MATTHEW PALAVIDIS
VICTOR FATTORETTO
MATTHEW SHIELDS

Station House, Campsie

Noise Impact Assessment

SYDNEY
9 Sarah St
MASCOT NSW 2020
(02) 8339 8000

ABN 98 145 324 714
www.acousticlogic.com.au

Project ID	20241221.1
Document Title	Noise Impact Assessment
Attention To	Station House Hotel Operations Trust

Revision	Date	Document Reference	Prepared By	Checked By	Approved By
0	12/12/2024	20241221.1/1212A/R0/BM	BM		LA

TABLE OF CONTENTS

1 INTRODUCTION

This report has been prepared to assess noise impacts associated with the proposed extension of trading hours for the internal operation of the Station House Hotel, located at 201-203 Beamish Street, Campsie.

Impacts addressed within this report pertain to the noise emissions from internal operational activity (Patrons, music and gaming.) Mechanical plant noise emission impacts have been addressed in principle.

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

2 REFERENCED DOCUMENTS

2.1.1 Background Information Used

The assessment is based on the following:

- Architectural drawings provided by Squillace; job number IRI1408, dated November 2024
- Venue Liquor Licence (LIQH400103077)

2.1.2 Guidelines

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

- Liquor Act 2007 (as amended).
- Liquor Amendment (Night Time Economy) Act 2020.
- 24-Hour Economy Legislation Amendment (Vibrancy Reforms) Act 2023.
- Liquor Regulation (2019) (as amended).
- Liquor and Gaming NSW – 'Disturbance Complaint Guidelines for Licenced Premises' ("**DCG**")(1 July 2024).
- NSW EPA – 'Noise Policy for Industry' ("**NPfI**") October 2017.

3 SITE DESCRIPTION AND THE PROPOSAL

The project site is located at 201-203 Beamish St, Campsie and consists of:

- Ground floor bar, gaming room and dining area/bistro.
- Hotel units located on the first and second floors.

3.1 PROPOSED EXTENDED HOURS OF OPERATION

The existing hours of operation are:

- 10:00am - 2am Monday to Saturday.
- 10:00am – 12:00am Sunday.

The proposed extended hours of operation are:

- 10:00am - 4am Monday to Saturday.
- 10:00am – 12:00am Sunday.

3.2 SENSITIVE RECEIVERS

The following table lists the nearest/potentially most impacted sensitive receivers surrounding the site.

Noting that the contents pertain specifically to noise impacts during the night time period, surrounding commercial uses have been excluded from the assessment.

An aerial photo of the site indicating nearby noise sensitive receivers and measurement locations is presented in Figure 1.

Table 1 – Sensitive Receivers

Receiver (Refer Figure 1)	Receiver Type	Description
R1	Residential	Multi-storey residential building located at 45 S Parade, Campsie

Figure 1 – Project Site Showing Local Context

- Residential

Note: Commercial receivers have not been assessed in this report as the primary concern is operational noise to residential receivers during the night time period.

4 SITE OPERATIONAL NOISE EMISSIONS ASSESSMENT

4.1 ENVIRONMENTAL NOISE AND VIBRATION SOURCES

This assessment provides a review of the noise emission impacts from the internal operational activity within the venue during the proposed extended hours.

4.2 NOISE ASSESSMENT CRITERIA FOR ON-SITE NOISE SOURCES

The project impact assessment methodology is summarised in the following table.

Table 2 – Noise Impact Assessment - Applicable Guidelines

Noise Source	Guideline Adopted	Comment
Patrons, music and gaming – licenced premises	Liquor Act/Vibrancy Reforms + Existing licence conditions	Refer discussion below/venue licence conditions

4.2.1 Patrons and Music – Licenced Premises

4.2.1.1 Liquor Act 2007

From mid-2024, the Vibrancy Reforms legislation designates Liquor and Gaming NSW as the primary regulator of entertainment related noise complaints for all licensed premises.

Changes have been made to the relevant pieces of legislation to effect this change. Entertainment sound emanating from licensed premises is now solely managed through the *Liquor Act 2007*. This means that noise-related conditions of development consent and 'offensive noise pollution' laws will no longer apply when such matters are regulated by the *Liquor Act 2007*.

The Vibrancy Reforms:

- Formalise procedures related to complaints, including increasing the number of disturbance complainants needed for a complaint to be formally considered. Complainants must also attempt to resolve disputes with the licensee before lodging a complaint.
- Remove restrictions on live entertainment that generally seek to restrict the type of live music, whether it is amplified or not, the location on the site, etc.
- Conditions of development consent relating to noise emitted from licenced premises or trading hours cease to have effect.
- Vary how noise impacts are assessed depending on the "order of occupancy". This refers to the order in which the licensed premises and complainant first began to operate or occupy their premises, as follows.
  - When the licenced premises was operating prior to the complainant occupying their premises, a more relaxed test is applied - *unreasonably and seriously disturbed* test is applied. The complainant would need to show they have taken reasonable steps to mitigate the disturbance, including ensuring windows and doors are closed at night and properly sealed.
  - When the licenced premises began operating after the complainant occupied their premises, or if there is a significant change to the licenced premises' operation, an *unduly disturbed* test is applied.
  - The Liquor and Gaming DCG nominates the process to be followed when assessing complaints, including the factors that would be considered and (where a valid complaint is established) appropriate management.

Notwithstanding the above, any noise condition included on an existing liquor licence will remain in force.

4.2.1.2 Application of the Act and DCG to the Development

The existing liquor licence for the venue (LIQH400103077) includes the following noise condition, which will be adopted in this assessment:

> *Condition 2080 – LA10 Noise Restriction*
>
> *The LA10* noise level emitted from the licensed premises shall not exceed the background noise level in any Octave Band Centre Frequency (31.5Hz - 8kHz inclusive) by more than 5dB between 07:00am and 12:00 midnight at the boundary of any affected residence.*

The LA10 noise level emitted from the licensed premises shall not exceed the background noise level in any Octave Band Centre Frequency (31.5Hz - 8kHz inclusive) between 12:00 midnight and 07:00am at the boundary of any affected residence.*

**Notwithstanding compliance with the above, the noise from the licensed premises shall not be audible within any habitable room in any residential premises between the hours of 12:00 midnight and 07:00am.*

4.2.1.3 Application to Subject Development

As indicated above, development consents can no longer contain conditions that limit noise levels at source or receiver, or regulate how live music is played.

4.2.1.4 Assessment Requirements

Typically, the two most relevant licenced premises assessment periods are 10pm to midnight, and after midnight. Project specific criteria have been determined for each most affected receiver location using the licence noise condition and the measured rating background noise level applicable to the operating time.

The criteria used to assess post-midnight inaudibility will be based on the higher of the noise level of:

- Threshold of Hearing Test

  Where the external, post-midnight noise level in any octave band is less than the threshold of hearing plus 10 dB, noise though an open window would be inaudible internally. The following tables indicates the threshold of hearing levels adopted.

Table 3 - Threshold of Hearing Test, dB

Threshold of Hearing	Octave Band Centre Frequency								
	31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
ISO226:2003	60	33	22	11	4	2	-1	5	13
External Level*	70	43	32	21	14	12	9	15	23

* Based on a 10 dB noise reduction through an open window

- Masking Test

  L_{10} entertainment noise level in any octave band is at least 10 dB below the corresponding background noise level.

Appendices A and B summarise the site noise measurements made and the calculation of applicable rating background noise levels and criteria. The following tables summarise the entertainment emissions criteria adopted for each receiver.

Table 4 – Receiver 1 – External Assessment Criteria, L_{10} dB

Time	Octave Band Centre Frequency								
Frequency	31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
7am to 6pm, L_{10}*	63	64	55	56	54	52	49	46	41
6pm to 10pm, L_{10}*	64	65	56	57	55	53	50	47	42
10pm to Midnight, L_{10}*	62	63	54	55	53	51	48	45	40
Midnight to 4am, L_{10}**	59	60	51	52	50	48	45	42	37
Midnight to 4am – Internal Inaudibility criterion***	70	50	41	42	40	38	35	32	27

* External L_{90} plus 3dB

** External L_{90} plus 0dB

*** Higher of External L_{90} minus 10dB, and external threshold of hearing level.

4.3 RECEIVER NOISE PREDICTIONS

Predictions of entertainment noise to nearby residential receivers from use of the premises is presented in this section. Predictions assume that the building and management controls detailed in Section 4.4 have been implemented.

We note that compliance at the specified receivers will result in compliance at all other receivers located further from the site.

Operational noise levels have been predicted at the worst effected residential receiver by:

- Taking attended measurements at the most significant noise sources throughout the venue. The spectrum of the highest recorded noise level is presented below. This has been conservatively utilised as a spatially averaged L_{eq} noise level within the facility throughout the gaming room area:

63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	A-wt
75	73	72	66	65	63	61	57	**71**

- Correcting for any attenuation between the noise source including enclosures, distance, directivity and barrier effects, where present.
- Adding the contribution from multiple noise sources at each receiver to determine the L_{10} noise level.

Table 5 – Predicted Entertainment Noise to Receiver 1, L_{10} dB

Time		Octave Band Centre Frequency								
		31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
2am to 4am Proposed Extended Hours	Predicted Noise Level, L10	<30	<30	<30	<30	<30	<25	<25	<25	<20
	Criteria, L10	59	60	51	52	50	48	45	42	37
	Inaudibility criterion	70	48	39	40	38	36	33	30	25
	Compliance	**Yes**								

4.4 MECHANICAL PLANT OPERATION

Acoustic Logic note that there are no proposed increases / alterations to the existing site MEP servicing the Station House development nominated within the proposal. Additionally, the operational capacity of the venue is not increasing with respect to the time periods of assessment nominated within the NSW EPA document, *Noise Policy for Industry 2017*, noting that the currently approved operational hours for the venue include operation during the nighttime period (10pm-7am). Hence, mechanical plant will continue to operate at an equivalent capacity to the approved operation from an acoustic viewpoint. Details of any additional MEP required to service the development should be provided to an acoustic consultant to ensure compliance with the requirements of the development consent.

4.5 COMPLYING MITIGATION

The following controls are recommended to ensure ongoing compliance with the requirements listed within Section 4.2 of this report:

- All entry/exit doors are to remain closed after 10pm, exclusive of patron ingress and egress.
- Management should ensure patrons leave the site in a prompt and orderly manner as much as practical.
- Prominent notices should be placed to remind people that a minimum amount of noise is to be generated when leaving the premises.
- In accordance with the Venue Liquor License Condition 3060, no entertainment other than background music can be provided after 12:00 midnight.
- In accordance with the Venue Liquor License Condition 3080, no more than 75 patrons are to be in the licensed area of the venue after 12:00 midnight.

5 CONCLUSION

This report presents an assessment of noise impacts associated with the proposed increased operational hours of the Station House Hotel, located at 201-203 Beamish Street, Campsie.

Assessment of the noise impacts from the development has been provided with reference to the requirements of the following documents:

- Liquor Act 2007 (as amended).
- Liquor Amendment (Night Time Economy) Act 2020.
- 24-Hour Economy Legislation Amendment (Vibrancy Reforms) Act 2023.
- Liquor Regulation (2019) (as amended).
- Liquor and Gaming NSW – 'Disturbance Complaint Guidelines for Licenced Premises' ("**DCG**")(1 July 2024).
- NSW EPA – 'Noise Policy for Industry' ("**NPfI**") October 2017.

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

Yours faithfully,

Acoustic Logic Pty Ltd
Brandon Mifsud

APPENDIX A AMBIENT NOISE MONITORING

This appendix summarises the ambient noise data measured near the subject site, and the calculated noise level descriptors adopted to characterise the existing noise environment.

Monitoring has been undertaken to assess the background noise levels at the nearby residential receivers.

A.1 NOISE DESCRIPTORS

Ambient noise constantly varies in level from moment to moment, so it is not possible to accurately determine prevailing noise conditions by measuring a single, instantaneous noise level.

To quantify ambient noise, a 15 minute measurement interval is typically utilised. Noise levels are monitored on a continuous basis over this period, and statistical and integrating techniques are used to characterise the noise being measured.

The principal measurement parameters are:

L_{eq} - represents the average noise energy during a measurement period. This parameter is derived by integrating the noise levels measured over the measurement period. L_{eq} is important in the assessment of noise impact as it closely corresponds with how humans perceive the loudness of steady state and quasi-steady state noise sources (such as traffic noise).

L_{90} – This is commonly used as a measure of the background noise level as it represents the noise level heard in the quieter periods during the measurement interval. The L_{90} parameter is used to set noise emission criteria for potentially intrusive noise sources since the disturbance caused by a noise 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.

L_{10} is used in some guidelines to measure noise produced by an intrusive noise source since it represents the average of the loudest noise levels produced at the source. Typically, this is used to assess noise from licenced venues.

L_{max} is the highest noise level produced during a noise event, and is typically used to assess sleep arousal impacts from short term noise events during the night. It is also used to assess internal noise levels resulting from aircraft noise and ground vibration induced noise from railways.

L_1 is sometimes used in place of L_{max} to represent a typical noise level from a number of high level, short term noise events.

A.2 UNATTENDED LONG TERM NOISE MONITORING

A.2.1 Equipment Used

Unattended noise monitoring was conducted using the following equipment:

- Rion NL-42 (Type 2)
- Rion Sound Level calibrator Type NC 74

Monitoring was continuous, with statistical noise levels recorded at 15-minute intervals throughout the monitoring period. 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.

A.2.2 Locations Monitored

The locations monitored are indicated Figure 2. Photographs of the monitoring locations are provided below:

A.2.3 Weather Affected and Extraneous/Outlying Data

Periods affected by adverse weather conditions (as defined by Fact Sheet B) are indicated on the following data graphs, and have been excluded from the assessment. Weather data was obtained from records provided by the Bureau of Meteorology for the following station:

- Canterbury Racecourse AWS

As the Bureau of Meteorology wind data is typically obtained at an exposed location at 10m above ground level, and the monitoring location was at approximately 4.5m above ground in more sheltered locations a wind multiplying factor of 0.5 has been applied to the BOM data to estimate the wind speed at the microphone location.

The following additional periods have been identified as likely to contain significant periods of non-representative data and have been excluded from the assessment:

- Night – 07/11/2024 and 12/11/2024

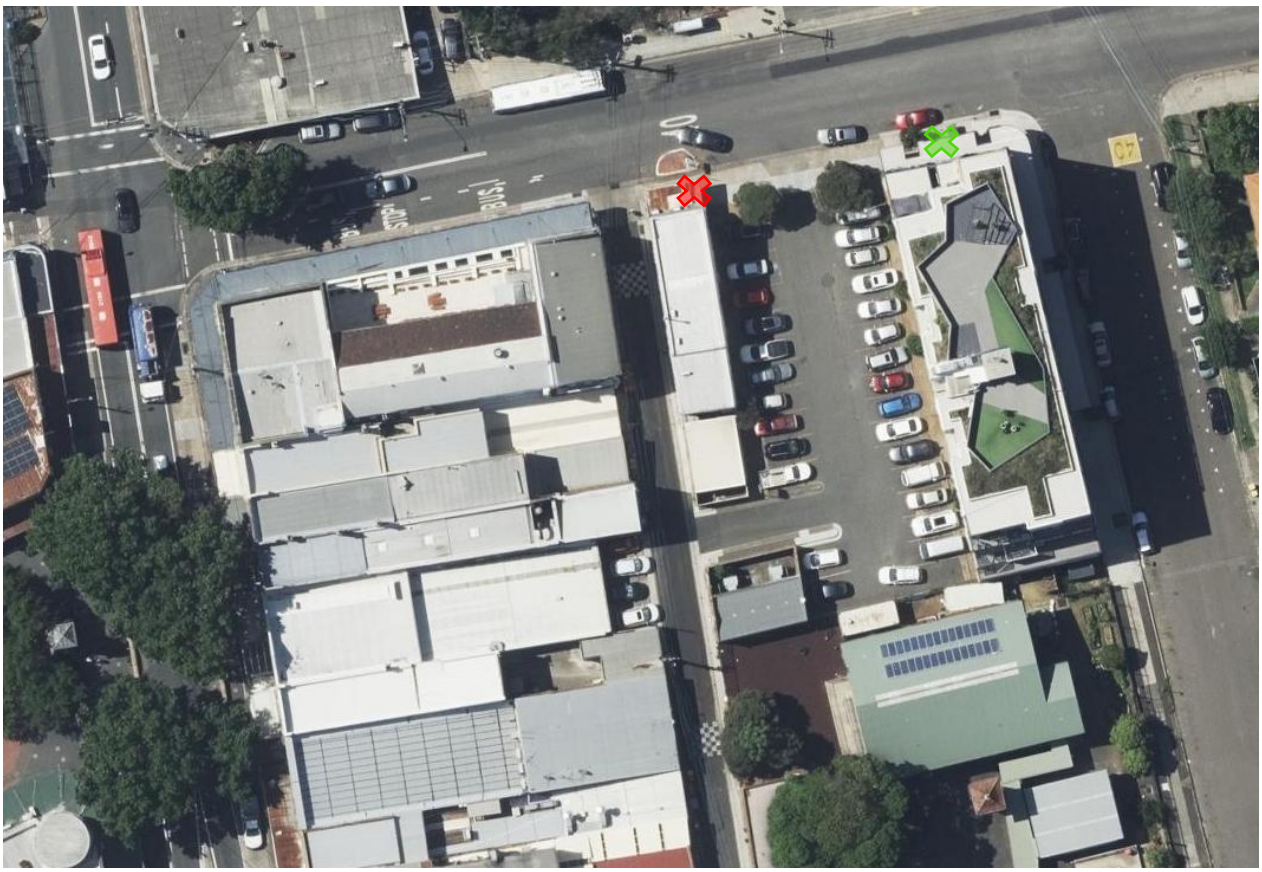


Figure 2 – Noise Monitoring Location

Unattended Monitoring Location

Attended Monitoring Location

A.3 CALCULATION OF REPRESENTATIVE AMBIENT NOISE LEVELS

The ambient, assessment and rating background levels have been determined from the unattended, long-term noise monitoring data based on the methodology in the Noise Policy for Industry Fact Sheet B.

A.4 RATING BACKGROUND NOISE LEVELS

The following table summarises the assessment background noise levels (ABL) for each location. Note that where no ABL is indicated, this is because that period was significantly affected by adverse weather or other extraneous noise.

The day, evening and night periods are as defined in the NPfI, as follows:

- 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.

In accordance with the NPfI:

- If the calculated evening rating background noise level is higher than the day level, the day rating background noise level has been adopted for the evening period.
- If the calculated night rating background noise level is higher than the evening level, the evening rating background noise level has been adopted for the evening period.
- If the calculated day rating background noise level was less than 35 dB(A), a "default" background of 35 dB(A) has been adopted.
- If the calculated evening or night rating background noise level was less than 30 dB(A), a "default" background of 30 dB(A) has been adopted.
- Where monitoring was conducted within 3m of a significant sound reflecting surface, 2.5 dB(A) has been subtracted from the calculated rating background to account for an increase in noise from reflections.

Table 6 –Rating Background Noise Levels

Location	Date	RBL		
		Day	Evening	Night
45 S Parade, Campsie	07/11/2024	-	52.1	-
	08/11/2024	55.2	56.5	54.9
	09/11/2024	53.4	54.7	52.5
	10/11/2024	52.4	55	54.5
	11/11/2024	55.1	53.6	50.2
	12/11/2024	54.4	54.8	-
	13/11/2024	54.1	53.5	49.6
	14/11/2024	54.4	55.3	52.8
	Calculated RBL	**54**	**55**	**53**

Spectra have been measured using attended monitoring, as indicted below.

A.4.1 Equipment Used

Attended noise monitoring was conducted using:

- Norsonics SA 140 (Type 1) sound analyser
- Rion NL-42 (Type 2) sound level meter

The sound level meter equipment used retain current calibration - either manufacturers' calibration or NATA certified calibration, and were field calibrated at the beginning and the end of the measurement with no significant drift in calibration noted.

A.4.2 Locations Monitored

The monitoring locations are indicated in Figure 2 and are described below:

- Monitoring was undertaken outside R1 - 45 S Parade. The location is representative of ambient noise environment of nearest residential receivers along S Parade.

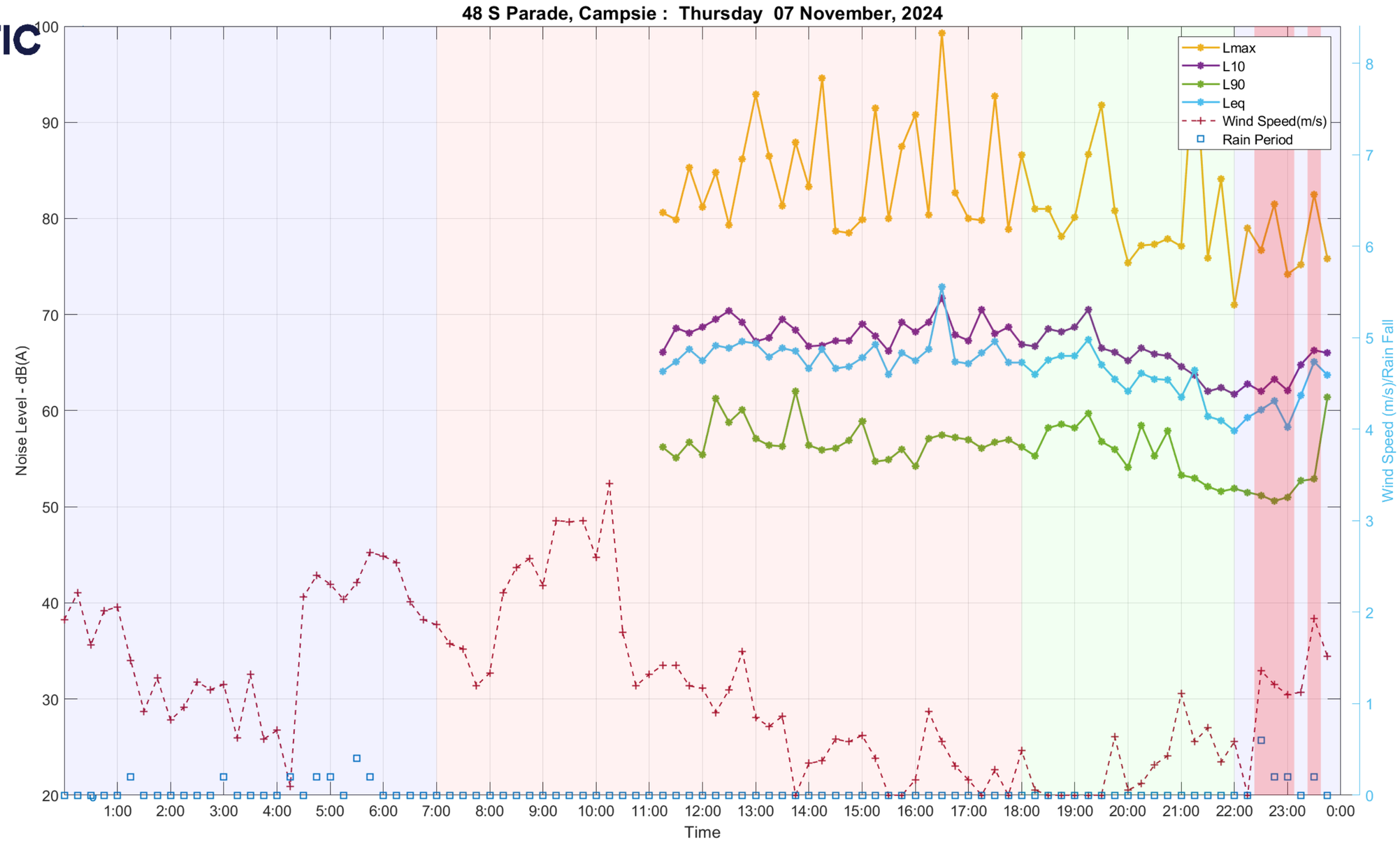
A.4.3 Results

Table 7 – Background Noise Spectrum (normalised to 0 dB(A))

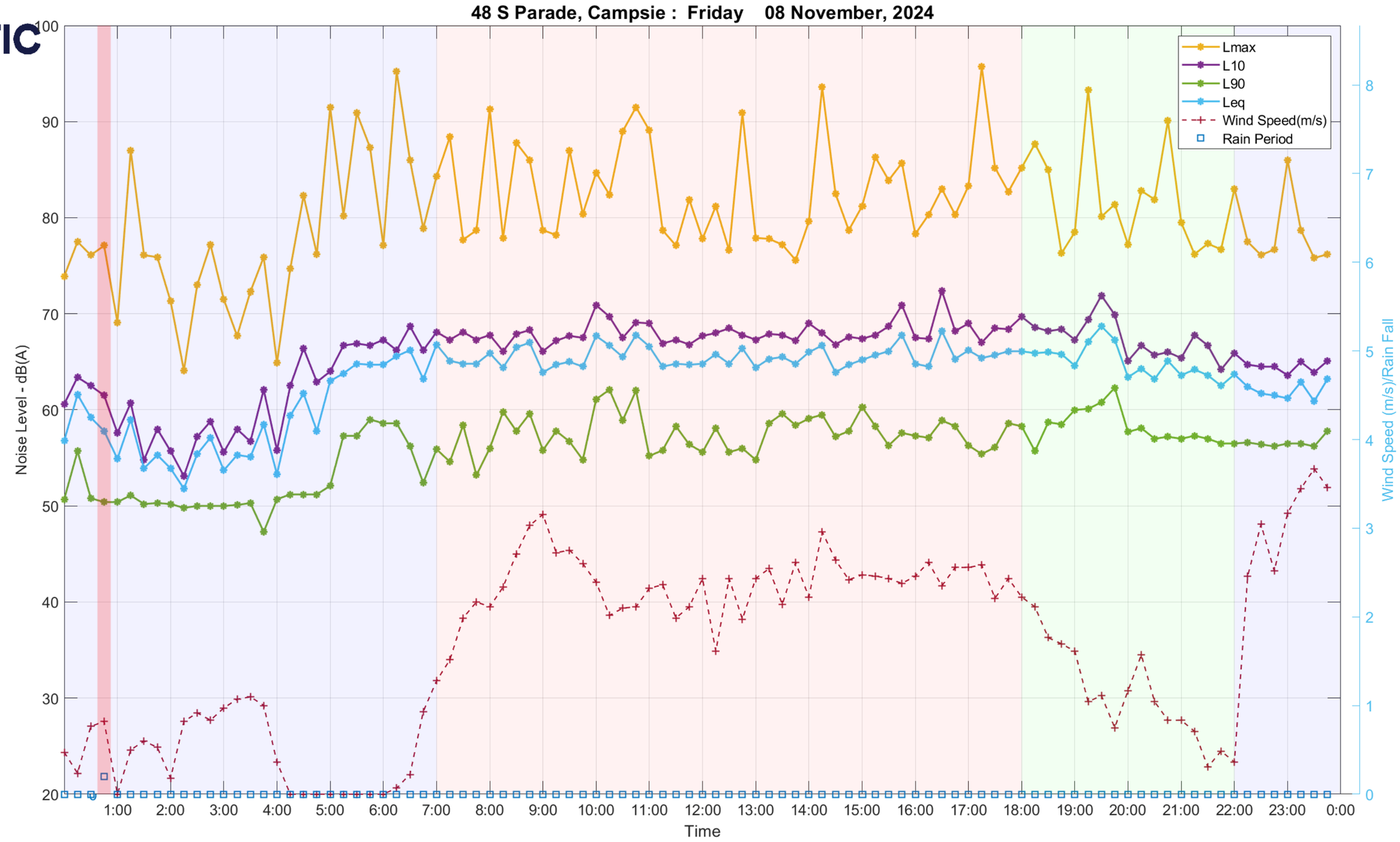
Octave Band Centre Frequency								
31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
6	7	-2	-1	-3	-5	-8	-11	-16

A.5 UNATTENDED MONITORING DATA GRAPHS

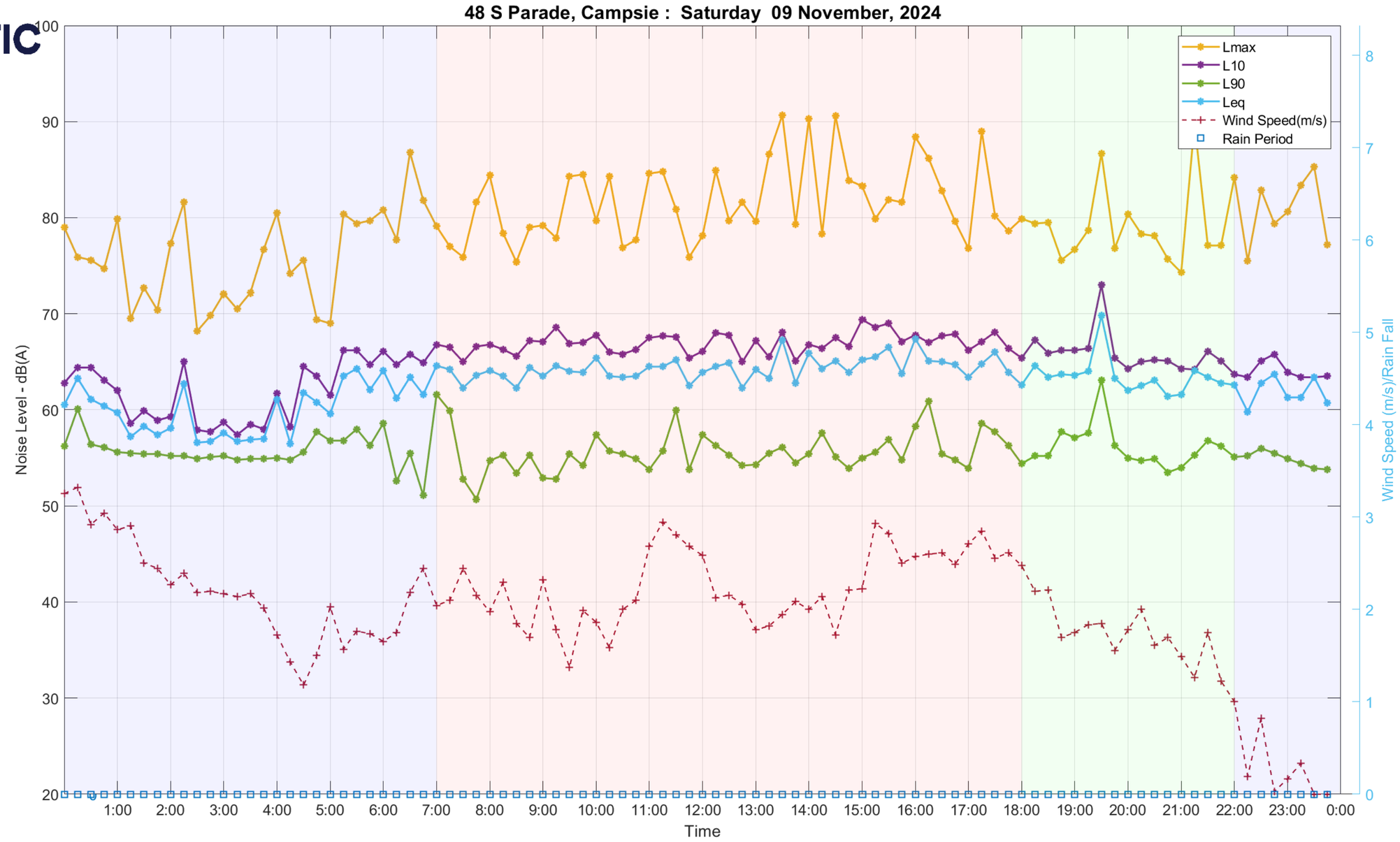
ACOUSTIC LOGIC



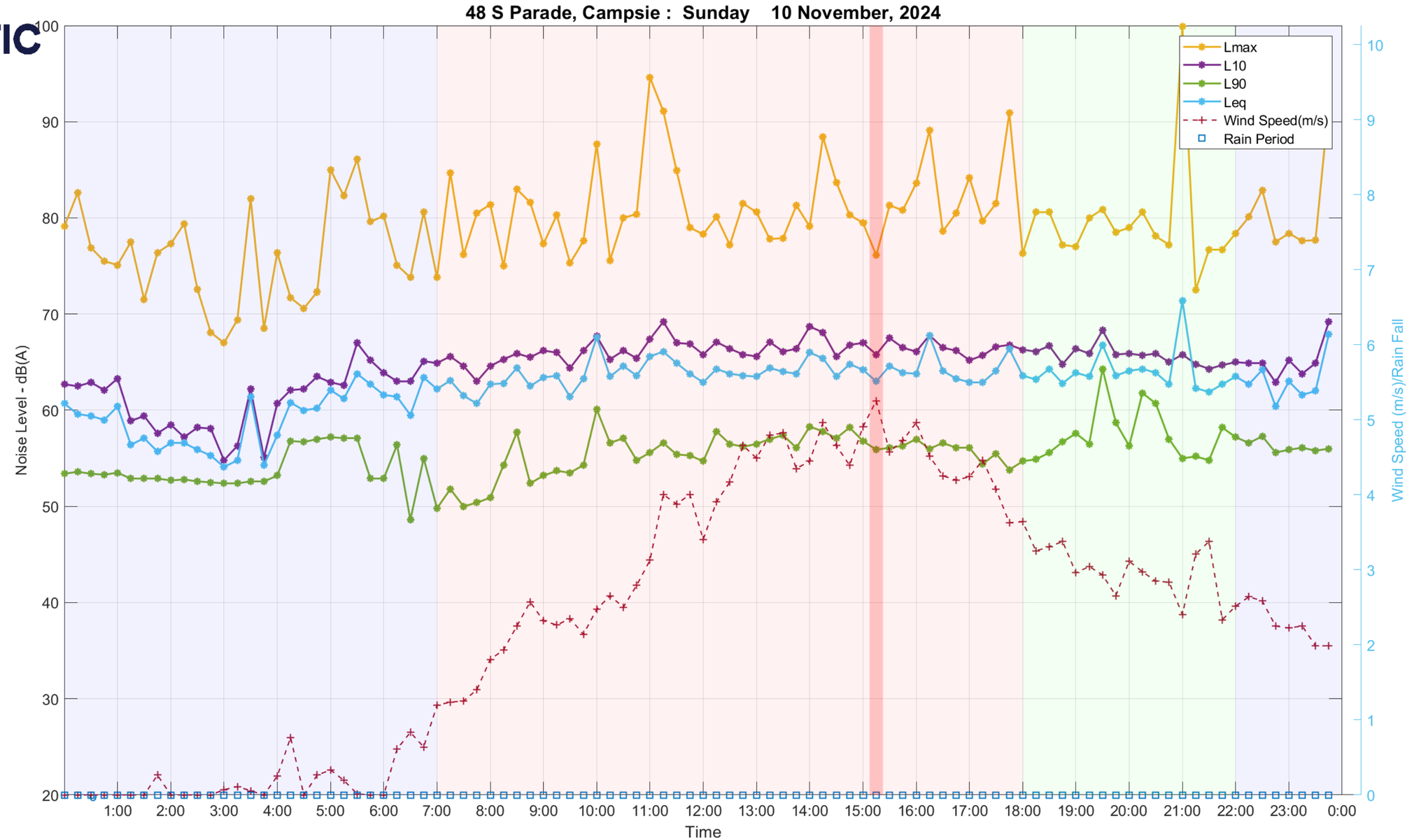
ACOUSTIC LOGIC



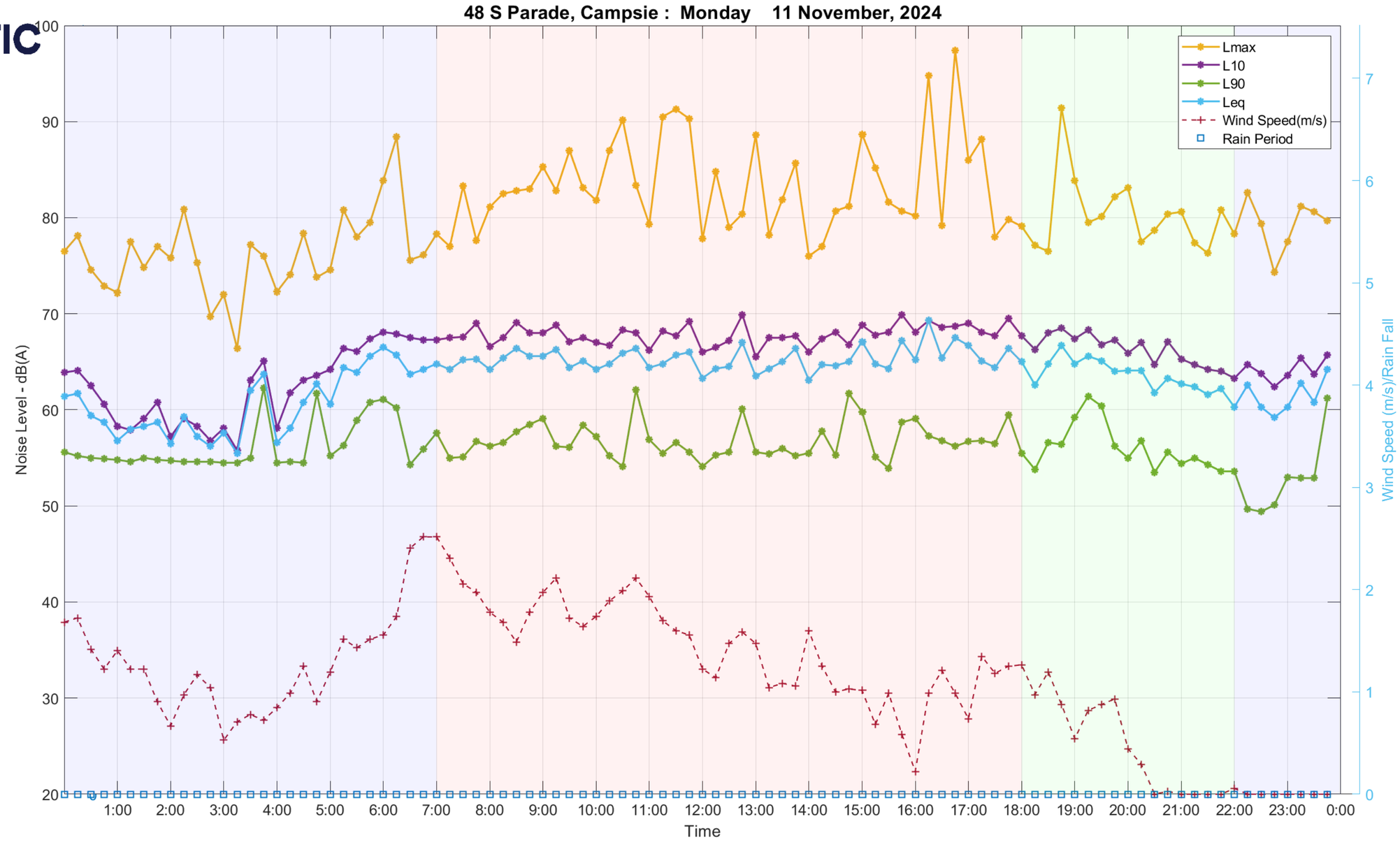
ACOUSTIC LOGIC



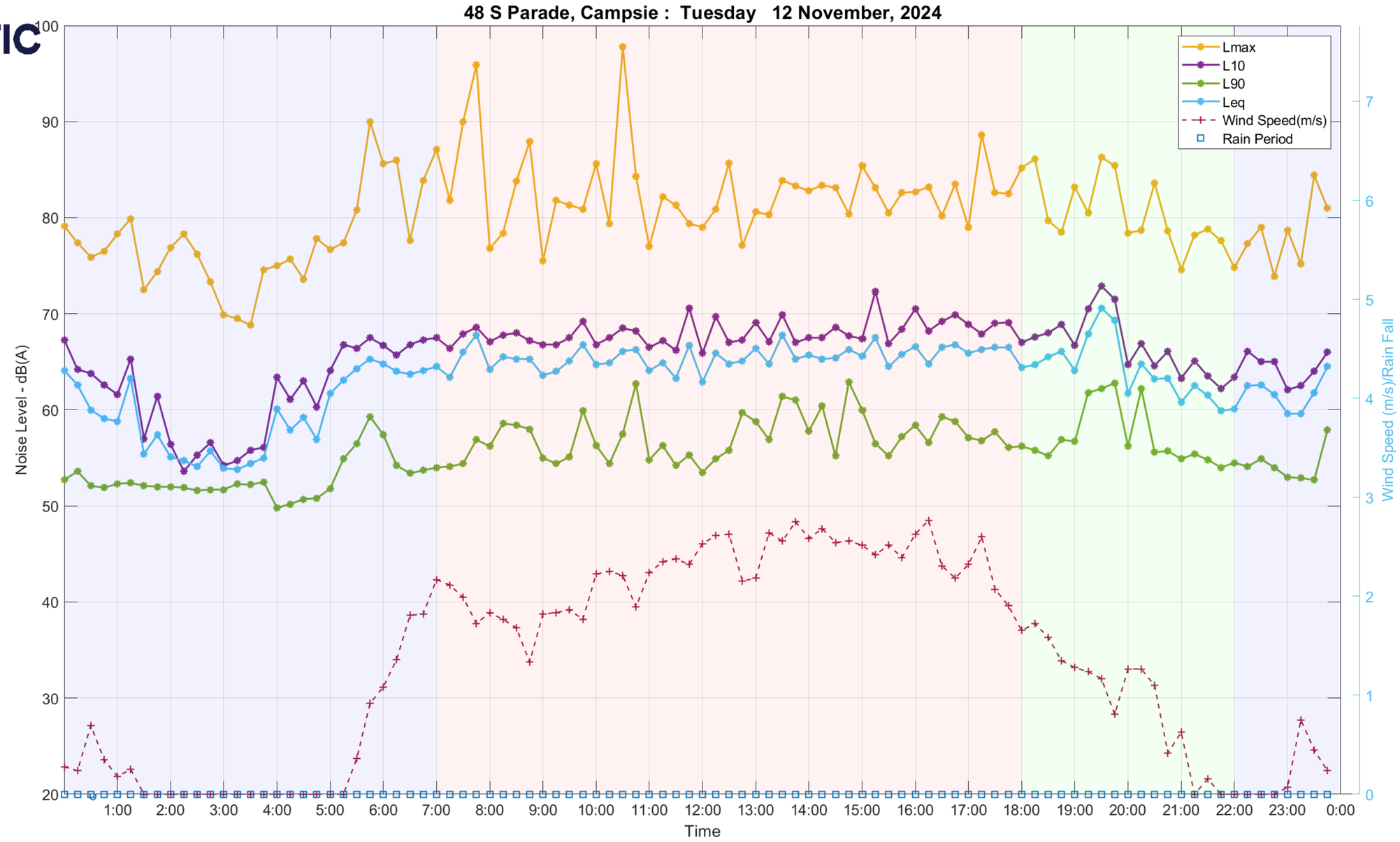
ACOUSTIC LOGIC



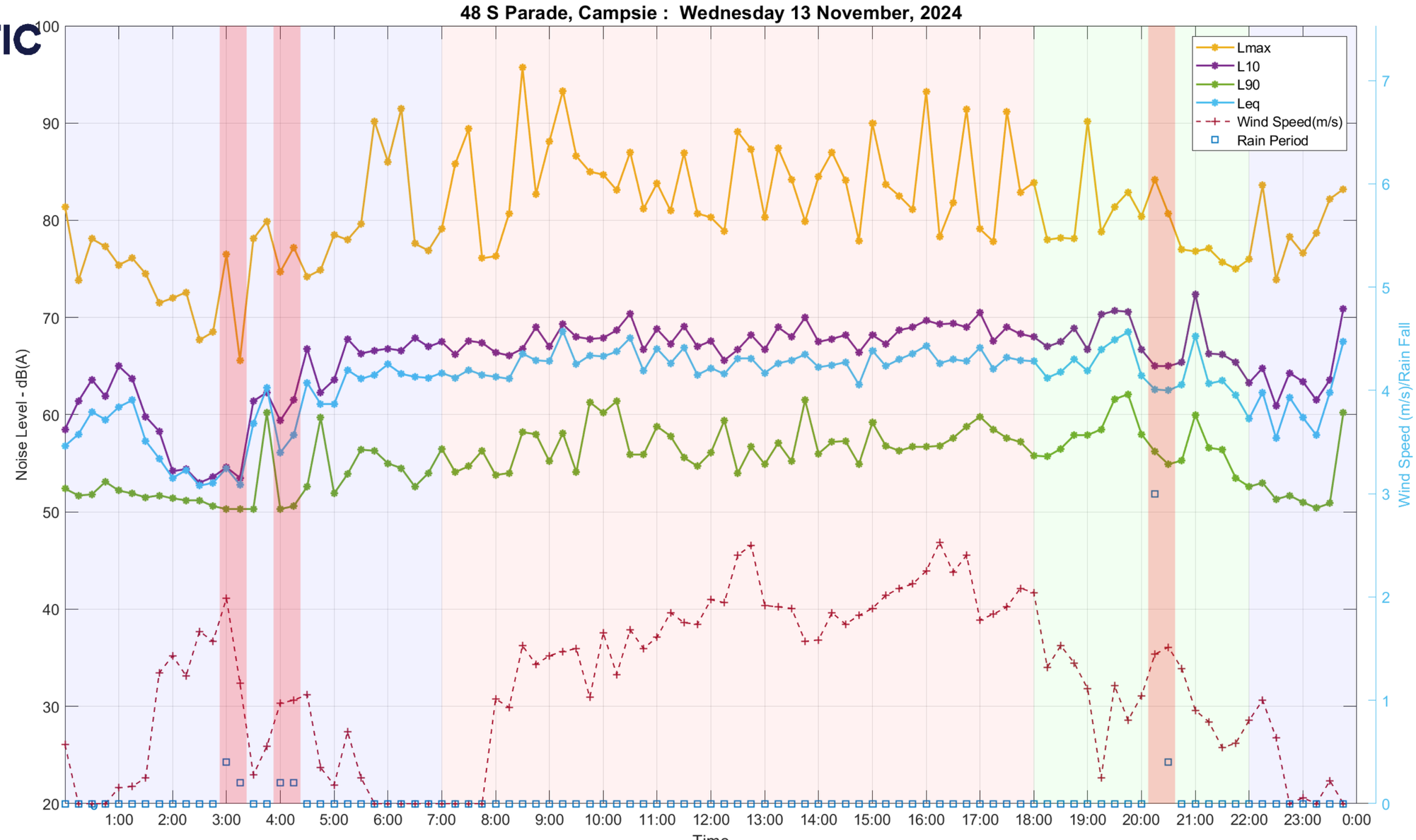
ACOUSTIC LOGIC



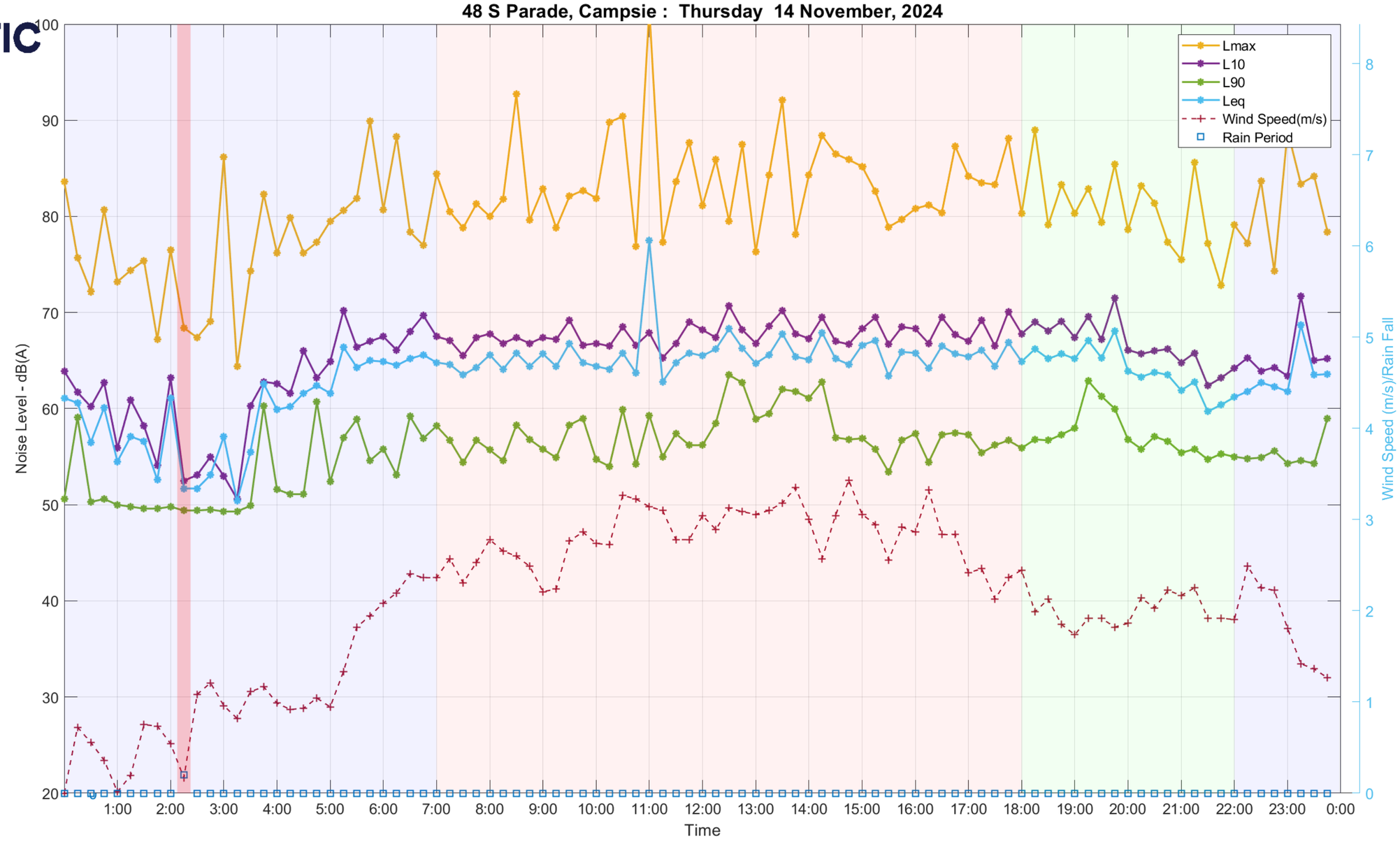
ACOUSTIC LOGIC



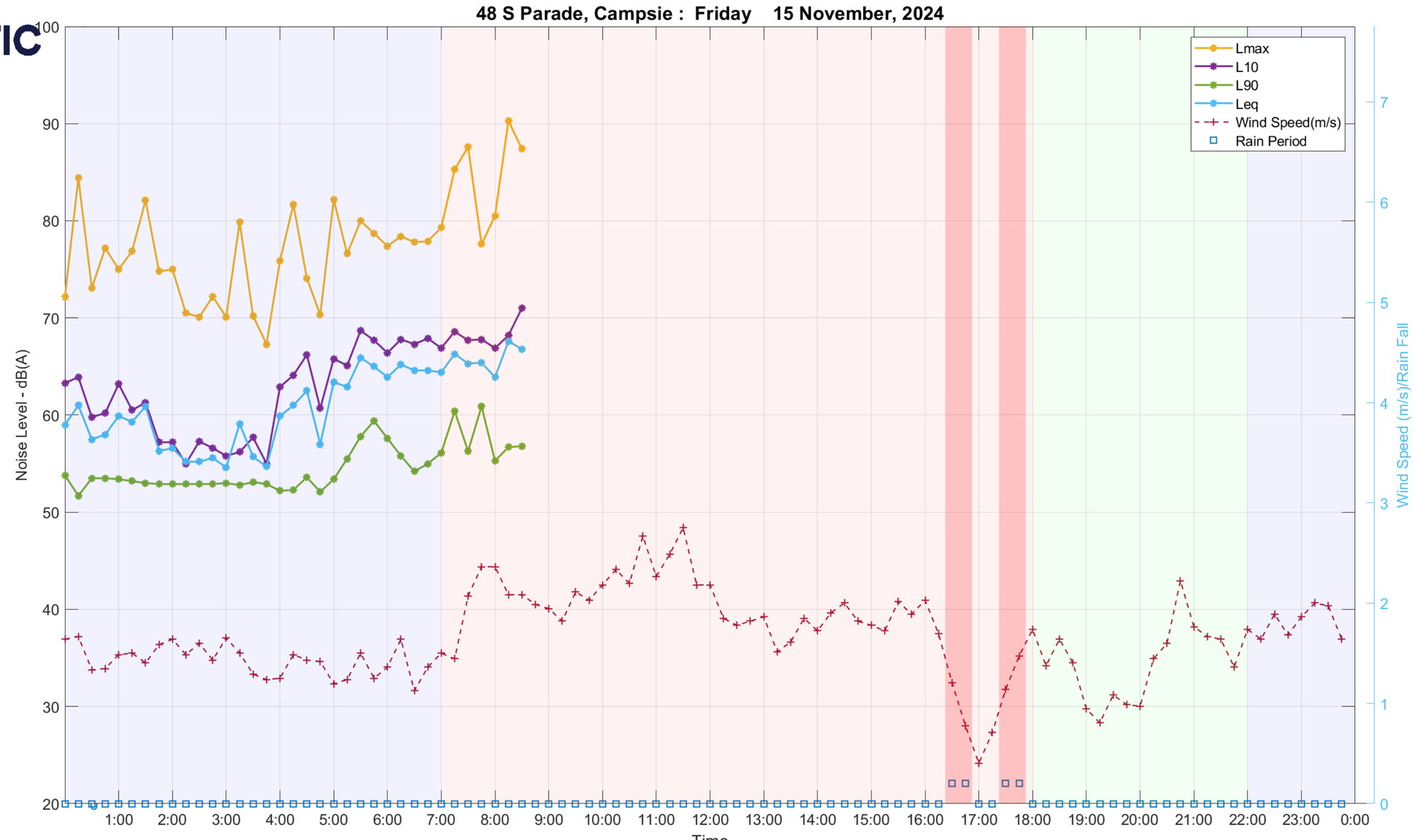
ACOUSTIC LOGIC



ACOUSTIC LOGIC



ACOUSTIC LOGIC



Wind Speed is corrected using factor 0.5000 based on logger location

APPENDIX B ENTERTAINMENT NOISE CRITERIA

Entertainment noise assessment criteria have been determined based on the objectives adopted for the assessment, and the measured background noise data. These are summarised below.

Table 8 – Receiver 1 – Entertainment Noise External Assessment Criteria, $L_{10,15min}$ (dB)

Time	Octave Band Centre Frequency								
	31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Criteria - 7am to 6pm, L_{10}*	63	64	55	56	54	52	49	46	41
Criteria - 6pm to 10pm, L_{10}*	64	65	56	57	55	53	50	47	42
Criteria - 10pm to Midnight, L_{10}*	62	63	54	55	53	51	48	45	40
Criteria - Midnight to 4am, L_{10}**	59	60	51	52	50	48	45	42	37
External L_{90} minus 10dB	49	50	41	42	40	38	35	32	27
External Threshold of Hearing Level	70	43	32	21	14	12	9	15	23
Midnight to Closing – Internal Inaudibility criteria***	70	50	41	42	40	38	35	32	27

* External L_{90} plus 3dB

** External L_{90} plus 0dB

*** Higher of External L_{90} minus 10dB, and external threshold of hearing level.