

6 Victoria St, Henley

Noise and Vibration Impact Assessment

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TABLE OF CONTENTS

1	INTRODUCTION	4
1.1	DETAILED PROPOSAL DESCRIPTION	4
2	SITE DESCRIPTION	4
3	REFERENCED DOCUMENTS & GUIDELINES.....	5
4	DESCRIPTION OF PROPOSAL.....	6
4.1	NEAREST SENSITIVE RECEIVERS.....	6
5	AMBIENT NOISE MONITORING.....	8
5.1	NOISE DESCRIPTORS	8
5.2	UNATTENDED LONG TERM NOISE MONITORING	9
5.2.1	Equipment Used.....	9
5.2.2	Locations and Period Monitored.....	9
5.2.3	Calculated Noise Levels.....	9
5.2.4	Rating Background Noise Levels	10
5.3	ATTENDED SHORT TERM NOISE MONITORING.....	10
5.3.1	Equipment Used.....	10
5.3.2	Locations Monitored	11
5.3.3	Attended measurement results summary.....	11
6	TRAFFIC NOISE INTRUSION ASSESSMENT.....	11
6.1	TRAFFIC NOISE INTRUSION CRITERIA.....	11
6.1.1	Hunters Hill Development Control Plan 2013.....	11
6.1.2	'State Environmental Planning Policy (T&I SEPP) Transport & Infrastructure 2021 ..	12
6.1.3	NSW Department of Planning – <i>Development near Rail Corridors or Busy Roads – Interim Guideline</i>	12
6.1.4	Summary of Noise Intrusion Criteria.....	13
6.2	COMPLYING CONSTRUCTIONS.....	13
6.2.1	Glazed Windows and Doors	14
6.2.2	External Wall Construction.....	15
6.2.3	External Roof & Ceiling Construction.....	15
6.3	NATURAL VENTILATION REQUIREMENTS.....	16
7	NOISE EMISSION ASSESSMENT.....	16
7.1	NOISE EMISSION CRITERIA.....	16
7.1.1	NSW EPA Noise Policy for Industry (NPfI) 2017	16
7.1.2	Summarised Noise Emission Requirements	18
7.2	ASSESSMENT OF NOISE EMISSIONS.....	18
7.2.1	Mechanical Plant Noise Emissions (In Principle).....	18
8	CONSTRUCTION NOISE AND VIBRATION IMPACTS.....	19
8.1.1	NSW EPA Interim Construction Noise Guidelines (2009).....	19
8.1.2	German Standard DIN 4150-3 (2016-12)	20
8.1.3	NSW EPA – 'Assessing Vibration: A Technical Guideline' ("AVTG") February 2006 ..	21
8.2	PRELIMINARY ASSESSMENT OF CONSTRUCTION NOISE AND VIBRATION IMPACTS.....	21
9	CONCLUSION.....	22
	APPENDIX – UNATTENDED NOISE MONITORING GRAPHS.....	23

1 INTRODUCTION

This noise and vibration impact assessment has been prepared on behalf of Health Infrastructure NSW to inform a Review of Environmental Factors (REF) for the demolition of existing structures, construction of a health services facility, and associated works at 6 Victoria Road, Henley.

1.1 DETAILED PROPOSAL DESCRIPTION

The proposed works include:

- demolition of existing structures;
- tree removal;
- construction of three buildings including a two-storey health services facility comprising patient rooms, and two one story buildings for communal areas and staffrooms respectively;
- ancillary car parking;
- landscaping;
- stormwater, services/utilities and ancillary works.

2 SITE DESCRIPTION

The subject site is located at 6 Victoria Road, Henley at the northernmost portion of the lot legally described as 880 in DP 832717. The development site is positioned between Victoria Road and Crown Close, within the former Gladesville Hospital site. It is irregular in shape with a total area of approximately 1,303m². The site currently accommodates a single storey brick building and associated carparking. The site is accessible via Crown Close, which connects to Victoria Road via Crown Street. Mature trees are located along the northern and western site boundary, and adjacent to the existing building.

The former Gladesville Hospital Campus is currently being used for a range of NSW Health services while some buildings are leased to external organisations. Other surrounding land uses include medium density residential flat buildings to the north (across Victoria Road), low density residential uses to the south along Crown Street beyond the former hospital boundaries. A public reserve exists immediately east across Crown Street, with a childcare centre is located approximately 150m to the southeast.



Figure 1. Subject development site indicated in red (source: Six maps 2026)

3 REFERENCED DOCUMENTS & GUIDELINES

Acoustic Logic has been engaged to assess noise and vibration impacts associated with the proposed health services facility to be located at 6 Victoria St, Henley.

This report will assess potential noise impacts associated with the following:

- Traffic noise impacts from surrounding roads including Victoria Rd.
- Mechanical plant noise emissions (in principle).
- Construction noise and vibration impacts

The subject site and local context are indicated in Figure 2.

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

- Architectural drawings provided by Kennedy Associates Architects dated 2nd December 2025
- State Environmental Planning Policy (I&TSEPP) Infrastructure & Transport 2021.
- NSW Department of Planning Document – ‘Development Near Rail Corridors and Busy Roads’ (“DNRCBR”) 2008.
- Hunters Hill Council Development Control Plan (DCP) 2013.
- NSW Environmental Protection Authority (EPA) document – ‘Noise Policy for Industry’ (“NPfI”) October 2017.
- NSW Department of Environment and Heritage, Environmental Protection Authority document – *Interim Construction Noise Guidelines* 2009.
- NSW Environmental Protection Authority (EPA) document – ‘Assessing Vibration: A Technical Guideline’ (“AVTG”) February 2006
- German Standard DIN 4150-3 (2016-12) – ‘Vibration in Buildings – Part 3: Effects on Structures’

4 DESCRIPTION OF PROPOSAL

The site is located at 6 Victoria St, Henley and the development will comprise of a health services facility.

4.1 NEAREST SENSITIVE RECEIVERS

The following table lists the nearest sensitive receivers surrounding the site. An aerial photo of the site indicating nearby noise sensitive receivers and measurement locations is presented in Figure 2.

Table 1 – Sensitive Receivers

Receiver (Refer Figure 1)	Land Use	Comment
R1	Residential	Multi-storey residentials units located north of project site
R2	Residential	Single storey residentials developments located south-west of project site
C1	Commercial	Single storey commercial development located east of project site
E1	Childcare	Single storey child care development located south-east of project site
H1	Healthcare	Gladesville Hospital, west of project site



Figure 2 Site Plan Showing Monitoring Locations and Surrounding Land Uses/Receivers

● - Unattended Noise Monitoring Location	■ - Residential
● - Attended Noise Monitoring Location	■ - Commercial
■ - Healthcare	■ - Site

5 AMBIENT NOISE MONITORING

Monitoring has been undertaken to obtain the following data:

- Background noise levels at the surrounding residential properties.
- Traffic noise levels from nearby busy roads including Victoria Road.

Figure 1 above shows the monitoring locations used.

5.1 NOISE DESCRIPTORS

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

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

The principal measurement parameters obtained from the data are:

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

L₉₀ – This is commonly used as a measure of the background noise level as it represents the noise level heard in the typical, quiet periods during the measurement interval. The **L₉₀** parameter is used to set noise emission criteria for potentially intrusive noise sources since the disturbance caused by a noise source will depend on how audible it is above the pre-existing noise environment, particularly during quiet periods, as represented by the **L₉₀** level.

L₁₀ is used in some guidelines to measure noise produced by an intrusive noise source since it represents the average of the loudest noise levels produced at the source. Typically, this is used to assess noise from licenced venues.

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

L₁ is sometimes used in place of **L_{max}** to represent a typical noise level from a number of high level, short term noise events.

5.2 UNATTENDED LONG TERM NOISE MONITORING

5.2.1 Equipment Used

Unattended noise monitoring was conducted using the following monitors:

- Rion NL-42 (Type 2)

The monitoring was continuous, with statistical noise levels recorded at 15-minute intervals throughout the monitoring period. Measurements were taken on "A" frequency weighting and fast time response.

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

5.2.2 Locations and Period Monitored

One unattended Rion type noise monitor was located along the northern boundary of the site with a 180 degree view of Victoria Road. This was to obtain traffic noise measurements. Refer to Figure 1 for detailed location. A second unattended monitor was placed along Crown Close on receiver C1 eastern boundary. This second unattended noise monitor was to obtain background noise levels at the site. Both locations were monitored between the 5th and the 12th December 2025.

5.2.3 Calculated Noise Levels

Ambient and rating background levels have been determined from the long term, unattended noise monitoring data based on the methodology in the Noise Policy for Industry Fact Sheet B. Appendix 1 contains the data collected, and the periods identified as being affected by adverse weather conditions or extraneous noise (as defined by NPfI Fact Sheet B).

Weather data was obtained from records provided by the Bureau of Meteorology for the weather station located at Terrey Hills.

The NPfI day, evening and night periods are:

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

Representative traffic noise levels have been presented in accordance with the EPA Road Noise Policy.

5.2.4 Rating Background Noise Levels

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

Table 2 – NPfI Rating Background Noise Levels

Location	Assessment Background Noise Level (dB(A) L ₉₀)*		
	Day	Evening	Night
Victoria Road Approx. 5m from kerb 180 degree view of road	59	59*	39
Crown Close Approx. 5m from kerb	53	53*	40

*Subsequent periods with higher RBL's then previous periods are to be adjusted down in line with the previous period as per the EPA NPfI.

5.2.4.1 Ambient Noise level

The data for the day and night periods as defined in the ISEPP have been processed using the guidelines in the EPA Road Noise Policy to determine the ambient noise levels at the monitoring locations.

Table 3 –Measured Traffic Noise

Monitoring Location	Time of Day	Ambient Noise Level	Ambient Noise Level (Worst 1 Hour)
Victoria Road Approx. 5m from kerb 180 degree view of road	Daytime (7am-10pm) dB(A) L _{Aeq}	70 dB(A) _(15-hour)	71 dB(A) _(1hour)
	Night time (10pm-7am) dB(A) L _{Aeq}	67 dB(A) _(9-hour)	70 dB(A) _(1hour)
Crown Close Approx. 5m from kerb	Daytime (7am-10pm) dB(A) L _{Aeq}	64 dB(A) _(15-hour)	65 dB(A) _(1hour)
	Night time (10pm-7am) dB(A) L _{Aeq}	61 dB(A) _(9-hour)	65 dB(A) _(1hour)

5.3 ATTENDED SHORT TERM NOISE MONITORING

5.3.1 Equipment Used

Attended noise monitoring was conducted using a Norsonic Nor140 sound level meter.

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

5.3.2 Locations Monitored

Attended noise measurements were conducted by this office to gain a traffic noise spectrum of Victoria Road and Crown Close.

5.3.3 Attended measurement results summary

Table 4 Traffic Noise Level Summary

Location	Measured Level
Victoria Road (See Figure 1) 2m from kerb 180° view of the road	71 dB(A) _(15mins)
Crown Close (See Figure 1) 2m from kerb 180° view of the road	57 dB(A) _(15mins)

6 TRAFFIC NOISE INTRUSION ASSESSMENT

6.1 TRAFFIC NOISE INTRUSION CRITERIA

A traffic noise intrusion assessment has been conducted based on the requirements of the following traffic noise criteria and standards.

6.1.1 Hunters Hill Development Control Plan 2013

"3.5.4 Acoustic Privacy

Controls

Site planning and the design of new developments should comply with the following provisions:

(a) Acoustic privacy for all dwellings should be maximised:

(i) Rooms which are sensitive to noise such as bedrooms should be located away from noise sources.

(ii) Bedrooms should not be located adjacent to living rooms or garages that belong to another dwelling.

(iii) Balconies and related building elements should be located and designed to minimise the penetration of noise into any dwelling.

(iv) Dwellings that would be located close to high noise source such as a busy road or airport flight path should be protected by appropriate shielding or by an appropriate layout which protects noise sensitive rooms.

(v) Layout and construction of new dwellings should conform to relevant guidelines for noise and sound transmission.

Note. Relevant guidelines for acoustic privacy are provided by the Building Code of Australia, Australian Standards, and by guidelines that support State Environmental Planning Policy (Infrastructure) 2007."

It is noted that the State Environmental Planning Policy (Infrastructure) 2007 has been superseded by the State Environmental Planning Policy (T&ISEPP) Transport & Infrastructure 2021, with this referred to below.

6.1.2 'State Environmental Planning Policy (T&ISEPP) Transport & Infrastructure 2021

Considering Victoria Road currently generates an AADT of more than 20,000, clause 2.120 of the *T&ISEPP* has been applied, which requires the following:

"This clause applies to development for any of the following purposes that is on land or adjacent to the road corridor for a freeway, a tollway or transit way or any other road with an annual average daily traffic volume of more than 20,000 vehicles (based on the traffic volume data published on the website of the RTA) and that the consent authority considers is likely to be adversely affected by road noise or vibration:

- (a) A building for residential use,*
- (b) A place of public worship,*
- (c) A hospital,*
- (d) An education establishment or childcare centre.*

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

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

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

In conjunction with clause 2.120 of the *T&ISEPP*, the development will need to ensure compliance with the *DNRCBR* guideline which states the following:

"The following provides an overall summary of the assessment procedure to meet the requirements of clauses 87 and 102 of the Infrastructure SEPP. The procedure covers noise at developments for both road and rail.

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

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

6.1.4 Summary of Noise Intrusion Criteria

This assessment shall be conducted in accordance with the most stringent criteria specified above, which is summarised below:

Table 5 Internal Noise Level Criteria

Location	Time Period	Criteria
Wards/Patient Rooms	Night (10pm-7am)	35 dB(A) $L_{eq(9\text{-hour})}$
Other Noise Sensitive Areas	Any Time	40 dB(A) $L_{eq(15\text{-hour})}$

6.2 COMPLYING CONSTRUCTIONS

External noise intrusions into the proposed development were assessed using the measured traffic, rail and aircraft noise levels reported above as a basis.

Calculations were performed considering the orientation of windows, the total area of glazing, facade transmission loss and room sound absorption characteristics. In this way the likely interior noise levels can be predicted. Acoustic treatment required to ensure compliance with the assessment criteria are detailed in this section.

Internal noise levels will primarily be as a result of noise transfer through the windows and doors as these are relatively light building elements that offer less resistance to the transmission of sound. Noise transfer through the masonry elements will not be significant and need not be considered further.

The constructions necessary to achieve the noise levels are detailed below. The predicted noise levels have been based on the expected level and spectral characteristics of the external noise, the area of building elements exposed to traffic noise, the absorption characteristics of the rooms and the noise reduction performance of the building elements.

6.2.1 Glazed Windows and Doors

The following constructions are recommended to comply with the project noise objectives. Aluminium framed/sliding glass doors and windows will be satisfactory provided they meet the following criteria. All external windows and doors listed are required to be fitted with Q-Ion type acoustic seals. (**Mohair Seals are unacceptable**).

Thicker glazing may be required for structural, safety or other purposes. Where it is required to use thicker glazing than scheduled, this will also be acoustically acceptable.

It is recommended that only window systems having test results indicating compliance with the required ratings obtained in a certified laboratory be used where windows with acoustic seals have been recommended.

In addition to complying with the minimum scheduled glazing thickness, the R_w rating of the glazing fitted into open-able frames and fixed into the building opening should not be lower than the values listed in Table 7 for all areas. Where nominated, this will require the use of acoustic seals around the full perimeter of open-able frames and the frame will need to be sealed into the building opening using a flexible sealant.

Standard room sizes and associated assumed glazing areas have been adopted for the below recommendations as plans are still being completed.

Table 6 Minimum Glazing Constructions

Applicable Patient Unit	Area	Glazing Thickness	Acoustic Seals
U01, U05, U02, U06	Patient Room	10mm float	Yes
	Kitchen	10mm float	
All other	Patient Room	6.38mm laminate	
	Kitchen	6.38mm laminate	

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

Glazing Assembly	Minimum R_w of Installed Window
6.38mm laminated	31
10mm float	33

Where single glazing has been recommended in Table 6, the following IGU's can be used in place of the tabled single glazing.

Table 8 – Equivalent IGU Systems

Single Glazing Assembly	Equivalent IGU	Minimum R_w / $R_w + C_{tr}$ of Installed IGU Windows
6.38mm laminated	8/16AG/8 OR 6/12/6.38	35 / 31
10mm float	6/12AG/10	37/32

6.2.2 External Wall Construction

External walls that are of masonry construction are acoustically acceptable without any further treatment.

In the event any penetrations are required through the external lining of any of the system for other building services, gaps should be filled with acoustic sealant to ensure compliance with acoustic criteria stipulated within this report.

Should light weight constructions be utilised a detailed analysis of the wall construction should be completed by an appropriately qualified acoustic consultant.

6.2.3 External Roof & Ceiling Construction

External roofing with masonry construction is acoustically acceptable without any further treatment.

In the event any penetrations are required through the external lining of any of the system for other building services, gaps should be filled with acoustic sealant to ensure compliance with acoustic criteria stipulated within this report.

Should light weight constructions be utilised a detailed analysis of the roof construction should be completed by an appropriately qualified acoustic consultant.

6.3 NATURAL VENTILATION REQUIREMENTS

With respect to natural ventilation of the dwelling, the NSW Department of Planning document "Development near Busy Roads and Rail Corridors - Interim Guideline" dictates that:

"If internal noise levels with windows or doors open exceed the criteria by more than 10dB(A), the design of the ventilation for these rooms should be such that occupants can leave windows closed, if they so desire, and also to meet the ventilation requirements of the Building Code of Australia."

With windows open, the allowable internal noise goal is permitted to be 10dB(A) higher than when the windows are closed (i.e. – allowable level in patient rooms becomes 45dB(A), and 50dB(A) in other sensitive areas).

Analysis of the data gathered from site indicates that compliance with the DNRCBR 'windows open' noise levels are not able to be complied with in all units with windows open to 5% of floor area.

Where any supplementary ventilation system is to be installed, this should be acoustically designed to ensure that the acoustic performance of the acoustic treatments outlined above is not reduced and does not exceed EPA and Council criteria for internal noise levels and noise emission to nearby properties.

7 NOISE EMISSION ASSESSMENT

The primary sources of noise emission from the site would be from mechanical plant which would generally consist of patient room air conditioning condensing units, bathroom ventilation fans (which would typically be small fans located internally) and miscellaneous ventilation fans.

7.1 NOISE EMISSION CRITERIA

The noise emission criteria from the project site shall comply with the requirements of the following documents.

7.1.1 NSW EPA Noise Policy for Industry (NPfI) 2017

The Noise Policy for Industry (NPfI) provides a methodology for assessing the need for noise mitigation:

- Determine project specific "trigger" levels.
- Predict noise emissions to surrounding properties and assess against the trigger levels.
- Noise mitigation should be assessed when the predicted noise emissions exceed the trigger levels.

In this assessment, the trigger levels determined using the NPfI will be adopted as assessment criteria for permanent plant and equipment.

Project specific noise "trigger" levels are determined based on the land use impacted, ambient noise environment and the time of day.

The EPA NPfI has three sets of criteria which are all required to be satisfied, namely "intrusiveness", "amenity" and "maximum noise levels". Intrusiveness and amenity are generally assessed at the most affected part of the property, or at the balcony or façade of an apartment or upper level of residence. Maximum noise levels are generally assessed outside bedroom windows.

The derivation of the project specific trigger levels is discussed below.

7.1.1.1 Project Intrusiveness Noise Levels

The guideline is intended to limit the audibility of noise emissions at residential receivers only. Noise emissions measured using the L_{eq} descriptor should not exceed the background noise level by more than 5dB(A). Where applicable, the intrusive noise level should be penalised (increased) to account for any annoying characteristics such as tonality (in accordance with Fact Sheet C of the Policy).

Intrusiveness criteria have been determined using the background noise levels in Section 4 and are summarised in the following table.

Table 9 - Project Noise Intrusiveness Levels

Location	Period/Time	Assessment Background Noise Level dB(A) L_{90}	Intrusiveness Noise Emission Trigger Level dB(A) $L_{eq(15min)}$
R1	Day (7am-6pm)	59	64
	Evening (6pm-10pm)	59	64
	Night (10pm-7am)	39	44
R2	Day (7am-6pm)	53	58
	Evening (6pm-10pm)	53	58
	Night (10pm-7am)	40	45

7.1.1.2 Project Amenity Noise Levels

The guideline is intended to limit the absolute noise level from all "industrial" noise sources so that it is consistent with the general environment.

Table 2.2 of the NPfl sets out acceptable noise levels for various land uses.

There are 3 categories for residential receivers - rural, suburban, urban. This subject site is most appropriately categorised as Urban.

Categories for non-residential uses are also indicated in the table.

Generally, the NPfl requires project amenity noise levels to be calculated in the following manner:

$$\text{Amenity } L_{Aeq, 15min} = \text{Recommended Amenity Noise Level} - 5 \text{ dB(A)} + 3 \text{ dB(A)}$$

The applicable amenity goals are provided in the following table.

Table 10 - Project Amenity Noise Levels

Type of Receiver	Time of day	Recommended Noise Level dB(A) _{Leq(period)}	Project Amenity Noise Level dB(A) _{Leq(15 minute)}
Residential – Urban	Day (7am-6pm)	60	58
	Evening (6pm-10pm)	50	48
	Night (10pm-7am)	45	43

7.1.2 Summarised Noise Emission Requirements

Summarised project trigger levels are in bold below, being the lower of the intrusiveness noise emission trigger level and the amenity noise level.

Table 11 – EPA NPfI Project Noise Trigger Level (PNTL)

Receiver	Time Period	Assessment Background Noise Level dB(A) _{L₉₀}	Intrusiveness Noise Emission Trigger Level dB(A) _{L_{eq(15min)}}	Project Amenity Noise Level dB(A) _{Leq(15 minute)}
R1	Day	59	64	58
	Evening	59	64	48
	Night	39	44	43
R2	Day	53	58	58
	Evening	53	58	48
	Night	40	45	43

7.2 ASSESSMENT OF NOISE EMISSIONS

An assessment of noise emissions from the proposed development has been conducted to ensure that the amenity of nearby land users is not adversely affected.

Noise emissions from mechanical plant will be assessed in principle.

7.2.1 Mechanical Plant Noise Emissions (In Principle)

Detailed design and selection of plant has not been undertaken but would generally consist of apartment air conditioning condensing units, bathroom ventilation fans (which would typically be small fans located internally) and miscellaneous ventilation fans.

All plant would be selected to meet the noise levels required by the noise limits indicated above, and where required would be treated by enclosing the equipment, treating ducting, acoustic louvres, as required to meet limit noise emissions.

Designers should have regard for the fact that allowances should be made in respect of plant locations to minimise impacts on sensitive receivers and to provide sufficient space to incorporate treatment to plant areas to meet the above guidelines.

8 CONSTRUCTION NOISE AND VIBRATION IMPACTS

A preliminary assessment of construction noise and vibration impacts produced by the development on nearby sensitive receivers has been conducted based on the requirements of the following documents;

- NSW Department of Environment and Heritage, Environmental Protection Authority document – *Interim Construction Noise Guidelines* 2009.
- NSW Environmental Protection Authority (EPA) document – ‘*Assessing Vibration: A Technical Guideline*’ (“AVTG”) February 2006
- German Standard DIN 4150-3 (2016-12) – ‘Vibration in Buildings – Part 3: Effects on Structures’

8.1.1 NSW EPA Interim Construction Noise Guidelines (2009)

EPA guidelines adopt differing strategies for noise control depending on the predicted noise level at the nearest residences:

- *“Noise affected” level.* Where construction noise is predicted to exceed the “noise effected” level at a nearby residence, the proponent should take reasonable/feasible work practices to ensure compliance with the “noise effected level”. For residential properties, the “noise effected” level occurs when construction noise exceeds ambient levels by more than:
 - 10dB(A)_{Leq(15min)} for work during standard construction hours (7am-6pm Monday to Friday and 8am to 1pm on Saturdays) and
 - 5dB(A)_{Leq(15min)} for work outside of standard construction hours.
- *“Highly noise affected level”.* Where noise emissions are such that nearby properties are “highly noise effected”, noise controls such as respite periods should be considered. For residential properties, the “highly noise effected” level occurs when construction noise exceeds 75dB(A)_{Leq(15min)} at nearby residences.

In addition to the above goals for residential receivers, the NSW EPA Interim Construction Noise Guideline nominates a management level of 70dB(A) _{Leq(15min)} at commercial receiver facades (typical office, retail). A summary of noise emission goals for standard hours of construction work are presented in Table 15.

Table 15 – Construction Noise Emission Goals

Location	Rating Background Noise Level	“Noise Affected” Level - dB(A) _{Leq(15min)}	“Highly Noise Affected” Level - dB(A) _{Leq(15min)}
Residences – R1	59	69	75
Residences – R2	53	63	75
Commercial	N/A	70	N/A

8.1.2 German Standard DIN 4150-3 (2016-12)

German Standard DIN 4150-3 (2016-12) provides vibration velocity guideline levels for use in evaluating the effects of vibration on structures. The criteria presented in DIN 4150-3 (2016-12) are presented in Table 16.

It is noted that the peak velocity is the value of the maximum of any of the three orthogonal component particle velocities as measured at the foundation, and the maximum levels measured in the x- and y-horizontal directions in the plane of the floor of the uppermost storey.

Nearby receivers would be classified as a type 2 structure.

Table 16 – DIN 4150-3 (2016-12) Safe Limits for Building Vibration

TYPE OF STRUCTURE		PEAK PARTICLE VELOCITY (mms ⁻¹)				
		At Foundation at a Frequency of			Plane of Floor of Uppermost Storey	Floor Slabs, Vertical Direction
		< 10Hz	10Hz to 50Hz	50Hz to 100Hz	All Frequencies	All Frequencies
1	Buildings used in commercial purposes, industrial buildings, and buildings of similar design	20	20 to 40	40 to 50	40	20
2	Dwellings and buildings of similar design and/or use	5	5 to 15	15 to 20	15	20
3	Structures that because of their particular sensitivity to vibration, do not correspond to those listed in Lines 1 or 2 and have intrinsic value (e.g., buildings that are under a preservation order)	3	3 to 8	8 to 10	8	20

8.1.3 NSW EPA – ‘Assessing Vibration: A Technical Guideline’ (“AVTG”) February 2006

The NSW EPA document “Assessing Vibration: A Technical Guideline” provides procedures for assessing tactile vibration and regenerated noise within potentially affected buildings and is used in the assessment of vibration impact on amenity.

Relevant criteria are presented below.

Table 17 – EPA Recommended Vibration Criteria

		RMS acceleration (m/s ²)		RMS velocity (mm/s)		Peak velocity (mm/s)	
Place	Time	Preferred	Maximum	Preferred	Maximum	Preferred	Maximum
Continuous Vibration							
Residences	Daytime	0.01	0.02	0.2	0.4	0.28	0.56
Offices		0.02	0.04	0.4	0.8	0.56	1.1
Workshops		0.04	0.08	0.8	1.6	1.1	2.2
Impulsive Vibration							
Residences	Daytime	0.3	0.6	6.0	12.0	8.6	17.0
Offices		0.64	1.28	13.0	26.0	18.0	36.0
Workshops		0.64	1.28	13.0	26.0	18.0	36.0

8.2 PRELIMINARY ASSESSMENT OF CONSTRUCTION NOISE AND VIBRATION IMPACTS

With respect to construction noise and vibration, the impact on nearby development will be dependent on the activity in question and where on the site the activity is undertaken. It is expected that the most impactful typical construction activities will be from demolition and excavation works.

Loudest plant and equipment items associated with these activities will typically have sound power levels of approximately 110-115dB(A)_{Leq(15min)}. The most impacted sensitive receivers are expected to be residential and commercial flat buildings bounding the site to the east and south.

Noise levels at the facades of these receivers may be at or above the highly noise affected level for typically loud construction activities, such as excavation, piling and hammering works. In order to minimise the potential impact on residents it is recommended that construction noise management processes be implemented for the project.

Excavator mounted rock breaking during excavation is the activity with the greatest potential for vibration generation. Given the proximity of the residential dwellings located south of the development, this activity has the potential to produce vibration levels approaching the criteria detailed above. Feasible and reasonable work practices should be implemented to ensure that vibration levels to surrounding receivers can be managed.

Ultimately, the type and duration of specific construction processes will determine the impact on neighbouring receivers, the detail of which is not currently known. However, potential ameliorative measures which could be enacted to minimise disturbance include;

- Selection of construction equipment and processes which minimises acoustic impact. For example, the use of bored piling rather than sheet piling will significantly reduce the noise and vibration impact to neighbouring properties;
- Community interaction and notification. Notification of construction works both before and during construction will enable nearby residents to plan for acoustic impacts associated with the development;
- Where possible, machinery should be located as far as practicable from neighbouring residents (i.e. towards the north-west of site);
- Deliveries and access to the site should be managed so that it does not unreasonably disturb neighbouring residents. Loading areas should be located away from nearby residents if possible.

9 CONCLUSION

Acoustic Logic has been engaged to assess noise impacts associated with the proposed health services facility development to be located at 6 Victoria St, Henley.

External noise intrusion will satisfy the requirements of relevant acoustic requirements summarised in Section 6.1 with the recommended acoustic controls in Section 6.2 of this report. Noise emission from the operation of the development have been assessed in principle and are able to comply with the requirements in Section 7.1 provided the recommendations and management controls identified in Section 7.2 are incorporated. Construction noise and vibration impacts have been discussed in section 8.

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

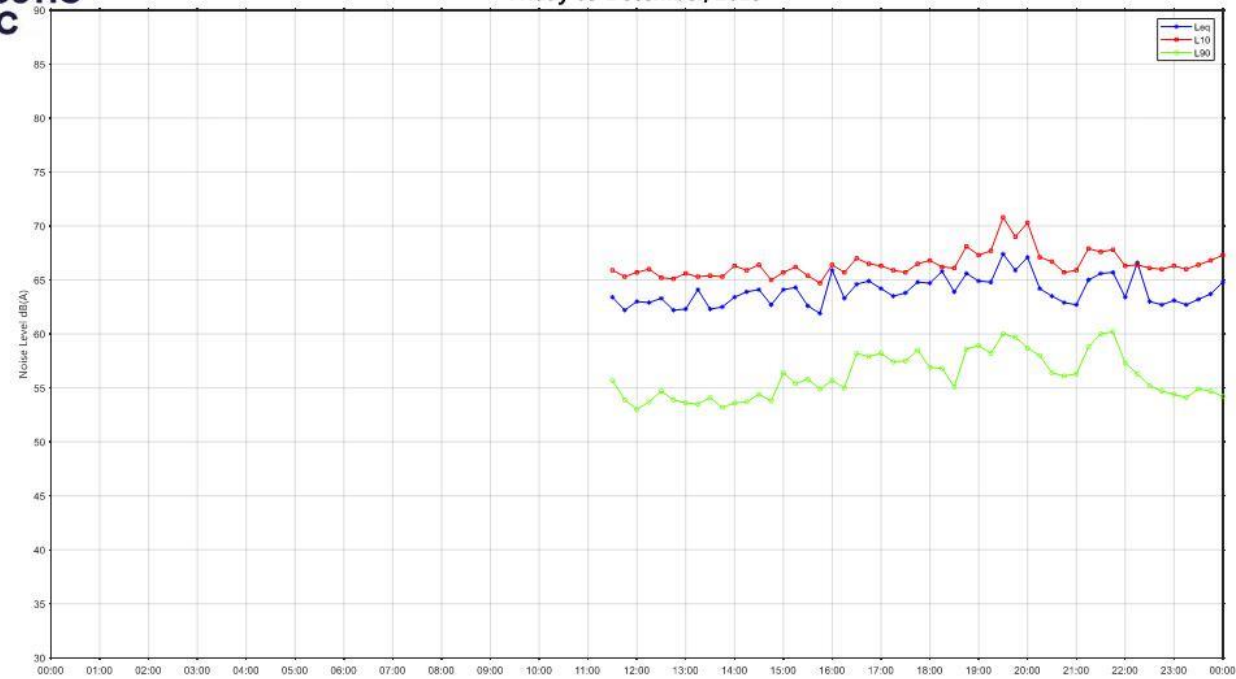
Yours faithfully,



Acoustic Logic Pty Ltd
Scott Jacobs

APPENDIX – UNATTENDED NOISE MONITORING GRAPHS

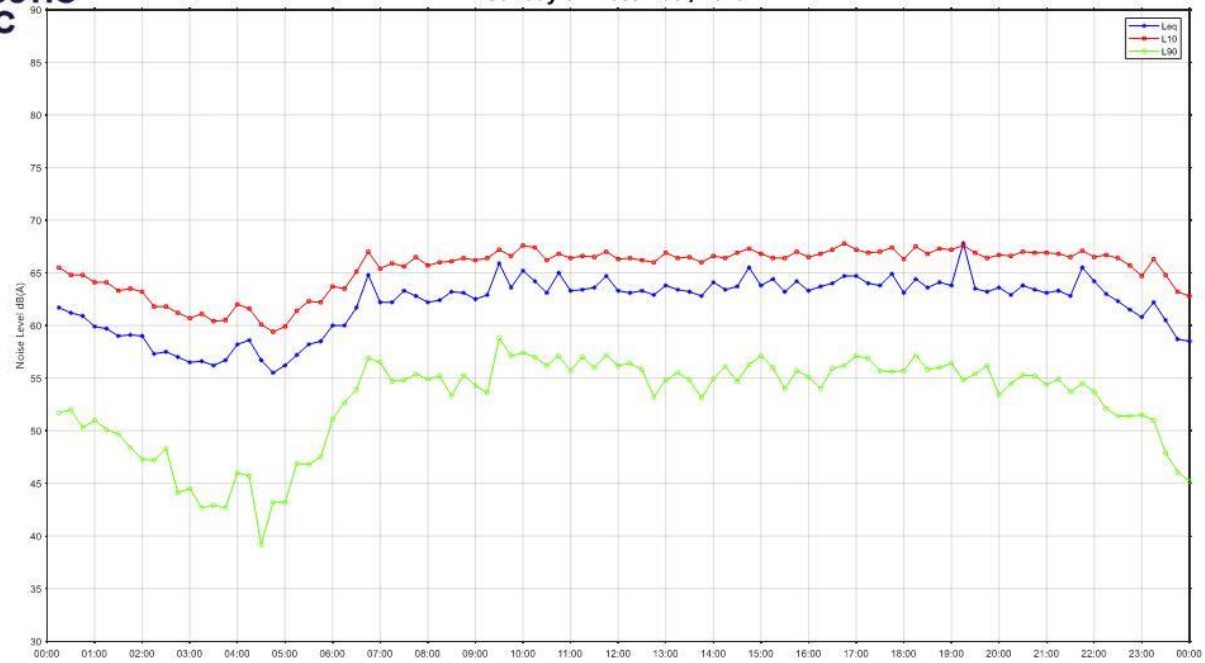
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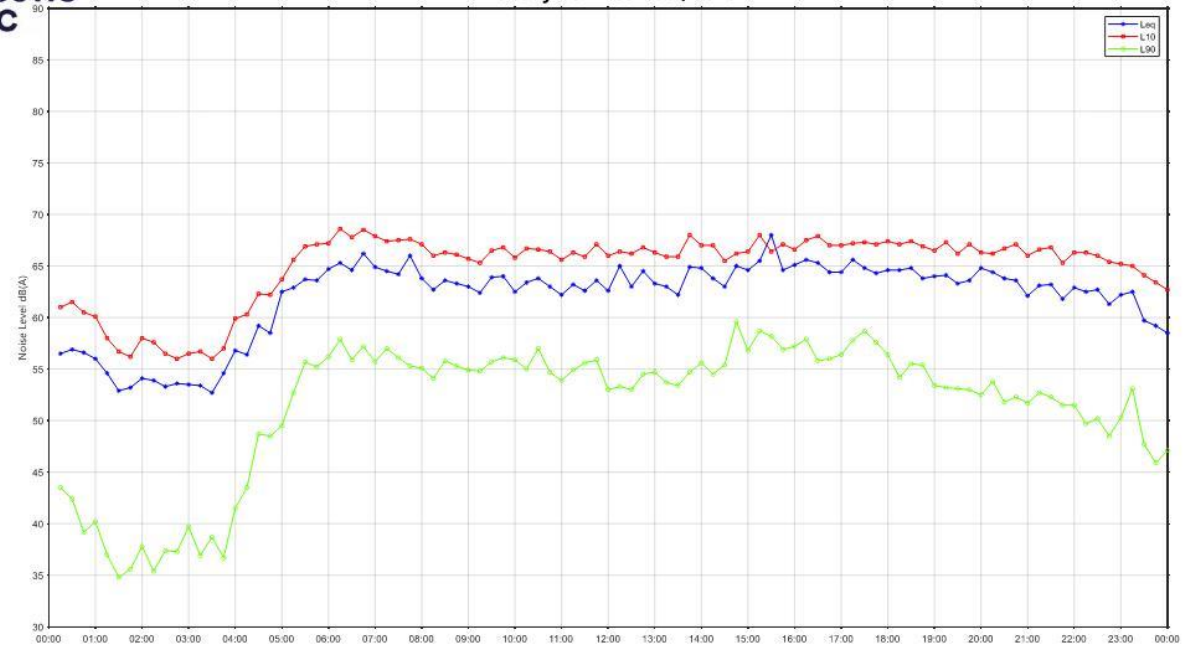
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Saturday 06 December, 2025**



**Crown Close
Sunday 07 December, 2025**



Crown Close
Monday 08 December, 2025



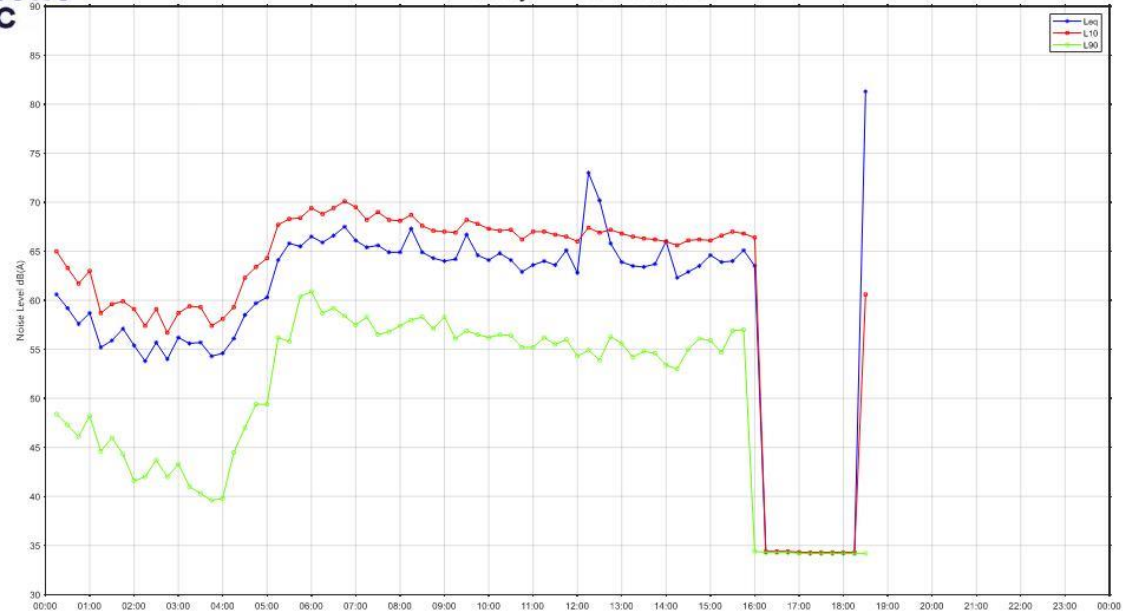
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Tuesday 09 December, 2025



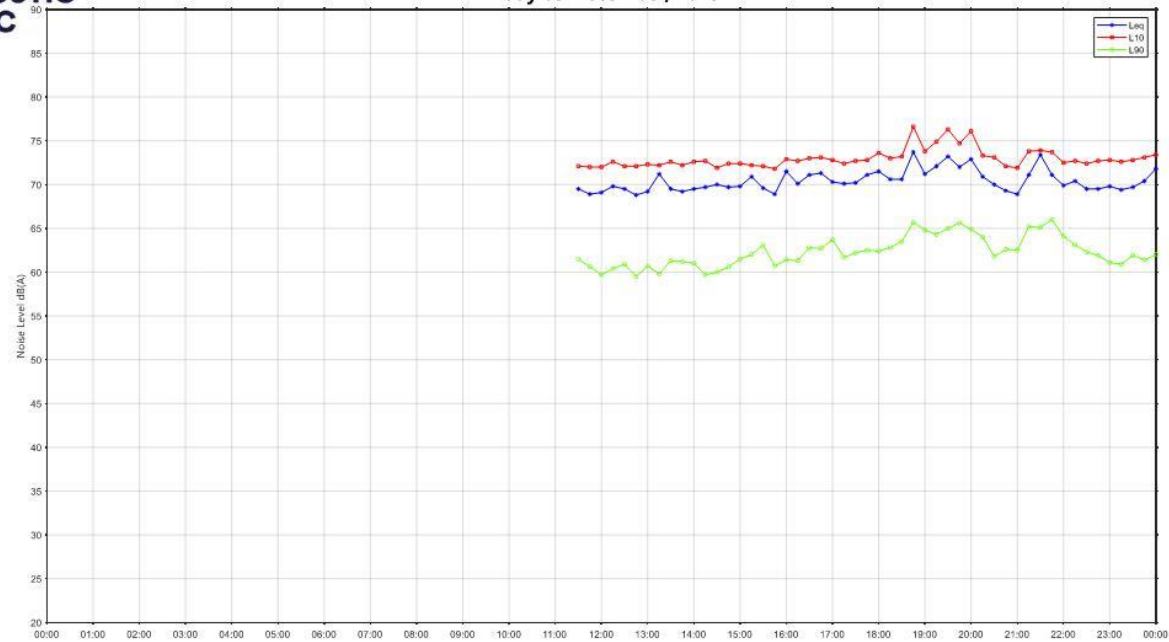
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Wednesday 10 December, 2025**



Crown Close
Thursday 11 December, 2025

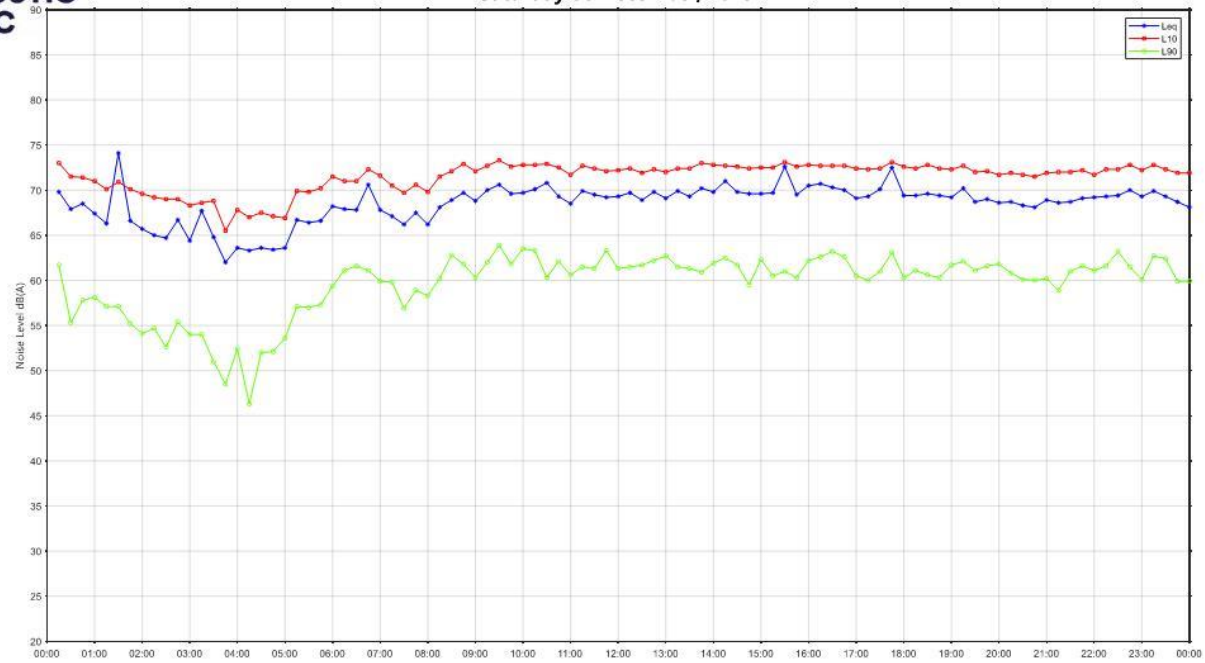


**Victoria Road
Friday 05 December, 2025**

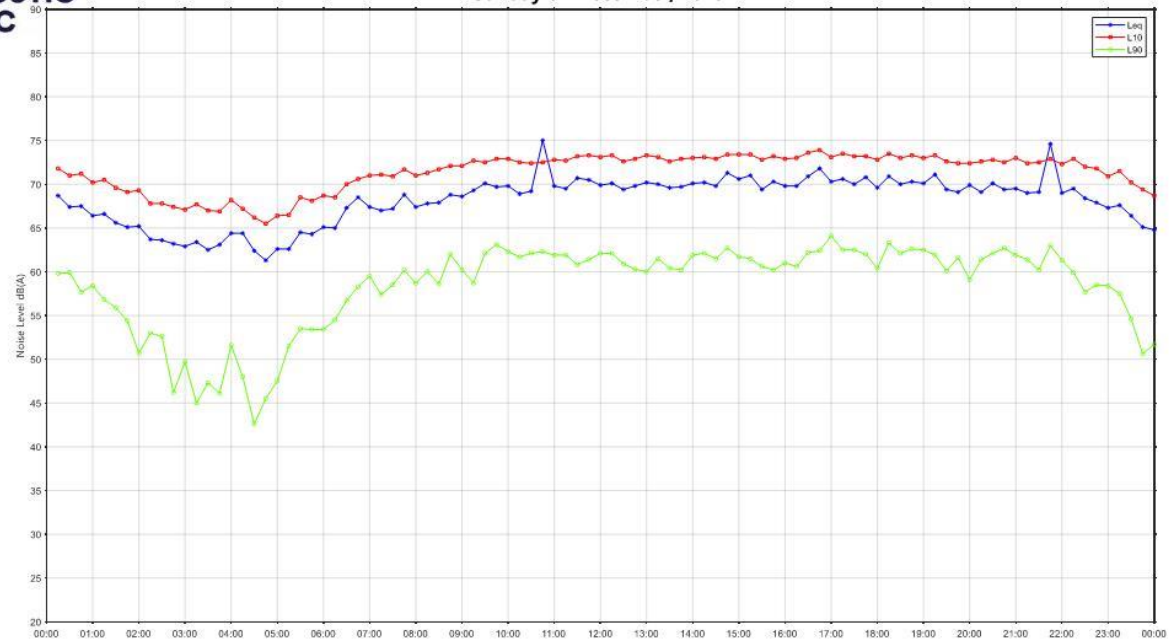




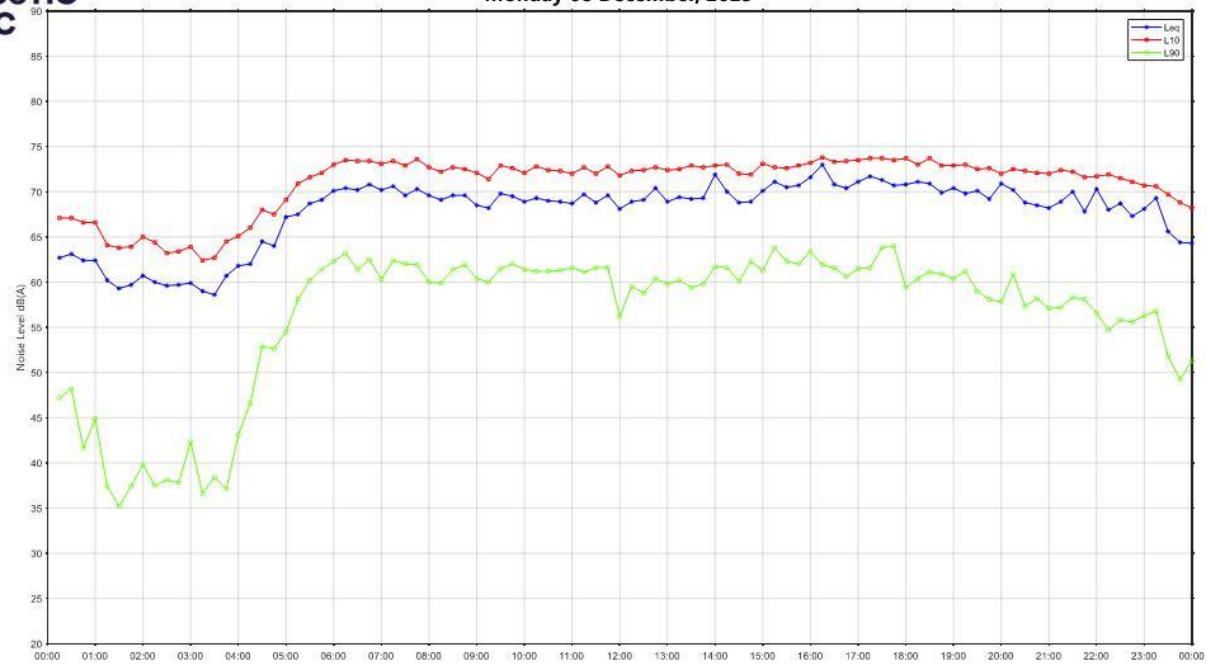
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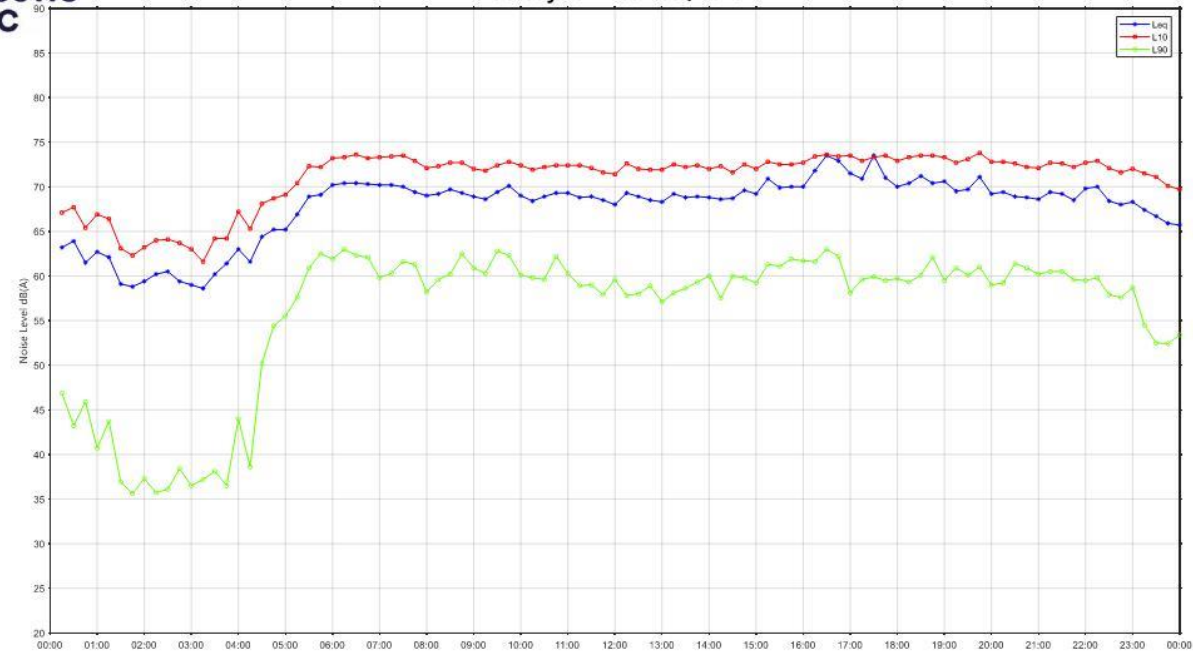
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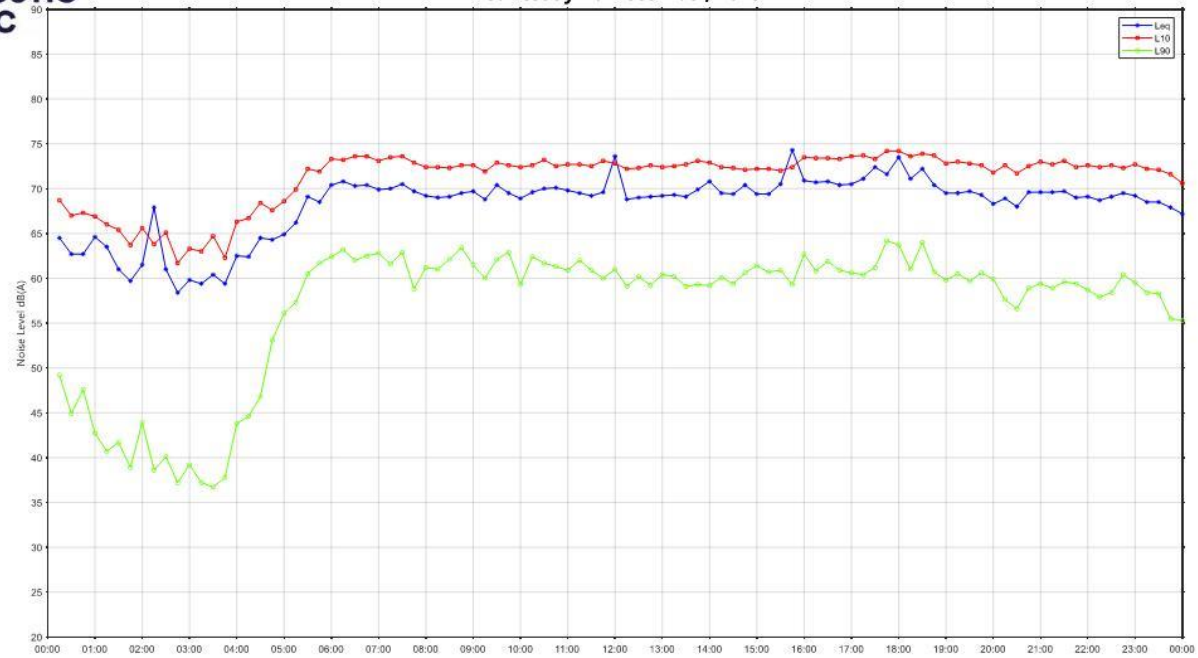
**Victoria Road
Monday 08 December, 2025**



**Victoria Road
Tuesday 09 December, 2025**



**Victoria Road
Wednesday 10 December, 2025**



**Victoria Road
Thursday 11 December, 2025**

