NVAQ

Environmental Noise Compliance Monitoring

Sydney International Container Terminal

Hutchinson Ports Australia

January 2025

Gate B, 150-160 Foreshore Rd, Botany NSW 2019

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Document Control

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1. Introduction

NVAQ Pty Ltd. (NVAQ) was commissioned by Hutchinson Ports Australia (HPA) to conduct the biannual environmental noise compliance monitoring at Sydney International Container Terminal Pty Ltd (SICTL) located at Gate B, 150-160 Foreshore Road, Botany NSW 2019.

The noise monitoring was conducted during normal port operations between 14 January to 29 January 2025.

The assessment contained within this report was conducted in accordance with the requirements of the SICTL site's current Environment Protection Licence EPL 20322, 1 September 2016, Clauses L3 and E1 at specified locations.

The noise monitoring was conducted during normal port operations and included unloading/loading of several large container ships. The results of the noise compliance monitoring for January 2025 are contained within this report.

Ambient background noise monitoring was conducted at the nearest noise sensitive receivers in the surrounding area of SICTL. A detailed summary of the noise monitoring results is enclosed in this report.

2. Scope – Noise Compliance

The scope of work provided to NVAQ for this assessment was as follows:

Prepare a noise compliance assessment for the existing site operations with reference to the NSW Environment Protection Authority (EPA) Environmental Protection Licence (EPL) and other relevant EPA noise guidelines and requirements.

This requires the following items:

- Assess the existing ambient noise environment in the areas surrounding the subject site.
- Compare the measured noise levels to EPL noise limits.
- Provide recommendations for further courses of action (where required).

3. Environmental Protection Licence (Noise)

The noise emissions from the on-site operations are required to satisfy specific NSW EPA requirements outlined in the site's EPL (Licence No. 20322).

Condition L3 Noise Limits Specifies:

L3.1 *Noise from the premises must not exceed the noise limits presented in Table 3-1 below. Note the limits represent the noise contribution at the nominated receiver locations.*

Table 3-1 : Noise Limits - LAeq

Most affected residential location	Day $L_{Aeq\ (15min)}$	Evening $L_{Aeq\ (15min)}$	Night $L_{Aeq\ (15min)}$	Night $L_{Aeq\ (9hours)}$
Chelmsford Avenue	40 dB(A)	40 dB(A)	40 dB(A)	38 dB(A)
Dent Street	45 dB(A)	45 dB(A)	45 dB(A)	43 dB(A)
Botany Road	47 dB(A)	47 dB(A)	47 dB(A)	45 dB(A)
Jennings Street	36 dB(A)	36 dB(A)	36 dB(A)	35 dB(A)
Australia Avenue	35 dB(A)	35 dB(A)	35 dB(A)	35 dB(A)
Military Road	42 dB(A)	42 dB(A)	42 dB(A)	40 dB(A)

L3.2 *Noise from the premises must not exceed the noise limits presented in Table 3-2 below. Note the limits represent the noise contribution at the nominated receiver locations.*

Table 3-2 : Noise Limits - Night

Most affected residential location	Day $L_{Aeq\ (15min)}$
Chelmsford Avenue	40 dB(A)
Dent Street	45 dB(A)
Botany Road	47 dB(A)
Jennings Street	36 dB(A)
Australia Avenue	35 dB(A)
Military Road	42 dB(A)

L3.3 *For the purposes of Conditions L3.1 and L3.2*

Day is defined as the period from 7 am to 6 pm (Monday to Saturday) and 8 am to 6 pm (Sundays and Public Holidays).

Evening is defined by the period from 6 pm to 10 pm on any day.

Night is defined as the period from 10 pm to 7 am (Monday to Saturday) and 10 pm to 8 am (Sundays and Public Holidays).

L3.4 *For the purposes of Condition L3.1 noise from the premises must be measured or computed at the most affected point on or within the residential boundary.*

L3.5 *For the purpose of Condition L3.1, if a residential dwelling is located more than 30m from the residential boundary, noise from the premises must be measured or computed at the most affected pointed within 30m of the dwelling.*

L3.6 *Noise from the premises is to be measured at one metre from the dwelling façade to determine compliance with the LA1 (one minute) noise limits in condition L3.2.*

L3.7 *The noise limits specified in condition L3.1 and L3.2 apply under the following meteorological conditions:*

a) *wind speeds up to 3 m/s at 10 m above ground level*
b) *temperature inversion conditions of up to 1.5 degrees C/100 m.*

Condition E1 *Noise Monitoring and Compliance Reporting specifies the following:*

E1.1 *The licensee must undertake noise monitoring as follows:*

a) *The noise monitoring must be undertaken within 6 months of the commencement of operations.*
b) *The noise monitoring must verify the assumptions and noise limits as outlined in the Port Botany Container Terminal Expansion Noise Assessment (2003), part of the Environmental Impact Statement submitted to the Department of Planning and Infrastructure in accordance with the Environmental Planning and Assessment Act 1979 for the approved container terminal development, and Conditions L3.1 and L3.2 of this license.*

E1.2. *Every 6 months, the Licensee must undertake a periodic noise monitoring program consisting of attended and unattended monitoring and provide a report within one month after completion of monitoring to the EPA's Manager, Sydney Industry at PO Box 668 Parramatta NSW 2124 containing the following information:*

a) *Unattended monitoring data for a continuous period of no less than 2 weeks*
b) *Attended monitoring data during the period outlined in subsection*
c) *Monitoring data from a minimum of three locations specified in Conditions L3.1 and L3.2;*
d) *An assessment of the noise levels against Condition L3 including trend analysis; and*
e) *Details of any feasible and reasonable noise mitigation measures that have been or are proposed to be implemented further reduce noise levels below the limits prescribed in this license.*

4. Site Description

4.1. Location and Operations

SICTL is located at B150-160 Sirius Road (off Foreshore Road), Botany, New South Wales (NSW) 2019 within Terminal 3 which is part of NSW Ports' Port Botany Expansion (PBE) Project that also includes other port operators and terminals. The SICTL Terminal 3 is situated parallel to the runway at Sydney International Airport.

The site occupies an approximate area of 63 hectares, extending 550 metres west and 1,300 metres north of the existing northern quay of Brotherson Dock. SICTL operates a modern international container terminal at Port Botany with key features being a 1300m Quay Line and two Rail Sidings equal to 1.6km of track.

The SICTL port site operates with the following plant and equipment:

- Six Automated Stacking Cranes (ASC).
- Engineering and Maintenance building – includes workshop and washing bay.
- Two Vessel Berths - HD1 and HD2.
- Four Quay Cranes (QCs).
- Shuttle carriers, reach stackers and other operational equipment.
- Railway sidings and freight train delivery and collection.
- Container yards, including Truck grids

Figure 4-1 shows the SICTL Site Layout, Work Areas & Potential Noise Sources

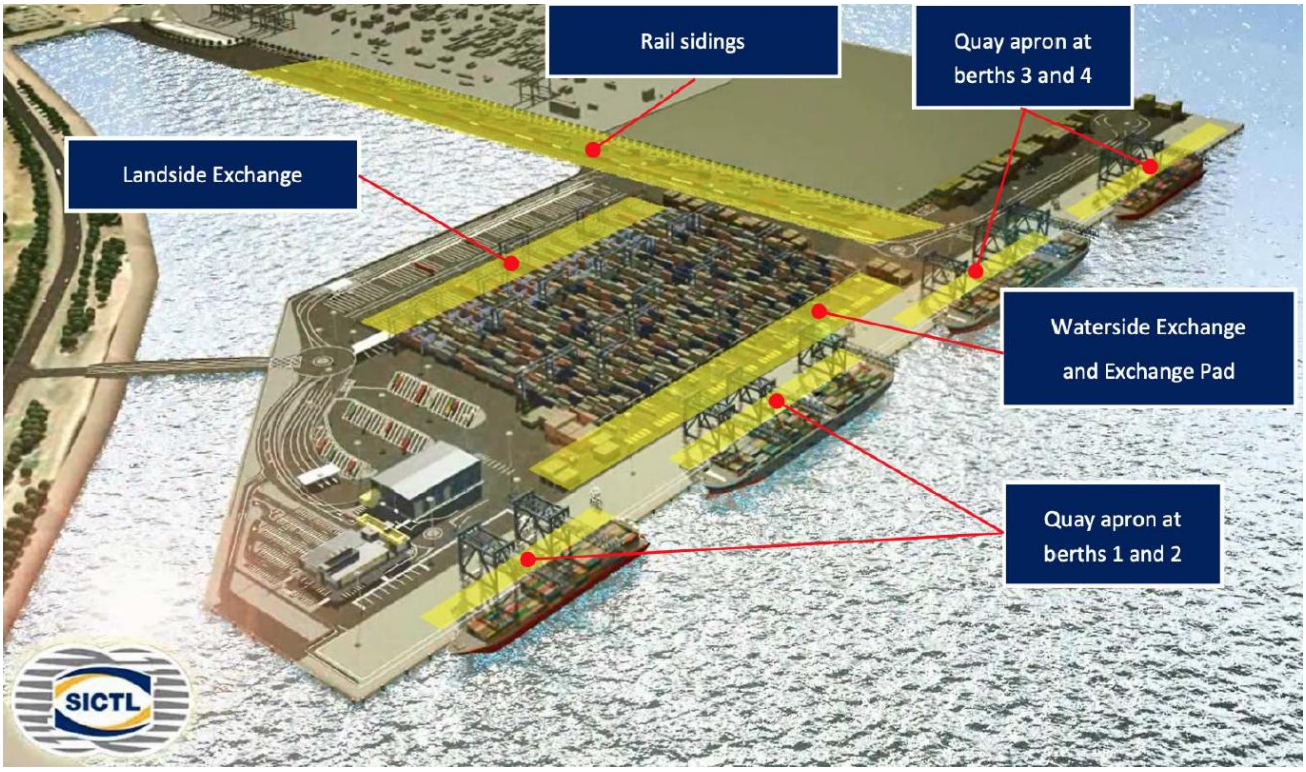


Figure 4-1: SICTL Site Layout, Work Areas & Potential Noise Sources

4.2. Adjacent Land Use

Areas surrounding the site comprises industrial, port related, commercial, residential and recreational land uses, as per the descriptions in the following section.

4.2.1. Industrial and Commercial Uses

- The main industrial land uses near the terminal include Patrick's Ports Botany Container Terminal, Caltex Oil Terminal, and DP World Australia (DP World container terminal). Several other industrial sites are also in close proximity to the area, such as Opal, Orora Recycling, Orica, BOC, Air Liquid, Mobil and British Petroleum Oil Terminals, Savino Del Bene Australia, Warehouse Solutions International, and Owens Transport. The Botany Industrial Park is approximately 1,000 metres from the site.
- Sydney (Kingsford Smith) Airport, the primary domestic and international airport in Sydney, is roughly 3,000 metres west of the site. The Discovery Cove Business Park, a commercial business center, is situated near the SICTL on Botany Road.
- A goods freight rail line operates from Port Botany and services SICTL, Patrick's Port Botany, DP World container terminal, Qube Logistics, and Veolia. The line connects with the metropolitan freight and intermodal terminal. Storage for goods occurs at the Cooks River and Botany Goods Yards, SICTL, Patrick's Port Botany container terminal, DP World container terminal, and various nearby transport and logistic facilities, including Sydney Haulage.

4.2.2. Residential, Recreation and Open Space Uses

- Residential land uses are situated to the east, northeast, and northwest of the site, encompassing the suburbs of Botany, Banksmeadow, and Matraville. Residential receivers to the north and northeast are located at distances ranging from 650 meters to 1,000 meters. These identified residential areas are considered nearest to the SICTL facility.
- The nearest educational institutions, as measured from the terminal's northern point, are Banksmeadow Primary School located 1km away and Matraville Primary School, located 1.6km from the site.
- Several recreational areas are present in the surrounding suburbs, including multiple open spaces.

4.3. Noise Sensitive Survey Locations

Details of three noise sensitive survey locations are provided in Table 4-1 and marked on the aerial image in Figure 4-2.

Further details on the survey locations are provided in Section 5.2.

Table 4-1 : Noise Sensitive Receivers Locations

Receiver	Receiver Type	Description
46 Jennings Street, Matraville	Residential	Single storey residential dwelling
80 Australia Avenue, Matraville	Residential	Single storey residential dwelling
12 Military Road, Matraville	Commercial	Graveyard & Crematorium

Figure 4-2: Site Aerial View, Subject Site & Noise Survey Locations

5. Noise Compliance Monitoring Methodology

Unattended and attended noise compliance measurements were conducted to quantify the existing ambient noise environment and noise impacts from the Site during normal operations.

A detailed summary of the methodology is provided in the section below.

5.1. Instrumentation

Unattended noise logging was conducted in accordance with the NSW EPA guidelines using the noise survey equipment outlined in Table 5-1. The noise loggers and sound level meter were calibrated before and after measurements and found no significant calibration drift.

The calibration certificates for each equipment item can be provided upon request.

Table 5-1 : Noise Logging Equipment

Equipment	Model	Serial Number	Calibration Due
Noise Logger	Ngara S-Pack	8780A2	31/08/2025
Noise Logger	Ngara S-Pack	8780A3	18/04/2026
Noise Logger	Ngara S-Pack	878007	26/09/2026
Sound Level Meter	Bruel & Kjaer 2270	3011793	09/04/2025
Acoustic Calibrator	Bruel & Kjaer Type 4231	2528486	18/02/2025

5.2. Measurement Location Details

Three measurement locations were selected in accordance with the locations specified in Consent Conditions L3.1 and L3.2 of the latest EPL (dated 1 September 2016). All locations were agreed by HPA and NVAQ prior to the noise survey.

The noise monitoring survey comprised three monitoring locations in accordance with Condition E 1.2. The three locations are marked on the aerial image in

Figure 4-2 for reference. Observations and information gathered at each monitoring location ensured that each location was suitable and was representative of the ambient noise environment for the location area.

The three monitoring locations have been established and described below in accordance with the previous noise survey conducted in July 2024.

5.2.1. Location 1: 80 Australia Avenue, Matraville

Unattended and attended noise monitoring was conducted at 80 Australia Avenue, Matraville. The noise logger was installed within the front yard of the residential property facing Australia Avenue. The monitoring location is approximately 1,900 metres from the south boundary of the SICTL site.

Attended noise survey measurements were conducted at the logger location during the Day, Evening & Nighttime periods.

This location is considered the nearest potential affected noise catchment area and was situated with an acceptable distance and separation from adjacent industrial tenancies.

The noise monitoring location was typical of an urban noise environment affected by local traffic, occasional birds and adjacent industrial tenancies between the subject site and the monitoring location. The adjacent industrial tenancies to this site include Orora Recycling facility and Sydney Haulage Container facility.

5.2.2. Location 2: 46 Jennings Street, Matraville

Unattended and attended noise monitoring was conducted at 46 Jennings Street, Matraville. The noise logger was installed within the front yard of the residential property facing Jennings Street. The monitoring location is approximately 2,200 metres from the south boundary of the SICTL site.

Note: This location has previously been a source of complaints regarding noise emissions from the Hutchison SICTL site and was not part of the original biannual noise compliance monitoring. As part of Conditions L3.1 and L3.2 of the EPL version 13 June 2017.

Attended noise survey measurements were conducted within 5 metres of the logger location on Jennings Street during the Day, Evening & Nighttime periods.

The industrial tenancies located between the site and the monitoring location include are Orora Recycling facility and Sydney Haulage Container facility.

5.2.3. Location 3: 12 Military Road, Matraville

Unattended and attended noise monitoring was conducted at 12 Military Road, Matraville, located within the Eastern Suburbs Crematorium. The noise logger was installed along the south-eastern fence of the site. The monitoring location is approximately 1,500 metres from the eastern boundary of the SICTL site where containers are loaded on trains.

Attended noise survey measurements were conducted at the logger location during the Day, Evening & Nighttime periods.

The main noise contributions at this location consisted of local traffic and adjacent industrial tenancies, such as DP World container terminal, P&O Trans Australia facility and Warehouse Solution International facility and activity associated with the cemetery are main noise contributors observed as influencing the local ambient noise environment.

5.3. Weather & Meteorological Conditions

All attended noise measurements were conducted during periods with no extraneous weather conditions and were characterised by low wind and no presence of rain.

In order to determine the noise levels at the unattended monitoring locations, any data affected by rainfall and high wind speed has been excluded in accordance with the provisions of EPA Noise Policy for Industry. Weather data from the Bureau of Meteorology's (BOM) Sydney Airport weather station has been used for this analysis.

6. Compliance Noise Monitoring Results

Unattended noise monitoring was conducted for a period of no less than two weeks from 14 January to 29 January in accordance with Condition E1.2 of the EPL and are summarised in Section 6.1 below.

Attended noise measurements were conducted at each of the three monitoring locations during the Day, Evening and Nighttime assessment periods and are summarised in Section 0 below.

General observations of the noise environment in the surrounding area include the following:

- Ambient noise environment characterised by urban hum
- The dominant noise source at all locations was local and distant traffic
- Aircraft activities were clearly audible at all locations
- Noise from adjacent industrial sites were audible at all monitoring locations during the Daytime assessment period, however noise from the port could not be determined and was inaudible during the evening and nighttime assessment periods.
- Birds, insects and distant local dogs barking were occasionally heard at each location
- Trucks, truck breaks, forklifts, reverse beeper sounds could be heard at nearby industrial tenancies during the Daytime assessment periods. This noise is not likely to have been from SICTL due to the distance separation from each of the 3 receiver locations.
- The noise environment at each monitor location was dominated by general traffic, urban and industrial noise sources.
- The ambient noise levels measured at the three logger locations are dominated by local noise sources. This has been confirmed through the attended noise measurement survey and observations during setup and retrieval of equipment.

6.1. Unattended Noise Monitoring Results

The results of the unattended noise compliance measurements for each of the three locations are provided in this section below.

6.1.1. Location 1: 80 Australia Avenue, Matraville

The results of the unattended noise survey at Location 1: 80 Australia Avenue are provided in Table 6-1 below.

Table 6-1 : 80 Australia Ave - Environmental Nosie Survey Results Summary

Date	Day 0700-1800hrs			Evenings 1800-2200hrs			Night 2200-0700hrs		
	L_{Aeq}	L_{A1}	L_{A90}	L_{Aeq}	L_{A1}	L_{A90}	L_{Aeq}	L_{A1}	L_{A90}
14/01/2025	-	-	-	50	59	41	43	48	38
15/01/2025	52	61	44	69	66	50	51	51	42
16/01/2025	59	65	56	56	62	53	58	63	54
17/01/2025	61	68	57	60	67	56	58	64	54
18/01/2025	56	62	52	52	58	49	49	54	47
19/01/2025	54	60	50	52	58	49	50	53	47
20/01/2025	53	61	48	49	57	42	48	52	45
21/01/2025	50	60	43	48	56	41	43	49	39
22/01/2025	56	63	46	54	62	47	49	58	43
23/01/2025	54	64	43	51	62	40	45	53	36
24/01/2025	55	64	47	52	62	44	47	54	37
25/01/2025	53	63	39	51	62	39	44	53	32
26/01/2025	53	62	41	51	62	42	45	53	35
27/01/2025	55	65	45	63	64	45	45	52	36
28/01/2025	56	65	45	58	65	50	47	55	40
29/01/2025	-	-	-	50	59	41	43	48	38
Median[1]	**54**	**62**	**45**	**52**	**62**	**45**	**47**	**53**	**40**

Note[1]: The weekly median noise levels do not include the weather excluded days.

80 Australia Avenue Notes & Observations:

- The measured L_{Aeq} noise levels on most days exceeded the L_{Aeq} noise limit for Australia Avenue. The median LAeq noise level also exceeded the L_{Aeq} noise limit at this location.
- However, based on observations and attended noise measurements the measured L_{Aeq} noise level exceeded the noise limits due to localised events at or nearby to the residential site.
- The median night-time L_{A1} noise level of 53 dB(A) complies with the night-time L_{A1} noise limit of 57 dB(A) for Australia Avenue.
- Furthermore, the unattended noise survey results were found to exceed the EPL Day, Evening and Night-time $L_{Aeq\ (15min)}$ noise limit for Australia Avenue.
- It is noted that during attended noise measurements, noise from the direction of Botany Port was slightly audible at times during the evening, and nighttime at Australia avenue. However, it could not be determined if the source of the noise was from SICTL or adjacent Container Terminals and Industrial premises.
- Therefore, the noise contribution from SICTL was found to be compliant with the EPA license noise limits at Australia Avenue.

6.1.2. Location 2: 46 Jennings Street, Matraville

The results of the unattended noise survey at Location 2: 46 Jennings Street are provided in Table 6-1 below.

Table 6-2 : 46 Jennings Street - Environmental Nosie Survey Results Summary

Date	Day 0700-1800hrs			Evenings 1800-2200hrs			Night 2200-0700hrs		
	L_{Aeq}	L_{A1}	L_{A90}	L_{Aeq}	L_{A1}	L_{A90}	L_{Aeq}	L_{A1}	L_{A90}
14/01/2025				51	62	41	45	52	32
15/01/2025	55	64	42	67	68	49	51	55	35
16/01/2025	57	66	49	55	64	48	55	63	48
17/01/2025	61	68	54	59	67	52	57	65	50
18/01/2025	55	64	48	52	63	44	50	58	41
19/01/2025	57	63	44	52	63	42	47	54	38
20/01/2025	63	67	41	51	62	37	46	53	37
21/01/2025	53	64	40	52	63	40	46	54	33
22/01/2025	56	64	44	54	62	47	49	58	43
23/01/2025	54	64	43	51	62	40	45	53	36
24/01/2025	55	64	47	52	62	44	47	54	37
25/01/2025	53	63	39	51	62	39	44	53	32
26/01/2025	53	62	41	51	62	42	45	53	35
27/01/2025	55	65	45	63	64	45	45	52	36
28/01/2025	56	65	45	58	65	50	47	55	40
Median[1]	**55**	**64**	**43**	**52**	**63**	**43**	**47**	**54**	**37**

Note[1]: The weekly median noise levels do not include the weather excluded days.

46 Jennings Street Notes & Observations:

- The measured L_{Aeq} noise levels on most days exceeded the L_{Aeq} noise limit for Jennings Street. The measured median L_{Aeq} noise level also exceeded the L_{Aeq} noise limit at this location.
- However, based on observations and attended noise measurements the measured L_{Aeq} noise level exceeded the noise limits due to localised events at or nearby to the residential site.
- The measured median night-time L_{A1} noise level of 54 dB(A) complies with the night-time L_{A1} noise limit of 55 dB(A) for Jennings Street.
- Furthermore, the unattended noise survey results were found to exceed the EPL Day, Evening and Night-time $L_{Aeq\ (15min)}$ noise limit for Jennings Street.
- It is noted that during attended noise measurements, noise from the direction of Botany Port was inaudible during the evening, and nighttime at Jennings Street.
- Therefore, the noise contribution from SICTL was found to be compliant with the EPA license noise limits at Jennings Street.

6.1.3. Location 3: 12 Military Road, Matraville

The results of the unattended noise survey at Location 3: 12 Military Road, Matraville are provided in Table 6-1 below.

Table 6-3 : 12 Military Road - Environmental Nosie Survey Results Summary

Date	Day 0700-1800hrs			Evenings 1800-2200hrs			Night 2200-0700hrs		
	L_{Aeq}	L_{A1}	L_{A90}	L_{Aeq}	L_{A1}	L_{A90}	L_{Aeq}	L_{A1}	L_{A90}
14/01/2025	-	-	-	57	64	52	54	61	48
15/01/2025	59	67	53	67	70	56	57	61	52
16/01/2025	61	68	56	59	65	54	62	67	56
17/01/2025	66	72	60	65	71	59	63	69	57
18/01/2025	58	65	51	58	64	49	56	62	48
19/01/2025	56	65	47	54	63	46	53	60	45
20/01/2025	61	67	49	57	63	49	55	60	50
21/01/2025	63	68	51	58	64	52	55	61	51
22/01/2025	62	68	55	57	64	52	55	61	48
23/01/2025	66	67	49	53	63	45	53	60	47
24/01/2025	62	67	53	54	63	48	50	57	43
25/01/2025	54	63	46	55	62	50	51	59	47
26/01/2025	53	63	44	53	62	44	50	57	46
27/01/2025	57	64	52	59	64	50	54	61	50
28/01/2025	65	68	55	60	65	54	52	60	46
Median[1]	**59**	**66**	**51**	**57**	**64**	**49**	**54**	**60**	**48**

Note[1]: The weekly median noise levels do not include the weather excluded days.

12 Military Road Notes & Observations:

- The measured L_{Aeq} noise levels on most days exceeded the L_{Aeq} noise limit for Military Road. The median L_{Aeq} noise level also exceeded the LAeq noise limit at this location.
- However, based on observations and attended noise measurements the measured L_{Aeq} noise level exceeded the noise limits due to localised events at or nearby to the cemetery site.
- The median night-time L_{A1} noise level of 60 dB(A) complies with the night-time L_{A1} noise limit of 60 dB(A) for Military Road.
- Furthermore, the unattended noise survey results were found to exceed the EPL Day, Evening and Night-time $L_{Aeq\ (15min)}$ noise limit for Military Road.
- It is noted that during attended noise measurements, noise from the direction of Botany Port was slightly audible during the evening, and nighttime at Military Road. However, it could not be determined if the source of the noise was from SICTL or adjacent Container Terminals and Industrial premises.
- Therefore, the noise contribution from SICTL was found to be compliant with the EPA license noise limits at Military Road.

6.2. Attended Noise Measurement Results

Attended noise measurements were conducted in accordance with the EPL at each of the three monitoring locations during the Day, Evening and Nighttime assessment periods.

In order to measure 'worst-case' operating condition. All attended noise measurements conducted while a ship was being loaded/unloaded at SICTL. Ship loading activities were observed by NVAQ at the boat ramp before and after each set of attended measurements during the Day, Evening and Nighttime.

Results and observations of the attended noise measurements are presented in the sections below.

6.2.1. Location 1: 80 Australia Avenue

Table 6-4 below provides the attended noise survey results conducted at 80 Australia avenue during the Day, Evening and Nighttime assessment periods.

Table 6-4: Attended Noise Survey Results – 80 Australia Avenue

Period	Date / Start Time (15min)	Measured Noise Levels - 15min			Comments
		L_{A90}	L_{Aeq}	L_{A1}	
Day	22/01/2025 13:08	42	55	67	- The noise environment was dominated by local traffic along Australia Ave. - Typical urban residential hum with some industrial noise present from nearby sites. - Intermittent construction noise on Aus Ave was clearly audible at times. - Aircraft activity clearly audible - Low level audible industrial noise from port direction. Could not be determined to be coming from SICTL
Evening	23/01/2025 19:14	52	52	60	- The noise environment was dominated by intermittent local traffic along Aus Ave. General urban hum noise including birds, distance dogs barking and people. - Distant road traffic noise from Beauchamp Rd, Bunnerong Rd and Botany Rd. - Aircraft activity clearly audible - No audible industrial noise from port
Night	22/01/2025 23:08	53	52	56	- The noise environment was dominated by intermittent local traffic along Aus Ave. - Aircraft activity clearly audible - No audible industrial noise from port

Notes & Compliance:

- The attended measured noise levels were found to exceed the noise criteria for Australia Avenue during the Day, Evening and Nighttime assessment periods.
- Noise from the port was inaudible at this location and therefore the noise contribution from SICTL was found to be compliant with the noise limits on Australia Avenue.

6.2.2. Location 2: 46 Jennings Street

Table 6-4 below provides the attended noise survey results conducted at 46 Jennings Street during the Day, Evening and Nighttime assessment periods.

Table 6-5: Attended Noise Survey Results – 46 Jennings Street

Period	Date / Start Time (15min)	Measured Noise Levels			Comments
		L_{A90}	L_{Aeq}	L_{A1}	
Day	22/01/2025 12:40	42	58	71	- The noise environment was dominated by local traffic along Jennings Street. - Typical urban residential hum with distant traffic noise from Beauchamp Rd, Bunnerong Rd and Perry Street. - Aircraft activity clearly audible - Distant industrial noise occasionally audible. - No audible industrial noise from port
Evening	23/01/2025 19:36	42	55	68	- The noise environment was dominated by local traffic along Jennings Street. - Typical urban residential hum, birds, insects and distant traffic noise from Beauchamp Rd, Bunnerong Rd and Perry Street. - Aircraft activity clearly audible - Distant industrial noise occasionally audible, not from port direction. - No audible industrial noise from port
Night	22/01/2025 22:46	45	53	63	- The noise environment was dominated by intermittent local traffic along Aus Ave. - Aircraft activity clearly audible - No audible industrial noise from port

Notes & Compliance:

- The attended measured noise levels were found to exceed the noise criteria for Australia Avenue during the Day, Evening and Nighttime assessment periods.
- Noise from the port was inaudible at this location and therefore the noise contribution from SICTL was found to be compliant with the noise limits on Jennings Street.

6.2.3. Location 3: 12 Military Road

Table 6-4 below provides the attended noise survey results conducted at 12 Military Road avenue during the Day, Evening and Nighttime assessment periods.

Table 6-6: Attended Noise Survey Results – 12 Military Road

Period	Date / Start Time (15min)	Measured Noise Levels			Comments
		L_{A90}	L_{Aeq}	L_{A1}	
Day	22/01/2025 12:10	51	65	77	- The noise environment was dominated by local traffic along Military Road. - Typical urban residential hum with distant traffic noise from Bumborah Point Rd & Botany Rd. - Occasional noise from patrons attending funerals in the cemetery. - Aircraft activity clearly audible - Distant industrial noise occasionally audible - Slightly audible industrial noise from port and nearby industrial sites, likely to be shipping companies and DP world.
Evening	23/01/2025 19:58	44	62	74	- The noise environment was dominated by local traffic along Military Road. - Typical urban residential hum with distant traffic noise from Bumborah Point Rd & Botany Rd. - Aircraft activity clearly audible - Distant industrial noise occasionally audible, possibly from DP world or adjacent industrial sites - No audible industrial noise from SICTL port
Night	22/01/2025 22:11	44	52	62	- The noise environment was dominated by intermittent local traffic along Aus Ave. - Aircraft activity clearly audible - No audible industrial noise from port

Notes & Compliance:

- The attended measured noise levels were found to exceed the noise criteria for Australia Avenue during the Day, Evening and Nighttime assessment periods.
- Noise from the port was inaudible at this location and therefore the noise contribution from SICTL was found to be compliant with the noise limits on Military Road.

7. Statement of Industrial Noise Compliance

In order to provide a statement of compliance for the existing industrial noise from SICTL, the unattended and attended noise monitoring results have been analysed and reviewed in detail. Noise emissions and noise contribution originating from the SICTL site were assessed during times where there was minimal localised noise and low ambient noise levels at the monitoring locations.

At each of the three noise monitoring locations there were multiple noise sources contributing to the ambient noise environment. As it is not possible to filter out all the localised ambient noise sources, compliance has been determined based on observations, attended measurements and statistical noise measurements.

7.1. Operations

NVAQ understands that normal operations were conducted at SICTL during the two-week monitoring period between 14 January to 29 January 2025. The SICTL shipping schedule was provided to NVAQ before the two-week monitoring period to confirm the presence of 'normal' operations with several ships being loaded/unloaded.

Furthermore, NVAQ staff observed container ships being loaded/unloaded at five times during the two-week period. This was observed from the Foreshore Road Boat Ramp which is located adjacent to the SICTL site.

7.2. Measured Noise Levels Review

7.2.1. Daytime Period

Unattended and attended noise levels measured at Australia Avenue, Jennings Street and Military Road all show an exceedance of the EPL Daytime L_{Aeq} noise limits.

The ambient noise environment at all 3 locations was dominated by localised noise, traffic noise and aircraft noise.

During the attended noise surveys, operational noise emissions from Port Botany shipping facilities was audible at low levels at Military Road and Australia Avenue. However, NVAQ could not determine that the noise source was coming from the direction of SICTL. Noise from the Port was inaudible at Jennings Street.

Therefore, based on the noise survey results and observations, operational noise impacts from SICTL are considered to be compliant with the EPL Daytime noise limits.

7.2.2. Evening time Period

Unattended and attended noise levels measured at Australia Avenue, Jennings Street and Military Road all show an exceedance of the EPL Evening time period L_{Aeq} noise limits.

The ambient noise environment at all 3 locations was dominated by localised noise, distant industrial noise birds, insects, traffic noise and aircraft noise.

During the attended noise surveys, operational noise emissions from Port Botany shipping facilities was audible at low levels at Military Road and Australia Avenue. However, NVAQ could not determine that the noise source was coming from the direction of SICTL and was

likely to be from DP World and adjacent industrial tenancies. Noise from the Port was inaudible at Jennings Street during the Evening.

Therefore, based on the noise survey results and observations, operational noise impacts from SICTL are considered to be compliant with the EPL Evening time noise limits.

7.2.3. Nighttime Period

Unattended and attended noise levels measured at Australia Avenue, Jennings Street and Military Road all show an exceedance of the EPL Nighttime L_{Aeq} noise limits.

The ambient noise environment at all 3 locations was dominated by localised noise, distant traffic noise and occasional aircraft noise.

During the attended noise surveys, operational noise emissions from Port Botany shipping facilities was inaudible at all 3 monitoring locations at Military Road, Australia Avenue & Jennings Street.

Therefore, based on the noise survey results and observations, operational noise impacts from SICTL are considered to be compliant with the EPL Nighttime noise limits.

8. Conclusion & Summary

To satisfy the requirements of the EPL for operations at SICTL, NVAQ conducted attended and unattended noise monitoring at the following 3 locations in accordance with the EPA License:

- 80 Australia Avenue
- 46 Jennings Street
- 12 Military Road

The short-term attended and long-term unattended measured noise levels were assessed against the EPL noise limits to determine compliance.

Existing noise levels at all 3 receiver locations are considered as 'high noise' areas. The dominant noise sources contributing to the LAeq and L1 noise measurements at all 3 locations was localised traffic, general urban hum, adjacent industrial sites, aircraft activities.

NVAQ note that low noise levels were observed from the Port Botany shipping facilities area at Australia Street and Military Road, however the direction and location of the port noise could not be determined in any instance. Port noise was found to be inaudible at Jennings Street during all survey periods.

Based on the attended measurements and observations, SICTL operational noise was found to be compliant with the EPL Day, Evening and Night-time noise limits.

Furthermore, no continuous annoying characteristics or tonal noise was present at the residential receivers. The port noise was found to be inaudible during the Nighttime periods and therefore will not cause sleep disturbance.

Based on the current operations, the site is found to be compliant with the operational noise limits. However, if SICTL increase or change their current operations, noise management procedures should be implemented to ensure the noise levels remain compliant.

Appendix A Terminology

Decibel, dB:
Unit of acoustic measurement. Measurements of power, pressure and intensity. Expressed in dB relative to standard reference levels.

dB(A):
Unit of acoustic measurement weighted to approximate the sensitivity of human hearing to sound frequency.

Sound Pressure Level, L_p (dB), of a sound:
20 times the logarithm to the base 10 of the ratio of the r.m.s. sound pressure to the reference sound pressure of 20 micro Pascals. Sound pressure level is measured using a microphone and a sound level meter, and varies with distance from the source and the environment.

Ambient Sound:
Of an environment: the all-encompassing sound associated with that environment, being a composite of sounds from many sources, near and far.

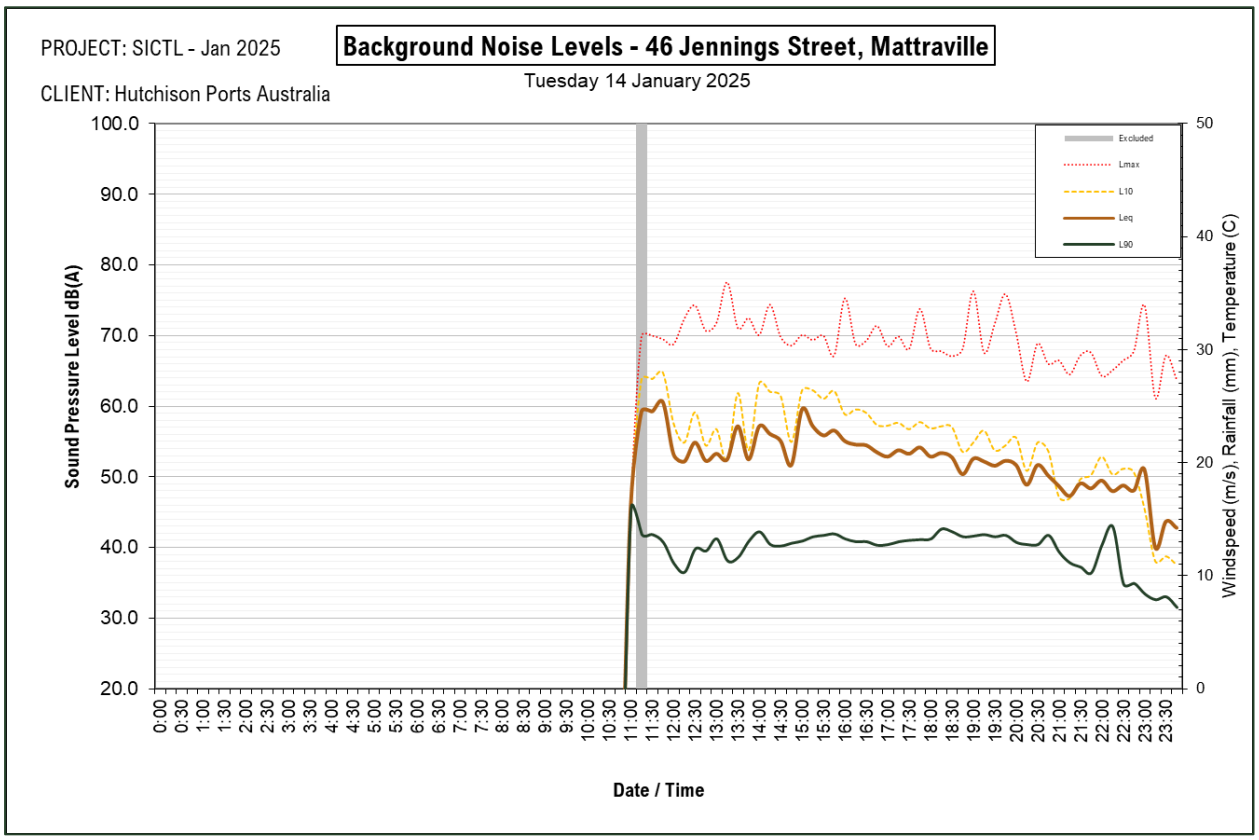
Percentile Level - L_{90}, L_{50}, L_{10}, L_1 etc:
A statistical measurement giving the sound pressure level which is exceeded for the given percentile of an observation period, e.g. L_{90} is the level which is exceeded for 90% of a measurement period. L_{90} is commonly referred to as the "background" sound level.

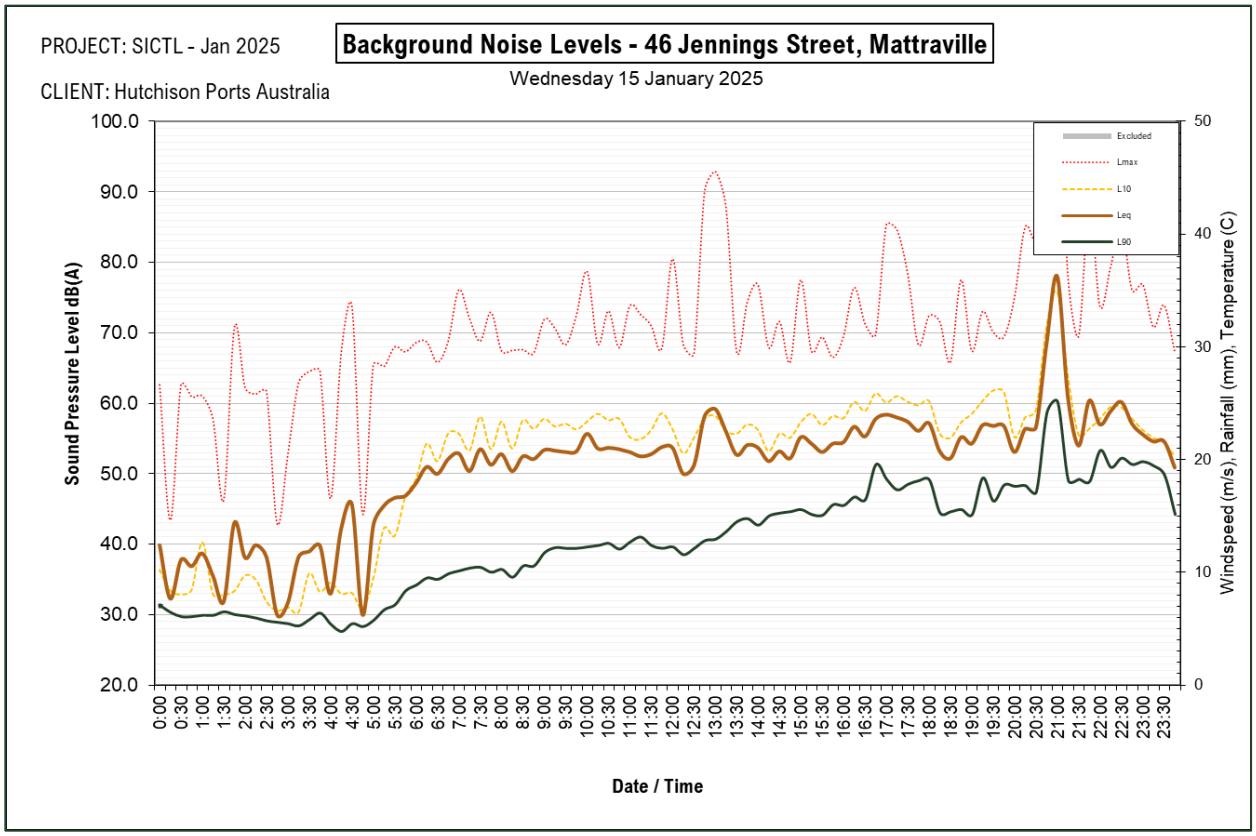
$L_{Aeq,T}$:
Equivalent continuous A-weighted sound pressure level. The value of the A-weighted sound pressure level of a continuous steady sound that, within a measurement time interval T, has the same A-weighted sound energy as the actual time-varying sound.

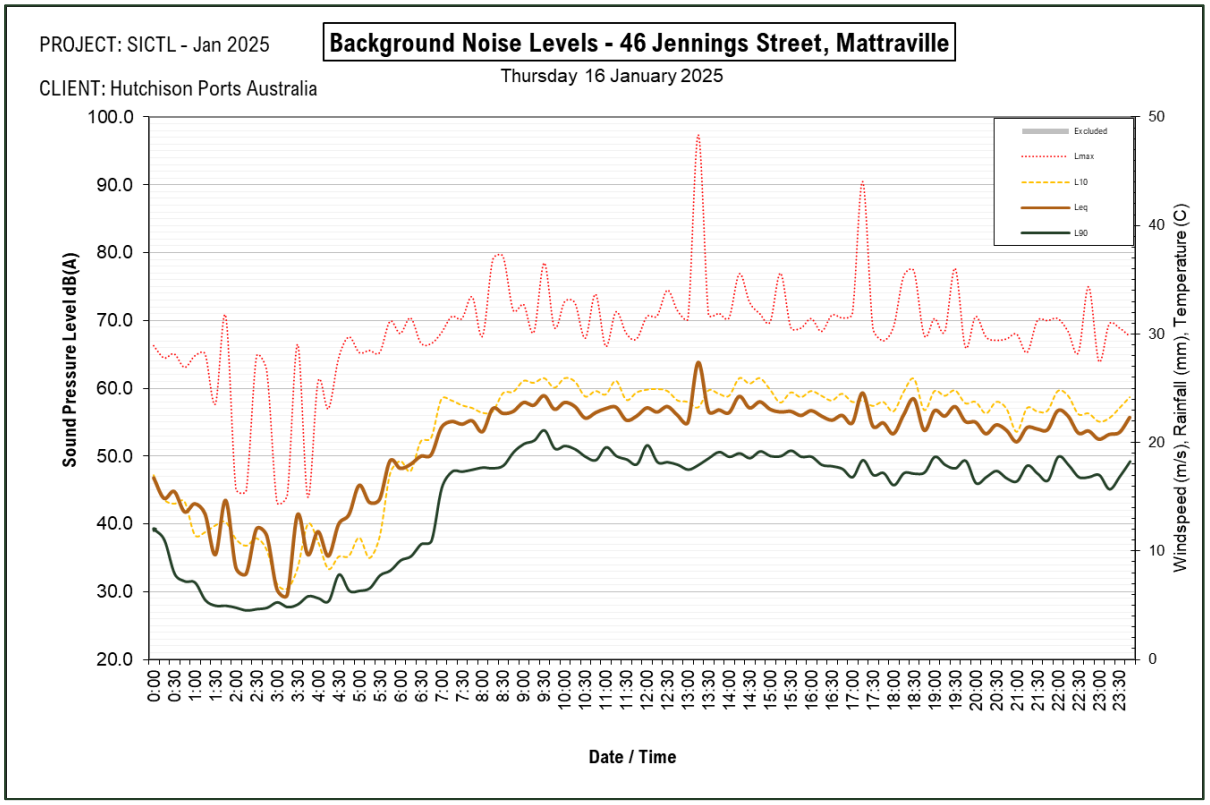
L_{max}:
The maximum noise level over the measurement period for a given time weighting e.g. slow (s), fast (F) or impulse (I).

Rating Background Level – RBL:
Method for determining the existing background noise level which involves calculating the tenth percentile from the L_{A90} measurements. This value gives the Assessment Background Noise Level (ABL). Rating Background Level is the median of the overall ABL.

Appendix B 46 Jennings Street - Noise Survey Graphs



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Thursday 16 January 2025
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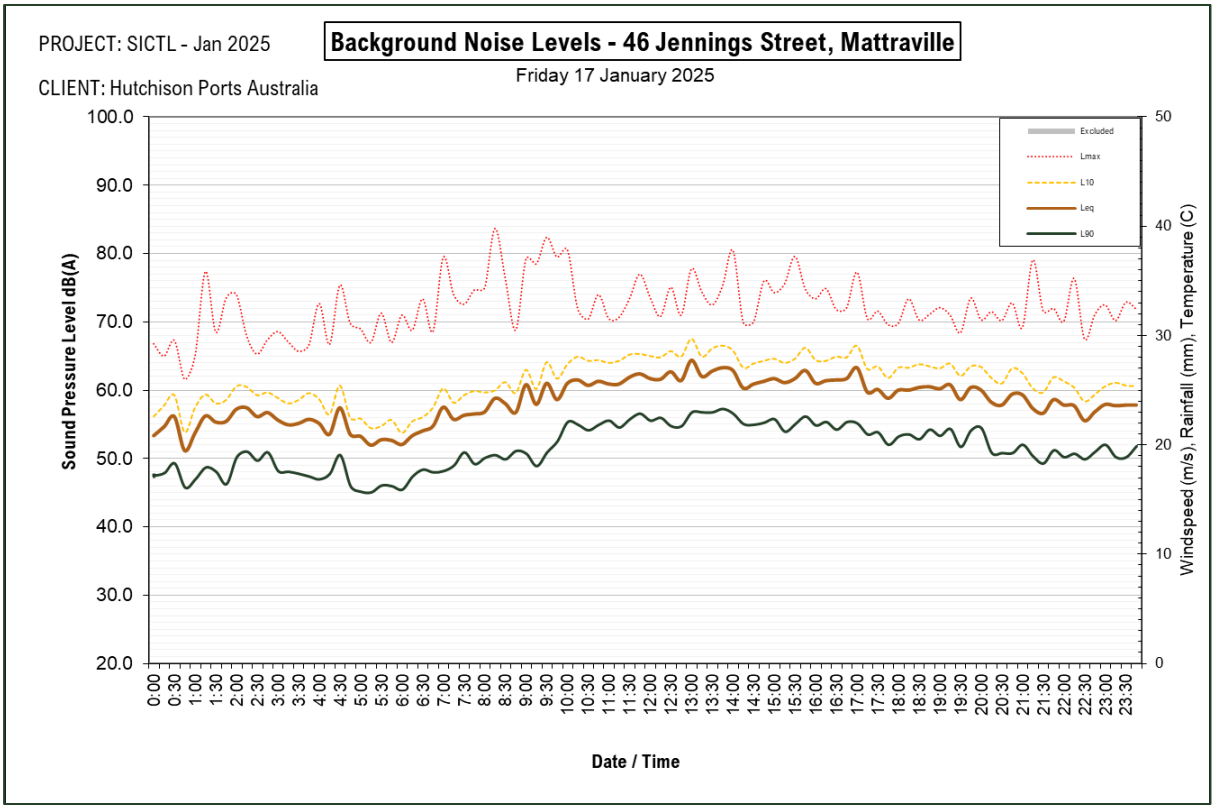
Date / Time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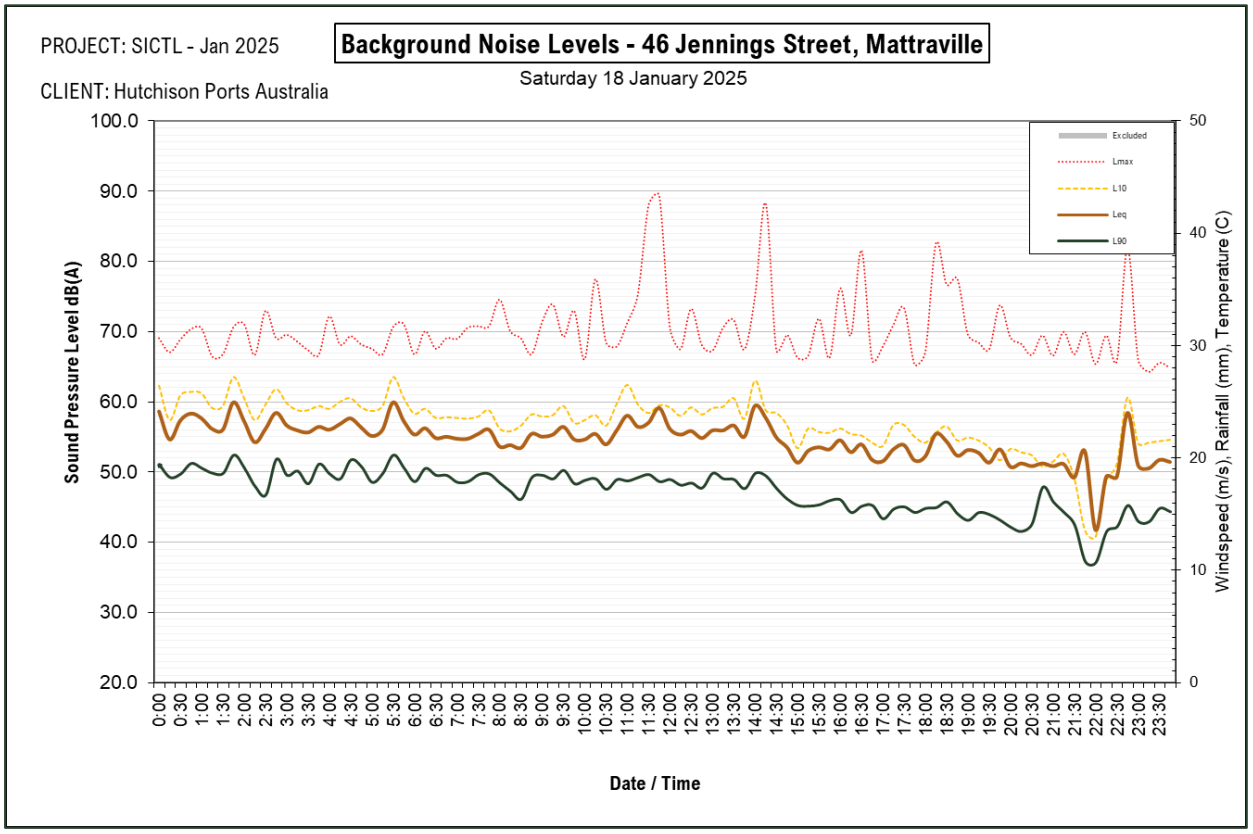
Date / Time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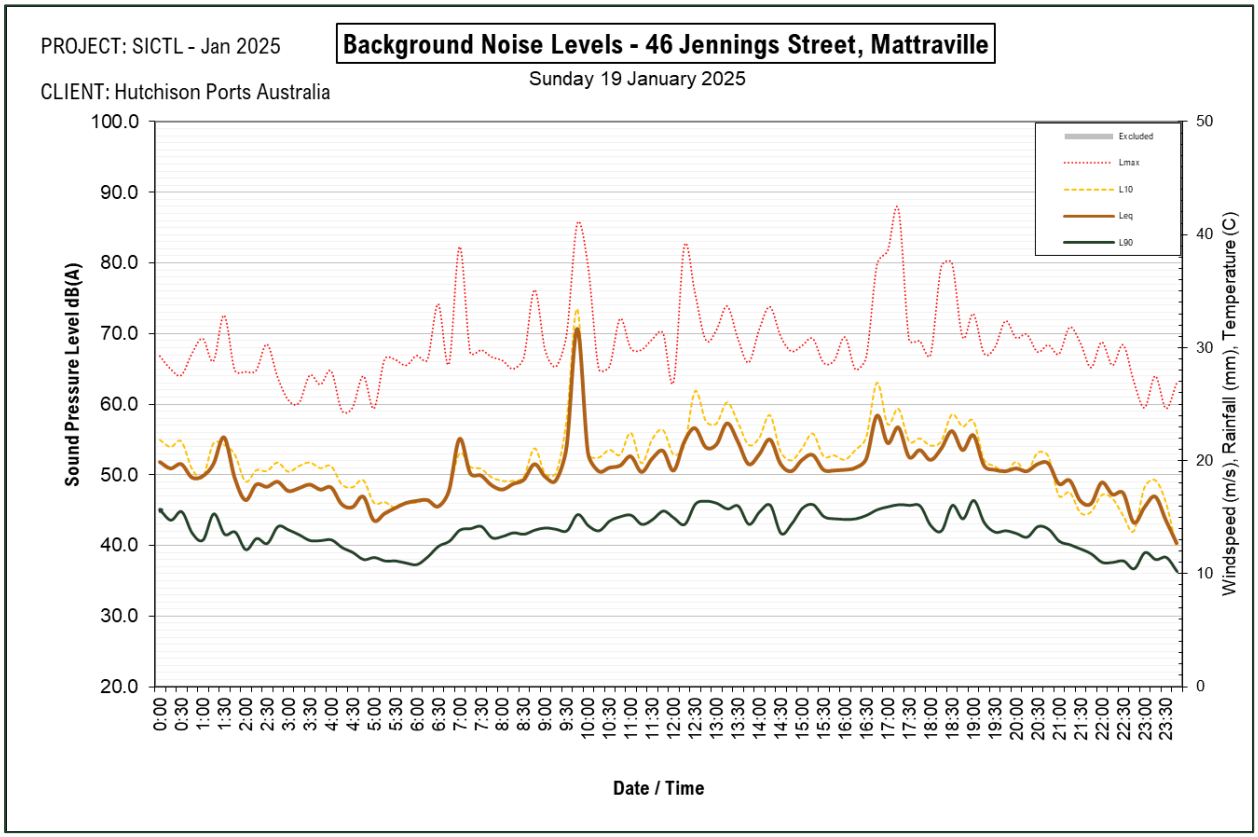
Date / Time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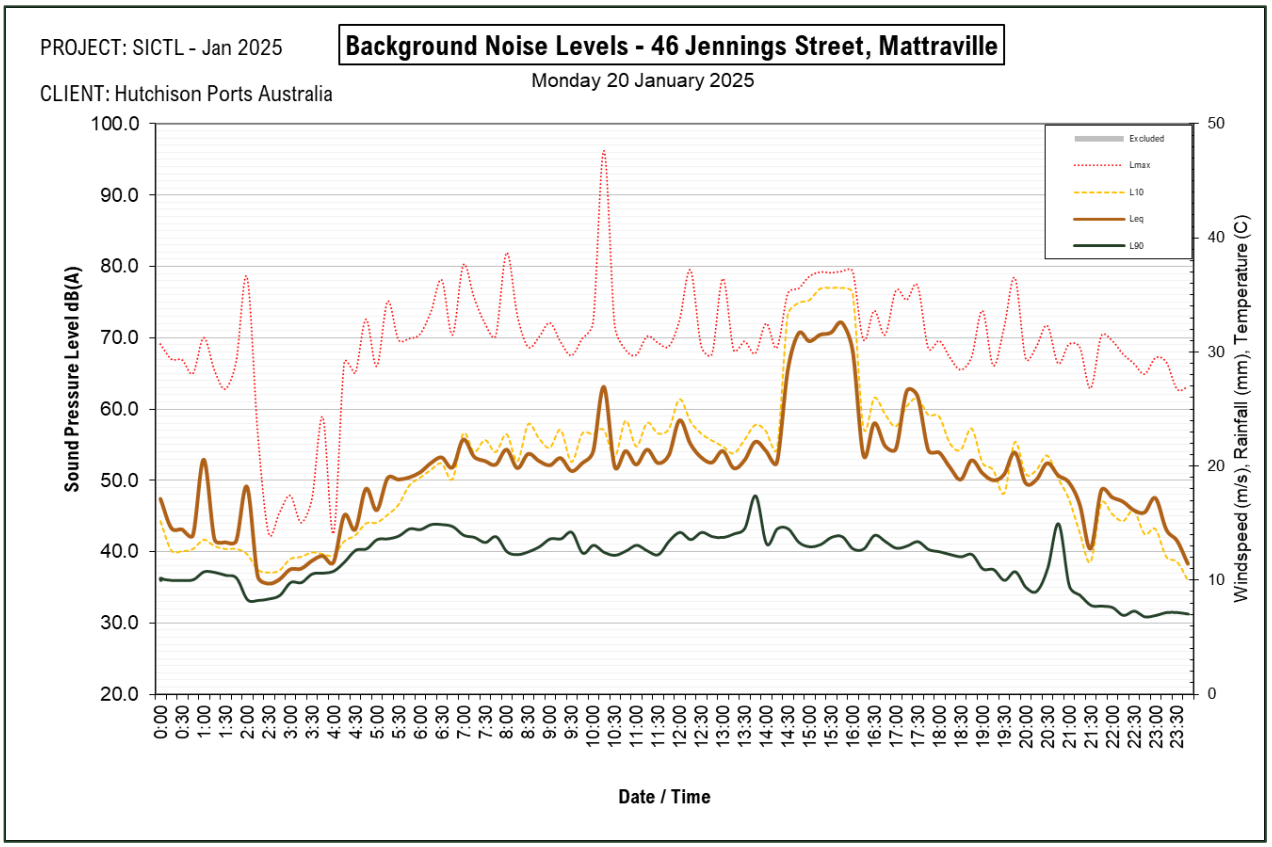
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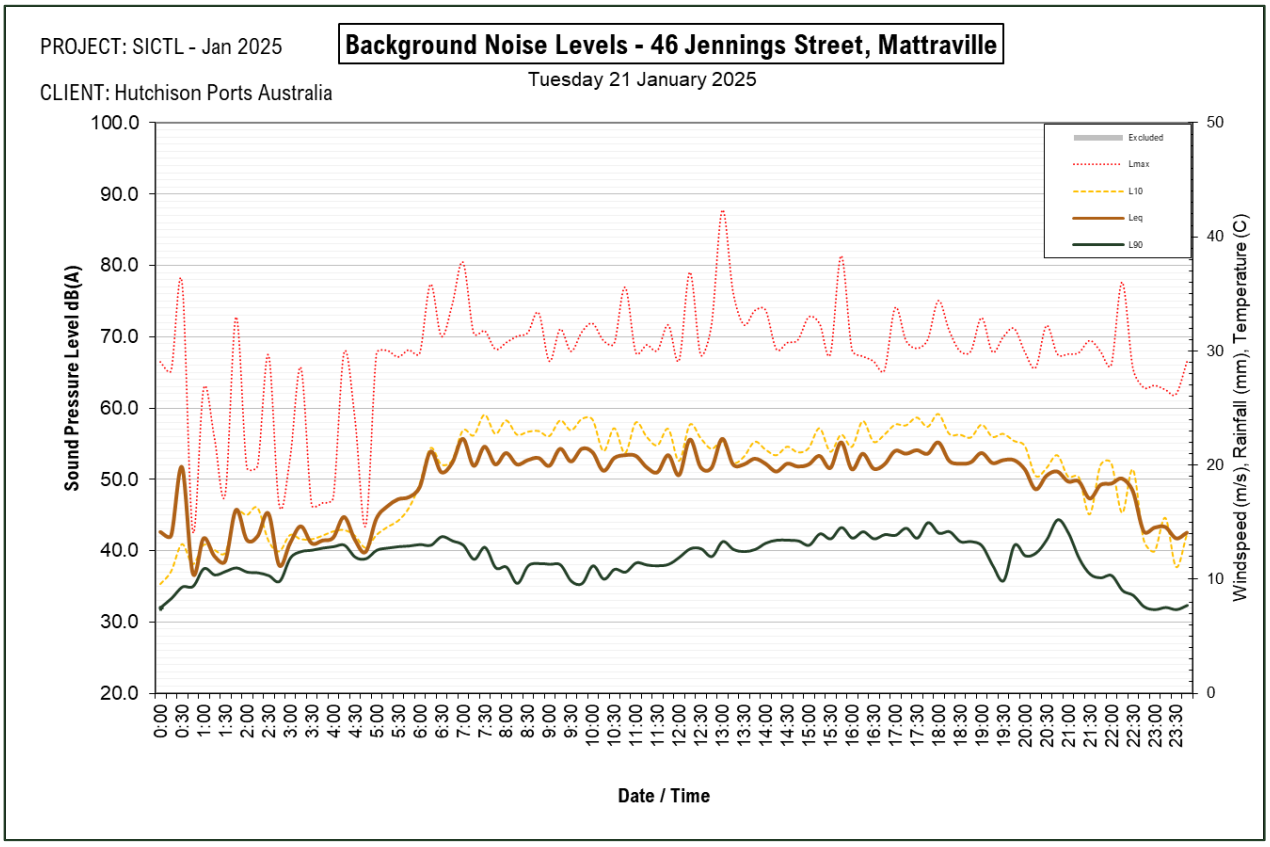
Date / Time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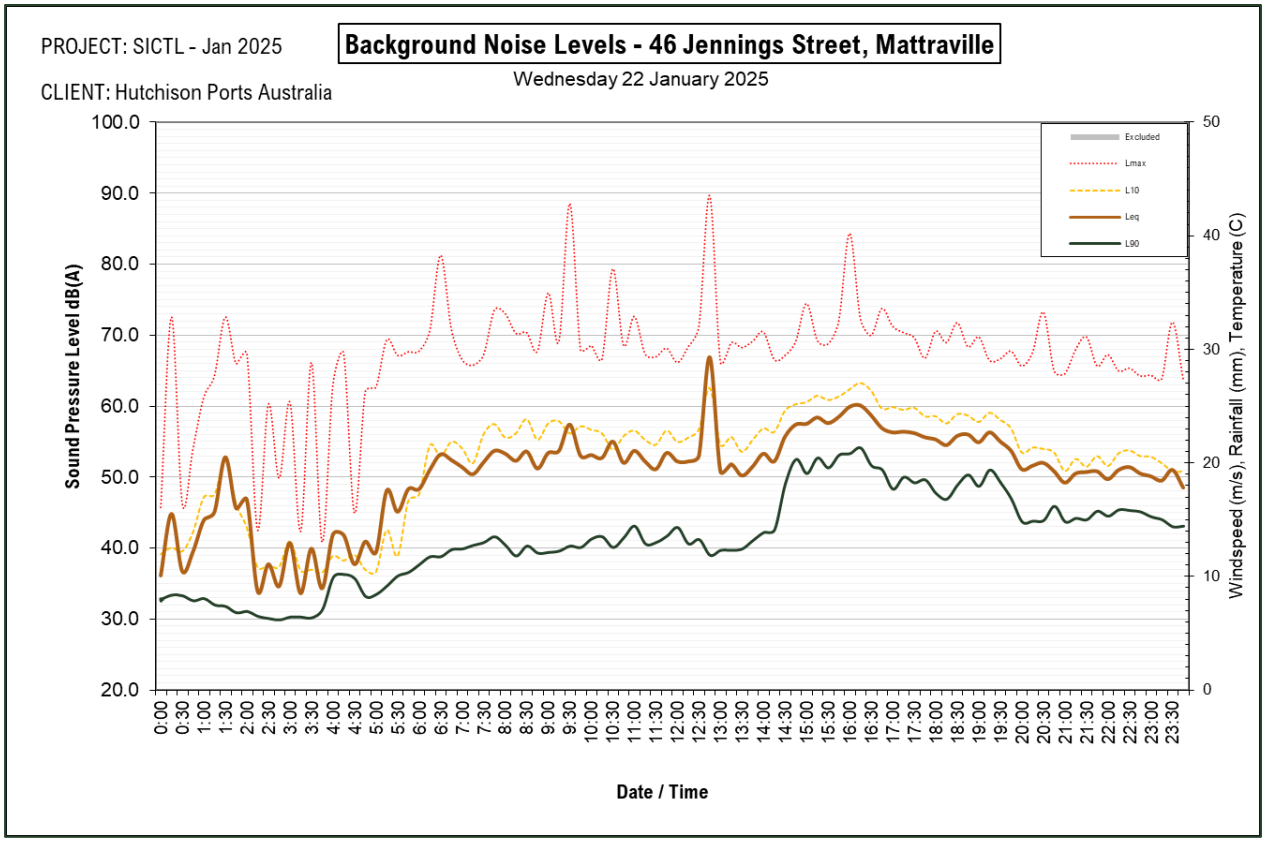
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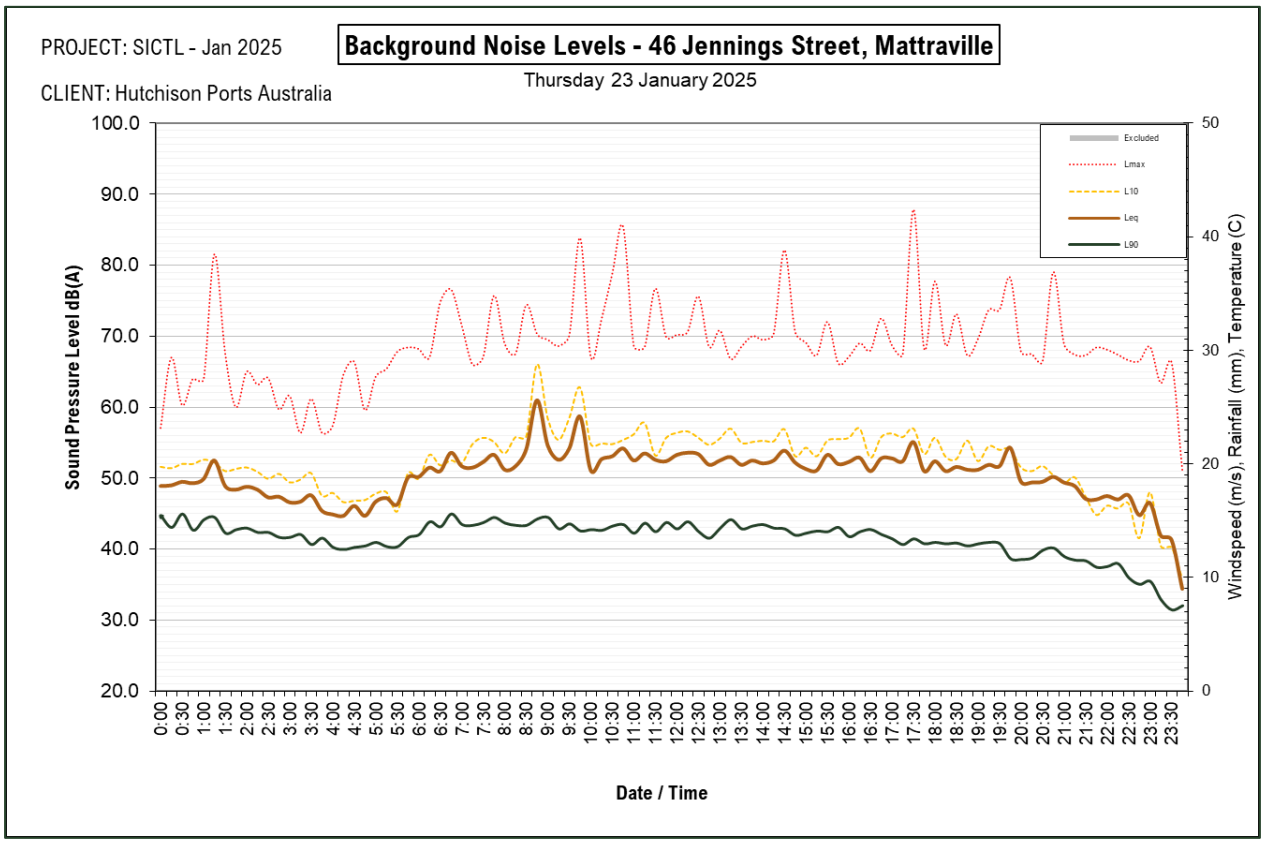
Windspeed (m/s), Rainfall (mm), Temperature (C)
Date / Time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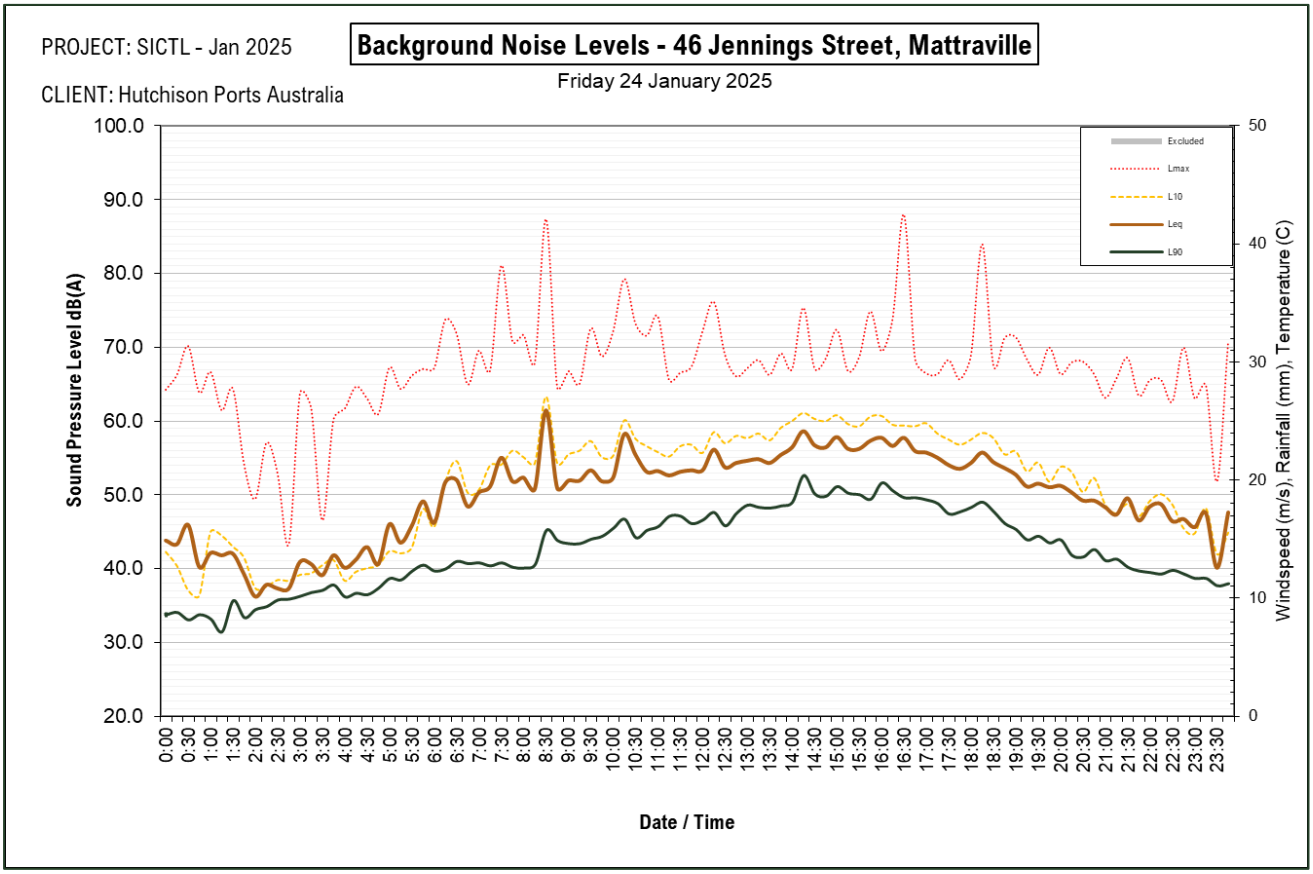
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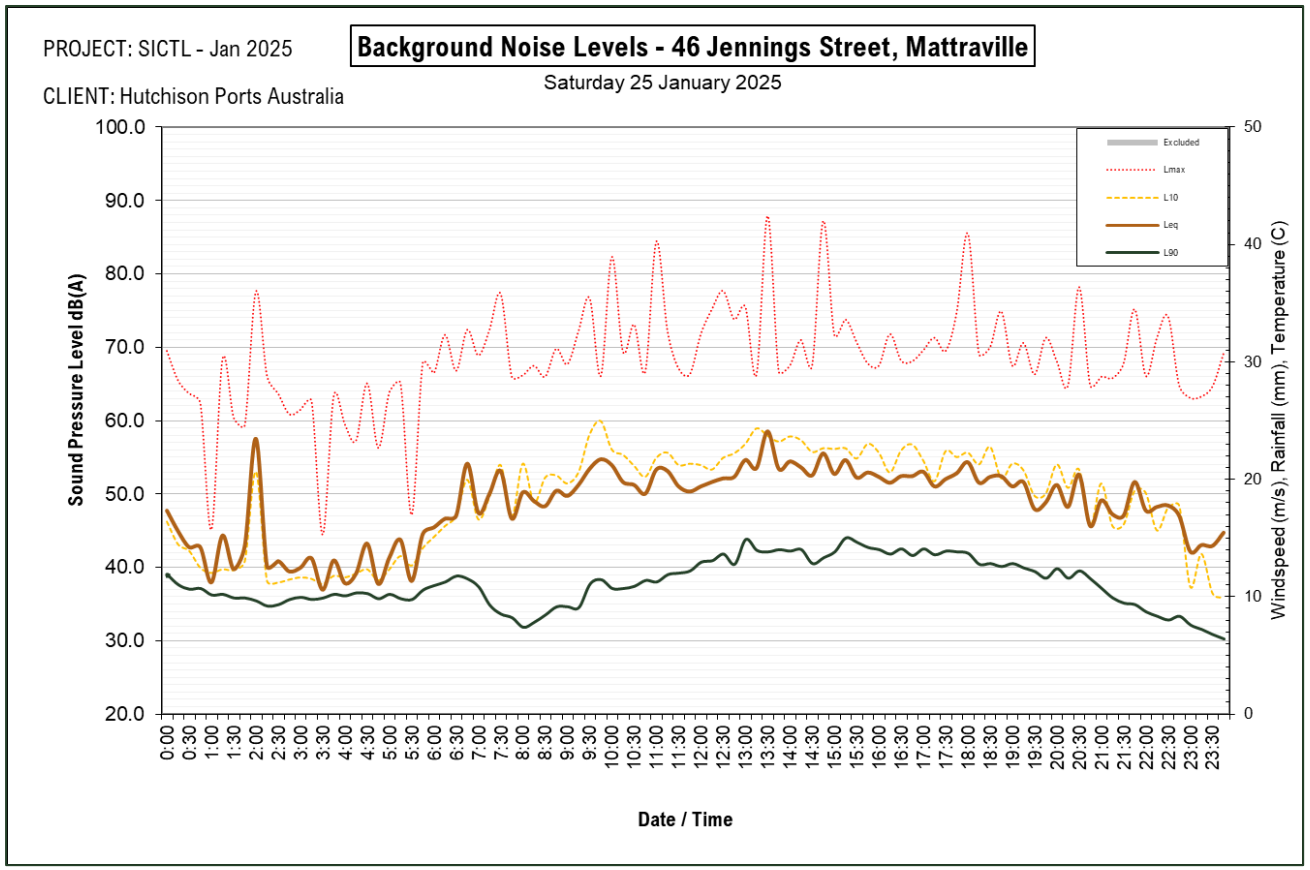
Date / Time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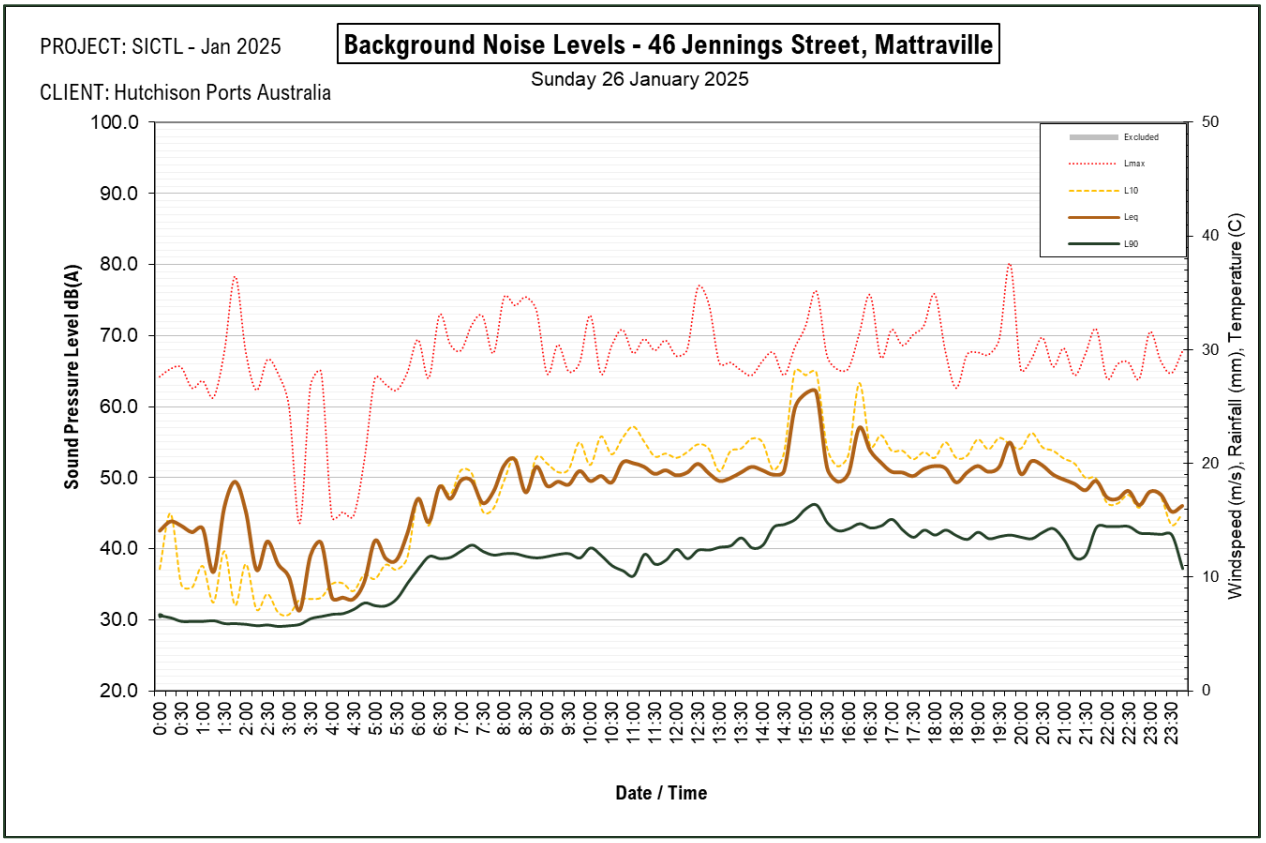
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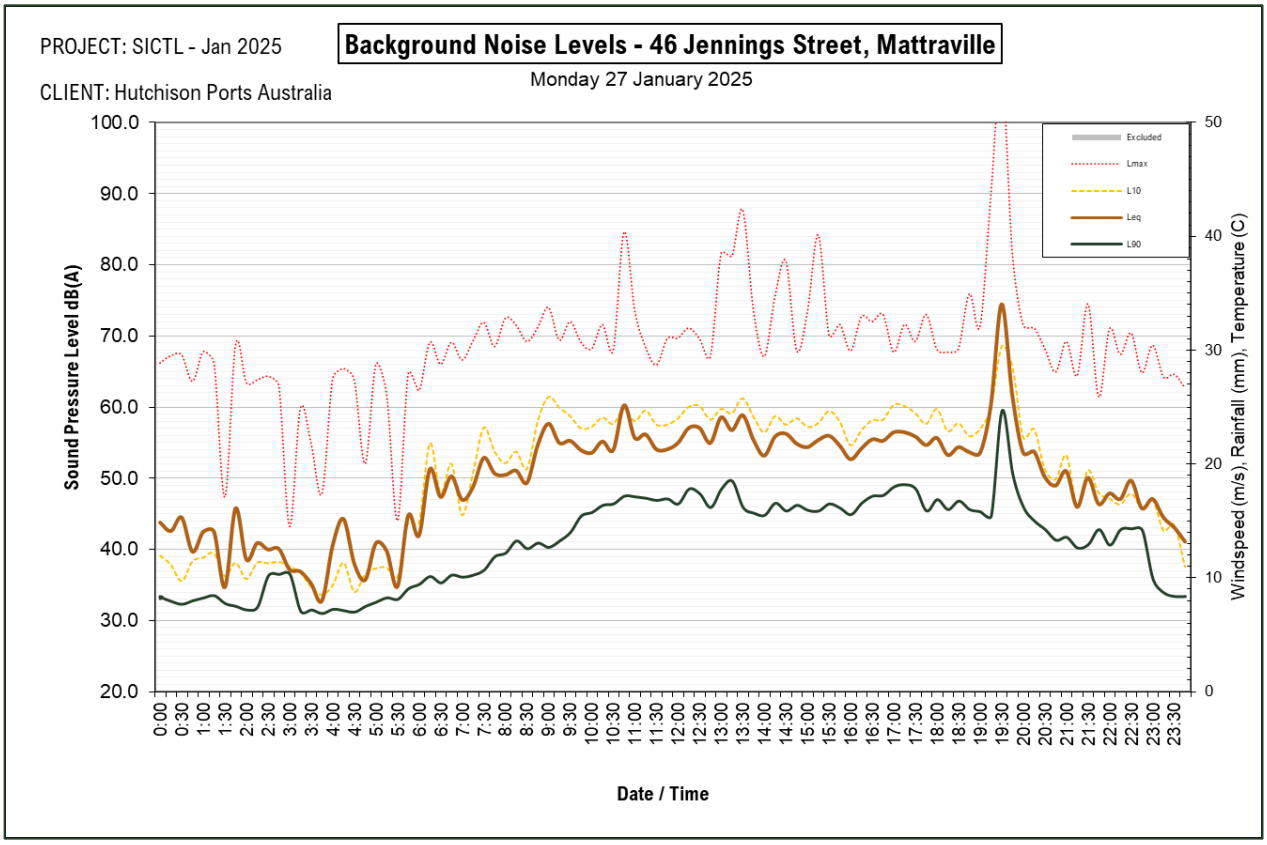
Date / Time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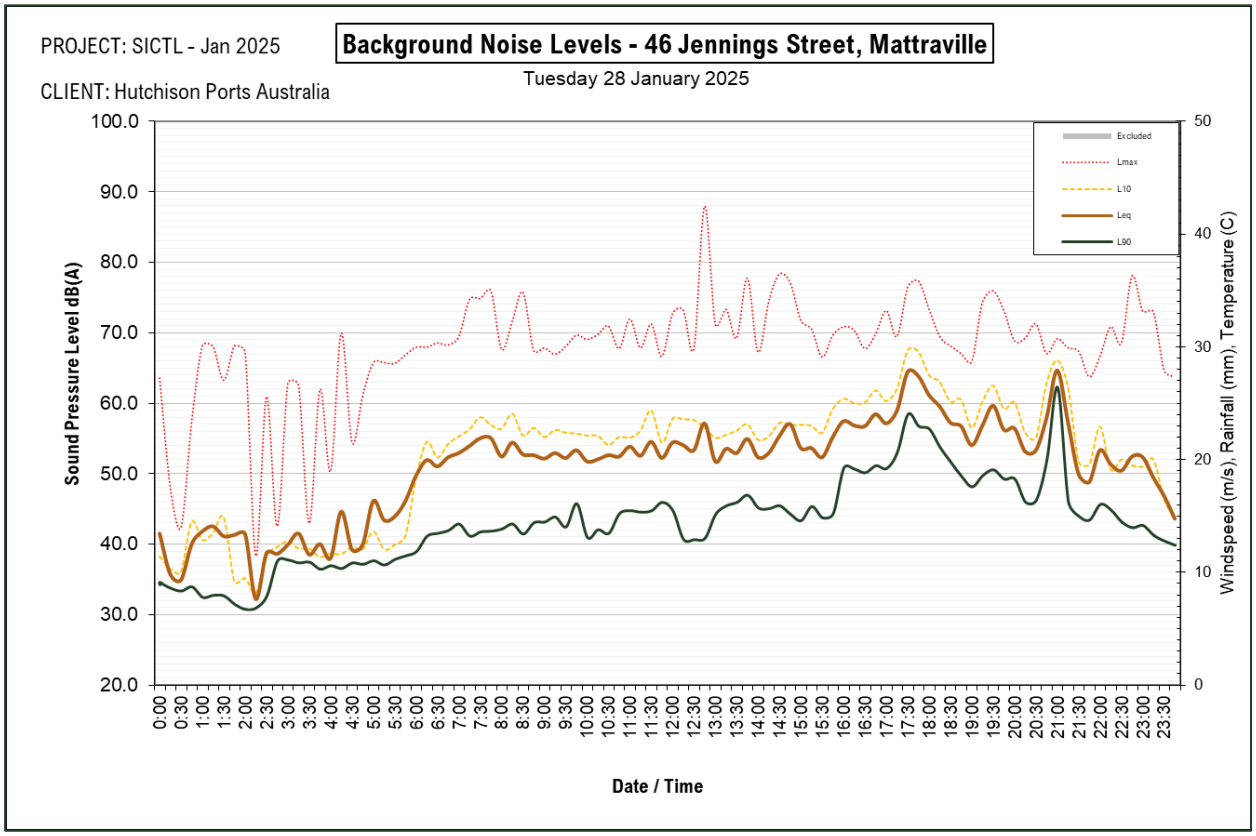
Date / Time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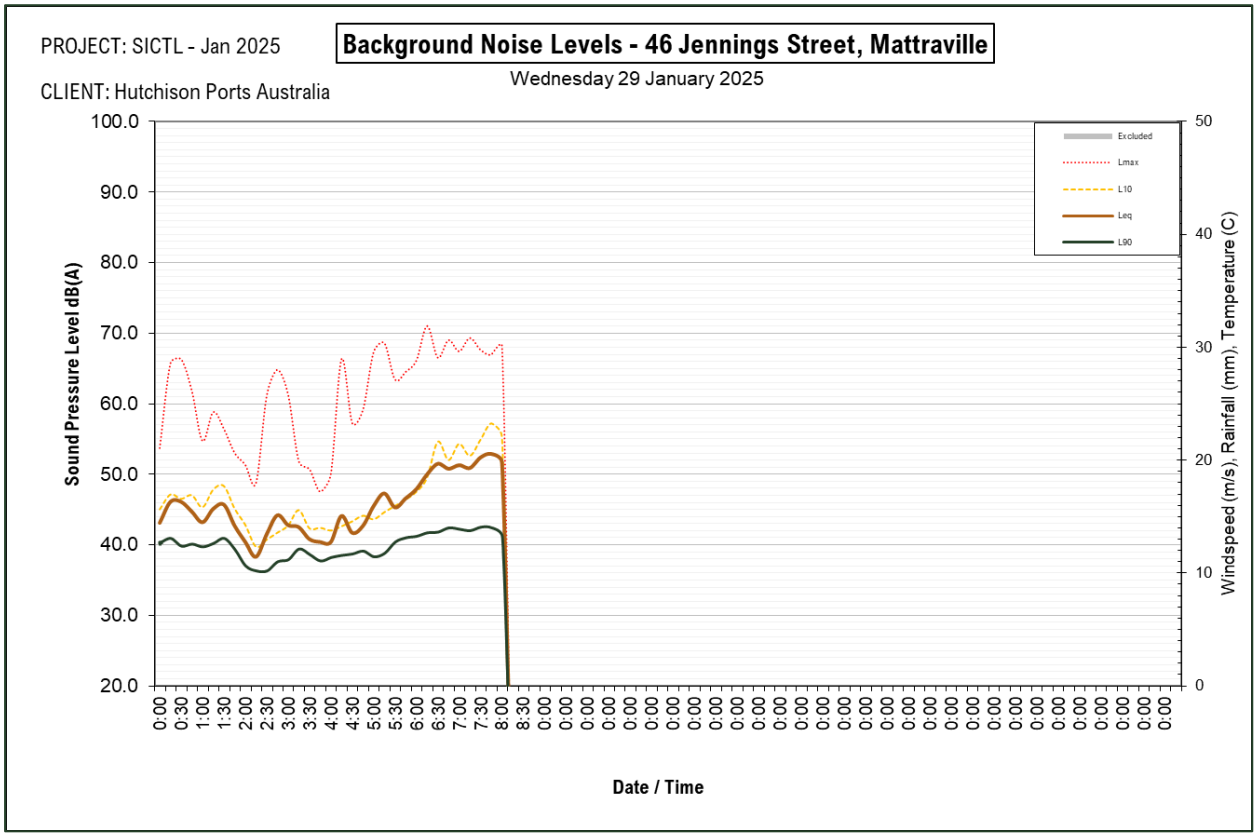
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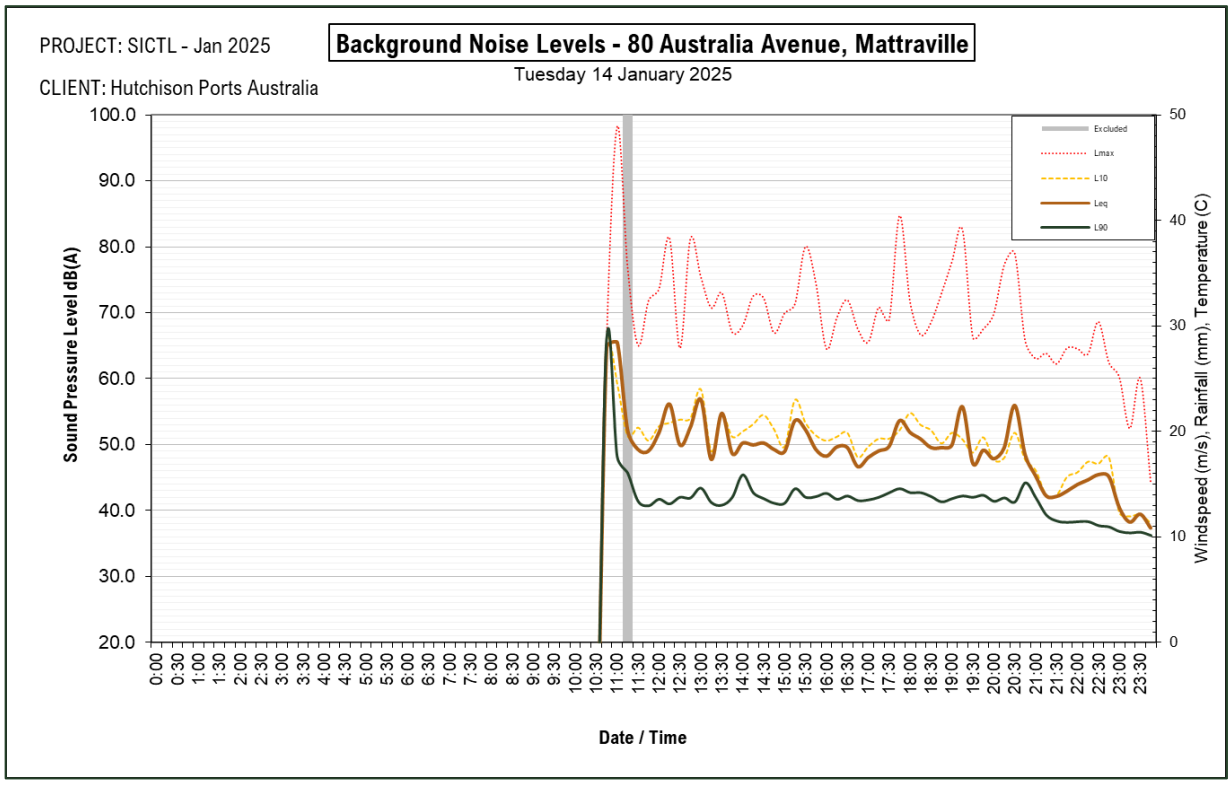
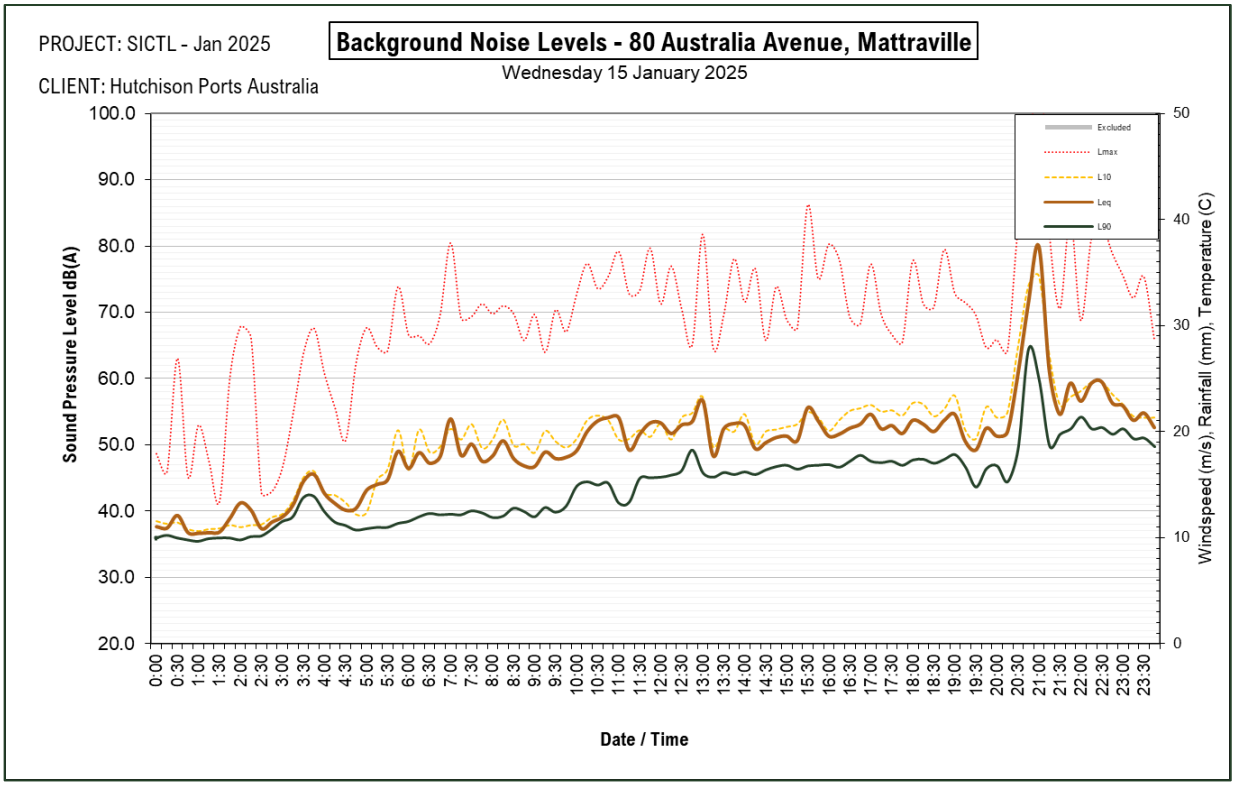
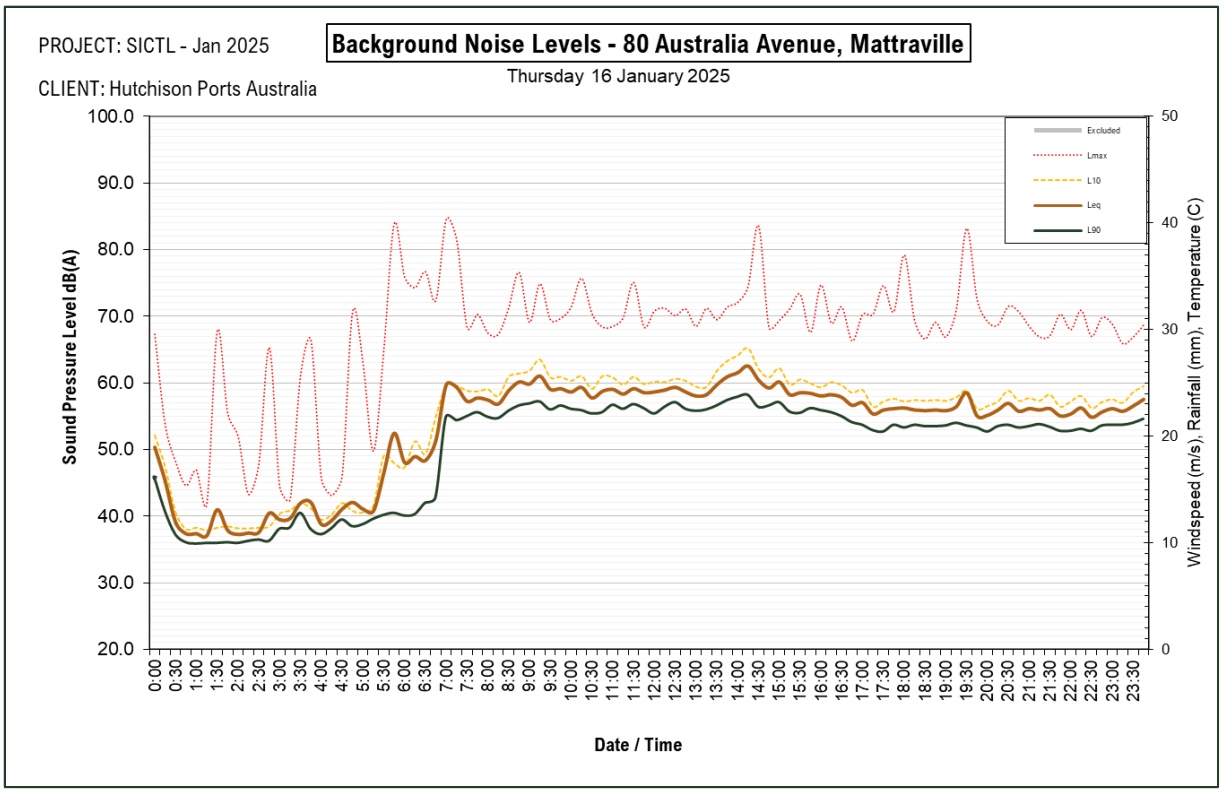
Sound Pressure Level dB(A)
Windspeed (m/s), Rainfall (mm), Temperature (C)
Date / Time

Appendix C 80 Australia Avenue Noise Survey Graphs



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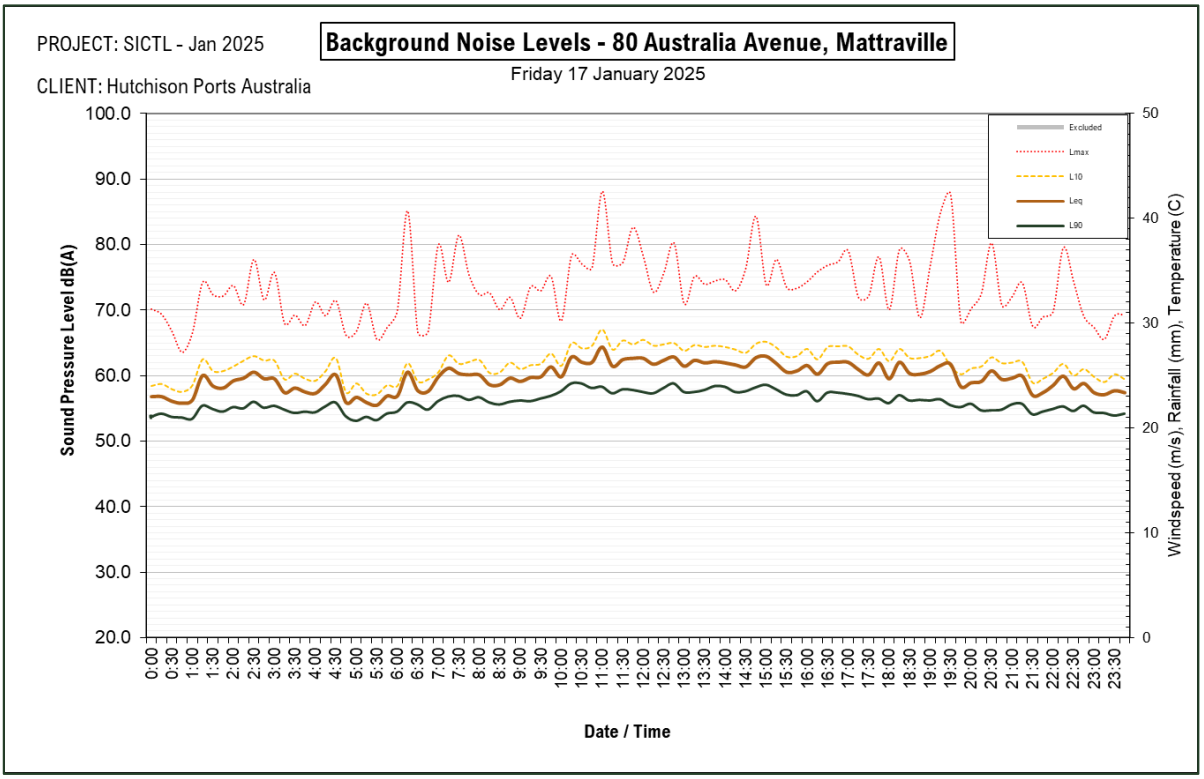
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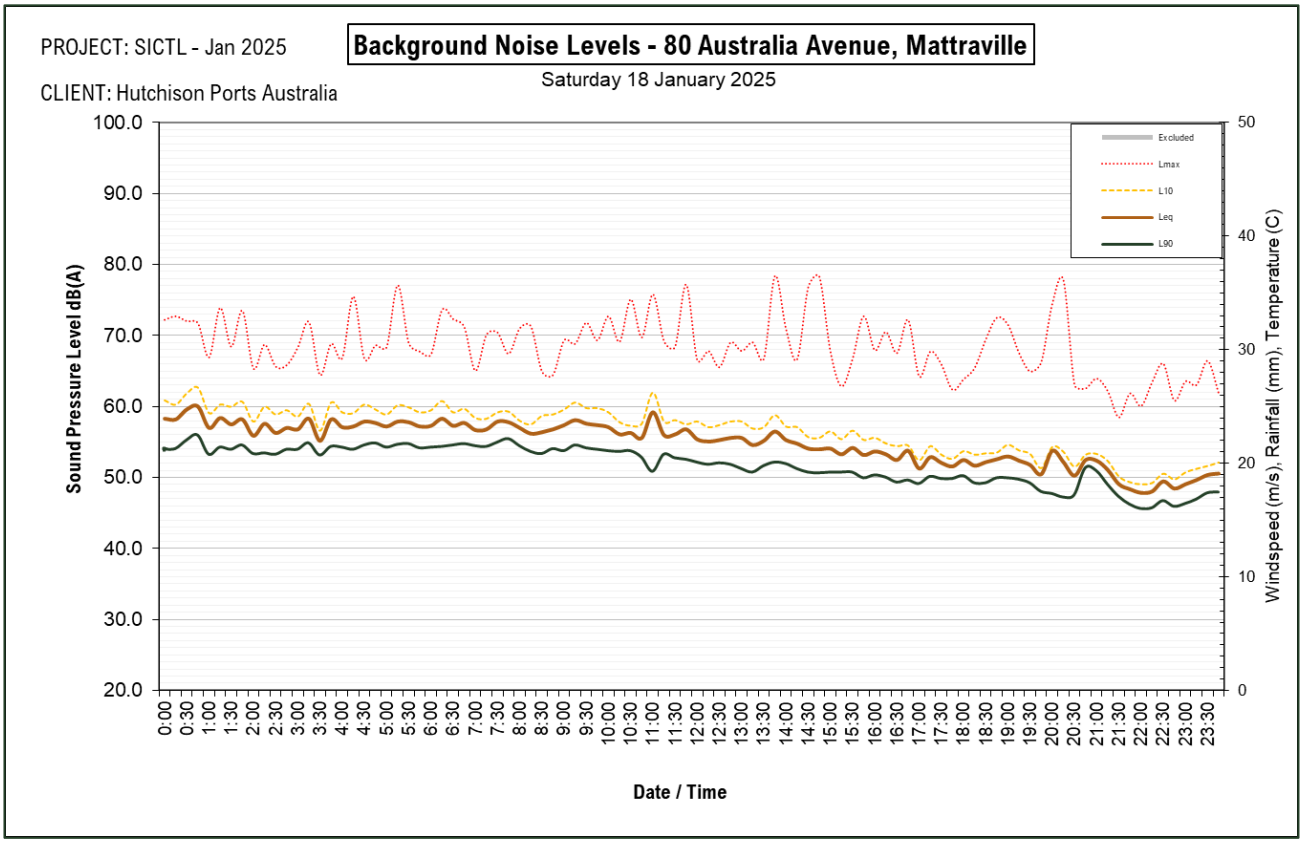
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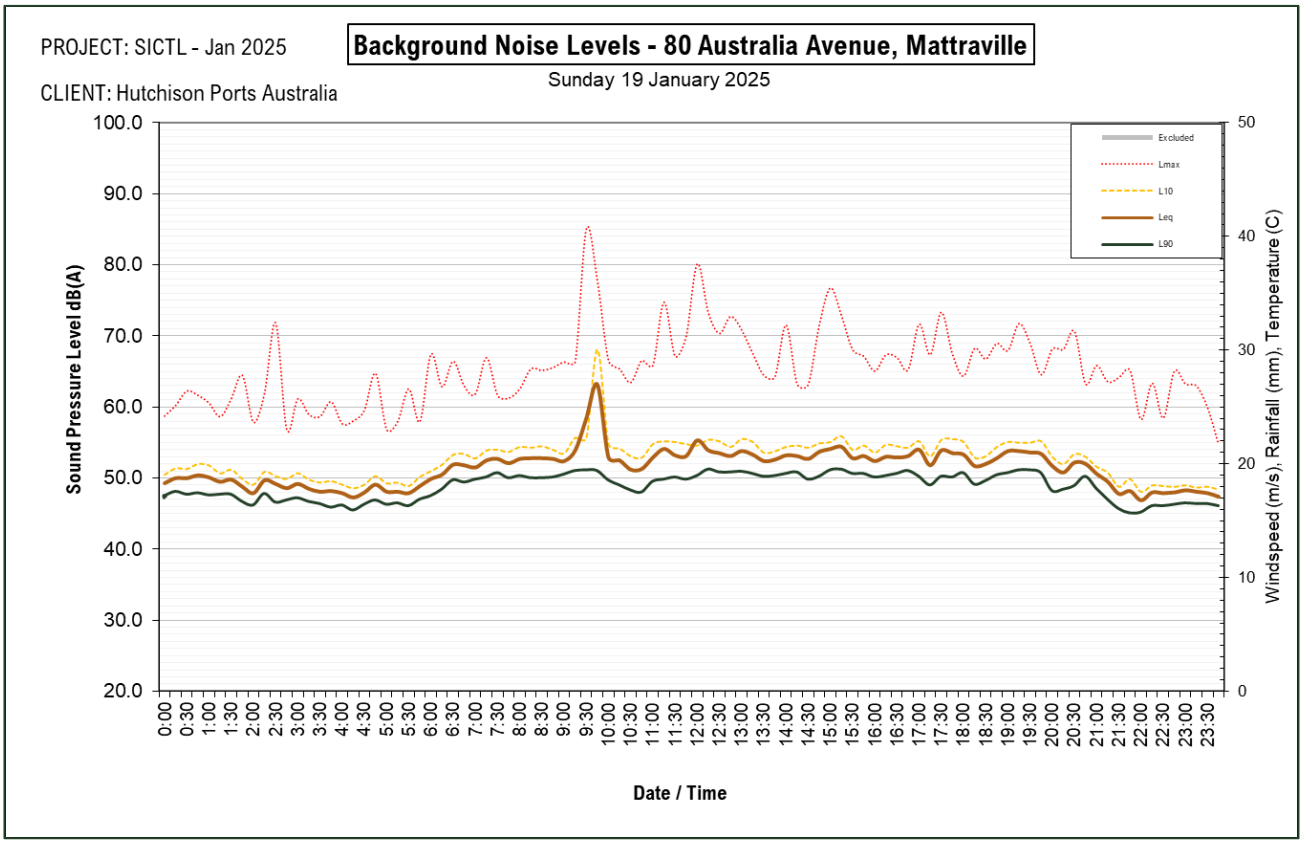
Date / Time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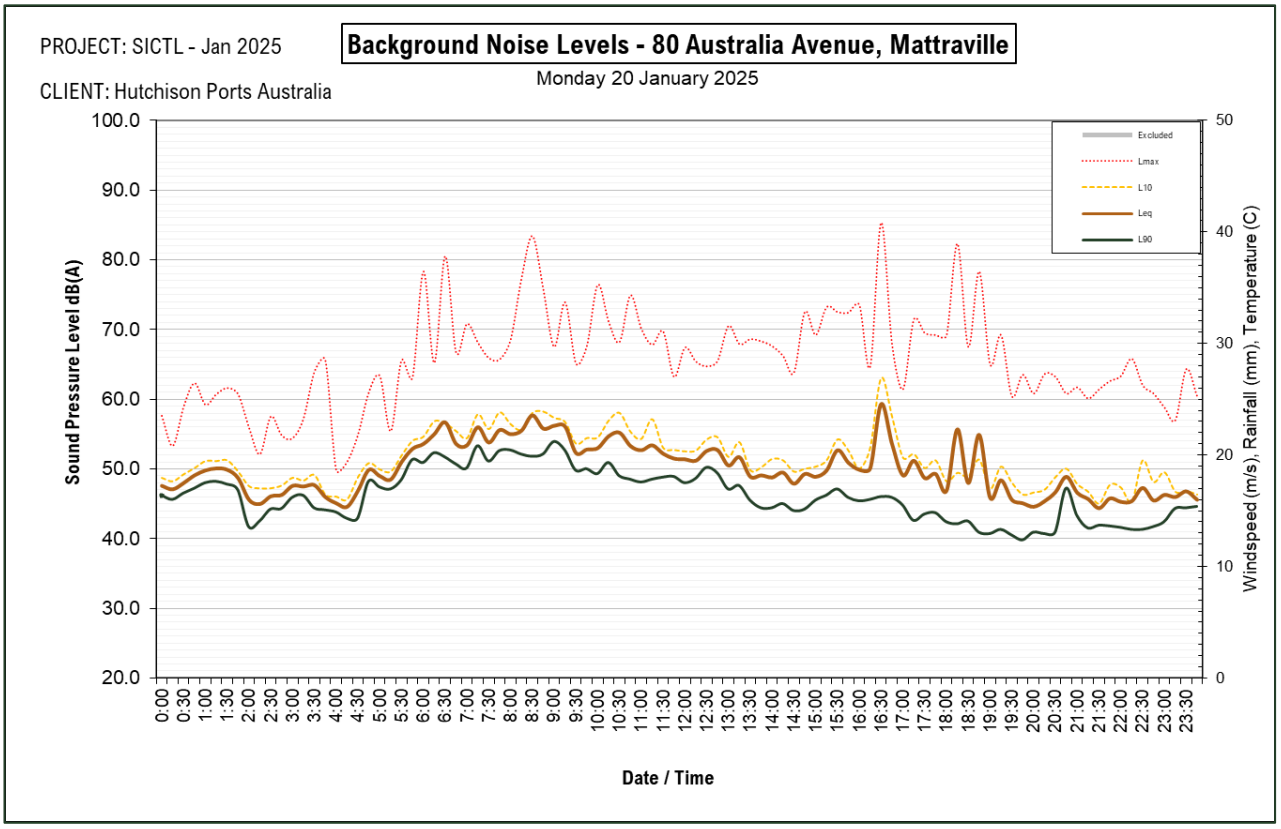
Date / Time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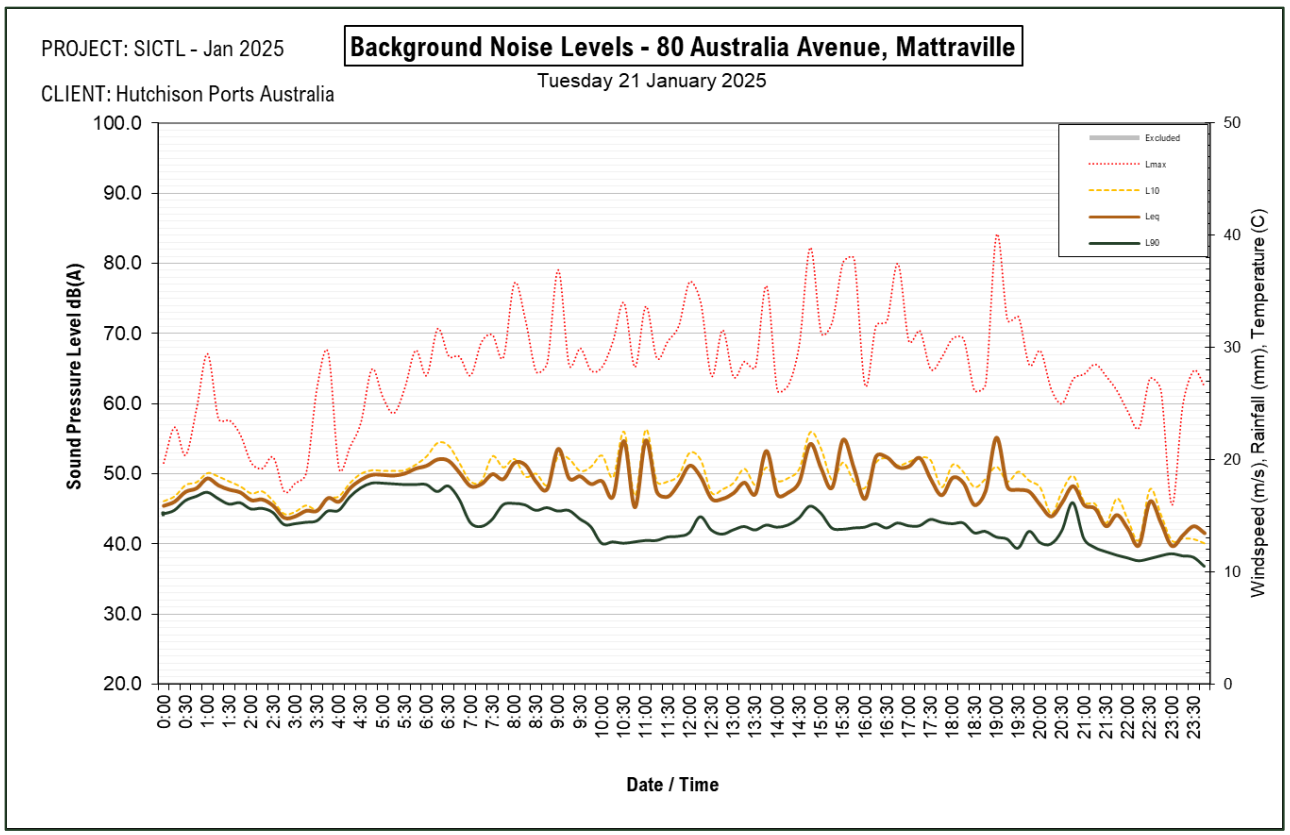
Date / Time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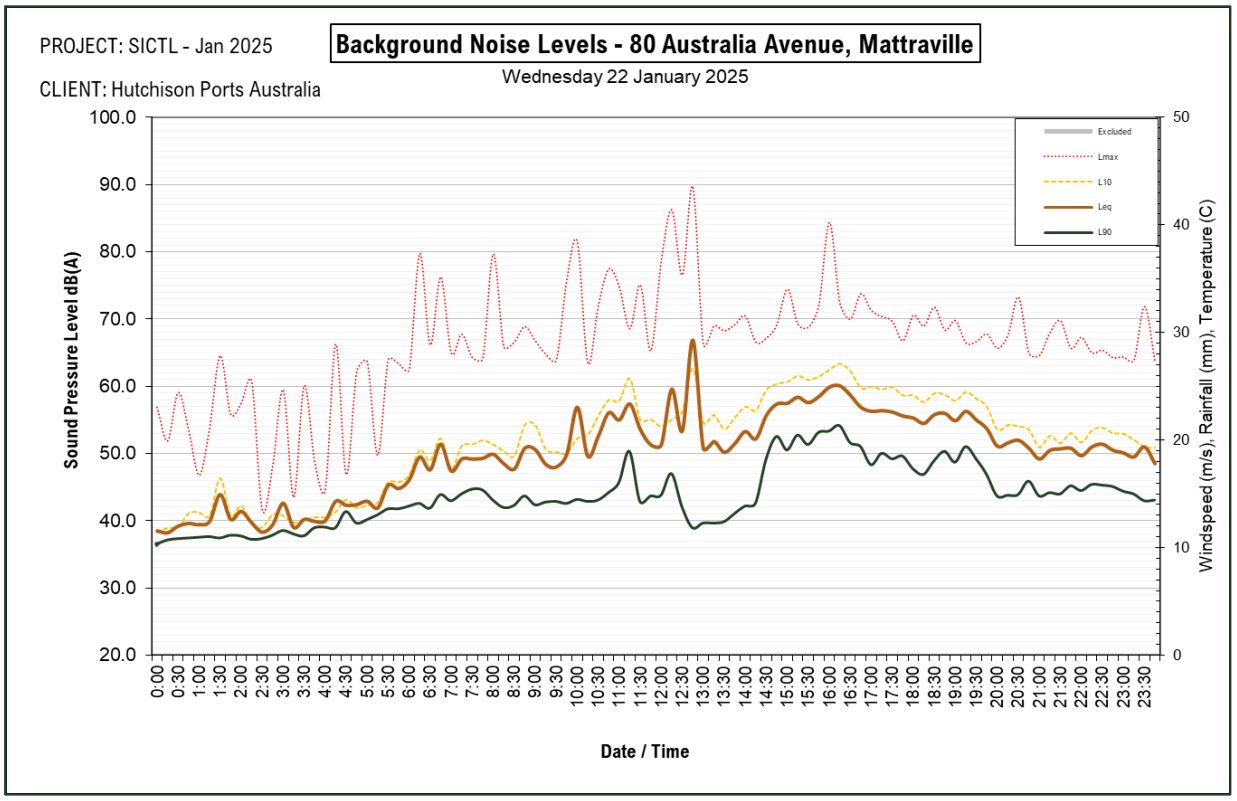
Date / Time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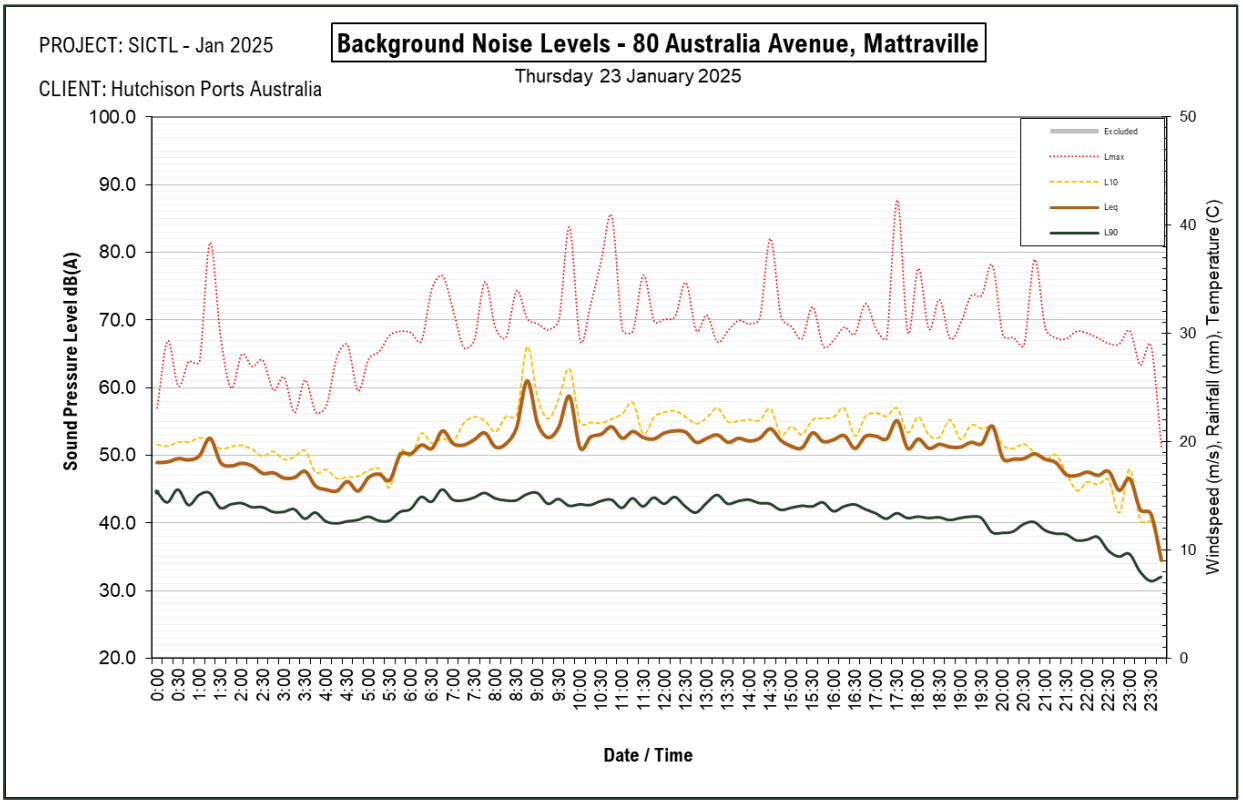
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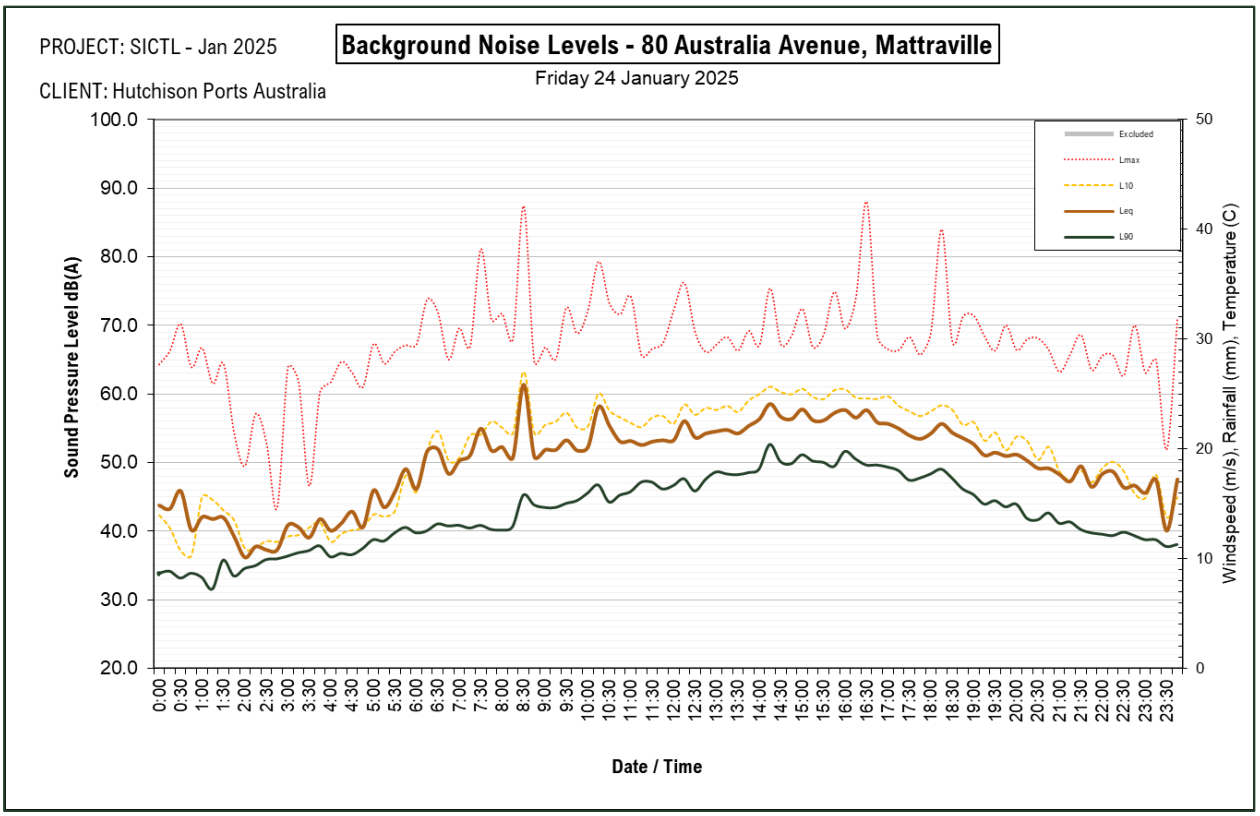
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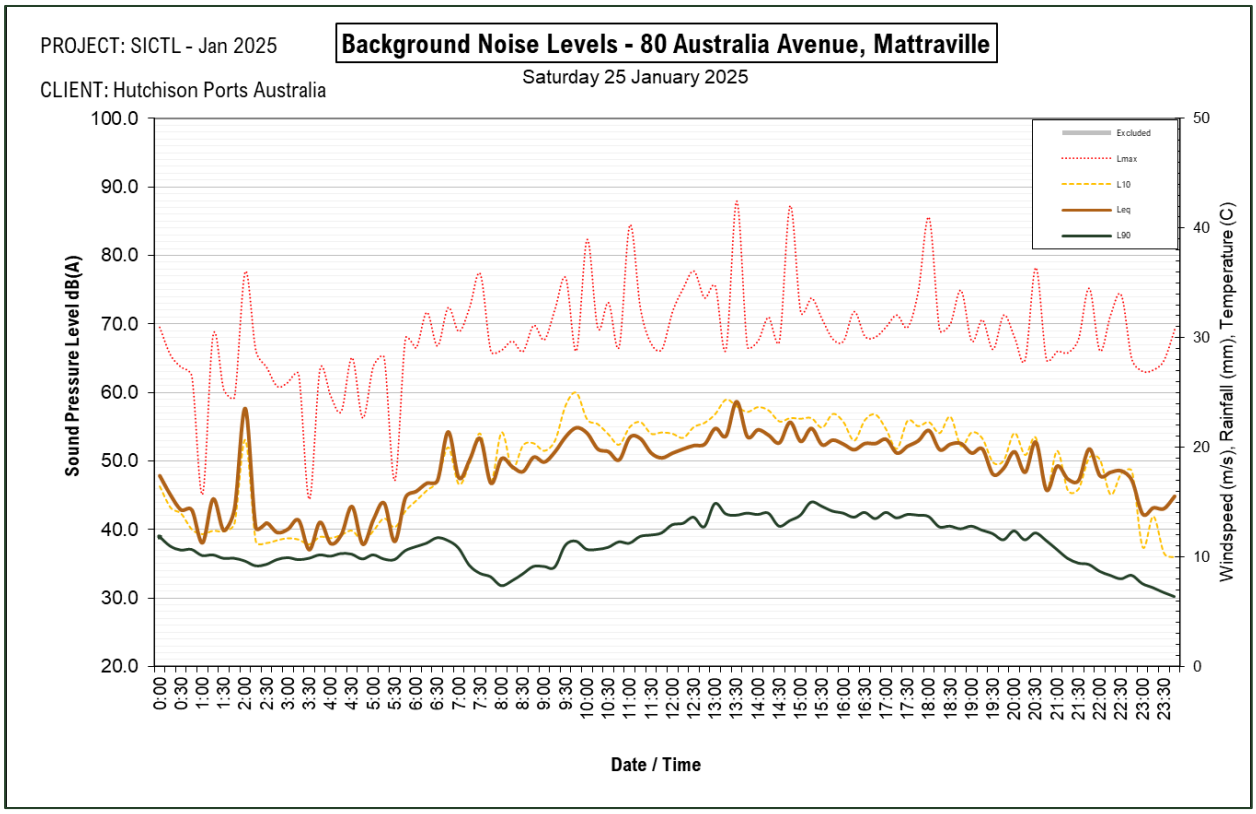
Date / Time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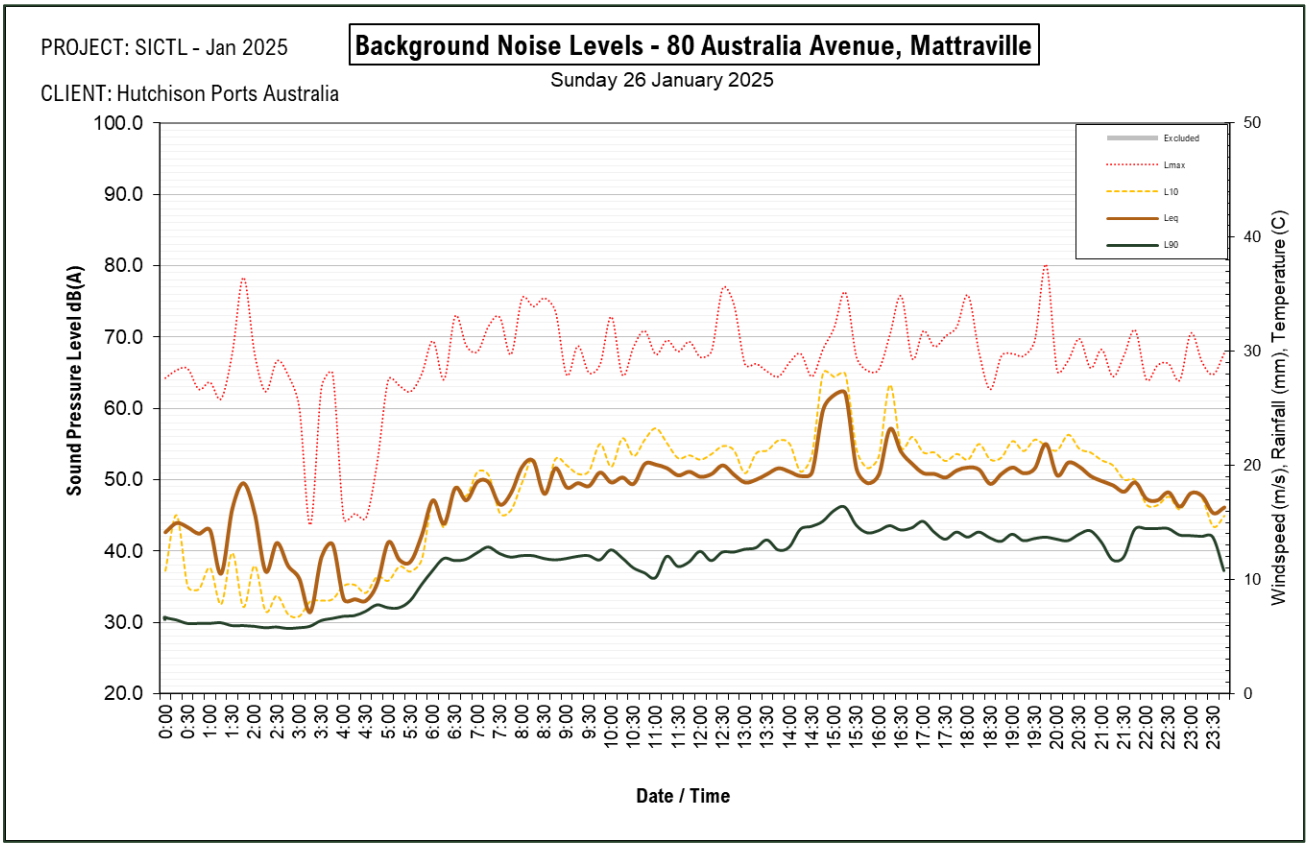
Date / Time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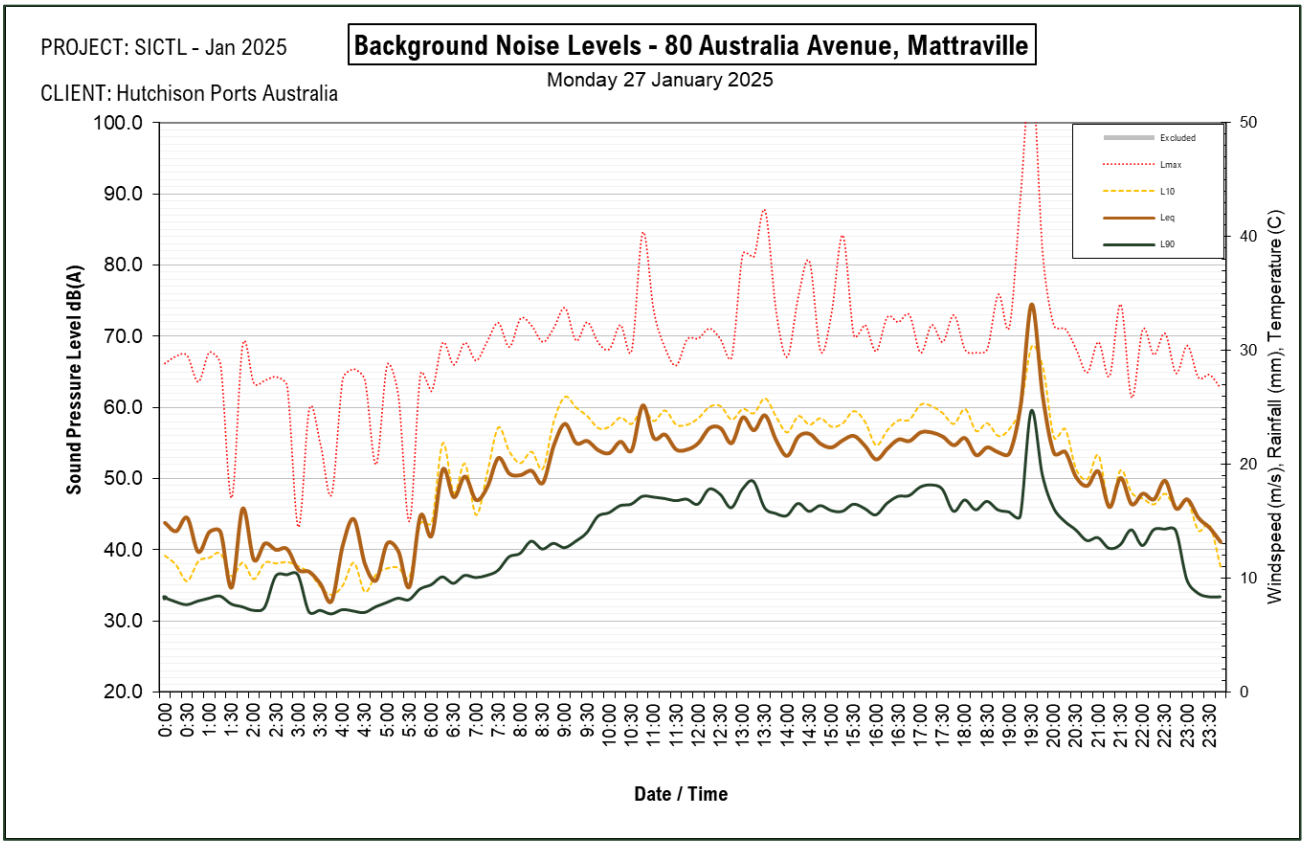
Date / Time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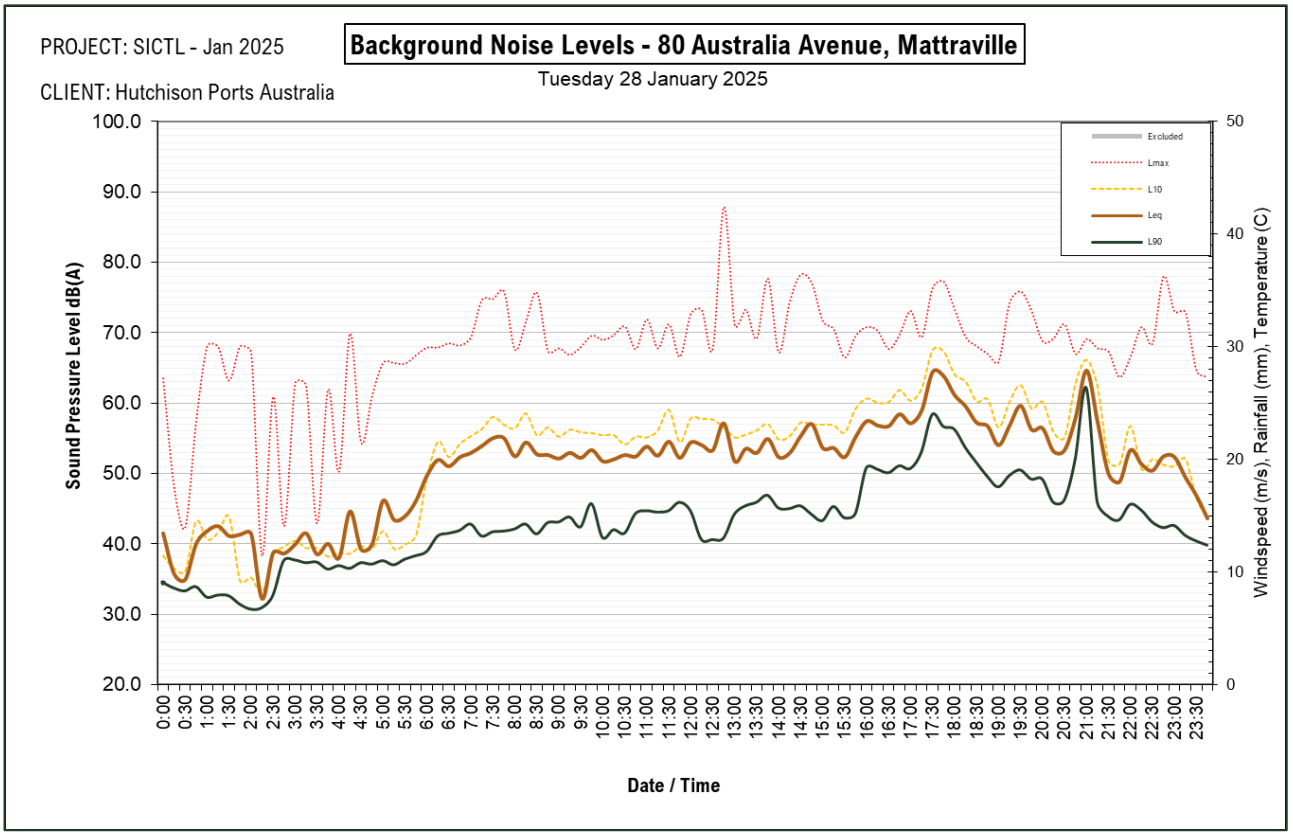
Windspeed (m/s), Rainfall (mm), Temperature (C)
Date / Time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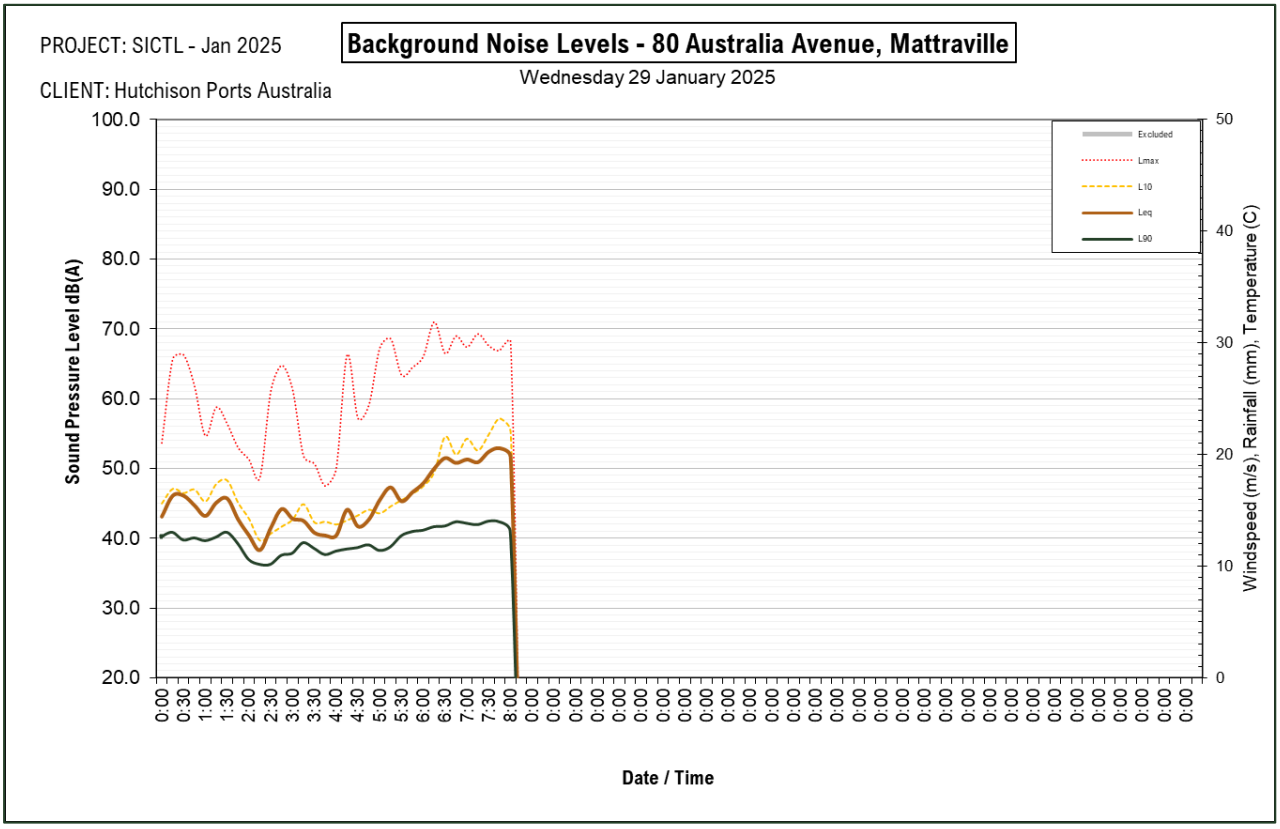
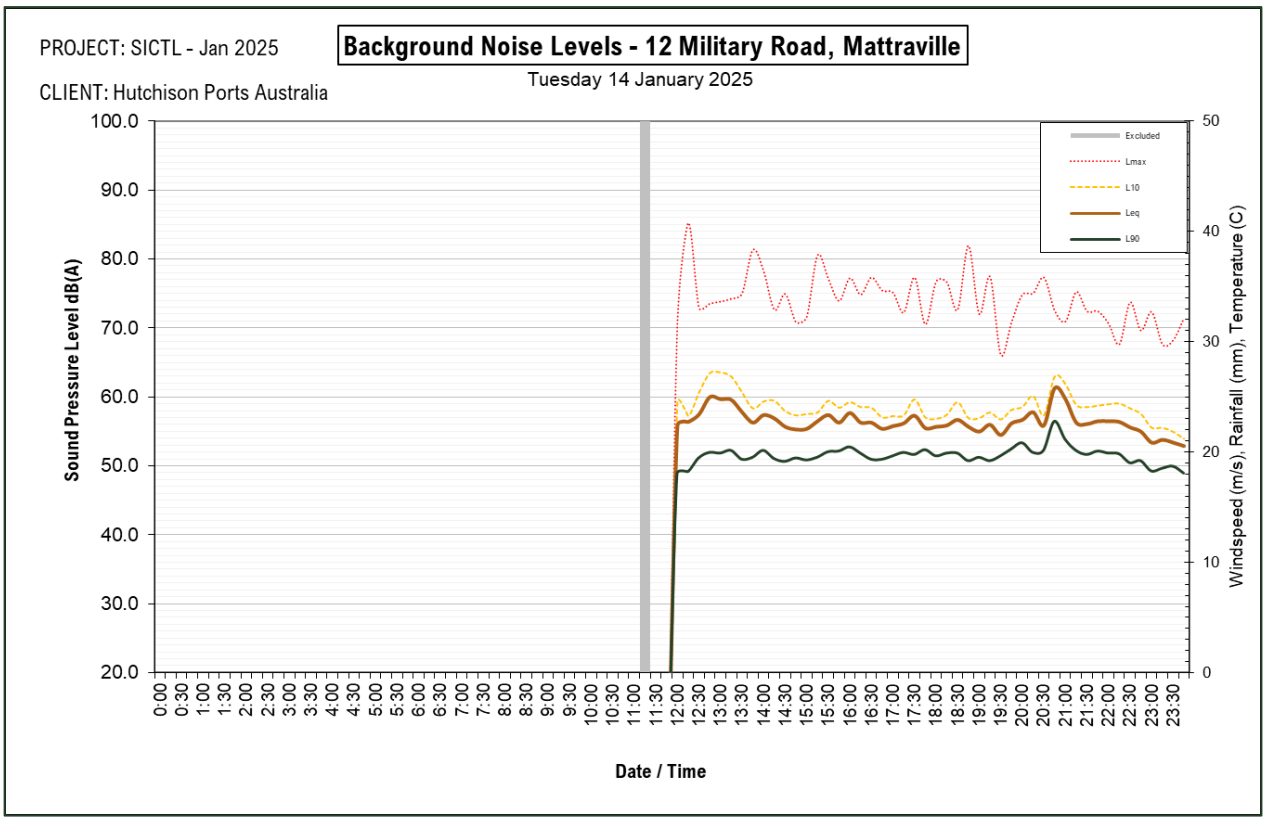
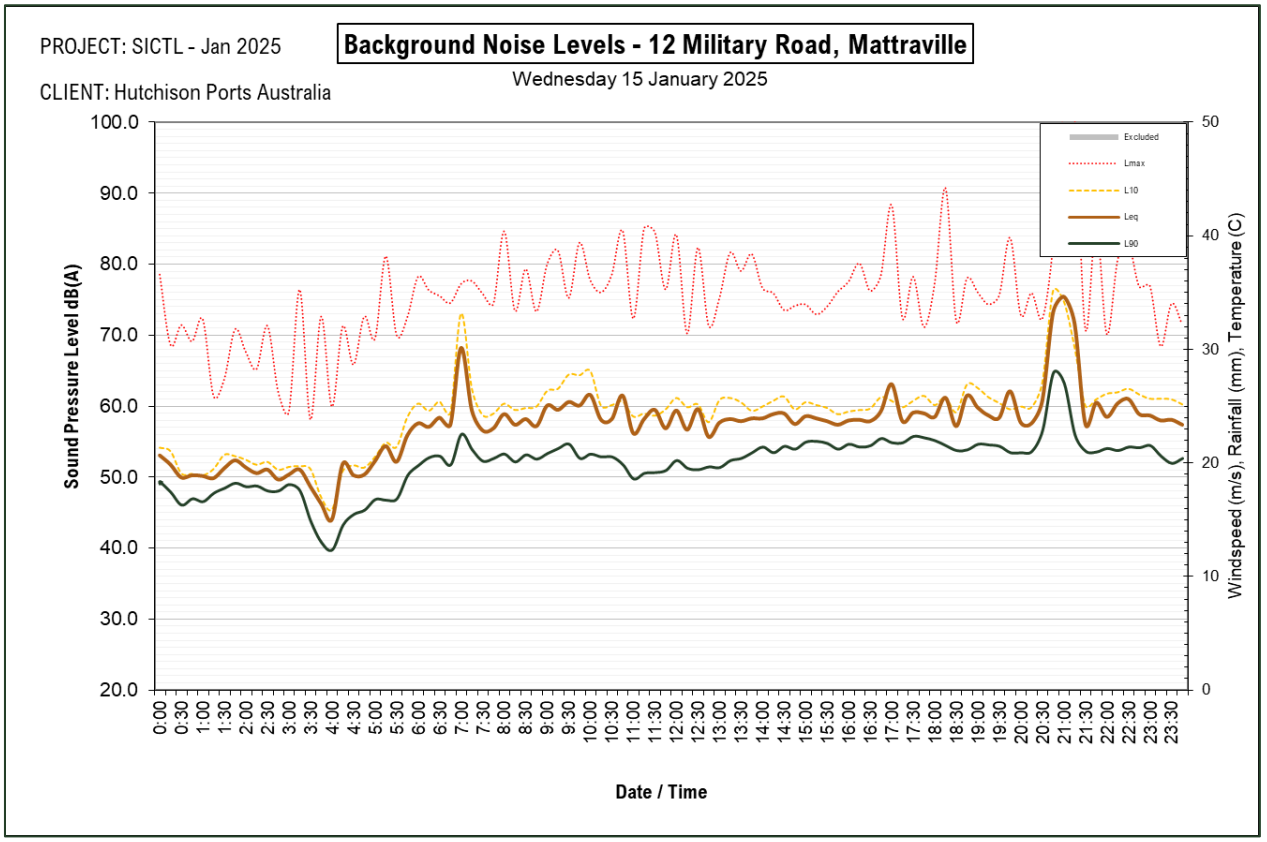
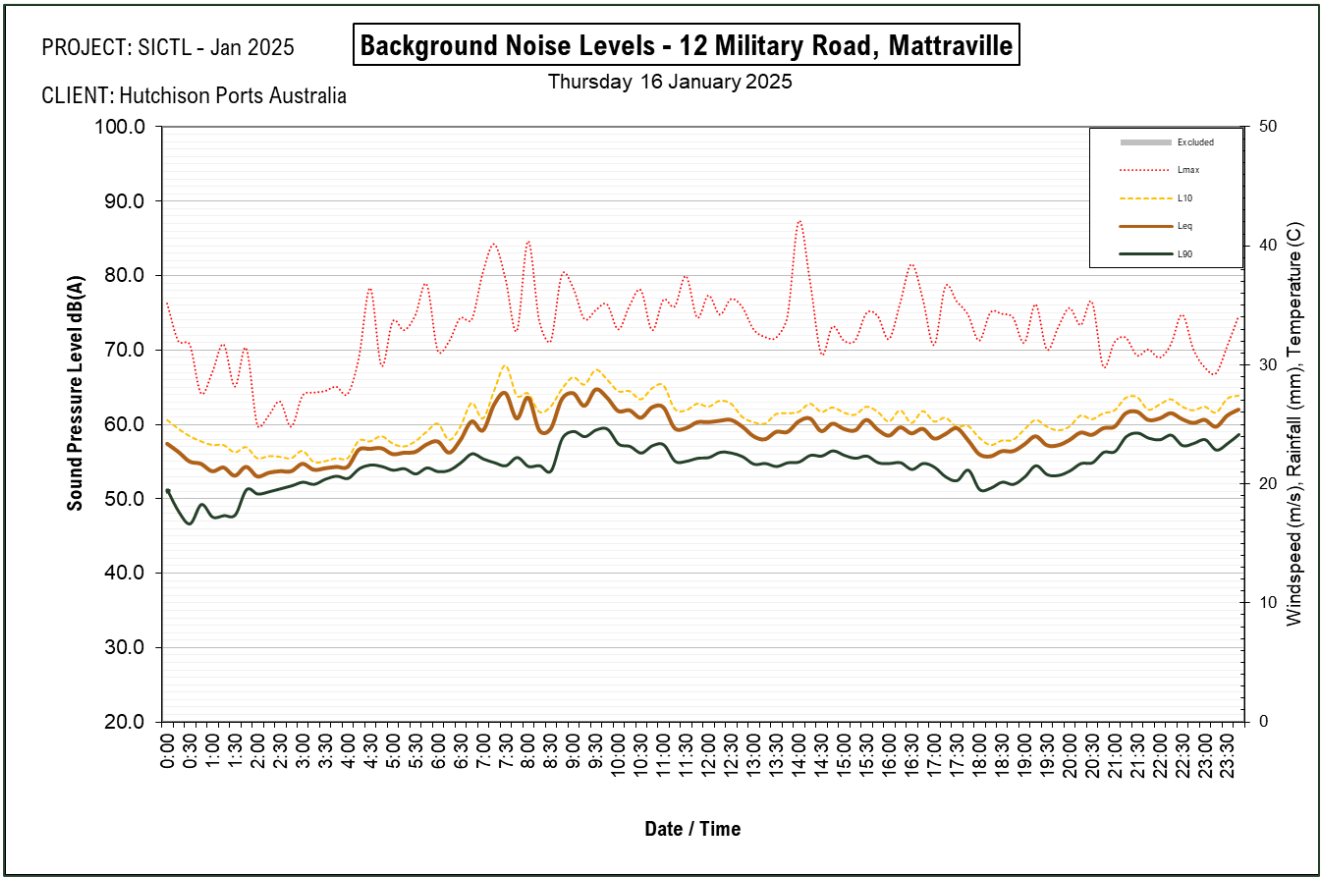
L90
Sound Pressure Level dB(A)
Windspeed (m/s), Rainfall (mm), Temperature (C)
Date / Time

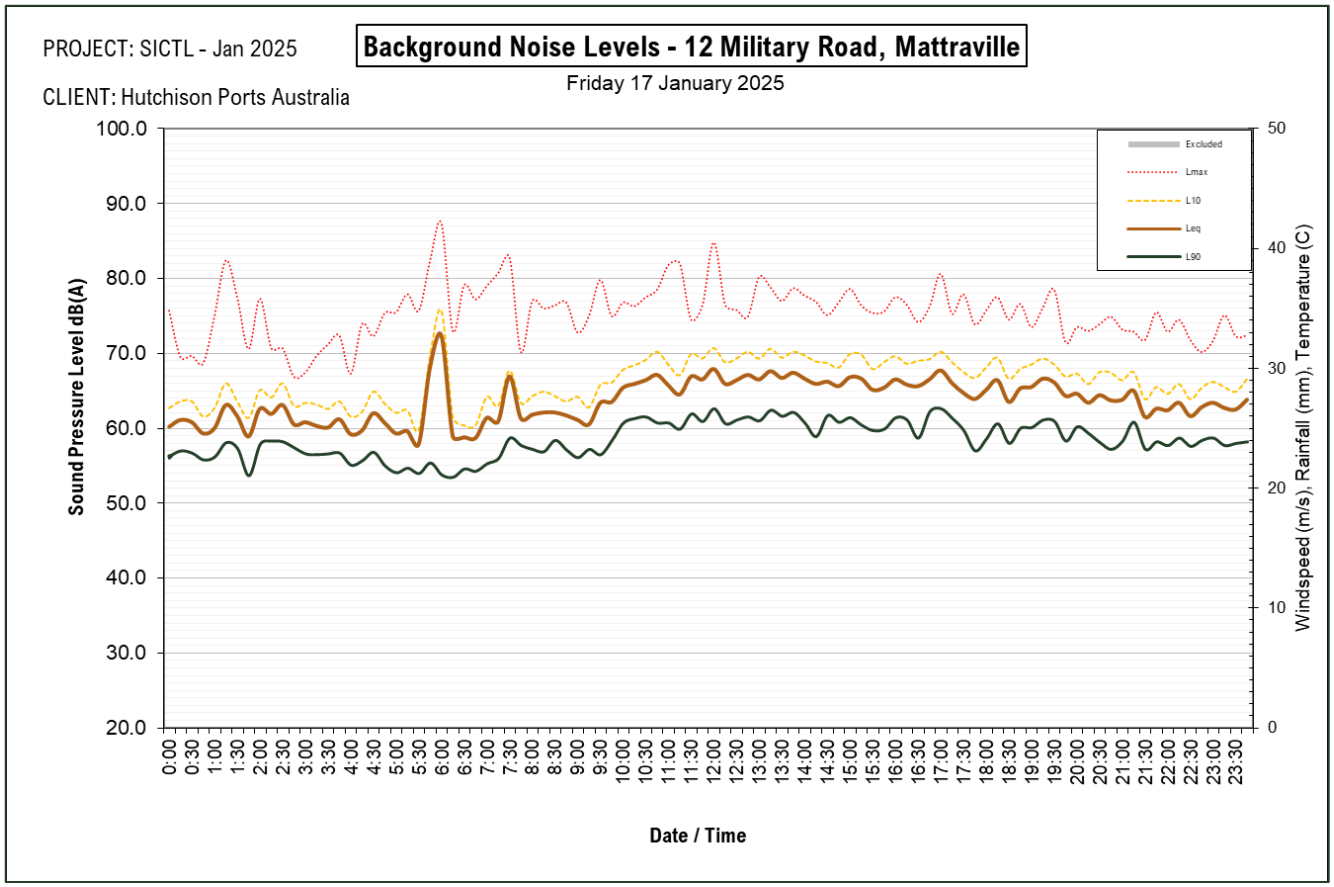

PROJECT: SICTL - Jan 2025
Background Noise Levels - 80 Australia Avenue, Mattraville
Wednesday 29 January 2025
CLIENT: Hutchison Ports Australia
Excluded
Lmax
L10
Leq
L90
Sound Pressure Level dB(A)
Windspeed (m/s), Rainfall (mm), Temperature (C)
Date / Time

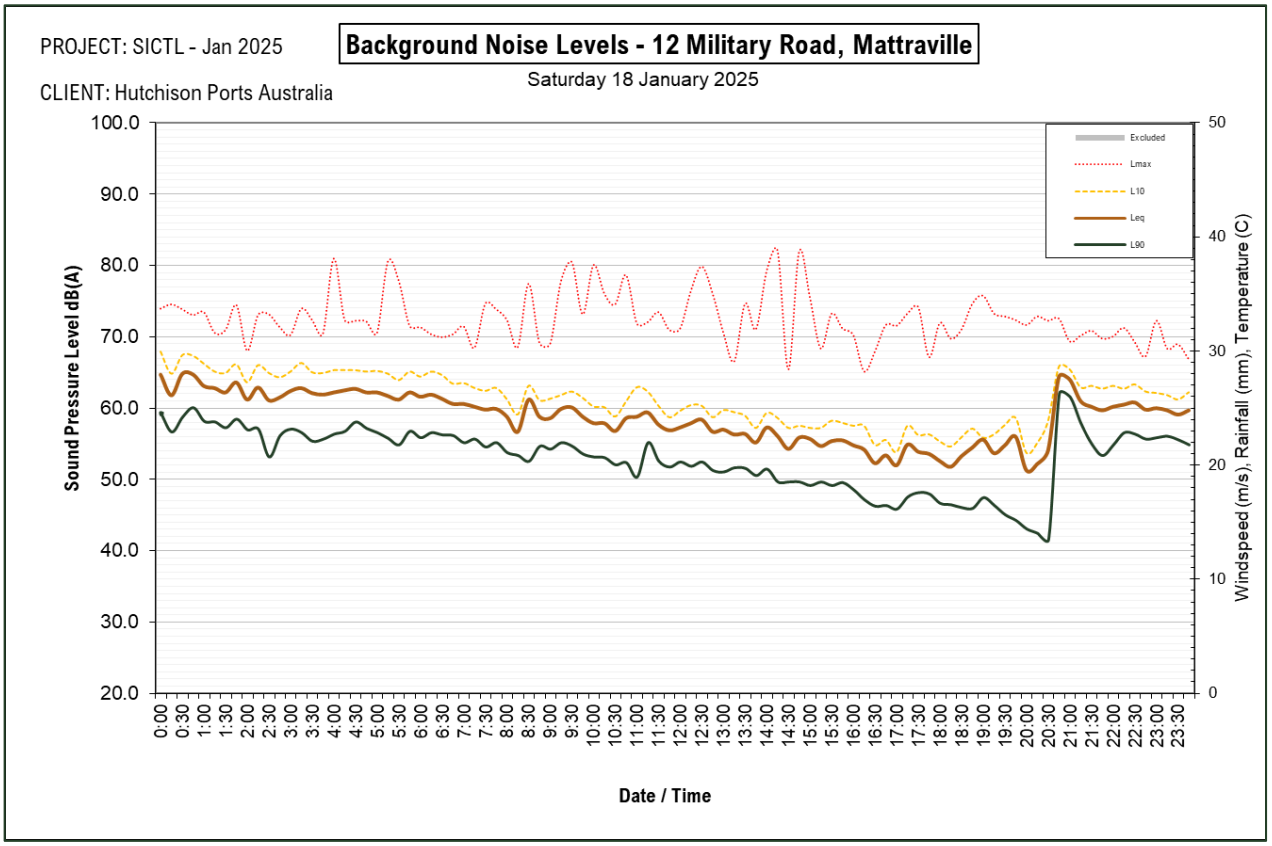
Appendix D 12 Military Road Noise Survey Graphs

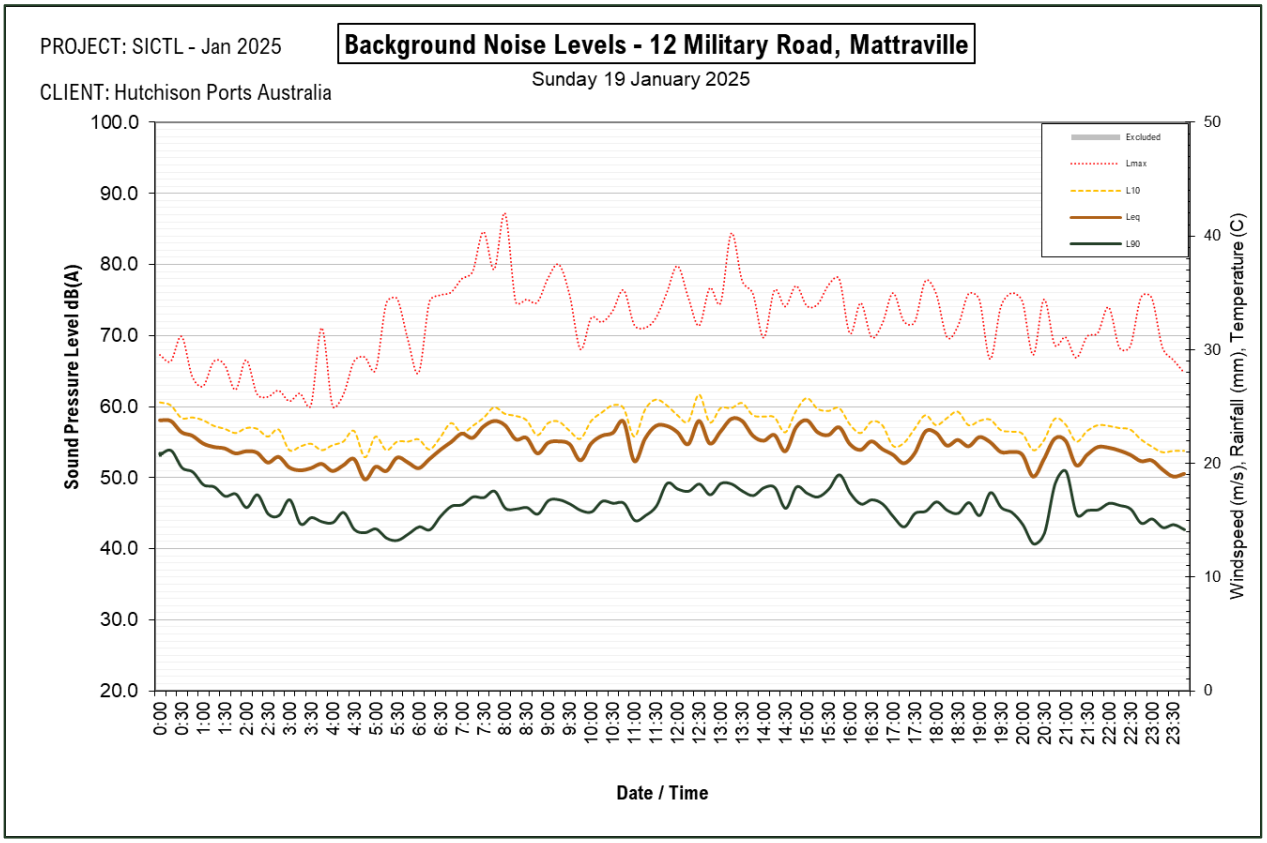


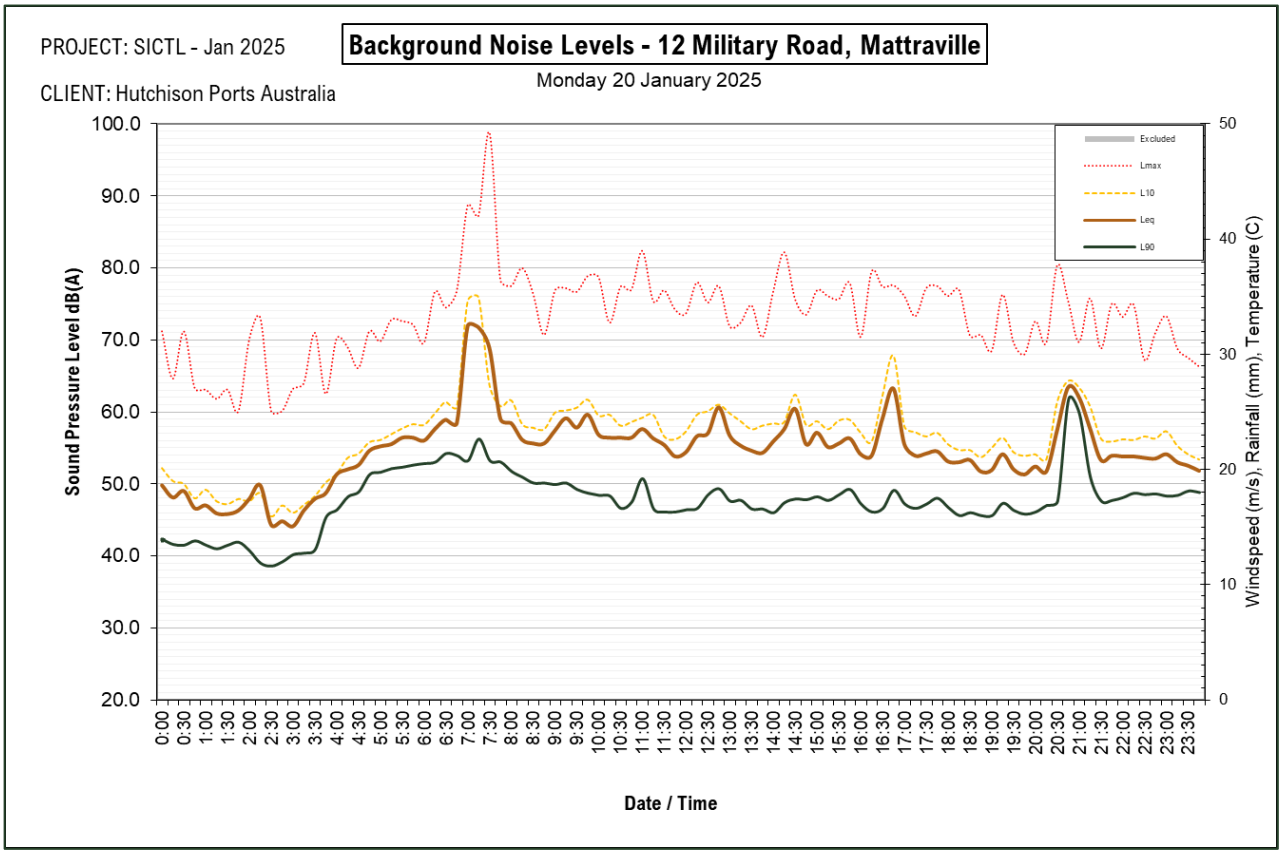


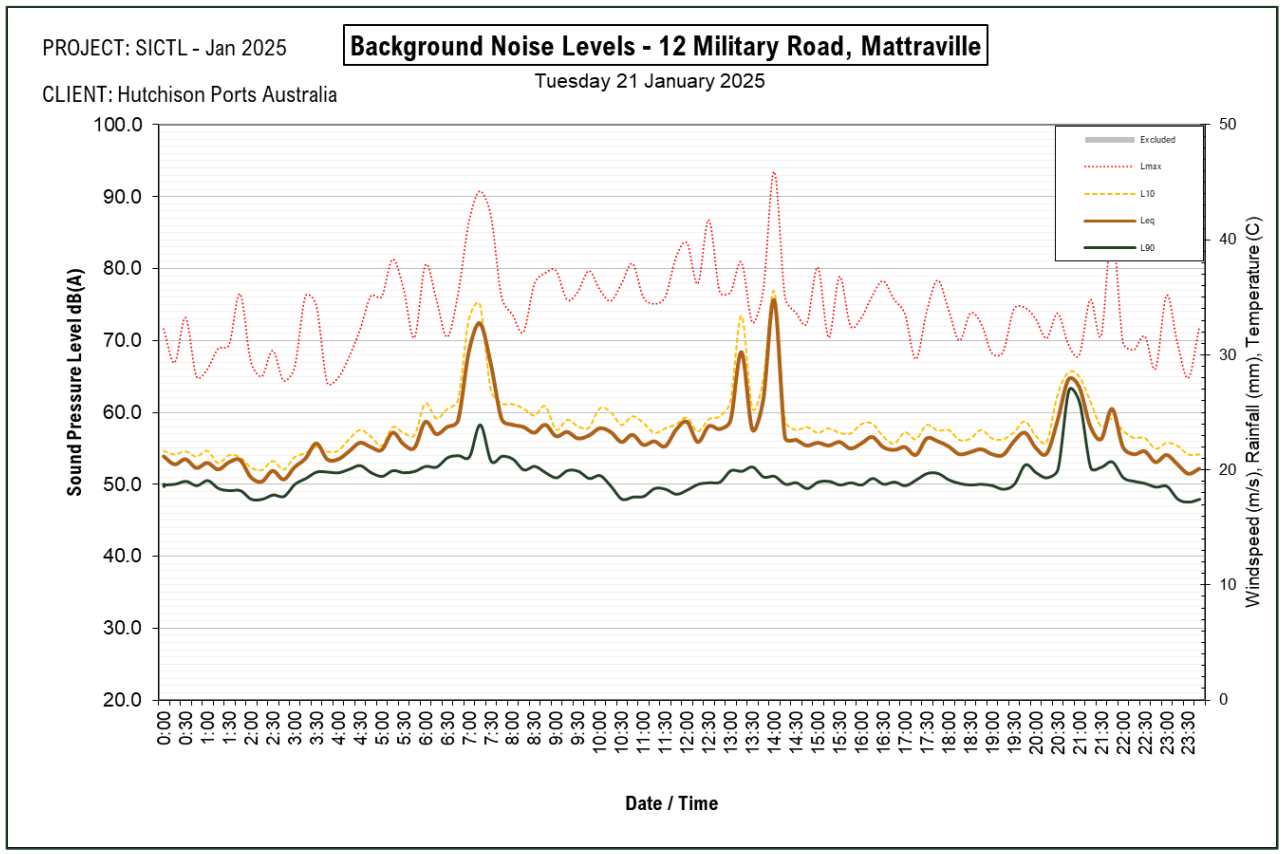

PROJECT: SICTL - Jan 2025
Background Noise Levels - 12 Military Road, Mattraville
Thursday 16 January 2025
CLIENT: Hutchison Ports Australia
Excluded
Lmax
L10
Leq
L90
Sound Pressure Level dB(A)
Windspeed (m/s), Rainfall (mm), Temperature (C)
Date / Time

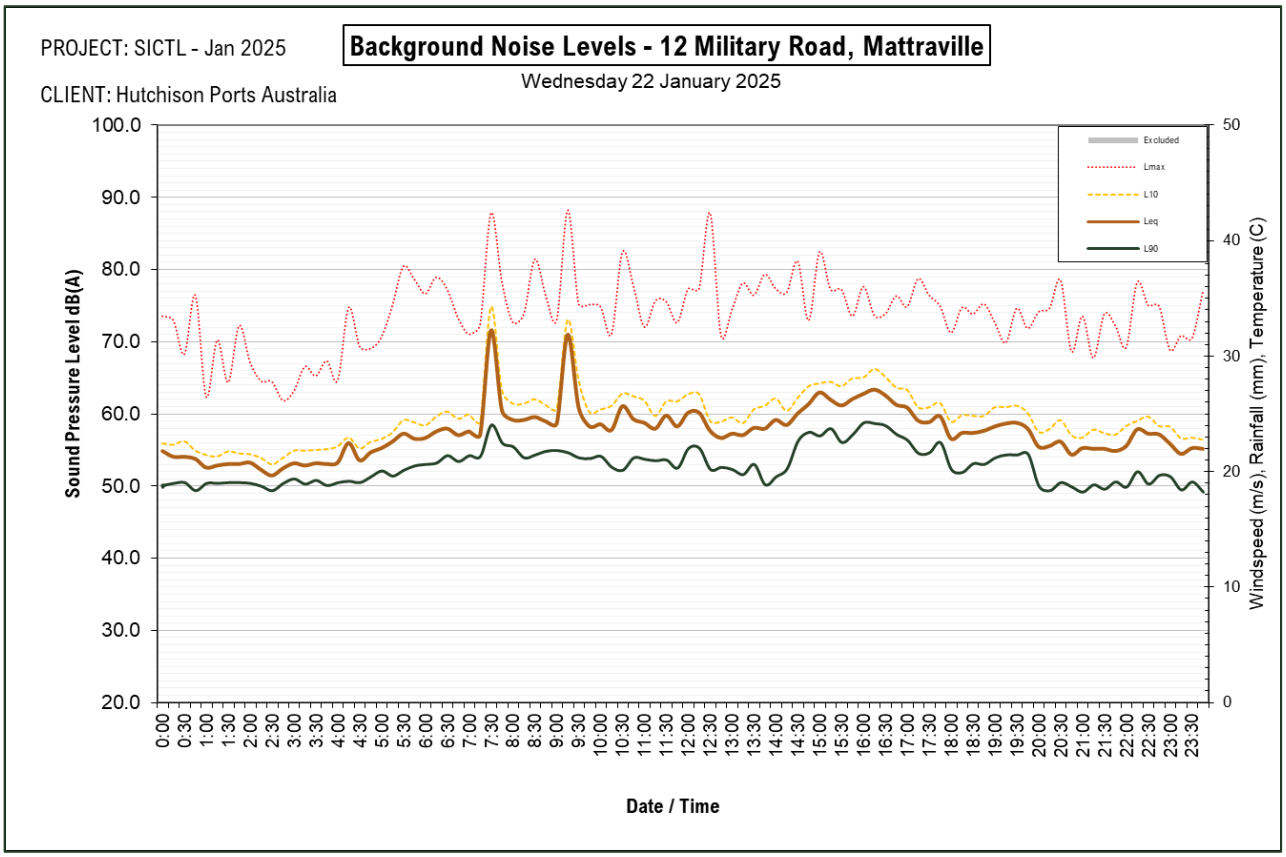

PROJECT: SICTL - Jan 2025
Background Noise Levels - 12 Military Road, Mattraville
Friday 17 January 2025
CLIENT: Hutchison Ports Australia
Excluded
Lmax
L10
Leq
L90
Sound Pressure Level dB(A)
Windspeed (m/s), Rainfall (mm), Temperature (C)
Date / Time

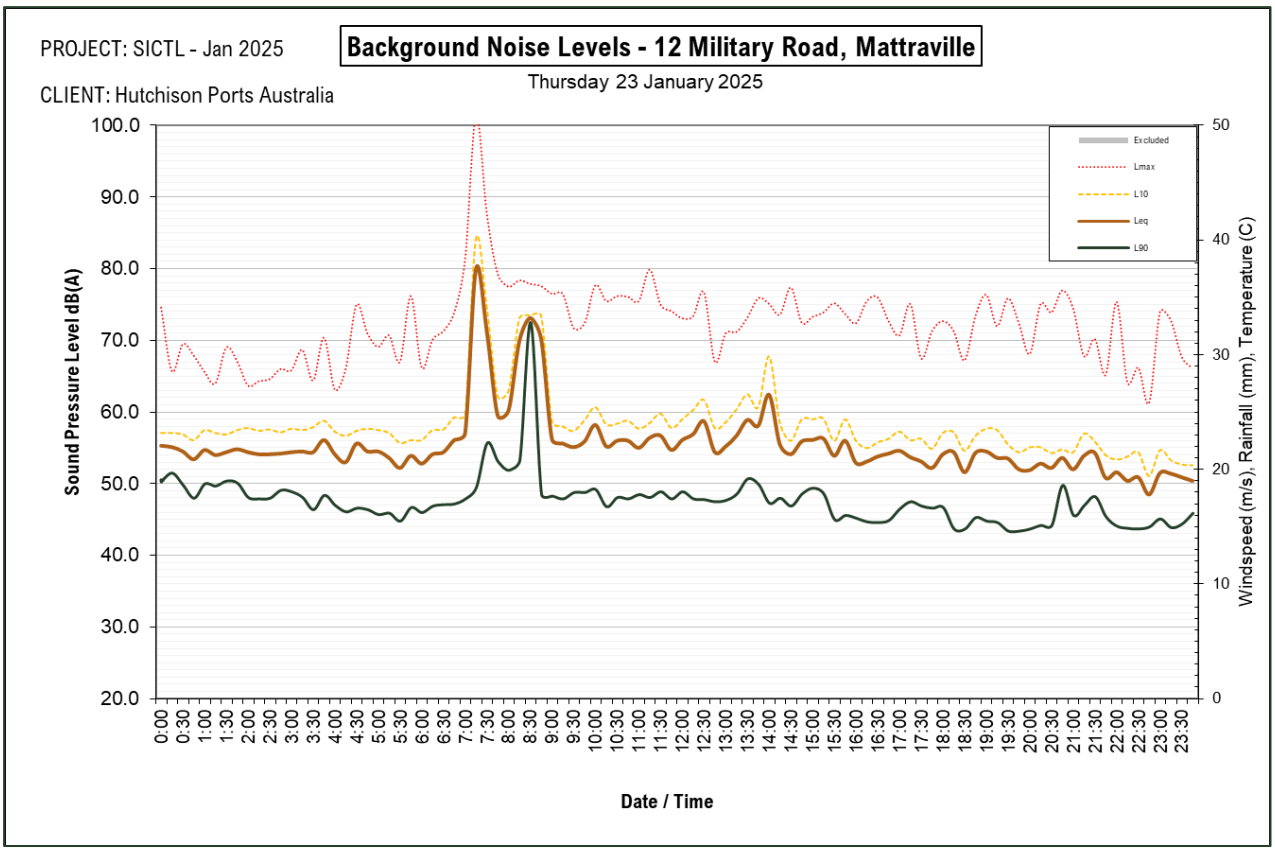

PROJECT: SICTL - Jan 2025
Background Noise Levels - 12 Military Road, Mattraville
Saturday 18 January 2025
CLIENT: Hutchison Ports Australia
Excluded
Lmax
L10
Leq
L90
Sound Pressure Level dB(A)
Windspeed (m/s), Rainfall (mm), Temperature (C)
Date / Time

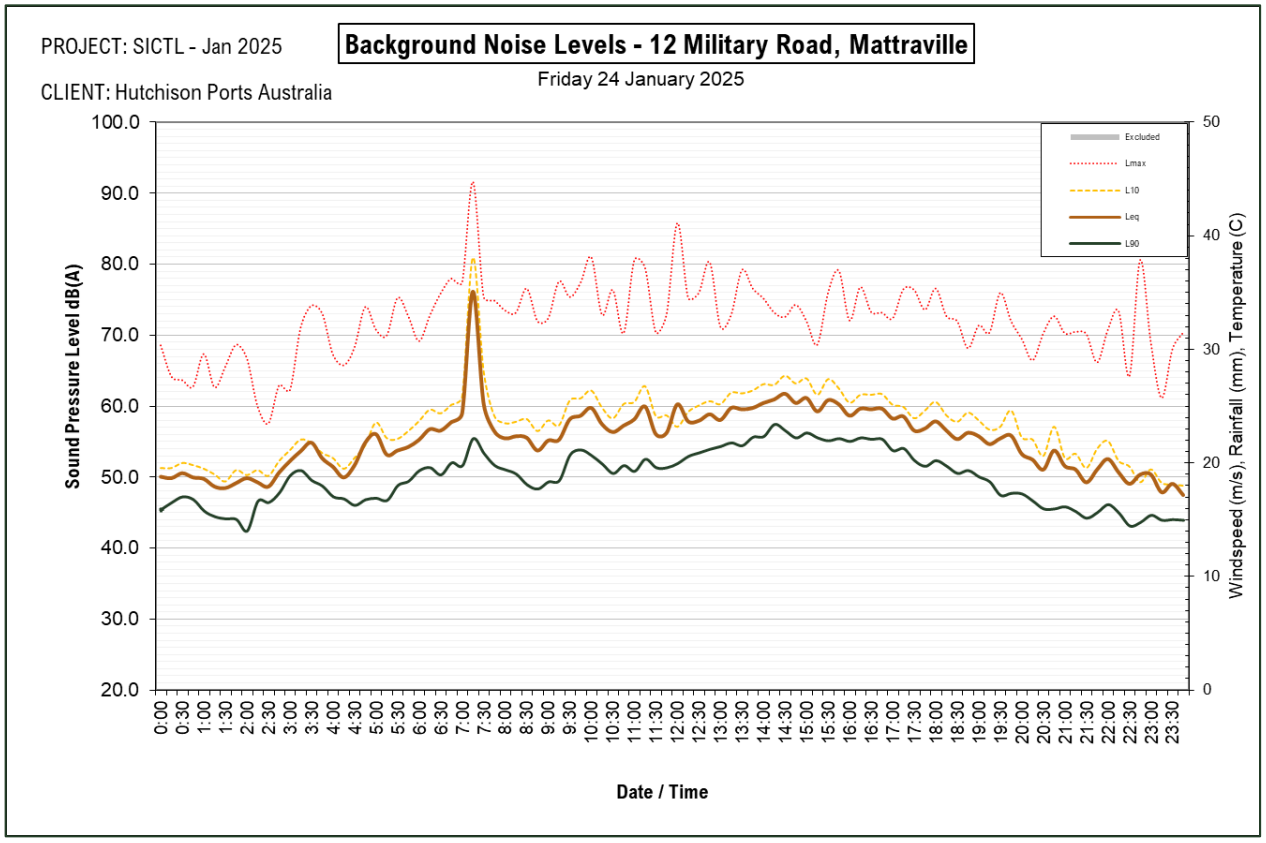

PROJECT: SICTL - Jan 2025
Background Noise Levels - 12 Military Road, Mattraville
Sunday 19 January 2025
CLIENT: Hutchison Ports Australia
Excluded
Lmax
L10
Leq
L90
Sound Pressure Level dB(A)
Windspeed (m/s), Rainfall (mm), Temperature (C)
Date / Time

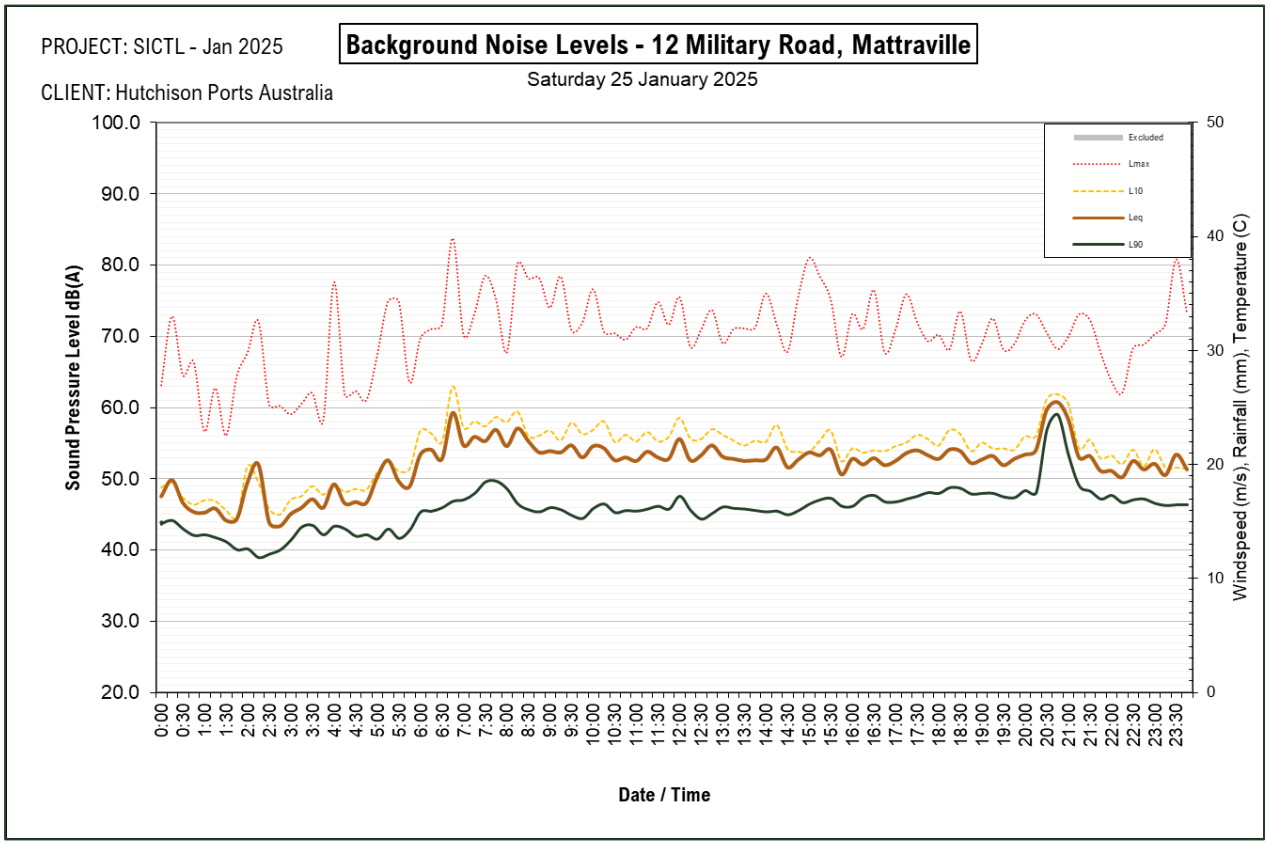

PROJECT: SICTL - Jan 2025
Background Noise Levels - 12 Military Road, Mattraville
Monday 20 January 2025
CLIENT: Hutchison Ports Australia
Excluded
Lmax
L10
Leq
L90
Sound Pressure Level dB(A)
Windspeed (m/s), Rainfall (mm), Temperature (C)
Date / Time

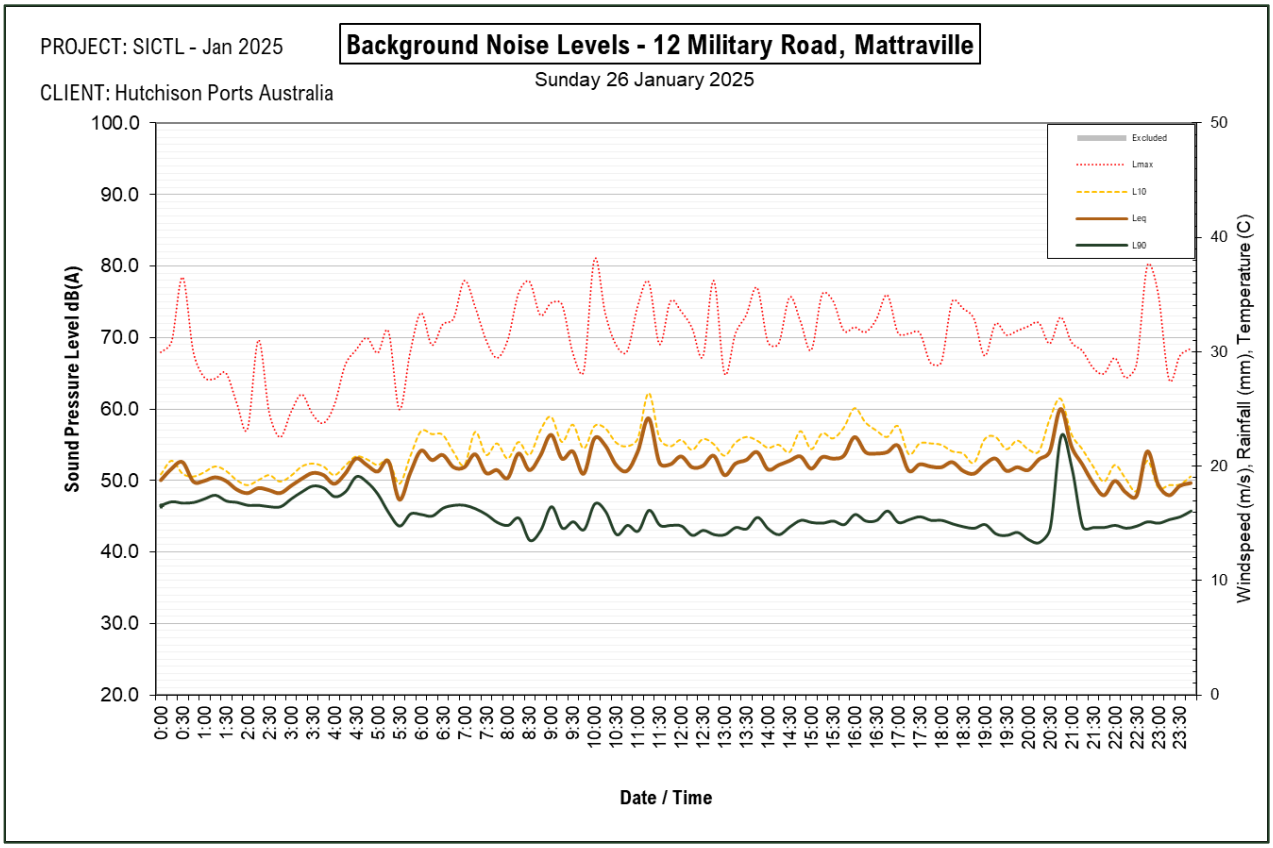

PROJECT: SICTL - Jan 2025
Background Noise Levels - 12 Military Road, Mattraville
Tuesday 21 January 2025
CLIENT: Hutchison Ports Australia
Excluded
Lmax
L10
Leq
L90
Sound Pressure Level dB(A)
Windspeed (m/s), Rainfall (mm), Temperature (C)
Date / Time

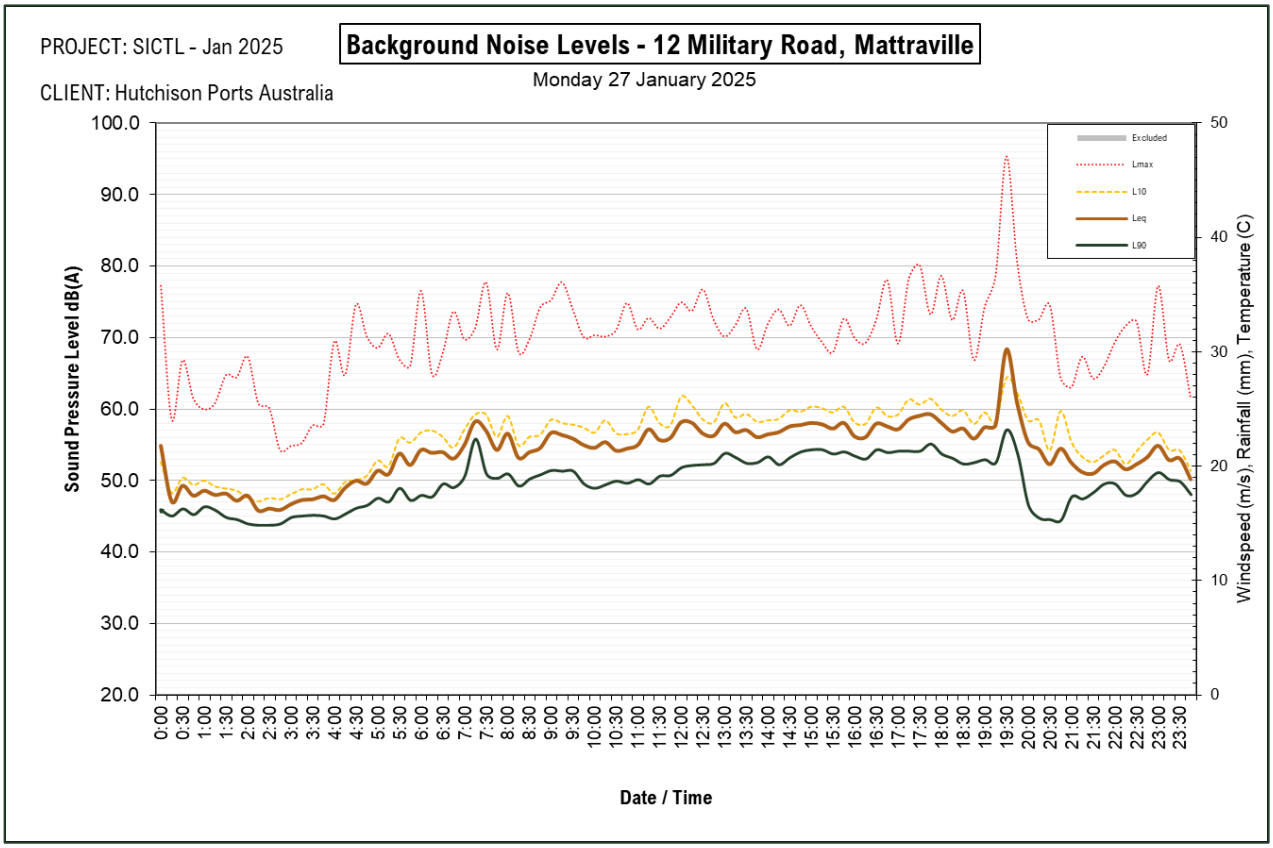

PROJECT: SICTL - Jan 2025
Background Noise Levels - 12 Military Road, Mattraville
Wednesday 22 January 2025
CLIENT: Hutchison Ports Australia
Sound Pressure Level dB(A)
Windspeed (m/s), Rainfall (mm), Temperature (C)
Excluded
Lmax
L10
Leq
L90
Date / Time

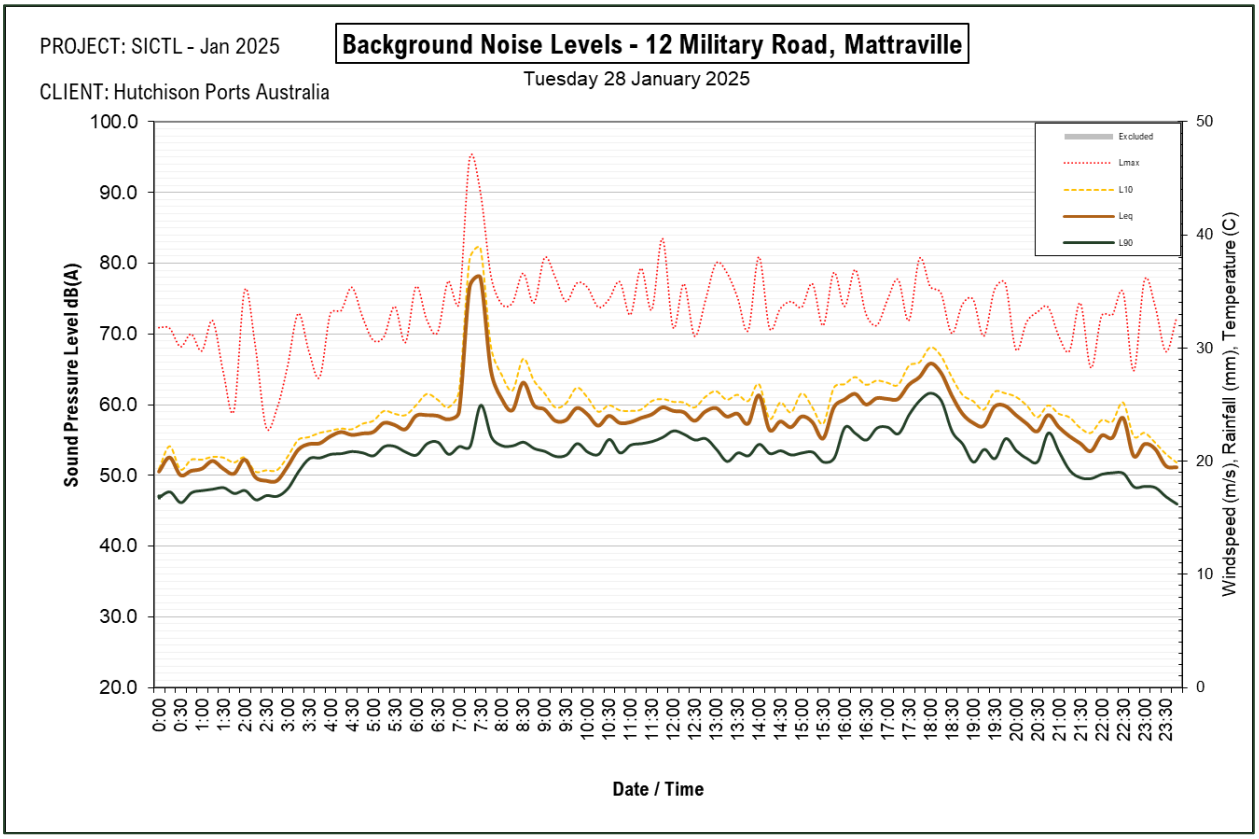

PROJECT: SICTL - Jan 2025
Background Noise Levels - 12 Military Road, Mattraville
Thursday 23 January 2025
CLIENT: Hutchison Ports Australia
Sound Pressure Level dB(A)
Windspeed (m/s), Rainfall (mm), Temperature (C)
Excluded
Lmax
L10
Leq
L90
Date / Time

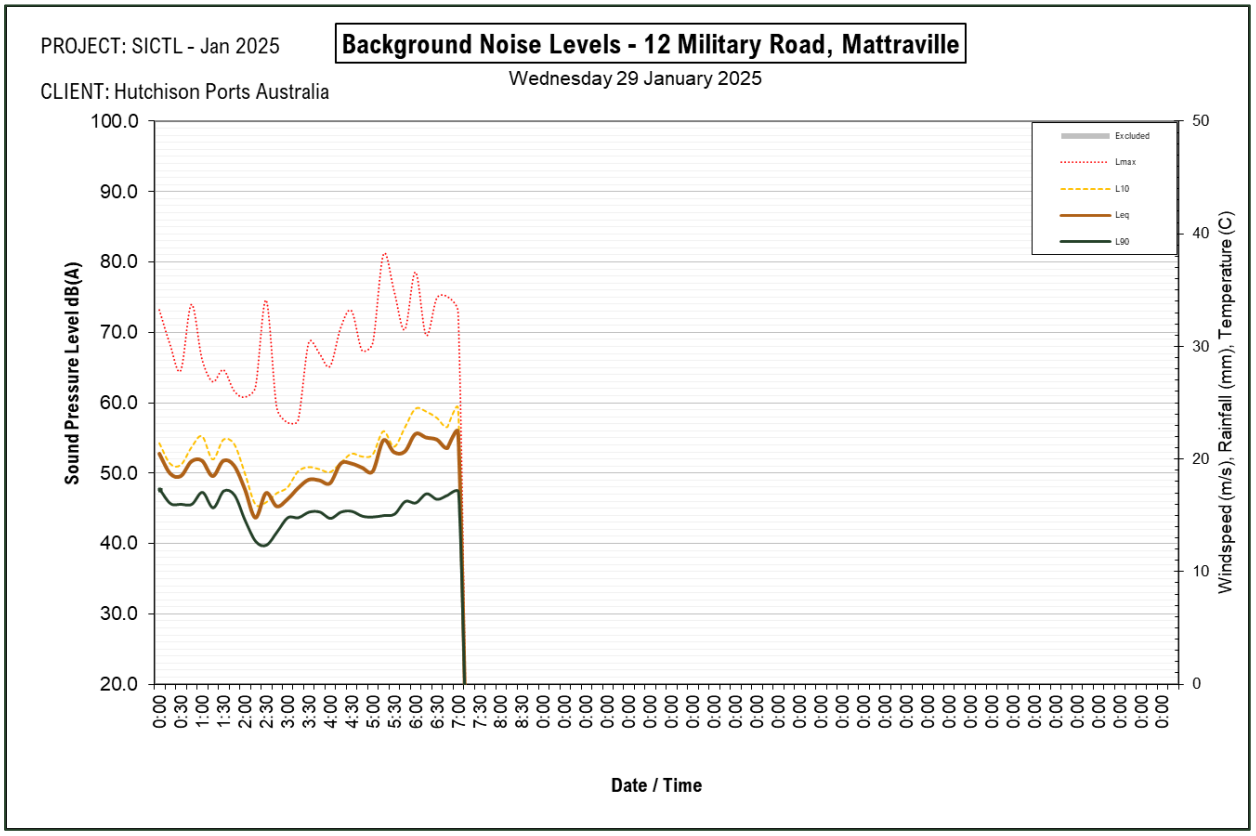

PROJECT: SICTL - Jan 2025
Background Noise Levels - 12 Military Road, Mattraville
Friday 24 January 2025
CLIENT: Hutchison Ports Australia
Excluded
Lmax
L10
Leq
L90
Sound Pressure Level dB(A)
Windspeed (m/s), Rainfall (mm), Temperature (C)
Date / Time


PROJECT: SICTL - Jan 2025
Background Noise Levels - 12 Military Road, Mattraville
Saturday 25 January 2025
CLIENT: Hutchison Ports Australia
Excluded
Lmax
L10
Leq
L90
Sound Pressure Level dB(A)
Windspeed (m/s), Rainfall (mm), Temperature (C)
Date / Time


PROJECT: SICTL - Jan 2025
Background Noise Levels - 12 Military Road, Mattraville
Sunday 26 January 2025
CLIENT: Hutchison Ports Australia
Excluded
Lmax
L10
Leq
L90
Sound Pressure Level dB(A)
Windspeed (m/s), Rainfall (mm), Temperature (C)
Date / Time


PROJECT: SICTL - Jan 2025
Background Noise Levels - 12 Military Road, Mattraville
Monday 27 January 2025
CLIENT: Hutchison Ports Australia
Excluded
Lmax
L10
Leq
L90
Sound Pressure Level dB(A)
Windspeed (m/s), Rainfall (mm), Temperature (C)
Date / Time


PROJECT: SICTL - Jan 2025
Background Noise Levels - 12 Military Road, Mattraville
Tuesday 28 January 2025
CLIENT: Hutchison Ports Australia
Excluded
Lmax
L10
Leq
L90
Sound Pressure Level dB(A)
Windspeed (m/s), Rainfall (mm), Temperature (C)
Date / Time


PROJECT: SICTL - Jan 2025
Background Noise Levels - 12 Military Road, Mattraville
Wednesday 29 January 2025
CLIENT: Hutchison Ports Australia
Excluded
Lmax
L10
Leq
L90
Sound Pressure Level dB(A)
Windspeed (m/s), Rainfall (mm), Temperature (C)
Date / Time