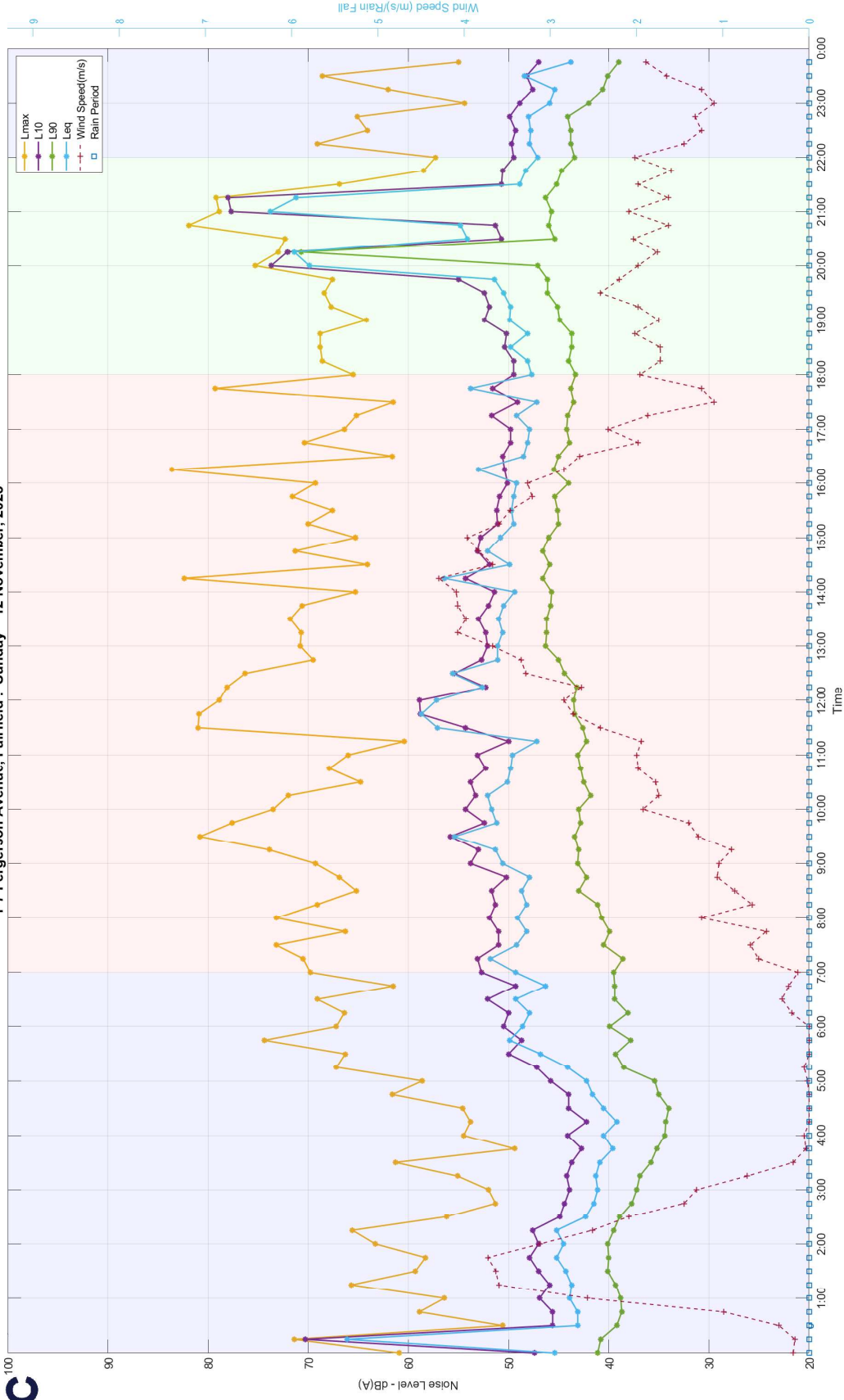
1-7 Fergerson Avenue, Fairfield : Friday 10 November, 2023



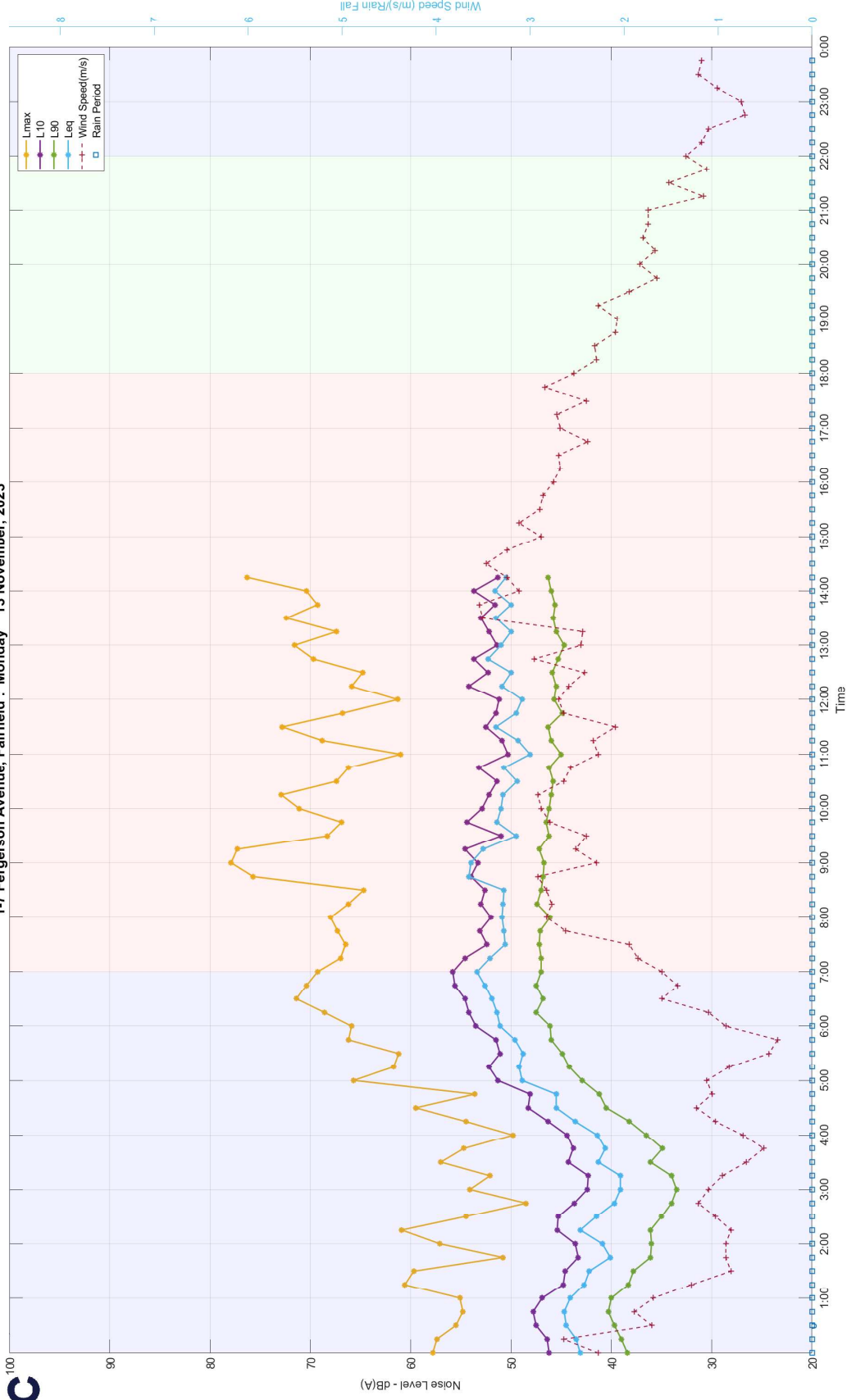
1-7 Fergerson Avenue, Fairfield : Saturday 11 November, 2023



1-7 Fergerson Avenue, Fairfield : Sunday 12 November, 2023



1-7 Fergerson Avenue, Fairfield : Monday 13 November, 2023



Wind Speed is corrected using factor 0.6600 based on logger location