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Noise Impact Assessment

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1 EXCECUTIVE SUMMARY

This report has been prepared to assess the impact of noise generated by nearby transportation sources on the occupant amenity of the proposed shop top development and to ensure noise emissions from the development are maintained. Based on site investigation, traffic noise from Barrenjoey Road which is classified as an arterial road will be the largest noise source impacting the development.

NSW planning instruments, guidelines and local authority planning guidelines (where applicable) have been used to develop project specific assessment criteria.

Noise impacts have been predicted at the subject development based on site measurements. The predicted impacts have been assessed against the project specific criteria. Measures needed to mitigate any identified potential impacts have been determined and are presented in the report. Section 7 of the report summarises the complying mitigation and development controls determined.

The assessment has demonstrated that the proposed development is able to provide an adequate level of amenity in respect on noise impact from nearby roads provided with the incorporation of the mitigation indicated in this assessment.

2 INTRODUCTION

This report has been prepared to assess the noise impacts associated with the proposed shop top residential development at 1112-1116 Barrenjoey Road, Palm Beach. The measures have been prepared to adequately mitigate the identified potential impacts from traffic noise generation of Barrenjoey Road and to ensure noise emissions from the development complies with the relevant noise regulations.

The subject site and local context are indicated in Figure 1 below.

The report has been prepared for the sole purpose of a development application assessment and should not be used or relied on for any other purpose.

2.1 REFERENCED DOCUMENTS

The following planning instruments and guidelines have been used in the assessment:

- State Environmental Planning Policy (Transport and Infrastructure) 2021 ("**TISEPP**")
- Development Near Rail Corridors and Busy Roads – Interim Guideline ("**DNRCBR**") (Department of Planning, 2008)
- Pittwater 21 Development Control Plan 2003 ("**DCP**")
- NSW Department of Environment and Heritage, Environmental Protection Authority document – '*Noise Policy for Industry2017*' (**"NPfI''**)

This assessment has been conducted using the architectural drawings issued by Koichi Takada Architects on the 5th August 2024.

3 SITE DESRIPTION

The nearest sensitive receivers around the project site have been identified as the following:

- **R1**: Double storey residential dwelling located on the North located at 1120 Barrenjoey Road.
- **R2**: Double storey residential dwelling located on the East located at 21A and 23 Palm Beach Road.
- **R3**: Double storey residential dwelling located on the East located at 21 Palm Beach Rd and 142-144 Pacific Road.
- **R4**: Double storey residential dwelling located on the Southeast located at 1106 -1110 Barrenjoey Road.
- **C1**: Two storey hotel and restaurant dwelling on the South, located at 1108 Barrenjoey Road.

A site map with the measurement locations and surrounding receivers are presented in Figure 1 below.

Figure 1 : Aerial View of the Project Site, Sensitive Receivers and Monitoring Locations.

4 ABBREVIATIONS AND DEFINITIONS

The following Abbreviations and definitions are used in this noise impact assessment.

dB	Decibels - unit for the measurement of sound
dB(A)	A-weighted decibels. Unit of measurement for broadband sound with the A-frequency weighting applied to approximate human loudness perception to sounds of different pitch.
L_{eq}	Energy, time averaged sound level
L_{max}	Maximum sound pressure level, fast response
L_{90}	Sound level exceeded for 90% of the measurement period
R_w	Frequency weighted sound reduction index.
NRC	Average absorption co-efficient for the octave bands with centre frequencies of 250Hz to 2 kHz inclusive.
Day*	For noise emissions assessment - the period from 7 am to 6 pm (Monday to Saturday) and 8 am to 6 pm(Sundays and public holidays). For transportation noise - the period from 7 am to 10 pm
Evening*	Refers to the period from 6 pm to 10 pm.
Night*	The period from 10 pm to 7 am (Monday to Saturday), and 10 pm to 8 am(Sundays and public holidays). For transportation noise - the period from 10 pm to 7am
Project Trigger Level	Target receiver noise levels for a particular noise-generating facility.
Assessment Background Level (ABL)	A-weighted background noise level representative of a single period. (Calculated in accordance with NPfI unless noted otherwise)
Rating Background Level (RBL)	The overall, single-figure A-weighted background level representing each assessment period (day/evening/night) over the whole monitoring period. (Calculated in accordance with NPfI unless noted otherwise)

* Unless nominated otherwise.

5 EXTERNAL NOISE INTRUSION ASSESSMENT

5.1 UNATTENDED NOISE MONITORING

5.1.1 Measurement Location

One unattended noise monitor was installed within the project development. Refer to Figure 1 for detailed location.

5.1.2 Measurement Period

Unattended noise monitoring for background noise was conducted from 7th July 2024 to 19th July 2024.

5.1.3 Summarised Background Noise Levels

Background levels have been calculated from the long term, unattended noise monitoring data. Refer to the Appendix B for the daily graphs.

The assessment and rating background levels have been determined based on the methodology in the Noise Policy for Industry Fact Sheet B. Periods affected by adverse weather conditions (as defined by NPfI Fact Sheet B) or extraneous noise are also indicated. Weather data was obtained from records provided by the Bureau of Meteorology for the weather station located at Terrey Hills Station.

The day, evening and night periods correspond to the NPfI guideline being:

- Day - period from 7 am to 6 pm Monday to Saturday or 8 am to 6 pm on Sundays and public holidays
- Evening - the period from 6 pm to 10 pm
- Night - the remaining periods

The following table summarises the rating background noise levels determined for the day, evening and night periods as defined in the NPfI.

Table 1 – Rating Background Noise and Traffic Noise Level Summary

Location	Time of day	Rating Background Noise Level $dB(A)_{L90(Period)}$	Traffic Noise Level $dB(A)L_{eq(period)}$
1112-1116 Barrenjoey Road, Palm Beach	Day (7am – 6pm)	42	Daytime 54dB(A)$L_{eq(15hour)}$ 56 dB(A)$L_{eq(1hour)}$
	Evening (6pm – 10pm)	37	
	Night (10pm – 7am)	36	Night 49 dB(A)$L_{eq(9hour)}$ 54 dB(A)$L_{eq(1hour)}$

5.2 ATTENDED NOISE MEASUREMENTS

An attended noise measurement of Barrenjoey Road was conducted by this office to supplement the unattended noise monitoring data.

5.2.1 Measurement Position

Attended noise measurement were undertaken 3m away from the kerb of Barrenjoey Road as shown in Figure 1 above.

5.2.2 Measurement Equipment

The measurement was 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.

5.2.3 Measured Traffic Noise Levels

The measured traffic noise levels for the attended measurements are presented in the table below.

Table 2– Measured Traffic Noise Levels at Attended Measurement Location

Project Site	Time of day	Measurement Location	Measured Traffic Noise Level dB(A)$L_{eq(15min)}$
1112-1116 Barrenjoey Road, Palm Beach	9th July 2024 (2:30pm to 3:00pm)	A1	64

6 GUIDELINES AND ASSESSMENT CRITERIA

6.1 PITTWATER 21 DEVELOPMENT CONTROL PLAN

The Pittwater 21 Development Control Plan states the following:

C1.6 Acoustic Privacy

'Controls Noise-sensitive rooms, such as bedrooms, should be located away from noise sources, including main roads, parking areas, living areas and communal and private open space areas and the like.'

6.2 STATE ENVIRONMENTAL PLANNING POLICY (TRANSPORT AND INFRASTRUCTURE) 2021

Certain development adjacent to major roadways must have regard to TI SEPP Clause 2.119, repeated below:

6.2.1 Section 2.119 Impact of Road Noise or Vibration on Non-Road Development

(1) This section applies to development for any of the following purposes that is on land in or adjacent to the road corridor for a freeway, a tollway or a transitway 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 TfNSW) and that the consent authority considers is likely to be adversely affected by road noise or vibration—

(a) residential accommodation,

(b) a place of public worship,

(c) a hospital,

(d) an educational establishment or centre-based child care facility.

(2) If the development is for the purposes of residential accommodation, 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 LAeq levels are not exceeded:

(e) in any bedroom in the residential accommodation—35 dB(A) at any time between 10 pm and 7am,

(f) anywhere else in the residential accommodation (other than a garage, kitchen, bathroom, or hallway)—40 dB(A) at any time.

6.3 DEVELOPMENT NEAR RAIL CORRIDORS AND BUSY ROADS – INTERIM GUIDELINE

This guideline provides general and specific advice for the planning and assessment of noise sensitive development impacted by roads and railways, and in particular those uses required to be addressed under the TI SEPP. The assessment criteria broadly mirror those in the TI SEPP.

6.3.1 Internal Noise Criteria – Airborne Noise

Table 3.1 of the guideline summarises the internal traffic noise levels that should be achieved in noise sensitive developments, including residential buildings. The $L_{eq,9hr}$ descriptor is used to assess noise levels in sleeping areas (bedrooms) and the $L_{eq,15hr}$ descriptor is used to assess noise levels in other habitable rooms. Table 3.1 of DNRCBR is repeated below.

Table 3 - DNRCBR Airborne Noise Criteria

Building Use	Room	Noise Level dB(A) L_{eq}
Residential	Sleeping Area (Bedroom)	35 (10pm to 7am)
	Other habitable rooms (excl. garages, kitchens, bathrooms & hallways)	40 (7am to10pm)

6.3.2 Ventilation

The DNRCBR recommends that when "windows open" noise levels are excessive, which is defined as when the "windows open" noise level exceeds the "windows closed" criterion by more than 10 dB(A), the occupants should be able to *"leave their windows closed, if they so desire, and also meet the ventilation requirements of the Building Code of Australia (BCA)."*

7 COMPLYING MITIGATION AND CONTROLS

7.1 PRIOR TO CONSTRUCTION

A report to be prepared by qualified and experience acoustic consultant to be submitted with the construction certificate stage. The assessment shall review and certify the documentation includes the measures needed to comply with the noise assessment performance criteria stated in this report in Section 6.3.1 (airborne noise).

7.2 BUILDING ENVELOPE

7.2.1 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**).

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 4 below. 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 4 - Minimum R_w of Glazing (with Acoustic Seals)

Glazing Assembly	Minimum R_w of Installed Window	s
6.38mm Laminated	31	Yes
6mm Float	29	

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 5 – Minimum Glazing Constructions

Location	Facade	Space	Minimum Complying Glazing Construction	Acoustic Seals
1112-1116 Barrenjoey Road, Palm Beach	West facing Barrenjoey Road	Living	6.38mm Laminated	Yes
		Bedroom	6.38mm Laminated	
	Remaining façade	Living	6mm Float	
		Bedroom	6mm Float	

7.2.2 External Wall Construction

The external walls to be constructed from masonry systems 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 (Selley's Pro Series Fire Block or CSR FireSeal) to ensure compliance with acoustic criteria stipulated within this report.

For external wall constructions which are constructed from lightweight materials the following construction is recommended.

Table 6 – External Light Weight Wall Construction

Site	Space	Internal Lining	Studwork System	External Lining
1112-1116 Barrenjoey Road, Palm Beach	All Façade	1 x 10mm Plasterboard	Minimum 90mm thick stud cavity with 75mm thick 14kg/m^3 glasswool insulation	9mm fibre cement sheet (or equivalent)

7.2.3 External Roof/Ceiling Construction

Based on the architectural plans referenced, the roof construction is to be of masonry systems, therefore it will not require further acoustic upgrading.

8 NOISE EMISSION ASSESSMENT

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

- Pittwater 21 Development Control Plan.
- NSW Department of Environment and Heritage, Environmental Protection Authority document – '*Noise Policy for Industry (NPfI) 2017*'.

8.1 NOISE CRITERIA

8.1.1 Pittwater 21 Development Control Plan

The Pittwater 21 development control plan does not provide any acoustic requirements for noise emissions, therefore our assessment will be based on the NSW EPA Npfl 2017 presented in the section below.

8.1.2 NSW EPA Noise Policy for Industry (NPfI) 2017

The NSW EPA Noise Policy for Industry (NPfI) 2017, has two criteria which need to be satisfied; namely the Intrusiveness noise level criteria and the Project amenity noise level criteria. The project noise trigger level is then established based on the lower of the intrusiveness and project amenity levels.

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

8.1.2.1 Intrusiveness Noise Level Criteria

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 do 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 Section 5.1.3. Noise emissions from the site should comply with the noise levels presented below when measured at nearby property boundary.

Table 7 – Intrusiveness Noise Level Criteria

Location	Period/Time	Rating Background Noise Level dB(A)L_{eq}	Intrusiveness Noise Level Criteria,dB(A)$L_{Aeq(15min)}$
1112-1116 Barrenjoey Road, Palm Beach	Day (7am-6pm)	42	47
	Evening (6pm-10pm)	37	42
	Night (10pm-7am)	36	41

8.1.2.2 Project Amenity Noise Level Criteria

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 NSW EPA Noise Policy for Industry sets out acceptable noise levels for various localities. Table 2.2 on page 11 of the policy indicates 3 categories to distinguish different residential areas. They are rural, suburban, urban. This site is categorised by suburban receivers.

For the purposes of this condition:

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

The project amenity noise level is calculated by taking the recommended amenity noise level (as presented in table 2.2 of the policy), subtracting 5dB(A) and then adding 3dB(A) to convert from $L_{Aeq,\ period}$ to a $L_{Aeq,\ 15\text{-}minute}$ descriptor. The project amenity noise level criteria are presented in the table below.

Table 8 - Project Amenity Noise Level Criteria

Location	Period/Time	Project Amenity Noise Level Criteria dB(A)$L_{Aeq(15min)}$
Nearby residences – suburban receivers	Day (7am-6pm)	53
	Evening (6pm-10pm)	43
	Night (10pm-7am)	38
Commercial Receivers	When in Use	63

8.1.2.3 Project Noise Trigger Level

The project noise trigger level (as outlined in section 2.1 of the policy) is the lower of the intrusiveness and project amenity noise levels. The project noise trigger levels are presented in the table below.

Table 9 – Project Noise Trigger Level Criteria

Location	Period/Time	Rating Background Noise Level dB(A)$L_{90(Period)}$	Intrusiveness Noise Level Criteria dB(A)$L_{Aeq(15min)}$	Project Amenity Noise Level Criteria dB(A)$L_{Aeq(15min)}$	Project Noise Trigger Level Criteria dB(A)$L_{Aeq(15min)}$
Residential Receivers	Day (7am-6pm)	42	**47**	53	**47**
	Evening (6pm-10pm)	37	**42**	43	**42**
	Night (10pm-7am)	36	41	**38**	**38**
Commercial Receivers	When in Use	N/A	N/A	**63**	**63**

8.2 MECHANICAL PLANT NOISE

Based on the architectural plans, the proposed mechanical plant is to be located on the roof. The plant selections have not been determined at this stage; it is recommended that a detailed acoustic review should be undertaken at CC stage to determine acoustic treatments to control noise emissions to satisfactory levels. Satisfactory levels will be achievable through appropriate plant selection and 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 8.1.2.3.

8.3 FUTURE COMMERCIAL TENANCIES

The proposed development is to include ground floor commercial tenancies and the specific tenancies are yet to be determined at this stage. Notwithstanding, we note the following for the commercial spaces below:

- It is expected that compliance with the relevant noise emission objectives is to be reviewed based on a separate planning approval as part of a fit out development application subject to the specific operations of each individual commercial tenancy once operators have been determined. Tenancies are capable of achieving noise emission objectives provided the appropriate acoustic treatments and management controls are implemented for each specific application.

- *If* tenancies were to become licensed for the service of alcohol, this use would be subject to a separate planning application which would be accompanied by a noise impact assessment of the proposed use typical for Liquor and Gaming NSW. Acoustic treatments and management controls could be applied to these tenancies use to achieve the relevant noise emission requirements from internal. However, the use of external areas (if any) would be likely to require management of patron numbers/hours of use to achieve compliance at all times.

9 CONCLUSION

This report presents an acoustic assessment of noise n impacts associated with the proposed mixed use development at 1112-1116 Barrenjoey Road, Palm Beach

Internal noise criteria for external noise impacts have been formulated with reference to the following documents:

- Pittwater 21 Development Control Plan (''**DCP**'')
- State Environmental Planning Policy (Transport and Infrastructure) 2021 ("**TISEPP**")
- Development Near Rail Corridors and Busy Roads – Interim Guideline ("**DNRCBR**") (Department of Planning, 2008)

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

- Pittwater 21 Development Control Plan. (''**DCP**'')
- NSW Department of Environment and Heritage, Environmental Protection Authority document – '*Noise Policy for Industry ("**NPfI**") 2017*'.

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

Yours faithfully,

Acoustic Logic Pty Ltd
Samantha Wong

APPENDIX A: NOISE MEASUREMENT EQUIPMENT DETAILS

A.1 MEASUREMENT EQUIPMENT

The unattended noise monitor used was one Rion NL-42 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.

The attended measurement was 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.

A.2 UNATTENDED NOISE BACKGROUND NOISE MONITORING

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.

Appendix 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 the Table below.

A.2.1 Measured Background Noise Levels

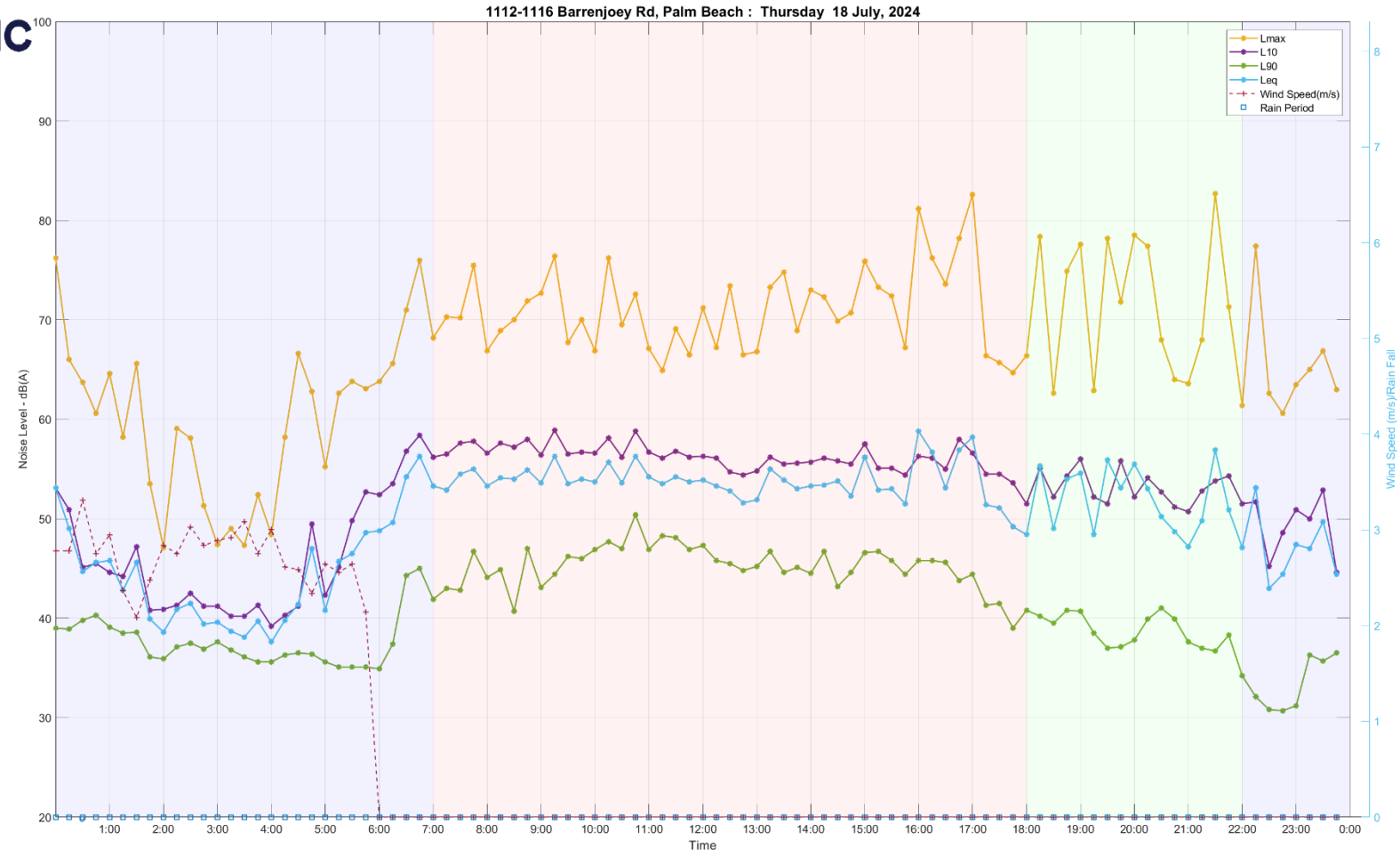
The background noise levels established from the unattended noise monitoring are detailed in Table 2 below.

Table 10 – Unattended Noise Monitor - Assessment Background Noise Levels

Date	Assessment Background Noise Level dB(A)L_{A90}		
	Day (7am-6pm)	**Evening (6pm-10pm)**	**Night (10pm-7am Next Day)**
09/07/2024	-	36	33
10/07/2024	41	35	33
11/07/2024	40	35	33
12/07/2024	42	39	38
13/07/2024	46	40	38
14/07/2024	43	36	38
15/07/2024	-	-	-
16/07/2024	-	43	40
17/07/2024	43	39	36
18/07/2024	42	37	31
19/07/2024	-	-	-
Median	**42**	**37**	**36**

Note: Periods marked '-' have had more than 20% of data within the nominated period be either not collected or be affected by adverse weather and in accordance with Fact Sheets A and B of the NPfI, have been removed from the assessment.

APPENDIX B : DAILY GRAPHS OF NOISE MONITORING


1112-1116 Barrenjoey Rd, Palm Beach : Thursday 18 July, 2024
Lmax
L10
L90
Leq
Wind Speed(m/s)
Rain Period
Noise Level - dB(A)
Wind Speed (m/s)/Rain Fall
Time
100
90
80
70
60
50
40
30
20
8
7
6
5
4
3
2
1
0
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
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19:00
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21:00
22:00
23:00
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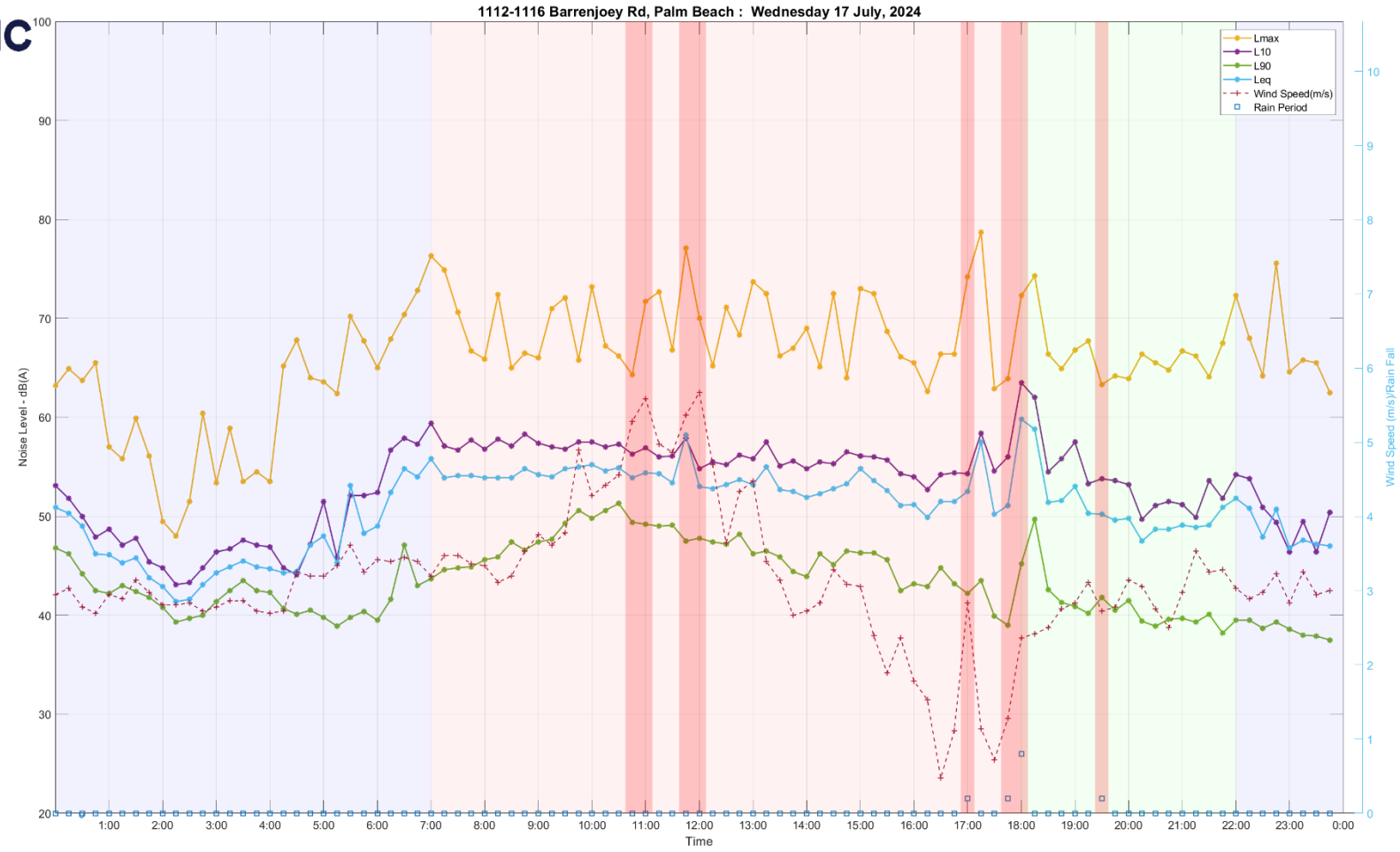
1112-1116 Barrenjoey Rd, Palm Beach : Wednesday 17 July, 2024
Lmax
L10
L90
Leq
Wind Speed(m/s)
Rain Period
Noise Level - dB(A)
Wind Speed (m/s)/Rain Fall
Time
100
90
80
70
60
50
40
30
20
10
9
8
7
6
5
4
3
2
1
0
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
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12:00
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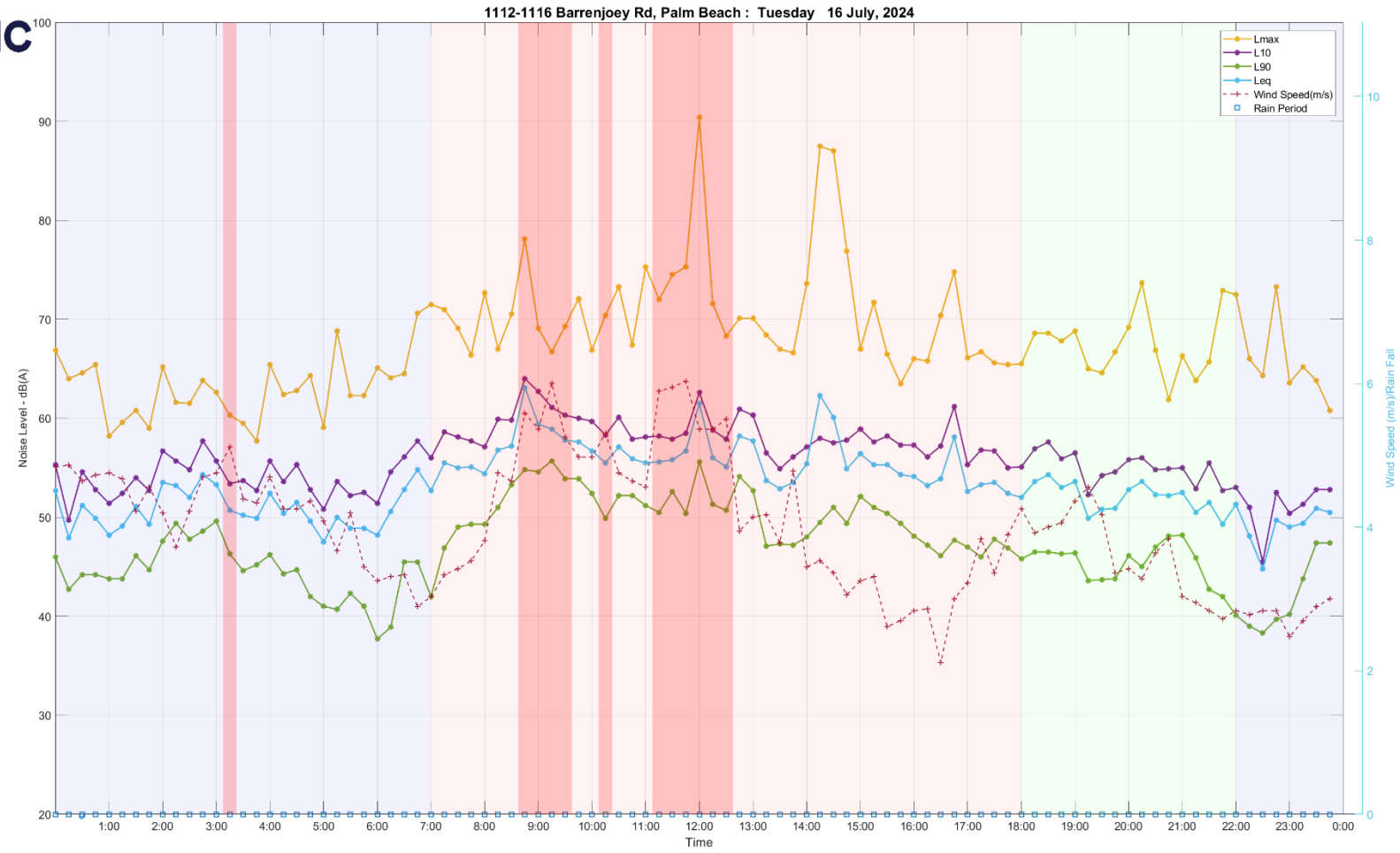
1112-1116 Barrenjoey Rd, Palm Beach : Tuesday 16 July, 2024
Lmax
L10
L90
Leq
Wind Speed(m/s)
Rain Period
Noise Level - dB(A)
Wind Speed (m/s)/Rain Fall
Time
100
90
80
70
60
50
40
30
20
10
8
6
4
2
0
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
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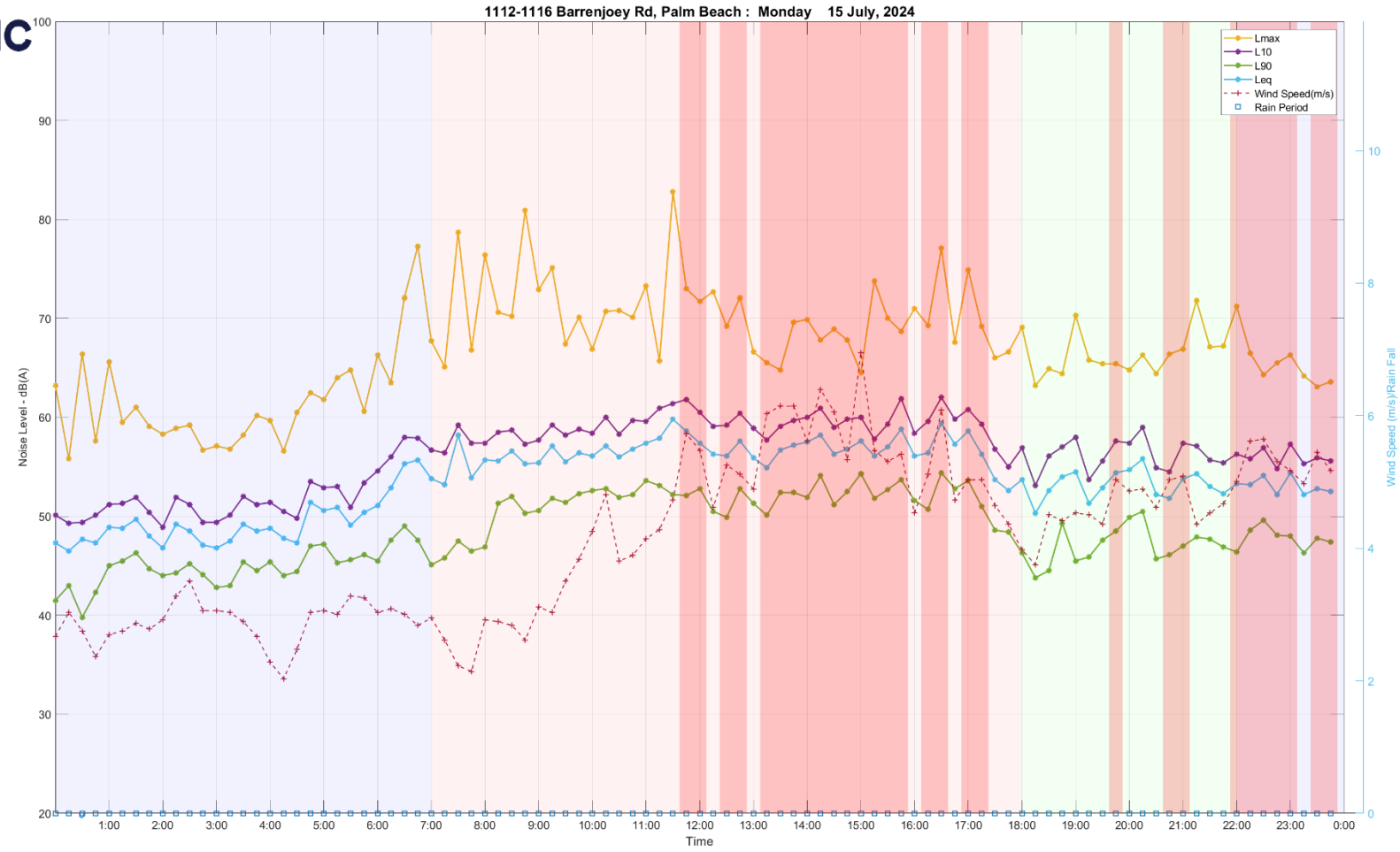
1112-1116 Barrenjoey Rd, Palm Beach : Monday 15 July, 2024
Lmax
L10
L90
Leq
Wind Speed(m/s)
Rain Period
Noise Level - dB(A)
Wind Speed (m/s)/Rain Fall
Time
100
90
80
70
60
50
40
30
20
10
8
6
4
2
0
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
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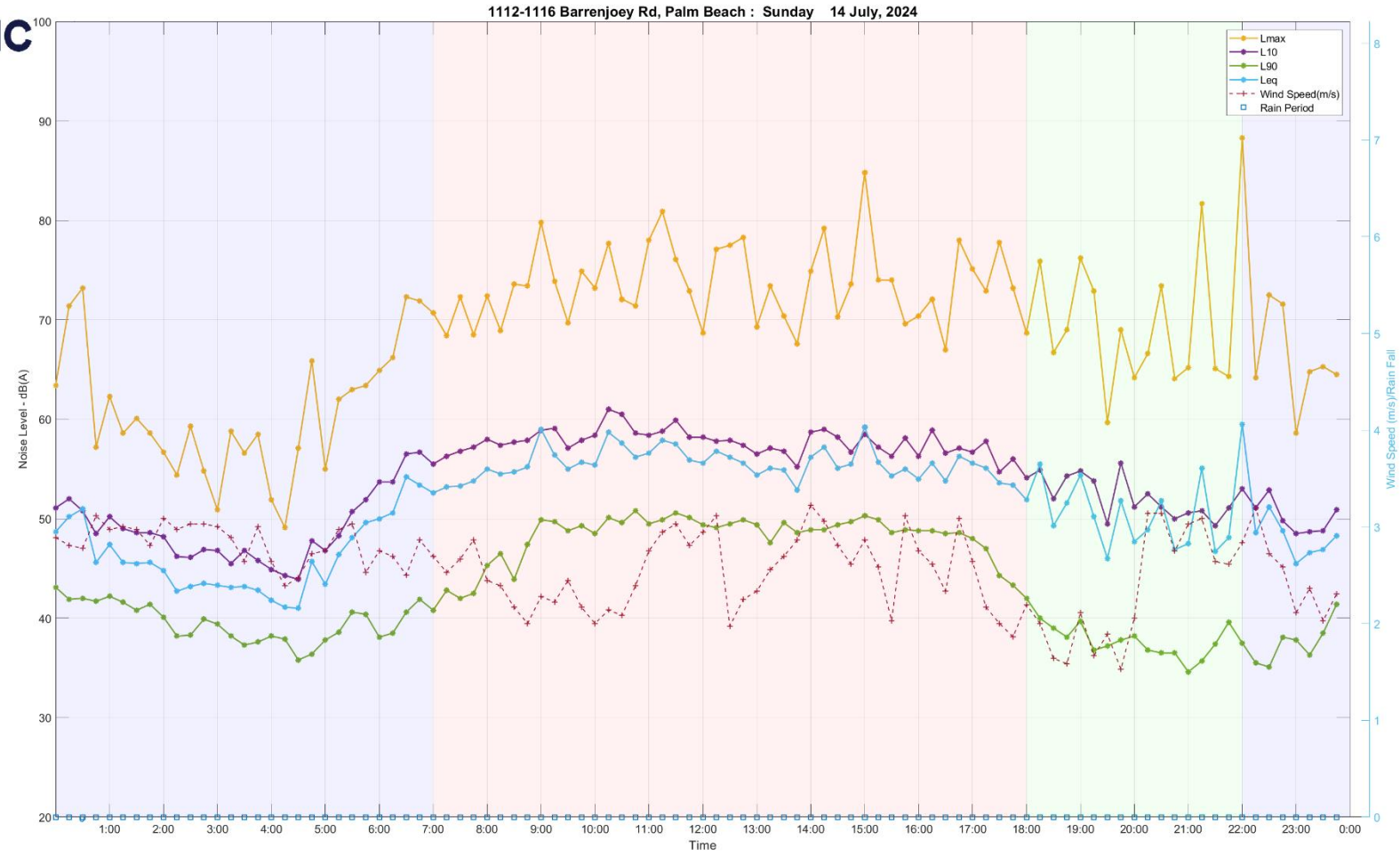
1112-1116 Barrenjoey Rd, Palm Beach : Sunday 14 July, 2024
Lmax
L10
L90
Leq
Wind Speed(m/s)
Rain Period
Noise Level - dB(A)
Wind Speed (m/s)/Rain Fall
Time
100
90
80
70
60
50
40
30
20
8
7
6
5
4
3
2
1
0
1:00
2:00
3:00
4:00
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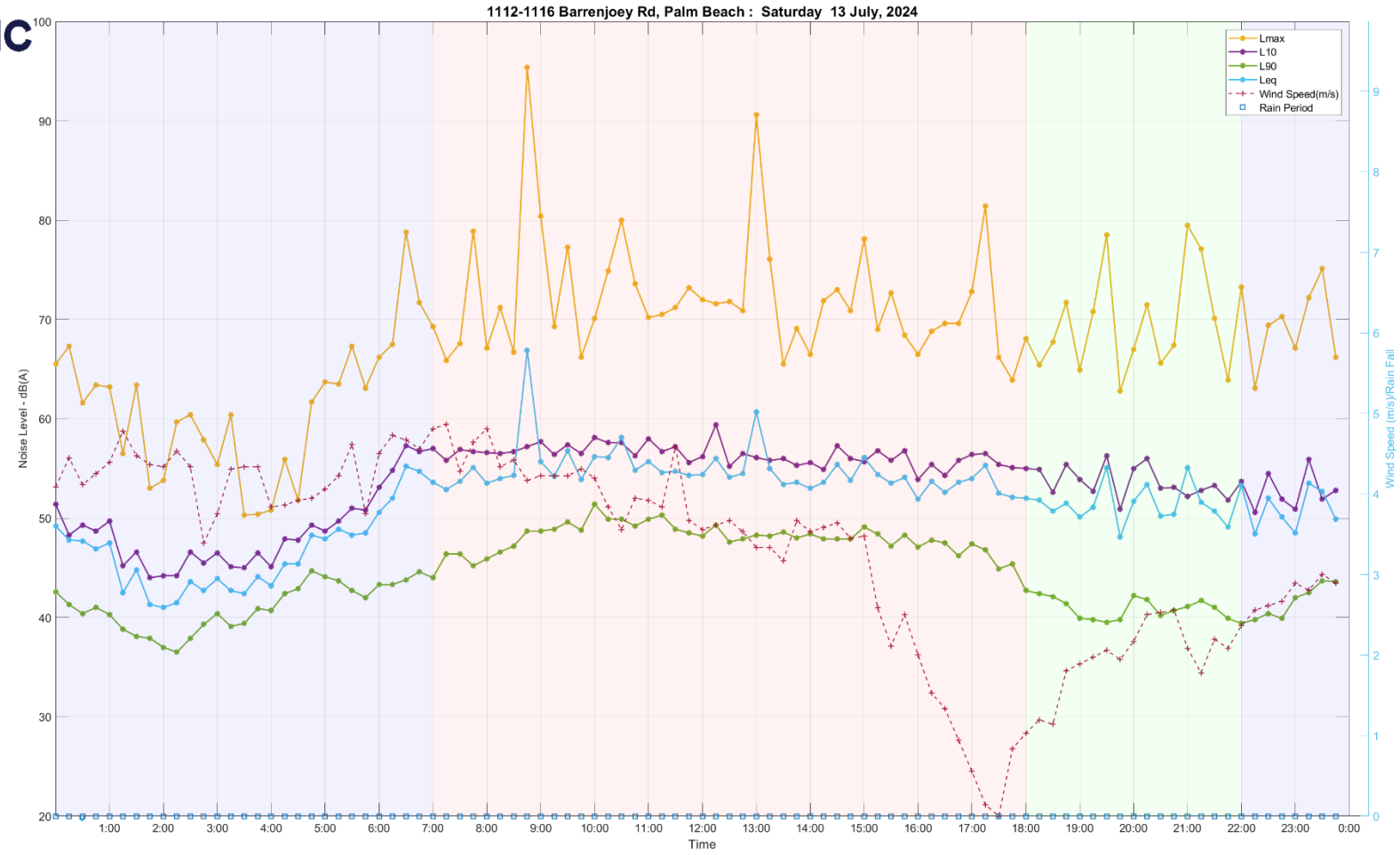
1112-1116 Barrenjoey Rd, Palm Beach : Saturday 13 July, 2024
Lmax
L10
L90
Leq
Wind Speed(m/s)
Rain Period
Noise Level - dB(A)
Wind Speed (m/s)/Rain Fall
Time
100
90
80
70
60
50
40
30
20
9
8
7
6
5
4
3
2
1
0
1:00
2:00
3:00
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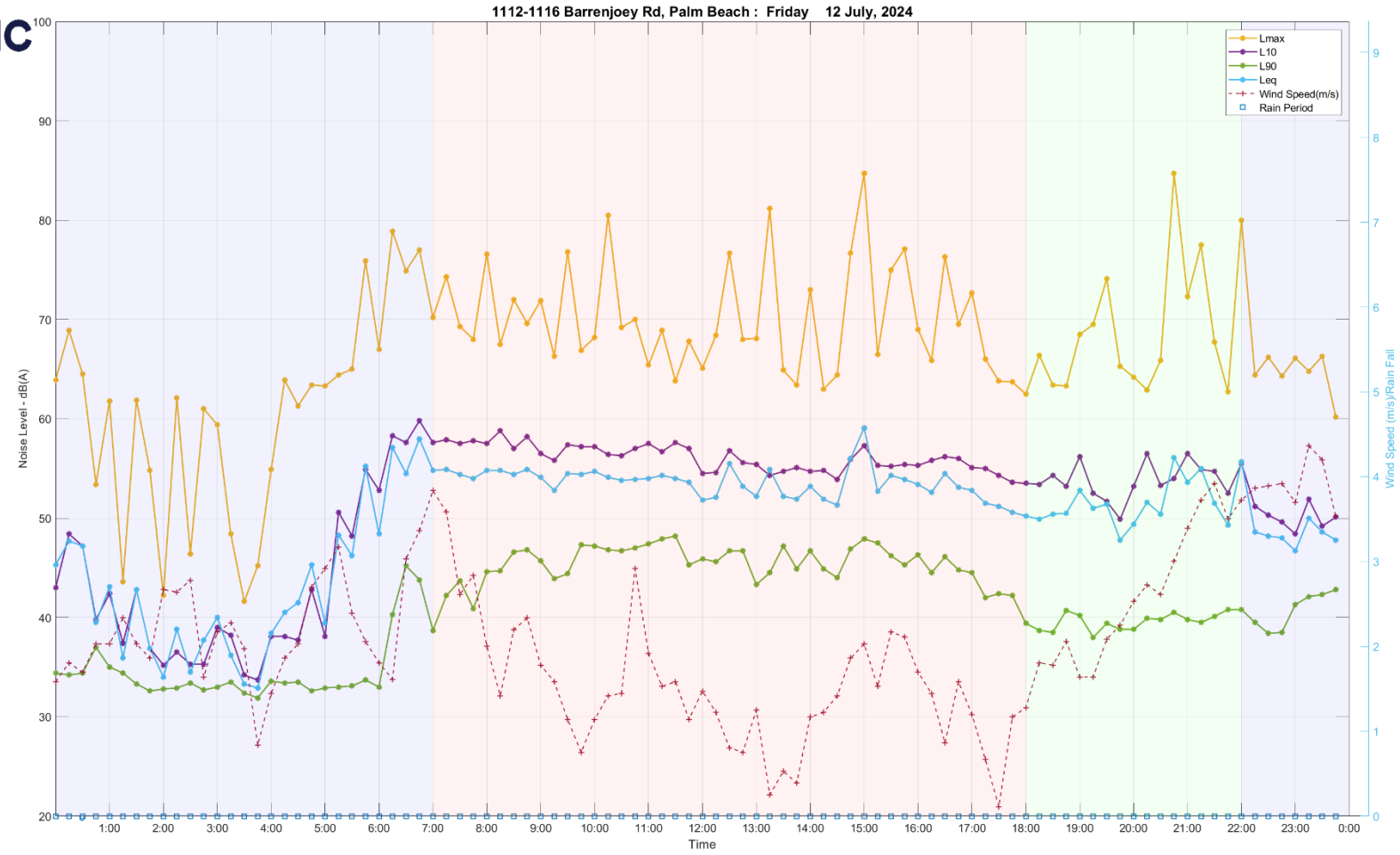
1112-1116 Barrenjoey Rd, Palm Beach : Friday 12 July, 2024
Lmax
L10
L90
Leq
Wind Speed(m/s)
Rain Period
Noise Level - dB(A)
Wind Speed (m/s)/Rain Fall
Time
100
90
80
70
60
50
40
30
20
9
8
7
6
5
4
3
2
1
0
1:00
2:00
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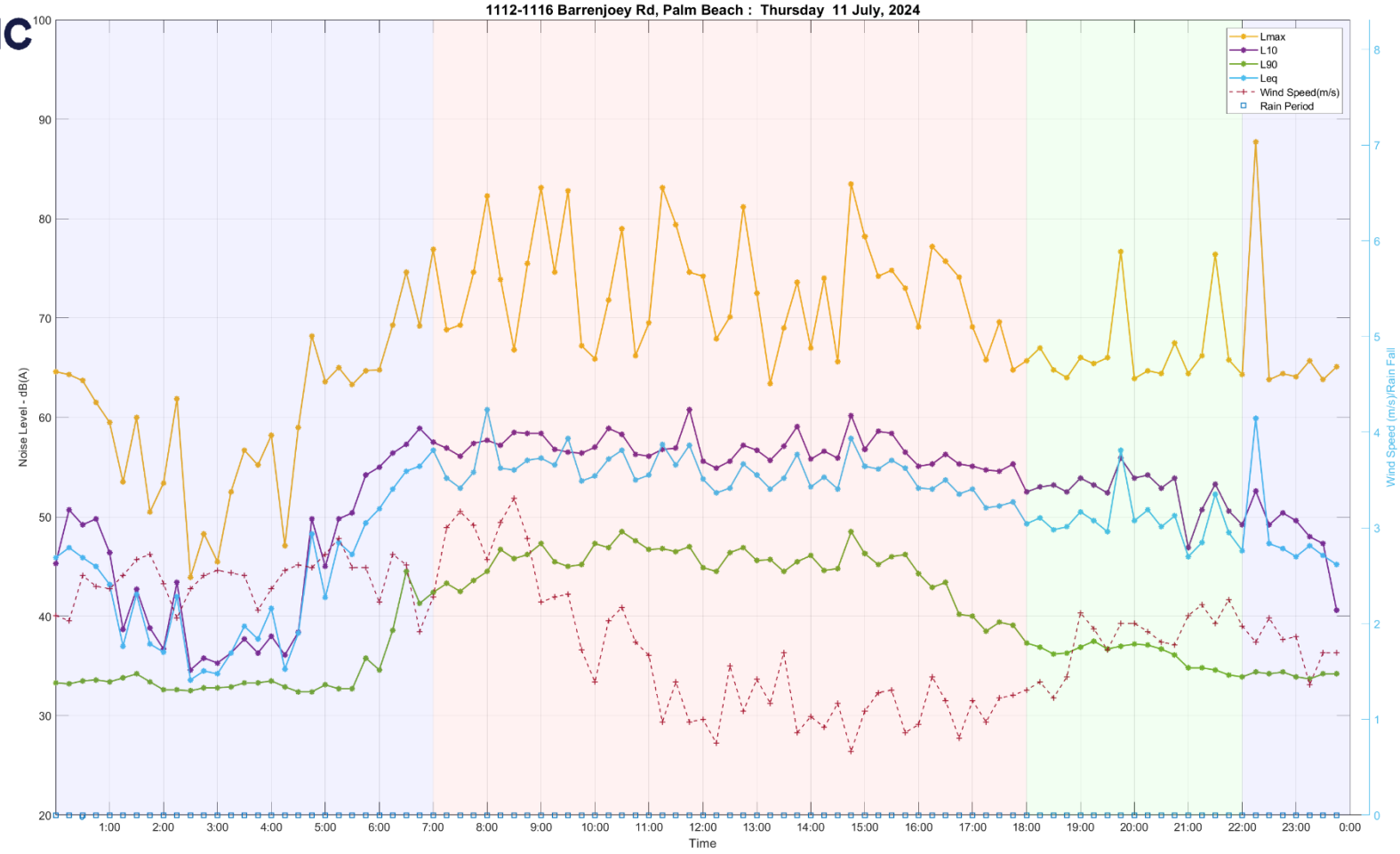
1112-1116 Barrenjoey Rd, Palm Beach : Thursday 11 July, 2024
Lmax
L10
L90
Leq
Wind Speed(m/s)
Rain Period
Noise Level - dB(A)
Wind Speed (m/s)/Rain Fall
Time
100
90
80
70
60
50
40
30
20
8
7
6
5
4
3
2
1
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1:00
2:00
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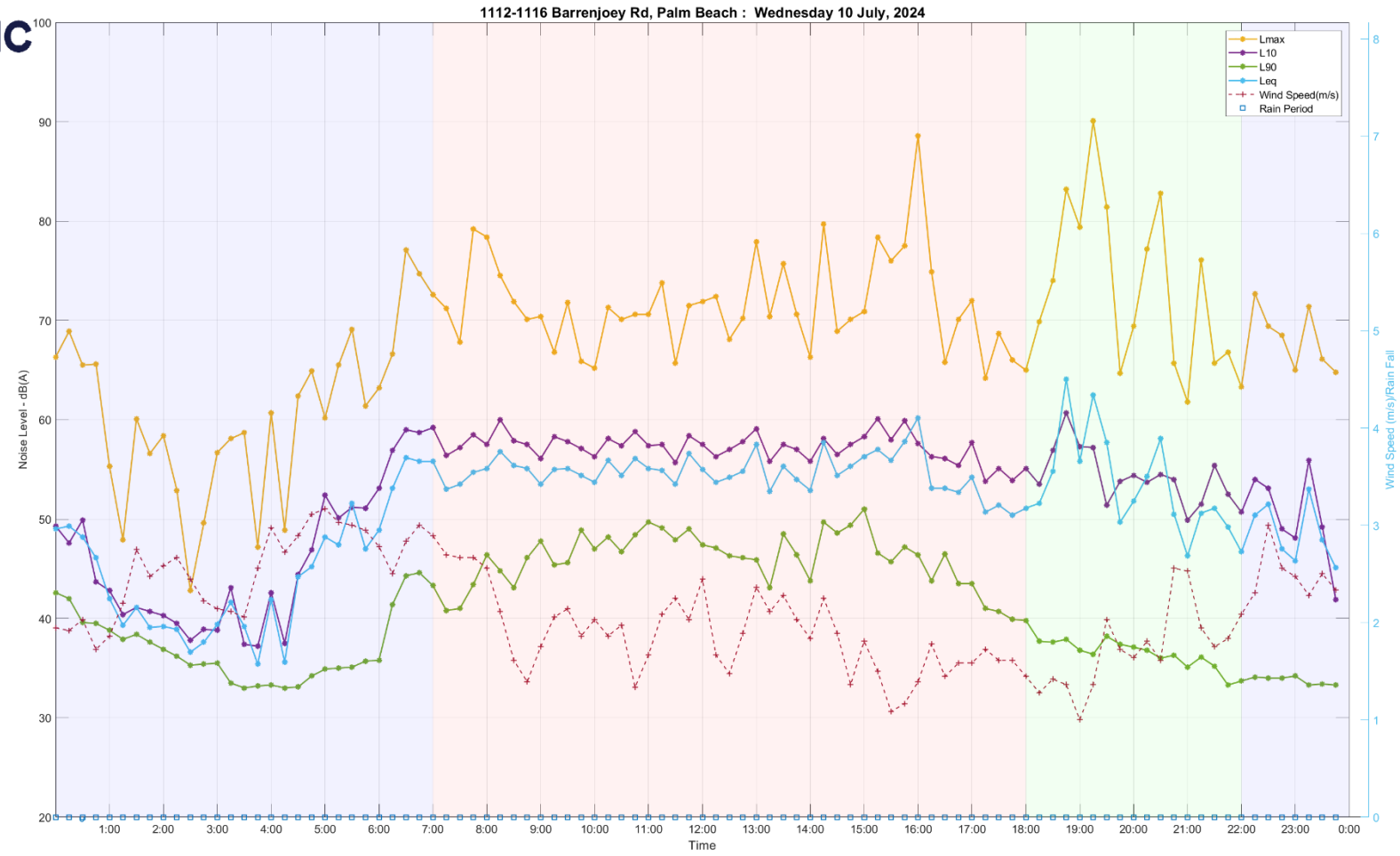
1112-1116 Barrenjoey Rd, Palm Beach : Wednesday 10 July, 2024
Lmax
L10
L90
Leq
Wind Speed(m/s)
Rain Period
Noise Level - dB(A)
Wind Speed (m/s)/Rain Fall
Time
100
90
80
70
60
50
40
30
20
8
7
6
5
4
3
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1
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1:00
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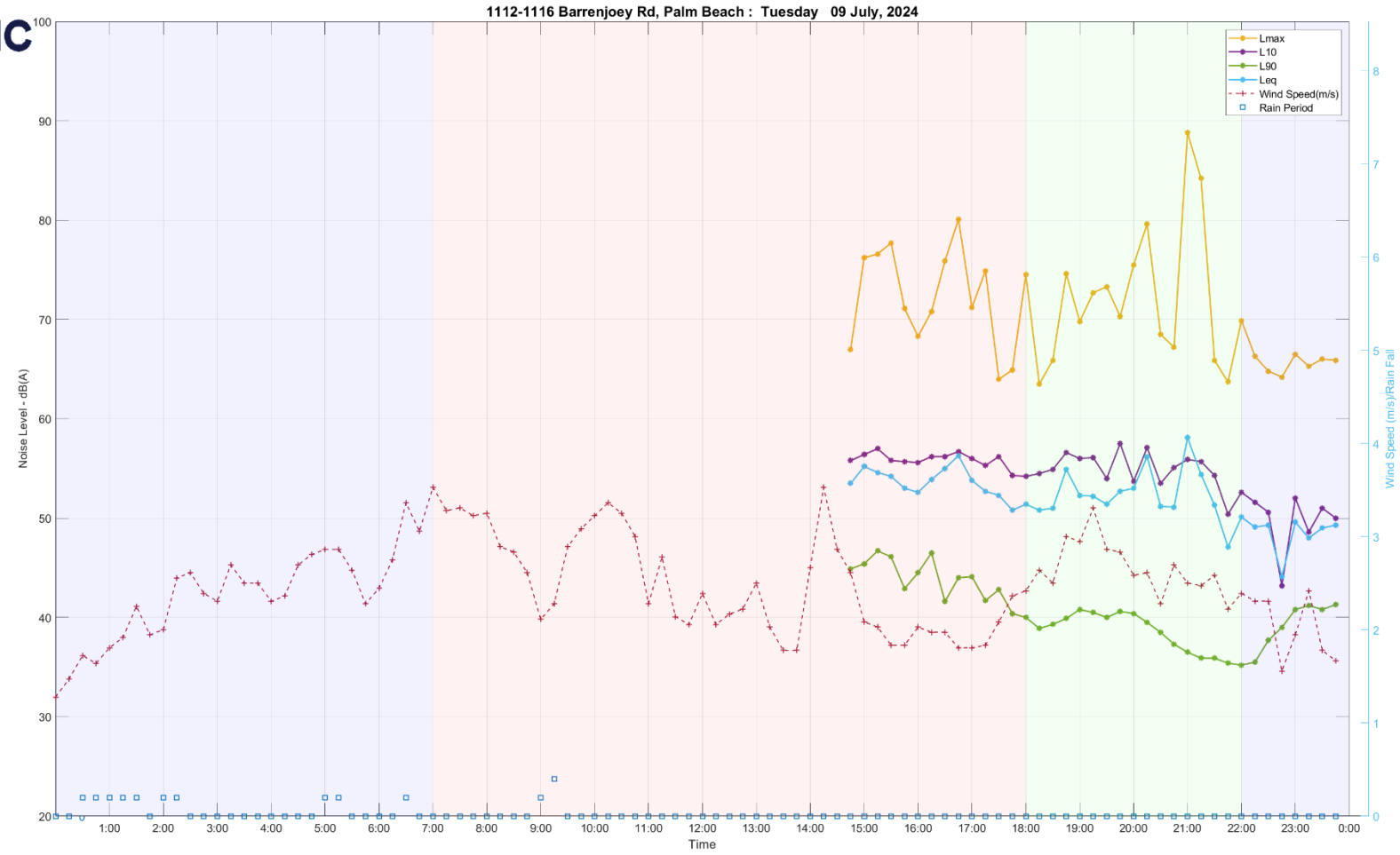
1112-1116 Barrenjoey Rd, Palm Beach : Tuesday 09 July, 2024
Lmax
L10
L90
Leq
Wind Speed(m/s)
Rain Period
Noise Level - dB(A)
Wind Speed (m/s)/Rain Fall
Time
100
90
80
70
60
50
40
30
20
8
7
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5
4
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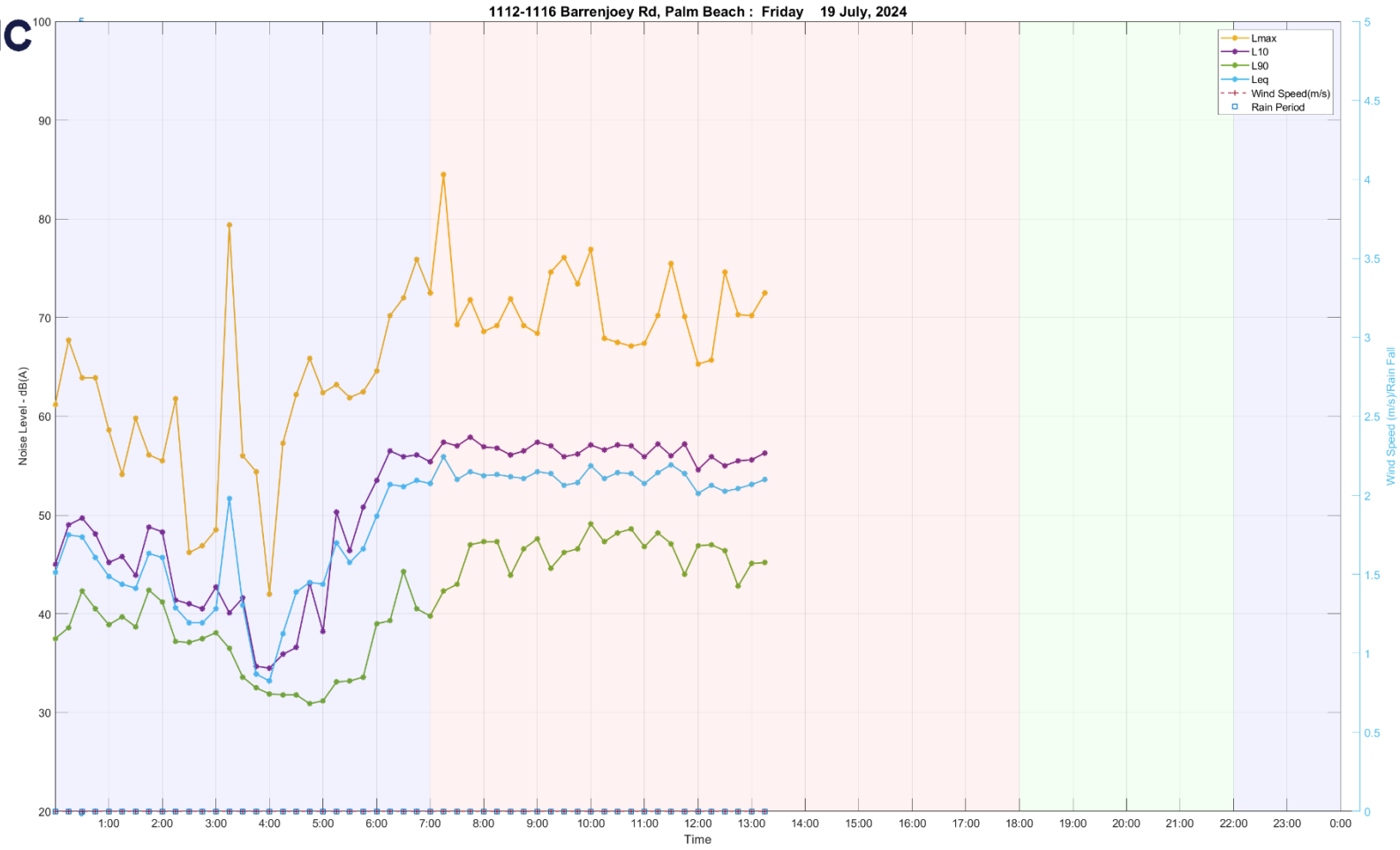

Wind Speed is corrected using factor 1.0000 based on logger location