RODNEY STEVENS ACOUSTICS
Acoustic Consultants

REPORT 160095R1

Revision 0

Patrick Port Botany Terminal Biannual Environmental Noise Compliance Monitoring May 2023

PREPARED FOR:
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Patrick Port Botany Terminal

Biannual Environmental

Noise Compliance Monitoring

May 2023

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EXECUTIVE SUMMARY

Rodney Stevens Acoustics Pty Ltd (RSA) has been commissioned by Patrick Port Botany Terminal's Health, Safety & Environment (HSE) Manager to undertake environmental noise compliance monitoring for Patrick Port Botany Terminal (PBT) operations.

This report presents the findings of environmental noise compliance monitoring, carried out every 6-months, for Patrick PBT operations between the dates of 8 May and 24 May 2023.

Attended and unattended noise monitoring was carried out to determine compliance with the established noise limits at the nearest affected receivers as per EPL 6962, 1 September 2020.

Existing noise levels at the nearest receptors are considered high. Noise generated by surrounding industrial premises, container storage facilities, road traffic, local fauna, residential activities and aircraft activities were the primary contributors to the L_{Aeq} and L_{A1} descriptors during the daytime, evening and night-time measurements.

It was observed that operational noise was not audible at the Chelmsford Avenue, Dent Street, Jennings Street and Australia Avenue monitoring locations, and was just audible at the Botany Road and Military Road monitoring location when ambient levels were low, but the direct source was indeterminable. Based on this observation, Patrick PBT operational noise is considered to comply with the EPL day, evening and night-time noise limits.

It is a finding of this compliance assessment that the current operation will comply with the established license limits at all locations during the daytime, evening and night-time periods.

Assessment of the measured residential noise levels indicated no annoying characteristics (tonality) were present. No sleep disturbance issues were present.

1 INTRODUCTION

Rodney Stevens Acoustics Pty Ltd (RSA) has been commissioned by Patrick's Health, Safety & Environment Manager to undertake environmental noise compliance monitoring for Patrick Port Botany Terminal (PBT) operations.

This report presents the findings of environmental noise monitoring compliance for Patrick PBT operations.

The noise assessment has been completed with reference to the requirements of the PBT site's current Environment Protection Licence (EPL) No.6962 (dated 1 September 2020), Clauses L3 and E1 at specified locations.

Ambient noise monitoring was undertaken at the nearest potentially affected receivers in the vicinity of the PBT site. Results from the unattended and attended noise monitoring have been reported.

Noise monitoring for this assessment was undertaken between 8 May and 24 May 2023. The PBT site was operating under standard conditions during the monitoring period.

Comparison of the measured noise levels has been made to previous reported results, although it should be noted that the terminal started its automated operations in April 2015.

Specific acoustic terminology is used in this report. An explanation of common acoustic terms is provided in Appendix A.

2 SCOPE OF ASSESSMENT

The scope of work for this study was to 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 required 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;
- compare results to previous investigations undertaken for the subject site; and
- provide recommendations for further courses of action (where required).

3 ENVIRONMENT 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. 6962).

Condition L3 Noise Limits specifies the following:

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

Table 3-1 Noise Limits – LAeq

Most affected residential location	Day $L_{Aeq\ (15\ min)}$	Evening $L_{Aeq\ (15\ min)}$	Night $L_{Aeq\ (15\ min)}$	Night $L_{Aeq(9hours)}$
Chelmsford Avenue	40 dB(A)	40 dB(A)	40 dB(A)	38 dB(A)
Dent Street	45 dB(A)	43 dB(A)	43 dB(A)	43 dB(A)
Jennings Street	36 dB(A)	36 dB(A)	36 dB(A)	35 dB(A)
Botany Road	47 dB(A)	43 dB(A)	43 dB(A)	45 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 the Table below. Note the limits represent the noise contribution at the nominated receiver locations in the table.

Table 3-2 Noise Limit – Night

Most affected residential location	Night $L_{A1(1min)}$
Chelmsford Avenue	53 dB(A)
Dent Street	55 dB(A)
Jennings Street	55 dB(A)
Botany Road (North Golf Club)	55 dB(A)
Australia Avenue	55 dB(A)
Military Road	55 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 L_{A1} (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 on the new extension – Lot 202, DP 1183399; and

(b) The noise monitoring must verify the assumptions and the noise limits as outlined in the Port Botany Container Terminal Expansion Noise Assessment (2003), part of the Environment Impact Assessment submitted in accordance with the Environmental Planning and Assessment Act 1979 for the approved container terminal development.

E1.2. Every 6 months after the commencement of operations of the new extension – Lot 202, DP 1183399, the Licensee must undertake a periodic noise monitoring program consisting of the attended and unattended monitoring and provide a report within one month after the completion of the 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 two weeks;

(b) Attended monitoring data during the period outlined in subsection (a);

(c) Monitoring data from 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 IDENTIFICATION

4.1 Location and Operation

The Patrick PBT is located at Penrhyn Road (Inter-modal Access Road), Banksmeadow, NSW 2019 (inside the Port Botany precinct). Foreshore Road and Botany Road are located to the north of the site and Brotherson Dock to the south. Figure 3-1 provides an overview of the site context. On 2 April 2015 the terminal replaced its manual straddle fleet with automated straddles (AutoStrads™).

The site operates 24 hours a day, seven days a week. Operations undertaken within the site boundary include:

- *Truck processing and container exchange activities.* Road transport trucks enter the Terminal along Penrhyn Road. The trucks access the applicable truck grid where they are either loaded or unloaded by an AutoStrad. Four truck weighbridges are utilised on the site. An empty container exchange area is positioned parallel to Penrhyn Road (eastern side of the terminal). Road transport trucks carrying empty containers enter the Terminal from Penryhn Road via Gate B110 and unloaded by heavy forklifts. Road transport trucks hauling over height containers or cargo on flat racks access the terminal's Out Of Gauge area via Gate B110, where oversized cargo is loaded or unloaded using reach stackers.

- *Automated rail activities*. Three Automated Rail Mounted Gantry (ARMG) Cranes service two 300m sidings discharging and loading train wagons to and from the intermediate stacking area (ISA). AutoStrads move container to and from the ISA to AutoYard stacks. By mid 2022, the AutoRail will increase four 300m sidings.

- *Automated yard activities.* Containers transit through the terminal via the automated yard. Current operations provide a storage capacity of approximately 5,000 ground slots, with an average of 4,000–8,000 containers located in the yard at any one time (depending on the time of year). The containers are manoeuvred through the automated yard, and to and from trucks at the truck grid via the use of AutoStrads. Approximately fifty AutoStrads are available for use throughout the automated yard at any given time.

- *Quay (ship-to-shore) crane activities.* Vessels are currently serviced at the site by nine operational quay cranes on Brotherson Dock. The cranes load and unload vessels with containers transferred to and from the automated container yard by AutoStrad.

- *Maintenance Activities.* Routine maintenance on equipment and plant is carried out in the purpose-built workshop, and when required on mobile plant in-situ e.g. quay cranes.

4.2 Adjacent Land Use

Areas surrounding the site comprises industrial, port relate, commercial, residential and recreational land uses, as described below.

4.2.1 Industrial and Commercial Uses

The main industrial land uses adjacent to the terminal are the Hutchison Ports Australia (Hutchison Ports container terminal, also known as Sydney International Container Terminal), Ampol Banksmeadow Diesel Stop and DP World Australia (DP World container terminal). A number of additional industrial sites are located in the vicinity of the site, including the 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 located approximately one kilometre from the site.

Sydney (Kingsford Smith) Airport, Sydney's major domestic and international airport, is located approximately five kilometres west of the site. The Discovery Cove Business Park, a commercial business centre, is located in the vicinity of the Patrick PBT on Botany Road.

A goods freight rail line operates from Port Botany and services Patrick PBT, Hutchinson Ports, DP World container terminal, Qube Logistics and Veolia. The Line links with the metropolitan freight and intermodal terminal Storage for goods occurs at the Cooks River and Botany Goods Yards, at Patrick PBT, Hutchinson Ports container terminal, DP World container terminal and various nearby transport and logistic, and haulage and container handling facilities e.g., Sydney Haulage.

4.2.2 Residential, Recreation and Open Space Uses

Residential land uses are located to the east, north-east and north-west of the site, and include the suburbs of Botany, Banksmeadow, and Matraville. Residential receivers to the north-east and north-west are located from between 750 metres and 1,000 metres away. These residential areas identified are considered to be nearest to Patrick PBT facility.

The nearest schools, as measured from the Terminal's northern point, are Banksmeadow Primary and Matraville Primary. Both are located 1.6 kilometres away.

There are a number of recreational areas in the surrounding suburbs, including several areas of open space.

Figure 4-1 Ambient noise monitoring locations (local context)

5 NOISE MONITORING METHODOLOGY

A brief outline of the methodology applied to the measurement of the existing ambient noise environment has been detailed below.

5.1 Instrumentation

Background noise level measurements were carried out using a Svantek 979 Type 1 Precision Sound Level Meter (serial number 21039) (operator attended noise monitoring), Acoustic Research Laboratories' statistical Environmental Noise Loggers, Type RION NL- 42 (serial numbers 536394, 345934, 810713, 184109, 885460 and 873126) (long-term unattended noise monitoring). The instruments comply with Australian Standard *AS 1259 Acoustics – Sound Level Meters*.

All instrument sets were calibrated by a NATA accredited laboratory. A copy of the instrument sets calibration certificates has been included in Appendix H of this report.

The microphones were positioned approximately 1.5 m above ground level and were fitted with windsocks. Each instrument was calibrated before and after the measurement period to ensure the reliability and accuracy of the instrument. There were no significant variances observed in the reference signal between the pre-measurement and post-measurement calibrations.

The instruments were set on A-weighted, fast response and logged noise levels over fifteen-minute statistical intervals. Observations were recorded during logger establishment for unattended noise monitoring and during the measurement interval for attended noise monitoring.

5.2 Measurement Locations

Locations consistent with those previously reported for the area were specifically referenced from the Patrick PBT biannual noise compliance studies, and as specified in Conditions L3.12 and L3.2 of the latest EPL (dated 13 June 2017).

The monitoring program comprised of monitoring at a total of six locations. These locations are shown in Figure 4-1. Information obtained during the noise monitoring program provides an adequate characterisation of the existing ambient noise profiles for the local area.

A description of each noise monitoring location is as follows.

5.2.1 Location 1: 34 Chelmsford Avenue, Botany

The unattended noise logger was located in the front yard of the residential property (facing the subject site). The noise logger was deployed approximately 2 metres from the front façade of the residential building, at a height of 1.5 metres above ground. Due to security reasons the logger was not able to be deployed at the front (western) boundary which is the nearest boundary to the subject site. The location was approximately 1,800 metres from the northwest boundary of the Patrick PBT site and approximately 2,170 metres from the berth docks. Attended monitoring was also carried out at this location.

Road traffic on Foreshore Road and Chelmsford Avenue, industry noise from the intervening Hutchison Ports container terminal and aircraft noise from Sydney Airport are the main noise contributors observed as influencing the local ambient noise environment.

5.2.2 Location 2: Boundary of 36 Dent Street, Botany

It is noted that previous measurements were taken at 26 Dent Street. Due to access issues from the residents of 26 Dent Street, a new monitoring location was selected near to the boundary of 36 Dent Street.

The unattended noise logger was located on the western boundary of the residential property (facing the subject site). The noise logger was deployed approximately 5 m from the westernfaçade of the property, at a height of 1.5 metres above ground. The location was approximately 950 metres from the northwest boundary of the Patrick PBT site and approximately 1,350 metres from the berth docks. Attended monitoring was also carried out at this location.

Road traffic on Foreshore Road and Dent Street and the nearby Hutchison Ports container terminal, industrial activity and residential activity in the vicinity are the part noise contributors observed as influencing the local ambient noise environment. The ambient noise setting was consistent with that of an urban noise environment. Road traffic noise from Botany Road and Foreshore Road were dominant noise sources for the area.

5.2.3 Location 3: 1424 Botany Road, Botany

The unattended noise logger was located at the rear of the residential property (facing the subject site). The noise logger was deployed approximately 10 m from the rear façade of the property, at a height of 1.5 metres above ground. The location was approximately 850 metres from the northwest boundary of the Patrick PBT site and approximately 1,200 metres from the berth docks. Attended monitoring was also carried out at this location.

Road traffic on Foreshore and Botany Roads, industrial activity in the area and the nearby Hutchison Ports container terminal are the part noise contributors observed as influencing the local ambient noise environment.

The ambient noise setting was consistent with that of an urban noise environment. Road traffic noise from Botany Road and Foreshore Road were dominant noise sources for the area.

5.2.4 Location 4: 80 Australia Avenue, Matraville

The logger was positioned at the front of the property, facing Australia Avenue. The location was considered indicative of the nearest potentially affected noise catchment area and positioned with an acceptable distance of separation from the nearby industrial buildings. Attended noise monitoring was also carried out at this location.

The monitoring location has a separation distance of approximately 900 metres from the eastern boundary of the site.

The noise monitoring location was typical of an urban noise environment affected by local traffic and intervening industrial premises between the subject site and the monitoring location (refer to Figure 4-1). The intervening industrial premises to the residences on Australia Avenue are Orora Recycling facility and Sydney Haulage Container facility.

5.2.5 Location 5: 46 Jennings Street, Matraville

Noise logging was conducted in the front yard of 46 Jennings Street. This location has previously been a source of complaints regarding noise emissions from the Patrick PBT 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, unattended and attended noise monitoring were conducted at this location. The unattended noise logger was located at the rear of the front yard of the residential property. Attended noise monitoring was also undertaken at this location.

The monitoring location is at a separation distance of approximately 1,100 m from the site's eastern boundary.

The noise monitoring location was typical of an urban noise environment mainly affected by local road traffic and intervening industrial premises between the subject site and the monitoring location (refer to Figure 4-1). Intervening industries observed to be contributing to the local ambient noise environment are Orora Recycling facility and Sydney Haulage Container facility.

5.2.6 Location 6: Military Road, Matraville

Unattended and attended noise monitoring was undertaken within the Eastern Suburbs Crematorium. The noise logger was placed along the south-eastern fence of the site. Attended noise measurements were obtained from the same location.

The monitoring location has a separation distance of approximately 1,000 metres from the south boundary of the site.

Local traffic and intervening industries, such as DP World container terminal, P&O Trans Australia facility and Warehouse Solution International facility and activity associated with the crematorium are main noise contributors observed as influencing the local ambient noise environment.

5.3 Meteorological Conditions

Attended noise monitoring results were not affected by adverse meteorological conditions based on real-time local observations during the monitoring period.

Any unattended noise monitoring data affected by inclement weather has been removed from the assessment with reference to the Bureau of Meteorology's (BOM) daily rainfall data.

6 AMBIENT NOISE MONITORING

Unattended noise monitoring was undertaken for a period of not less than 2 weeks as per Condition E1.2 of the EPL. The monitoring period was between 8 May and 22 May 2023. Locations indicated in Figure 4-1.

Attended noise monitoring at all of the locations was undertaken during the daytime period on Monday 23 May, evening and night period on Tuesday 24 May 2023.

Local meteorological conditions were satisfactory during the attended monitoring program.

Observations made as part of these studies categorise the local noise environment as being urban/urban with industrial interface. Observations of existing noise sources support this definition and are described as follows:

- an 'urban hum' is a distinct feature of the ambient noise environment;
- the primary noise source for the area is traffic noise originating from heavy and passenger vehicles travelling along major and local traffic routes; and
- noise from multiple industrial sources is audible at several of the monitoring locations.

Residential activity and local fauna such as birds, bats and insects were also sporadically audible. Aircraft noise was sporadically audible. Noise emissions from train warning bells, installed at Goods Railway Line between the Caltex and the Patrick PBT was also audible. Truck engines, engine brakes, forklifts and reversing beepers from surrounding roads and nearby industrial and container storage facilities were frequently audible during the monitoring. Ambient noise profiles were typical of an urban area.

The daily noise descriptor graphs obtained as part of this assessment (included in the Appendices) show that the current ambient noise environment, as measured at each monitoring location, generally fluctuated in accordance with diurnal patterns.

Noise levels for the areas surrounding the monitoring locations were found to be primarily influenced by urban and industrial noise sources consistent with the setting of the area.

Background noise levels measured through the use of the environmental noise loggers are influenced by all local sources of noise. The results are to be viewed in conjunction with the attended noise levels presented in Section 6.2 of this report.

Observations during the attended noise monitoring program indicated short term peaks (warning alarms and impact events) either at Port Botany or surrounding industrial premises were generally audible at the nearest residential receivers to the site. Residential activity, off-site industrial noise and traffic flow noise (both distant and local) were primary influences of the measured ambient noise levels.

6.1 Unattended Noise Monitoring Results

Unattended noise monitoring was carried out at six noise monitoring locations (Locations 1 to 6) during the daytime, evening and night-time periods. The results of the unattended monitoring are discussed below.

6.1.1 Location 1: 34 Chelmsford Avenue, Botany

Table 6-1 presents the unattended noise monitoring results at Chelmsford Avenue, Botany.

Table 6-1 Unattended monitoring results (Location 1: 34 Chelmsford Avenue)

Date	Day (7.00 am–6.00 pm)			Evening (6.00 pm–10.00 pm)			Night (10.00 pm–7.00 am)		
	L_{Aeq}	L_{A1}	L_{A90}	L_{Aeq}	L_{A1}	L_{A90}	L_{Aeq}	L_{A1}	L_{A90}
8/05/2023	58.5	64.5	54.5	53.3	61.6	44.3	50.9	56.1	39.0
9/05/2023	57.1	63.6	49.8	53.5	63.0	42.2	52.3	54.7	38.5
10/05/2023	55.6	63.2	47.4	52.4	61.2	46.0	50.2	55.2	42.3
11/05/2023	55.9	63.9	42.9	53.0	63.4	44.7	50.2	55.9	39.4
12/05/2023	54.6	64.5	40.9	53.1	62.9	44.2	50.8	55.7	43.0
13/05/2023	54.6	62.9	46.2	53.5	61.1	43.9	59.0	59.6	40.3
14/05/2023	*52.6*	*61.9*	*41.3*	*53.1*	*62.4*	*39.9*	*51.6*	*52.5*	*37.5*
15/05/2023	53.7	63.1	41.5	53.4	63.1	42.9	51.7	55.6	37.4
16/05/2023	56.4	63.8	43.7	52.0	60.9	45.8	58.1	62.8	48.2
17/05/2023	*59.3*	*65.0*	*54.0*	*56.7*	*64.4*	*49.0*	*52.5*	*58.0*	*40.7*
18/05/2023	57.6	64.5	49.8	53.3	61.3	42.8	51.0	54.8	38.5
19/05/2023	59.2	63.0	42.2	53.8	62.5	46.3	50.0	53.5	36.6
20/05/2023	55.0	62.8	44.5	51.8	62.6	42.8	47.6	51.8	37.4
21/05/2023	53.8	62.7	46.5	53.8	62.9	44.5	50.3	55.1	37.9
Median	**56.1**	**63.4**	**44.5**	**53.1**	**62.6**	**44.2**	**53.5**	**55.4**	**38.5**

Notes: Values expressed as dB(A)

Values in italics removed from Median calculation due to inclement weather

dB(A) = decibels, A-weighted, values rounded to nearest 1 dB(A)

L_{Aeq} = equivalent continuous (energy average) A-weighted sound pressure level
L_{A1} = A-weighted sound pressure level exceeded for 1% of the time

L_{A90} = A-weighted sound pressure level exceeded for 90% of the time (background)

Data measured during inclement weather has been removed from the median values shown.

Median L_{Aeq} unattended noise measurements exceed the EPL day, evening and night-time L_{Aeq} noise limits for Chelmsford Avenue. The daily average daytime, evening and night-time L_{Aeq} noise levels also exceed the EPL noise limits.

The median night-time L_{A1} noise level of 55.4 dB(A) exceeds the night-time L_{A1} noise limit of 53 dB(A) for Chelmsford Avenue. The daily average night-time L_{A1} noise levels exceeds the EPL noise limit on all of the monitoring days except for 20th May.

It should be noted that operational noise from Patrick PBT was not audible during daytime, evening and night-time operator attended noise monitoring. Hence, the exceedances of the EPL from the unattended monitoring are unlikely to be due to Patrick PBT operations. Based on this observation, operational noise from Patrick PBT facility is considered to comply with the EPL noise limits at the residences on Chelmsford Avenue.

6.1.2 Location 2: 36 Dent Street, Botany

Table 6-2 presents the unattended noise monitoring results at Dent Street, Botany.

Table 6-2 Unattended monitoring results (Location 2: 36 Dent Street)

Date	Day (7.00 am–6.00 pm)			Evening (6.00 pm–10.00 pm)			Night (10.00 pm–7.00 am)		
	L_{Aeq}	L_{A1}	L_{A90}	L_{Aeq}	L_{A1}	L_{A90}	L_{Aeq}	L_{A1}	L_{A90}
8/05/2023	*60.2*	*66.9*	*50.2*	*57.1*	65.2	*50.6*	*56.0*	*60.6*	*46.0*
9/05/2023	59.8	66.6	53.3	56.5	66.0	47.2	54.6	58.8	43.4
10/05/2023	57.2	64.1	51.3	54.2	61.4	49.9	53.4	57.4	45.4
11/05/2023	60.6	64.9	48.2	51.9	60.2	47.4	53.6	57.9	45.8
12/05/2023	60.6	65.4	46.8	53.1	60.3	47.5	53.1	57.0	46.9
13/05/2023	59.6	65.4	49.8	50.4	57.5	45.9	54.6	57.3	44.8
14/05/2023	*63.4*	*63.3*	*47.5*	*53.7*	*63.5*	*45.2*	*54.0*	*54.8*	*42.4*
15/05/2023	59.8	63.0	46.8	55.0	62.5	47.8	55.4	58.5	42.9
16/05/2023	56.9	64.2	49.6	54.4	61.8	50.5	58.7	63.9	52.4
17/05/2023	*60.9*	*66.6*	*56.0*	*57.5*	*65.9*	*51.1*	*55.2*	*60.3*	*47.3*
18/05/2023	60.2	66.6	54.1	55.4	62.6	48.2	54.3	58.7	43.7
19/05/2023	58.0	65.0	48.9	57.0	65.3	51.4	54.2	57.9	44.0
20/05/2023	57.4	65.4	50.6	55.4	63.9	47.7	51.7	56.0	42.3
21/05/2023	59.3	64.7	51.7	56.5	65.8	50.2	54.2	59.4	46.9
Median	**59.2**	**65.2**	**49.8**	**54.9**	**63.0**	**47.8**	**54.7**	**58.2**	**44.8**

Notes: Values expressed as dB(A)

Values in italics removed from Median calculation due to inclement weather

dB(A) = decibels, A-weighted, values rounded to nearest 1 dB(A)

L_{Aeq} = equivalent continuous (energy average) A-weighted sound pressure level

L_{A1} = A-weighted sound pressure level exceeded for 1% of the time

L_{A90} = A-weighted sound pressure level exceeded for 90% of the time (background)

Data measured during inclement weather has been removed from the median values shown.

Median L_{Aeq} unattended noise measurements exceed the EPL day, evening and night-time L_{Aeq} noise limits for Dent Street. The daily average daytime, evening and night-time L_{Aeq} noise levels also exceed the EPL noise limits.

The median night-time L_{A1} noise level of 58.2 dB(A) exceeds the night-time L_{A1} noise limit of 55 dB(A) for Dent Street. The daily average night-time L_{A1} noise levels exceeds the EPL noise limit on all of the monitoring days.

It should be noted that operational noise from Patrick PBT was not audible during daytime, evening and night-time operator attended noise monitoring. Hence, the exceedances of the EPL from the unattended monitoring are unlikely to be due to Patrick PBT operations. Based on this observation, operational noise from Patrick PBT facility is considered to comply with the EPL noise limits at the residences on Dent Street.

6.1.3 Location 3: 1424 Botany Road, Botany

Table 6-3 presents the unattended noise monitoring results at Botany Road, Botany.

Table 6-3 Unattended monitoring results (Location 3: 1424 Botany Road)

Date	Day (7.00 am–6.00 pm)			Evening (6.00 pm–10.00 pm)			Night (10.00 pm–7.00 am)		
	L_{Aeq}	L_{A1}	L_{A90}	L_{Aeq}	L_{A1}	L_{A90}	L_{Aeq}	L_{A1}	L_{A90}
8/05/2023	*55.8*	*65.3*	*49.3*	*54.8*	*64.0*	*50.7*	*55.9*	*61.0*	*46.7*
9/05/2023	58.7	65.3	52.3	55.8	63.8	48.0	54.5	61.2	43.5
10/05/2023	55.8	65.4	50.0	52.8	63.6	49.0	52.9	61.2	43.7
11/05/2023	54.6	65.3	46.5	50.9	63.5	45.6	53.3	61.4	46.2
12/05/2023	54.3	65.2	45.4	51.9	63.4	45.6	51.9	61.5	44.8
13/05/2023	54.4	65.3	46.7	49.2	62.9	43.6	55.6	61.6	43.2
14/05/2023	*67.0*	*65.3*	*45.4*	*52.4*	*62.5*	*44.1*	*53.6*	*61.8*	*41.5*
15/05/2023	54.1	65.2	45.9	54.2	62.4	48.5	54.3	61.9	42.1
16/05/2023	55.0	65.2	48.1	52.9	61.8	48.5	58.6	62.1	51.3
17/05/2023	*60.0*	*65.1*	*55.3*	*57.2*	*61.5*	*51.1*	*54.8*	*62.4*	*45.9*
18/05/2023	58.4	65.2	52.9	54.1	61.1	47.5	53.6	62.5	43.7
19/05/2023	55.1	65.1	48.1	56.3	60.8	51.1	53.9	62.7	45.4
20/05/2023	56.7	65.1	49.7	55.3	60.5	48.0	51.5	62.9	41.6
21/05/2023	57.3	65.0	51.2	55.7	60.4	49.1	54.3	63.0	46.5
Median	**56.2**	**65.2**	**48.1**	**54.0**	**62.5**	**48.0**	**54.5**	**61.8**	**43.7**

Notes: Values expressed as dB(A)

Values in italics removed from Median calculation due to inclement weather

dB(A) = decibels, A-weighted, values rounded to nearest 1 dB(A)

L_{Aeq} = equivalent continuous (energy average) A-weighted sound pressure level

L_{A1} = A-weighted sound pressure level exceeded for 1% of the time

L_{A90} = A-weighted sound pressure level exceeded for 90% of the time (background)

Data measured during inclement weather has been removed from the median values shown.

Median L_{Aeq} unattended noise measurements exceed the EPL day, evening and night-time L_{Aeq} noise limits for Botany Road. The daily average daytime, evening and night-time L_{Aeq} noise levels also exceed the EPL noise limits.

The median night-time L_{A1} noise level of 61.8 dB(A) exceeds the night-time L_{A1} noise limit of 55 dB(A) for Botany Road. The daily average night-time L_{A1} noise levels achieved the also exceed the EPL noise limit.

It should be noted that operational noise was observed during the operator attended noise monitoring was not audible during daytime periods, and slightly audible during evening and night-time periods during low ambient levels of between 49 dB(A) to 56 dB(A) and the source could not be determined. Hence, the exceedances of the EPL from the unattended monitoring are unlikely to be due to Patrick PBT operations. Based on this observation, operational noise from Patrick PBT facility is considered to comply with the EPL noise limits at the residences on Botany Road.

6.1.4 Location 4: 80 Australia Avenue, Matraville

Table 6-4 presents the unattended noise monitoring results at Australia Avenue, Matraville.

Table 6-4 Unattended monitoring results (Location 4: 80 Australia Avenue)

Date	Day (7.00 am–6.00 pm)			Evening (6.00 pm–10.00 pm)			Night (10.00 pm–7.00 am)		
	L_{Aeq}	L_{A1}	L_{A90}	L_{Aeq}	L_{A1}	L_{A90}	L_{Aeq}	L_{A1}	L_{A90}
8/05/2023	*56.1*	*64.4*	*47.2*	*55.3*	*60.2*	*53.0*	*55.2*	*59.0*	*52.2*
9/05/2023	57.1	62.5	52.9	54.2	59.4	49.5	53.9	57.4	48.6
10/05/2023	54.7	61.7	49.4	52.4	58.7	49.4	52.0	56.3	47.4
11/05/2023	51.6	61.3	40.9	47.0	57.7	40.7	52.2	56.4	48.3
12/05/2023	53.9	61.8	39.4	50.5	58.0	40.1	52.9	56.5	49.0
13/05/2023	54.9	61.8	45.8	50.3	56.6	46.1	58.6	57.9	44.9
14/05/2023	*51.5*	*60.6*	*42.1*	*49.3*	*57.3*	*42.6*	*50.9*	*54.1*	*44.1*
15/05/2023	50.9	60.4	40.4	52.7	58.6	45.4	53.2	56.5	46.3
16/05/2023	54.0	61.8	45.7	53.1	58.9	50.3	58.2	62.5	53.9
17/05/2023	*58.2*	*63.5*	*54.8*	*56.7*	*61.8*	*53.5*	*55.9*	*60.0*	*51.0*
18/05/2023	56.7	63.1	52.7	53.2	60.8	45.2	53.5	57.5	47.2
19/05/2023	57.1	63.1	44.4	55.2	60.2	51.1	55.3	58.9	52.1
20/05/2023	55.1	62.0	49.7	53.6	59.3	49.3	47.5	57.8	29.4
21/05/2023	32.0	61.9	31.7	*32.5*	59.4	32.2	32.8	57.5	32.6
Median	**55.2**	**61.9**	**45.8**	**53.3**	**59.1**	**49.3**	**54.7**	**57.5**	**48.3**

Notes: Values expressed as dB(A)

Values in italics removed from Median calculation due to inclement weather

dB(A) = decibels, A-weighted, values rounded to nearest 1 dB(A)

L_{Aeq} = equivalent continuous (energy average) A-weighted sound pressure level

L_{A1} = A-weighted sound pressure level exceeded for 1% of the time

L_{A90} = A-weighted sound pressure level exceeded for 90% of the time (background)

Data measured during inclement weather has been removed from the median values shown.

Median L_{Aeq} unattended noise measurements exceed the EPL day, evening and night-time L_{Aeq} noise limits for Australia Avenue. The daily average daytime, evening and night-time L_{Aeq} noise levels also exceed the EPL noise limits.

The median night-time L_{A1} noise level of 57.5 dB(A) exceeds the night-time L_{A1} noise limit of 55 dB(A) for Australia Avenue. The daily average night-time L_{A1} noise levels also exceeds the EPL noise limit.

It should be noted that operational noise from Patrick PBT was not audible during daytime, evening and night-time operator attended noise monitoring. Hence, the exceedances of the EPL from the unattended monitoring are unlikely to be due to Patrick PBT operations. Based on this observation, operational noise from Patrick PBT facility is considered to comply with the EPL noise limits at the residences on Australia Avenue.

6.1.5 Location 5: 46 Jennings Street, Matraville

Table 6-5 presents the unattended noise monitoring results at Jennings Street, Matraville.

Table 6-5 Unattended monitoring results (Location 5: 46 Jennings Street)

Date	Day (7.00 am–6.00 pm)			Evening (6.00 pm–10.00 pm)			Night (10.00 pm–7.00 am)		
	L_{Aeq}	L_{A1}	L_{A90}	L_{Aeq}	L_{A1}	L_{A90}	L_{Aeq}	L_{A1}	L_{A90}
8/05/2023	*54.2*	*65.6*	*42.3*	*51.2*	*63.1*	*42.9*	*49.5*	*54.1*	*42.4*
9/05/2023	54.6	65.4	44.0	50.8	63.4	40.8	49.6	54.9	40.0
10/05/2023	54.8	65.2	43.0	51.7	64.0	41.2	49.9	55.8	42.1
11/05/2023	54.8	65.5	38.7	51.8	63.8	37.5	49.5	54.8	41.0
12/05/2023	55.3	65.3	36.9	51.2	62.6	37.7	46.3	54.0	38.5
13/05/2023	54.6	64.9	42.3	51.4	61.4	37.7	53.7	58.3	37.4
14/05/2023	*52.6*	*64.2*	*37.8*	*48.2*	*60.8*	*35.9*	*50.1*	*53.1*	*38.2*
15/05/2023	54.8	65.5	37.3	52.0	63.2	38.7	51.2	55.3	40.6
16/05/2023	53.8	64.0	39.8	50.9	62.5	40.6	54.4	61.9	43.4
17/05/2023	*55.4*	*65.3*	*47.0*	*52.8*	*64.2*	*42.4*	*51.9*	*57.5*	*40.9*
18/05/2023	55.7	66.4	45.5	53.1	65.0	39.4	49.4	55.7	40.9
19/05/2023	55.5	65.6	40.0	51.3	62.5	41.6	48.5	56.0	41.8
20/05/2023	53.6	64.7	41.8	51.5	63.4	40.6	47.5	56.0	40.7
21/05/2023	54.8	63.9	45.1	49.1	60.8	41.9	48.8	53.7	39.8
Median	**54.8**	**65.3**	**41.8**	**51.4**	**63.2**	**40.6**	**50.6**	**55.5**	**40.7**

Notes: Values expressed as dB(A)

Values in italics removed from Median calculation due to inclement weather

dB(A) = decibels, A-weighted, values rounded to nearest 1 dB(A)

L_{Aeq} = equivalent continuous (energy average) A-weighted sound pressure level

L_{A1} = A-weighted sound pressure level exceeded for 1% of the time

L_{A90} = A-weighted sound pressure level exceeded for 90% of the time (background)

Data measured during inclement weather has been removed from the median values shown.

Median L_{Aeq} unattended noise measurements exceed the EPL day, evening and night-time L_{Aeq} noise limits for Jennings Street. The daily average daytime, evening and night-time L_{Aeq} noise levels also exceed the EPL noise limits.

The median night-time L_{A1} noise level of 55.5 dB(A) complies with the night-time L_{A1} noise limit of 55 dB(A) for Jennings Street. The daily average night-time L_{A1} noise levels exceeds the EPL noise limit on the following monitoring days; 10, 13, 16, 18, 19, 20 May.

It should be noted that operational noise was observed during the operator attended noise monitoring was not audible during daytime and night-time periods, and slightly audible during evening periods during low ambient levels of between 45 dB(A) to 52 dB(A) and the source could not be determined. Hence, the exceedances of the EPL from the unattended monitoring are unlikely to be due to Patrick PBT operations. Based on this observation, operational noise from Patrick PBT facility is considered to comply with the EPL noise limits at the residences on Jennings Street.

6.1.6 Location 6: Military Road, Matraville

Table 6-6 presents the unattended noise monitoring results at Military Road, Matraville.

Table 6-6 Unattended monitoring results (Location 6: Military Road)

Date	Day (7.00 am–6.00 pm)			Evening (6.00 pm–10.00 pm)			Night (10.00 pm–7.00 am)		
	L_{Aeq}	L_{A1}	L_{A90}	L_{Aeq}	L_{A1}	L_{A90}	L_{Aeq}	L_{A1}	L_{A90}
8/05/2023	*56.1*	*65.4*	*43.7*	*54.6*	*64.3*	*48.1*	*54.1*	*61.0*	*48.3*
9/05/2023	56.3	64.7	45.8	52.3	62.9	45.6	52.5	60.4	45.0
10/05/2023	55.3	64.3	43.7	52.5	63.6	41.9	52.5	59.6	46.4
11/05/2023	55.7	62.7	42.8	51.2	61.8	44.5	53.9	61.9	47.8
12/05/2023	53.6	63.6	43.3	50.8	62.2	43.5	49.3	57.5	40.6
13/05/2023	53.6	63.6	40.4	48.9	61.1	36.8	54.9	59.3	38.7
14/05/2023	*54.3*	*63.6*	*40.4*	*52.1*	*62.8*	*41.5*	*53.1*	*59.1*	*43.0*
15/05/2023	54.2	64.1	42.1	52.5	63.3	44.6	53.4	60.7	45.6
16/05/2023	54.3	67.8	45.1	51.9	63.1	39.8	58.6	66.4	50.1
17/05/2023	*62.0*	*65.7*	*48.9*	*54.4*	*64.6*	*46.9*	*55.8*	*63.4*	*45.5*
18/05/2023	56.2	64.1	47.1	55.8	66.0	41.4	53.6	60.9	45.8
19/05/2023	54.6	62.8	42.2	53.9	63.6	44.2	52.4	60.0	46.2
20/05/2023	53.3	62.9	45.1	51.6	62.1	44.1	51.7	59.0	47.3

Date	Day (7.00 am–6.00 pm)			Evening (6.00 pm–10.00 pm)			Night (10.00 pm–7.00 am)		
	L_{Aeq}	L_{A1}	L_{A90}	L_{Aeq}	L_{A1}	L_{A90}	L_{Aeq}	L_{A1}	L_{A90}
21/05/2023	55.7	65.4	46.8	53.2	63.4	45.3	53.6	60.2	46.3
Median	**54.9**	**64.1**	**43.7**	**52.6**	**63.2**	**44.1**	**53.9**	**60.3**	**46.2**

Notes: Values expressed as dB(A)

Values in italics removed from Median calculation due to inclement weather

dB(A) = decibels, A-weighted, values rounded to nearest 1 dB(A)

L_{Aeq} = equivalent continuous (energy average) A-weighted sound pressure level
L_{A1} = A-weighted sound pressure level exceeded for 1% of the time

L_{A90} = A-weighted sound pressure level exceeded for 90% of the time (background)

Median L_{Aeq} unattended noise measurements exceed the EPL day, evening and night-time L_{Aeq} noise limits for Military Road. The daily average daytime, evening and night-time L_{Aeq} noise levels also exceed the EPL noise limits.

The median night-time L_{A1} noise level of 60.3 dB(A) exceeds the night-time L_{A1} noise limit of 55 dB(A) for Military Road. The daily average night-time L_{A1} noise levels also exceeds the EPL noise limit.

It should be noted that operational noise was observed during the operator attended noise monitoring was not audible during daytime periods, and slightly audible during evening and night-time periods during low ambient levels of between 52 dB(A) to 58 dB(A) and the source could not be determined. Hence, the exceedances of the EPL from the unattended monitoring are unlikely to be due to Patrick PBT operations. Based on this observation, operational noise from Patrick PBT facility is considered to comply with the EPL noise limits at the residences on Military Road.

6.2 Attended Noise Monitoring Results

Attended noise monitoring was carried out at the six sensitive receiver noise monitoring locations during the daytime, evening and night-time periods. The results of the attended monitoring are presented in Table 6-7 to Table 6-12.

The results of the attended monitoring are discussed below.

6.2.1 Location 1: 34 Chelmsford Avenue, Botany

The results of the attended background noise monitoring undertaken at 34 Chelmsford Avenue are presented in Table 6-7 below.

Table 6-7 Attended monitoring results (Location 1: 34 Chelmsford Avenue)

Period	Date of measurement	Time	Measured Noise Level			Comments
			L_{A90}	L_{Aeq}	L_{A1}	
Day	22/05/2023	12:24	40	43	51	Distant road traffic 43-45 dB(A) Vehicle pass by 58-62 dB(A)
Evening	23/05/2023	19:40	49	52	58	Distant road traffic (Foreshore Road 50-53 dB(A) Aircraft flyover 52 dB(A) Car pass bys 63 - 69 dB(A)
Night	23/05/2023	22:00	40	42	48	Distant road traffic (Foreshore Rd 42-43 dB (A)

Notes: Values expressed as dB(A) and rounded to nearest 1 dB(A)
L_{A90} = A-weighted sound pressure level exceeded for 90%of the time (background)
L_{Aeq} = equivalent continuous (energy average) A-weighted sound pressure level
L_{A1} = A-weighted sound pressure level exceeded for 1% of the time
dB(A) = decibels, A-weighted
All values from comments are approximate readings
SS (steady state) noise level is the operator observed baseline noise level where sources influencing the statistical results are determined.

From the attended measurements presented in Table 6-7 above, the operational noise from Patrick PBT was not audible during day, evening and night-time periods. Based on this observation, the operational noise from Patrick PBT is considered to comply with the EPL day, evening and night noise limits at this monitoring location.

Road traffic noise on Chelmsford Avenue and Foreshore Road were the dominant noise sources during the attended measurements and influenced the L_{Aeq} and L_{A1} descriptors. Aircraft fly overs, residential and community activity on Chelmsford Avenue and flora and fauna were also audible.

6.2.2 Location 2: 36 Dent Street, Botany

The results of the attended background noise monitoring undertaken at 36 Dent Street are presented in Table 6-8 below.

Table 6-8 Attended monitoring results (Location 2: 36 Dent Street)

Period	Date of measurement	Time	Measured Noise Level			Comments
			L_{A90}	L_{Aeq}	L_{A1}	
Day	22/05/2023	13:05	47	50	57	Distant road traffic (Foreshore Rd) 49-52 dB(A) Intermittent Port Botany crane operation 45 - 47 dB(A)
Evening	23/05/2023	20:05	50	53	58	Distant road traffic (Foreshore Rd) 50-53 dB(A) Port Botany machinery 50 dB(A)
Night	23/05/2023	22:22	48	50	55	Distant road traffic (Foreshore Rd) 47-52 dB(A) Distant industrial activity 47 dB(A) Port Botany misc. noise 46 dB(A)

Notes: Values expressed as dB(A) and rounded to nearest 1 dB(A)
L_{A90} = A-weighted sound pressure level exceeded for 90%of the time (background)
L_{Aeq} = equivalent continuous (energy average) A-weighted sound pressure level
L_{A1} = A-weighted sound pressure level exceeded for 1% of the time
dB(A) = decibels, A-weighted
All values from comments are approximate readings
SS (steady state) noise level is the operator observed baseline noise level where sources influencing the statistical results are determined.

From the attended measurements presented in Table 6-8 above, the operational noise was not audible during day, evening and night time periods. Based on this observation, the operational noise from Patrick PBT is considered to comply with the EPL day, evening and night noise limits at this monitoring location.

Road traffic noise from Botany Road and Foreshore Road was the dominant noise source during the attended measurements and influenced the L_{Aeq} and L_{Amax} descriptors. Noise generated by industrial activity on the opposite side of Botany Road, traffic on Dent Street, and flora and fauna were also audible during the measurements.

6.2.3 Location 3: 1424 Botany Road, Botany

The results of the attended background noise monitoring undertaken at 1424 Botany Road are presented in Table 6-9 below.

Table 6-9 Attended monitoring results (Location 3: 1424 Botany Road)

Period	Date of measurement	Time	Measured Noise Level			Comments
			L_{A90}	L_{Aeq}	L_{A1}	
Day	22/05/2023	13:50	51	55	63	Road traffic 53-55 dB(A)
Evening	23/05/2023	20:33	53	57	61	Traffic noise from Foreshore Road (constant throughout measurement) 50-55 dB(A) Port Botany Container metal on metal noise 50-55 dB(A)
Night	23/05/2023	22:52	48	50	54	Road traffic 46-49 dB(A) Container set down metal on metal noise (intermittently) 54-58 dB(A)

Notes: Values expressed as dB(A) and rounded to nearest 1 dB(A)
L_{A90} = A-weighted sound pressure level exceeded for 90%of the time (background)
L_{Aeq} = equivalent continuous (energy average) A-weighted sound pressure level
L_{A1} = A-weighted sound pressure level exceeded for 1% of the time
dB(A) = decibels, A-weighted
All values from comments are approximate readings
SS (steady state) noise level is the operator observed baseline noise level where sources influencing the statistical results are determined.

From the attended measurements presented in Table 6-9 above, the operational noise was not audible during daytime periods. The operational noise was audible during evening and night time periods at ambient levels of between 54 dB(A) and 58 dB(A) and the direct source could not be determined. Based on this observation, the operational noise from Patrick PBT is considered to comply with the EPL day, evening and night noise limits at this monitoring location.

Road traffic noise from Botany Road and Foreshore Road was the dominant noise source during the attended measurements and influenced the L_{Aeq} and L_{A1} descriptors. Noise generated by aircraft fly overs, residential activity and flora and fauna were also audible during the measurements.

6.2.4 Location 4: 80 Australia Avenue, Matraville

The results of the attended background noise monitoring undertaken at 80 Australia Avenue are presented in Table 6-10 below.

Table 6-10 Attended monitoring results (Location 4: 80 Australia Avenue)

Period	Date of measurement	Time	Measured Noise Level			Comments
			L_{A90}	L_{Aeq}	L_{A1}	
Day	22/05/2023	14:22	43	46	53	Distant road traffic 45 - 48 dB(A) Fauna 45 – 48 dB(A) Vehicle pass bys 53 - 58 dB(A)
Evening	23/05/2023	20:59	47	52	63	Distant road traffic (Foreshore Rd 48-51dB(A) Vehicle pass by 65-68 dB(A) Distant industrial noise 53 dB(A)
Night	23/05/2023	23:19	52	55	59	Distant traffic (Foreshore Rd 45-47 dB (A) Vehicle pass by 59-61 dB(A)

Notes: Values expressed as dB(A) and rounded to nearest 1 dB(A)
L_{A90} = A-weighted sound pressure level exceeded for 90%of the time (background)
L_{Aeq} = equivalent continuous (energy average) A-weighted sound pressure level
L_{A1} = A-weighted sound pressure level exceeded for 1% of the time
dB(A) = decibels, A-weighted
All values from comments are approximate readings
SS (steady state) noise level is the operator observed baseline noise level where sources influencing the statistical results are determined.

From the attended measurements presented in Table 6-10 above, the operational noise was not audible during day, evening and night time periods. Based on this observation, the operational noise from Patrick PBT is considered to comply with the EPL day, evening and night noise limits at this monitoring location.

Nearby industrial noise (Orora Recycling) and road traffic on Australia Avenue and Botany Road were the primary influence during the day, evening and night-time periods at Australia Avenue. Noise generated by aircraft fly overs, residential activity and flora and fauna were also audible during the measurements.

6.2.5 Location 5: 46 Jennings Street, Matraville

The results of the attended background noise monitoring undertaken at Jennings Street are presented in Table 6-11 below. It should be noted that attended noise measurements were conducted outside of the residential premises, at the front boundary on Jennings Street.

Table 6-11 Attended monitoring results (Location 5: 46 Jennings Street)

Period	Date of measurement	Time	Measured Noise Level			Comments
			L_{A90}	L_{Aeq}	L_{A1}	
Day	22/05/2023	15:21	39	55	67	Distant road traffic (Beauchamp Rd 51-55 dB(A) Vehicle pass by 60-62 dB(A)
Evening	23/05/2023	21:51	40	46	60	Distant road traffic (Beauchamp Rd) 45-48 dB(A) Vehicle pass by 60-62 dB(A)
Night	23/05/2023	00:00	40	42	47	Distant road traffic (Perry Street, Botany Road 45-47dB(A) Vehicle pass by 68-70 dB(A)

Notes: Values expressed as dB(A) and rounded to nearest 1 dB(A)
L_{A90} = A-weighted sound pressure level exceeded for 90%of the time (background)
L_{Aeq} = equivalent continuous (energy average) A-weighted sound pressure level
L_{A1} = A-weighted sound pressure level exceeded for 1% of the time
dB(A) = decibels, A-weighted
All values from comments are approximate readings

SS (steady state) noise level is the operator observed baseline noise level where sources influencing the statistical results are determined.

From the attended measurements presented in Table 6-11 above, the operational noise was not audible during day and night-time periods. The operational noise was audible during evening periods at ambient levels of between 40 dB(A) and 42 dB(A) and the direct source could not be determined. Based on this observation, the operational noise from Patrick PBT is considered to comply with the EPL day, evening and night noise limits at this monitoring location.

Road traffic on Jennings Street and surrounding streets and residential activity was the primary influence during the day, evening and night-time measurements at Jennings Street. Noise generated by aircraft fly overs, and flora and fauna were also audible during the measurements.

6.2.6 Location 6: Military Road, Matraville

The results of the attended background noise monitoring undertaken at Military Road are presented in Table 6-12 below.

Table 6-12 Attended monitoring results (Location 6: Military Road)

Period	Date of measurement	Time	Measured Noise Level			Comments
			L_{A90}	L_{Aeq}	L_{A1}	
Day	22/05/2023	14:50	46	56	66	Road traffic Foreshore Road 50-55 dB(A) Vehicle pass by 60-65 dB(A)
Evening	23/05/2023	21:21	49	51	55	Traffic noise from Foreshore Road 48-50 dB(A) Port Botany noise (Slightly Audible) 48-50dB(A)
Night	23/05/2023	23:38	45	48	53	Truck Pass by 85dB(A) Vehicle pass by 72 dB(A) Aircraft noise 61 dB(A) Port Botany noise 45-48 dB(A)

Notes: Values expressed as dB(A) and rounded to nearest 1 dB(A)
L_{A90} = A-weighted sound pressure level exceeded for 90%of the time (background)
L_{Aeq} = equivalent continuous (energy average) A-weighted sound pressure level
L_{A1} = A-weighted sound pressure level exceeded for 1% of the time
dB(A) = decibels, A-weighted
All values from comments are approximate readings
SS (steady state) noise level is the operator observed baseline noise level where sources influencing the statistical results are determined.

From the attended measurements presented in Table 6-12 above, the operational noise was audible during evening and night time periods at ambient levels of between 45 dB(A) and 50 dB(A) and the direct source could not be determined. Based on this observation, the operational noise from Patrick PBT is considered to comply with the EPL day, evening and night noise limits at this monitoring location.

Road traffic on Military Road and activity associated with the crematorium in the facility were the primary influences during the day, evening and night-time measurements at Military Road. Noise generated by aircraft fly overs and flora and fauna were also audible during the measurements.

7 STATEMENT OF EXISTING INDUSTRIAL NOISE COMPLIANCE

In providing the statement of existing noise compliance status, the results of the noise monitoring have been reviewed. The steady state noise levels from Patrick PBT operations at locations that were just audible were estimated through observations during periods of minimal extraneous noise. Multiple noise sources were audible at all locations and could not be totally eliminated from the monitoring period, therefore estimates are likely to be overly conservative and overall compliance is generally based on the observed site influence, and measurement statistics.

7.1 Operations

It is understood that standard operations of Patrick PBT facility were generally present during the two weeks monitoring period over two occasions.

7.2 Review of Measured Noise Levels

7.2.1 Daytime Period

Measured ambient noise levels from the unattended monitoring and attended measurements show exceedances of the EPL daytime L_{Aeq} limits at Chelmsford Avenue, Dent Street, Botany Road, Australia Avenue, Jennings Street and Military Road.

However, operational noise from Patrick PBT was inaudible at all 6 monitoring locations during the daytime attended noise surveys. Based on this observation, operational noise impacts from Patrick PBT facility are considered to comply with the EPL daytime noise limits.

Dominant noise sources at all 6 monitoring locations were mainly road traffic noise from surrounding roads and local activity (residential, industrial and aircraft).

7.2.2 Evening Period

Measured ambient noise levels from the unattended monitoring and attended measurements show exceedances of the EPL evening L_{Aeq} limits at Chelmsford Avenue, Dent Street, Botany Road, Australia Avenue, Jennings Street and Military Road.

Operational noise was just audible at Botany Road and Military Road locations at low ambient levels of between 45-50 dB(A), but the source could not be determined. The operation noise observed was over a very short duration (usually no more than 30 seconds). Operational noise was observed at a level reaching 59 dB(A) however, the duration of this noise was of an impulsive nature and largely intermittent and the exact source could not be determined. This observed noise level from the monitoring locations complies with the relevant noise limits. It also complies with the Botany Road - 43 dB(A) $L_{Aeq(15min)}$ evening noise limits and Military Road - 42 dB(A) $L_{Aeq(15min)}$ evening noise limits.

Operational noise from Patrick PBT was not audible at the Chelmsford Avenue, Jennings Street, Dent Street and Australia Avenue monitoring locations during the attended noise surveys. Based on these observations, operational noise impacts from Patrick PBT facility are considered to comply with the EPL evening noise limits.

Dominant noise sources at all 6 monitoring locations were mainly road traffic noise from surrounding roads and local activity (residential, industrial and aircraft).

7.2.3 Night-time Period

Measured ambient noise levels from the unattended monitoring and attended measurements show exceedances of the EPL night-time L_{Aeq} limits at Chelmsford Avenue, Dent Street, Botany Road, Australia Avenue, Jennings Street and Military Road.

Operational noise was just audible at the Botany Road and Military Road locations at low ambient levels of between 45-50 dB(A), but the source could not be determined. The operation noise observed was over a very short duration (usually no more than 30 seconds). Operational noise was observed at a level reaching 50 dB(A) however, the duration of this noise was of an impulsive nature and largely intermittent and the exact source

could not be determined. This observed noise level from the monitoring locations complies with the relevant noise limits. It also complies with the Botany Road - 43 dB(A) $L_{Aeq(15min)}$, 45 dB(A) $L_{Aeq(9hours)}$ and 55 dB(A) $L_{A1(1min)}$ night-time noise limits, and Military Road - 42 dB(A) $L_{Aeq(15min)}$, 40 dB(A) $L_{Aeq(9hours)}$ and 55 dB(A) $L_{A1(1min)}$ night-time noise limits.

Operational noise from Patrick PBT was not audible at the Chelmsford Avenue, Dent Street, Australia Avenue and Jennings Street monitoring locations during the attended noise surveys. Based on these observations, operational noise impacts from Patrick PBT facility are considered to comply with the EPL night time noise limits.

Dominant noise sources at all 6 monitoring locations were mainly road traffic noise from surrounding roads and local activity (residential and industrial).

8 CONCLUSION

This report presents the findings of the May 2023 environmental noise compliance monitoring for the Patrick Stevedores' Port Botany Terminal (Patrick PBT) operations.

Attended and unattended noise monitoring were carried out to determine compliance with the established noise limits at the nearest affected receivers.

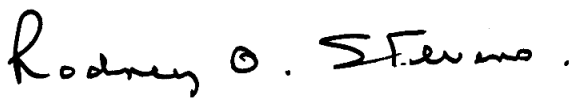
Existing noise levels at the nearest receptors are considered high. Noise generated by surrounding industrial premises, container storage facilities, road traffic, local fauna, residential activities and aircraft activities were the primary contributors to the L_{Aeq} and L_{A1} descriptors during the daytime, evening and night-time measurements.

It was observed that operational noise was not audible at the Chelmsford Avenue, Dent Street, Jennings and Australia Avenue monitoring locations, and was slightly audible at the Botany Road, Jennings Street and Military Road monitoring location when ambient levels were low, but the direct source was indeterminable. Based on this observation, Patrick PBT operational noise is considered to comply with the EPL day, evening and night-time noise limits.

It is a finding of this compliance assessment that the current operation will comply with the established licence limits at all locations during the daytime, evening and night-time periods.

Assessment of the measured residential noise levels indicated no annoying characteristics (tonality) were present. No sleep disturbance issues were present.

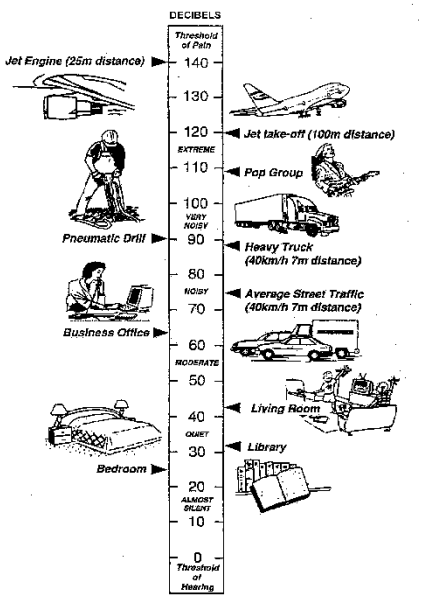
Approved: -



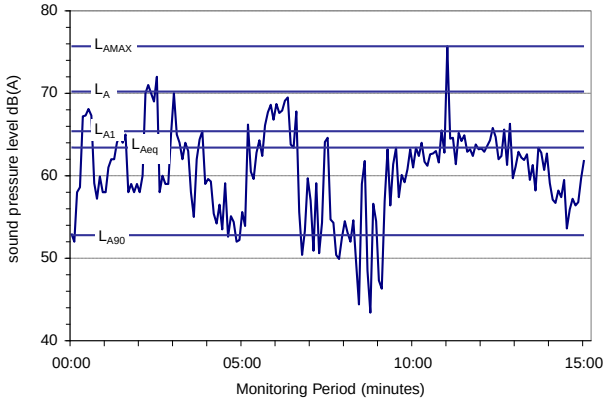
Rodney Stevens - MAAS

Appendix A – Acoustic Terminology

A-weighted sound pressure	The human ear is not equally sensitive to sound at different frequencies. People are more sensitive to sound in the range of 1 to 4 kHz (1000 – 4000 vibrations per second) and less sensitive to lower and higher frequency sound. During noise measurement an electronic '*A-weighting*' frequency filter is applied to the measured sound level *dB(A)* to account for these sensitivities. Other frequency weightings (B, C and D) are less commonly used. Sound measured without a filter is denoted as linear weighted dB(linear).
Ambient noise	The total noise in a given situation, inclusive of all noise source contributions in the near and far field.
Community annoyance	Includes noise annoyance due to: ▪ character of the noise (e.g. sound pressure level, tonality, impulsiveness, low-frequency content) ▪ character of the environment (e.g. very quiet suburban, suburban, urban, near industry) ▪ miscellaneous circumstances (e.g. noise avoidance possibilities, cognitive noise, unpleasant associations) ▪ human activity being interrupted (e.g. sleep, communicating, reading, working, listening to radio/TV, recreation).
Compliance	The process of checking that source noise levels meet with the noise limits in a statutory context.
Cumulative noise level	The total level of noise from all sources.
Extraneous noise	Noise resulting from activities that are not typical to the area. Atypical activities may include construction, and traffic generated by holiday periods and by special events such as concerts or sporting events. Normal daily traffic is not considered to be extraneous.
Feasible and reasonable measures	Feasibility relates to engineering considerations and what is practical to build; reasonableness relates to the application of judgement in arriving at a decision, considering the following factors: ▪ Noise mitigation benefits (amount of noise reduction provided, number of people protected). ▪ Cost of mitigation (cost of mitigation versus benefit provided). ▪ Community views (aesthetic impacts and community wishes). ▪ Noise levels for affected land uses (existing and future levels, and changes in noise levels).
Impulsiveness	Impulsive noise is noise with a high peak of short duration or a sequence of these peaks. Impulsive noise is also considered annoying.
Low frequency	Noise containing major components in the low-frequency range (20 to 250 Hz) of the frequency spectrum.
Noise criteria	The general set of non-mandatory noise levels for protecting against intrusive noise (for example, background noise plus 5 dB) and loss of amenity (e.g. noise levels for various land use).

Noise level (goal)	A noise level that should be adopted for planning purposes as the highest acceptable noise level for the specific area, land use and time of day.
Noise limits	Enforceable noise levels that appear in conditions on consents and licences. The noise limits are based on achievable noise levels, which the proponent has predicted can be met during the environmental assessment. Exceedance of the noise limits can result in the requirement for either the development of noise management plans or legal action.
Performance-based goals	Goals specified in terms of the outcomes/performance to be achieved, but not in terms of the means of achieving them.
Rating Background Level (RBL)	The rating background level is the overall single figure background level representing each day, evening and night time period. The rating background level is the 10th percentile min L_{A90} noise level measured over all day, evening and night time monitoring periods.
Receptor	The noise-sensitive land use at which noise from a development can be heard.
Sleep disturbance	Awakenings and disturbance of sleep stages.
Sound and decibels (dB)	Sound (or noise) is caused by minute changes in atmospheric pressure that are detected by the human ear. The ratio between the quietest noise audible and that which should cause permanent hearing damage is a million times the change in sound pressure. To simplify this range the sound pressures are logarithmically converted to decibels from a reference level of 2 x 10-5 Pa. The picture below indicates typical noise levels from common noise sources.  dB is the abbreviation for decibel – a unit of sound measurement. It is equivalent to 10 times the logarithm (to base 10) of the ratio of a given sound pressure to a reference pressure.
Sound Power Level (SWL)	The sound power level of a noise source is the sound energy emitted by the source. Notated as SWL, sound power levels are typically presented in *dB(A)*.

Sound Pressure Level (SPL)	The level of noise, usually expressed as SPL in *dB(A)*, as measured by a standard sound level meter with a pressure microphone. The sound pressure level in *dB(A)* gives a close indication of the subjective loudness of the noise.
Statistical noise levels	Noise levels varying over time (e.g. community noise, traffic noise, construction noise) are described in terms of the statistical exceedance level. A hypothetical example of A weighted noise levels over a 15-minute measurement period is indicated in the following figure:



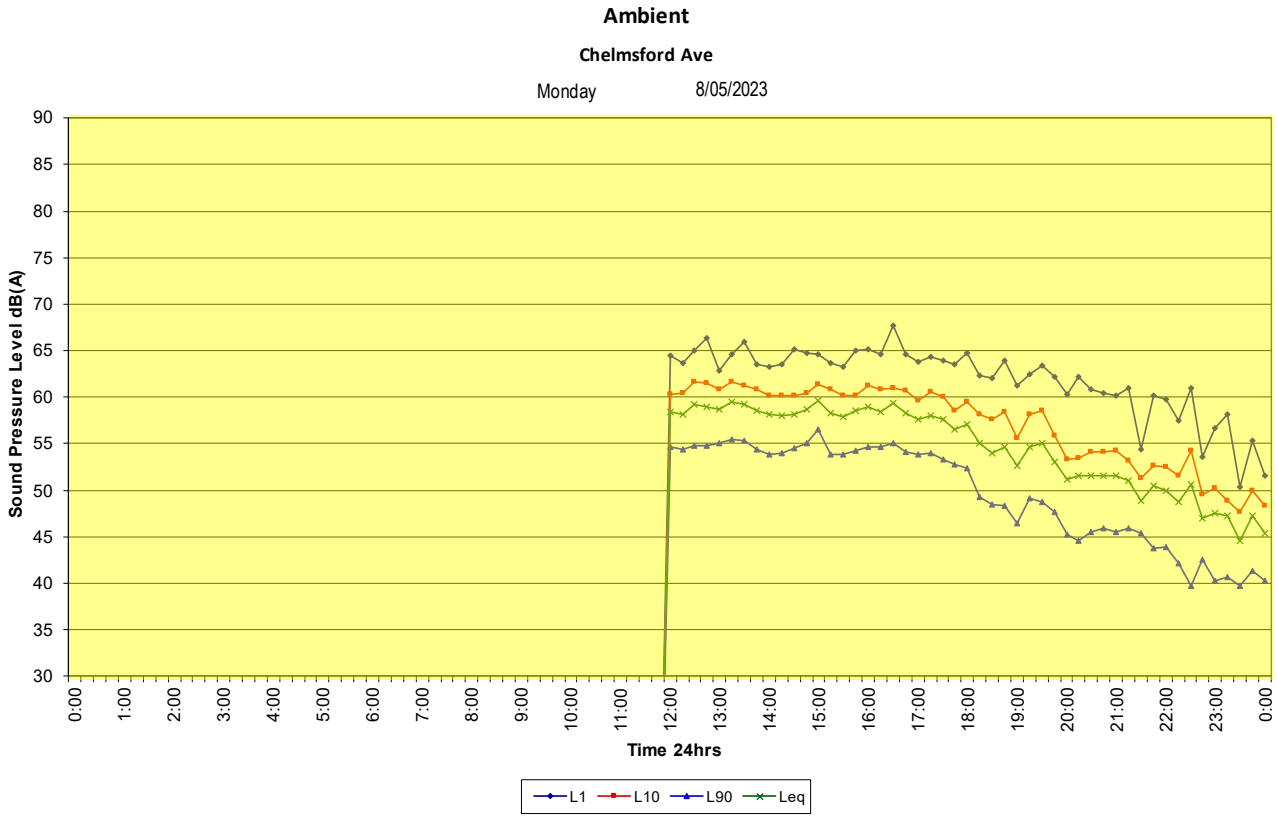
Key descriptor

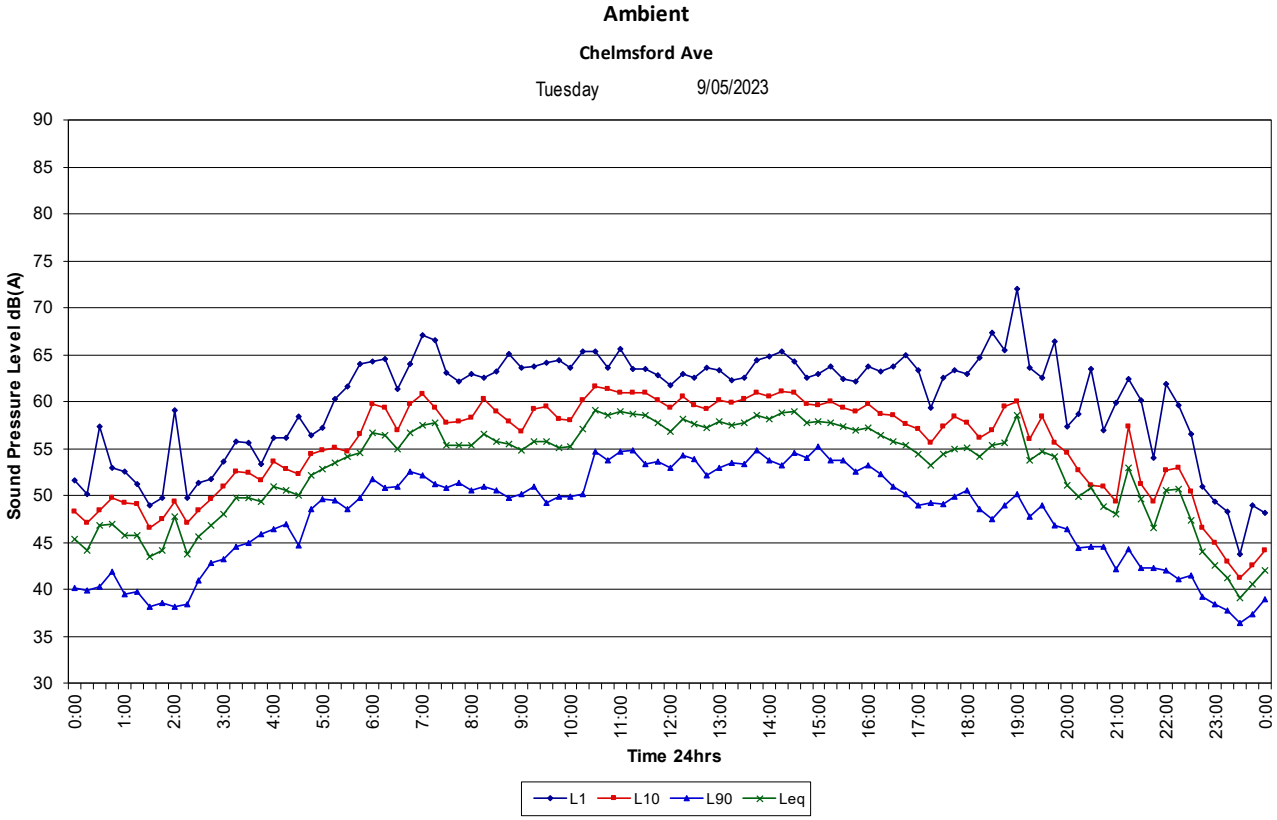
- LAmax Maximum recorded noise level.
- LA1 The noise level exceeded for 1% of the 15-minute interval.
- LA10 Noise level present for 10% of the 15-minute interval. Commonly referred to the average maximum noise level.
- LAeq Equivalent continuous (energy average) A-weighted sound pressure level. It is defined as the steady sound level that contains the same amount of acoustic energy as the corresponding time-varying sound.
- LA90 Noise level exceeded for 90% of time (background level). The average minimum background sound level (in the absence of the source under consideration).

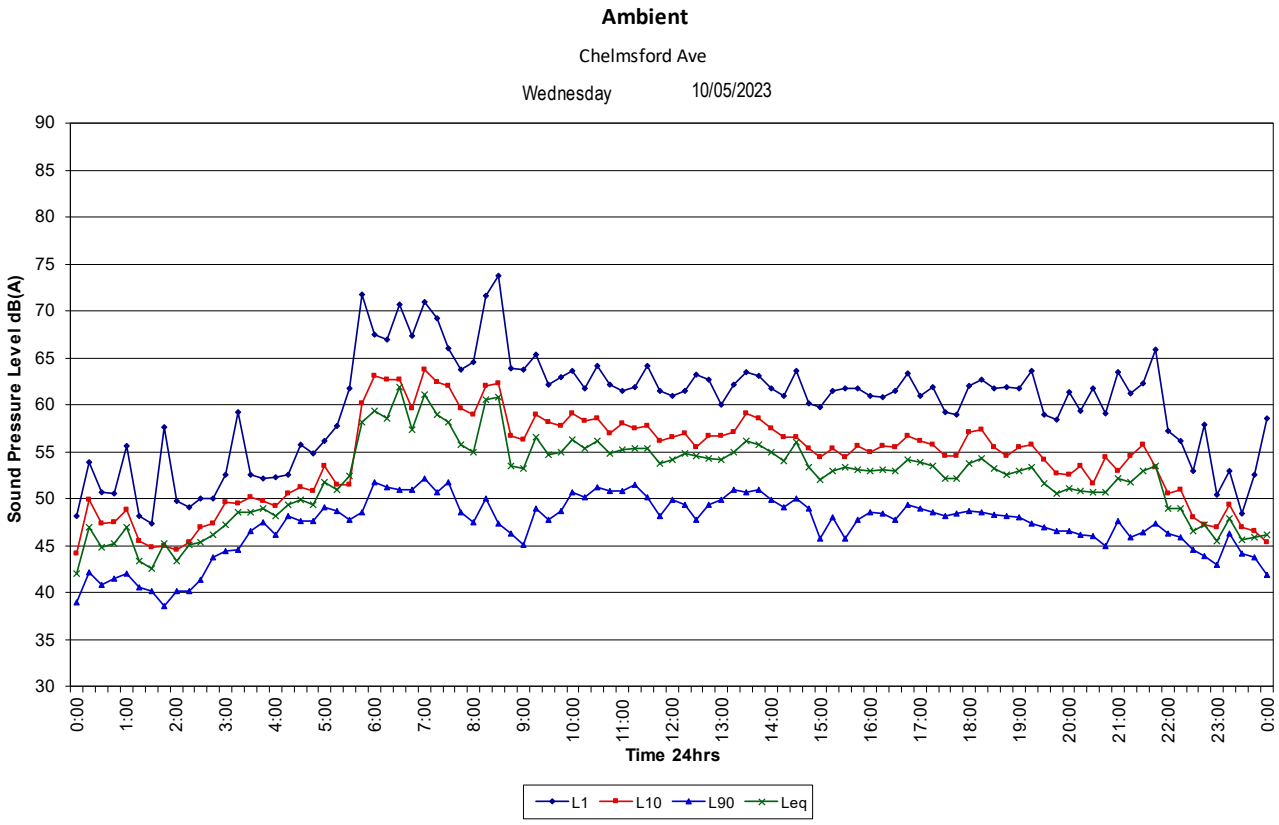
Threshold	The lowest sound pressure level that produces a detectable response (in an instrument/person).
Tonality	Tonal noise contains one or more prominent tones (and characterised by a distinct frequency components) and is considered more annoying. A 2 to 5 dBA penalty is typically applied to noise sources with tonal characteristics.

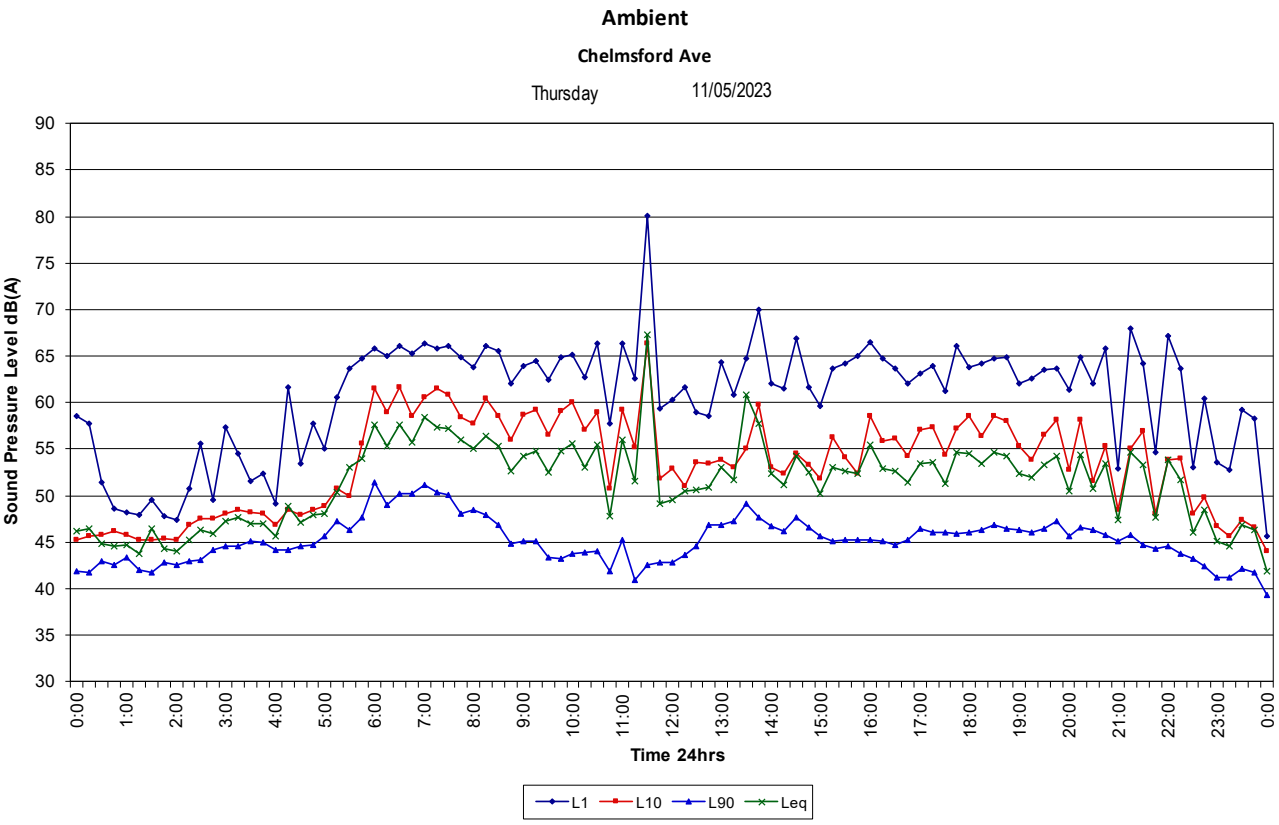
Appendix B – Unattended Logger Graphs

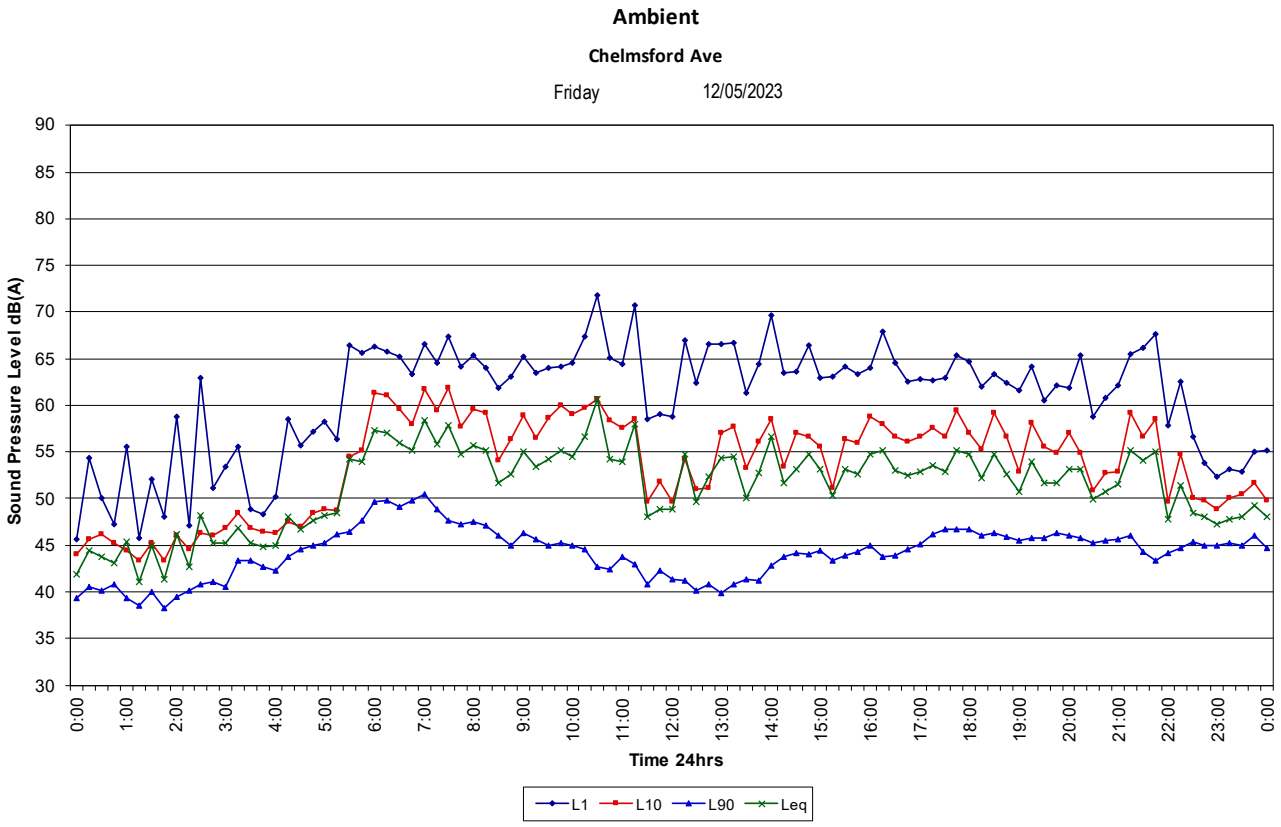
Chelmsford Avenue






Ambient
Chelmsford Ave
Wednesday 10/05/2023
Sound Pressure Level dB(A)
Time 24hrs
L1
L10
L90
Leq


Ambient
Chelmsford Ave
Thursday 11/05/2023
Sound Pressure Level dB(A)
Time 24hrs
L1
L10
L90
Leq


Ambient
Chelmsford Ave
Friday 12/05/2023
Sound Pressure Level dB(A)
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22:00
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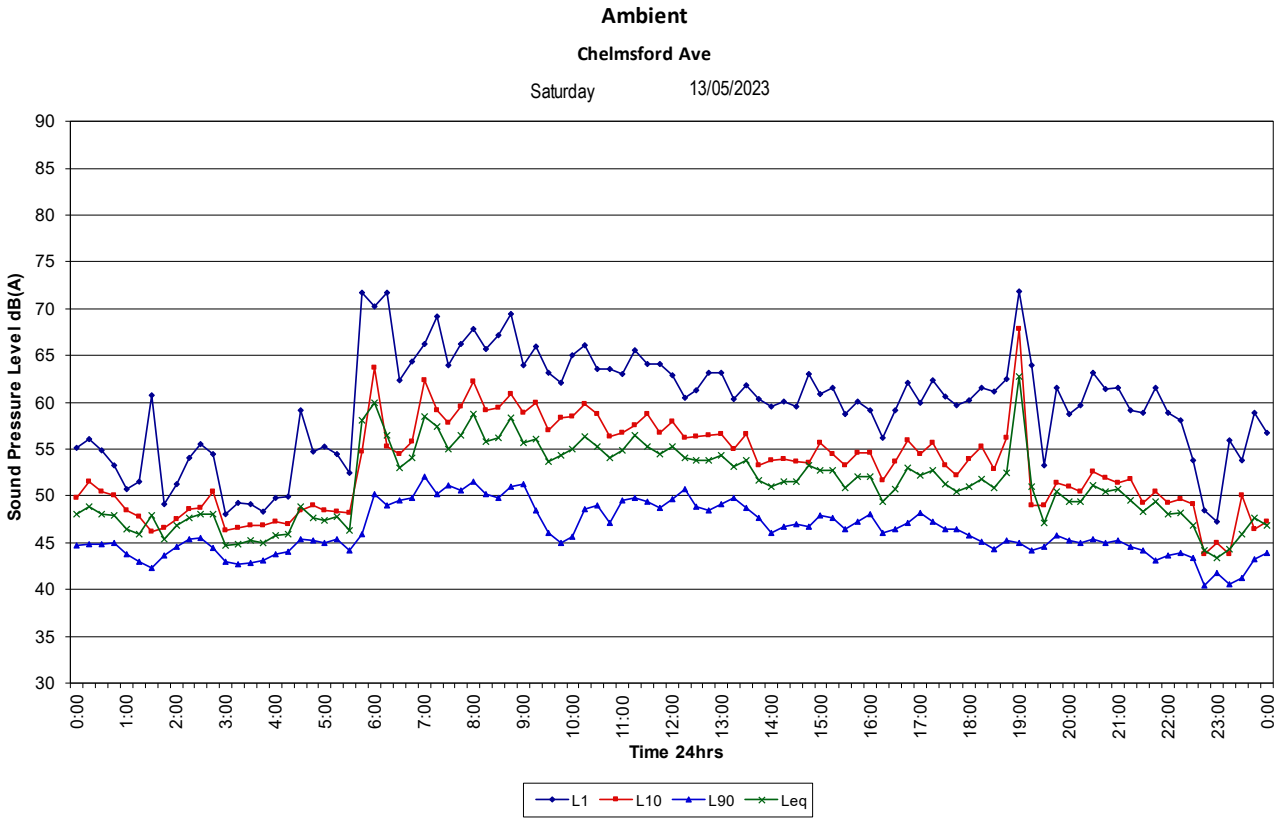
0:00
Time 24hrs
L1
L10
L90
Leq


Ambient
Chelmsford Ave
Saturday 13/05/2023
Sound Pressure Level dB(A)
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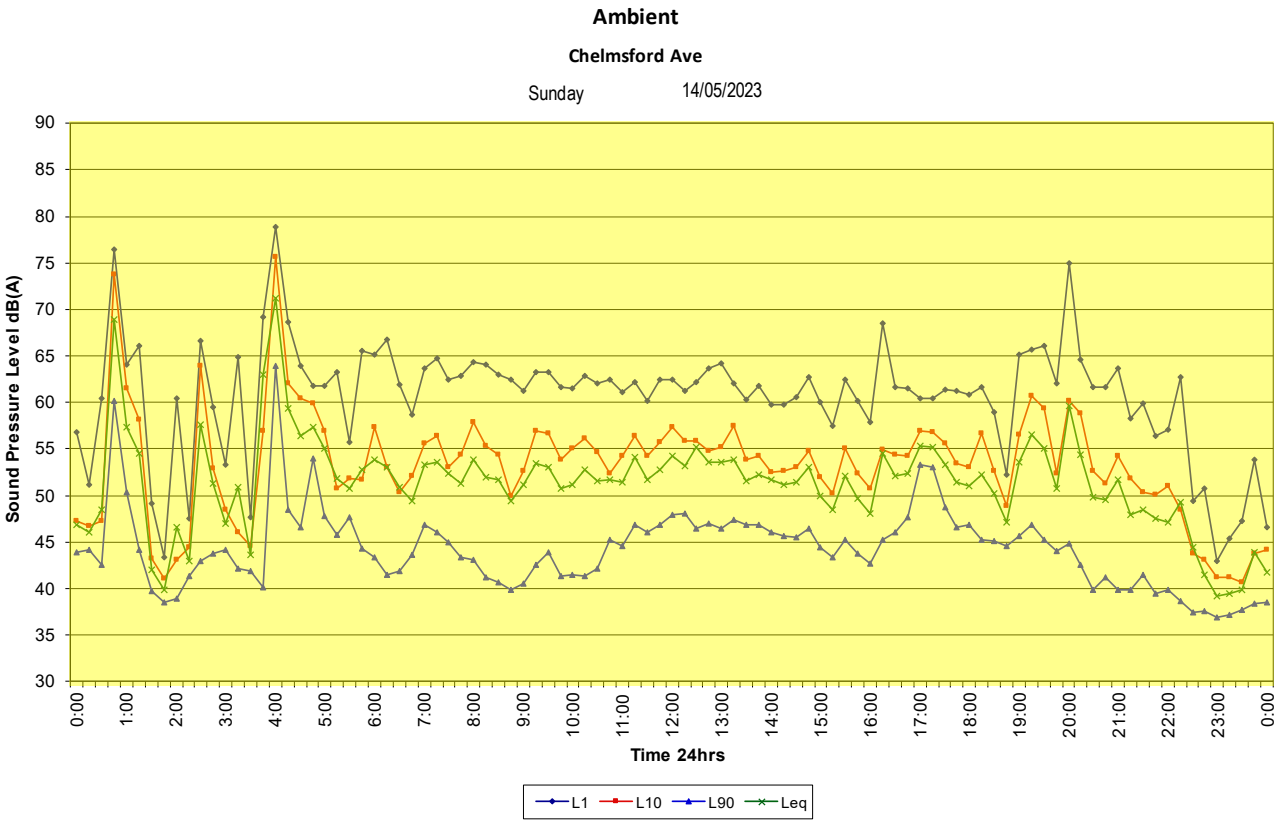
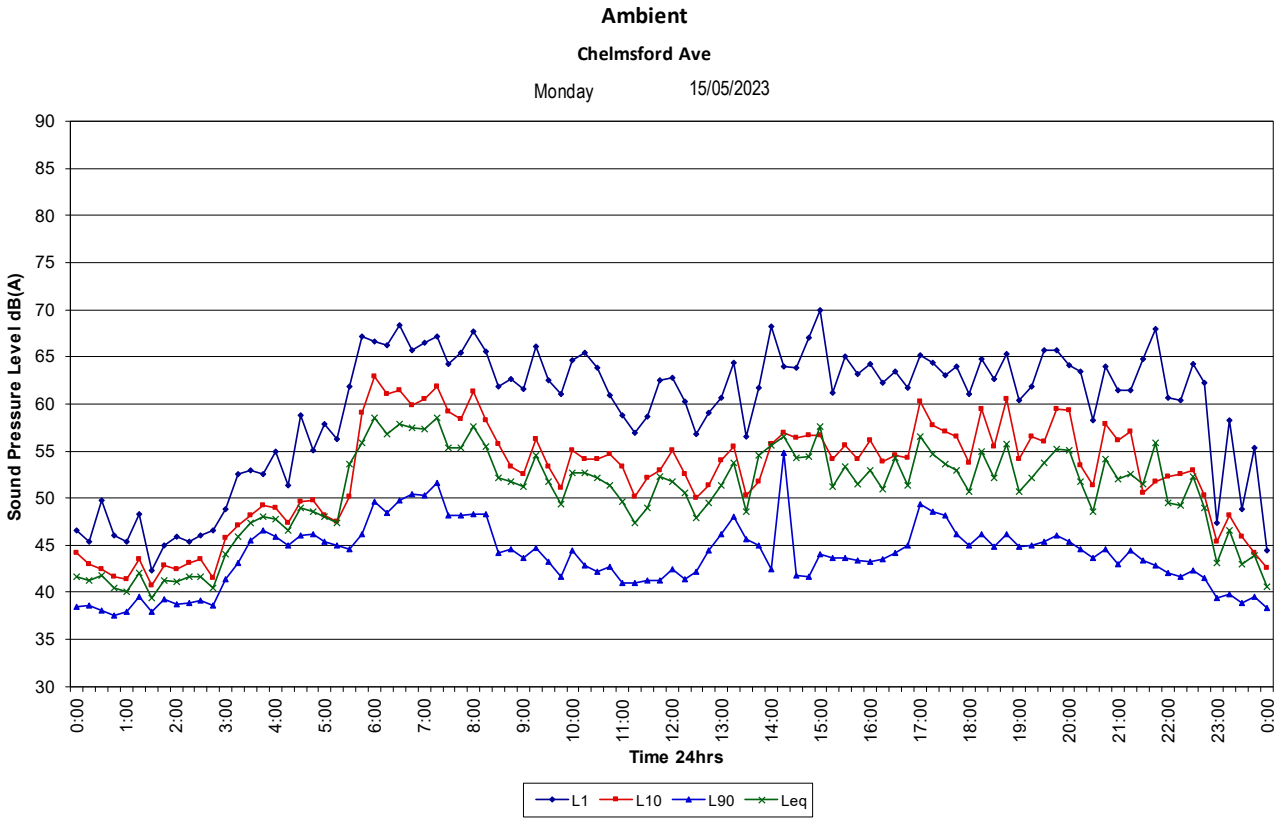
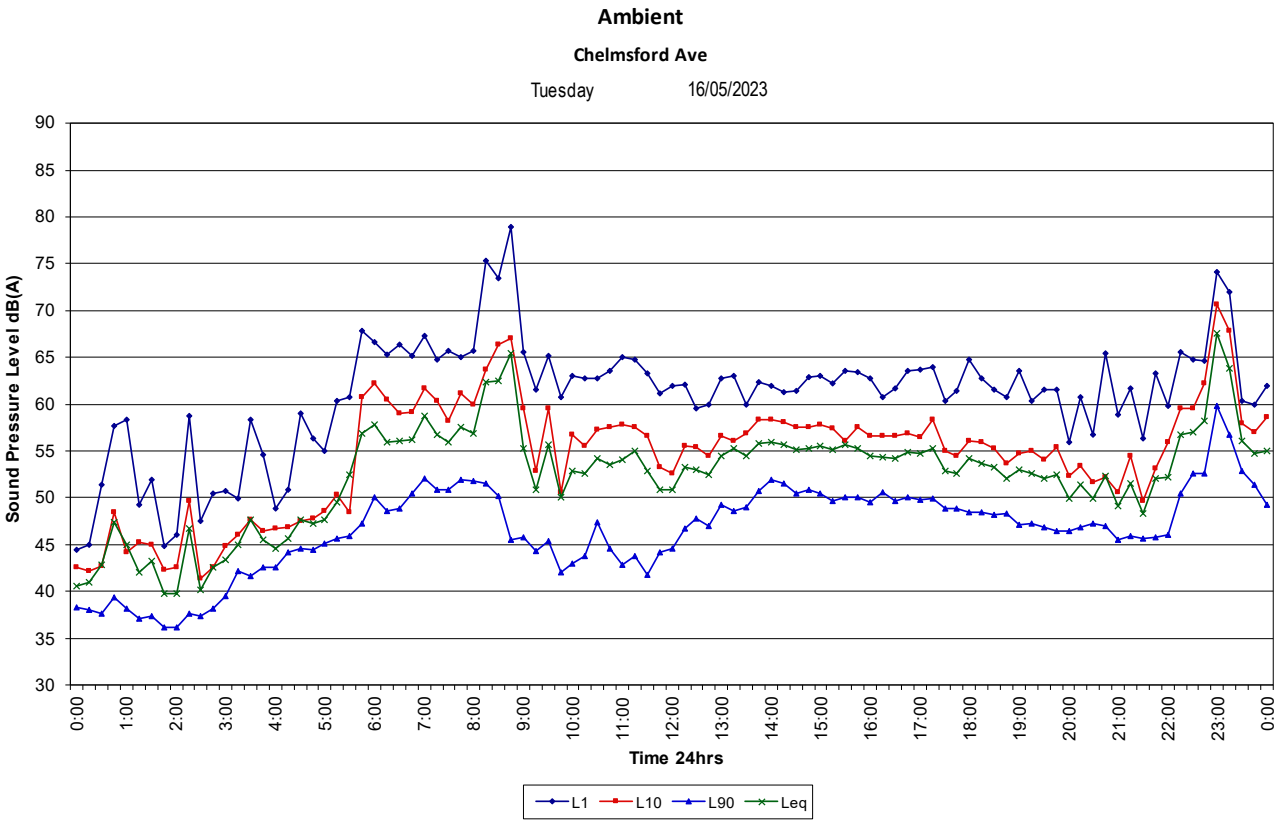
0:00
Time 24hrs
L1
L10
L90
Leq


Ambient
Chelmsford Ave
Sunday 14/05/2023
Sound Pressure Level dB(A)
Time 24hrs
L1 L10 L90 Leq


Ambient
Chelmsford Ave
Monday 15/05/2023
Sound Pressure Level dB(A)
Time 24hrs
L1 L10 L90 Leq


Ambient
Chelmsford Ave
Tuesday 16/05/2023
Sound Pressure Level dB(A)
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Time 24hrs
L1
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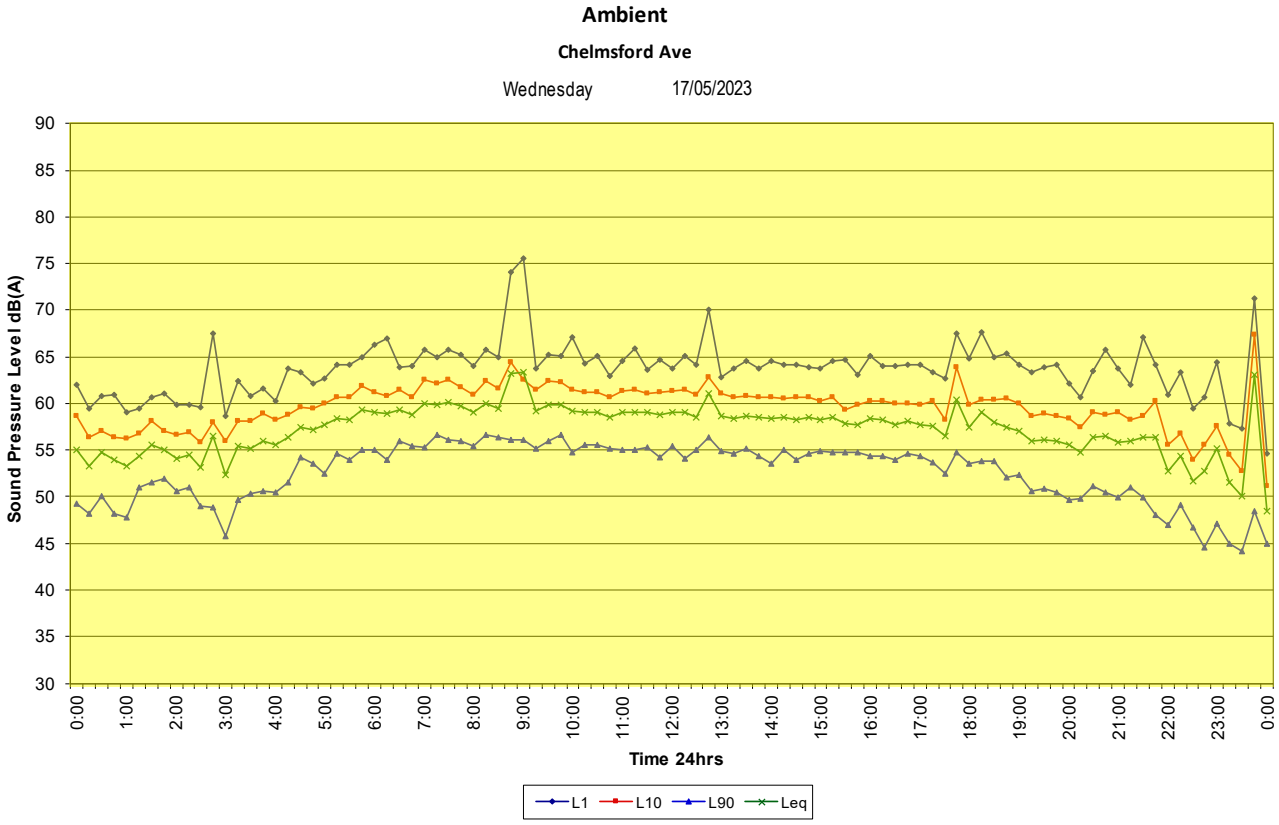
Leq


Ambient
Chelmsford Ave
Wednesday 17/05/2023
Sound Pressure Level dB(A)
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Time 24hrs
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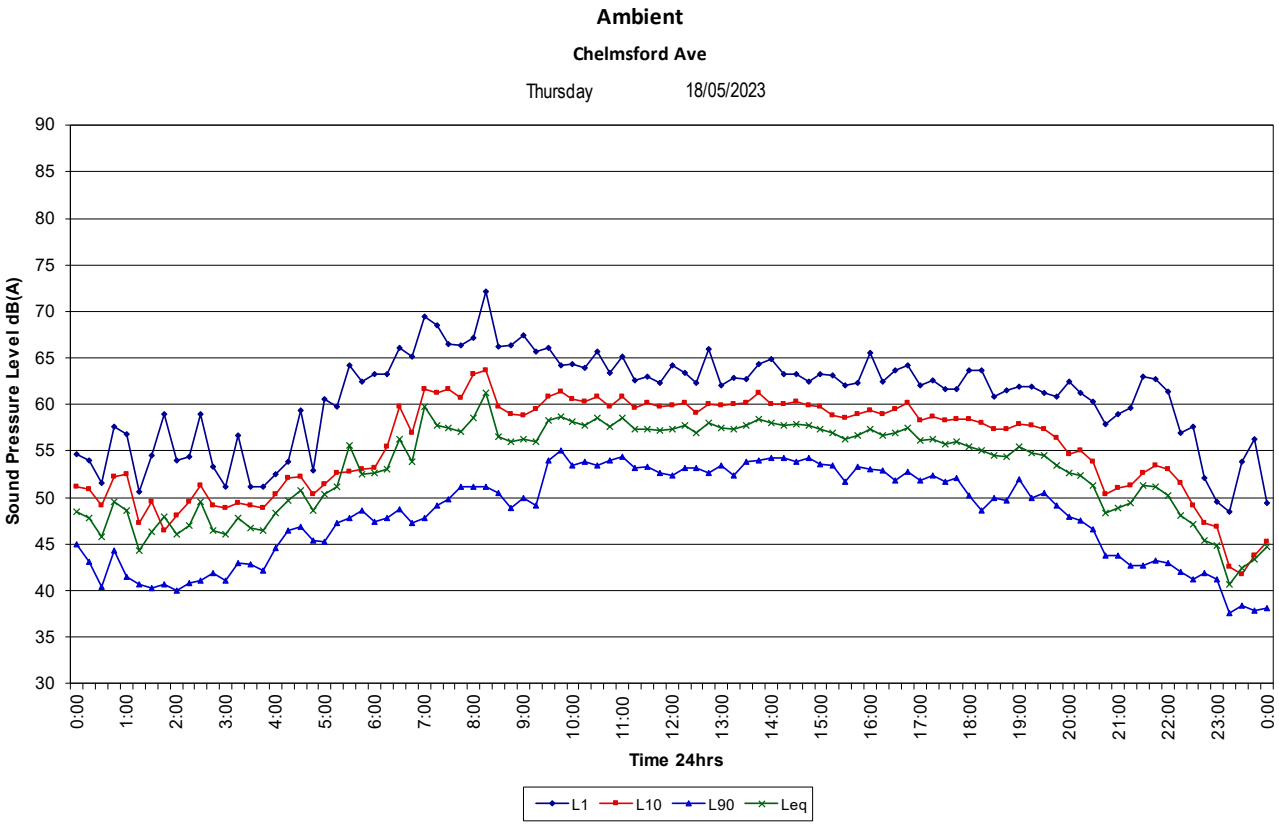
Ambient
Chelmsford Ave
Thursday 18/05/2023
Sound Pressure Level dB(A)
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Time 24hrs
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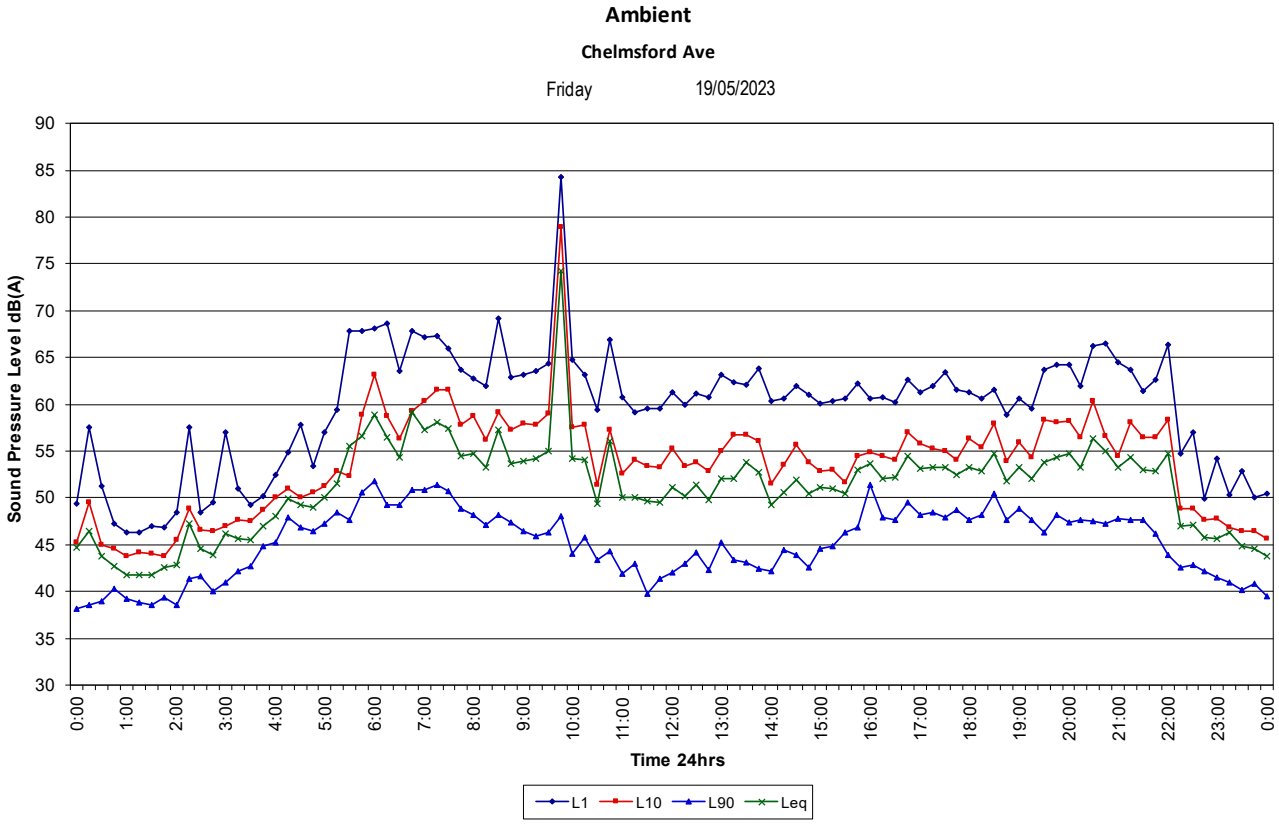
Ambient
Chelmsford Ave
Friday 19/05/2023
Sound Pressure Level dB(A)
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Time 24hrs
L1
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L90
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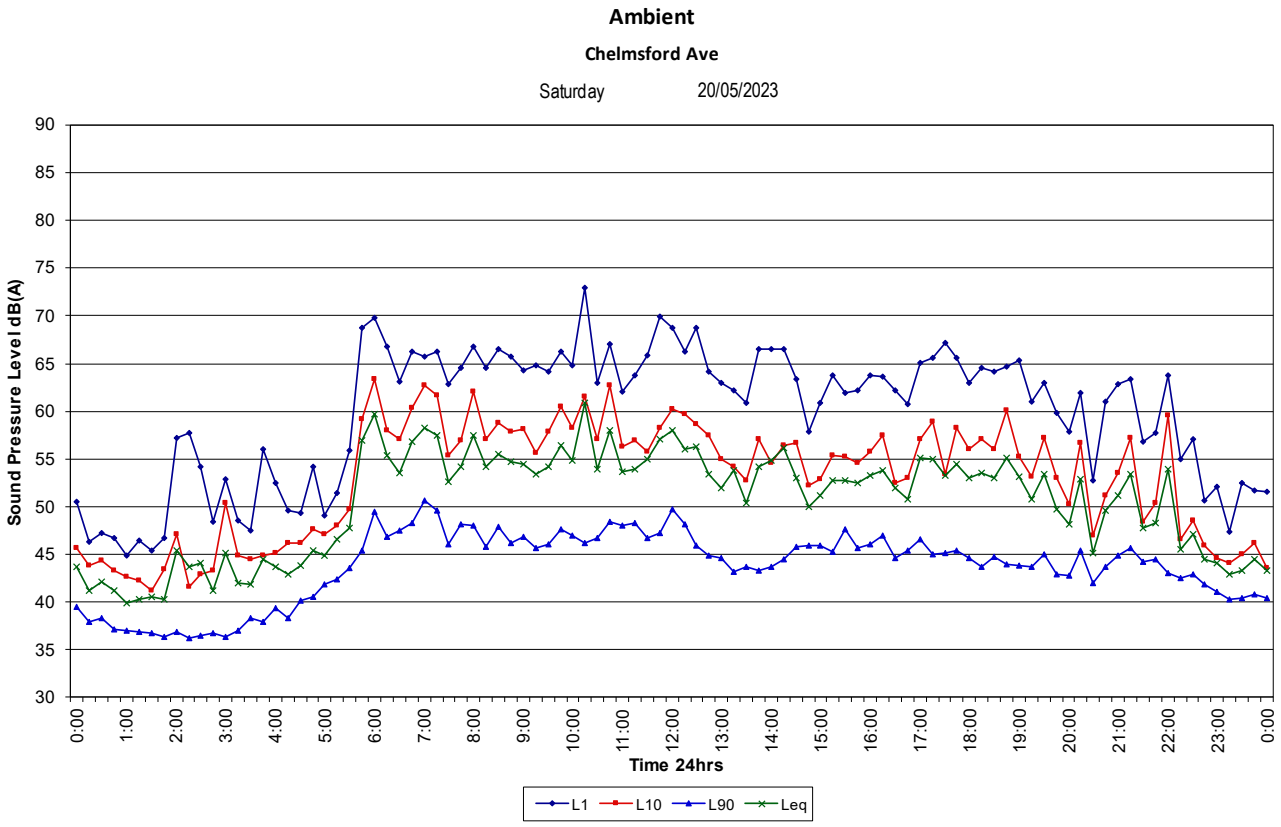
Ambient
Chelmsford Ave
Saturday 20/05/2023
Sound Pressure Level dB(A)
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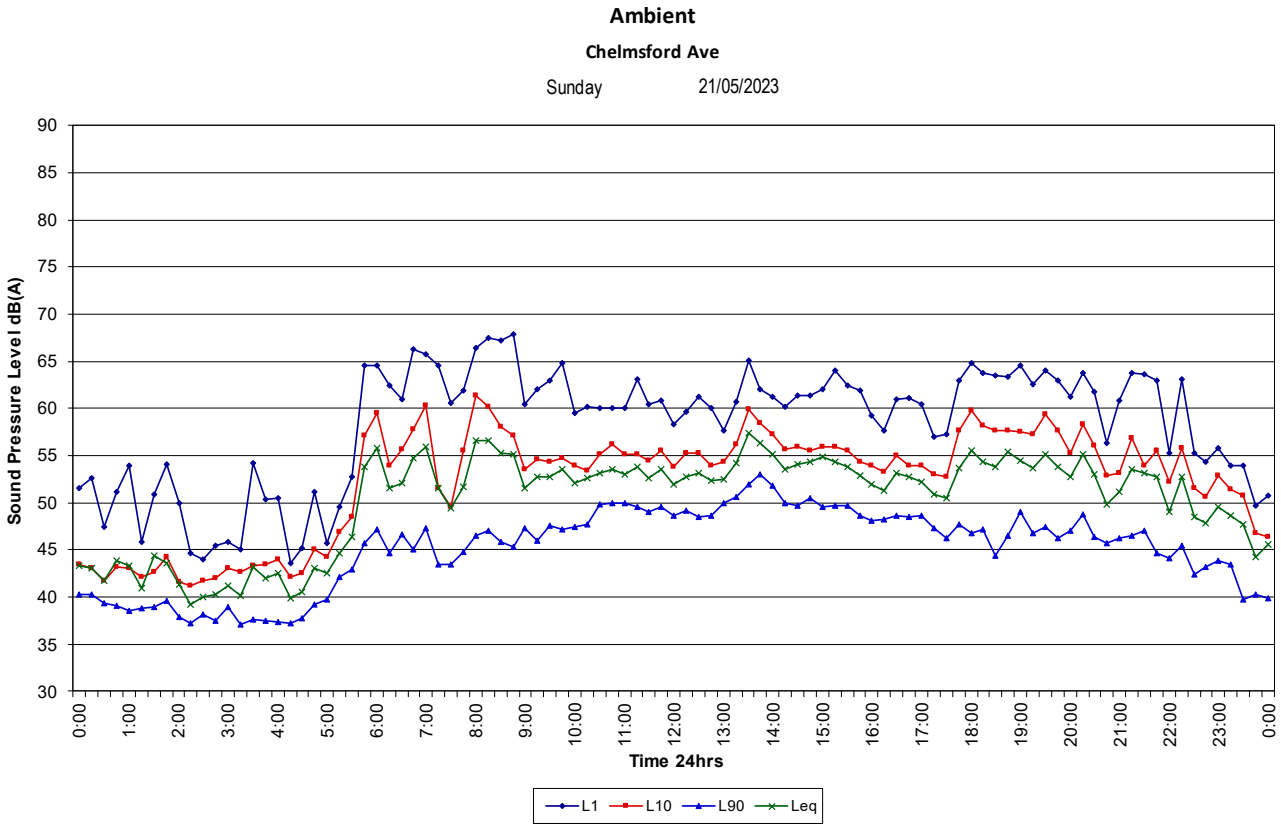
Time 24hrs
L1 L10 L90 Leq


Ambient
Chelmsford Ave
Sunday 21/05/2023
Sound Pressure Level dB(A)
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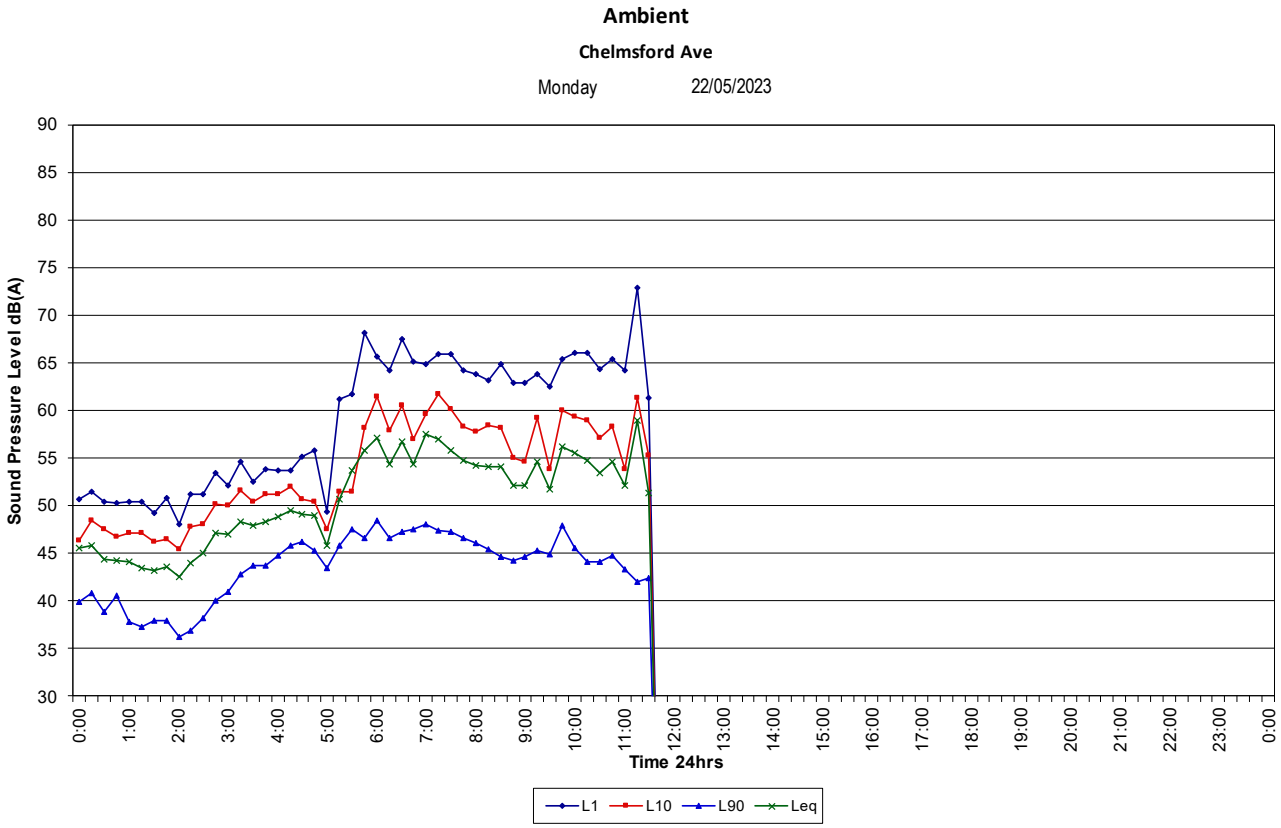
Time 24hrs
L1 L10 L90 Leq


Ambient
Chelmsford Ave
Monday 22/05/2023
Sound Pressure Level dB(A)
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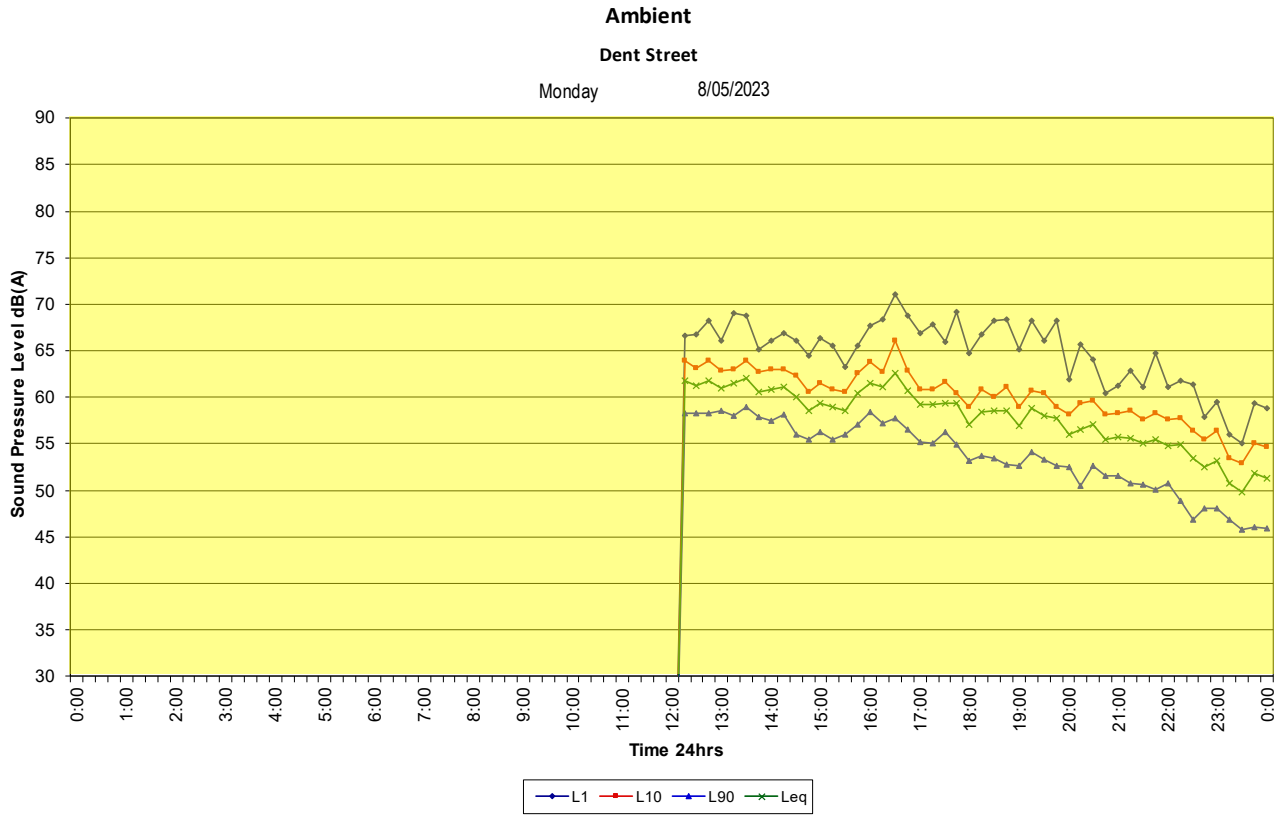
Time 24hrs
L1 L10 L90 Leq

Dent Street


Ambient
Dent Street
Monday 8/05/2023
Sound Pressure Level dB(A)
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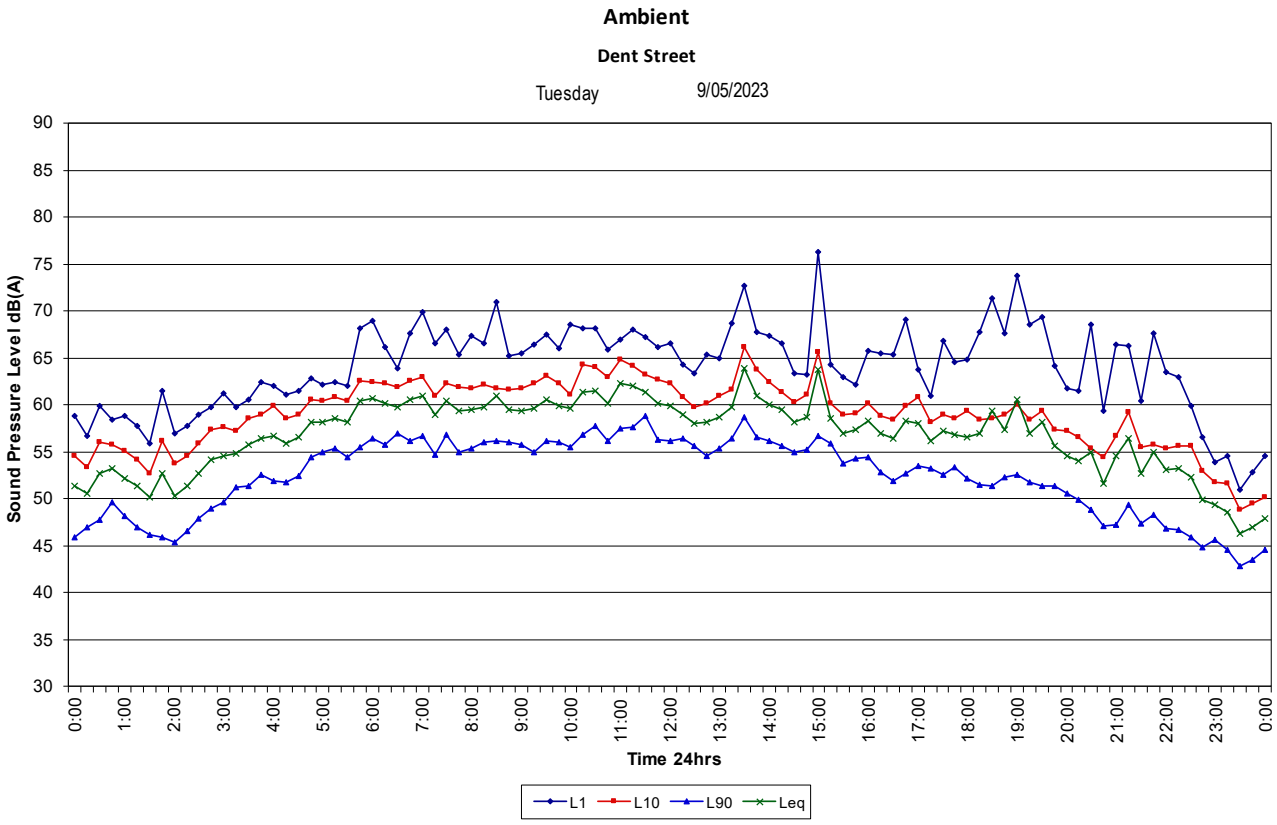
0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 0:00
Time 24hrs
L1 L10 L90 Leq


Ambient
Dent Street
Tuesday 9/05/2023
Sound Pressure Level dB(A)
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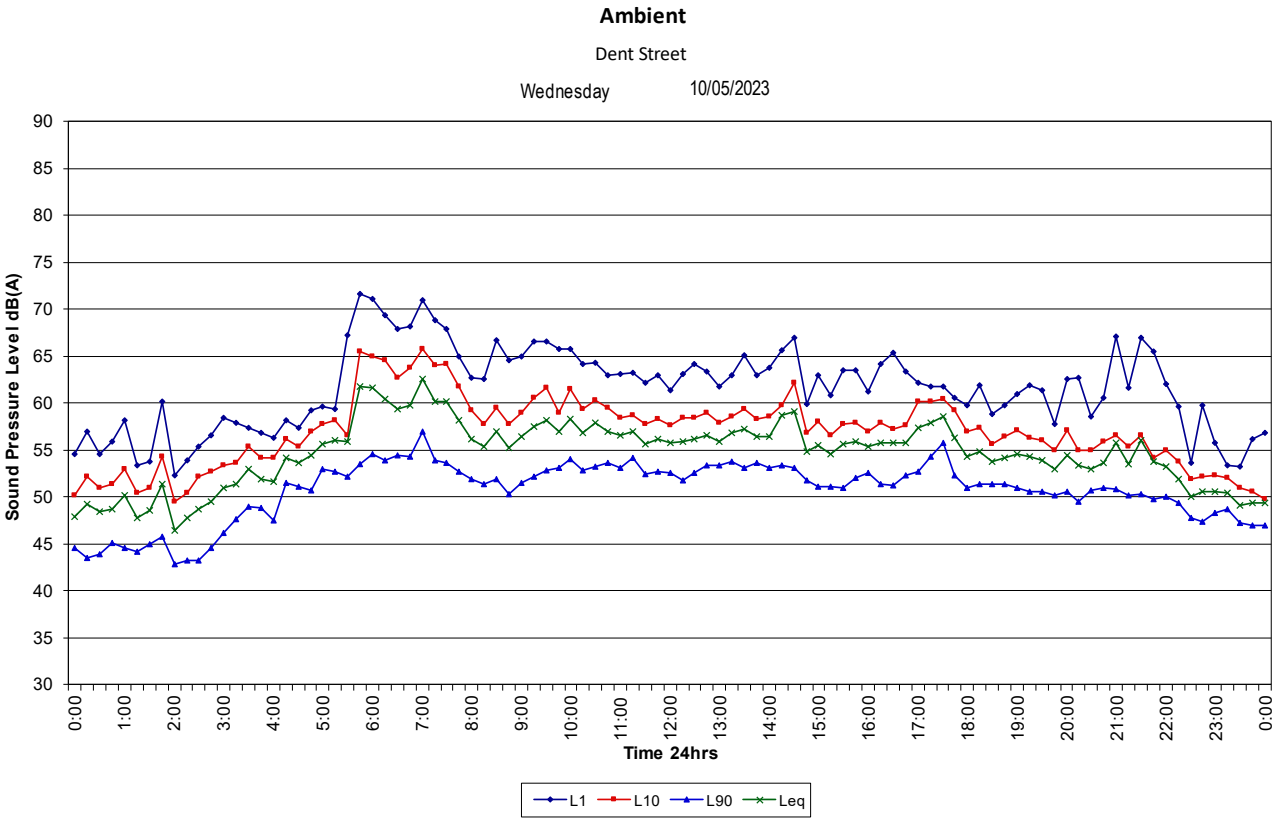
0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 0:00
Time 24hrs
L1 L10 L90 Leq


Ambient
Dent Street
Wednesday 10/05/2023
Sound Pressure Level dB(A)
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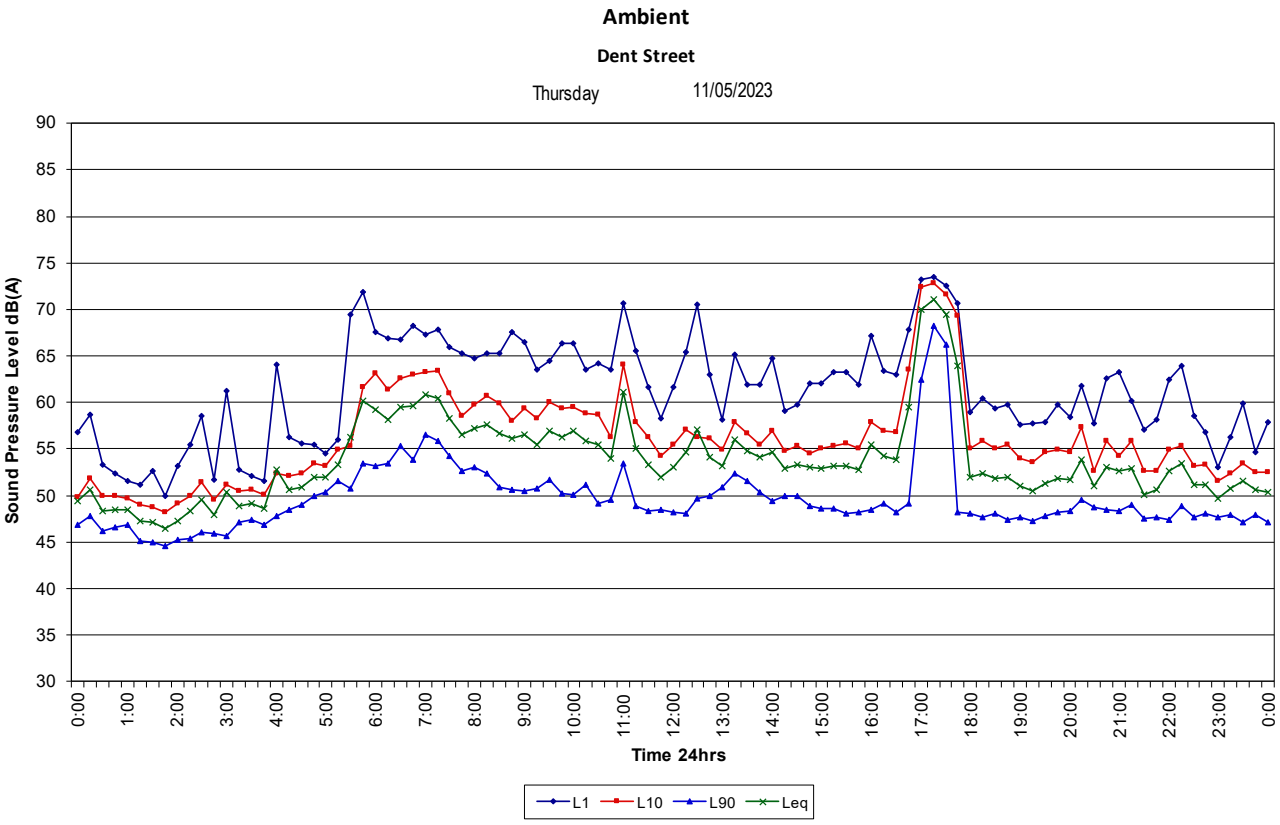
Time 24hrs
L1 L10 L90 Leq


Ambient
Dent Street
Thursday 11/05/2023
Sound Pressure Level dB(A)
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1:00
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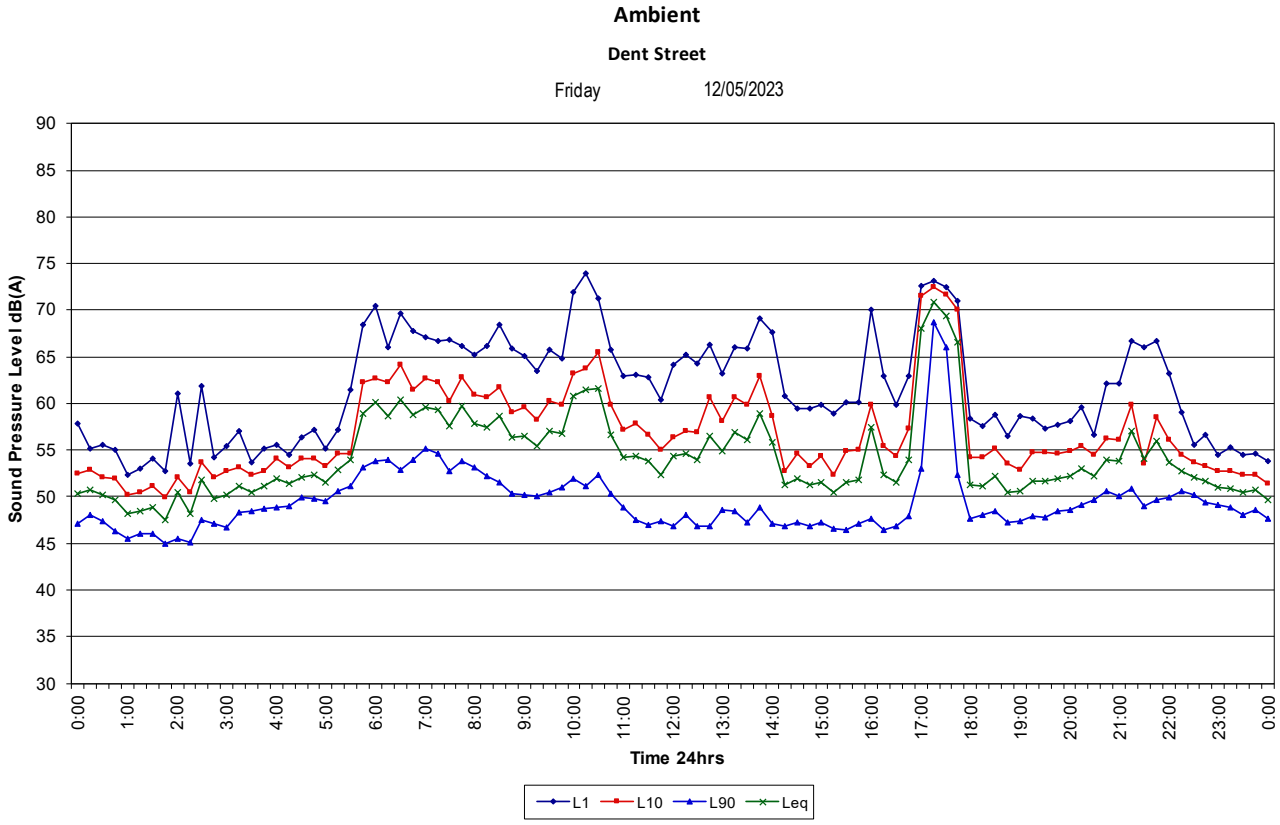
23:00
0:00
Time 24hrs
L1
L10
L90
Leq


Ambient
Dent Street
Friday 12/05/2023
Sound Pressure Level dB(A)
90
85
80
75
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35
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0:00
1:00
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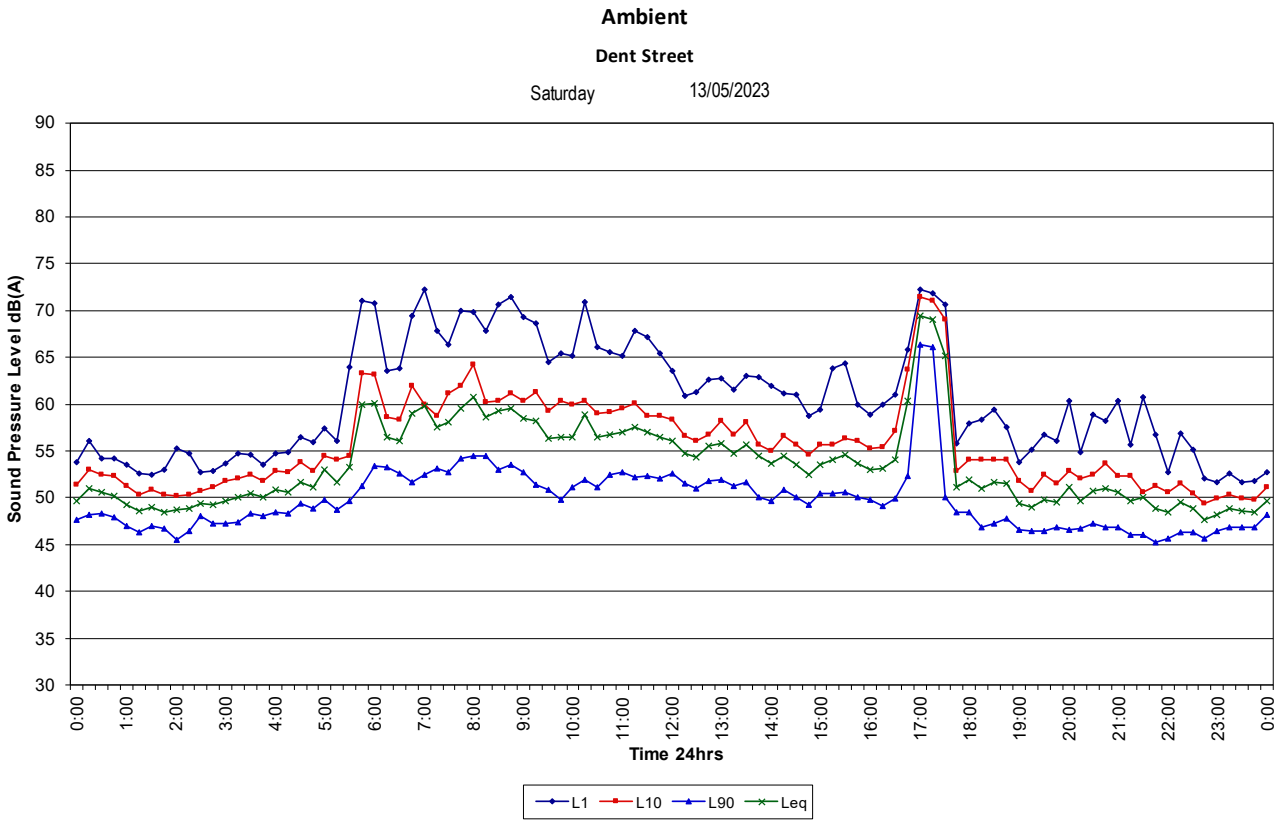
22:00
23:00
0:00
Time 24hrs
L1
L10
L90
Leq


Ambient
Dent Street
Saturday 13/05/2023
Sound Pressure Level dB(A)
90
85
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35
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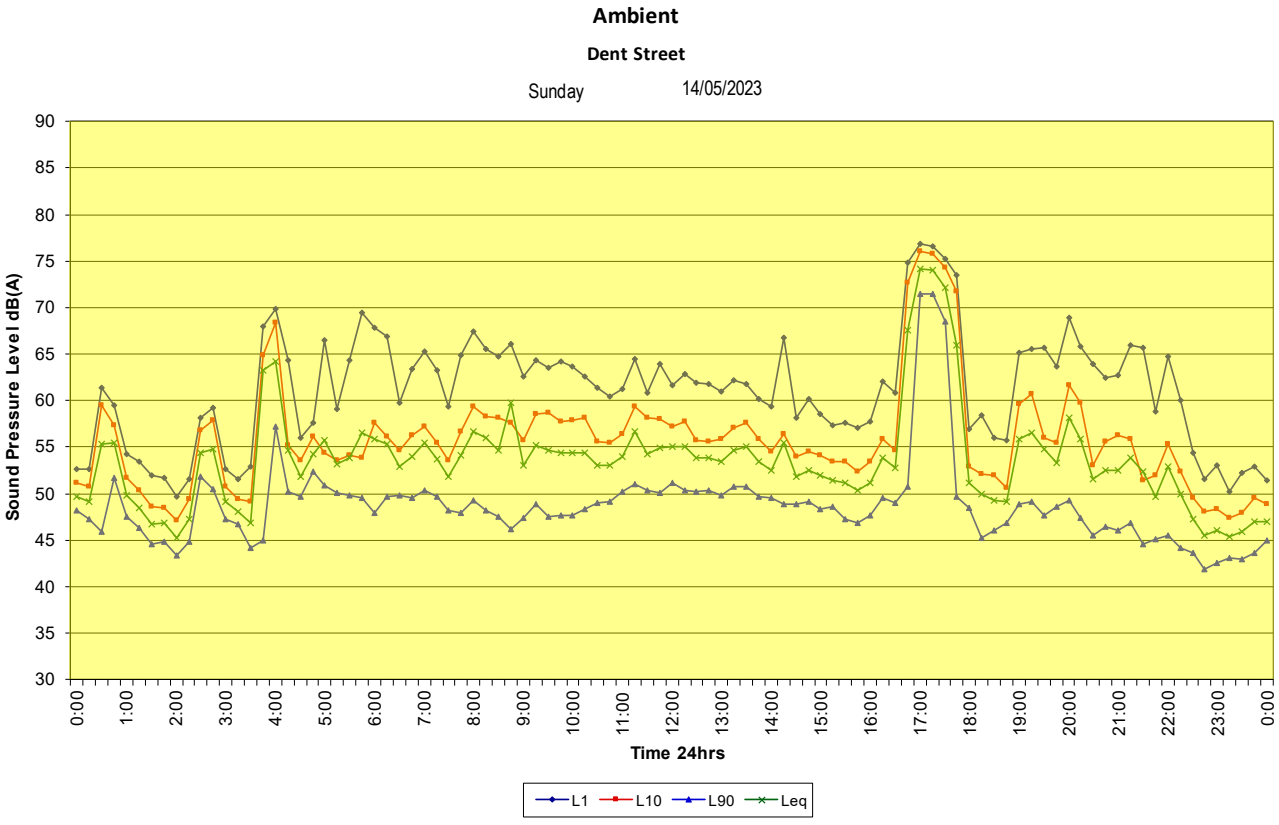
0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 0:00
Time 24hrs
L1 L10 L90 Leq


Ambient
Dent Street
Sunday 14/05/2023
Sound Pressure Level dB(A)
90
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35
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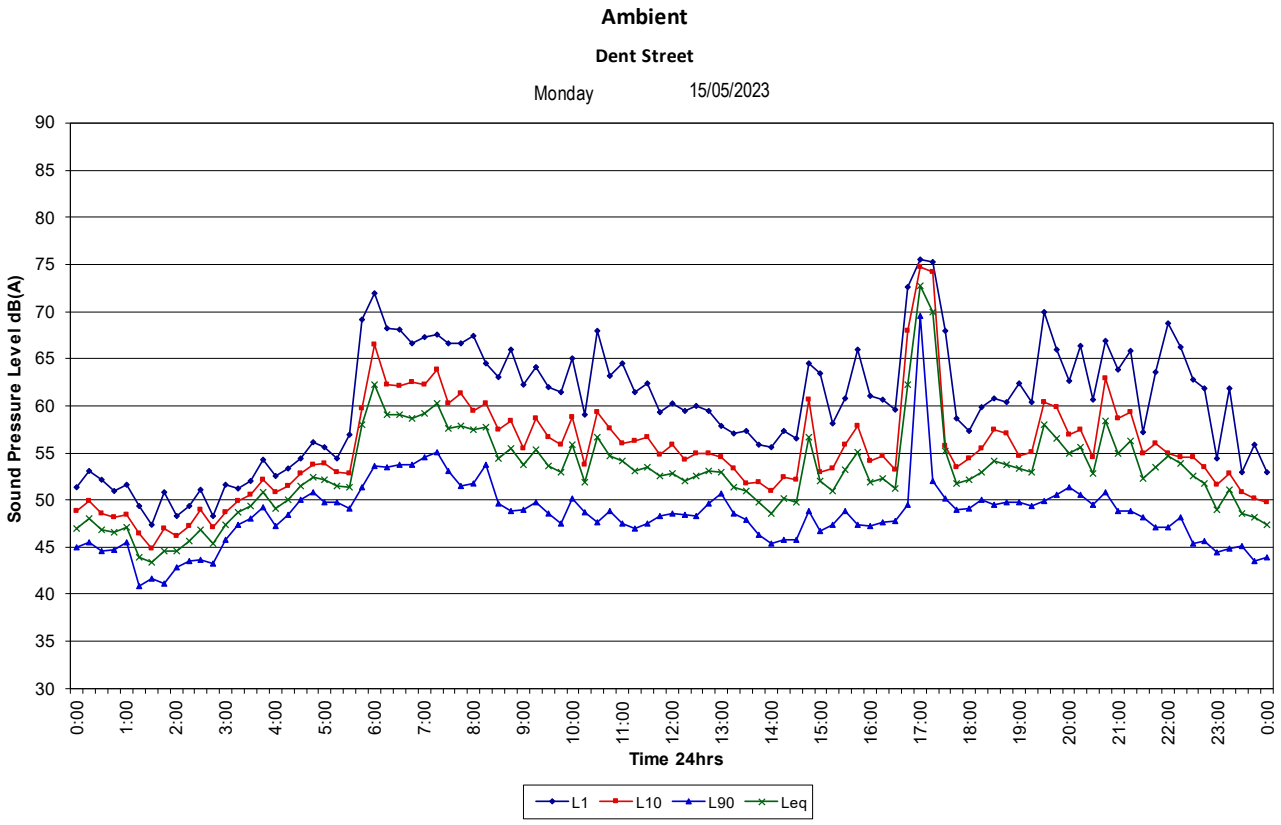
0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 0:00
Time 24hrs
L1 L10 L90 Leq


Ambient
Dent Street
Monday 15/05/2023
Sound Pressure Level dB(A)
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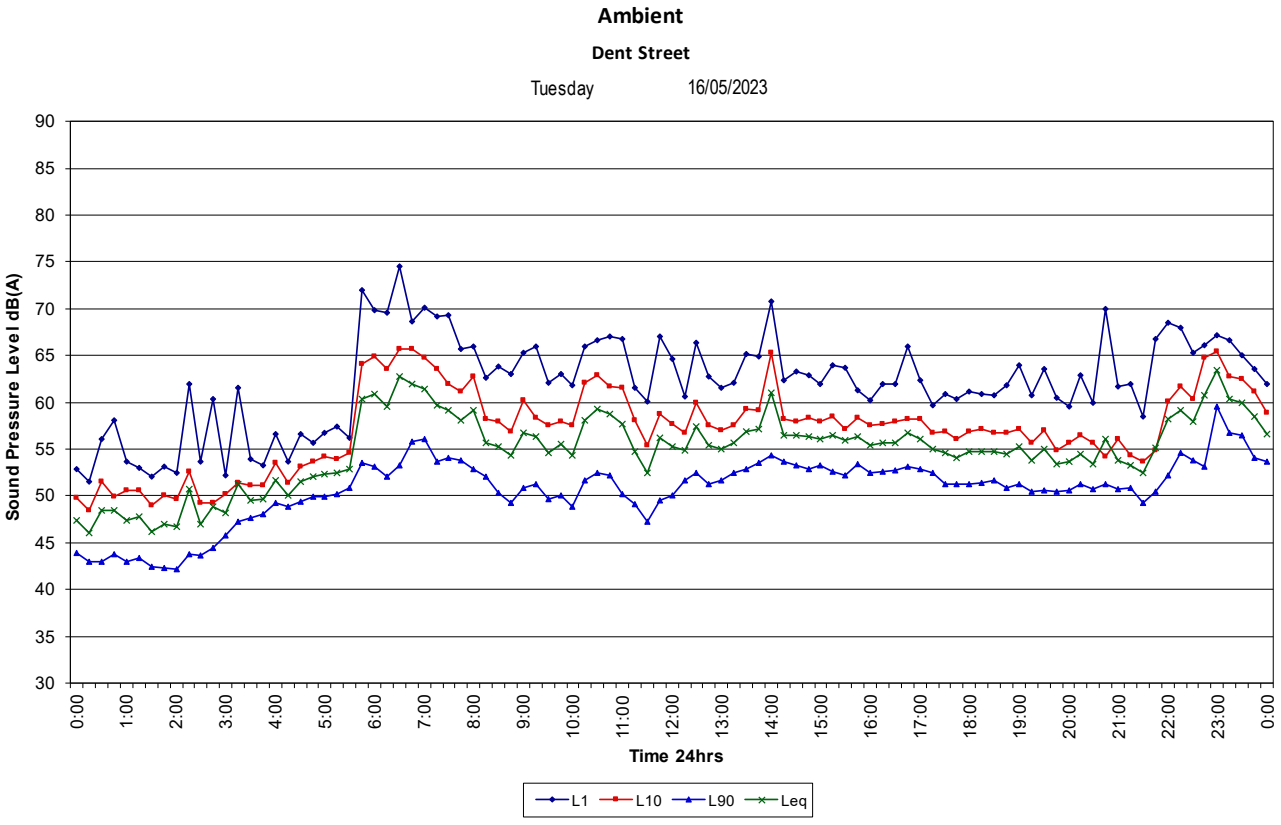
0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 0:00
Time 24hrs
L1 L10 L90 Leq


Ambient
Dent Street
Tuesday 16/05/2023
Sound Pressure Level dB(A)
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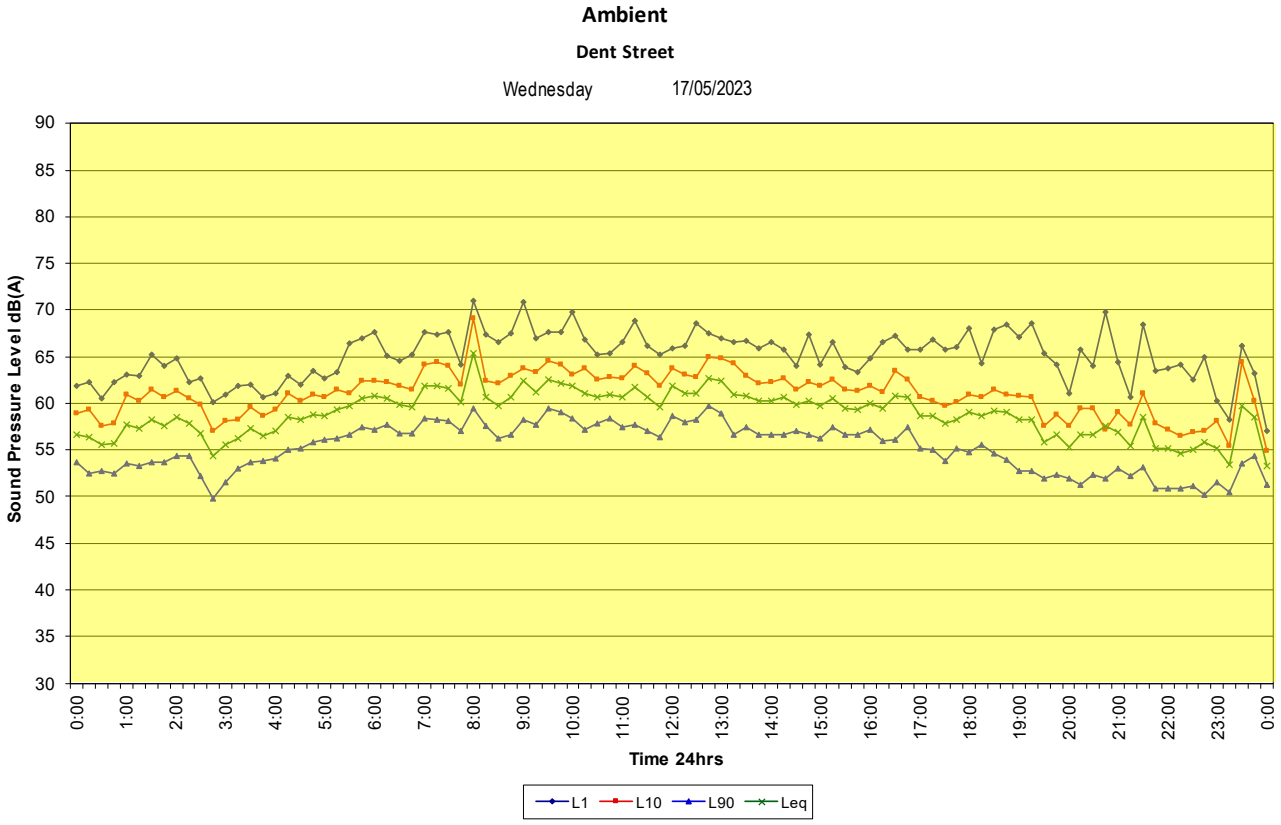
0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 0:00
Time 24hrs
L1 L10 L90 Leq


Ambient
Dent Street
Wednesday 17/05/2023
Sound Pressure Level dB(A)
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23:00
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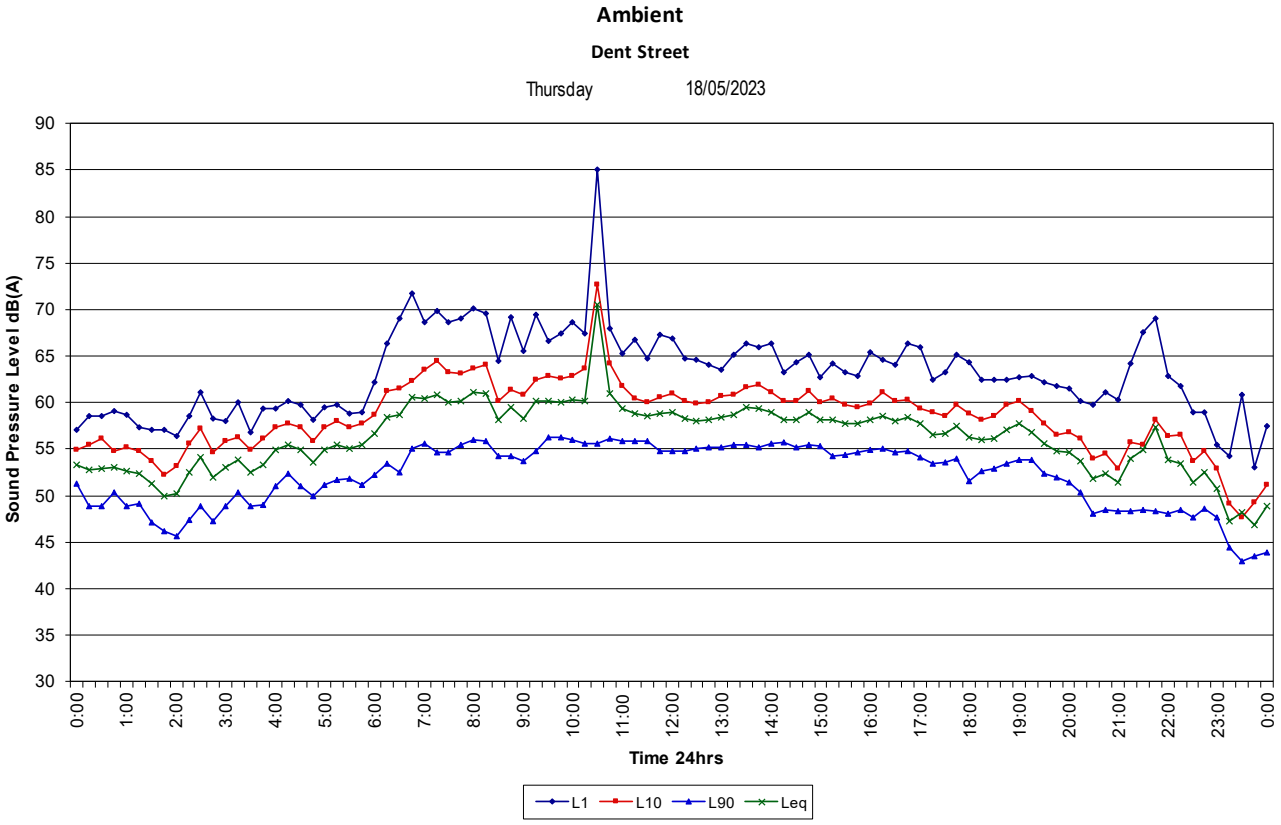
Time 24hrs
L1
L10
L90
Leq


Ambient
Dent Street
Thursday 18/05/2023
Sound Pressure Level dB(A)
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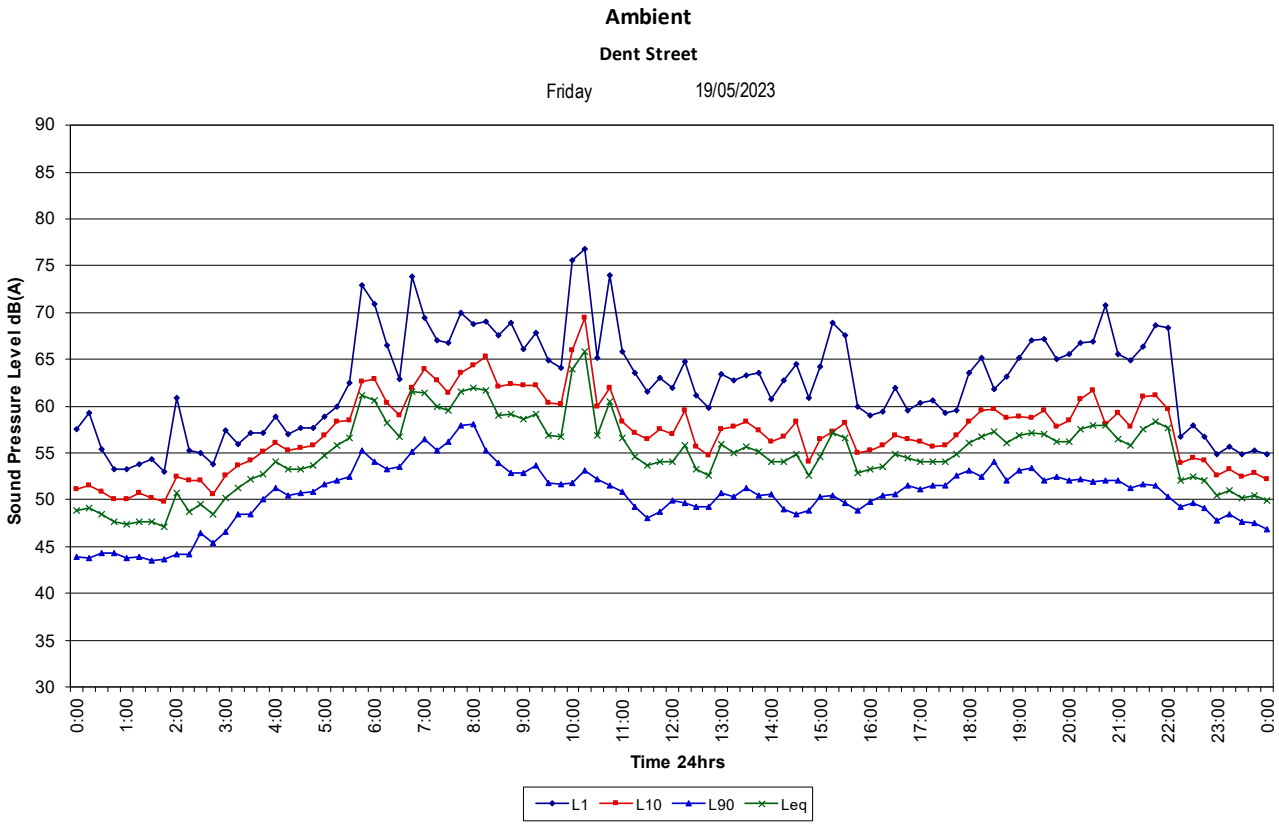
Time 24hrs
L1
L10
L90
Leq


Ambient
Dent Street
Friday 19/05/2023
Sound Pressure Level dB(A)
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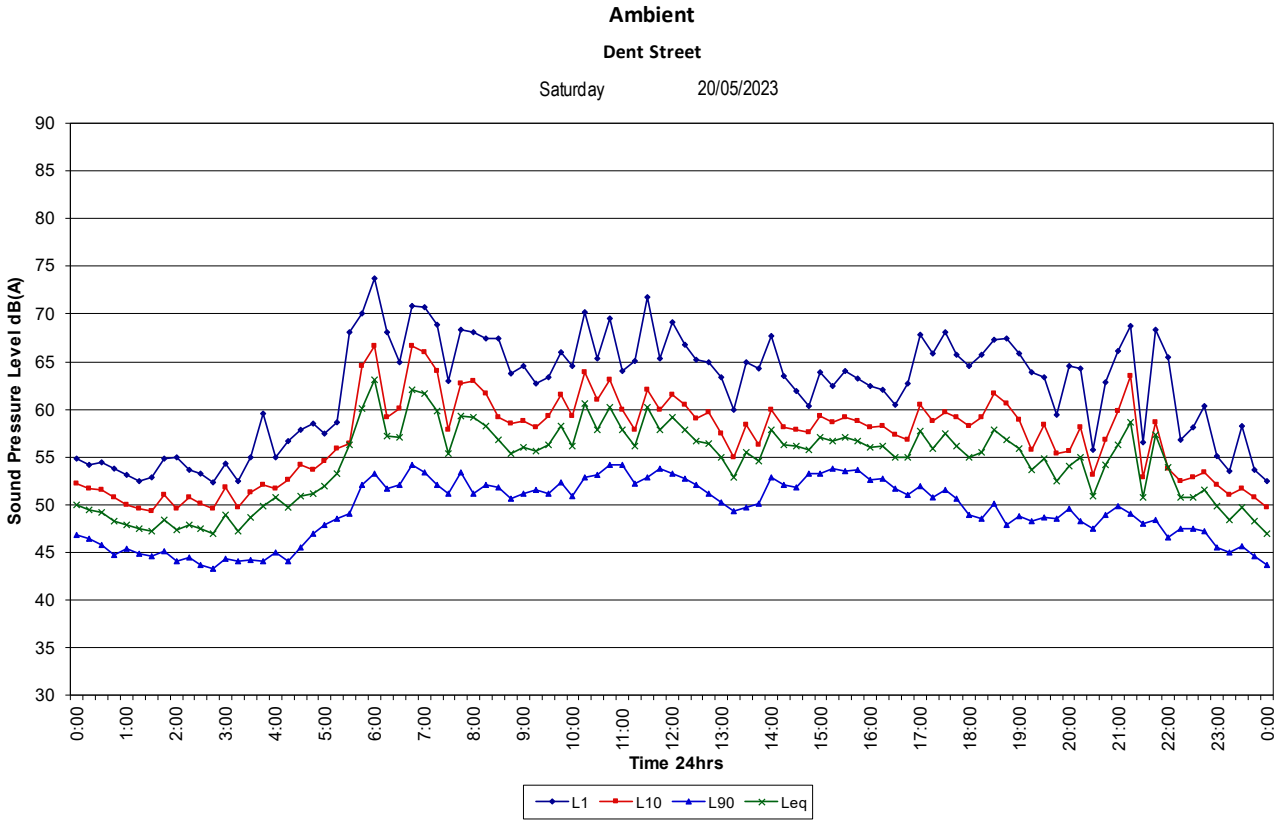
0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 0:00
Time 24hrs
L1 L10 L90 Leq


Ambient
Dent Street
Saturday 20/05/2023
Sound Pressure Level dB(A)
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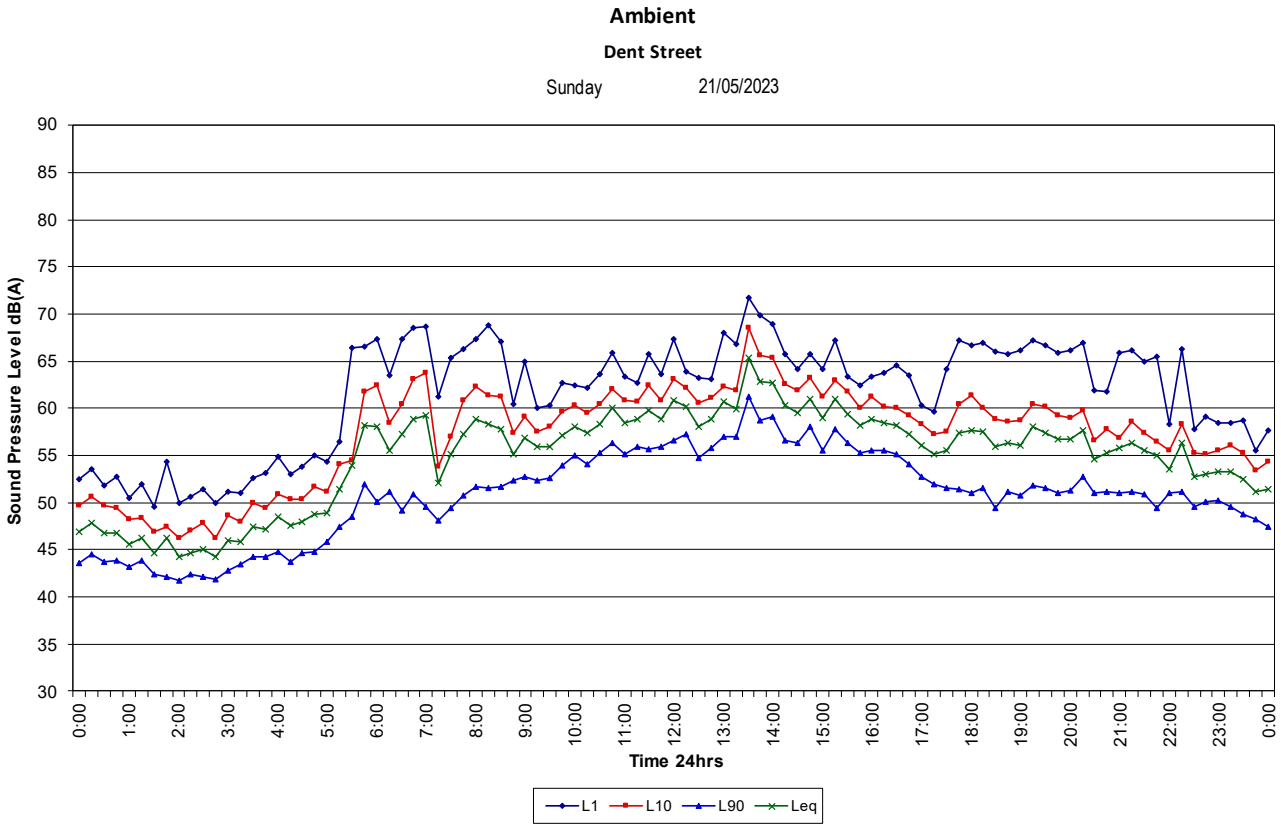
0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 0:00
Time 24hrs
L1 L10 L90 Leq


Ambient
Dent Street
Sunday 21/05/2023
Sound Pressure Level dB(A)
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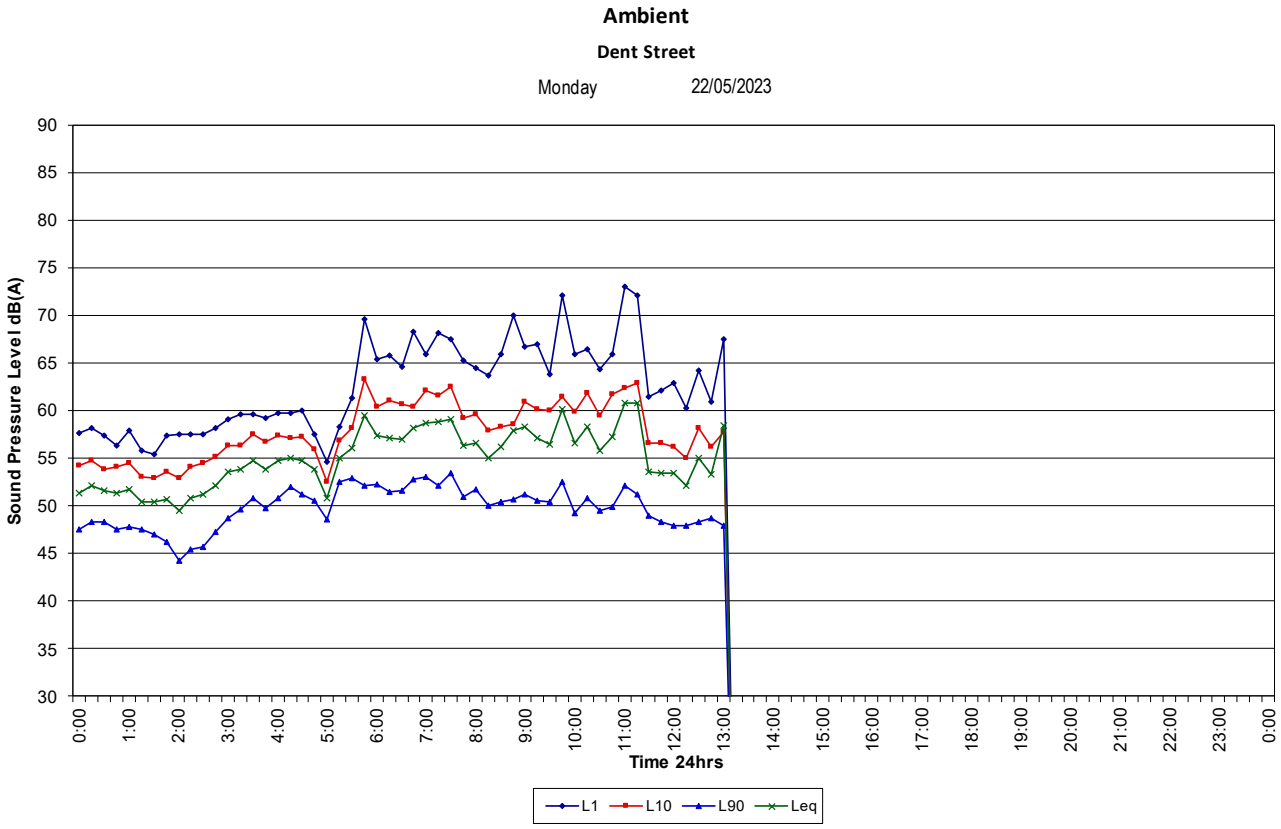
0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 0:00
Time 24hrs
L1 L10 L90 Leq


Ambient
Dent Street
Monday 22/05/2023
Sound Pressure Level dB(A)
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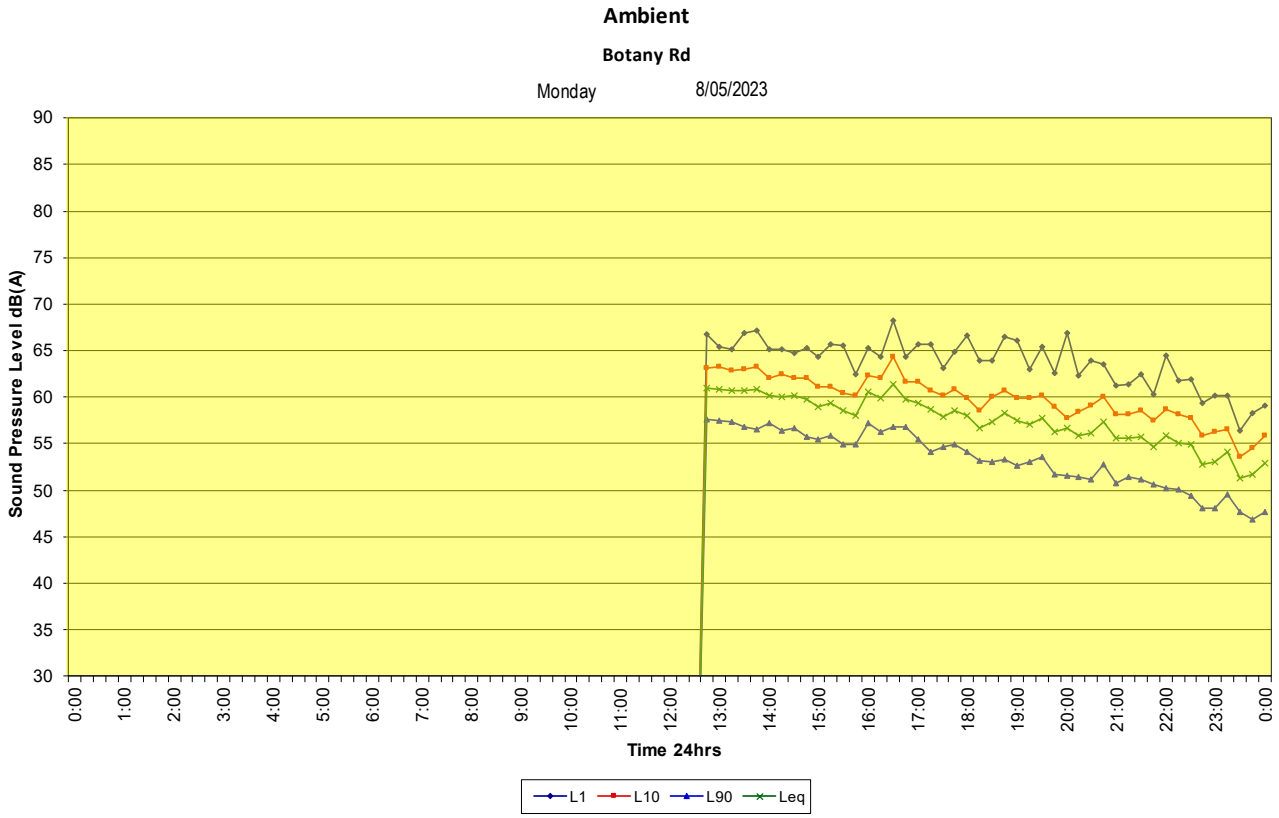
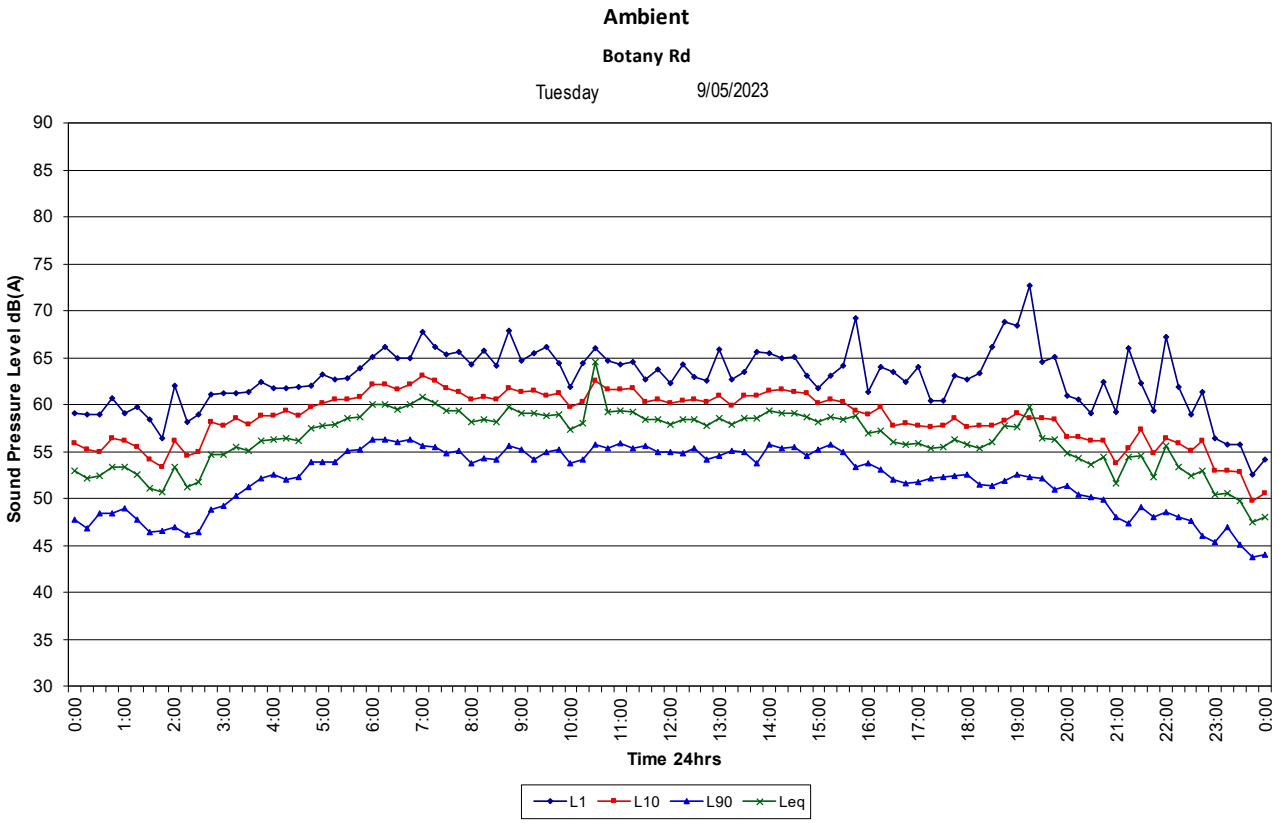
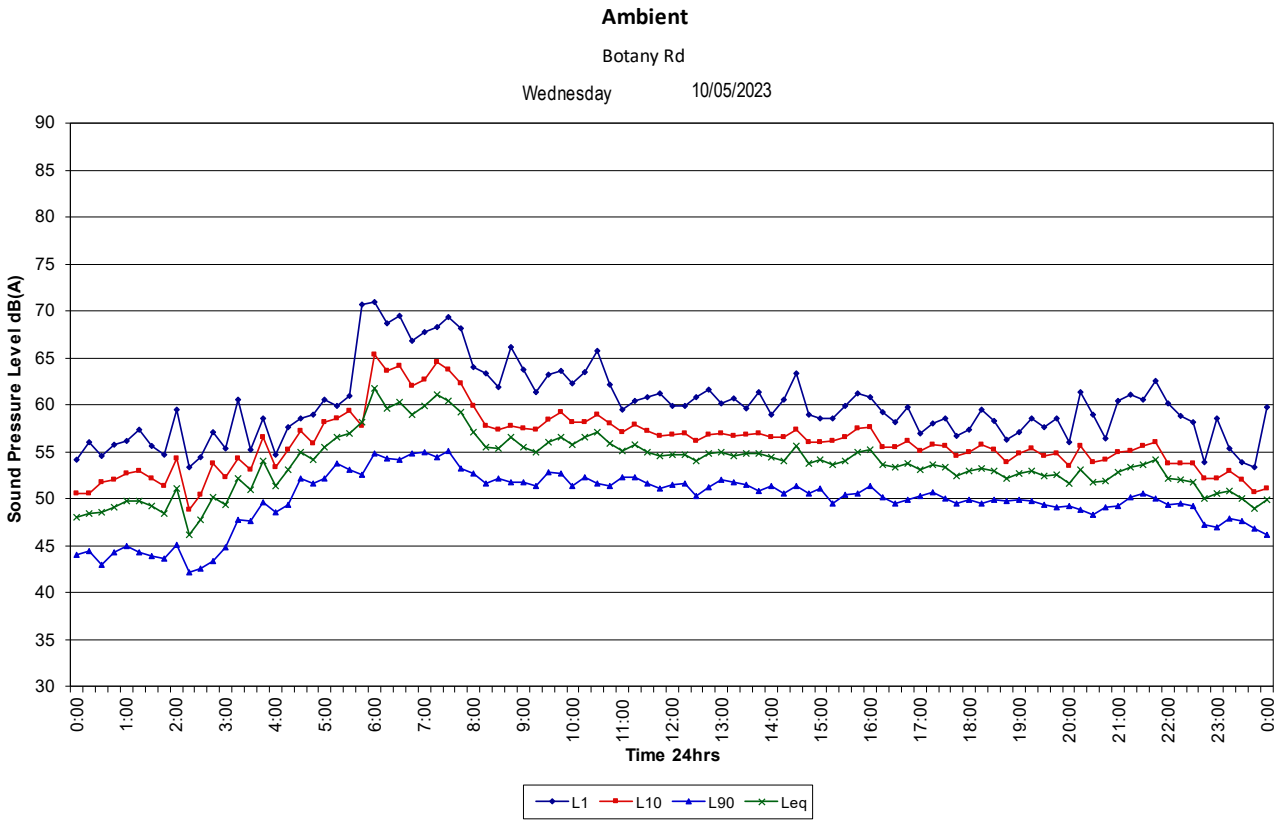
0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 0:00
Time 24hrs
L1 L10 L90 Leq

Botany Road


Ambient
Botany Rd
Monday 8/05/2023
Sound Pressure Level dB(A)
Time 24hrs
L1 L10 L90 Leq


Ambient
Botany Rd
Tuesday 9/05/2023
Sound Pressure Level dB(A)
Time 24hrs
L1 L10 L90 Leq


Ambient
Botany Rd
Wednesday 10/05/2023
Sound Pressure Level dB(A)
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Time 24hrs
L1
L10
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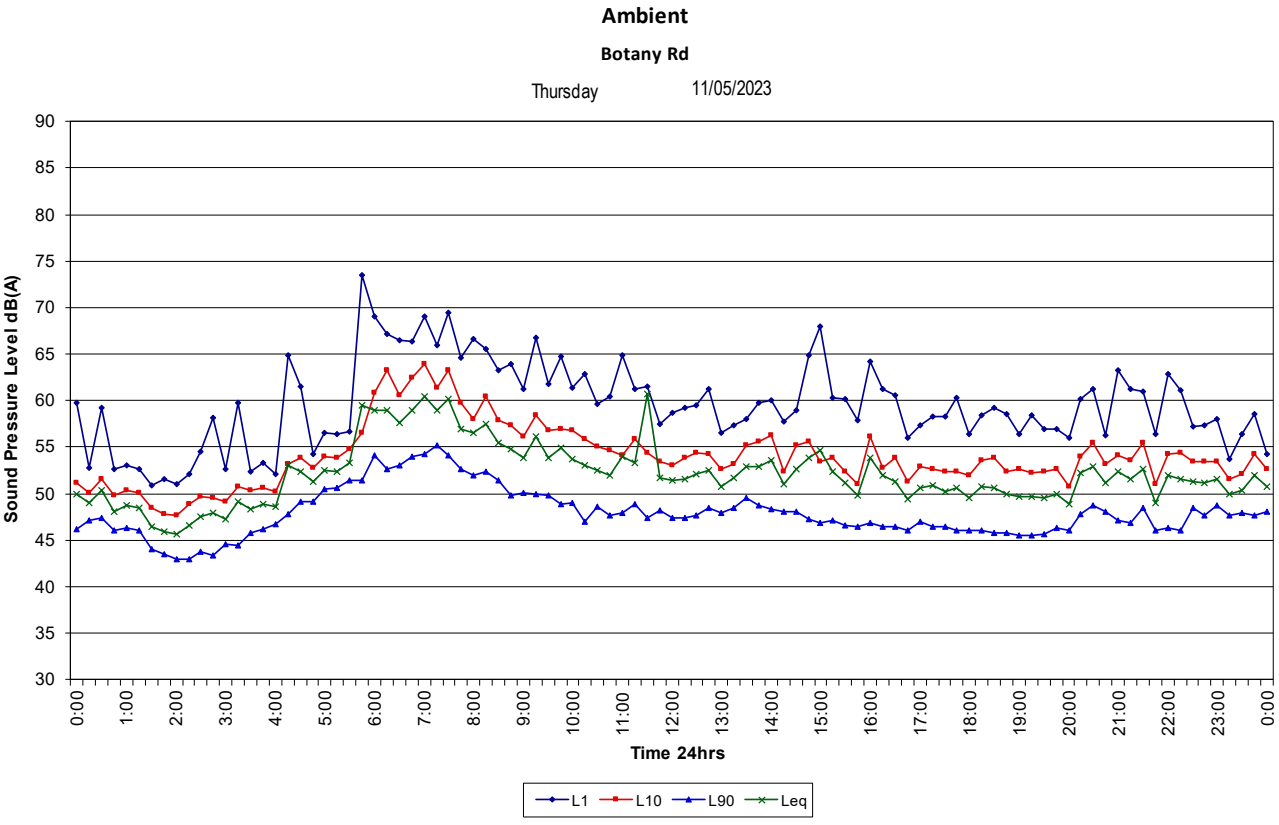
Ambient
Botany Rd
Thursday 11/05/2023
Sound Pressure Level dB(A)
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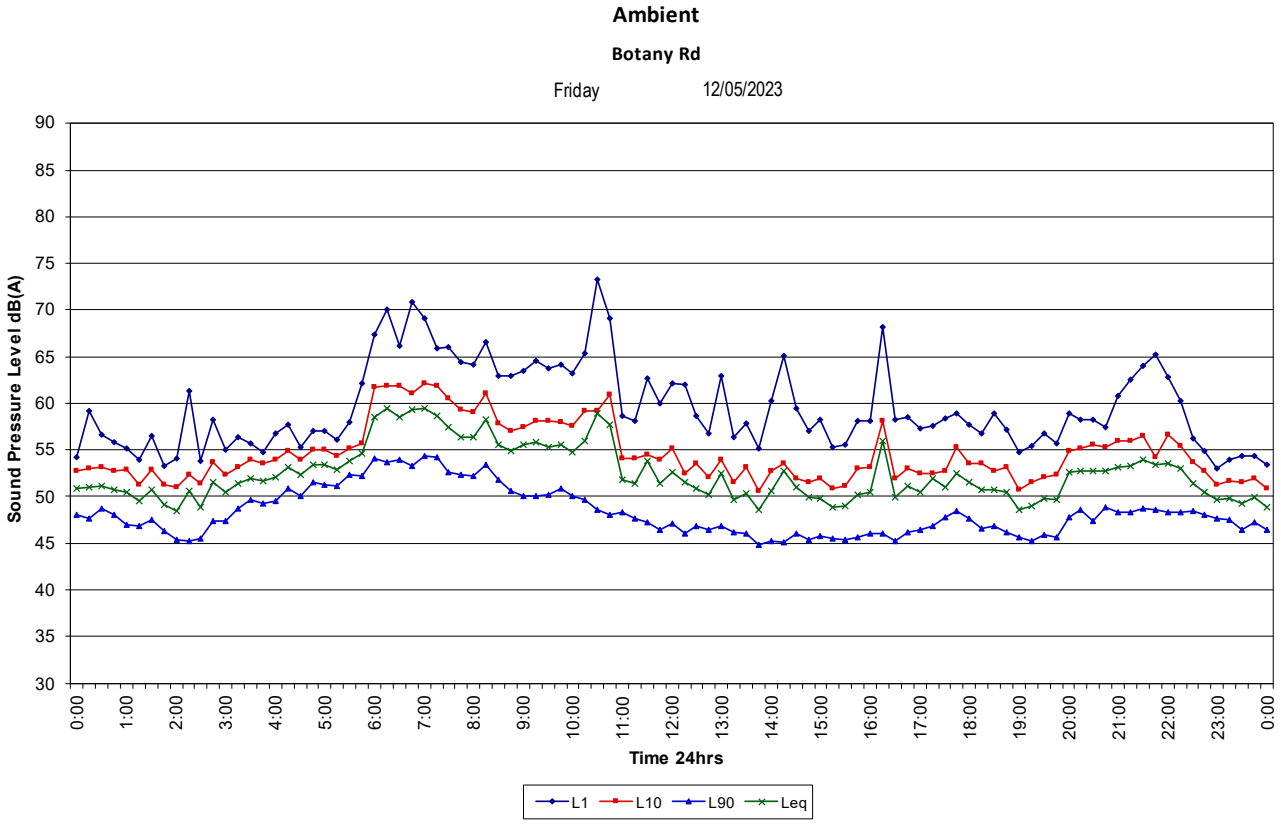
Time 24hrs
L1
L10
L90
Leq


Ambient
Botany Rd
Friday 12/05/2023
Sound Pressure Level dB(A)
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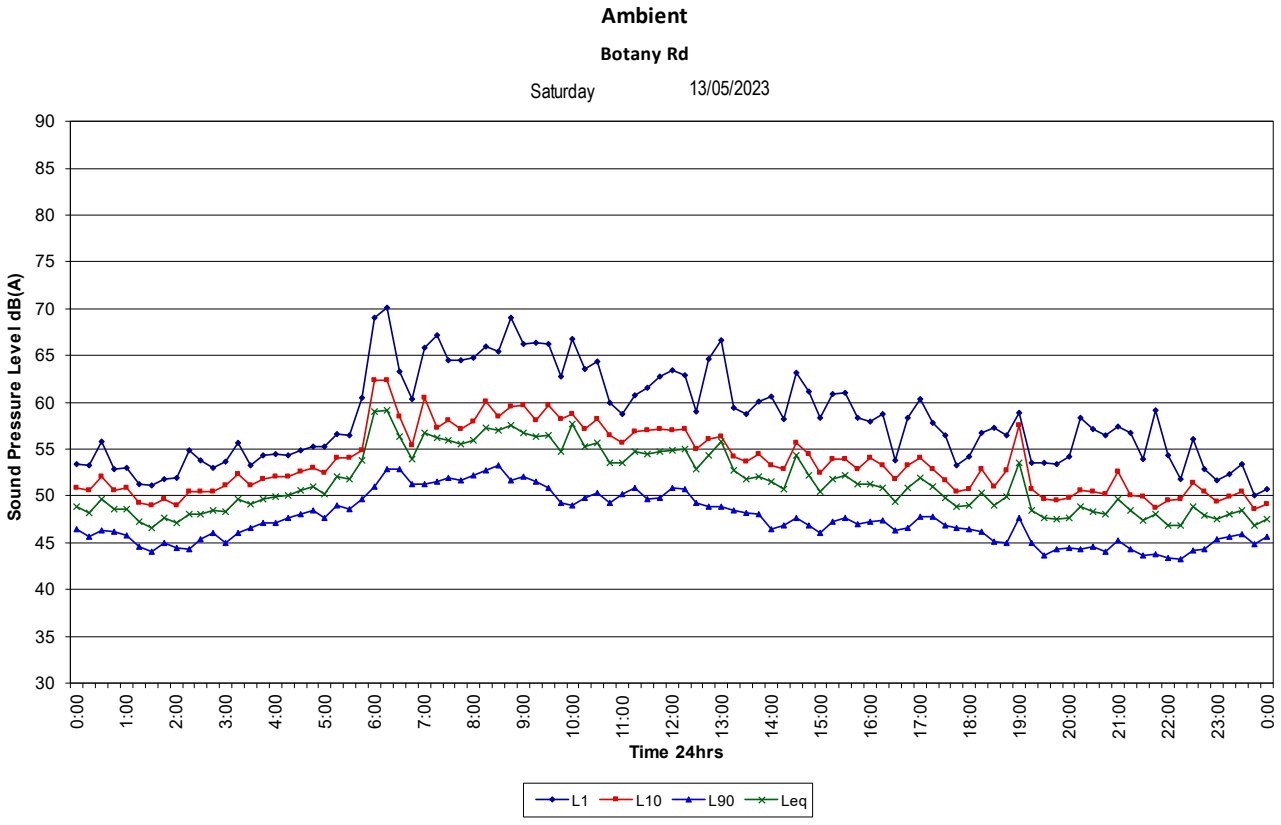
Time 24hrs
L1
L10
L90
Leq


Ambient
Botany Rd
Saturday 13/05/2023
Sound Pressure Level dB(A)
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Time 24hrs
L1
L10
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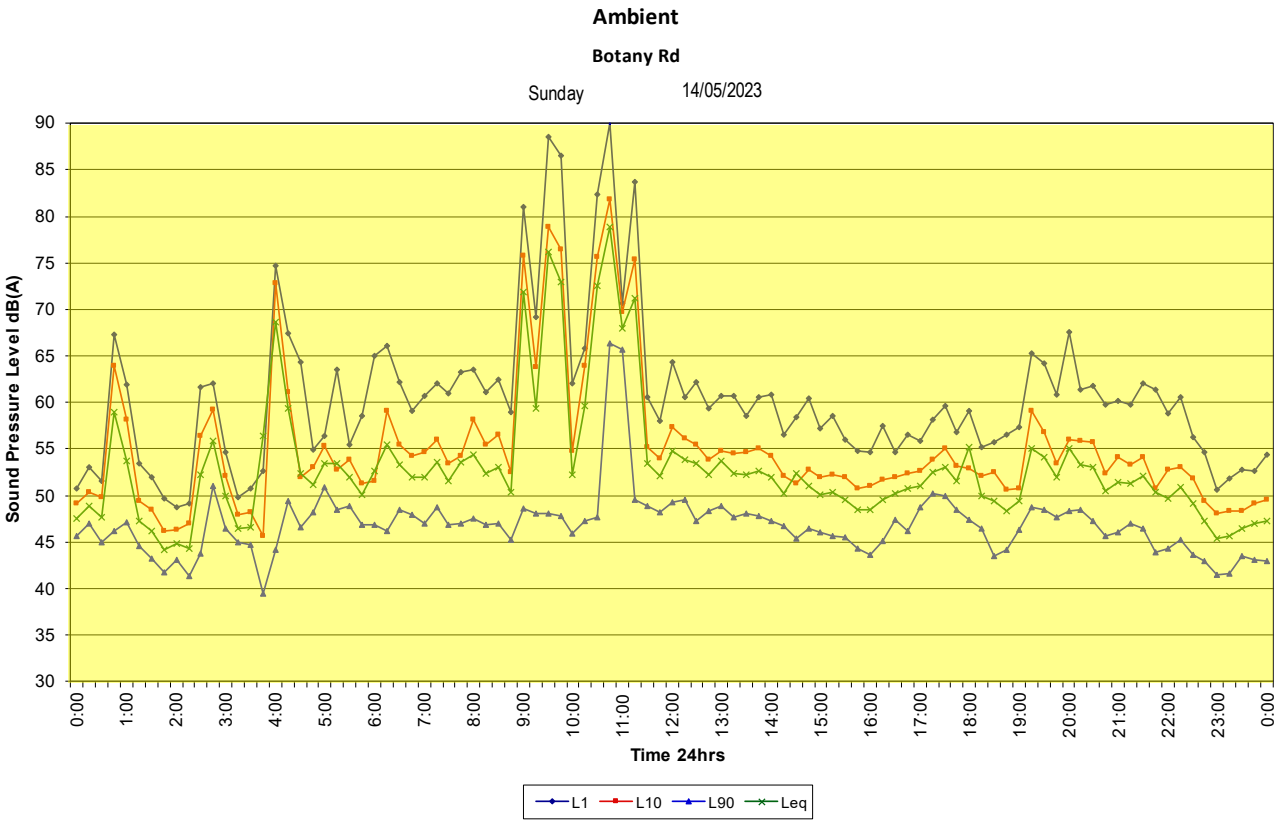
Leq


Ambient
Botany Rd
Sunday
14/05/2023
Sound Pressure Level dB(A)
Time 24hrs
L1
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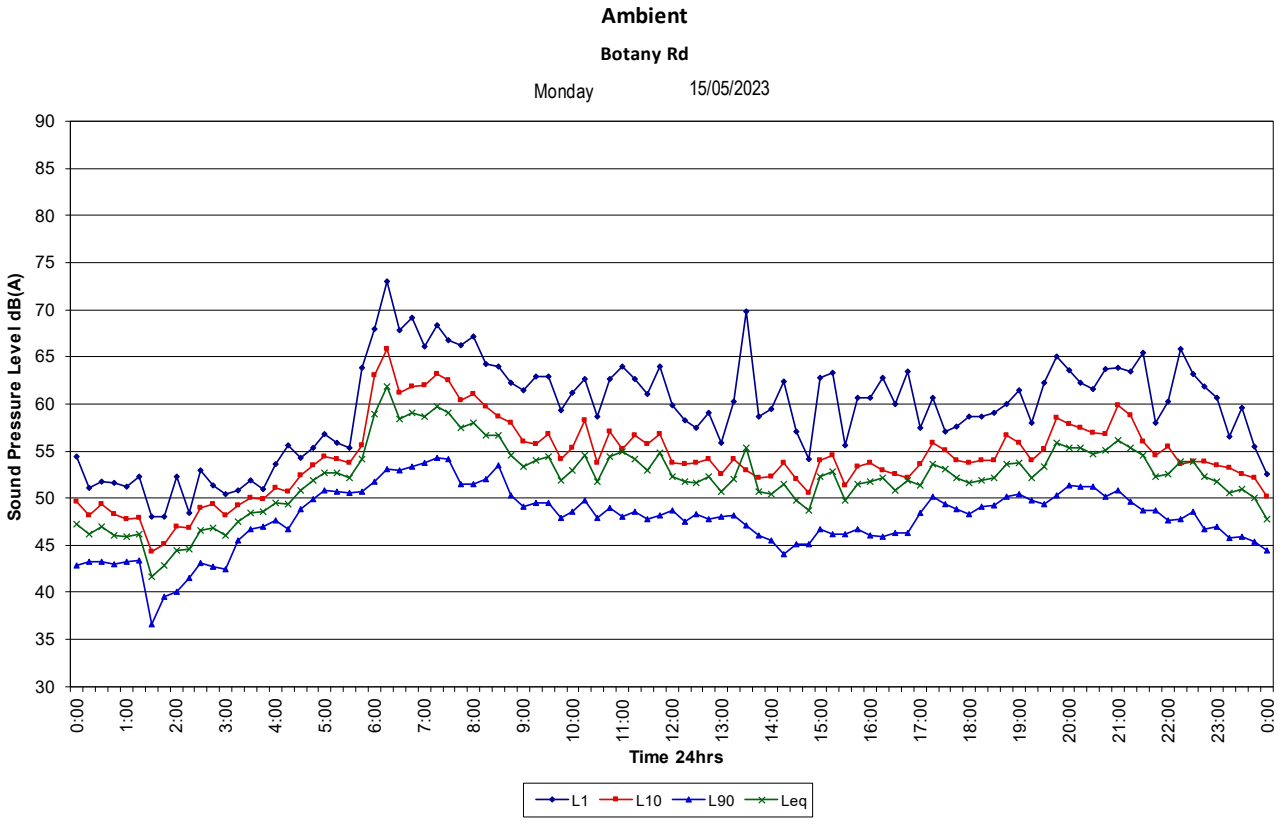
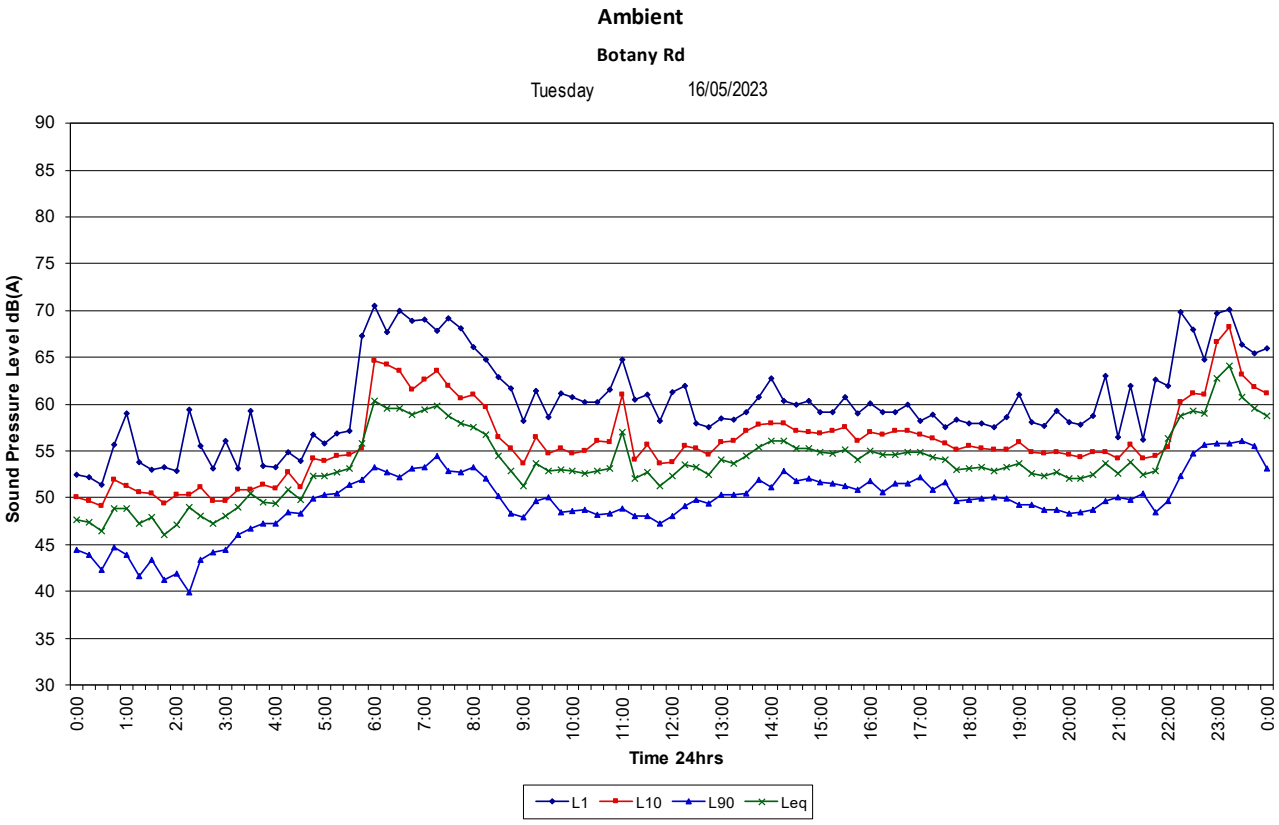
Leq


Ambient
Botany Rd
Monday
15/05/2023
Sound Pressure Level dB(A)
Time 24hrs
L1
L10
L90
Leq


Ambient
Botany Rd
Tuesday 16/05/2023
Sound Pressure Level dB(A)
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Time 24hrs
L1
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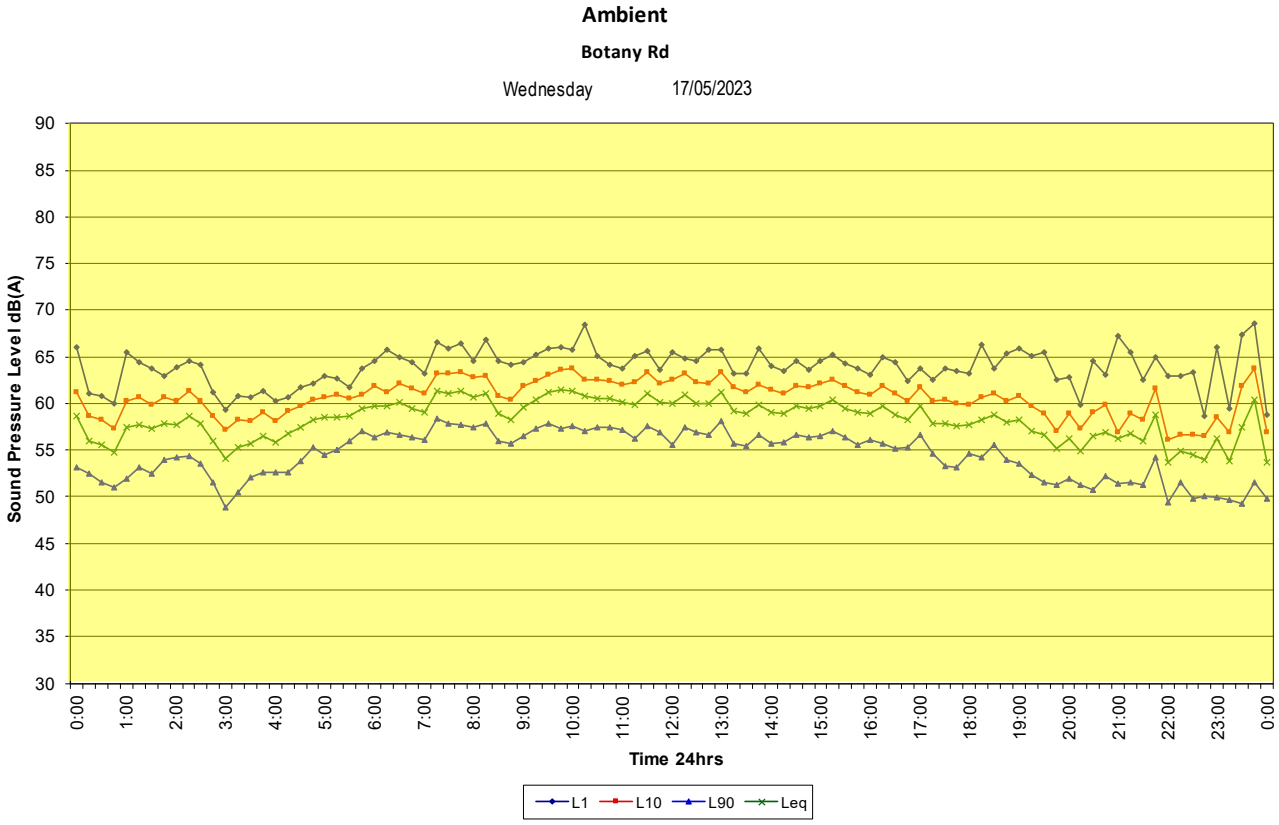
Ambient
Botany Rd
Wednesday 17/05/2023
Sound Pressure Level dB(A)
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Time 24hrs
L1
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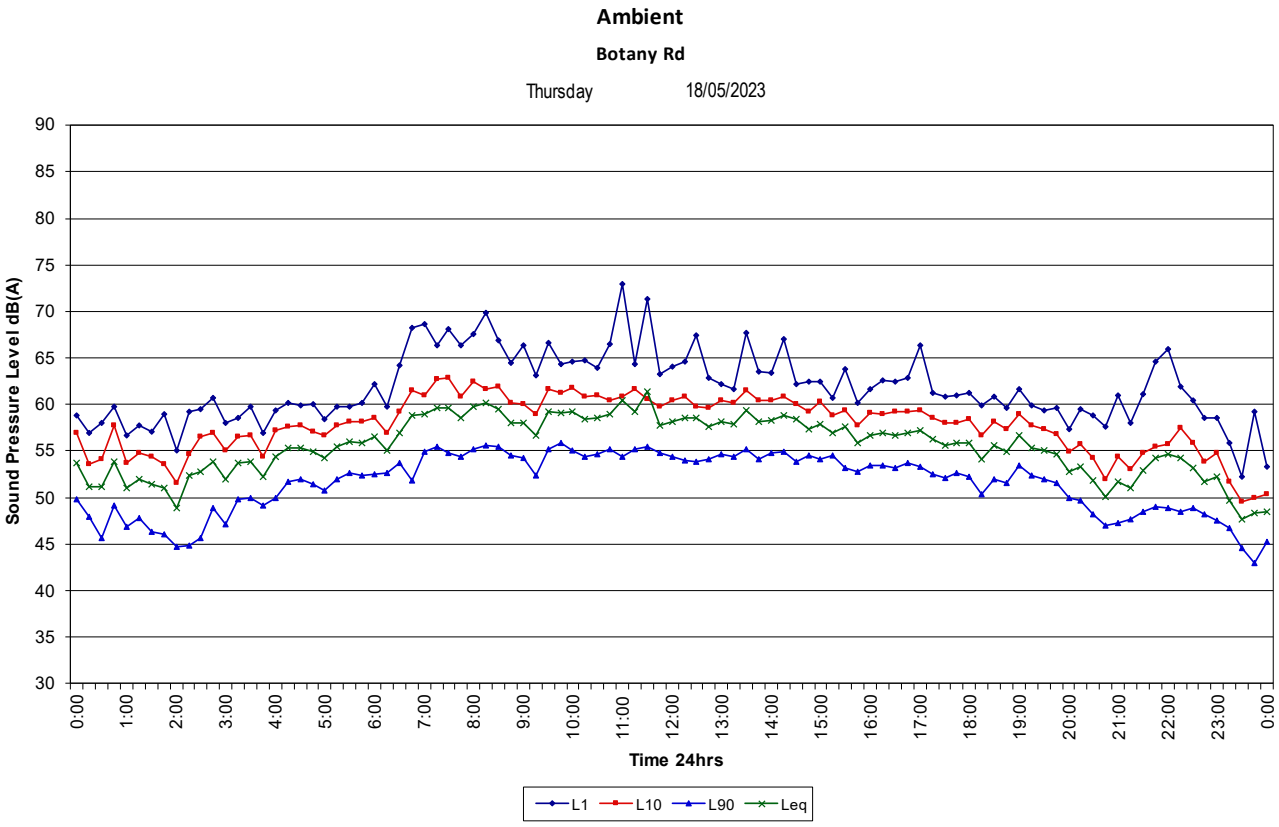
Leq


Ambient
Botany Rd
Thursday 18/05/2023
Sound Pressure Level dB(A)
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Time 24hrs
L1
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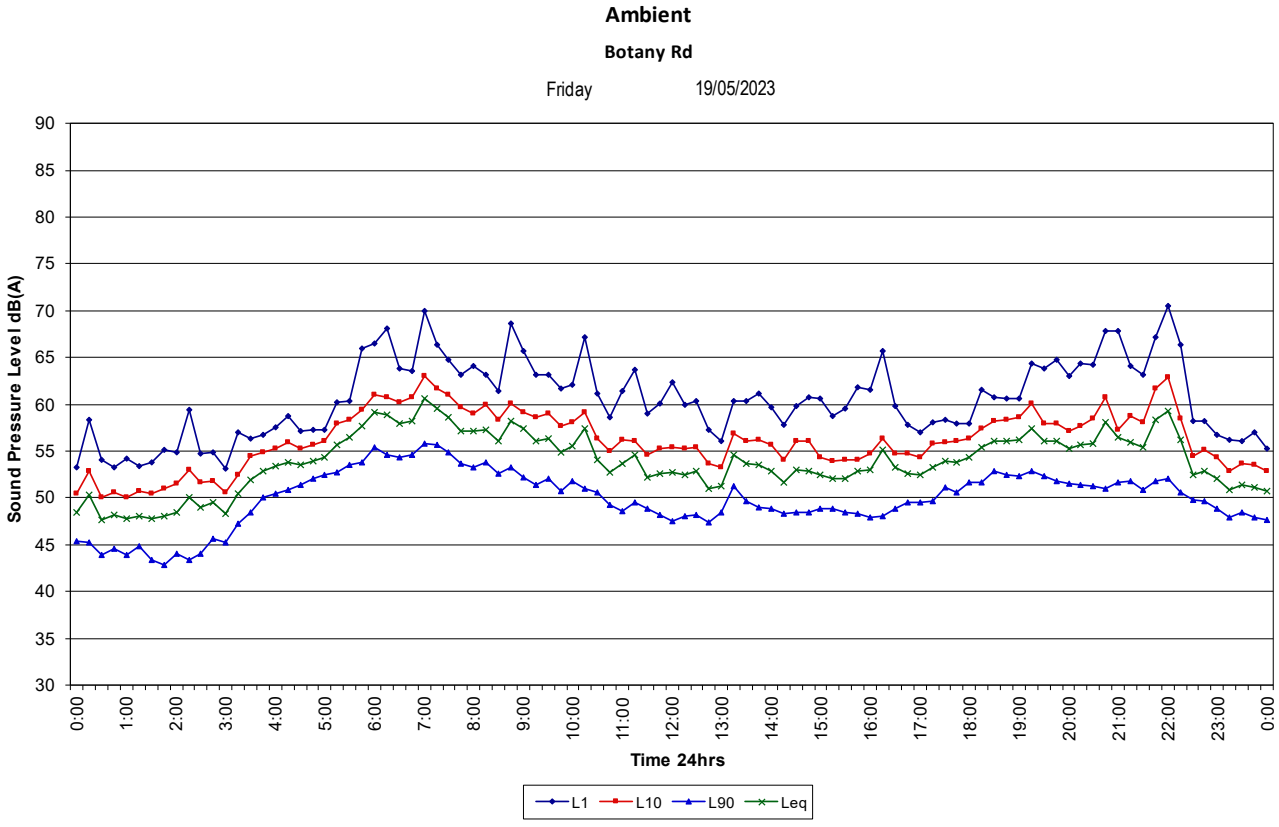
L90
Leq


Ambient
Botany Rd
Friday 19/05/2023
Sound Pressure Level dB(A)
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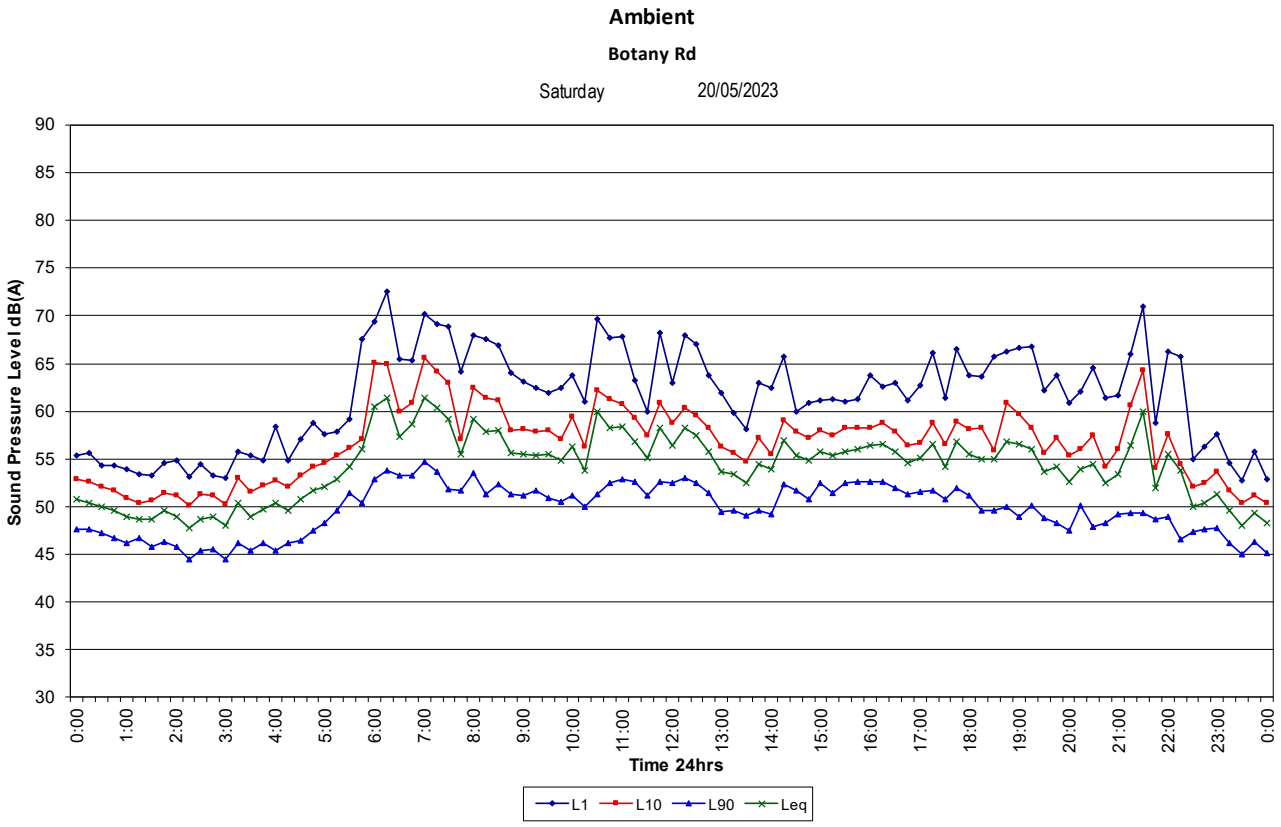
Time 24hrs
L1
L10
L90
Leq


Ambient
Botany Rd
Saturday 20/05/2023
Sound Pressure Level dB(A)
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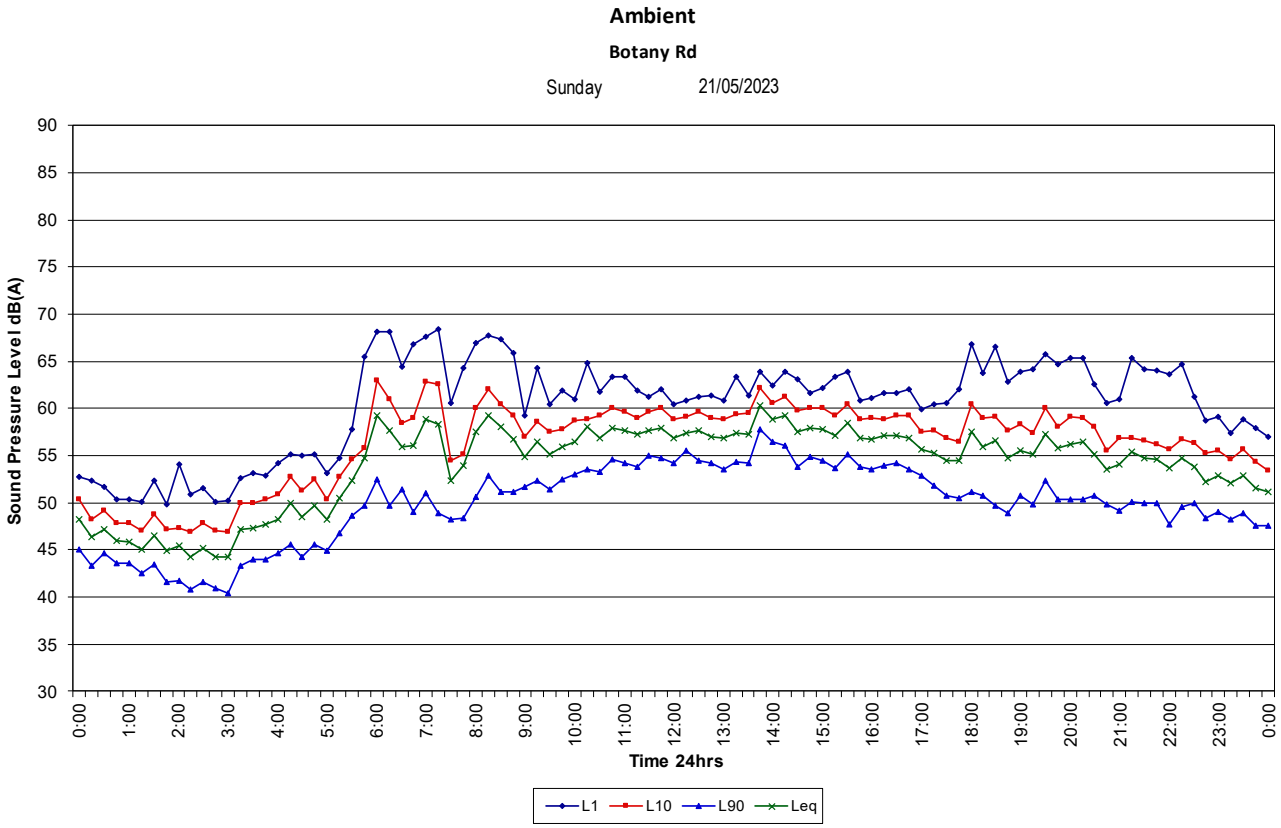
Time 24hrs
L1 L10 L90 Leq


Ambient
Botany Rd
Sunday 21/05/2023
Sound Pressure Level dB(A)
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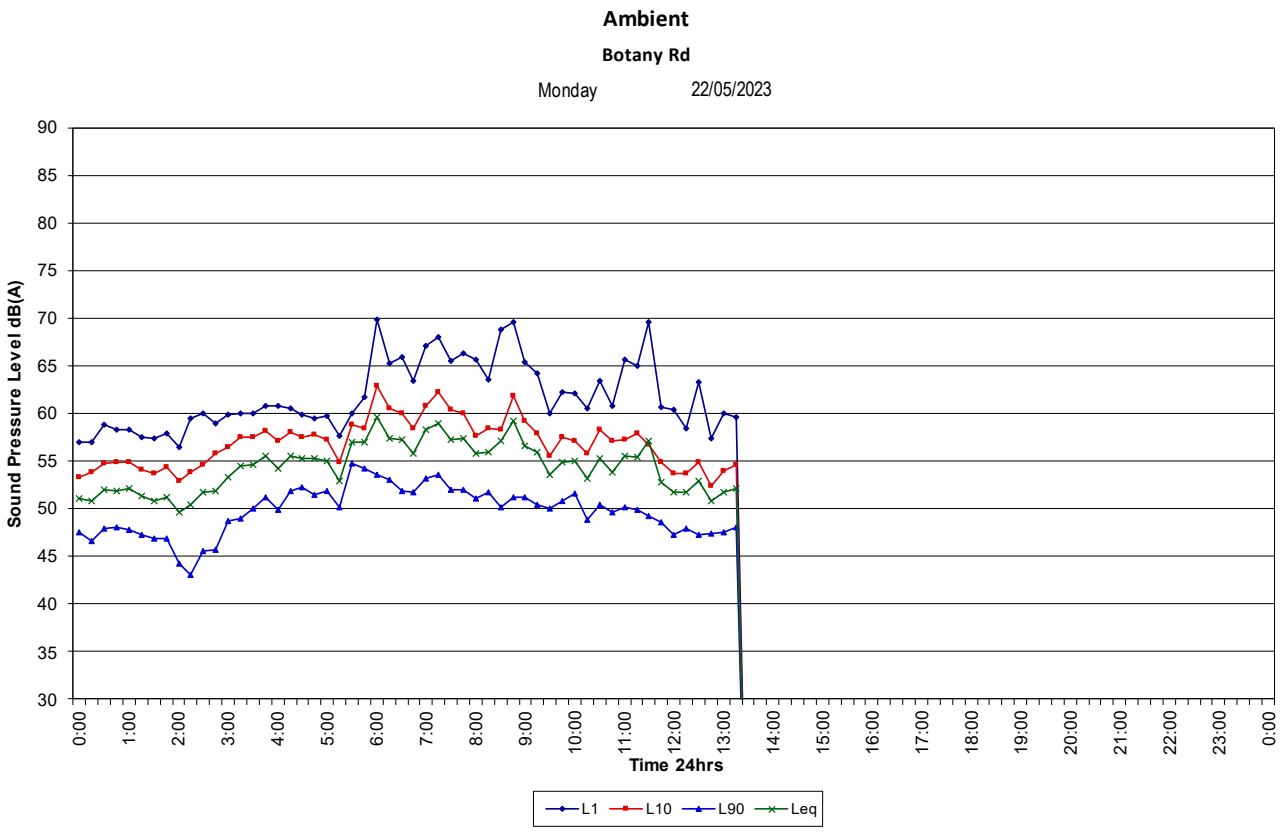
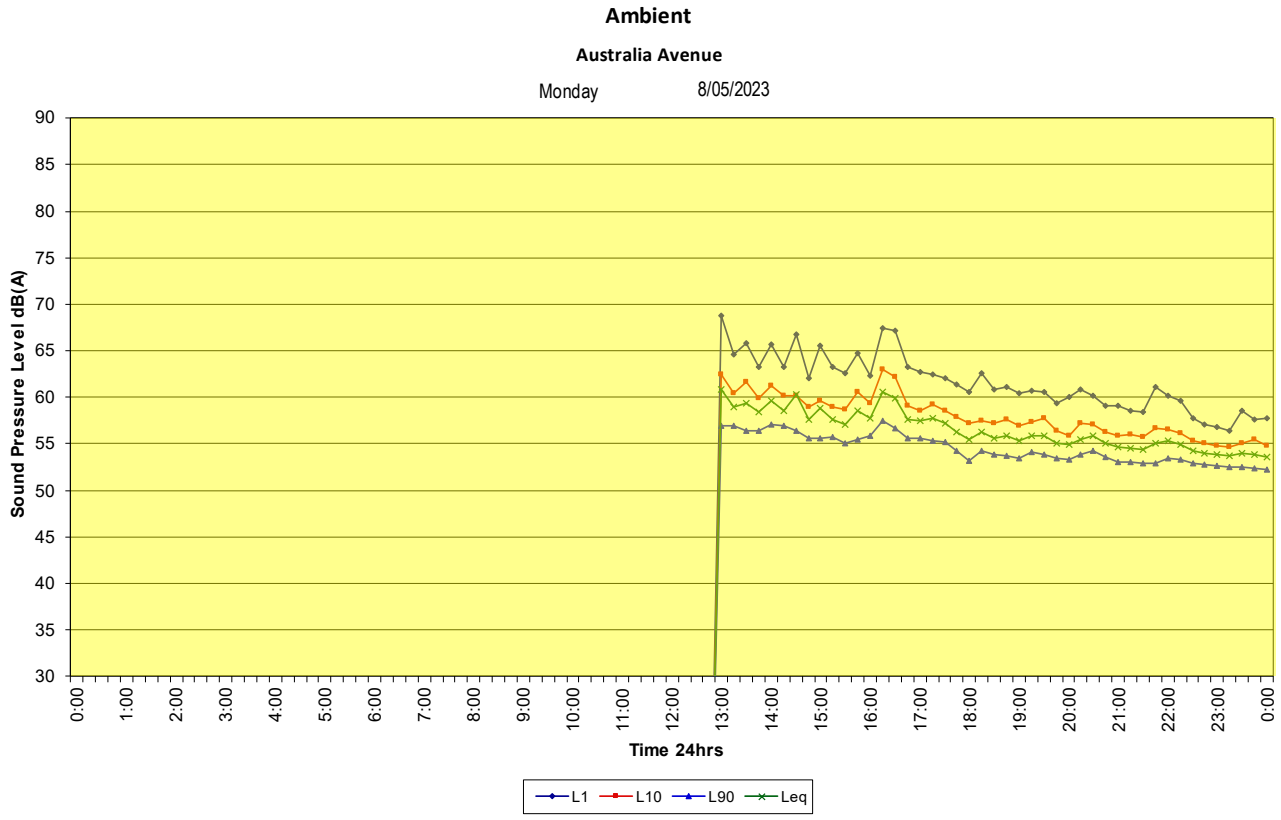
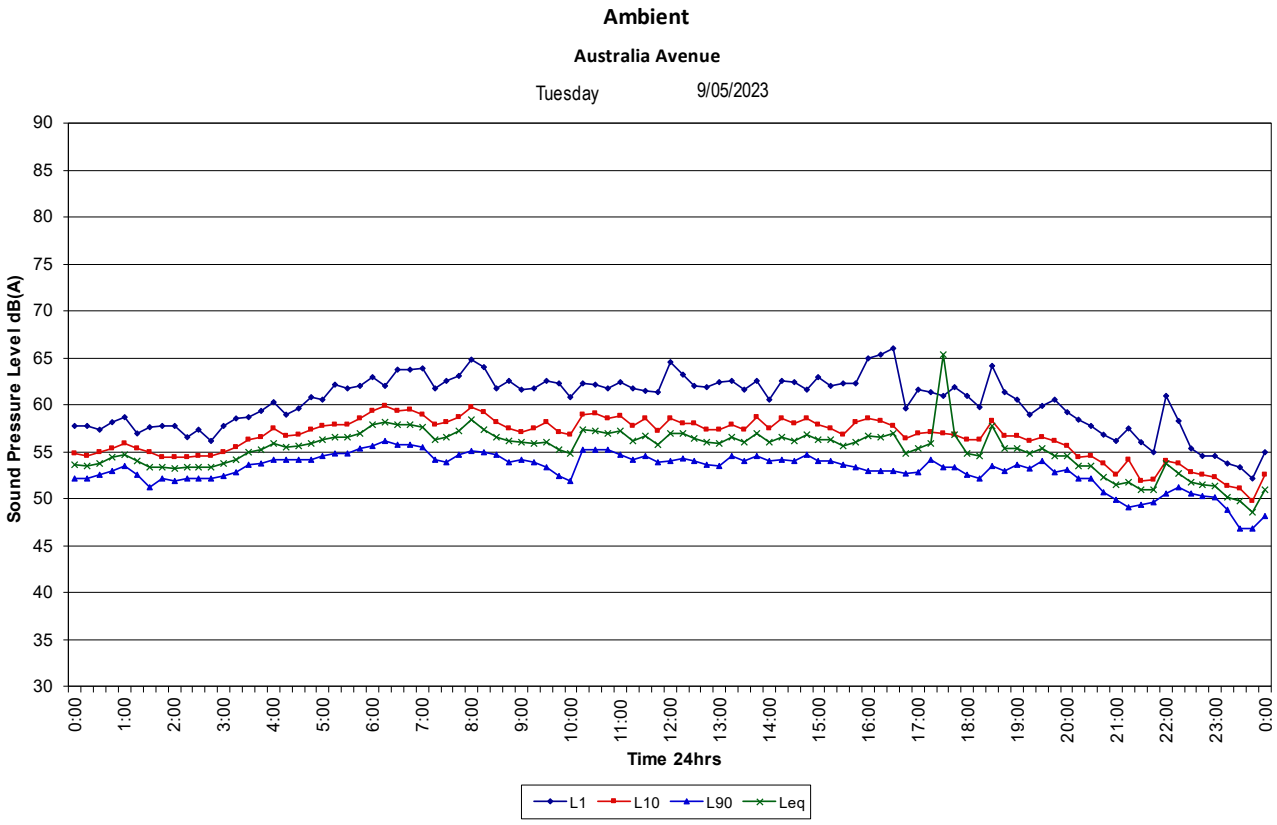
Time 24hrs
L1 L10 L90 Leq



Australia Avenue




Ambient
Australia Avenue
Tuesday 9/05/2023
Sound Pressure Level dB(A)
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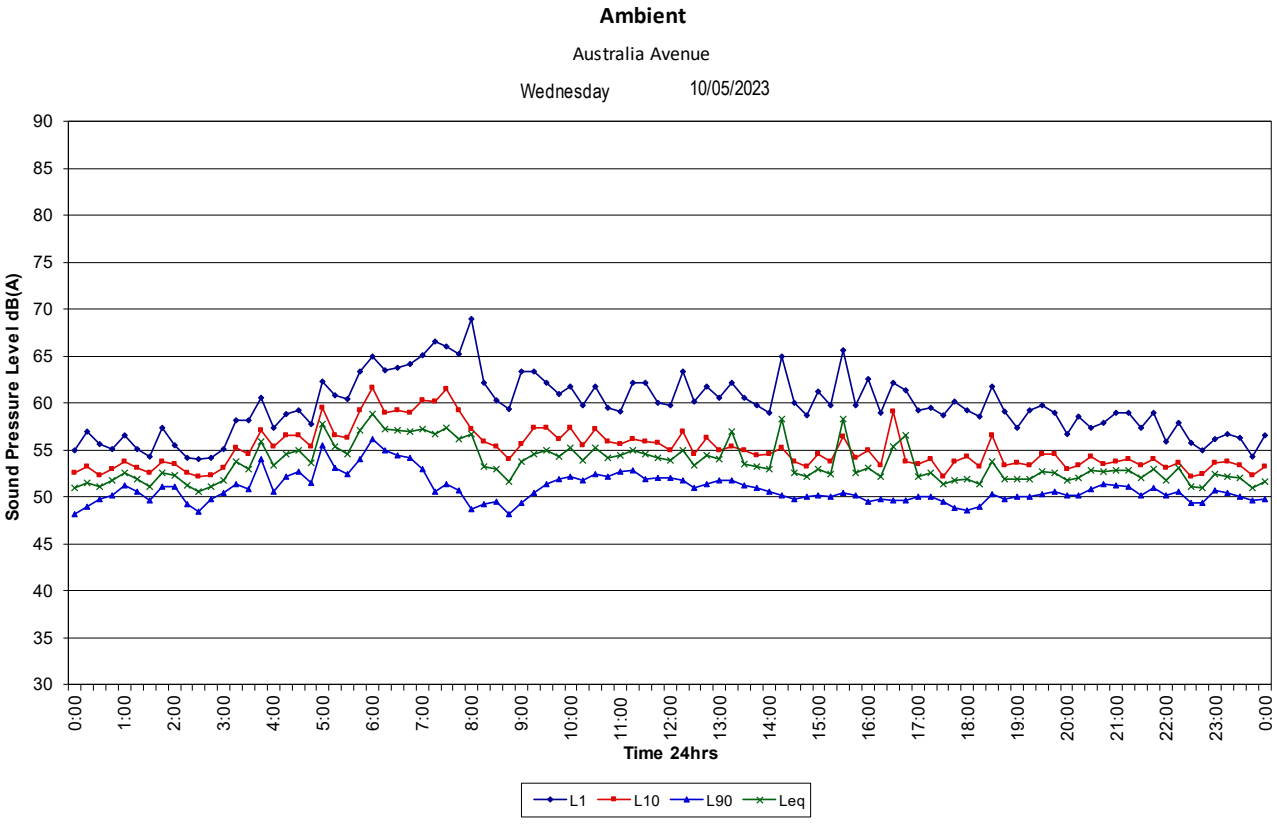
0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 0:00
Time 24hrs
L1 L10 L90 Leq


Ambient
Australia Avenue
Wednesday 10/05/2023
Sound Pressure Level dB(A)
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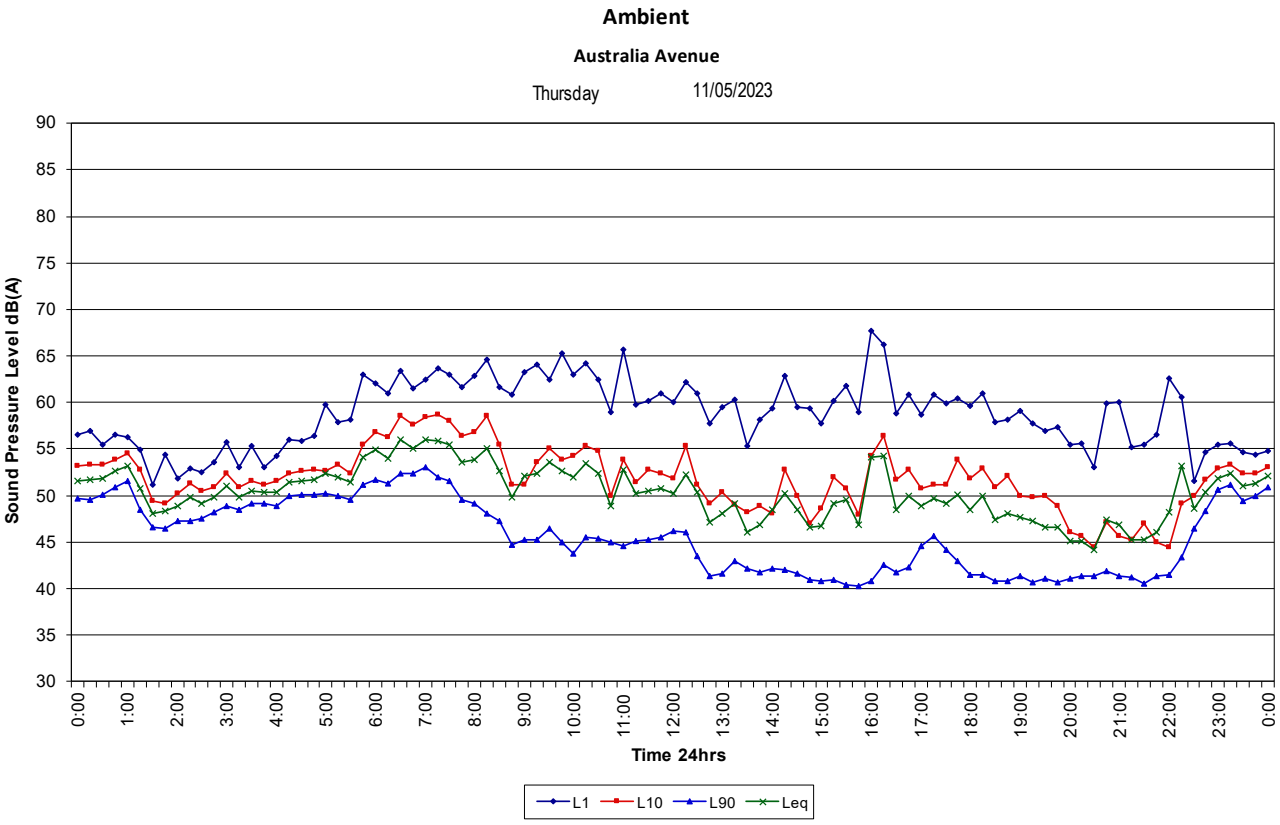
0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 0:00
Time 24hrs
L1 L10 L90 Leq


Ambient
Australia Avenue
Thursday 11/05/2023
Sound Pressure Level dB(A)
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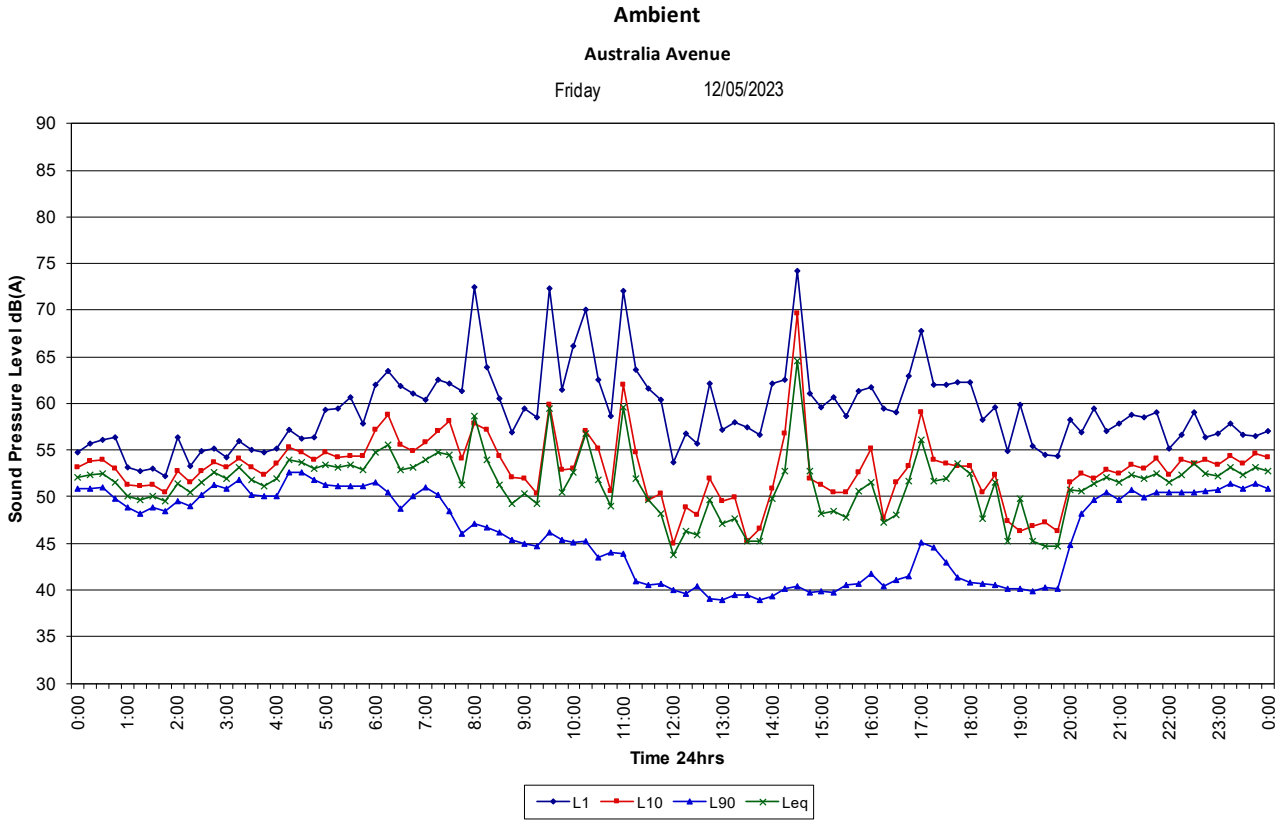
0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 0:00
Time 24hrs
L1 L10 L90 Leq


Ambient
Australia Avenue
Friday 12/05/2023
Sound Pressure Level dB(A)
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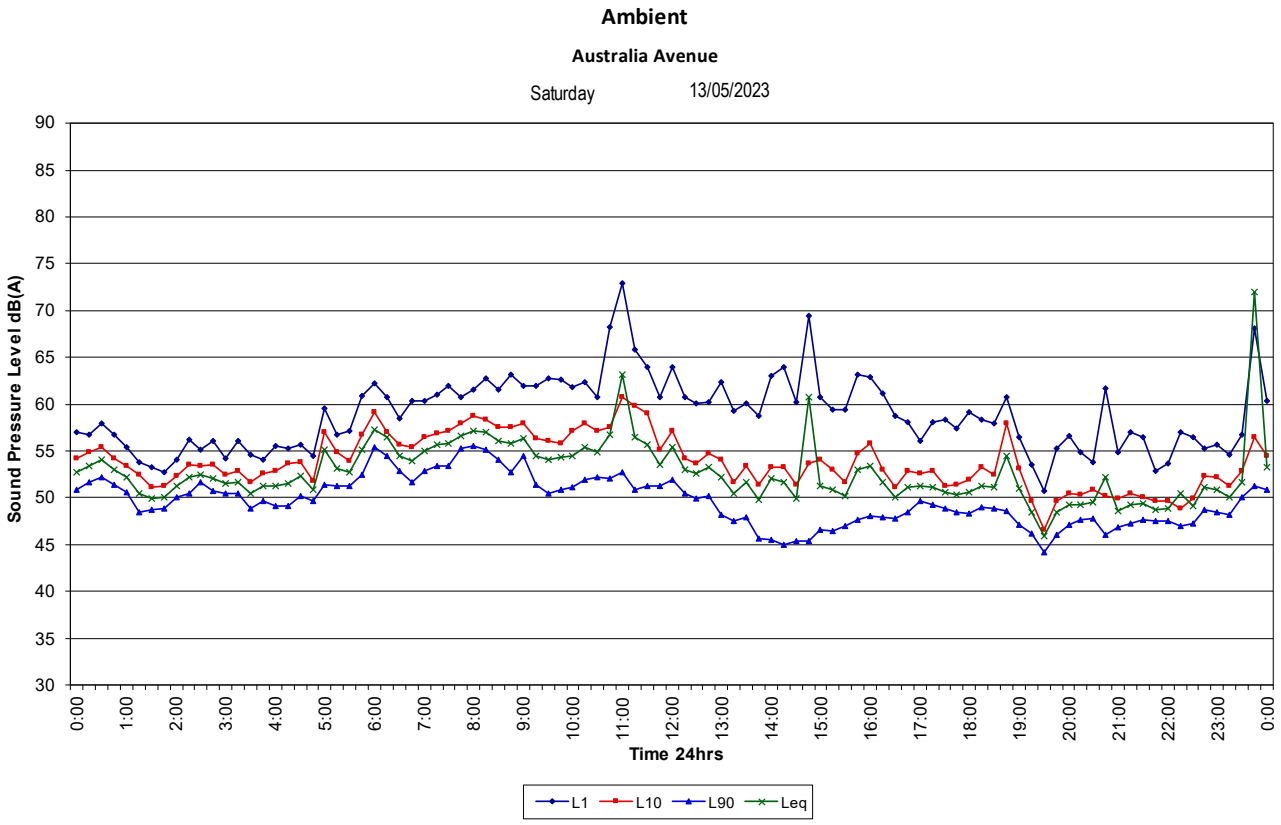
0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 0:00
Time 24hrs
L1 L10 L90 Leq


Ambient
Australia Avenue
Saturday 13/05/2023
Sound Pressure Level dB(A)
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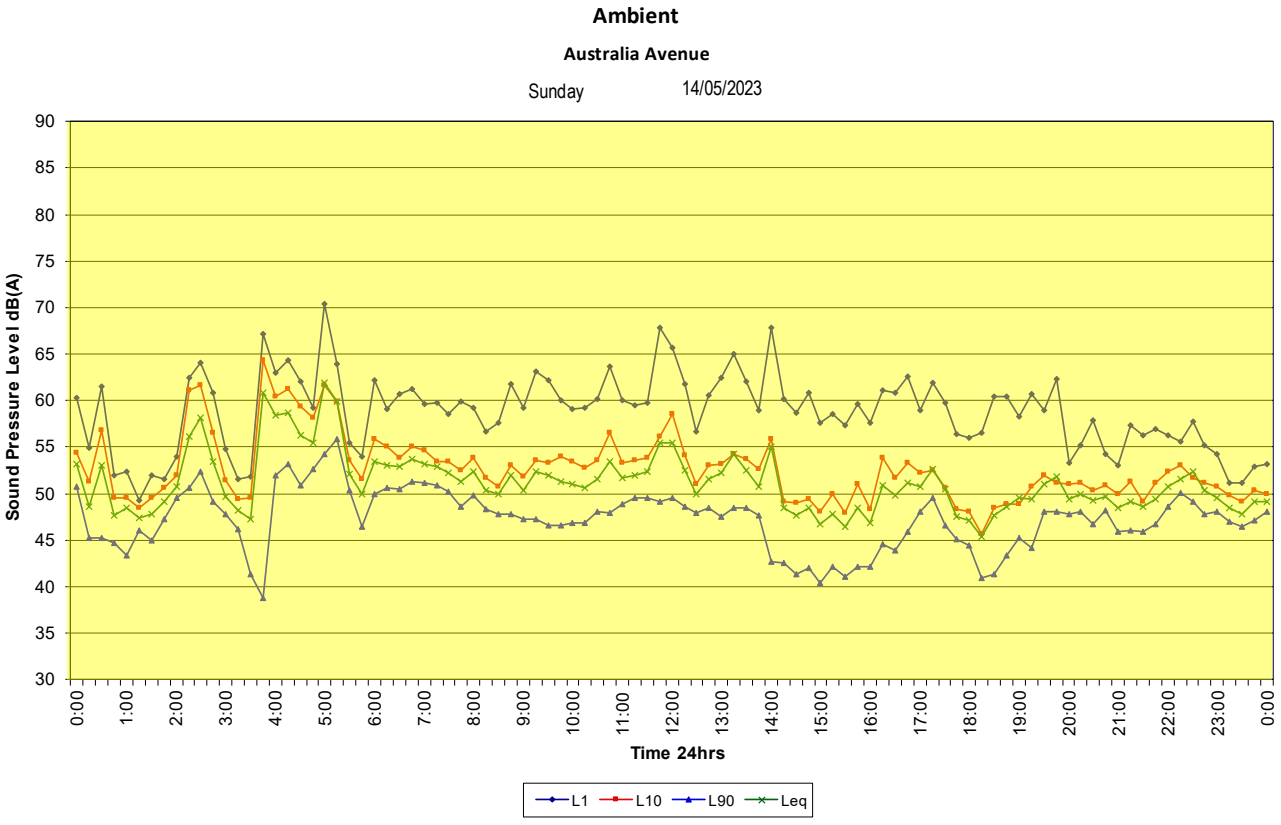
Time 24hrs
L1
L10
L90
Leq


Ambient
Australia Avenue
Sunday 14/05/2023
Sound Pressure Level dB(A)
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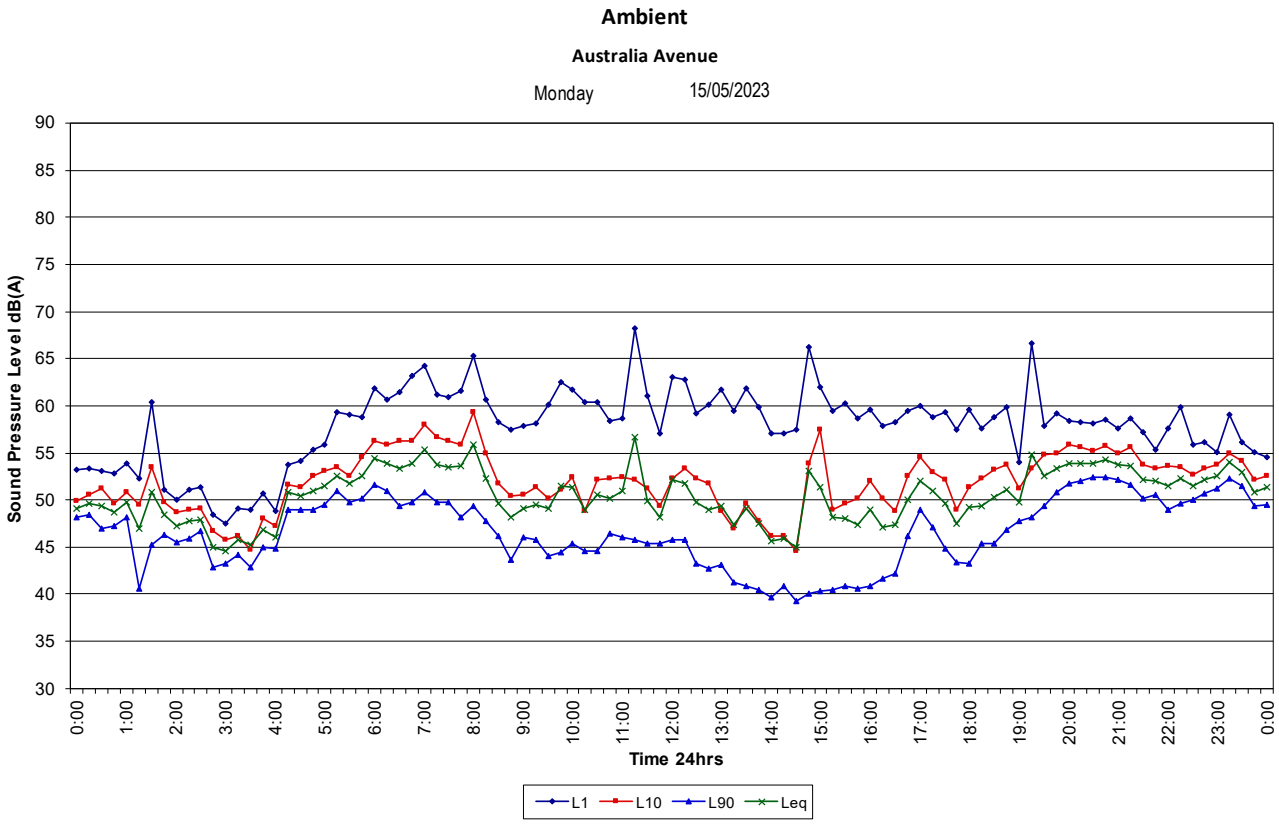
Time 24hrs
L1
L10
L90
Leq


Ambient
Australia Avenue
Monday 15/05/2023
Sound Pressure Level dB(A)
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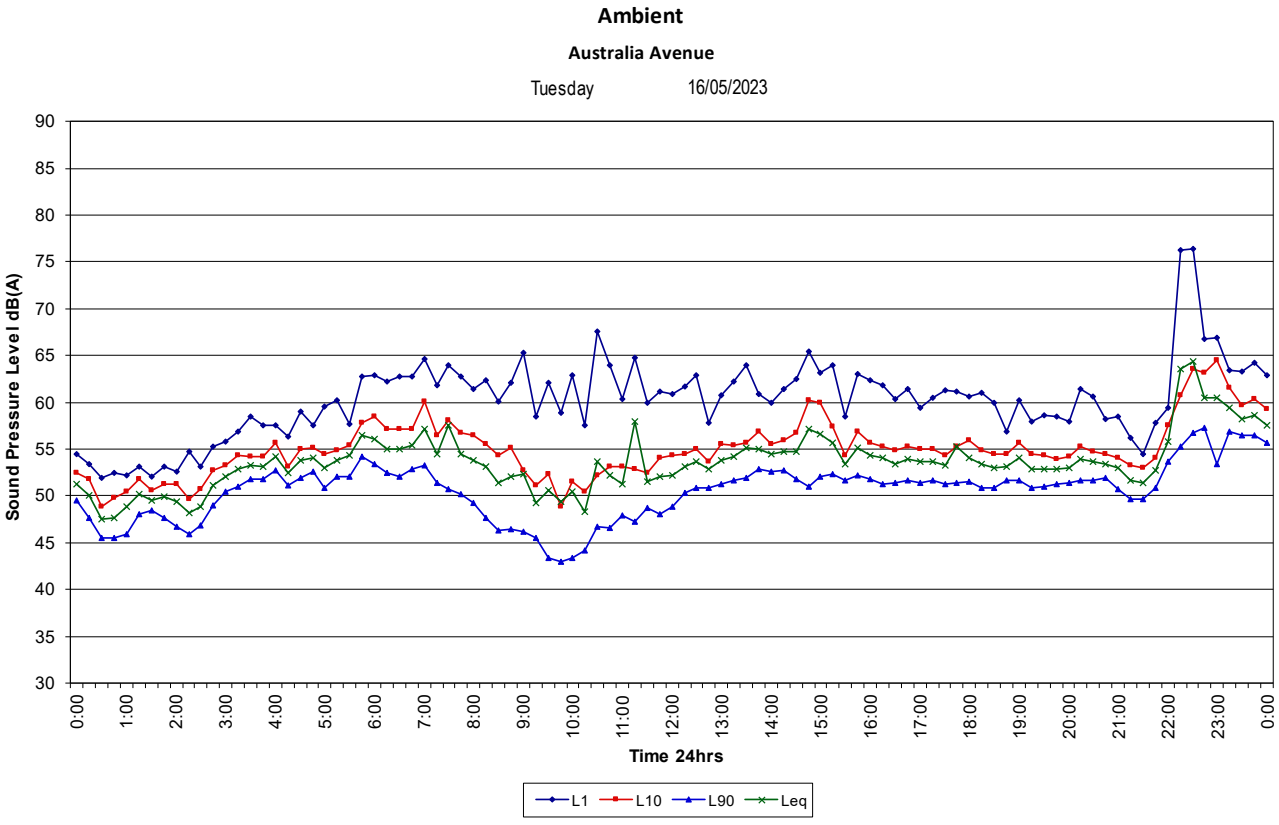
0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 0:00
Time 24hrs
L1 L10 L90 Leq


Ambient
Australia Avenue
Tuesday 16/05/2023
Sound Pressure Level dB(A)
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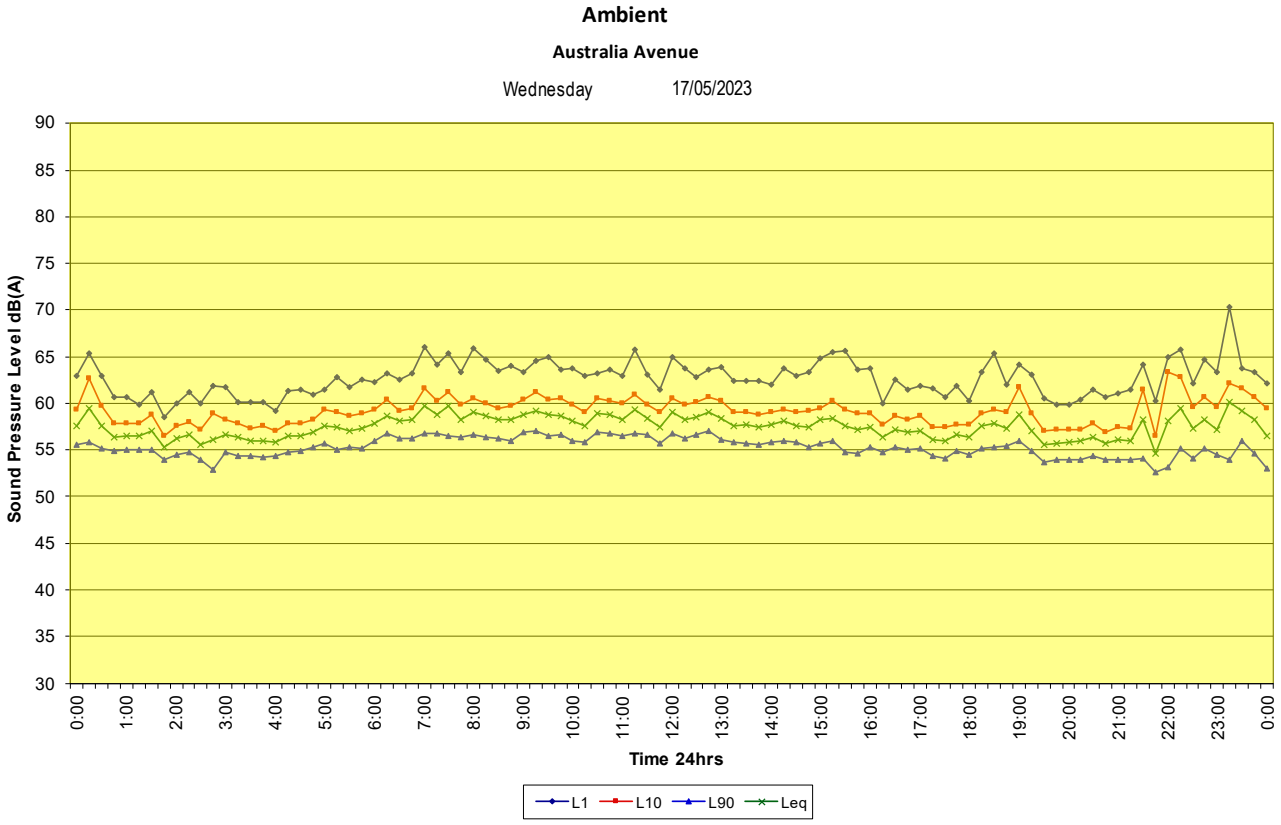
0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 0:00
Time 24hrs
L1 L10 L90 Leq


Ambient
Australia Avenue
Wednesday 17/05/2023
Sound Pressure Level dB(A)
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Time 24hrs
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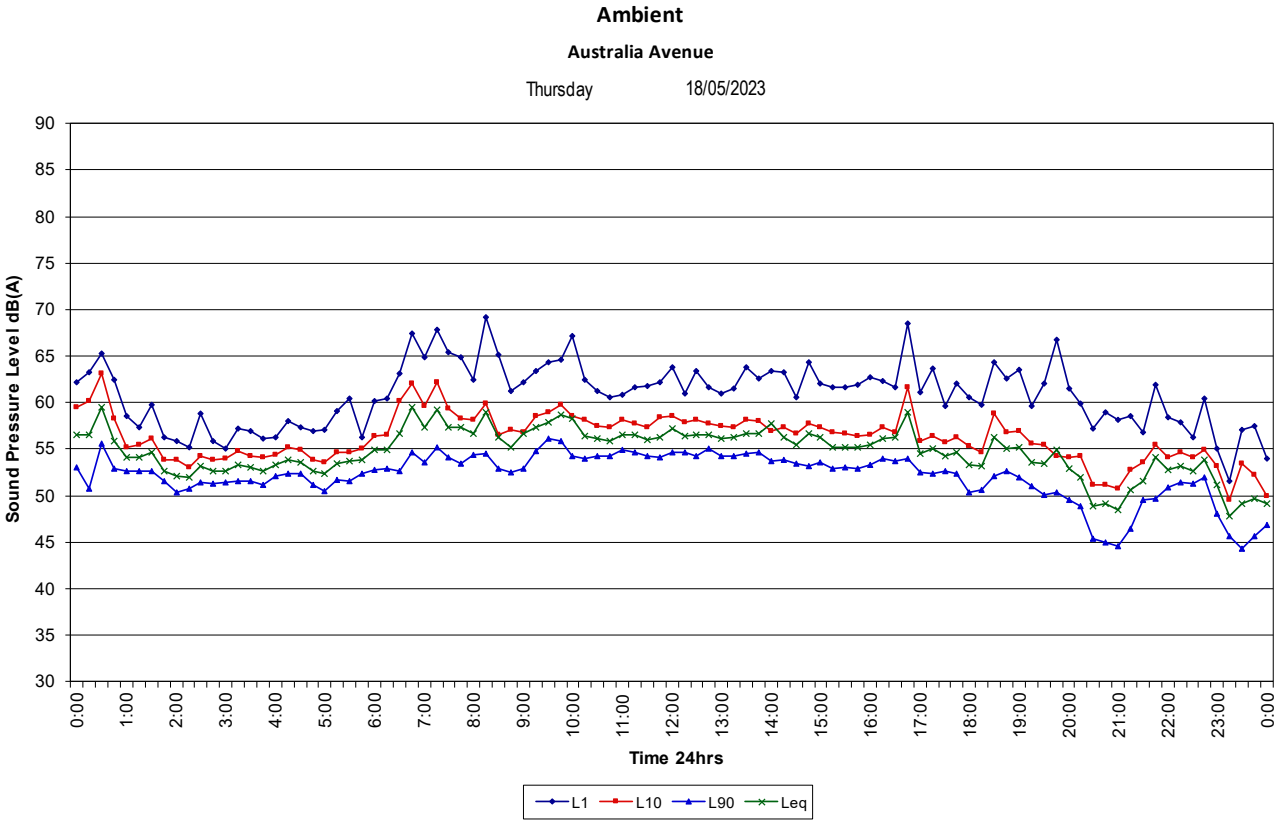
Ambient
Australia Avenue
Thursday 18/05/2023
Sound Pressure Level dB(A)
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Time 24hrs
L1
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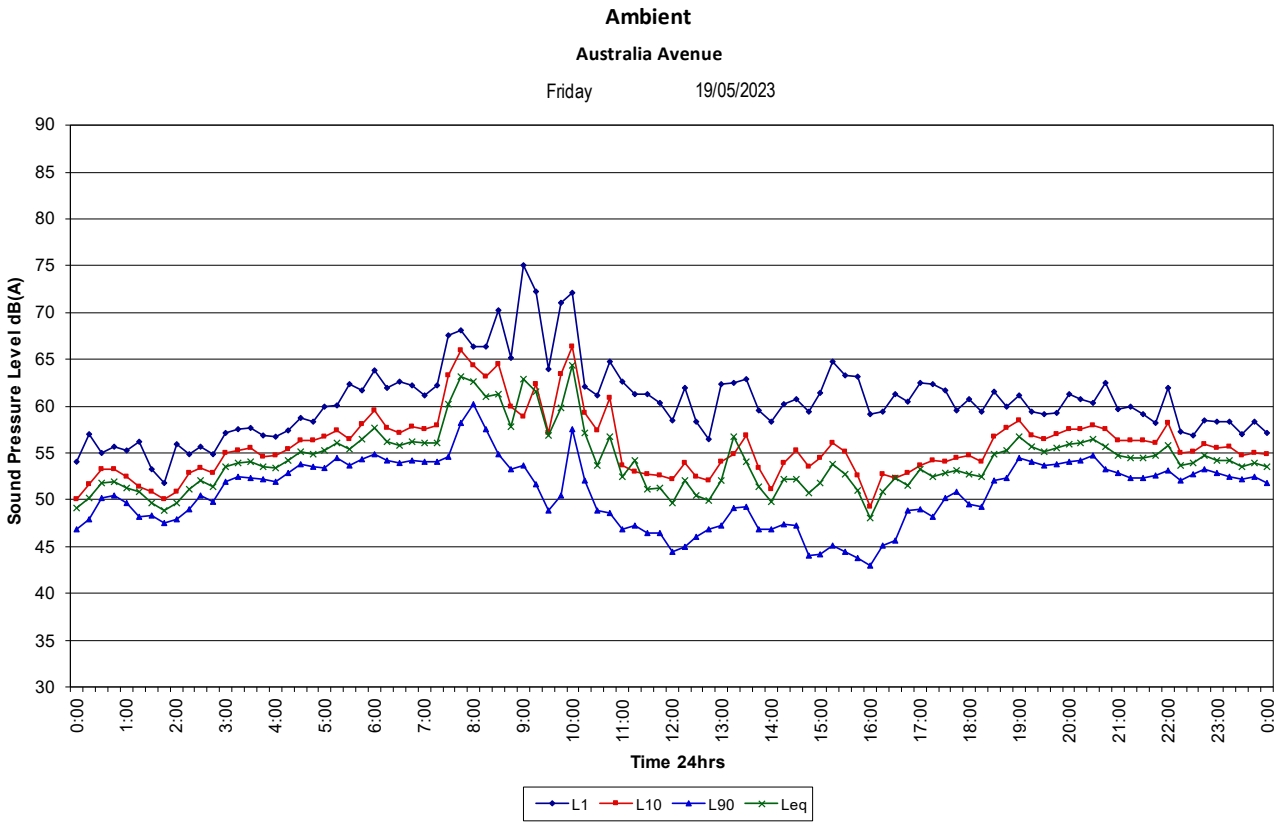
Leq


Ambient
Australia Avenue
Friday 19/05/2023
Sound Pressure Level dB(A)
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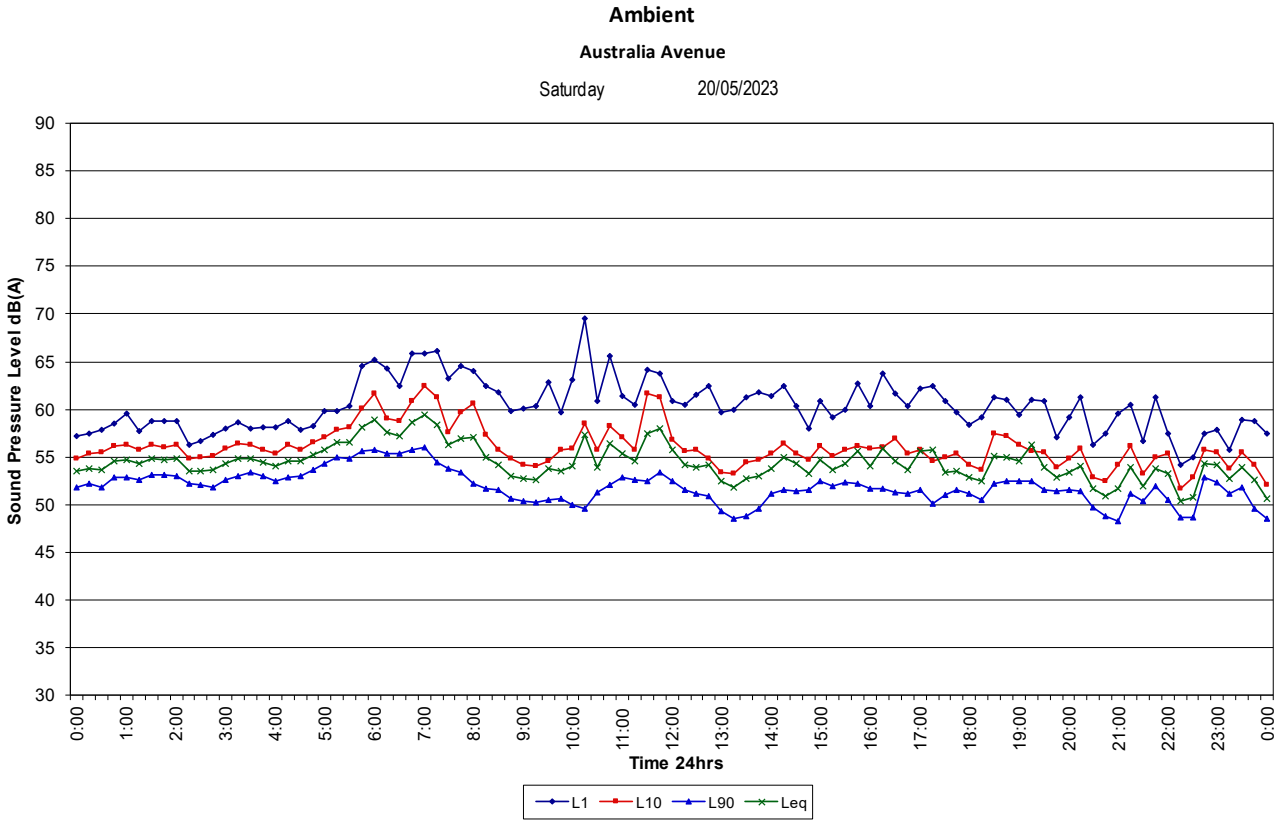
Time 24hrs
L1 L10 L90 Leq


Ambient
Australia Avenue
Saturday 20/05/2023
Sound Pressure Level dB(A)
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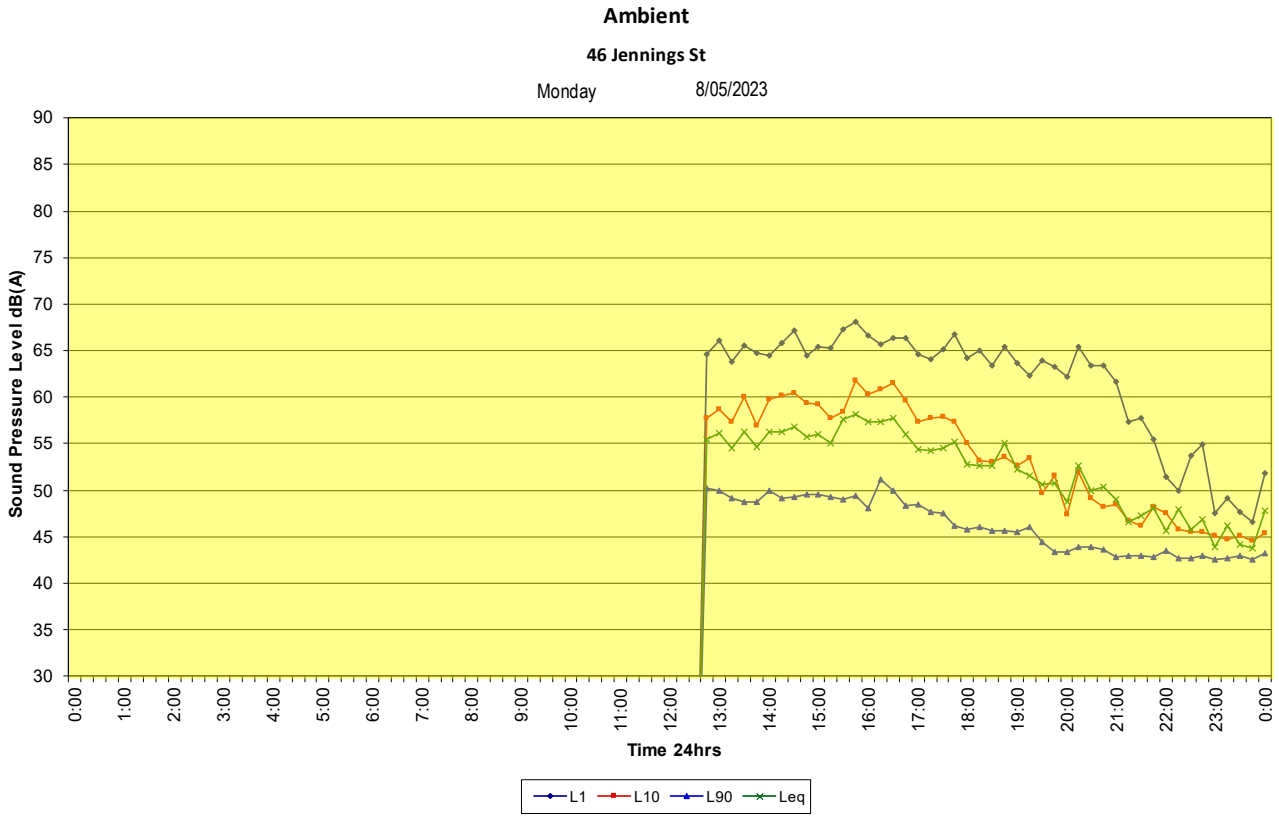
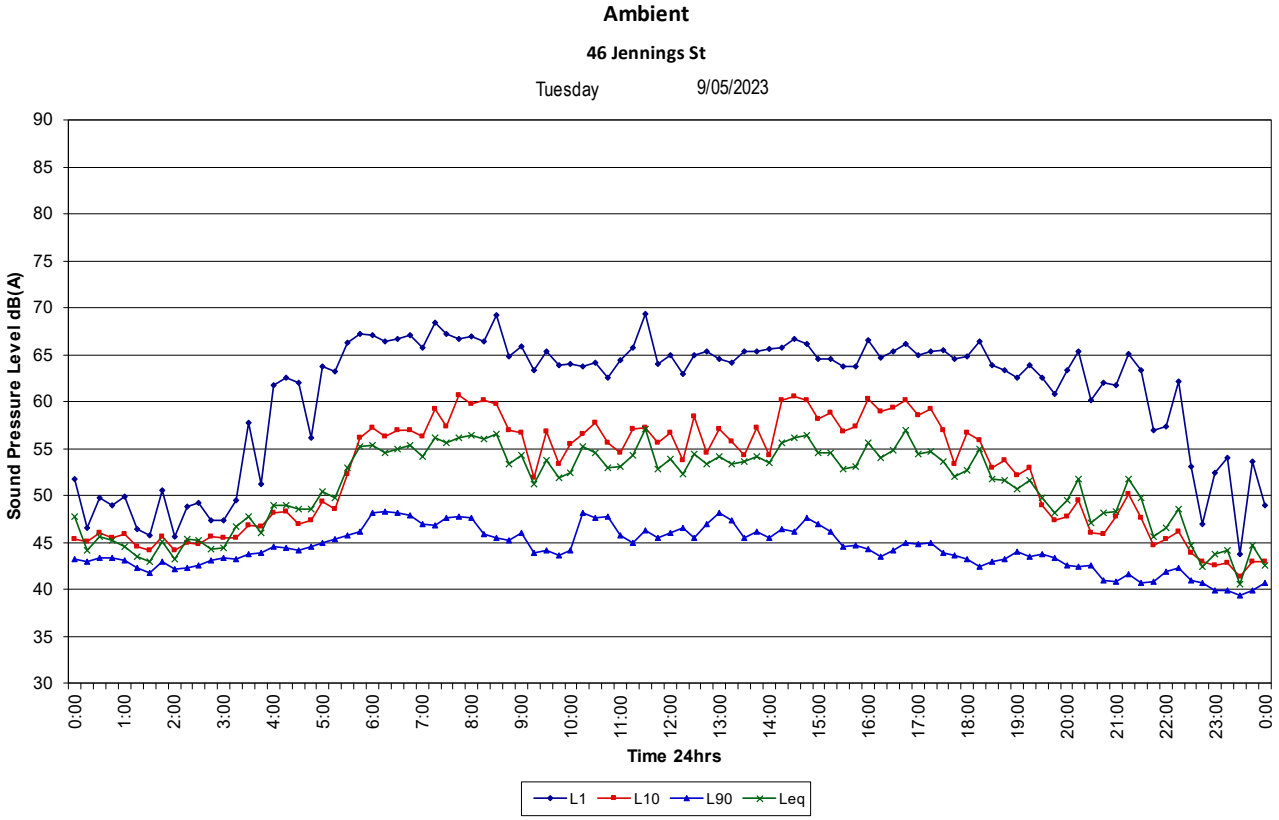
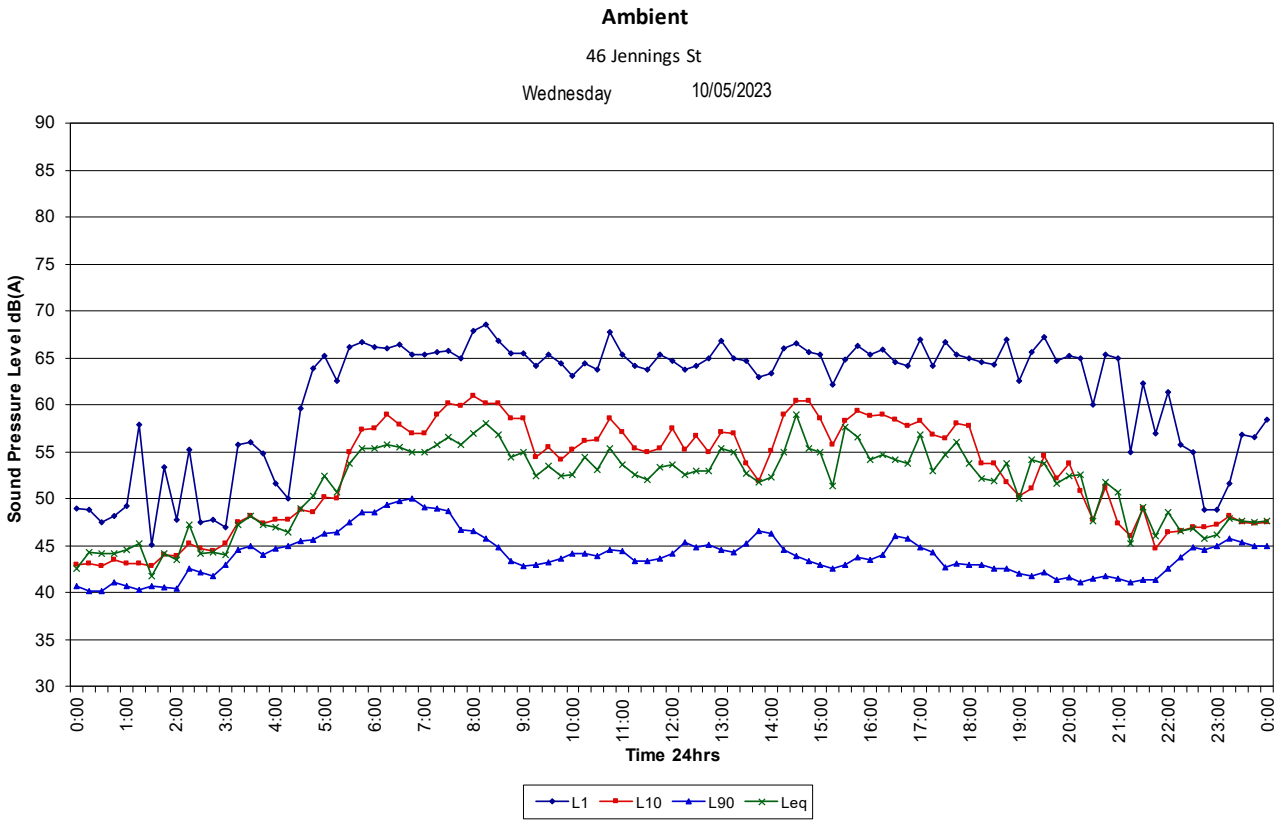
Time 24hrs
L1 L10 L90 Leq

Jennings Street






Ambient
46 Jennings St
Wednesday 10/05/2023
Sound Pressure Level dB(A)
Time 24hrs
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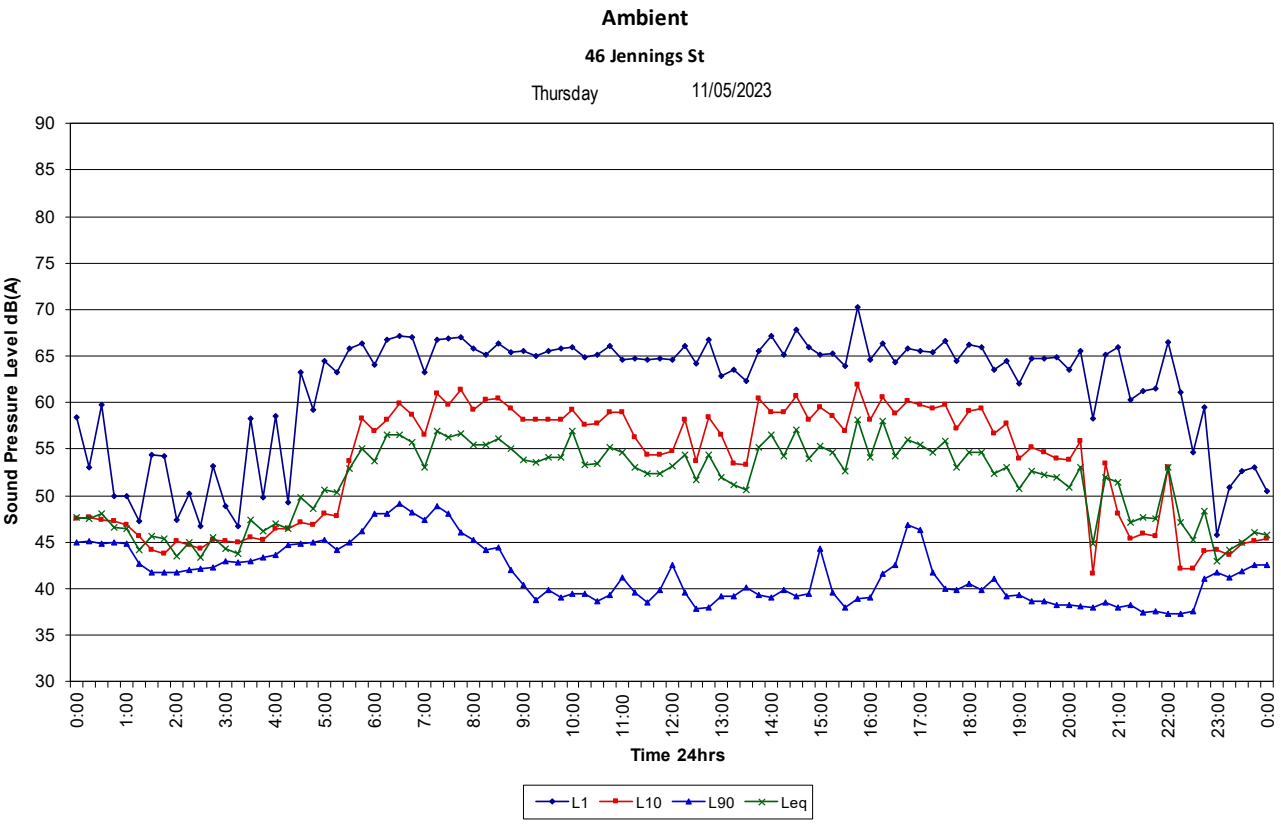
Ambient
46 Jennings St
Thursday 11/05/2023
Sound Pressure Level dB(A)
Time 24hrs
L1
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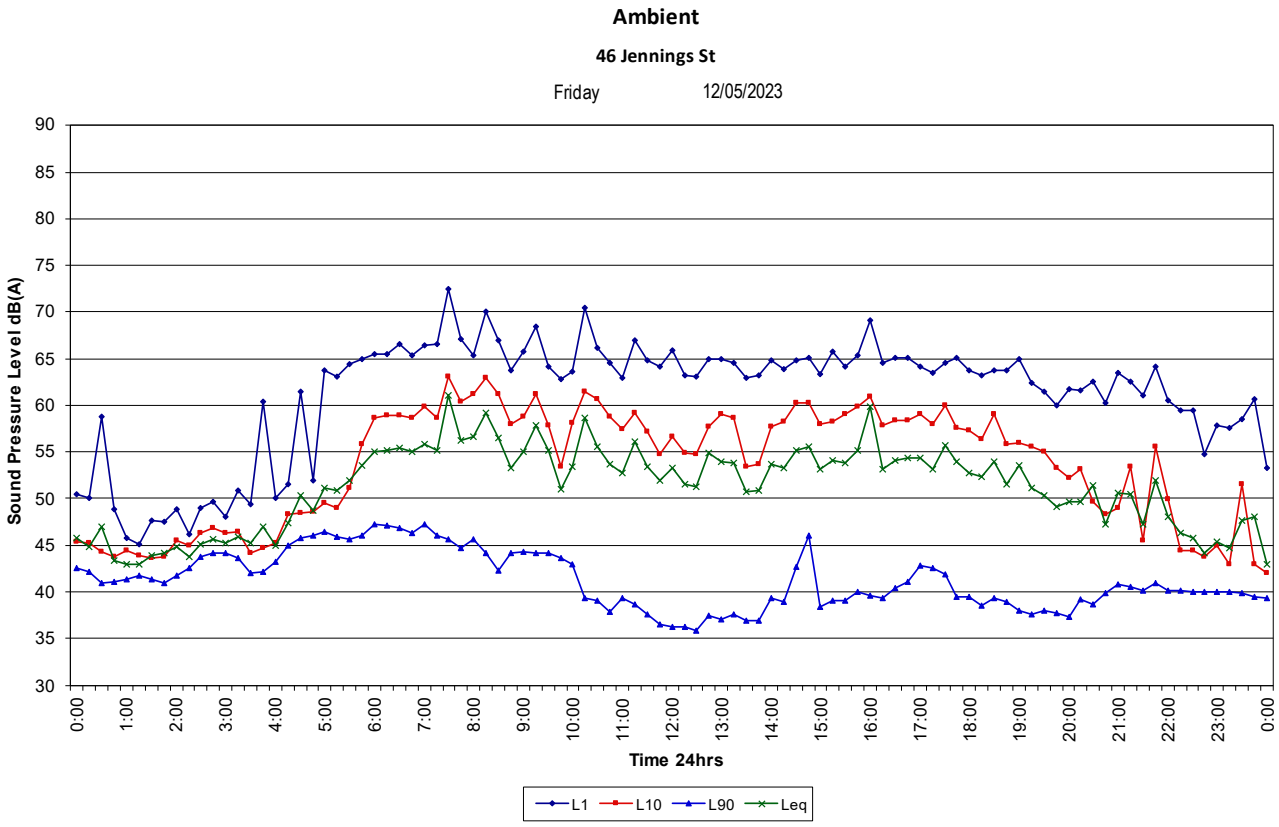
Ambient
46 Jennings St
Friday 12/05/2023
Sound Pressure Level dB(A)
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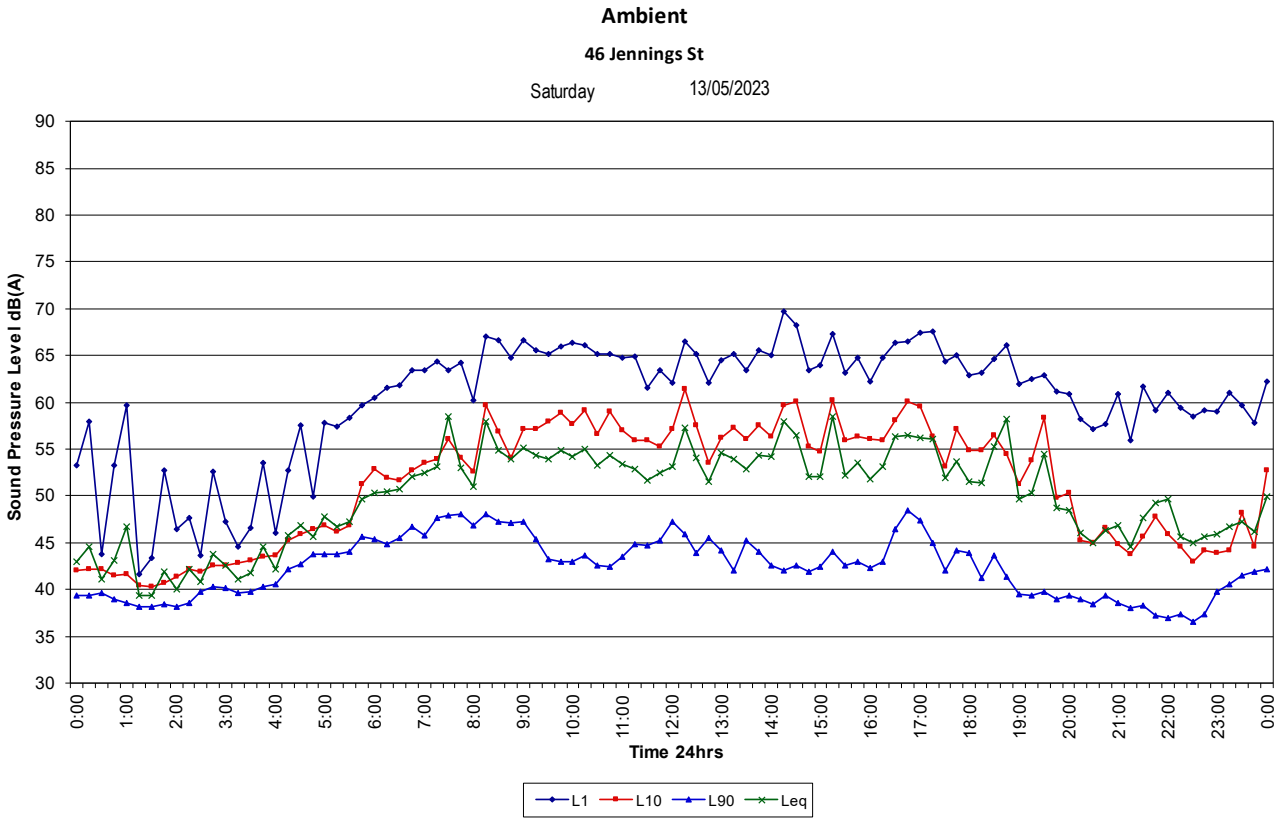
Time 24hrs
L1 L10 L90 Leq


Ambient
46 Jennings St
Saturday 13/05/2023
Sound Pressure Level dB(A)
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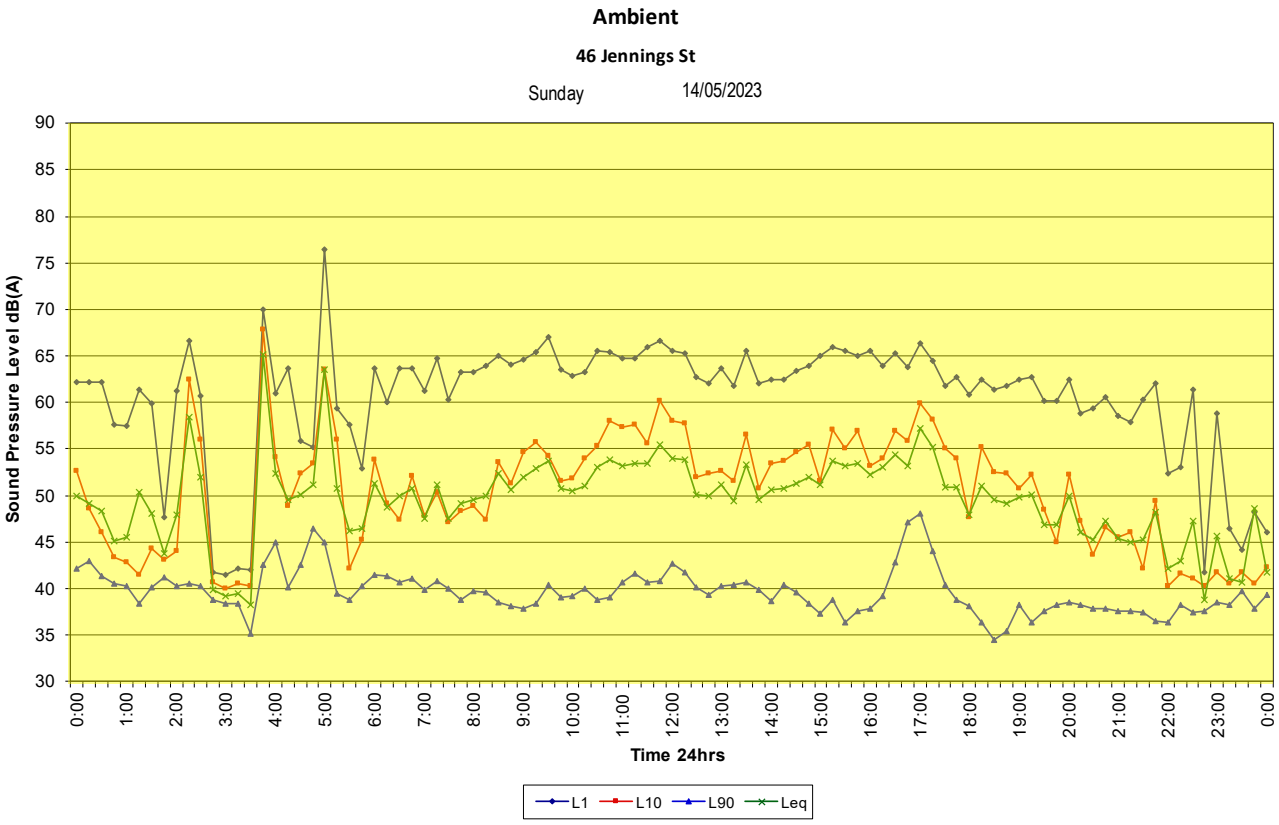
Time 24hrs
L1 L10 L90 Leq


Ambient
46 Jennings St
Sunday 14/05/2023
Sound Pressure Level dB(A)
Time 24hrs
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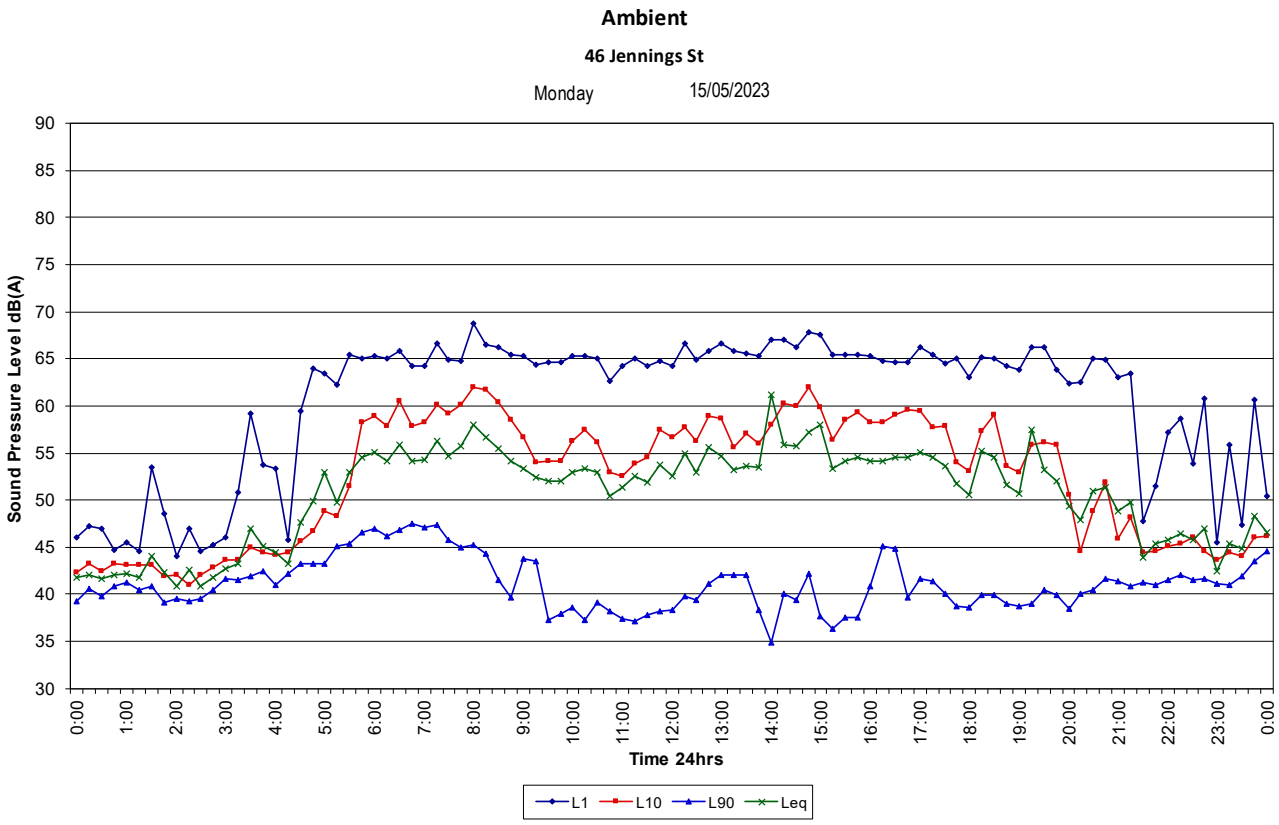
Ambient
46 Jennings St
Monday 15/05/2023
Sound Pressure Level dB(A)
Time 24hrs
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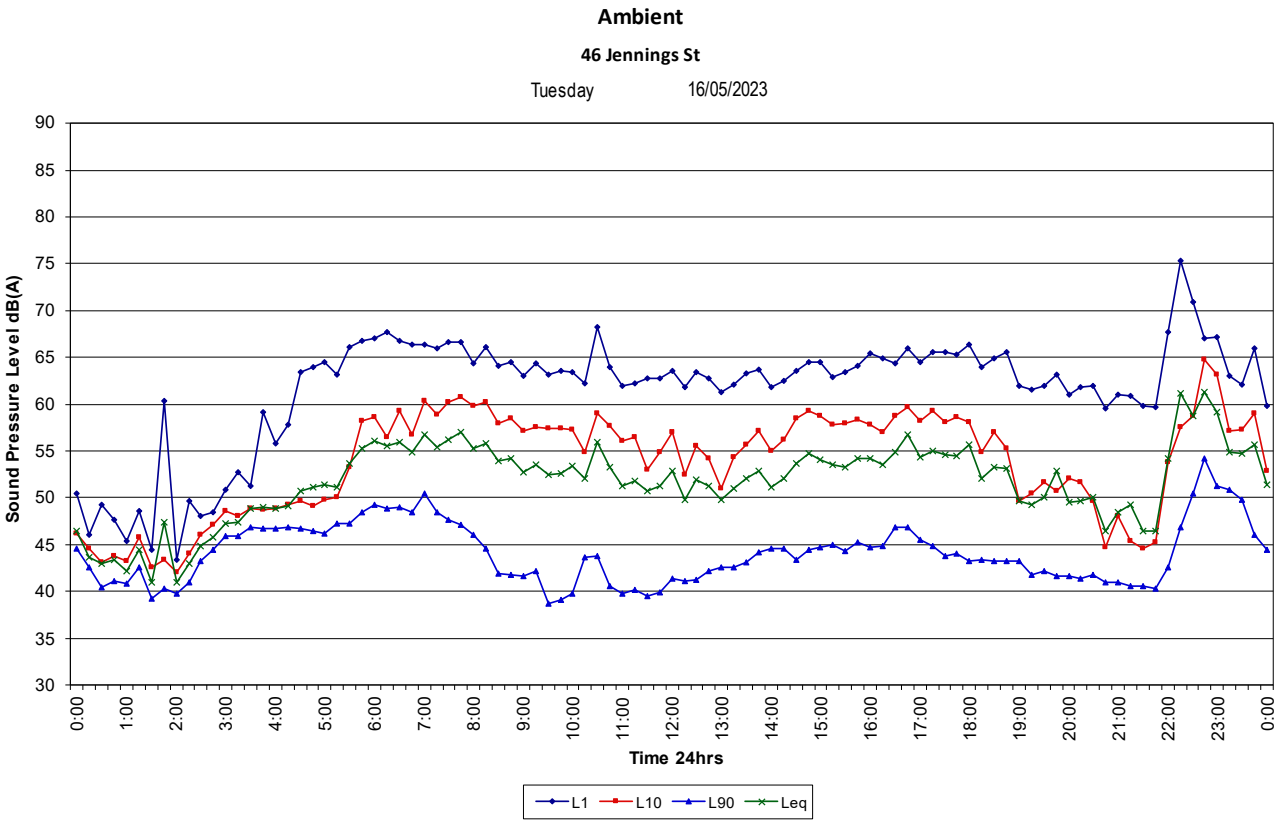
Ambient
46 Jennings St
Tuesday 16/05/2023
Sound Pressure Level dB(A)
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Time 24hrs
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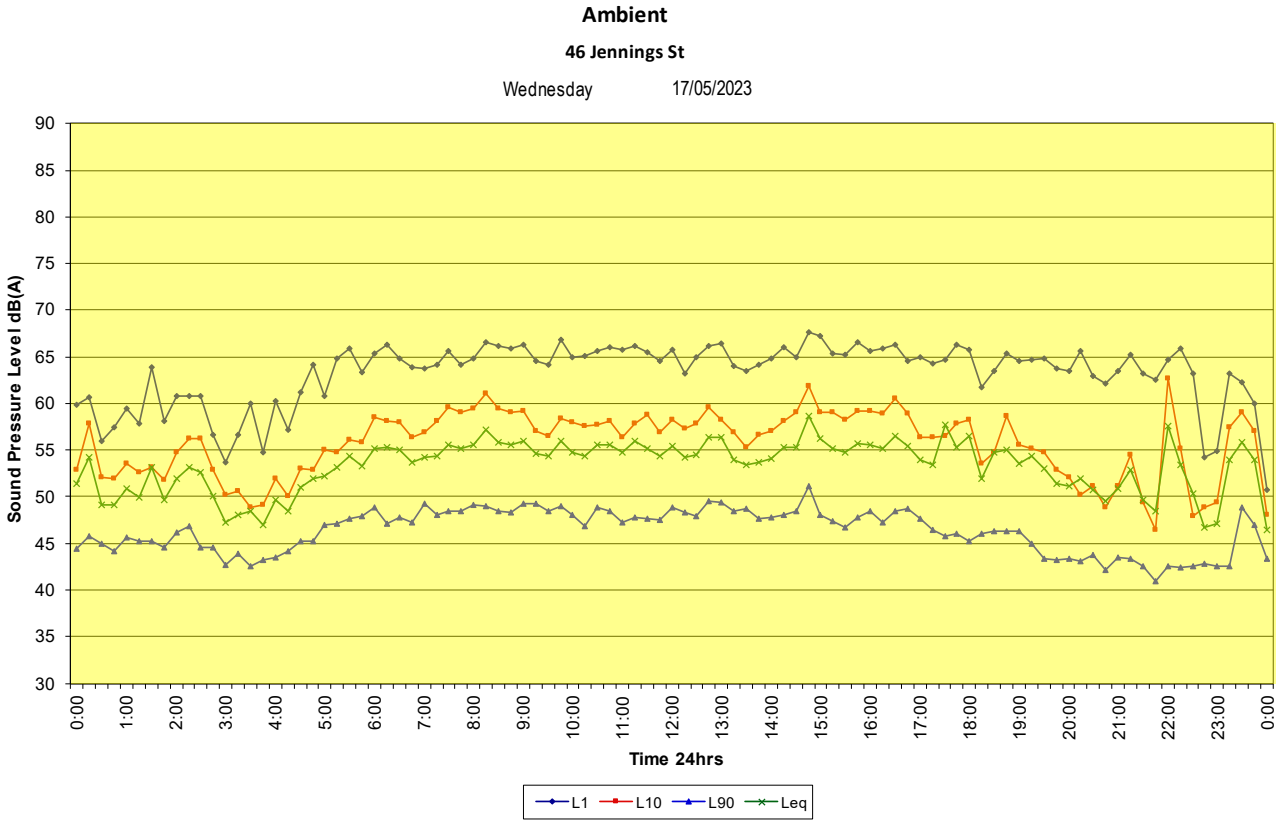
Ambient
46 Jennings St
Wednesday 17/05/2023
Sound Pressure Level dB(A)
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Time 24hrs
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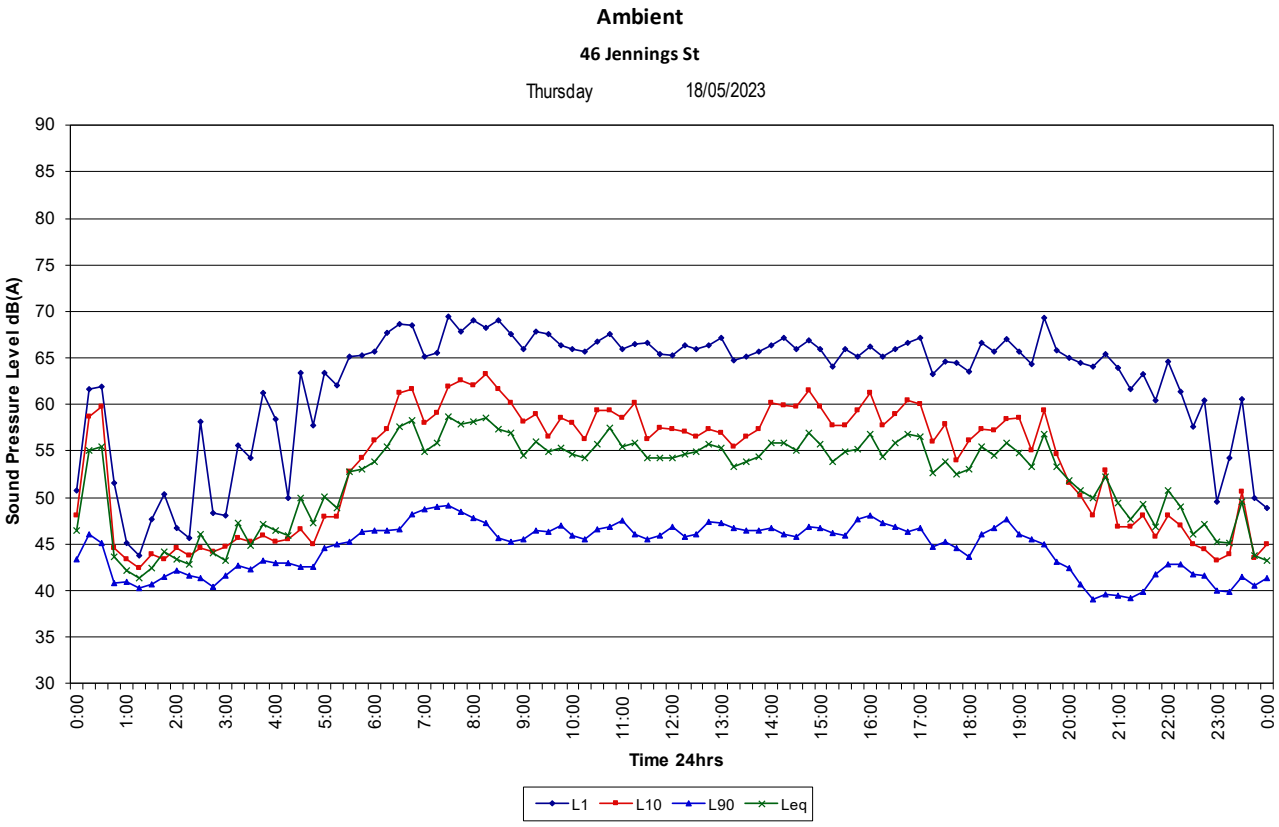
Ambient
46 Jennings St
Thursday 18/05/2023
Sound Pressure Level dB(A)
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Time 24hrs
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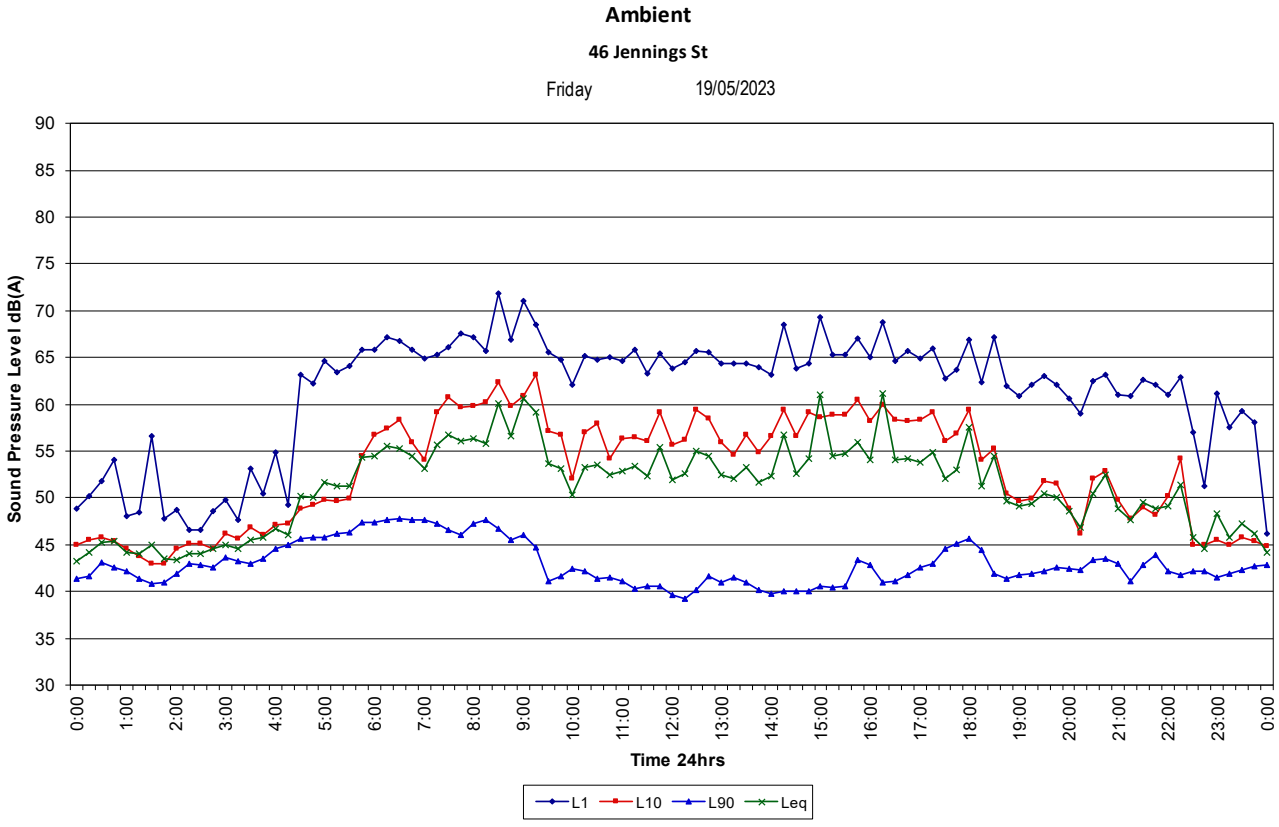
Ambient
46 Jennings St
Friday 19/05/2023
Sound Pressure Level dB(A)
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Time 24hrs
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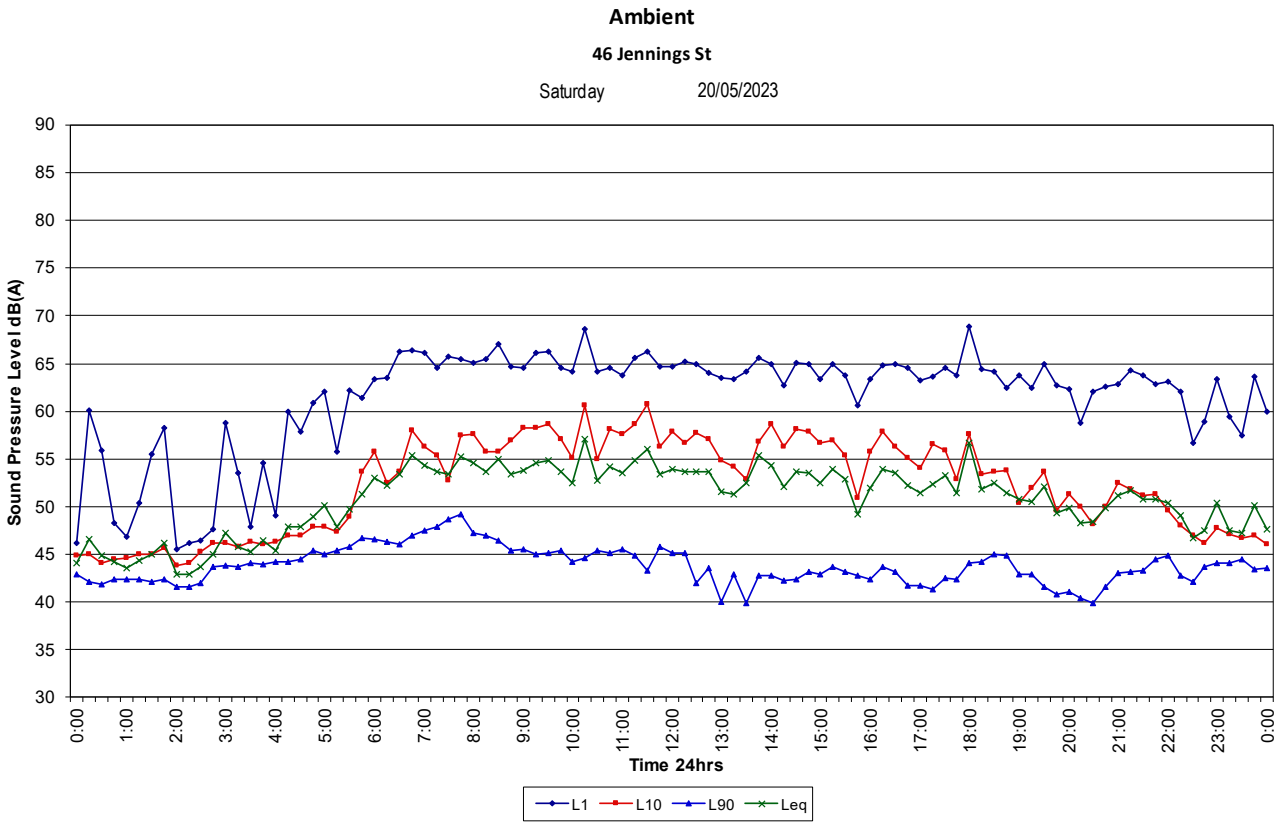
Ambient
46 Jennings St
Saturday 20/05/2023
Sound Pressure Level dB(A)
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Time 24hrs
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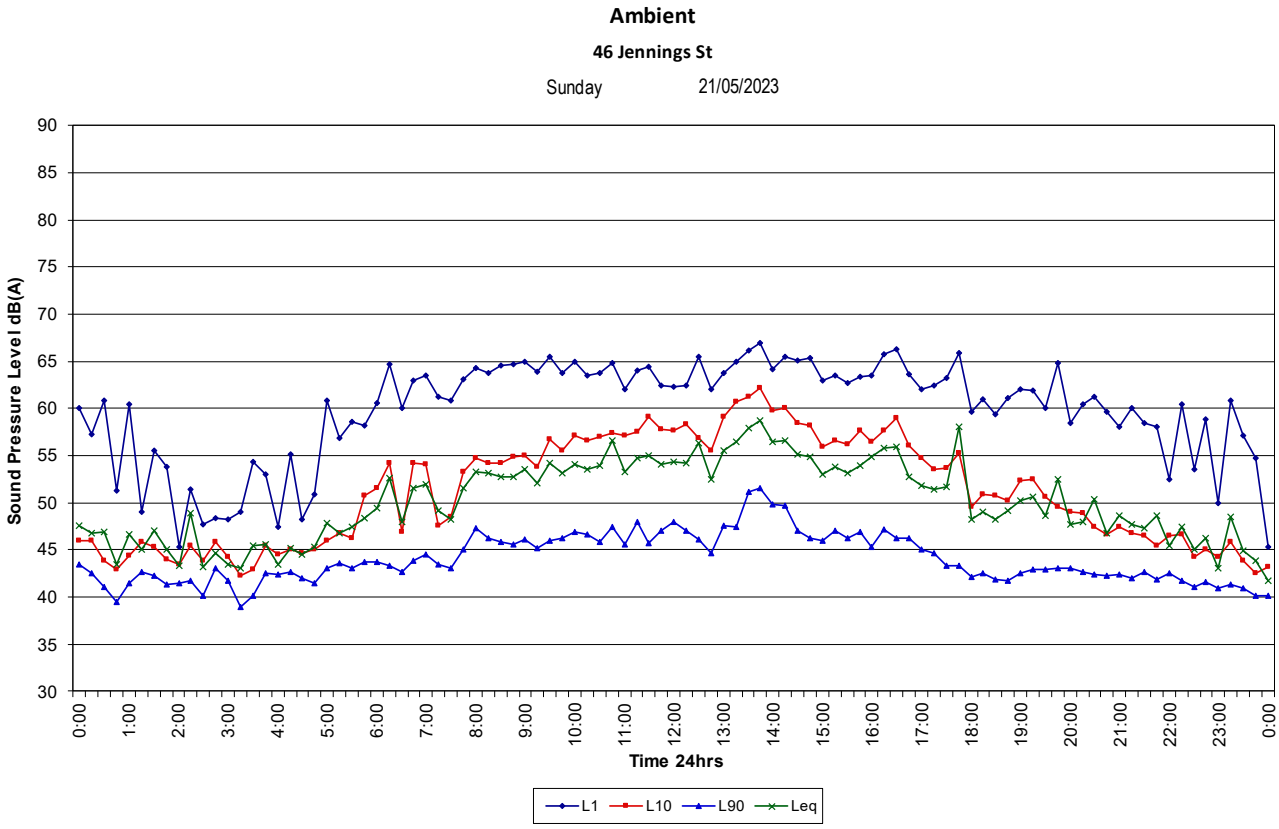
Ambient
46 Jennings St
Sunday 21/05/2023
Sound Pressure Level dB(A)
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Time 24hrs
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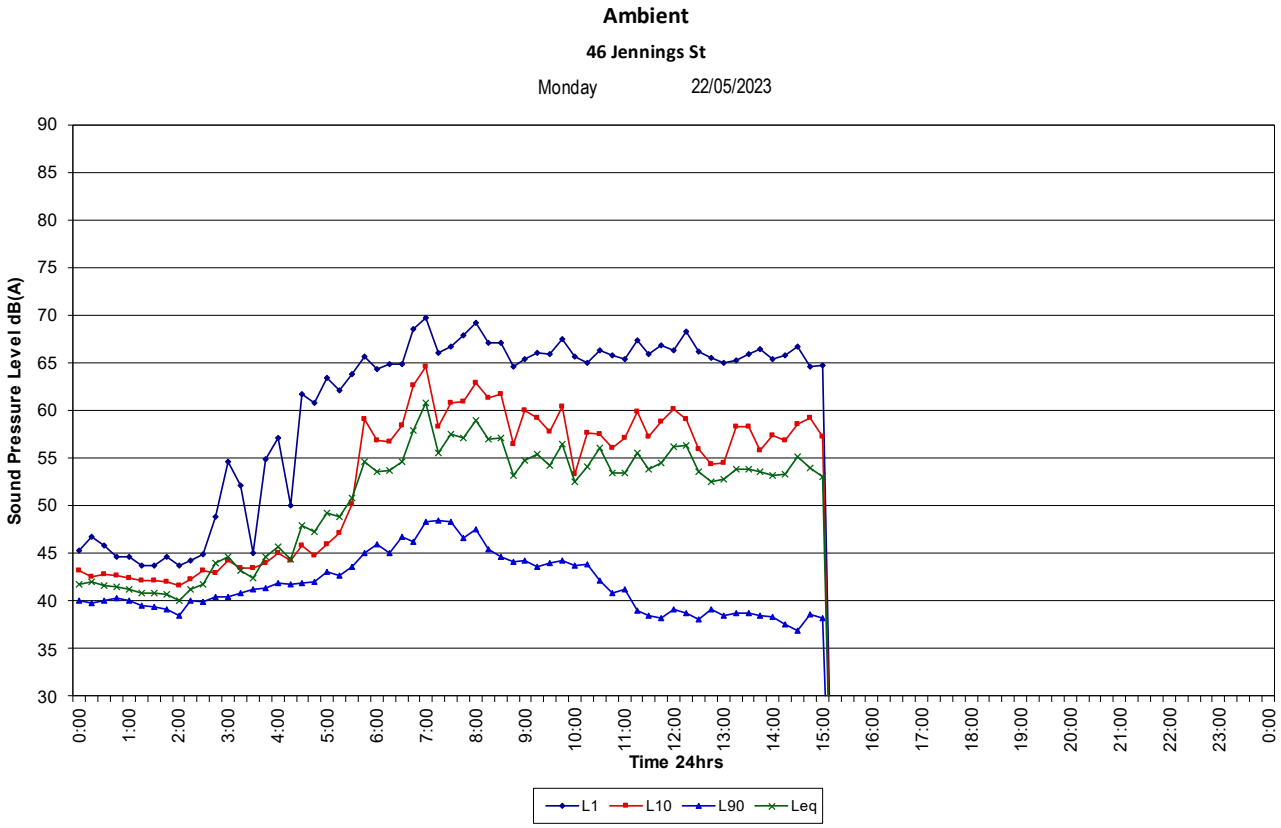
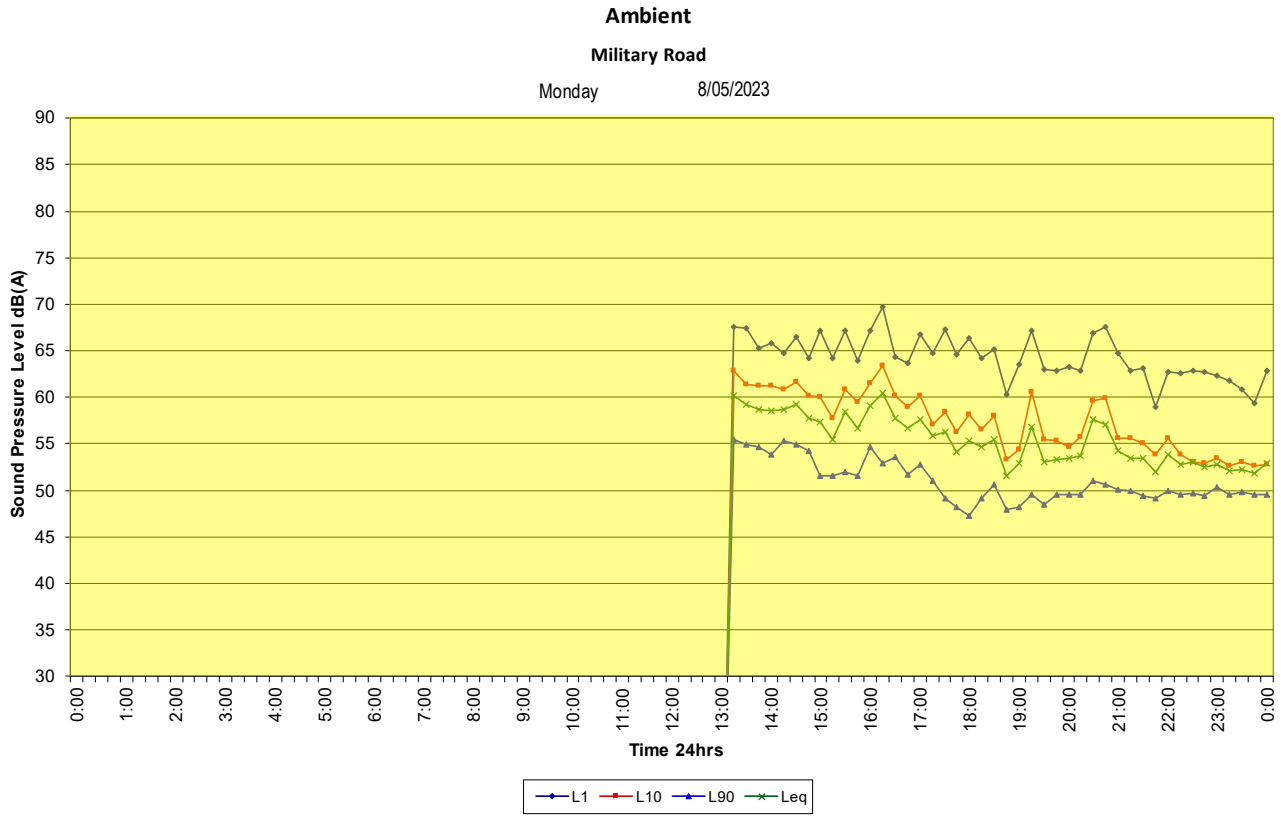
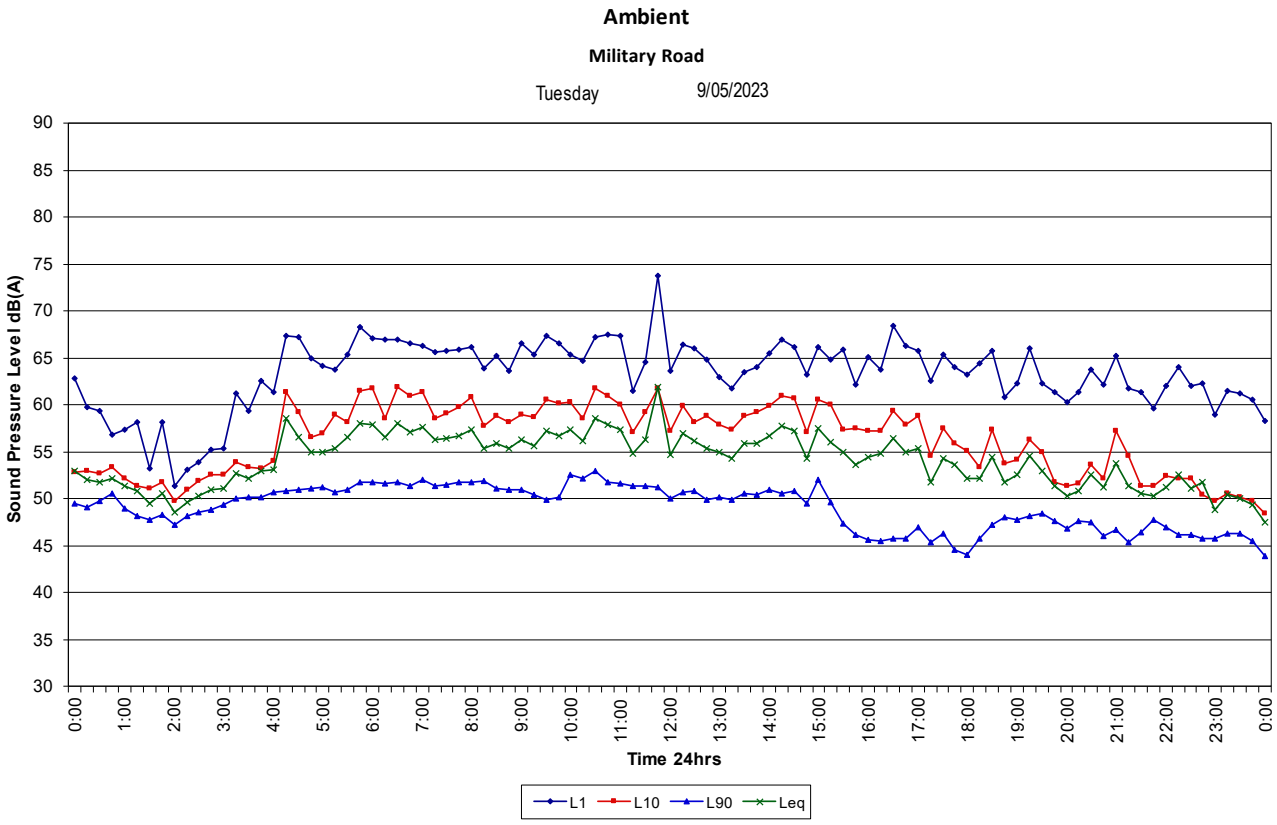


Military Road




Ambient
Military Road
Tuesday 9/05/2023
Sound Pressure Level dB(A)
Time 24hrs
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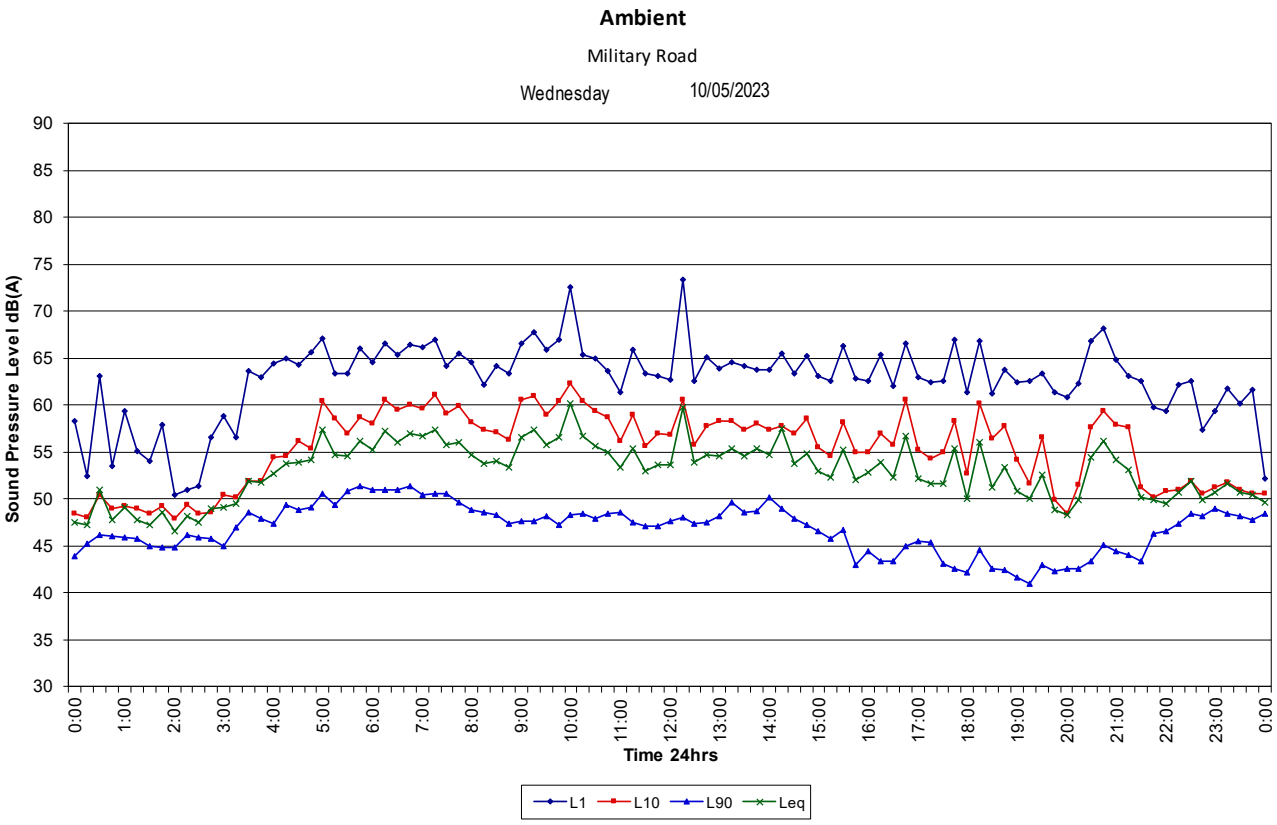
Ambient
Military Road
Wednesday 10/05/2023
Sound Pressure Level dB(A)
Time 24hrs
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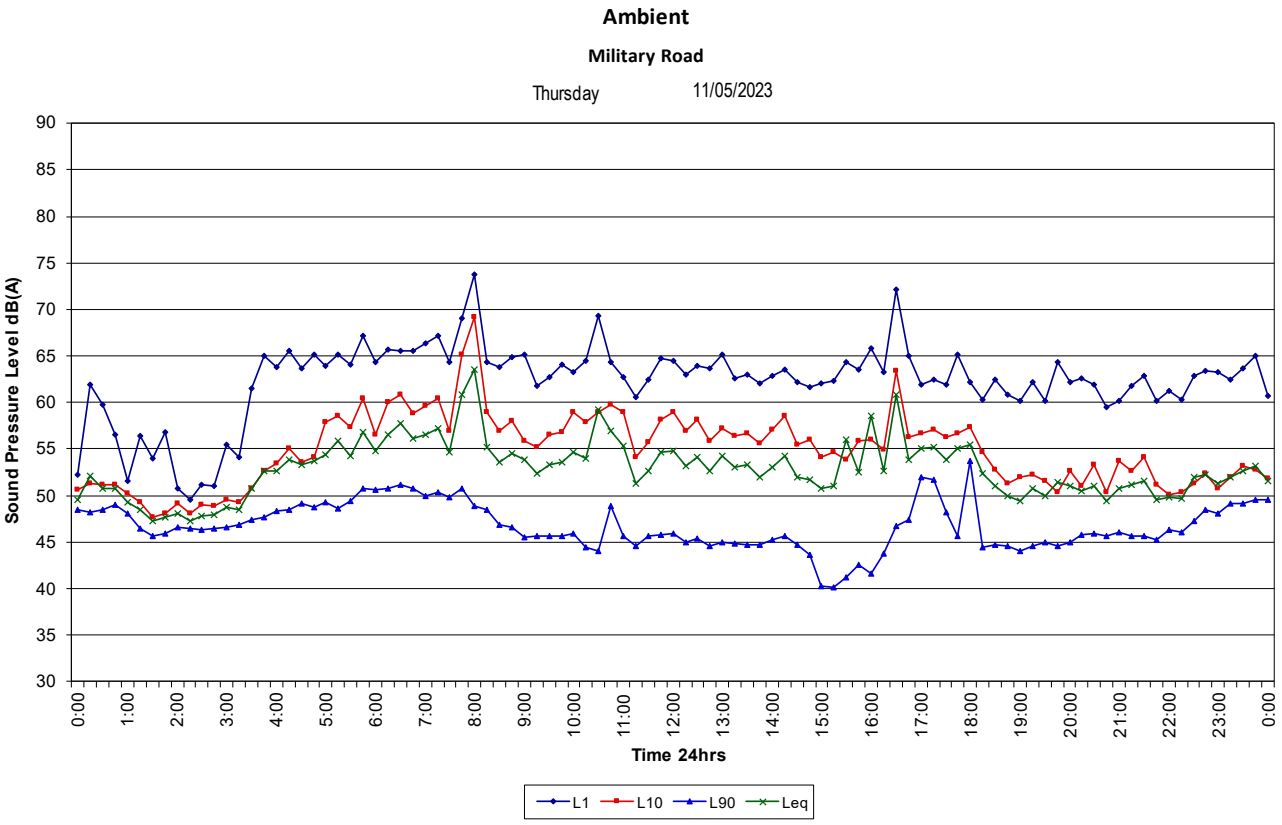
Leq


Ambient
Military Road
Thursday 11/05/2023
Sound Pressure Level dB(A)
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Time 24hrs
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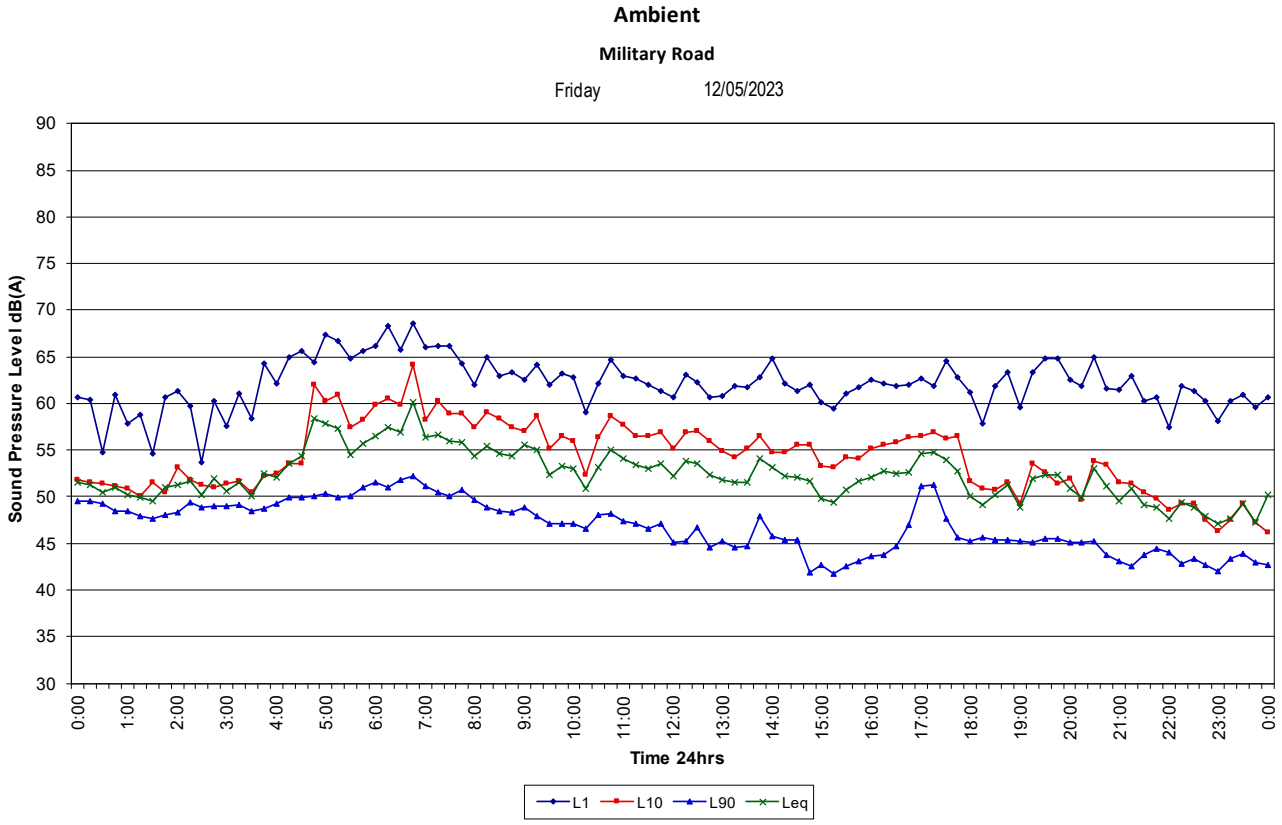
Leq


Ambient
Military Road
Friday 12/05/2023
Sound Pressure Level dB(A)
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Time 24hrs
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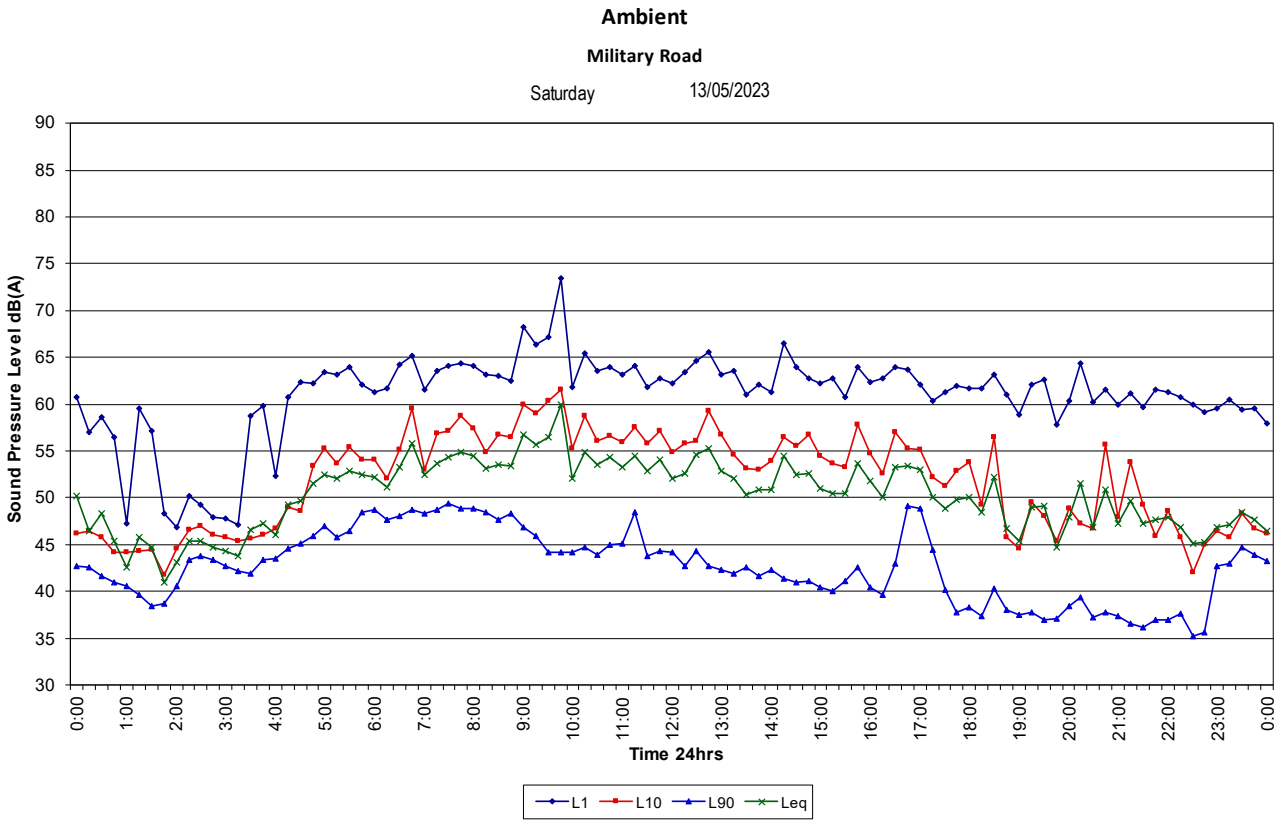
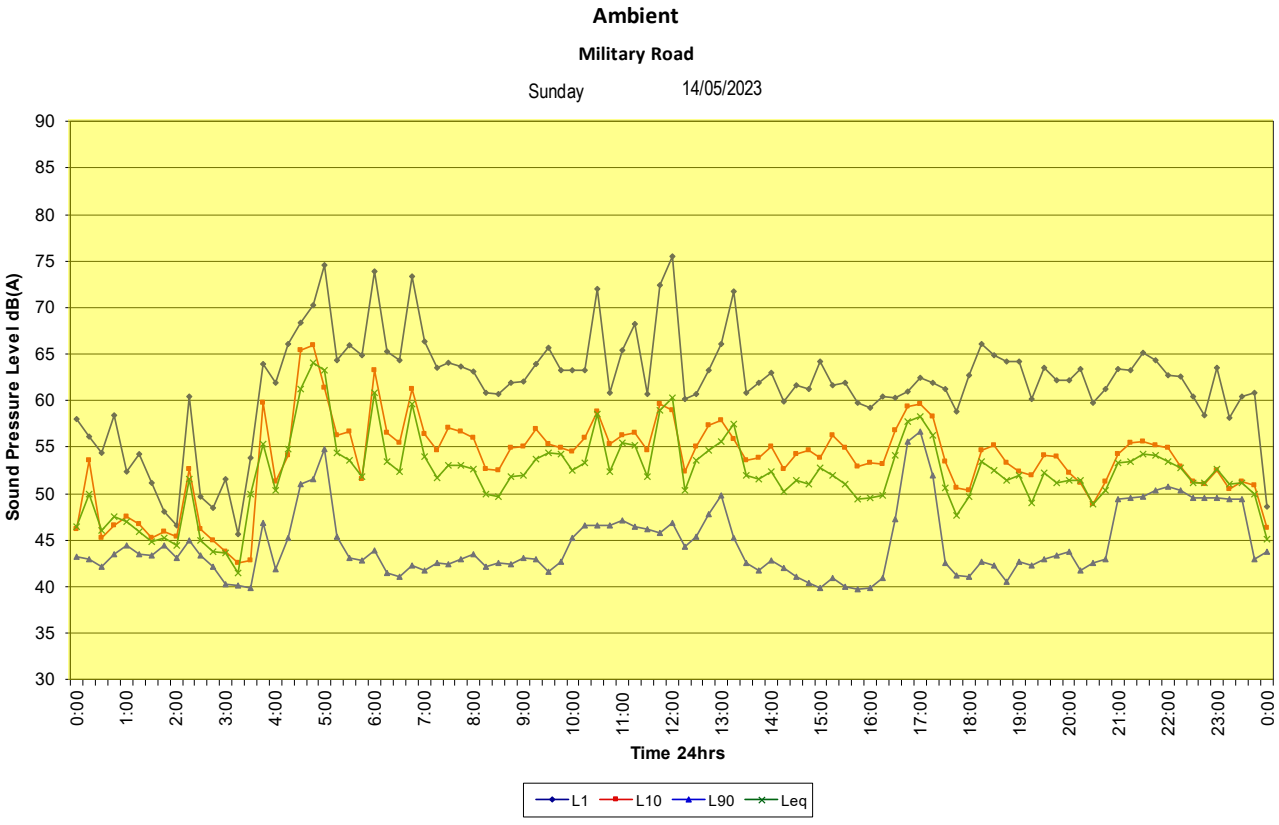
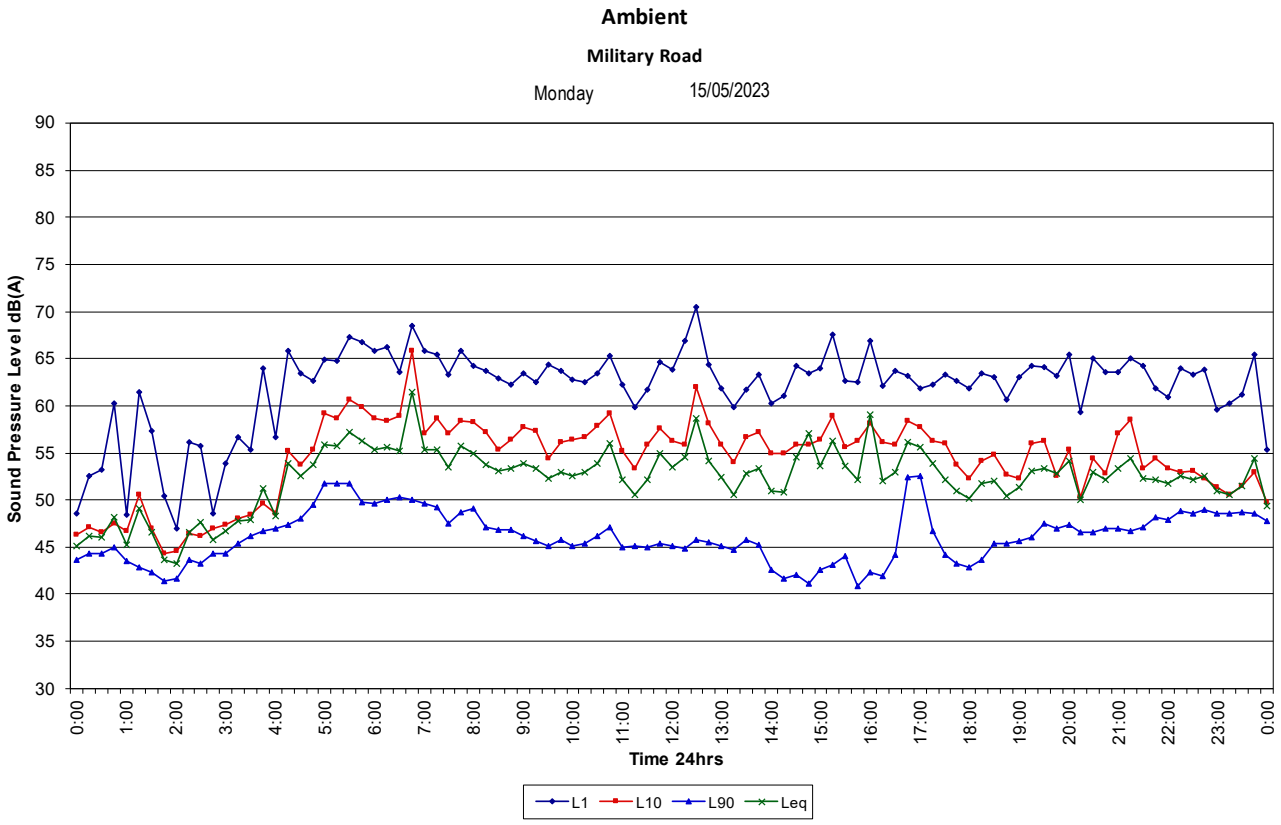
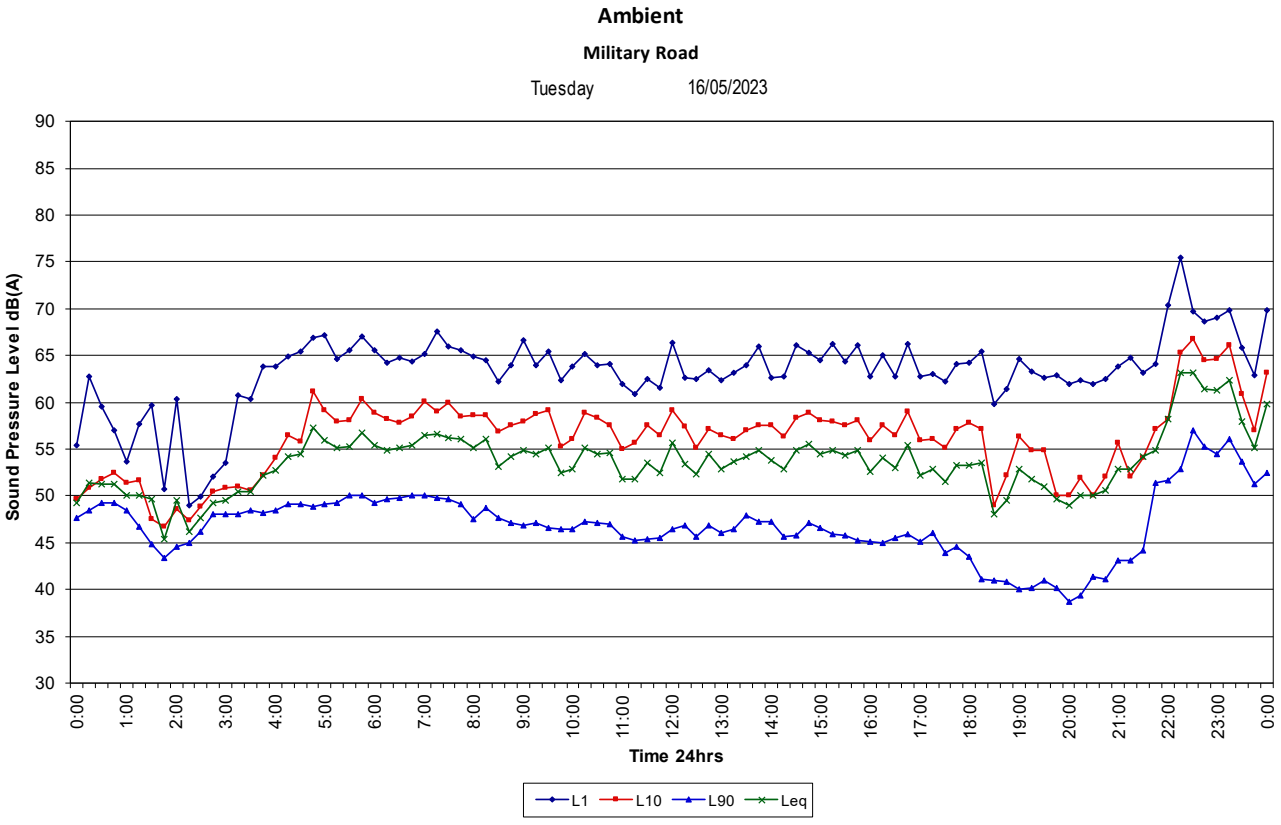
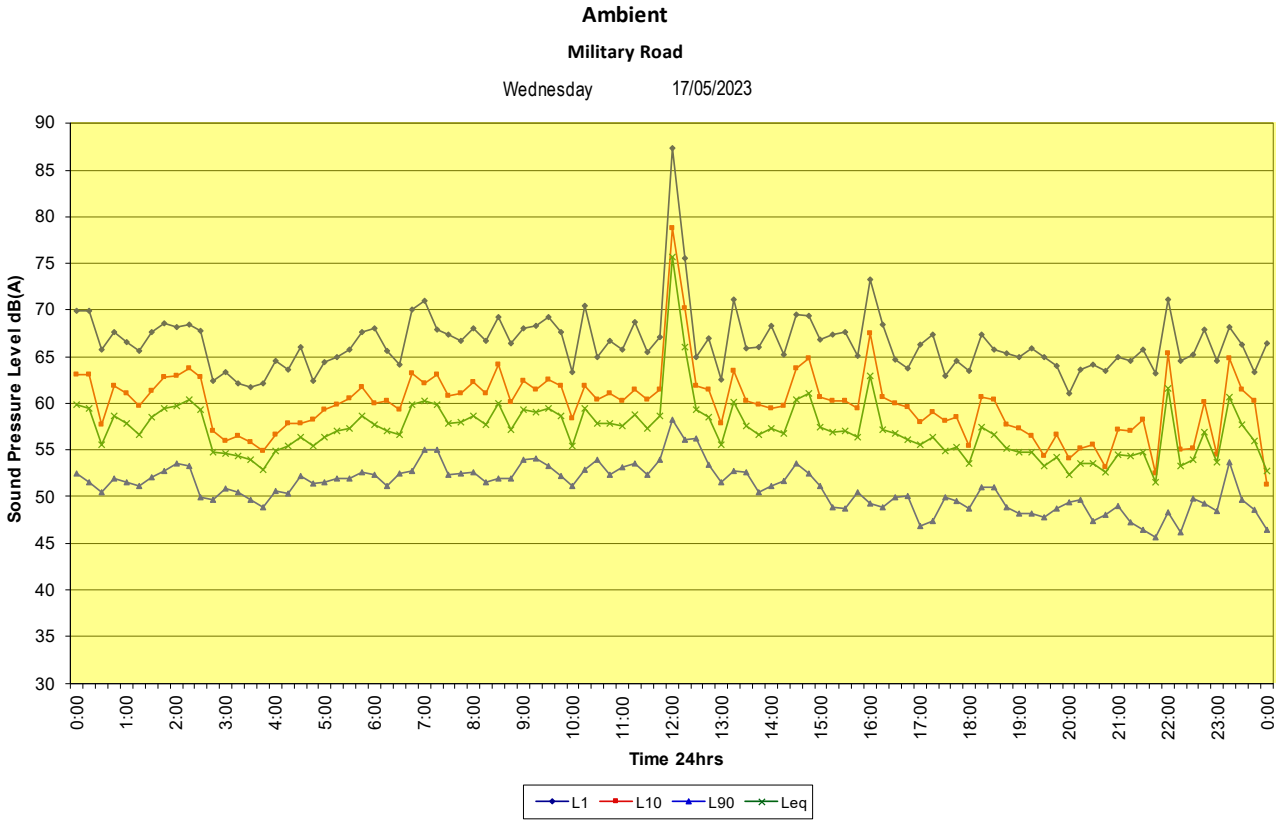
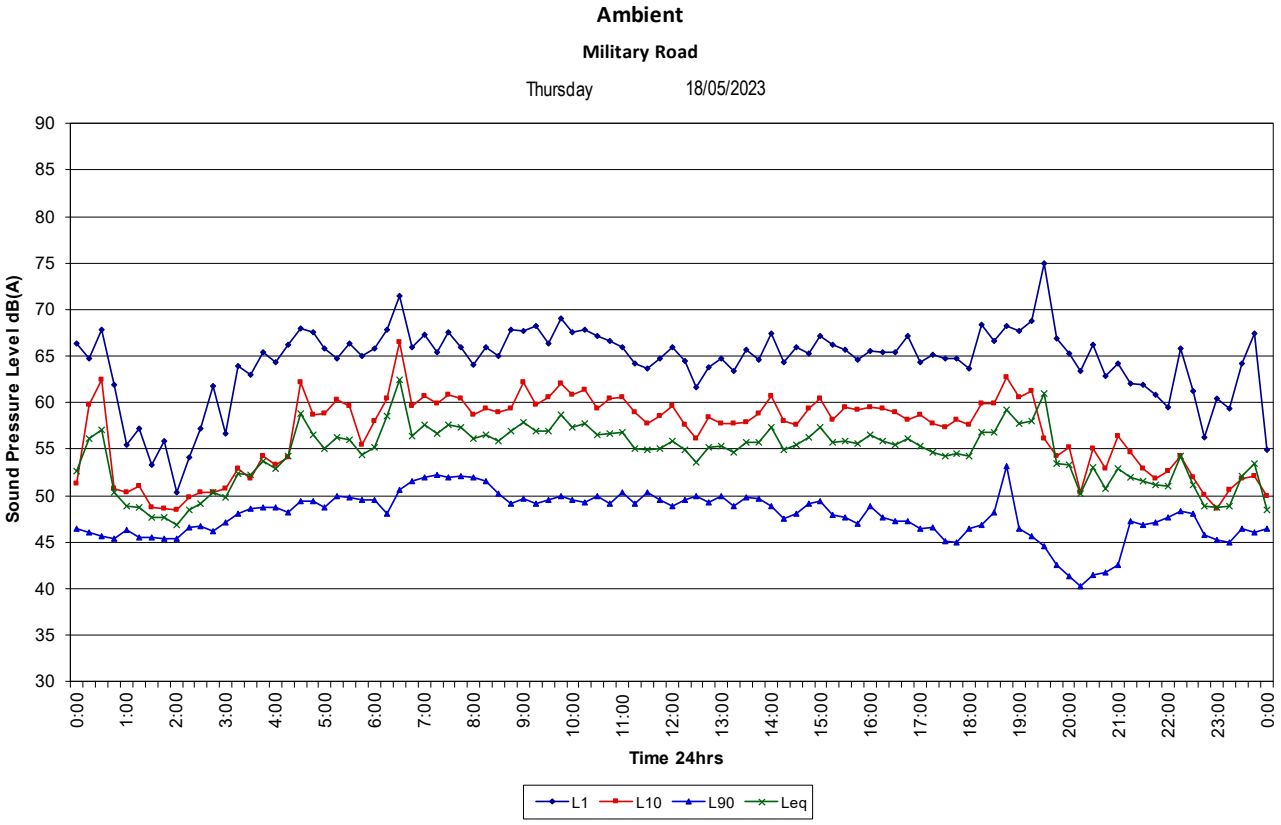

Ambient
Military Road
Saturday 13/05/2023
Sound Pressure Level dB(A)
Time 24hrs
L1 L10 L90 Leq

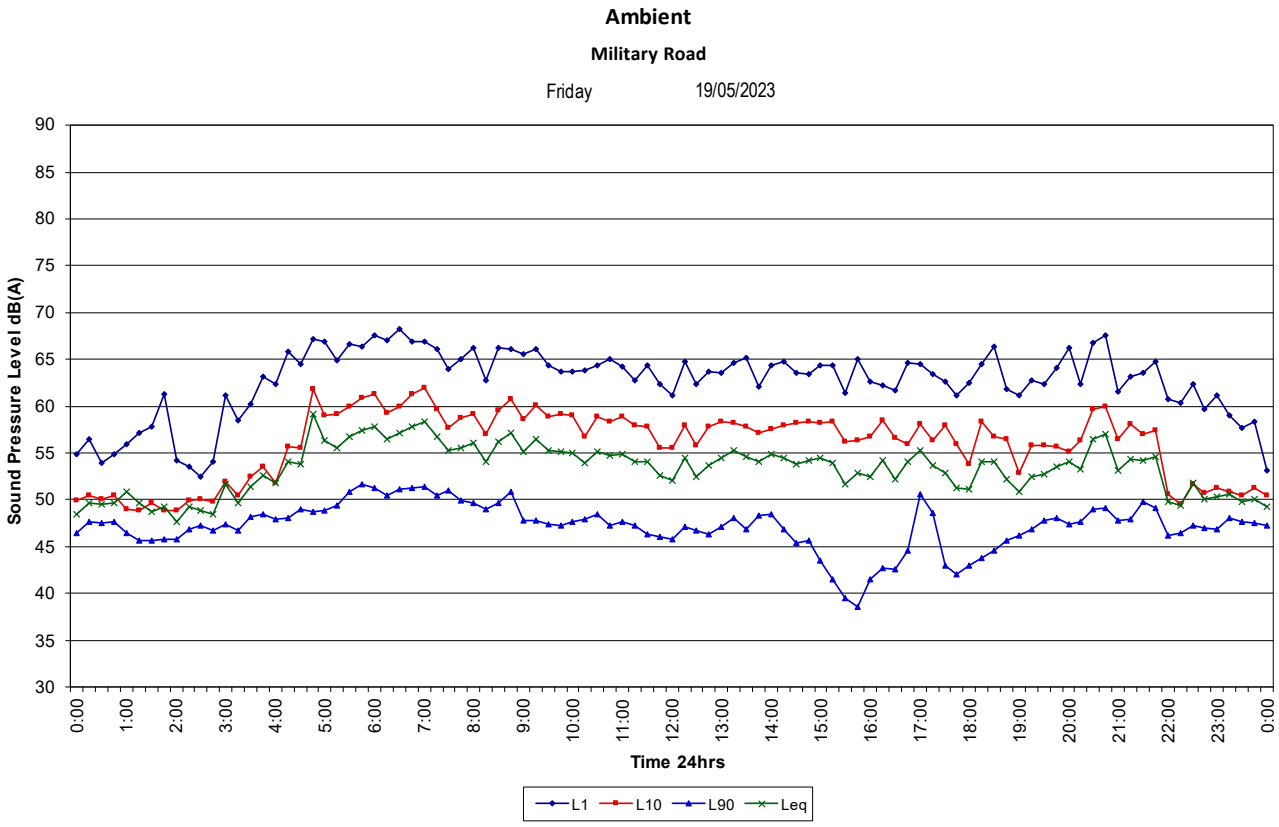

Ambient
Military Road
Sunday 14/05/2023
Sound Pressure Level dB(A)
Time 24hrs
L1 L10 L90 Leq

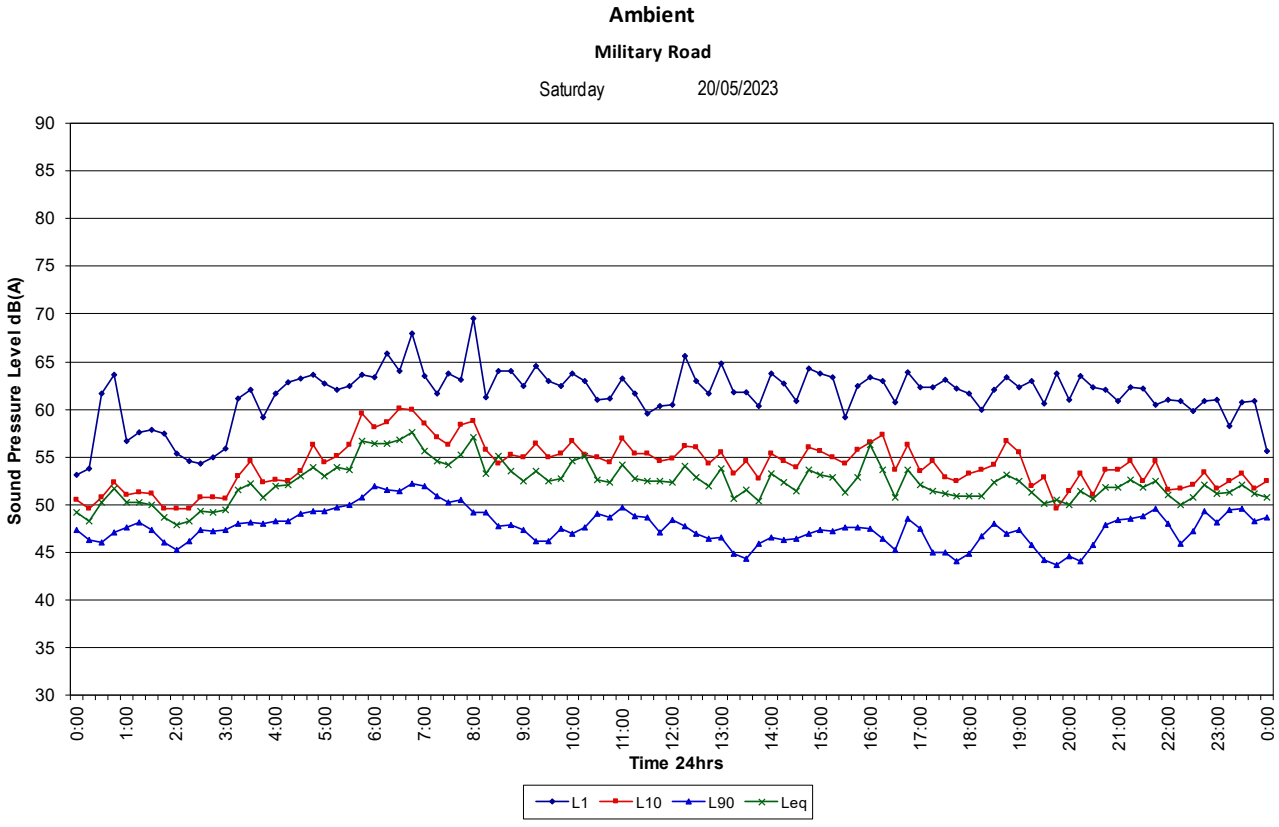

Ambient
Military Road
Monday 15/05/2023
Sound Pressure Level dB(A)
90
85
80
75
70
65
60
55
50
45
40
35
30
0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 0:00
Time 24hrs
L1 L10 L90 Leq

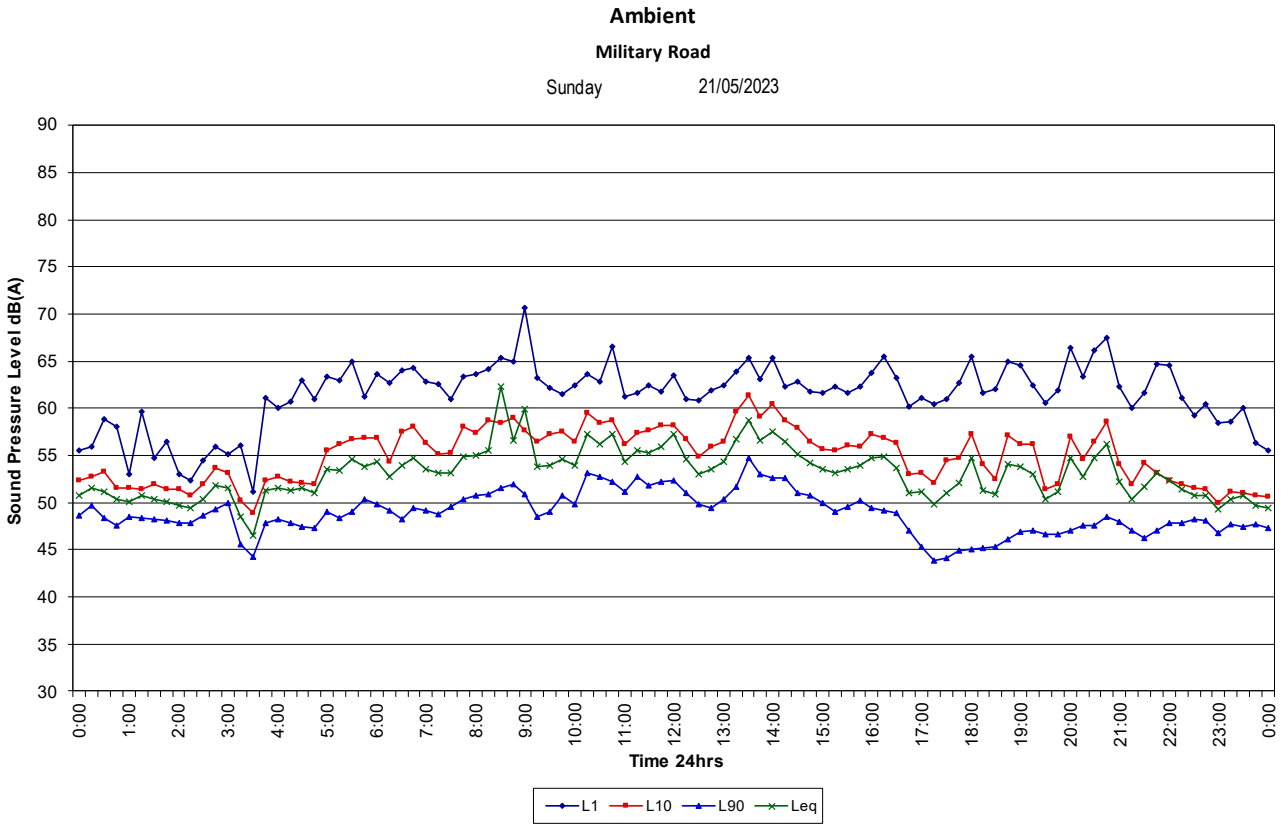

Ambient
Military Road
Tuesday 16/05/2023
Sound Pressure Level dB(A)
90
85
80
75
70
65
60
55
50
45
40
35
30
0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 0:00
Time 24hrs
L1 L10 L90 Leq

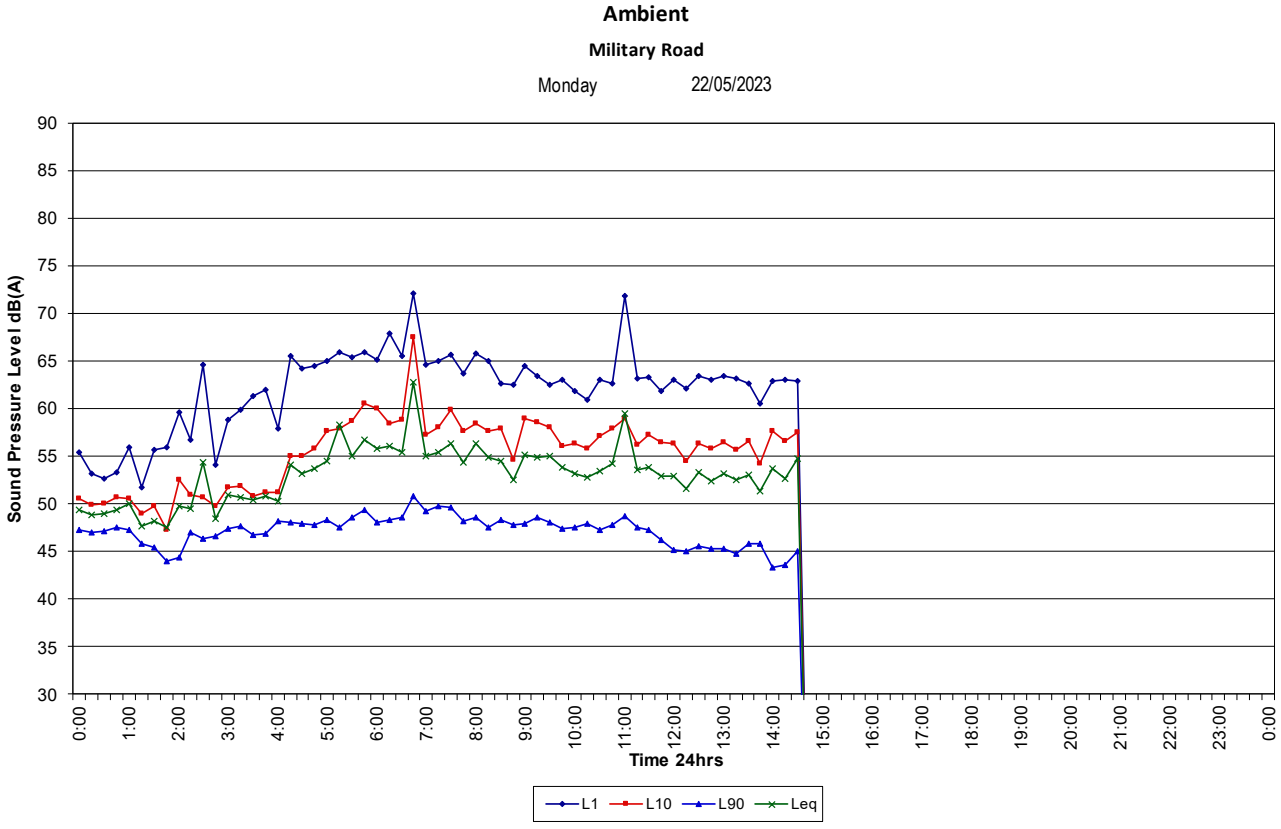

Ambient
Military Road
Wednesday 17/05/2023
Sound Pressure Level dB(A)
90
85
80
75
70
65
60
55
50
45
40
35
30
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
0:00
Time 24hrs
L1
L10
L90
Leq


Ambient
Military Road
Thursday 18/05/2023
Sound Pressure Level dB(A)
90
85
80
75
70
65
60
55
50
45
40
35
30
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
0:00
Time 24hrs
L1
L10
L90
Leq


Ambient
Military Road
Friday 19/05/2023
Sound Pressure Level dB(A)
90
85
80
75
70
65
60
55
50
45
40
35
30
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
0:00
Time 24hrs
L1
L10
L90
Leq


Ambient
Military Road
Saturday 20/05/2023
Sound Pressure Level dB(A)
90
85
80
75
70
65
60
55
50
45
40
35
30
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
0:00
Time 24hrs
L1
L10
L90
Leq


Ambient
Military Road
Sunday 21/05/2023
Sound Pressure Level dB(A)
90
85
80
75
70
65
60
55
50
45
40
35
30
0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 0:00
Time 24hrs
L1 L10 L90 Leq


Ambient
Military Road
Monday 22/05/2023
Sound Pressure Level dB(A)
90
85
80
75
70
65
60
55
50
45
40
35
30
0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 0:00
Time 24hrs
L1 L10 L90 Leq

Appendix C – Instrument Calibration Certification

Acoustic Research Labs Pty Ltd
Unit 36/14 Loyalty Rd
North Rocks NSW AUSTRALIA 2151
Ph: +61 2 9484 0800 A.B.N. 65 160 399 119
www.acousticresearch.com.au

Sound Level Meter
IEC 61672-3:2013

Calibration Certificate

Calibration Number C22650

Client Details	Acoustic Research Labs Pty Ltd 36/14 Loyalty Road North Rocks NSW 2151
Equipment Tested/ Model Number :	Rion NL-42EX
Instrument Serial Number :	00184109
Microphone Serial Number :	183895
Pre-amplifier Serial Number :	90631
Firmware Version :	2.0

Pre-Test Atmospheric Conditions		Post-Test Atmospheric Conditions	
Ambient Temperature :	24.7°C	**Ambient Temperature :**	24.8°C
Relative Humidity :	52.7%	**Relative Humidity :**	52.5%
Barometric Pressure :	99.98kPa	**Barometric Pressure :**	99.99kPa

Calibration Technician : Lucky Jaiswal **Secondary Check:** Dylan Selge
Calibration Date : 14 Oct 2022 **Report Issue Date :** 19 Oct 2022

Approved Signatory : Ken Williams

Clause and Characteristic Tested	Result	Clause and Characteristic Tested	Result
12: Acoustical Sig. tests of a frequency weighting	*Pass*	17: Level linearity incl. the level range control	*NA*
13: Electrical Sig. tests of frequency weightings	*Pass*	18: Toneburst response	*Pass*
14: Frequency and time weightings at 1 kHz	*Pass*	19: C Weighted Peak Sound Level	*Pass*
15: Long Term Stability	*Pass*	20: Overload Indication	*Pass*
16: Level linearity on the reference level range	*Pass*	21: High Level Stability	*Pass*

The sound level meter submitted for testing has successfully completed the class 2 periodic tests of IEC 61672-3:2013, for the environmental conditions under which the tests were performed.

However, no general statement or conclusion can be made about conformance of the sound level meter to the full requirements of IEC 61672-1:2013 because evidence was not publicly available, from an independent testing organisation responsible for pattern approvals, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2013 and because the periodic tests of IEC 61672-3:2013 cover only a limited subset of the specifications in IEC 61672-1:2013.

Uncertainties of Measurement -

Acoustic Tests		Environmental Conditions	
125Hz	*±0.13dB*	*Temperature*	*±0.1°C*
1kHz	*±0.13dB*	*Relative Humidity*	*±1.9%*
8kHz	*±0.14dB*	*Barometric Pressure*	*±0.014kPa*
Electrical Tests	*±0.13dB*		

All uncertainties are derived at the 95% confidence level with a coverage factor of 2.

This calibration certificate is to be read in conjunction with the calibration test report.

Acoustic Research Labs Pty Ltd is NATA Accredited Laboratory Number 14172.
Accredited for compliance with ISO/IEC 17025 - Calibration.

The results of the tests, calibrations and/or measurements included in this document are traceable to SI units.

NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration and inspection reports.

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Sound Level Meter
IEC 61672-3:2013
Calibration Certificate

Calibration Number C22466

Client Details	Acoustic Research Labs Pty Ltd 36/14 Loyalty Road North Rocks NSW 2151
Equipment Tested/ Model Number :	Rion NL-42EX
Instrument Serial Number :	00885460
Microphone Serial Number :	176935
Pre-amplifier Serial Number :	86282

Pre-Test Atmospheric Conditions		**Post-Test Atmospheric Conditions**	
Ambient Temperature :	23.5°C	**Ambient Temperature :**	23.8°C
Relative Humidity :	44.9%	**Relative Humidity :**	44.1%
Barometric Pressure :	100.14kPa	**Barometric Pressure :**	100.17kPa

Calibration Technician : Lucky Jaiswal
Secondary Check: Shaheen Boaz
Calibration Date : 13 Jul 2022
Report Issue Date : 15 Jul 2022

Approved Signatory : Juan Aguero

Clause and Characteristic Tested	Result	Clause and Characteristic Tested	Result
12: Acoustical Sig. tests of a frequency weighting	*Pass*	17: Level linearity incl. the level range control	*N/A*
13: Electrical Sig. tests of frequency weightings	*Pass*	18: Toneburst response	*Pass*
14: Frequency and time weightings at 1 kHz	*Pass*	19: C Weighted Peak Sound Level	*Pass*
15: Long Term Stability	*Pass*	20: Overload Indication	*Pass*
16: Level linearity on the reference level range	*Pass*	21: High Level Stability	*Pass*

The sound level meter submitted for testing has successfully completed the class 2 periodic tests of IEC 61672-3:2013, for the environmental conditions under which the tests were performed.

However, no general statement or conclusion can be made about conformance of the sound level meter to the full requirements of IEC 61672-1:2013 because evidence was not publicly available, from an independent testing organisation responsible for pattern approvals, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2013 and because the periodic tests of IEC 61672-3:2013 cover only a limited subset of the specifications in IEC 61672-1:2013.

Uncertainties of Measurement -

Acoustic Tests		Environmental Conditions	
125Hz	*±0.13dB*	*Temperature*	*±0.1°C*
1kHz	*±0.13dB*	*Relative Humidity*	*±1.9%*
8kHz	*±0.14dB*	*Barometric Pressure*	*±0.014kPa*
Electrical Tests	*±0.13dB*		

All uncertainties are derived at the 95% confidence level with a coverage factor of 2.

This calibration certificate is to be read in conjunction with the calibration test report.

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www.acousticresearch.com.au

Sound Level Meter
IEC 61672-3:2013
Calibration Certificate

Calibration Number C22436

Client Details	Acoustic Research Labs Pty Ltd 36/14 Loyalty Road North Rocks NSW 2151
Equipment Tested/ Model Number :	Rion NL-42EX
Instrument Serial Number :	00873126
Microphone Serial Number :	172453
Pre-amplifier Serial Number :	73502

Pre-Test Atmospheric Conditions		Post-Test Atmospheric Conditions	
Ambient Temperature :	25.7°C	**Ambient Temperature :**	23.5°C
Relative Humidity :	41.7%	**Relative Humidity :**	44.6%
Barometric Pressure :	100.17kPa	**Barometric Pressure :**	100.12kPa

Calibration Technician : Lucky Jaiswal
Secondary Check: Shaheen Boaz
Calibration Date : 13 Jul 2022
Report Issue Date : 15 Jul 2022

Approved Signatory : Juan Aguero

Clause and Characteristic Tested	Result	Clause and Characteristic Tested	Result
12: Acoustical Sig. tests of a frequency weighting	*Pass*	17: Level linearity incl. the level range control	*N/A*
13: Electrical Sig. tests of frequency weightings	*Pass*	18: Toneburst response	*Pass*
14: Frequency and time weightings at 1 kHz	*Pass*	19: C Weighted Peak Sound Level	*Pass*
15: Long Term Stability	*Pass*	20: Overload Indication	*Pass*
16: Level linearity on the reference level range	*Pass*	21: High Level Stability	*Pass*

The sound level meter submitted for testing has successfully completed the class 2 periodic tests of IEC 61672-3:2013, for the environmental conditions under which the tests were performed.

However, no general statement or conclusion can be made about conformance of the sound level meter to the full requirements of IEC 61672-1:2013 because evidence was not publicly available, from an independent testing organisation responsible for pattern approvals, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2013 and because the periodic tests of IEC 61672-3:2013 cover only a limited subset of the specifications in IEC 61672-1:2013.

Uncertainties of Measurement -

Acoustic Tests		Environmental Conditions	
125Hz	*±0.13dB*	*Temperature*	*±0.1°C*
1kHz	*±0.13dB*	*Relative Humidity*	*±1.9%*
8kHz	*±0.14dB*	*Barometric Pressure*	*±0.014kPa*
Electrical Tests	*±0.13dB*		

All uncertainties are derived at the 95% confidence level with a coverage factor of 2.

This calibration certificate is to be read in conjunction with the calibration test report.

Acoustic Research Labs Pty Ltd is NATA Accredited Laboratory Number 14172.
Accredited for compliance with ISO/IEC 17025 - Calibration.

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Sound Level Meter
IEC 61672-3:2013
Calibration Certificate

Calibration Number C22801

Client Details	Acoustic Research Labs Pty Ltd 36/14 Loyalty Road North Rocks NSW 2151
Equipment Tested/ Model Number :	Rion NL-42EX
Instrument Serial Number :	00810713
Microphone Serial Number :	199462
Pre-amplifier Serial Number :	10714
Firmware Version :	2.0

Pre-Test Atmospheric Conditions		Post-Test Atmospheric Conditions	
Ambient Temperature :	23.1°C	**Ambient Temperature :**	23.6°C
Relative Humidity :	42.5%	**Relative Humidity :**	41.9%
Barometric Pressure :	99.95kPa	**Barometric Pressure :**	99.89kPa

Calibration Technician : Lucky Jaiswal **Secondary Check:** Dylan Selge
Calibration Date : 13 Dec 2022 **Report Issue Date :** 14 Dec 2022

Approved Signatory : Ken Williams

Clause and Characteristic Tested	Result	Clause and Characteristic Tested	Result
12: Acoustical Sig. tests of a frequency weighting	*Pass*	17: Level linearity incl. the level range control	*N/A*
13: Electrical Sig. tests of frequency weightings	*Pass*	18: Toneburst response	*Pass*
14: Frequency and time weightings at 1 kHz	*Pass*	19: C Weighted Peak Sound Level	*Pass*
15: Long Term Stability	*Pass*	20: Overload Indication	*Pass*
16: Level linearity on the reference level range	*Pass*	21: High Level Stability	*Pass*

The sound level meter submitted for testing has successfully completed the class 2 periodic tests of IEC 61672-3:2013, for the environmental conditions under which the tests were performed.

However, no general statement or conclusion can be made about conformance of the sound level meter to the full requirements of IEC 61672-1:2013 because evidence was not publicly available, from an independent testing organisation responsible for pattern approvals, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2013 and because the periodic tests of IEC 61672-3:2013 cover only a limited subset of the specifications in IEC 61672-1:2013.

Uncertainties of Measurement -

Acoustic Tests		Environmental Conditions	
125Hz	*±0.13dB*	*Temperature*	*±0.1°C*
1kHz	*±0.13dB*	*Relative Humidity*	*±1.9%*
8kHz	*±0.14dB*	*Barometric Pressure*	*±0.014kPa*
Electrical Tests	*±0.13dB*		

All uncertainties are derived at the 95% confidence level with a coverage factor of 2.

This calibration certificate is to be read in conjunction with the calibration test report.

Acoustic Research Labs Pty Ltd is NATA Accredited Laboratory Number 14172.
Accredited for compliance with ISO/IEC 17025 - Calibration.

The results of the tests, calibrations and/or measurements included in this document are traceable to SI units.

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www.acousticresearch.com.au

Sound Level Meter
IEC 61672-3:2013
Calibration Certificate

Calibration Number C22365

Client Details	Rodney Stevens Acoustics Pty Ltd PO Box 522 Wahroonga NSW 2076
Equipment Tested/ Model Number :	Rion NL-42EX
Instrument Serial Number :	00546394
Microphone Serial Number :	172450
Pre-amplifier Serial Number :	46606

Pre-Test Atmospheric Conditions		**Post-Test Atmospheric Conditions**	
Ambient Temperature :	24.3°C	**Ambient Temperature :**	24.8°C
Relative Humidity :	37.8%	**Relative Humidity :**	37.8%
Barometric Pressure :	100.89kPa	**Barometric Pressure :**	100.81kPa

Calibration Technician :	Lucky Jaiswal	**Secondary Check:**	Shaheen Boaz
Calibration Date :	2 Jun 2022	**Report Issue Date :**	6 Jun 2022

Approved Signatory : Ken Williams

Clause and Characteristic Tested	Result	Clause and Characteristic Tested	Result
12: Acoustical Sig. tests of a frequency weighting	*Pass*	17: Level linearity incl. the level range control	*N/A*
13: Electrical Sig. tests of frequency weightings	*Pass*	18: Toneburst response	*Pass*
14: Frequency and time weightings at 1 kHz	*Pass*	19: C Weighted Peak Sound Level	*Pass*
15: Long Term Stability	*Pass*	20: Overload Indication	*Pass*
16: Level linearity on the reference level range	*Pass*	21: High Level Stability	*Pass*

The sound level meter submitted for testing has successfully completed the class 2 periodic tests of IEC 61672-3:2013, for the environmental conditions under which the tests were performed.

However, no general statement or conclusion can be made about conformance of the sound level meter to the full requirements of IEC 61672-1:2013 because evidence was not publicly available, from an independent testing organisation responsible for pattern approvals, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2013 and because the periodic tests of IEC 61672-3:2013 cover only a limited subset of the specifications in IEC 61672-1:2013.

Uncertainties of Measurement -

Acoustic Tests		Environmental Conditions	
125Hz	*±0.13dB*	*Temperature*	*±0.1°C*
1kHz	*±0.13dB*	*Relative Humidity*	*±1.9%*
8kHz	*±0.14dB*	*Barometric Pressure*	*±0.014kPa*
Electrical Tests	*±0.13dB*		

All uncertainties are derived at the 95% confidence level with a coverage factor of 2.

This calibration certificate is to be read in conjunction with the calibration test report.

Acoustic Research Labs Pty Ltd is NATA Accredited Laboratory Number 14172.
Accredited for compliance with ISO/IEC 17025 - Calibration.

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North Rocks NSW AUSTRALIA 2151
Ph: +61 2 9484 0800 A.B.N. 65 160 399 119
www.acousticresearch.com.au

Sound Level Meter
IEC 61672-3:2013
Calibration Certificate

Calibration Number C22691

Client Details	Acoustic Research Labs Pty Ltd 36/14 Loyalty Road North Rocks NSW 2151
Equipment Tested/ Model Number :	Rion NL-42EX
Instrument Serial Number :	00345934
Microphone Serial Number :	151202
Pre-amplifier Serial Number :	36132
Firmware Version :	2.0

Pre-Test Atmospheric Conditions		Post-Test Atmospheric Conditions	
Ambient Temperature :	24.8°C	**Ambient Temperature :**	24°C
Relative Humidity :	38.9%	**Relative Humidity :**	39.9%
Barometric Pressure :	99.23kPa	**Barometric Pressure :**	99.2kPa

Calibration Technician :	Lucky Jaiswal	**Secondary Check:**	Dylan Selge
Calibration Date :	28 Oct 2022	**Report Issue Date :**	2 Nov 2022

Approved Signatory : Ken Williams

Clause and Characteristic Tested	Result	Clause and Characteristic Tested	Result
12: Acoustical Sig. tests of a frequency weighting	*Pass*	17: Level linearity incl. the level range control	*N/A*
13: Electrical Sig. tests of frequency weightings	*Pass*	18: Toneburst response	*Pass*
14: Frequency and time weightings at 1 kHz	*Pass*	19: C Weighted Peak Sound Level	*Pass*
15: Long Term Stability	*Pass*	20: Overload Indication	*Pass*
16: Level linearity on the reference level range	*Pass*	21: High Level Stability	*Pass*

The sound level meter submitted for testing has successfully completed the class 2 periodic tests of IEC 61672-3:2013, for the environmental conditions under which the tests were performed.

However, no general statement or conclusion can be made about conformance of the sound level meter to the full requirements of IEC 61672-1:2013 because evidence was not publicly available, from an independent testing organisation responsible for pattern approvals, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2013 and because the periodic tests of IEC 61672-3:2013 cover only a limited subset of the specifications in IEC 61672-1:2013.

Uncertainties of Measurement -

Acoustic Tests		Environmental Conditions	
125Hz	*±0.13dB*	*Temperature*	*±0.1°C*
1kHz	*±0.13dB*	*Relative Humidity*	*±1.9%*
8kHz	*±0.14dB*	*Barometric Pressure*	*±0.014kPa*
Electrical Tests	*±0.13dB*		

All uncertainties are derived at the 95% confidence level with a coverage factor of 2.

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