

HENRY LAWSON DRIVE STAGE 1B

Noise and Vibration Assessment

Prepared for:

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1 Introduction

1.1 Proposal Description

Transport for NSW (Transport) proposes to upgrade a 1.8-kilometre section of Henry Lawson Drive between Auld Avenue, Milperra and the approach to the M5 Motorway (known as the Henry Lawson Drive Upgrade Stage 1B) (the proposal). This include road widening to increase traffic capacity and improve travel time as well as upgrades of key intersections to enhance capability and driver safety. Key features of the proposal would include:

- widening Henry Lawson Drive from two to four lanes between Auld Avenue, Milperra and the M5 Motorway, Milperra with a raised central median
- upgrading the Henry Lawson Drive / Bullecourt Avenue signalised intersection, including:
 - an additional right-turn lane from Henry Lawson Drive (northbound) to Bullecourt Avenue (two right-turn lanes total)
 - an additional right-turn lane from Bullecourt Avenue to Henry Lawson Drive (northbound) (two right-turn lanes total)
 - converting the existing dedicated left-turn lane from Bullecourt Avenue to Henry Lawson Drive (southbound) into a dedicated left-turn slip lane
 - maintaining the dedicated left-turn lane from Henry Lawson Drive (southbound) to Bullecourt Avenue
- upgrading the Henry Lawson Drive / Pozieres Avenue signalised intersection, including:
 - a new dedicated right-turn lane from Henry Lawson Drive (southbound) to Pozieres Avenue
 - a new dedicated left-turn lane from Henry Lawson Drive (northbound) to Pozieres Avenue and relocation of the existing bus stop north of the intersection
- providing a new two-lane local link road between Auld Avenue and Keys Parade (about 160 metres), crossing over Milperra Drain, providing access to / from southbound lanes of Henry Lawson Drive and Auld Avenue, and removing up to eight parking spaces on Auld Avenue to accommodate the link road
- extending Raleigh Road about 120 metres to connect with Keys Parade at a roundabout, and removing the direct connection between Raleigh Road and Henry Lawson Drive
- converting the Henry Lawson Drive intersections to be left-in left-out only, at:
 - Ruthven Avenue
 - Whittle Avenue
 - Amiens Avenue
 - Ganmain Crescent
 - Fromelles Avenue
 - Hermies Avenue
- modifying the Bullecourt Avenue / Ashford Avenue intersection to better accommodate heavy vehicle movements

- constructing a three-metre-wide shared path:
 - on the western side of Henry Lawson Drive between Pozieres Avenue and Keys Parade
 - along Keys Parade, the new Auld Avenue local link road and the extended section of Raleigh Road
- reconstruction of some existing shared paths within the proposal area
- constructing a new footpath within the proposal area:
 - on the eastern side of Henry Lawson Drive between the Flower Power and Ingram Avenue
 - along the northern side of Ingram Avenue
 - along the eastern side of Fromelles Avenue
- installing new drainage infrastructure and water quality controls within the proposal area, including:
 - an upgraded longitudinal and transverse drainage pits and pipes network along Henry Lawson Drive
 - a bioretention basin between Henry Lawson Drive, Bullecourt Avenue and Fleurbaix Avenue and maintenance access to this basin
 - swales along Henry Lawson Drive and Keys Parade and installation of Gross Pollutant Traps
- construction activities and ancillary work, including:
 - relocation of utilities (including electrical, gas, water and telecommunications)
 - civil earthworks, drainage work, water quality controls and tie-in work to adjoining sections of Henry Lawson Drive and local roads
 - final roadworks including pavement, kerb and gutters, signs, road furniture, landscaping, lighting and line marking
 - new traffic signals and intelligent transport systems including, but not limited to, closed-circuit television
 - establishment of temporary ancillary facilities to support construction, including compound sites, site offices, stockpile and laydown locations, temporary access tracks and water quality devices.

1.2 Purpose of this report

This noise and vibration assessment has been prepared to assess the potential noise and vibration impacts of the proposal. This report has been prepared to support a Review of Environmental Factors (REF) being prepared for Transport for NSW under Division 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

1.3 Terminology

The assessment uses specific acoustic terminology and an explanation of common terms is included in **Appendix A**.

2 Existing Environment

The proposal is located in the Canterbury-Bankstown local government area. Existing noise levels in the study area are generally influenced by road traffic noise from the M5 Motorway and Henry Lawson Drive.

Receivers which adjoin the proposal are typically suburban residential properties, with some commercial properties at the north end of the project and at the intersection of Bullecourt Avenue and Ashford Avenue.

The assessment uses several Noise Catchment Areas (NCAs) that reflect the land uses in the study area and the existing background noise levels. These are shown in **Figure 1**.

2.1 Noise and Vibration Sensitive Receivers

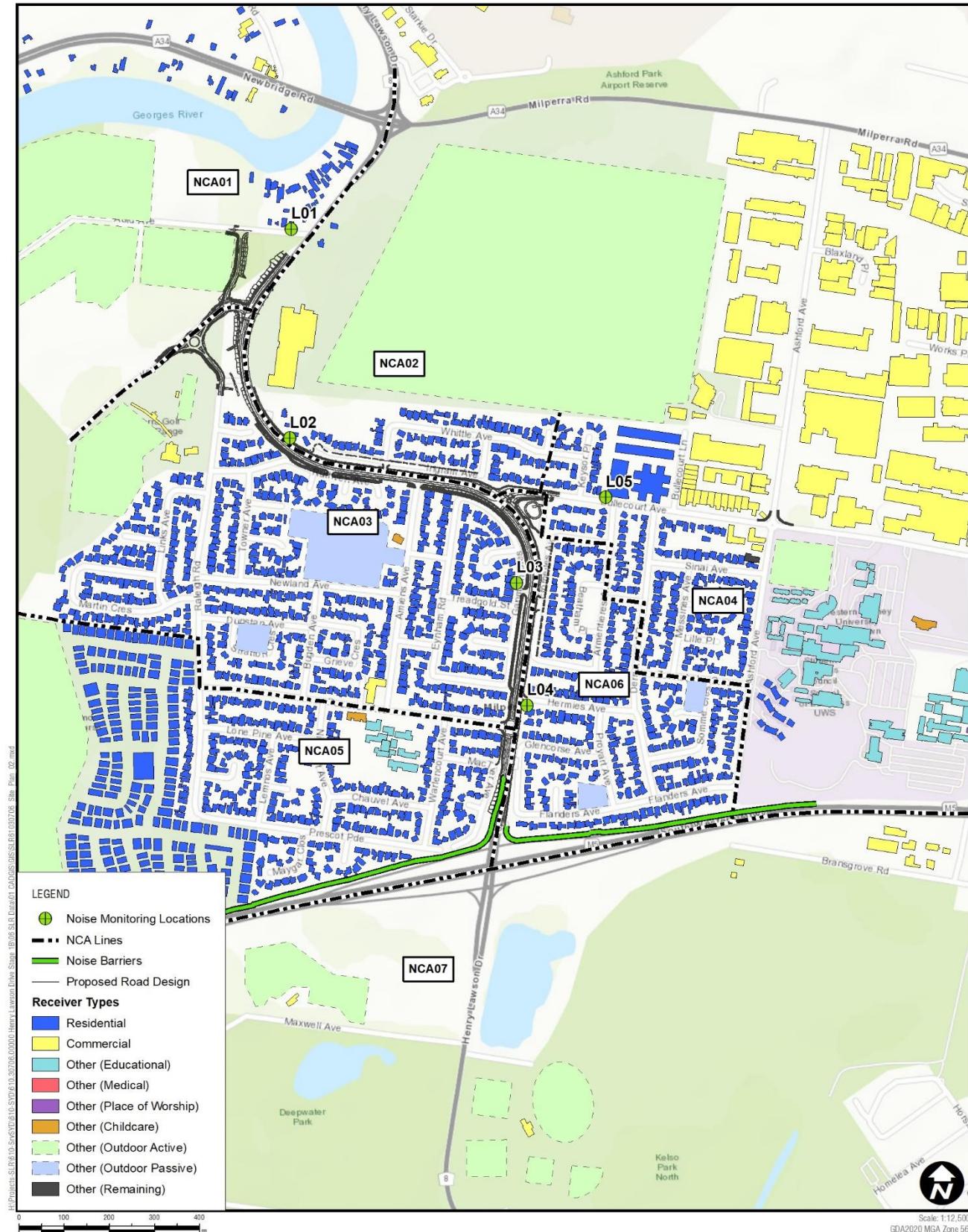
Receivers potentially sensitive to noise and vibration have been categorised as residential dwellings, commercial/industrial buildings, or ‘other sensitive’ land uses which include educational facilities, child care centres, and various outdoor recreation areas. Receiver types and locations are shown in **Figure 1**.

The ‘other sensitive’ non-residential receivers identified in the study area are shown in **Table 1**.

Table 1 ‘Other Sensitive’ Receivers (Non-Residential)

NCA	Name	Address	Type
NCA01	Gordon Parker Reserve	2 Auld Avenue, Milperra	Outdoor Active Recreation
	Vale of Ah Reserve	Auld Avenue, Milperra	Outdoor Active Recreation
NCA02	Bankstown Golf Club	70 Ashford Avenue, Milperra	Outdoor Active Recreation
NCA03	KU Milperra	12 Amiens Avenue, Milperra	Childcare
	Milperra Tennis Courts	101 Raleigh Road, Milperra	Outdoor Active Recreation
	Newland Reserve	5 Newland Avenue, Milperra	Outdoor Passive Recreation
	Dustan Reserve	2 Dustan Avenue, Milperra	Outdoor Passive Recreation
NCA04	Western Sydney University Early Learning Bankstown	Horsley Road and Bullecourt Avenue, Milperra	Childcare
NCA04	Western Sydney University Bankstown Campus	Horsley Road and Bullecourt Avenue, Milperra	Educational
	Milperra Reserve	101 Bullecourt Avenue Bankstown	Outdoor Active Recreation
	Milperra Community Hall	130 Ashford Avenue, Milperra	Public Building
NCA05	SDN Milperra	22 Pozieres Avenue, Milperra	Childcare
	Milperra Public School	22 Pozieres Avenue, Milperra	Educational
	Riverlands Golf and Recreation Club	56 Prescot Parade, Milperra	Outdoor Active Recreation
NCA06	Frank Moulang Reserve	9 Zonnebeke Crescent, Milperra	Outdoor Passive Recreation
	Tompson Reserve	2A Proyart Avenue, Milperra	Outdoor Passive Recreation
NCA07	Aussie Paintball	2 Maxwell Avenue, Milperra	Outdoor Active Recreation
	Kelso Oval	Bransgrove Road, Panania	Outdoor Active Recreation
	East Hills Baseball Club	565 Henry Lawson Drive, Panania	Outdoor Active Recreation

Figure 1 Site Plan, Receivers and Noise Monitoring Locations



2.1.1 New Developments

A review of recently approved potentially noise and vibration sensitive developments in the study area has been completed and the following identified developments have been included in the operational assessment:

- An aged care facility at 7 Bullecourt Avenue (currently vacant lot at location of noise monitor L05)
- Riverlands residential development at the location of the current Riverlands Golf and Recreation Club in the southwest extent of the noise and vibration study area (indicative building geometry included based on development application subdivision plans).

2.2 Existing Noise Surveys and Monitoring Locations

Unattended noise monitoring was completed in the study area during March and April 2022. The measured noise levels have been used to determine the existing noise environment and to set the criteria used to assess the potential impacts from the proposal.

The ambient noise monitoring was conducted during a regular (non-holiday) period for a minimum of seven days at each location. The measured existing noise levels are representative of the background noise levels at receivers that would likely be most affected by the construction and operation of the proposal in each NCA.

The noise monitoring equipment continuously measured existing noise levels in 15-minute periods during the daytime, evening and night-time. All equipment carried current National Association of Testing Authorities (NATA) calibration certificates and calibration was checked before and after each measurement.

The results of the noise monitoring have been analysed to exclude noise from extraneous events and data affected by adverse weather conditions, such as strong wind or rain (wind and rain was measured at a locally deployed weather station at L05), to establish representative existing noise levels for each NCA. The period noise levels are then determined based on the remaining valid data, ensuring a minimum of seven days are considered at each location.

The noise monitoring locations are shown in **Figure 1** and the results are summarised in **Table 2**. Details of each monitoring location together with graphs of the measured daily noise levels are provided in **Appendix B**.

Table 2 Summary of Unattended Noise Monitoring Results

ID	Address	Measured Noise Level (dBA)							
		Construction ¹						Operational ²	
		Background Noise (RBL)			Average Noise (LAeq)			Average Noise (LAeq)	
		Day	Evening	Night	Day	Evening	Night	Day	Night
L01	5 Auld Ave, Milperra	50	46	40	62	60	58	62	58
L02	503 Henry Lawson Dr, Milperra	58	48	41	74	72	69	74	69
L03	20 Ganmain Cres, Milperra	55	46	35	63	61	58	63	58
L04	23 Hermies Ave, Milperra	57	48	39	68	65	63	67	63
L05	Bullecourt Avenue, Milperra	50	45	39	66	63	59	65	59

Note 1: Construction noise is assessed during the daytime which is 7 am to 6 pm, the evening which is 6 pm to 10 pm and the night-time which is 10 pm to 7 am. See the NSW EPA *Interim Construction Noise Guideline*.

Note 2: Operational road traffic noise is assessed during the daytime which is 7 am to 10 pm and the night-time which is 10 pm to 7 am. See the NSW EPA *Road Noise Policy*.

Short-term attended noise monitoring was also completed at each monitoring location. The attended measurements allow the contributions of the various noise sources at each location to be determined. Detailed observations from the attended measurements are provided in **Appendix B**.

The attended measurements were generally found to be consistent with the results of the unattended noise monitoring and show that existing noise levels are typically dominated by road traffic noise from the surrounding road network.

3 Policy Context

3.1 Construction Noise and Vibration Guidelines

3.1.1 Construction Noise and Vibration Guidelines

The guidelines used to assess construction impacts from the proposal are listed in **Table 3**. The guidelines aim to protect the community and environment from excessive adverse noise and vibration impacts as projects are constructed.

Table 3 Construction Noise and Vibration Guidelines

Guideline/Policy Name	Where Guideline Used
<i>Interim Construction Noise Guideline (ICNG) (DECC, 2009)</i>	Assessment of airborne noise impacts on sensitive receivers
<i>AS2107:2016 Acoustics – Recommended design sound levels and reverberation times for building interiors</i>	Provides recommended design sound levels for internal areas of occupied spaces
<i>Road Noise Policy (RNP) (DECCW, 2011)</i>	Assessment of construction traffic impacts
<i>BS 7385 Part 2-1993 Evaluation and measurement for vibration in buildings Part 2, BSI, 1993</i>	Assessment of vibration impacts (structural damage) to non-heritage sensitive structures
<i>DIN 4150:Part 3-2016 Structural vibration – Effects of vibration on structures, Deutsches Institute fur Normung, 1999</i>	Screening assessment of vibration impacts (structural damage) to heritage sensitive structures, where the structure is found to be unsound
<i>Assessing Vibration: a technical guideline (DEC, 2006)</i>	Assessment of vibration impacts on sensitive receivers
<i>Construction Noise and Vibration Guideline (CNVG) (Roads and Maritime Services, 2016)¹</i>	Assessment and management protocols for airborne noise and vibration impacts for road infrastructure projects

Note 1: Roads and Maritime is now TfNSW.

3.1.2 Interim Construction Noise Guideline

The NSW *Interim Construction Noise Guideline (ICNG)* is used to assess and manage impacts from construction noise on residences and other sensitive land uses in NSW.

The ICNG contains procedures for determining project specific Noise Management Levels (NMLs) for sensitive receivers based on the existing background noise in the area. The ‘worst-case’ noise levels from construction of a project are predicted and then compared to the NMLs in a 15-minute assessment period to determine the likely impact of the project.

The NMLs are not mandatory limits, however, where construction noise levels are predicted or measured to be above the NMLs, feasible and reasonable work practices to minimise noise emissions are to be investigated.

Residential Receivers

The ICNG approach for determining NMLs at residential receivers is shown in **Table 4**.

Table 4 ICNG NMLs for Residential Receivers

Time of Day	NML L _{Aeq(15minute)}	How to Apply
Standard Construction Hours Monday to Friday 7:00 am to 6:00 pm Saturday 8:00 am to 1:00 pm No work on Sundays or public holidays	Noise affected RBL ¹ + 10 dB	<ul style="list-style-type: none"> The noise affected level represents the point above which there may be some community reaction to noise Where the predicted or measured L_{Aeq(15minute)} is greater than the noise affected level, the proponent should apply all feasible and reasonable work practices to meet the noise affected level The proponent should also inform all potentially impacted residents of the nature of works to be carried out, the expected noise levels and duration, as well as contact details.
	Highly Noise Affected 75 dBA	<ul style="list-style-type: none"> The Highly Noise Affected (HNA) level represents the point above which there may be strong community reaction to noise Where noise is above this level, the relevant authority (consent, determining or regulatory) may require respite periods by restructuring the hours that the very noisy activities can occur, taking into account: <ul style="list-style-type: none"> Times identified by the community when they are less sensitive to noise (such as before and after school for works near schools or mid-morning or mid-afternoon for works near residences) If the community is prepared to accept a longer period of construction in exchange for restrictions on construction times.
Outside Standard Construction Hours	Noise affected RBL + 5 dB	<ul style="list-style-type: none"> A strong justification would typically be required for works outside the recommended standard hours The proponent should apply all feasible and reasonable work practices to meet the noise affected level Where all feasible and reasonable practises have been applied and noise is more than 5 dB above the noise affected level, the proponent should negotiate with the community.

Note 1: The RBL is the Rating Background Level and the ICNG refers to the calculation procedures in the NSW *Industrial Noise Policy* (INP). The INP has been superseded by the NSW EPA *Noise Policy for Industry* (NPfI).

Work is recommended to be completed during Standard Construction Hours where possible. More stringent requirements are placed on work that is required to be completed outside Standard Construction Hours (ie during the evening or night-time), which reflects the greater sensitivity of communities to noise impacts during these periods.

Sleep Disturbance

Infrastructure projects often require certain work to be completed during the night-time. Where night work is located close to residential receivers, there is potential for sleep disturbance impacts.

The ICNG lists five categories of work that might need to be undertaken outside of Standard Construction Hours:

- The delivery of oversized equipment or structures** that require special arrangements to transport on public roads
- Emergency work** to avoid the loss of life or damage to property, or to prevent environmental harm
- Maintenance and repair of public infrastructure** where disruption to essential services or considerations of worker safety do not allow work within standard hours

- **Public infrastructure work** that shortens the length of the project and is supported by the affected community
- Work where a proponent demonstrates and justifies a **need to operate outside the recommended standard hours.**

Where construction work is planned to extend over more than two consecutive nights, the ICNG recommends that an assessment of sleep disturbance impacts should be completed.

Where construction work is planned to extend over more than two consecutive nights, the ICNG recommends that an assessment of sleep disturbance impacts should be completed. The ICNG refers to the NSW *Environmental Criteria for Road Traffic Noise* (ECRTN) for assessing the potential impacts, which notes that to limit the level of sleep disturbance, the L1 level (or L_{Amax}) should not exceed the existing L₉₀ background noise level by more than 15 dB. The ECRTN has since been superseded by the NSW EPA *Road Noise Policy* (RNP), which concludes the following regarding research on sleep disturbance:

- Maximum internal noise levels below 50 dBA to 55 dBA are unlikely to awaken people from sleep. This equates to an upper acceptable range external noise level of 65 dBA when assuming a conservative 10 dB loss for open windows.
- One or two events per night with maximum internal noise levels of 65-70 dBA are not likely to affect health and wellbeing significantly.

The above guidance results in the following assessment requirements:

- The 'sleep disturbance screening level' of RBL +15 dB (external), which is used to identify receivers where there is potential for sleep disturbance.
- Where the sleep disturbance screening level is predicted to be exceeded, further assessment may be required to determine if the 'awakening reaction' level of L_{Amax} 65 dB (external) is likely to be exceeded. The awakening reaction level is the level above which sleep disturbance is considered likely.

Summary of Residential NMLs

The residential NMLs for the proposal have been determined in accordance with the requirements of the ICNG using the results from the unattended existing noise monitoring (see **Section 2**) and are shown in **Table 5**.

Table 5 Residential Receiver Construction Noise Management Levels

NCA	Representative Background Monitoring Location	Noise Management Level (L _{Aeq(15minute)} dBA)				Sleep Disturbance	
		Standard Construction (RBL +10 dB)	Out of Hours (RBL +5 dB)			Screening Level (RBL +15 dB)	Awakening Reaction
			Daytime	Daytime ¹	Evening	Night time	
NCA01	L01	60	55	51	45	55	65
NCA02	L02	68	63	53	46	56	65
NCA03	L03	65	60	51	40	50	65
NCA04	L05	60	55	50	44	54	65
NCA05	L03	65	60	51	40	50	65
NCA06	L05	67	62	53	44	54	65

Note 1: Daytime out of hours is 7 am to 8 am and 1 pm to 6 pm on Saturday, and 8 am to 6 pm on Sunday and public holidays.

'Other Sensitive' Land Uses and Commercial Receivers

Several non-residential land uses have been identified in the study area. These include 'other sensitive' land uses such as educational institutes, outdoor recreational areas and commercial properties. The NMLs for 'other sensitive' receivers are shown in **Table 6**.

Table 6 NMLs for 'Other Sensitive' Receivers

Land Use	Noise Management Level L _{Aeq(15minute)} (dBA) (Applied when the property is in use)	
	Internal	External
ICNG 'Other Sensitive' Receivers		
Classrooms at schools and other educational institutions	45	55 ¹
Active recreation areas (characterised by sporting activities and activities which generate noise)	-	65
Passive recreation areas (characterised by contemplative activities that generate little noise)	-	60
Commercial	-	70
Industrial	-	75
Non-ICNG 'Other Sensitive' Receivers		
Child care centres – sleeping areas ²	40	50 ¹
Public building ³	50	60 ¹

Note 1: It is assumed that these receivers have windows partially open for ventilation which results in internal noise levels being around 10 dB lower than the external noise level.

Note 2: Criteria taken from Association of Australian Acoustical Consultants *Guideline for Child Care Centre Acoustic Assessment*.

Note 3: Criteria taken from AS2107.

3.1.3 Construction Traffic Noise Guidelines

The potential impacts from construction traffic associated with the proposal travelling on public roads are assessed under the NSW EPA *Road Noise Policy* (RNP) and Roads and Maritime (now TfNSW) *Construction Noise and Vibration Guideline* (CNVG).

An initial screening test is first applied to evaluate if existing road traffic noise levels are expected to increase by more than 2.0 dB as a result of construction traffic. Where this is considered likely, further assessment is required using the RNP and TfNSW *Road Noise Criteria Guideline* (RNCG) base criteria shown in **Table 7**.

Table 7 RNP/NCG Criteria for Assessing Construction Traffic on Public Roads

Road Category	Type of Project/Land Use	Assessment Criteria (dBA)	
		Daytime (7 am – 10 pm)	Night time (10 pm – 7 am)
Freeway/ arterial/ sub-arterial roads	Existing residences affected by additional traffic on existing freeways/arterial/sub-arterial roads generated by land use developments	LAeq(15hour) 60 (external)	LAeq(9hour) 55 (external)
Local roads	Existing residences affected by additional traffic on existing local roads generated by land use developments	LAeq(1hour) 55 (external)	LAeq(1hour) 50 (external)

3.1.4 Construction Vibration Guidelines

The effects of vibration from construction work can be divided into three categories:

- Those in which the occupants of buildings are disturbed (**human comfort**). People can sometimes perceive vibration impacts when vibration generating construction work is located close to occupied buildings. Vibration from construction work tends to be intermittent in nature and the EPA's *Assessing Vibration: a technical guideline* (2006) provides criteria for intermittent vibration based on the Vibration Dose Value (VDV), as shown in **Table 8**. While the construction activities for the proposal are generally not expected to result in continuous or impulsive vibration impacts, criteria are provided in **Table 9**.
- Those where building contents may be affected (**building contents**). People perceive vibration at levels well below those likely to cause damage to building contents. For most receivers, the human comfort vibration criteria are the most stringent and it is generally not necessary to set separate criteria for vibration effects on typical building contents. Exceptions to this can occur when vibration sensitive equipment, such as electron microscopes or medical imaging equipment, are in buildings near to construction work. No such equipment has been identified in the study area.
- Those where the integrity of the building may be compromised (**structural/cosmetic damage**). If vibration from construction work is sufficiently high it can cause structural/cosmetic damage to elements of affected buildings. Industry standard cosmetic damage vibration limits are specified in British Standard BS 7385 and German Standard DIN 4150. The limits are shown in **Table 10** and **Table 11**.

Table 8 Human Comfort Vibration – Vibration Dose Values for Intermittent Vibration

Building Type	Assessment Period	Vibration Dose Value ¹ (m/s ^{1.75})	
		Preferred	Maximum
Critical Working Areas (eg operating theatres or laboratories)	Day or night-time	0.10	0.20
Residential	Daytime	0.20	0.40
	Night-time	0.13	0.26
Offices, schools, educational institutions and places of worship	Day or night-time	0.40	0.80
Workshops	Day or night-time	0.80	1.60

Note 1: The VDV accumulates vibration energy over the daytime and night-time assessment periods, and is dependent on the level of vibration as well as the duration.

Table 9 Human Comfort Vibration – Preferred and Maximum Weighted Root Mean Square Values for Continuous and Impulsive Vibration Acceleration (m/s^2) 1–80 Hz

Location	Assessment period	Preferred values		Maximum values	
		z axis	x and y axis	z axis	x and y axis
Continuous vibration					
Critical working areas ¹	Day or night-time	0.0050	0.0036	0.010	0.0072
Residential	Daytime	0.010	0.0071	0.020	0.014
	Night-time	0.007	0.005	0.014	0.010
Offices, schools, educational institutions and places of worship	Day or night-time	0.020	0.014	0.040	0.028
Workshops	Day or night-time	0.04	0.029	0.080	0.058
Impulsive vibration					
Critical working areas ¹	Day or night-time	0.0050	0.0036	0.010	0.0072
Residential	Daytime	0.30	0.21	0.60	0.42
	Night-time	0.10	0.071	0.20	0.14
Offices, schools, educational institutions and places of worship	Day or night-time	0.64	0.46	1.28	0.92
Workshops	Day or night-time	0.64	0.46	1.28	0.92

Note 1: Such as operating theatres or precision laboratories where sensitive operations are occurring. No such areas have been identified in the study area.

Table 10 Cosmetic Damage – BS 7385 Transient Vibration Values for Minimal Risk of Damage

Group	Type of Building	Peak Component Particle Velocity in Frequency Range of Predominant Pulse	
		4 Hz to 15 Hz	15 Hz and Above
1	Reinforced or framed structures. Industrial and heavy commercial buildings	50 mm/s at 4 Hz and above	
2	Unreinforced or light framed structures. Residential or light commercial type buildings	15 mm/s at 4 Hz increasing to 20 mm/s at 15 Hz	20 mm/s at 15 Hz increasing to 50 mm/s at 40 Hz and above

Note 1: Where the dynamic loading caused by continuous vibration may give rise to dynamic magnification due to resonance, especially at the lower frequencies where lower guide values apply, then the guide values may need to be reduced by up to 50%.

Table 11 Cosmetic Damage – DIN 4150 Guideline Values for Short-term Vibration on Structures

Group	Type of Structure	Guideline Values Vibration Velocity (mm/s)				
		Foundation, All Directions at a Frequency of			Topmost Floor, Horizontal	Floor Slabs, Vertical
		1 to 10 Hz	10 to 50 Hz	50 to 100 Hz	All frequencies	All frequencies
1	Buildings used for commercial purposes, industrial buildings and buildings of similar design	20	20 to 40	40 to 50	40	20
2	Residential buildings and buildings of similar design and/or occupancy	5	5 to 15	15 to 20	15	20
3	Structures that, because of their particular sensitivity to vibration, cannot be classified as Group 1 or 2 <u>and</u> are of great intrinsic value (eg heritage listed buildings)	3	3 to 8	8 to 10	8	20 ¹

Note 1: It may be necessary to lower the relevant guideline value markedly to prevent minor damage.

3.1.5 Heritage Buildings or Structures

Heritage listed buildings and structures should be considered on a case-by-case basis but as noted in BS 7385 should not be assumed to be more sensitive to vibration, unless structurally unsound. Where a heritage building is deemed to be sensitive, the more stringent DIN 4150 Group 3 guideline values in **Table 11** can be applied.

No vibration sensitive heritage listed items have been identified in the study area.

The Henry Lawson Drive Upgrade Stage 1A assessment included consideration of the existing Milperra Drain Bridge. Although the bridge is not listed on the Bankstown LEP Heritage Schedule, the Stage 1A assessment concluded that the Milperra Drain Bridge is of heritage significance at a local level.

The existing Milperra Drain Bridge is located on a two-traffic-lane carriageway south of the intersection with Auld Avenue. The bridge is a four-span reinforced concrete T-beam structure, with a reinforced concrete deck slab and end cross girders as supports. The bridge will be duplicated, and the existing bridge will be strengthened as part of Henry Lawson Drive Upgrade Stage 1A. The proposal (Stage 1B) would then tie-in with the southern end of the bridge.

Australian Standard AS 2187: Part 2-2006 recommends a ground vibration limit of 100 mm/s for unoccupied structures of reinforced concrete or steel construction. Further guidance is provided in ACARP project No C14057 Effect of Blasting on Infrastructure, which recommends a ‘safe’ vibration limit of 100 mm/s for concrete bridges. Given the Milperra Drain Bridge would be recently strengthened at the time of the proposal, a recommended vibration limit of 100 mm/s is considered appropriate. Nearby construction work for the proposal would be limited to Henry Lawson Drive south of the Milperra Drain Bridge and it is expected that construction vibration levels at the bridge would be below the recommended 100 mm/s limit for the proposed work.

3.1.6 Minimum Working Distances for Vibration Intensive Work

Minimum working distances for typical vibration intensive construction equipment are provided in the CNVG and are shown in **Table 12**. The minimum working distances are for both cosmetic damage (from BS 7385 and DIN 4150) and human comfort (from the NSW EPA Vibration Guideline). They are calculated from empirical data which suggests that where work is further from receivers than the quoted minimum distances then impacts are not considered likely.

Table 12 Recommended Minimum Working Distances from Vibration Intensive Equipment

Plant Item	Rating/Description	Minimum Distance			Human Response (NSW EPA Guideline)	
		Cosmetic Damage		Heritage Items (DIN 4150, Group 3)		
		Residential and Light Commercial (BS 7385)				
Vibratory Roller	<50 kN (1–2 tonne)	5 m	11 m	15 m to 20 m		
	<100 kN (2–4 tonne)	6 m	13 m	20 m		
	<200 kN (4–6 tonne)	12 m	25 m	40 m		
	<300 kN (7–13 tonne)	15 m	31 m	100 m		
	>300 kN (13–18 tonne)	20 m	40 m	100 m		
	>300 kN (>18 tonne)	25 m	50 m	100 m		
Small Hydraulic Hammer	300 kg (5 to 12 t excavator)	2 m	5 m	7 m		
Medium Hydraulic Hammer	900 kg (12 to 18 t excavator)	7 m	15 m	23 m		
Large Hydraulic Hammer	1,600 kg (18 to 34 t excavator)	22 m	44 m	73 m		
Vibratory Pile Driver	Sheet piles	2 m to 20 m	5 m to 40 m	20 m		
Piling Rig – Bored	≤ 800 mm	2 m (nominal)	5 m	4 m		
Jackhammer	Hand held	1 m (nominal)	3 m	2 m		

Note 1: Minimum working distances for heritage items that have been identified as structurally unsound or otherwise particularly sensitive to vibration. These distances have been calculated based on the 2.5 mm/s PPV criteria from DIN 4150 and the cosmetic damage minimum working distances presented in the CNVG with reference to BS 7385.

The minimum working distances are indicative and will vary depending on the particular item of equipment and local geotechnical conditions. The distances apply to cosmetic damage of typical buildings under typical geotechnical conditions.

3.2 Operational Noise and Vibration Guidelines

The guidelines used to assess the potential operational road traffic noise impacts from the proposal are listed in **Table 13**. The guidelines aim to protect the community and environment from excessive noise and vibration impacts from the long-term operation of projects.

Table 13 Operational Road Traffic Noise and Vibration Guidelines

Guideline/Policy Name	When Guideline is Used
Road Noise Policy (RNP) (DECCW, 2011)	Operational road traffic noise assessment
Road Noise Criteria Guideline (RNCG) (Transport for NSW, 2022)	Defines TfNSW's interpretation of the RNP and details how criteria are applied to sensitive receivers
Road Noise Mitigation Guideline (RNMG) (Transport for NSW, 2022)	Details how additional mitigation measures are to be applied to road infrastructure projects
Road Noise Model Validation Guideline (Transport for NSW, 2022)	Contains procedures for validating operational road traffic noise models
Environmental Noise Management Manual (ENMM) (Roads and Traffic Authority, 2001)	Additional information for operational road traffic noise assessment, including maximum noise assessments
Preparing an Operational and Construction Noise and Vibration Assessment Report (Roads and Maritime, 2016)	Defines how to complete operational road traffic noise and vibration assessments
AS2107:2016 Acoustics – Recommended design sound levels and reverberation times for building interiors	Provides recommended design sound levels for internal areas of occupied spaces.
At-Receiver Noise Treatment Guideline (Roads and Maritime, 2017)	Provides an overview and discussion of feasible and reasonable at-receiver noise mitigation measures

Note: Roads and Maritime is now TfNSW.

3.2.1 Airborne Noise – Road Noise Policy and Noise Criteria Guideline

The NSW *Road Noise Policy* (RNP) is used to assess and manage potential airborne noise impact from new and redeveloped road projects.

This assessment is undertaken with guidance from the *Road Noise Criteria Guideline* (RNCG) which is Transport for NSW's interpretation of the RNP and provides a consistent approach to identifying road noise criteria for infrastructure projects.

The RNP and RNCG provide non-mandatory criteria for residential and 'other sensitive' land uses. Where a project results in road traffic noise levels which are predicted to be above the criteria, the project should investigate feasible and reasonable noise mitigation measures to minimise the impacts.

The RNP and RNCG use the following terms to describe and assess the impacts from road projects:

- '**No Build**' – the assessment scenario used to predict noise levels if the project were not to go ahead
- '**Build**' – the assessment scenario used to predict noise levels with the project.

The difference between the 'Build' and the 'No Build' noise levels is used to determine the impact of the project.

Residential Receivers

A road is ‘redeveloped’ where work is in an existing road corridor and the existing road is not substantially realigned. A road is ‘new’ when a project proposes road construction in an undeveloped corridor or changes the functional class of a road. The proposal would ‘redevelop’ Henry Lawson Drive and construct a ‘new’ link road between Auld Avenue and Keys Parade.

The relevant noise criteria for residential receivers affected by traffic noise are shown in **Table 14**.

Table 14 RNCG Criteria for Residential Receivers

Road Category	Type of Project/Land Use	Assessment Criteria (dBA)	
		Daytime (7 am – 10 pm)	Night time (10 pm – 7 am)
Freeway/ arterial/ sub-arterial roads	2. Existing residences affected by noise from redevelopment of existing freeway/arterial/sub-arterial roads	LAeq(15 hour) 60 (external)	LAeq(9 hour) 55 (external)
	6. Existing residences affected by increases in traffic noise of 12 dB or more from redevelopment of existing freeway/arterial/sub-arterial roads ¹	Between LAeq(15hour) 42-60 (external)	Between LAeq(9hour) 42-55 (external)
Local roads	8. Existing residences affected by noise from redevelopment of existing local roads	LAeq(1 hour) 55 (external)	LAeq(1 hour) 50 (external)

Note 1: The relative increase criterion at each facade is determined from the existing traffic noise level plus 12 dB.

The criteria are lower for the night-time due to the greater sensitivity of communities to noise impacts during this period.

The RNP and RNCG require noise to be assessed at project opening and for a future design year, which is typically ten years after opening. For this proposal, the at-opening year is 2031 and the future design year is 2041.

‘Other Sensitive’ Land Uses

Several ‘other sensitive’ non-residential land uses have been identified in the study area. The noise criteria for these receivers are shown in **Table 15**. The RNCG does not consider commercial and industrial receivers as being sensitive to operational airborne road traffic noise impacts.

Table 15 RNCG Criteria for Other Sensitive Receivers

Existing Sensitive Land Use	Assessment Criteria (dB)		Additional Considerations
	Daytime (7 am – 10 pm)	Night time (10 pm – 7 am)	
1. School classrooms	LAeq(1 hour) 40 (internal) ¹	-	In the case of buildings used for education or health care, noise level criteria for spaces other than classrooms and wards may be obtained by interpolation from the ‘maximum’ levels shown in Australian Standard 2107:2000 (Standards Australia 2000).
2. Hospital wards	LAeq(1 hour) 35 (internal) ¹	LAeq(1 hour) 35 (internal) ¹	

Existing Sensitive Land Use	Assessment Criteria (dB)		Additional Considerations
	Daytime (7 am – 10 pm)	Night time (10 pm – 7 am)	
3. Places of worship	LAeq(1 hour) 40 (internal) ¹	LAeq(1 hour) 40 (internal) ¹	The criteria are internal, ie the inside of a church. Areas outside the place of worship, such as a churchyard or cemetery, may also be a place of worship. Therefore, in determining appropriate criteria for such external areas, it should be established what is in these areas that may be affected by road traffic noise.
4. Open space (active use)	LAeq(15 hour) 60 (external)	-	Active recreation is characterised by sporting activities and activities which generate their own noise or focus for participants, making them less sensitive to external noise intrusion.
5. Open space (passive use)	LAeq(15 hour) 55 (external)	-	Passive recreation is characterised by contemplative activities that generate little noise and where benefits are compromised by external noise intrusion (eg playing chess, reading).
6. Child care facilities	Sleeping rooms LAeq(1 hour) 35 (internal) ¹ Indoor play areas LAeq(1 hour) 40 (internal) ¹ Outdoor play areas LAeq(1 hour) 55 (external)	-	Multipurpose spaces (eg shared indoor play/sleeping rooms) should meet the lower of the respective criteria. Measurements for sleeping rooms should be taken during designated sleeping times for the facility, or if these are not known, during the highest hourly traffic noise level during the opening hours of the facility.
7. Aged care facilities	-	-	The criteria for residential land uses should be applied to these facilities.

Note 1: The criteria are specified as an internal noise level for this receiver category. As the noise model predicts external noise levels, it has been conservatively assumed that all 'other sensitive' receivers have openable windows and external noise levels are 10 dB higher than the corresponding internal level, which is representative of windows being partially open to provide ventilation.

3.2.2 Potential Road Traffic Noise Impacts on the Surrounding Road Network

Where a project results in traffic redistribution, noise impacts can occur on the surrounding road network due to vehicles using different routes after the project is complete. The RNCG criteria (see **Table 14**) are therefore to be applied to the surrounding road network where a road project generates an increase in road traffic noise of more than 2.0 dB.

4 Methodology

4.1 Construction Airborne Noise Assessment Methodology

A noise model of the study area has been used to predict noise levels from the proposed construction work to all surrounding receivers. The model uses ISO 9613 algorithms in SoundPLAN V8.2 software.

Local terrain, receiver buildings and structures were digitised in the noise model to develop a three-dimensional representation of the construction sites and surrounding areas.

4.1.1 Work Description

Representative scenarios have been developed to assess the likely impacts from the various construction phases of the proposal. These scenarios are shown in **Table 16** together with a high-level description of each work activity. The locations of the various work scenarios are shown in **Figure 2**. The scenarios represent one possible way that the proposal could be constructed and may not necessarily be the same methodology that the contractor engaged to construct the proposal would use. The final construction methodology (including the full plant and equipment list) and the expected construction noise levels would be confirmed during detailed design.

The assessment uses ‘realistic worst-case’ scenarios to determine the impacts from the noisiest 15-minute period that are likely to occur for each work scenario, as required by the ICNG. The impacts represent construction noise levels without mitigation applied.

The scenarios that are likely to have the highest noise levels have been separated into ‘peak’ and ‘typical’ work. The ‘peak’ work represents the noisiest stages and can require noise intensive equipment such as concrete saws. While ‘peak’ work would be required at certain times in most locations, the highest noise impact work would only last for relatively short periods of the overall work duration. The ‘typical’ work represents typical noise emissions from the project when noise intensive equipment is generally not in use.

The assessment is considered conservative as the calculations assume several items of construction equipment are in use at the same time within individual scenarios.

Table 16 Construction Scenario Descriptions

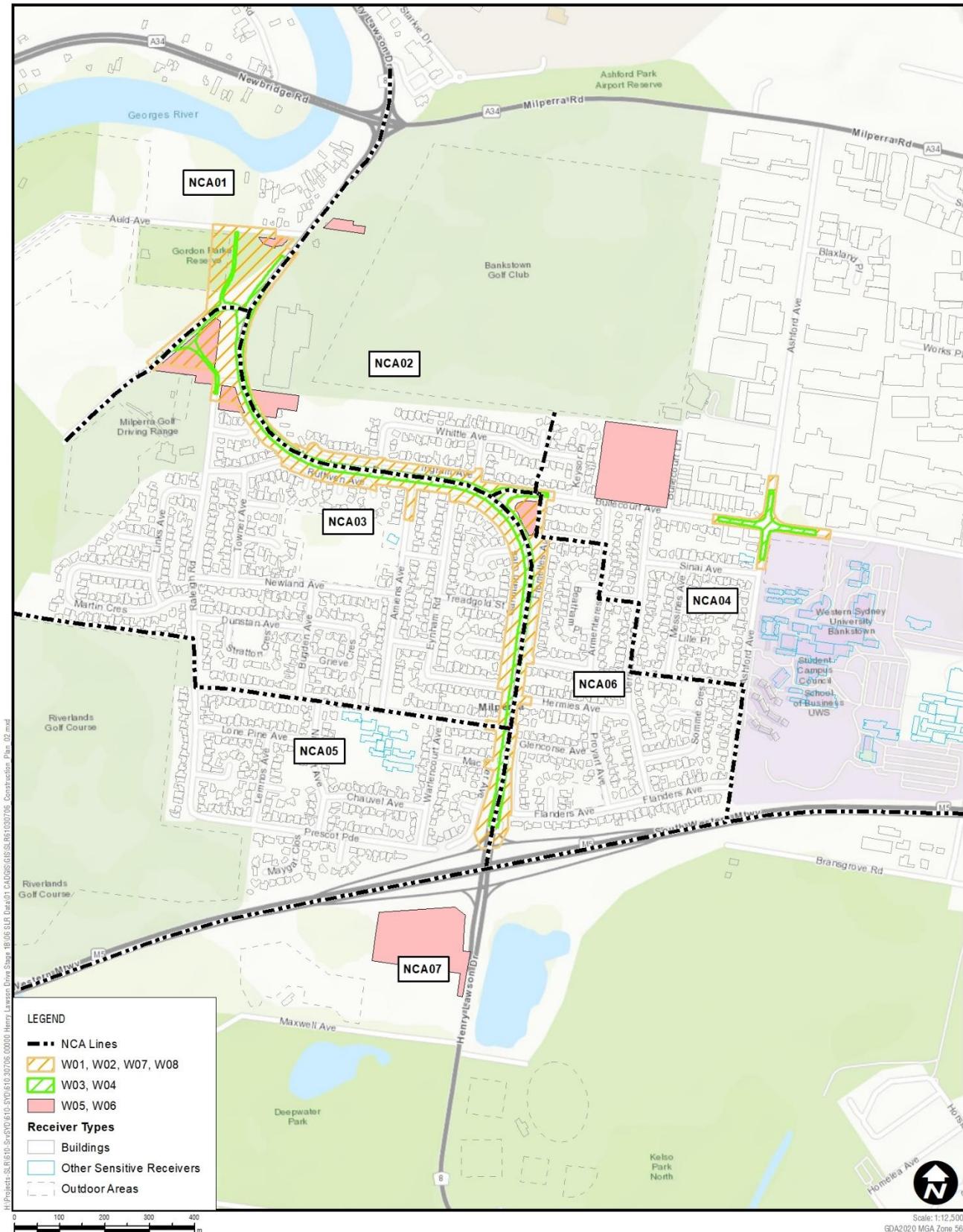
ID	Scenario ¹	Sound Power Level (dBA)	Description
W.01	Preliminary work, utilities, earthwork and drainage - peak	120	<p>These would include:</p> <ul style="list-style-type: none">• Vegetation removal and grubbing• Establishment of ancillary facilities and laydown areas• Identifying, relocating, adjusting and protecting utilities• Removal of topsoil, stockpiling and/or disposal if weed affected• Earthwork including removal of topsoil, preparation of new pavement areas, foundation treatment, grading and compacting• Installing/altering drainage infrastructure, as required
W.02	Preliminary work, utilities, earthwork and drainage - typical	105	Noise intensive equipment such as concrete saws would be required at times.

ID	Scenario ¹	Sound Power Level (dBA)	Description
W.03	Road and intersection work - peak	121	Road work would be required along the entire road alignment. Road construction would include: <ul style="list-style-type: none"> ● Construction of new kerbs and gutters
W.04	Road and intersection work - typical	106	<ul style="list-style-type: none"> ● Construction of new road pavement, including placing and compacting select fill, subbase and asphalt wearing surface ● Tie in work to existing road network <p>Vibratory rollers and compaction equipment would be required for placement of the asphalt courses.</p>
W.05	Compound operation - peak	111	The compound sites may include site offices, laydown and stockpiling areas, worker amenities and workforce parking, as needed.
W.06	Compound operation - typical	105	
W.07	Landscaping and finishing work - peak	115	After the main construction work is complete, landscaping and finishing work would be required which would include: <ul style="list-style-type: none"> ● Spreading of topsoil and mulch ● Planting ● Installation of intelligent transport systems, new street lighting, road furniture and signage ● Line marking ● Removal of all traffic management devices and environmental controls ● Relocation/decommissioning of temporary utilities and services ● Decommission and removal of site offices, equipment and materials at completion ● Rehabilitation of ground surface
W.08	Landscaping and finishing work - typical	104	

Note 1: Equipment lists for each scenario and Sound Power Level data are provided in [Appendix C](#).

The assessment in **Section 5** presents a summary of the predicted impacts from the above construction scenarios. To gain an understanding of the potential impacts from the proposal, detailed results are also provided for some of the key construction scenarios.

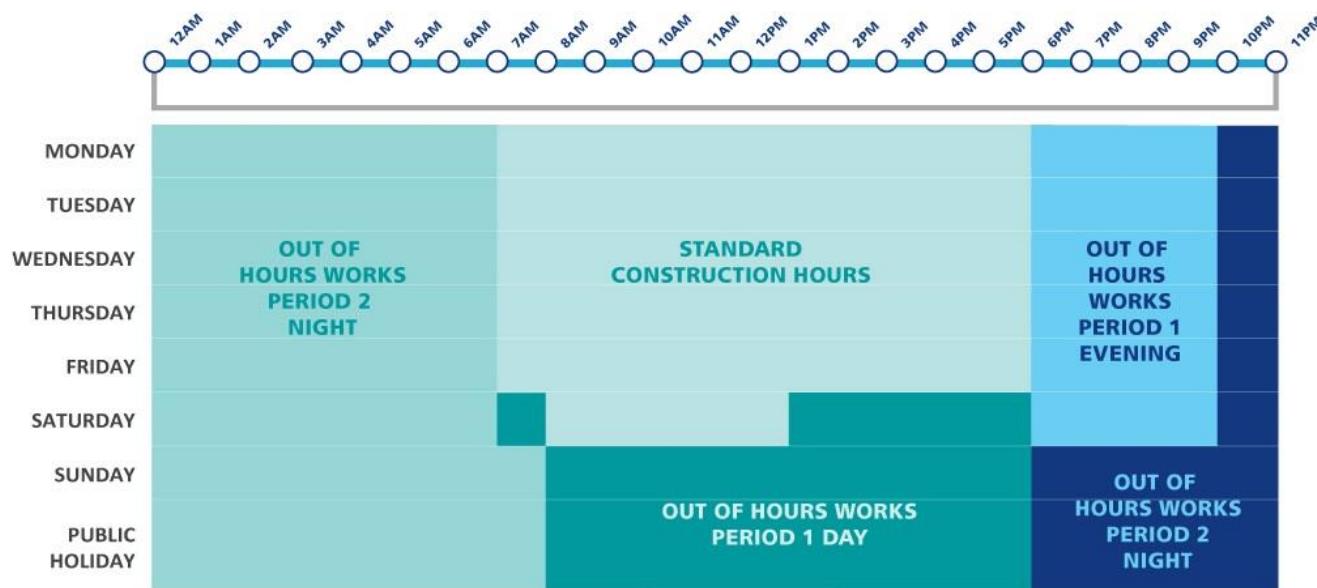
Figure 2 Construction Work Locations



4.1.2 Working Hours

Construction of the proposal would be carried out during standard construction hours where possible. Standard construction hours are defined in the ICNG and shown in **Table 17**.

Table 17 Standard Construction Hours^{1, 2, 3}



Note 1: Taken from the Transport for NSW *Construction Noise and Vibration Strategy*.

Note 2: Standard construction hours are Monday to Friday 7 am to 6 pm and Saturdays from 8 am to 1 pm, as defined in the ICNG.

Note 3: Work outside of standard construction hours is defined as 'Out-of-Hours Work' (OOHW) and can be divided into two periods of sensitivity. OOHW Period 1 which relates to evening (and weekend daytime) work, and OOHW Period 2 which relates to night-time (and weekend evening) work.

Certain construction activities that may result in traffic restrictions are likely to be carried out outside of Standard construction hours during evening and night-time periods to minimise disruption to traffic and provide a safer working environment for construction workers.

The expected periods in which the work would be completed are shown in **Table 16**.

Table 18 Construction Scenarios – Working Hours

ID	Scenario	Estimated Duration	Hours of Work			
			Std. Day	Day OOH ¹	Evening	Night time
W.01	Preliminary work, utilities, earthwork and drainage - peak	27 weeks	✓	✓	✓	✓
W.02	Preliminary work, utilities, earthwork and drainage - typical		✓	✓	✓	✓
W.03	Road and intersection work - peak	44 weeks	✓	✓	✓	✓
W.04	Road and intersection work - typical		✓	✓	✓	✓
W.05	Compound operation - peak	Project duration	✓	✓	✓	✓
W.06	Compound operation - typical		✓	✓	✓	✓
W.07	Landscaping and finishing work - peak	9 weeks	✓	✓	✓	✓
W.08	Landscaping and finishing work - typical		✓	✓	✓	✓

Note 1: OOH = out of hours. Daytime out of hours is Saturday between 7 am to 8 am and 1 pm to 6 pm, on Sunday and public holidays between 8 am to 6 pm.

Construction activities would generally occur sequentially, such that the construction scenarios would not necessarily be undertaken concurrently over all working hours.

Construction of the proposal would take around two years to complete, subject to approvals, funding and weather. However, these durations are indicative and would be confirmed by the construction contractor.

4.2 Construction Vibration Assessment

The potential impacts during vibration intensive work have been assessed using the CNVG minimum working distances for cosmetic damage and human response shown in **Table 12**. The assessment identifies structures which are within the minimum working distances based the construction scenarios with vibration intensive equipment as shown in **Table 19** (see **Figure 2** and **Appendix C** for more information).

Table 19 Vibration Intensive Equipment

ID	Scenario	Vibration Intensive Equipment	Minimum Working Distance		
			Cosmetic Damage	Heritage Items	Human Response
W.03	Road and intersection work - peak	Vibratory Roller (13–18 tonne)	20 m	40 m	100 m

Note 1: Other items of vibration generating equipment may be required at times during the works, however, they are expected to be less vibration intensive.

4.3 Construction Traffic

The potential impacts from construction traffic on public roads have been predicted using the *Calculation of Road Traffic Noise* (CoRTN) algorithm.

Where road traffic noise is predicted to increase by more than 2.0 dB and the RNP base criteria are found to be exceeded, feasible and reasonable mitigation and management measures should be considered.

4.4 Construction Mitigation

The ICNG acknowledges that due to the nature of construction work it is inevitable that there will be impacts where construction is near to sensitive receivers. Several approaches are used on major infrastructure projects to minimise the potential noise and vibration impacts as far as practicable.

Standard Mitigation Measures

The *Construction Noise and Vibration Guideline* (CNVG) contains a number of ‘standard mitigation measures’ for mitigating and managing noise and vibration impacts during construction of road infrastructure projects.

These standard measures include items such as requiring construction contractors to complete site inductions to make workers aware of any noise and vibration specifics, completing regular monitoring to check noise and vibration levels are as expected, and checking noise emission levels from construction equipment to ensure they remain within manufacturers’ specifications. The ‘standard mitigation measures’ are shown in full in **Appendix C**.

Additional Mitigation Measures

Where noise impacts remain after the use of ‘standard mitigation measures’, the CNVG requires ‘additional mitigation measures’ to be applied, where feasible and reasonable. The ‘additional mitigation measures’ include items such as notification of upcoming work, using respite where there are high impacts and verification of construction noise and vibration levels. The measures are determined based on the exceedance of the management levels and are shown in **Appendix C**.

4.5 Operational Noise Modelling Methodology

4.5.1 Key Operational Features of the Proposal

The key features of the proposal that have the potential to change operational road traffic noise impacts in the study area include:

- Upgrade of Henry Lawson Drive to a four-lane divided road (two lanes in each direction) with a central median
- Modification of the Bullecourt Avenue / Ashford Avenue intersection to better accommodate heavy vehicle movements
- Construction of a new two-lane local link road between Auld Avenue and Keys Parade
- Extension of Raleigh Road to connect with Keys Parade at a roundabout and removal of the direct connection between with Henry Lawson Drive.

4.5.2 Noise Model

A noise model of the study area has been used to predict noise levels from the operation of the proposal to the surrounding receivers. The model uses *Calculation of Road Traffic Noise* (CoRTN) (UK Department of Transport, 1988) algorithms in SoundPLAN V8.2 software.

Local terrain, receiver buildings and structures were digitised in the noise model to develop a three-dimensional representation of the proposal and surrounding areas.

The '**No Build**' scenarios use the existing road alignment geometry, with all existing structures and features within the road corridor included.

The '**Build**' scenarios use the proposed design of the proposal, which includes all widening work and changes to existing ground levels such as cuttings and embankments.

4.5.3 Project and Non-Project Roads

Roads where design or engineering changes are proposed as part of the proposal are considered as 'project' roads. Existing roads with no upgrades or work occurring are considered 'non-project'.

All major roads in the study area have been modelled together with major roads on the surrounding road network to determine the contributions from 'project' and 'non-project' roads at individual receivers, as required by the RNCG. Project and non-project roads are shown in **Appendix D**.

4.5.4 Transition Zones

The RNCG requires transition zones to be applied at the point where road categories change from 'new' to 'redeveloped' to provide a smooth transition in noise criteria.

Transition zones were investigated in the area around the new link road between Auld Avenue and Keys Parade. Road traffic noise levels at all sensitive receivers in this area would be dominated by the relatively higher traffic volumes on the 'redeveloped' roads (ie Henry Lawson Drive) and the 'redeveloped' criteria has been applied accordingly.

4.5.5 Noise Modelling Parameters

Further details on the noise modelling parameters used in the assessment are shown in **Table 20**.

Table 20 Summary of Noise Model Inputs and Parameters

Input Parameter	Source of Data
Ground topography	The noise model includes a 'digital ground model' which is an accurate 3D representation of the terrain in the study area. The ground model was constructed from a combination of surveyed road corridor data, LIDAR point cloud data and 1 m contours.
Buildings, receiver locations and floors	The buildings in the noise model were generated from a third-party database, digitised based on satellite imagery and a combination of automated and manual processing to identify building attributes. The buildings have been checked and updated where appropriate to be suitable for noise modelling. The model predicts noise to every facade of every identified receiver in the assessment area using the following heights: <ul style="list-style-type: none">• Floor heights – 2.8 m• Ground floor receiver height – 1.5 m• Subsequent receiver heights – 1.5 m + 2.8 m times floor number (eg 4.3 m, 7.1 m, etc.)
Operational study area	The operational study area extends 600 m from the centre of the outside lanes of the project roads as required by the RNCG. The study area is cut at the northern and southern extents of the proposal.
Assessment timeframes	The proposal is assessed 'at-opening' in 2031 and in the 'future design' year in 2041.

Input Parameter	Source of Data
Traffic volumes	<p>Existing traffic volumes were measured at the same time as the noise monitoring survey. This data was used to model the existing situation and validate the operational model.</p> <p>The predicted traffic volumes for the 2031 and 2041 years used in the assessment are shown in Appendix D.</p>
Vehicle speed	<p>Existing vehicle speeds were measured during the noise monitoring survey and used to validate the noise model.</p> <p>Existing and future posted vehicle speeds used in the Build and No Build modelling situations:</p> <ul style="list-style-type: none"> • Henry Lawson Drive – 60 km/h • Bullecourt Avenue – 50 km/h • Keys Parade – 60 km/h • Ashford Avenue north of Bullecourt Avenue – 60km/h • Ashford Avenue south of Bullecourt Avenue – 50km/h • Auld Avenue – 50 km/h • M5 Motorway Mainline – 100km/h • M5 On/Off Ramps – 60 km/h
Source heights and source correction	<p>Vehicles generally emit road traffic noise at four source heights. These are represented in the noise model by the following:</p> <ul style="list-style-type: none"> • Cars (at 0.5 m height with a source correction of 0.0 dB) • Truck tyres (at 0.5 m height with a source correction of -5.4 dB) • Truck engines (at 1.5 m height with a source correction of -2.4 dB) • Truck exhausts (at 3.6 m height with a source correction of -8.5 dB).
Road surface corrections	The existing and future road surfaces within the study area are Dense Grade Asphalt (DGA). DGA has a 0 dB surface correction factor.
Ground absorption	<p>Noise levels at receivers can be influenced by the type of ground between the source of noise and the receiver. The following ground absorption factors have been used as detailed in the Transport for NSW <i>Road Noise Model Validation Guideline</i>:</p> <ul style="list-style-type: none"> • Residential and commercial areas – 50% • Open grass areas – 75%.
General corrections	<p>The model also includes the following corrections to convert the noise model outputs to the appropriate assessment noise levels:</p> <ul style="list-style-type: none"> • Facade reflections +2.5 dB • LA10 to LAeq -3 dB.

4.5.6 Noise Model Validation

To validate the operational road traffic noise model, the existing scenario was modelled using measured traffic data and compared to existing noise measurements in the study area (see **Section 2**). The validation measurement sites are shown in **Figure 1** and a summary of the model validation is provided in **Table 21**. Only noise monitoring locations which were used for model validation are shown.

Table 21 Comparison of Measured and Predicted Road Traffic Noise Levels

Location	Noise Level (dBA) ¹					
	Daytime LAeq(15hour)			Night time LAeq(9hour)		
	Measured	Predicted	Difference ²	Measured	Predicted	Difference ²
L01 - 5 Auld Ave, Milperra	62.4	62.9	0.5	58.5	58.2	-0.4
L02 - 503 Henry Lawson Dr, Milperra	73.9	71.4	-2.4	68.5	66.3	-2.3
L03 - 20 Ganmain Cres, Milperra	63.4	64.0	0.7	57.7	58.5	0.8
L04 - 23 Hermies Ave, Milperra	67.9	69.0	1.2	62.5	63.5	1.0
L05 - Bullecourt Avenue, Milperra ²	65.2	66.7	1.6	59.3	60.3	1.0
Median			0.7	Median		0.8

Note 1: Validation of the noise model was completed using data from 23 to 26 March and 1-5 April 2022. Validation at L05 was completed using data from 22 to 28 March, due to limited noise and traffic survey data at this location. These periods excluded weekends which tend to have lower and intermittent traffic volumes.

Note 2: Difference is Predicted minus Measured. A negative difference indicates the predicted level of road traffic noise is lower than the measured data, a positive difference indicates the predicted level is higher.

The TfNSW *Road Noise Model Validation Guideline* notes that noise models typically result in random scatter error of ± 2.0 dB.

Four of the five model validation locations are within the expected model accuracy of ± 2.0 dB, however, the model is underpredicting by just over 2 dB at L02. This location was noted to have a short section of particularly worn existing road surface during the attended survey which likely resulted in the elevated measured road traffic noise levels compared to the model predictions. Additionally, the noise logger was only around 8 m from the road edge, due to limited secure locations at the site, which is known to increase the chance of validation error (ie it is less than the CoRTN reference emission distance). If L02 was removed from the validation the median difference between modelled and predicted noise levels would be 0.9 dB. Given this is within ± 2.0 dB and the other validation locations are within 500 m on similar sections of the road, it is expected that the predictions in this area will be accurate for the future modelling scenarios that would include new pavement and assess to the building facades.

The predictions show that the noise model is generally within the accepted tolerances and is valid for predicting road traffic noise levels for the proposal.

4.5.7 Noise Mitigation

The TfNSW *Road Noise Mitigation Guideline* (RNMG) provides guidance in managing and controlling road traffic noise and describes the principles to be applied when reviewing noise mitigation. The RNMG recognises that the RNCG criteria are not always practicable and that it is not always feasible or reasonable to expect that they are achieved.

As projects progress through the early design stages, various road design features are evaluated to assist with minimising road traffic noise. The RNMG defines these ‘integrated noise reduction measures’ as including:

- Adjustments to vertical and horizontal alignments
- Road gradient modifications
- Traffic management
- Cost effective use of won project spoil to provide landscape mounds where there is suitable site footprint.

Following use of the above measures, site specific ‘additional noise mitigation measures’ are then required to be investigated for receivers which have residual exceedances of the criteria. When evaluating if a receiver qualifies for consideration of ‘additional noise mitigation measures’ the RNMG considers how far above the criterion the noise level is and also how much a project increases noise levels. These considerations provide a feasible and reasonable approach to identifying qualifying receivers.

The RNMG provides three triggers where a receiver may qualify for consideration of ‘additional noise mitigation’ (beyond the use of ‘integrated noise reduction measures’). These are:

- **Trigger 1** – the predicted ‘Build’ noise level exceeds the RNCG controlling criterion and the noise level increase due to the project (ie the noise predictions for the ‘Build’ minus the ‘No Build’) is greater than 2.0 dB
- **Trigger 2** – the predicted ‘Build’ noise level is 5 dB or more above the RNCG controlling criterion (ie exceeds the cumulative limit) and the receiver is significantly influenced by project road noise, regardless of the incremental impact of the project
- **Trigger 3** – the noise level contribution from the road project is acute (daytime $L_{Aeq(15\text{hour})}$ 65 dBA or higher, or night-time $L_{Aeq(9\text{hour})}$ 60 dBA or higher) even if noise levels are controlled by a non-project road.

The eligibility of receivers for consideration of ‘additional noise mitigation’ is determined before the benefit of low noise pavement and noise barriers is included. The requirement for the project is to provide feasible and reasonable additional mitigation to eligible receivers with the aim of meeting the RNCG controlling criterion.

For receivers that qualify for consideration of ‘additional noise mitigation’, potential noise mitigation measures are to be considered in the following order of preference:

- At-source mitigation:
 - Quieter road pavement surfaces
- In-corridor mitigation:
 - Noise mounds
 - Noise barriers
- At-receiver mitigation:
 - At-property treatments.

There are existing noise walls to the north of the M5 Motorway on and off ramps to Henry Lawson Drive, located south of the project as shown in **Figure 1**. The noise wall to the west of Henry Lawson Drive continues around 120 m into the project area along the edge of the existing road corridor. This barrier has been included in the noise model and assessment and would be realigned to the edge as part of the proposal.

4.5.8 Maximum Noise Levels

Maximum noise levels near roads are generally controlled by noise from trucks. Where roads are located close to residential receivers there is potential for sleep disturbance impacts from maximum noise level events.

The RNP and ENMM both state that while a maximum noise level assessment is required to be undertaken for new and redeveloped road infrastructure projects, it should only be used as a tool to help prioritise and rank mitigation strategies and should not be applied as a decisive criterion.

The purpose of a maximum noise level assessment is to determine where maximum noise levels are likely to change as a result of a project.

The maximum noise level assessment includes an evaluation of the number and distribution of night-time events in accordance with the ENMM. A maximum noise level event is defined as being any passby where:

- The maximum noise level of the event is greater than 65 dBA LAFmax
and
- The LAFmax – LAeq(1hour) is greater than or equal to 15 dB.

Existing maximum noise levels were monitored in the study area during the unattended noise monitoring survey (see **Section 2**). The potential for changes in maximum noise levels to nearby sensitive receivers are then evaluated where the proposal redevelops roads.

5 Assessment of Construction Impacts

5.1 Overview of Construction Impacts at Residential Receivers

The following overview is based on the predicted noise impacts at the most affected receivers in each NCA and is generally representative of the worst-case situation where construction equipment is at the closest point to each receiver. For most work, the construction noise impacts would frequently be lower than predicted as the worst-case situation is typically only apparent for a relatively short period when noisy equipment is in use nearby.

The following assessment shows the predicted noise impacts based on the exceedance of the NML, as per the categories in **Table 22** which are taken from the CNVG.

Table 22 NML Exceedance Bands and Corresponding CNVG Perception Categories

CNVG Perception Categories	Daytime	Standard construction hours	Out of Hours Periods	
	Symbol	NML Exceedance	Symbol	NML Exceedance
Noticeable	•	-1	◆	1 to 5 dB
Clearly Audible	●	1 to 10 dB	●	6 to 15 dB
Moderately Intrusive	◆	11 dB to 20 dB	◆	16 dB to 25 dB
Highly Intrusive	■	>20 dB	■	>25 dB

Note 1: Applicable for construction noise levels of 5-10 dB above RBL (see **Table 33**).

The predicted construction noise impacts are presented for the residential receivers within each NCA that have the potential to be the most affected by construction noise from the proposal. Receivers which are further away from the work and/or shielded from view would likely experience lower noise levels and impacts.

The assessment is generally considered conservative as the calculations assume several items of construction equipment are in use at the same time within individual scenarios. In reality, there would frequently be periods when construction noise levels are much lower than the worst-case levels predicted as well as times when no equipment is in use and no noise impacts occur.

A summary of the predicted construction noise impacts in each NCA for residential receivers is shown in **Table 23**. Detailed noise level predictions and summaries of the number of receivers predicted to have 'noticeable', 'clearly audible', 'moderately intrusive' and 'highly intrusive' impacts in each NCA are provided in **Appendix C**.

Table 23 Predicted Worst-case Construction Noise Exceedances – Residential Receivers

Period	ID	Scenario	NCA01	NCA02	NCA03	NCA04	NCA05	NCA06
Daytime	W.01	Preliminary work, utilities, earthwork and drainage - peak	■	■	■	■	■	■
	W.02	Preliminary work, utilities, earthwork and drainage - typical	◆	●	◆	◆	◆	◆
	W.03	Road and intersection work - peak	◆	■	■	■	■	■
	W.04	Road and intersection work - typical	•	●	●	◆	●	●
	W.05	Compound operation - peak	◆	■	◆	■	•	•
	W.06	Compound operation - typical	●	■	●	◆	•	•
	W.07	Landscaping and finishing work - peak	■	◆	■	■	■	■
	W.08	Landscaping and finishing work - typical	◆	●	◆	◆	◆	●
Evening	W.01	Preliminary work, utilities, earthwork and drainage - peak	■	■	■	■	■	■
	W.02	Preliminary work, utilities, earthwork and drainage - typical	◆	◆	■	■	■	◆
	W.03	Road and intersection work - peak	◆	■	■	■	■	■
	W.04	Road and intersection work - typical	●	◆	◆	■	◆	◆
	W.05	Compound operation - peak	◆	■	■	■	●	●
	W.06	Compound operation - typical	◆	■	◆	■	◆	●
	W.07	Landscaping and finishing work - peak	■	■	■	■	■	■
	W.08	Landscaping and finishing work - typical	◆	◆	◆	■	◆	◆
Night	W.01	Preliminary work, utilities, earthwork and drainage - peak	■	■	■	■	■	■
	W.02	Preliminary work, utilities, earthwork and drainage - typical	■	■	■	■	■	■
	W.03	Road and intersection work - peak	■	■	■	■	■	■
	W.04	Road and intersection work - typical	●	■	■	■	■	■
	W.05	Compound operation - peak	■	■	■	■	◆	◆
	W.06	Compound operation - typical	◆	■	■	■	●	●
	W.07	Landscaping and finishing work - peak	■	■	■	■	■	■
	W.08	Landscaping and finishing work - typical	■	■	■	■	■	■
Key to Impacts (see Table 22)			◆ Noticeable	● Clearly Audible	◆ Moderately	■ Highly Intrusive		

The above assessment for the most affected residential receivers in each NCA during the worst-case impacts shows that:

- The work areas are close to residential receivers on Henry Lawson Drive, Bullecourt Avenue, Ashford Avenue, Rayleigh Road and Auld Avenue, which results in ‘high intrusive’ to ‘moderately intrusive’ noise levels and impacts at some of the nearest receivers. The highest noise levels and impacts would be experienced by adjacent receivers when noisy construction work is nearby. Where receivers are further away, or when less noise intensive work is being completed, the predicted noise impacts are correspondingly lower.

- The highest impacts are expected to occur when noise intensive equipment is being used such as chainsaws, chippers, concrete saws or rockbreakers. These items of equipment would only, however, be required occasionally and would be unlikely to be in use for long periods of time.
- The impacts during the daytime are predicted to be ‘highly intrusive’ at the nearest receivers in several NCAs during the ‘peak’ work scenarios. During ‘typical’ work impacts would be reduced to be ‘moderately intrusive’ or ‘clearly audible’, or be compliant with the management levels.
- The night-time impacts are expected to be ‘highly intrusive’ at certain times during all work scenarios when noisy work is being completed near to receivers.

For most scenarios, the noisiest work would only be required for a relatively short period of the work shift and of the total proposal duration. Noise levels and impacts at other times would be much lower than the worst-case levels predicted.

5.2 Detailed Construction Noise Impacts at All Receiver Types

The predicted construction noise levels and impacts from each work scenario are tabulated in **Appendix C** for each NCA. The following sections provide a detailed discussion of the construction impacts from some of the key construction scenarios.

5.2.1 Daytime Scenarios

The highest daytime construction noise impacts are predicted during ‘*W.01 – Preliminary work, utilities, earthwork and drainage - peak*’ when noise intensive equipment such as a concrete saw is in use. The predicted daytime noise impacts during this work are shown in:

- **Figure 3** – ‘*W.01 – Preliminary work, utilities, earthwork and drainage – peak*’, when noise intensive equipment such as a concrete saw is being used.
- **Figure 4** – ‘*W.02 – Preliminary work, utilities, earthwork and drainage – typical*’, which does not generally require noise intensive equipment.

‘*Preliminary work, utilities, earthwork and drainage*’ has been assumed to occur anywhere within the proposal area and would include work associated with utilities.

It is noted that the figures show the impacts assuming work is being completed in all locations at the same time. In reality, for most scenarios, work would occur in one area before moving to the next location which would limit the impacts to the surrounding receivers.

Figure 3 Predicted Impacts during 'W.01 – Preliminary work, utilities, earthwork and drainage – peak' (Daytime)

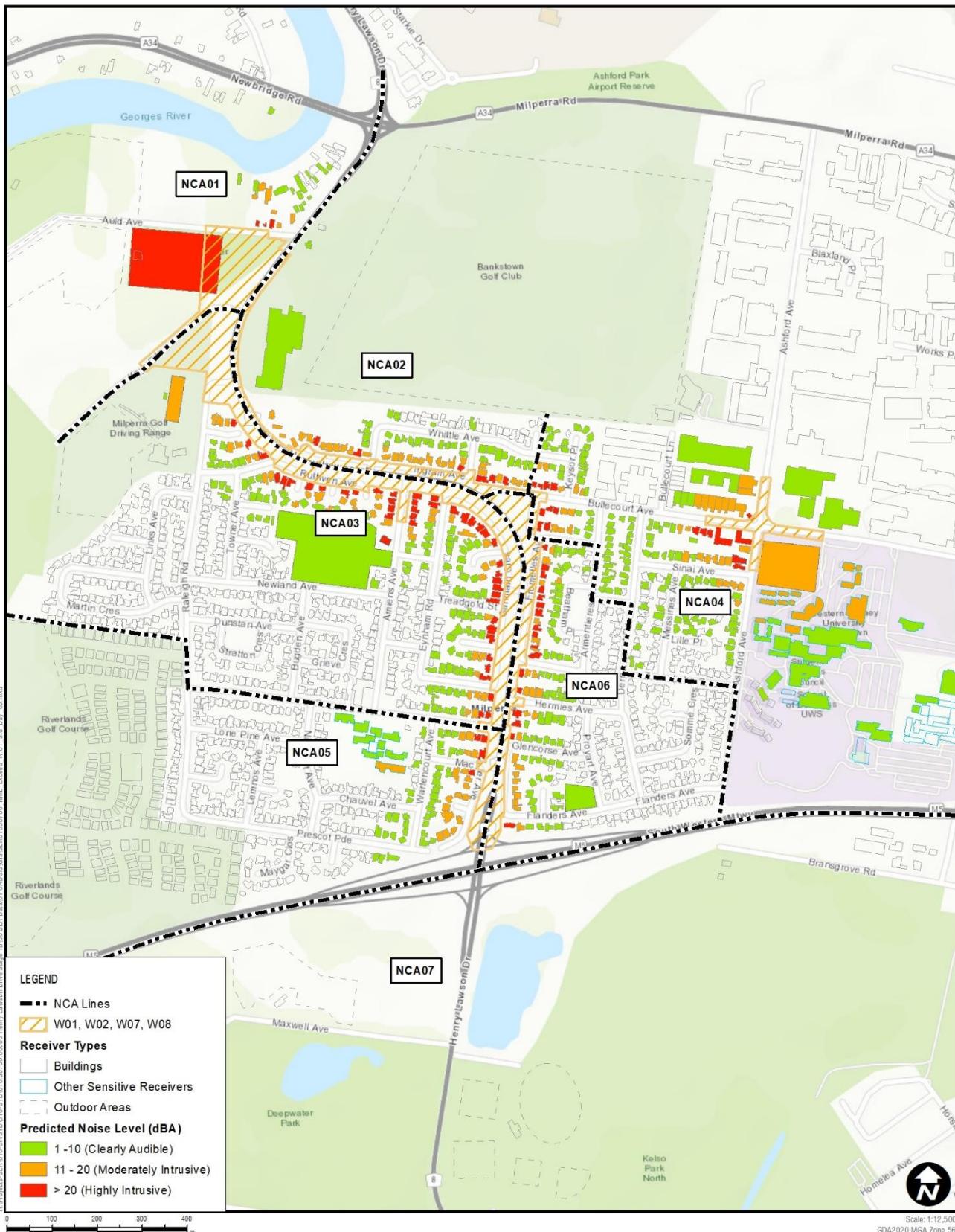


Figure 4 Predicted Impacts during 'W.02 – Preliminary work, utilities, earthwork and drainage – typical' (Daytime)



The above figures show that front-row residential receivers are predicted to have ‘highly intrusive’ worst-case daytime impacts when noise intensive work is being completed nearby as part of ‘W.01 – Preliminary work, utilities, earthwork and drainage – peak’. Residential receivers on the rows further back are predicted to experience much lower worst-case daytime noise levels that generally range from ‘moderately intrusive’ to compliant with the NMLs.

When noise intensive equipment is not in use as part of ‘W.02 – Preliminary work, utilities, earthwork and drainage – typical’, the worst-case noise impacts are substantially reduced. Front-row residential receivers in this scenario are predicted to experience ‘moderately intrusive’ or ‘clearly audible’ impacts when work is nearby. Residential receivers on the second-row and beyond are generally predicted to experience noise levels that are compliant with the NMLs.

The impacts presented above are based on all equipment working simultaneously in each assessed scenario. There would frequently be periods when construction noise levels are much lower than the worst-case levels predicted and there would be times when no equipment is in use and no impacts occur.

5.2.2 Night-time Scenarios

Certain construction activities that may result in traffic restrictions are likely to be carried out during the night-time to minimise disruption to traffic and provide a safer working environment for construction workers. Noise intensive equipment such as concrete saws may be required at times during out of hours work.

The highest night-time construction noise impacts are predicted during ‘W.01 – Preliminary work, utilities, earthwork and drainage - peak’ when noise intensive equipment such as a concrete saw is in use. The predicted night-time impacts during this work are shown in:

- **Figure 5** – ‘W.01 – Preliminary work, utilities, earthwork and drainage - peak’, when noise intensive equipment such as a concrete saw is being used.
- **Figure 6** – ‘W.02 – Preliminary work, utilities, earthwork and drainage – typical’, which does not generally require noise intensive equipment.

Out-of-hours work would likely be required at some of the compounds to support out of hours work. The predicted noise levels during ‘W.06 – Compound operation - typical’ are shown in **Figure 7** to show the impacts from one of the lower noise generating scenarios.

It is noted that the figures show the impacts assuming work is being completed in all locations at the same time. In reality, for most scenarios, work would occur in one area before moving to the next location which would limit the impacts to the surrounding receivers.

Figure 5 Predicted Impacts during 'W.01 – Preliminary work, utilities, earthwork and drainage – peak' (Night-time)

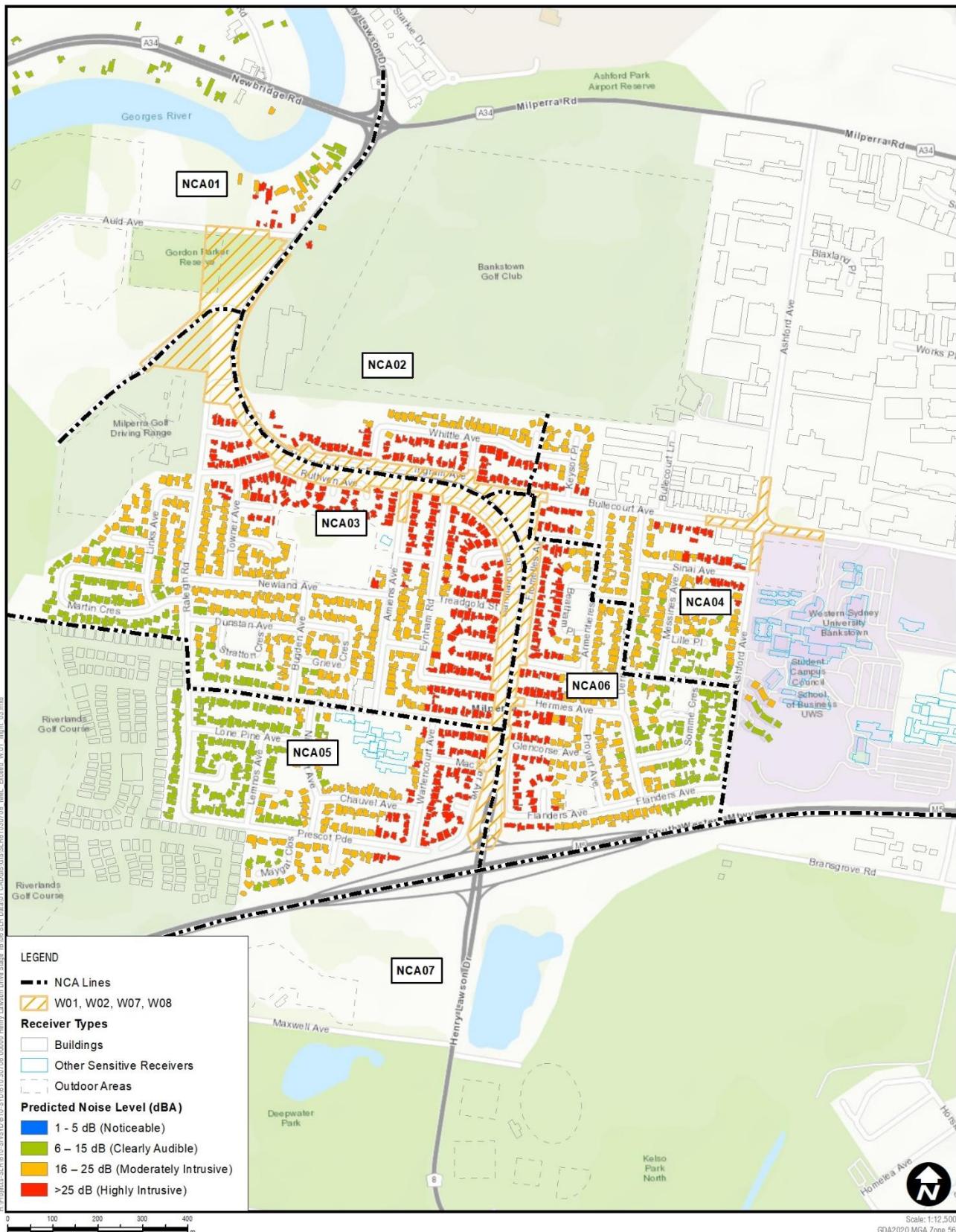


Figure 6 Predicted Impacts during 'W.02 – Preliminary work, utilities, earthwork and drainage – typical' (Night-time)

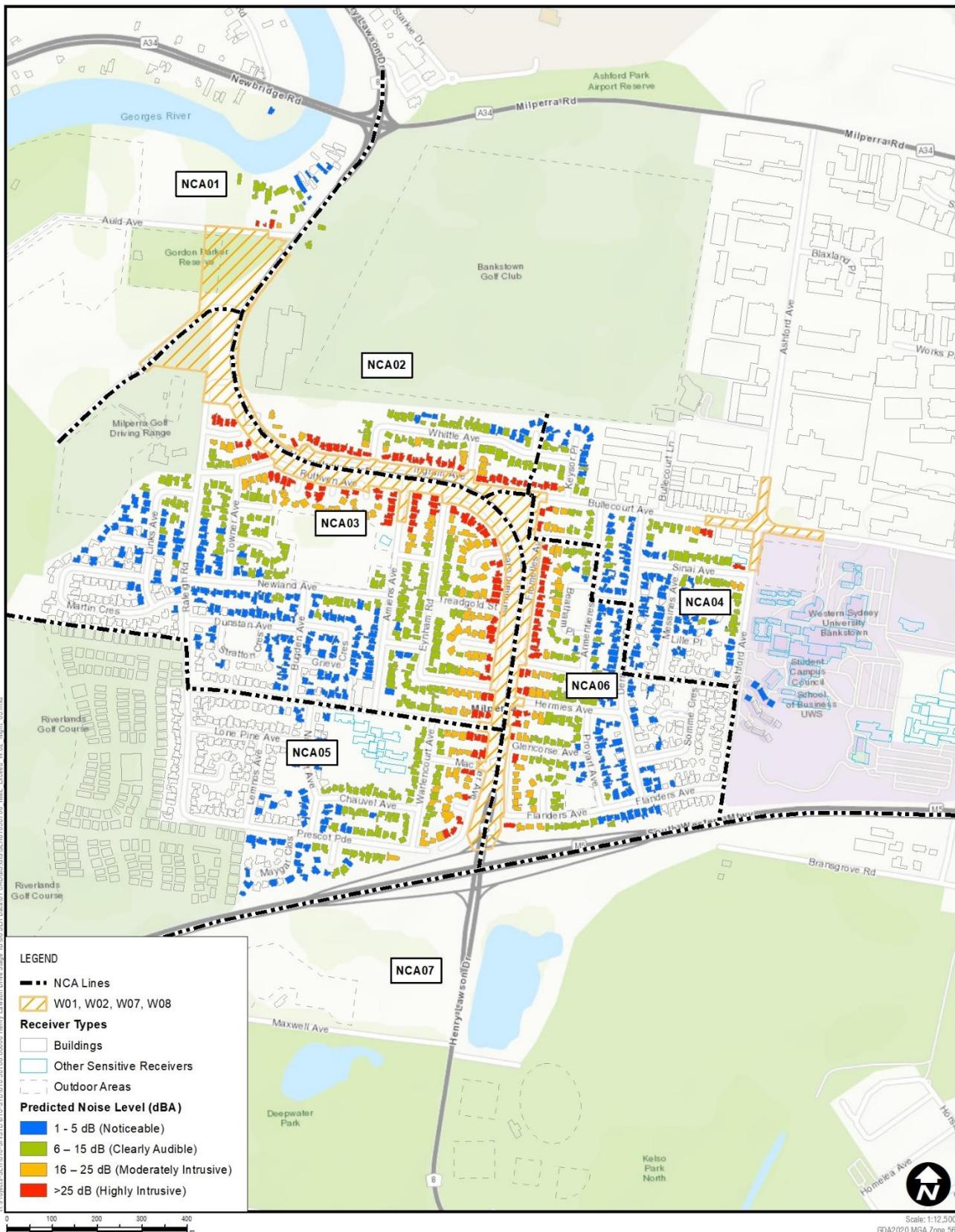
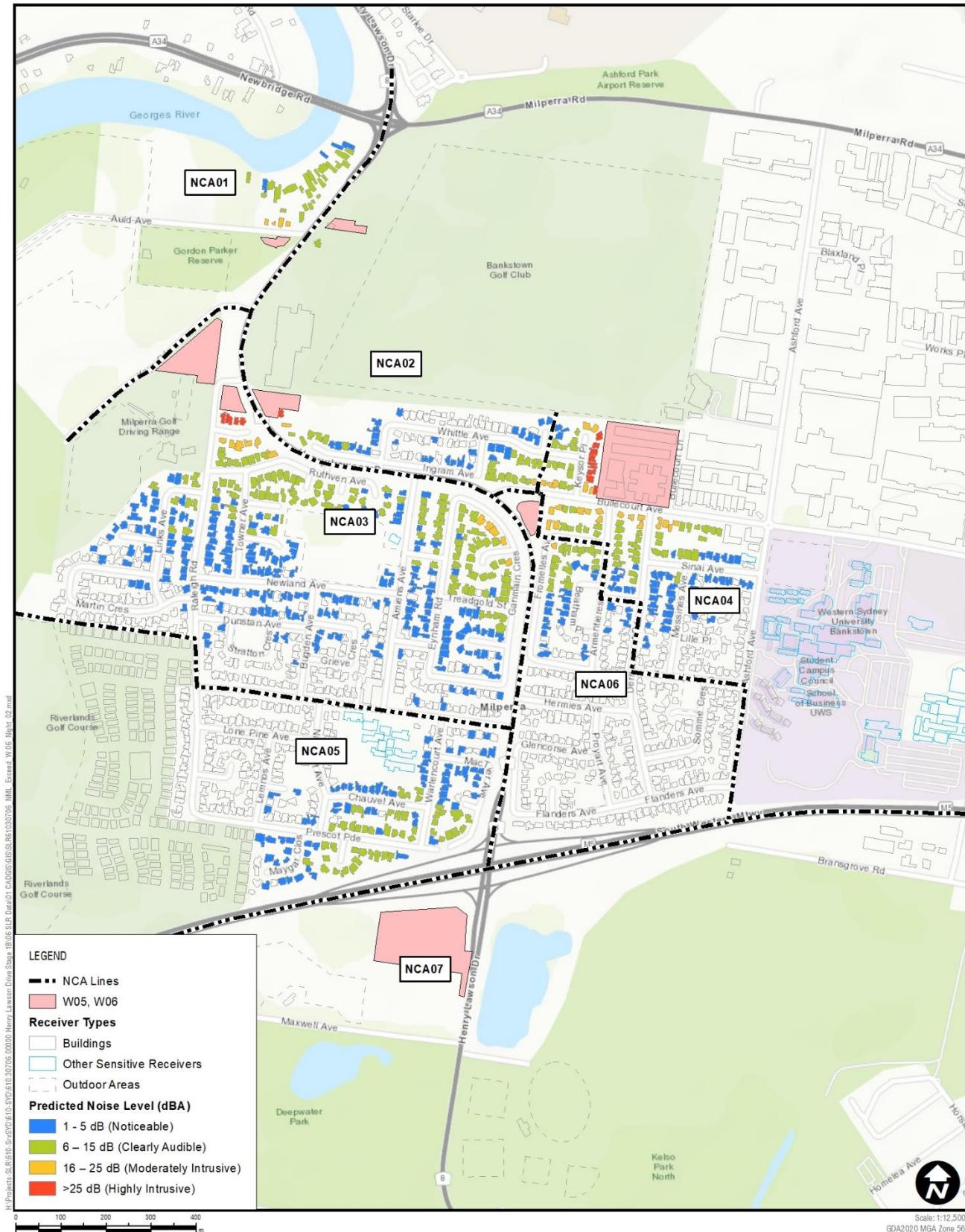


Figure 7 Predicted Impacts during 'W.06 – Compound operation – typical' (Night-time)



The above figures show that the predicted noise impacts during night-time work are more widespread than the daytime scenarios, which is due to lower NMLs during this period.

Residential receivers near to the work are predicted to have ‘highly intrusive’ worst-case night-time impacts when noise intensive work is being completed nearby as part of ‘W.01 – Preliminary work, utilities, earthwork and drainage – peak’, with more distant receivers generally having ‘moderately intrusive’ or ‘clearly audible’ worst-case impacts.

When noise intensive equipment is not in use as part of ‘W.02 – Preliminary work, utilities, earthwork and drainage – typical’, the worst-case noise impacts are substantially reduced, however, the front-row receivers are predicted to still experience ‘highly intrusive’ worst-case night-time noise levels.

The predicted night-time noise impacts during ‘W.06 – Compound operation – typical’ are reduced further relative to scenarios required across the entire study area. Residential receivers surrounding the compounds are, however, predicted to be impacted during noisy work.

The impacts presented above are based on all equipment working simultaneously in each assessed scenario. There would frequently be periods when construction noise levels are much lower than the worst-case levels predicted and there would be times when no equipment is in use and no impacts occur.

The requirements for night-time work would be confirmed as the proposal progresses. Construction mitigation and management measures are discussed further in **Section 7.1**.

5.3 Highly Noise Affected Residential Receivers

Residential receivers that are subject to noise levels of 75 dBA or greater are considered Highly Noise Affected by the ICNG. Receivers can be Highly Noise Affected when noisy work occurs close to residents.

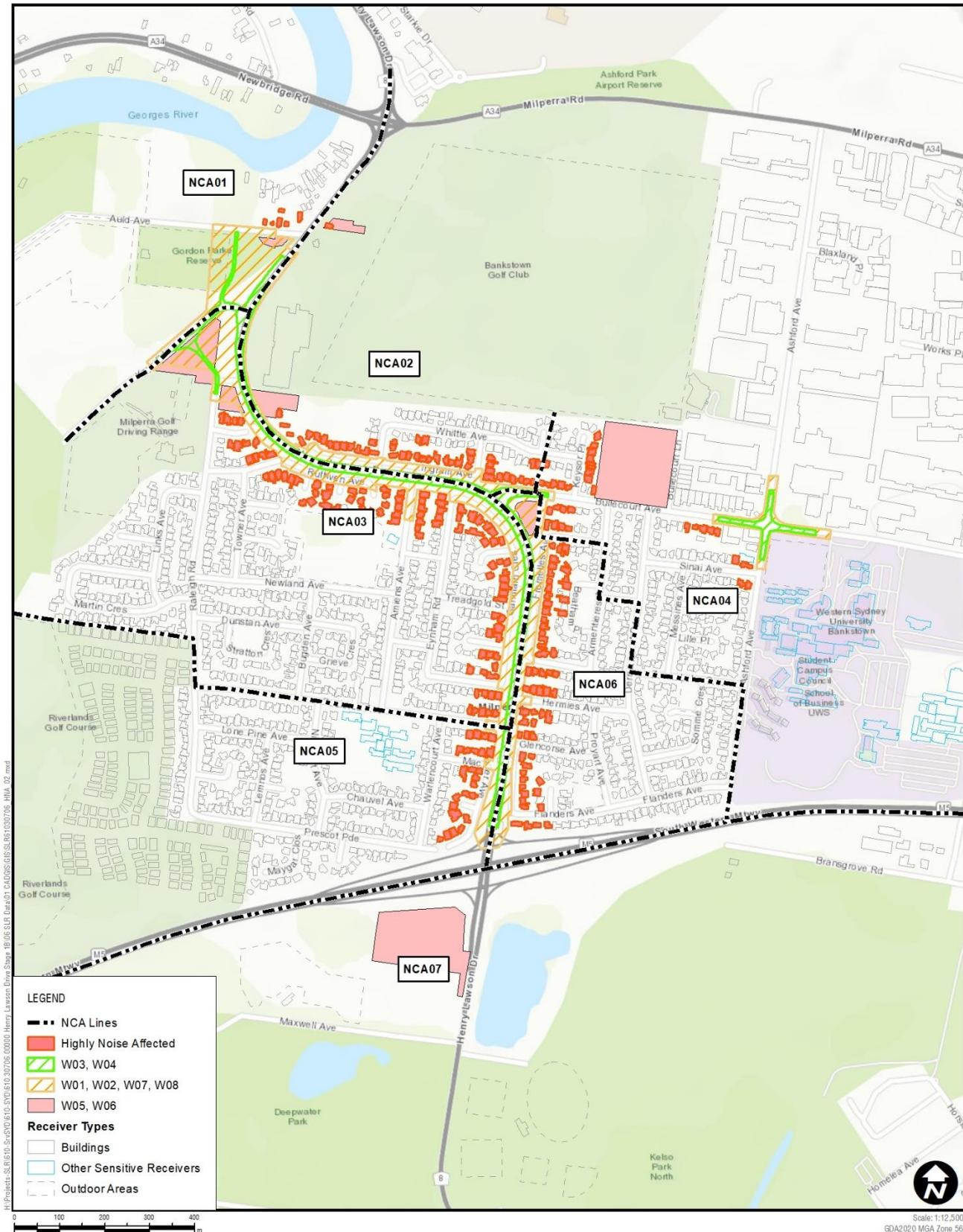
The number of residential receivers which could potentially be Highly Noise Affected during the worst-case impacts from the proposal are summarised in **Table 24** and shown in **Figure 8**. The predictions assume the individual scenarios are occurring at all locations across the study area.

Table 24 Predicted Number of Highly Noise Affected Residential Receivers

ID	Scenario	NCA01	NCA02	NCA03	NCA04	NCA05	NCA06
W.01	Preliminary work, utilities, earthwork and drainage - peak	6	42	93	20	24	62
W.02	Preliminary work, utilities, earthwork and drainage - typical	-	1	14	2	2	4
W.03	Road and intersection work - peak	1	42	77	21	16	49
W.04	Road and intersection work - typical	-	6	-	4	1	5
W.05	Compound operation - peak	-	2	3	9	-	-
W.06	Compound operation - typical	-	2	-	1	-	-
W.07	Landscaping and finishing work - peak	4	36	62	13	12	39
W.08	Landscaping and finishing work - typical	-	-	10	-	2	4

Note: There are no residential receivers in NCA07.

Figure 8 Highly Noise Affected Residential Receivers (from any work scenario)



Front-row residential receivers on Henry Lawson Drive are predicted to be Highly Noise Affected when noise intensive work is being carried out nearby. The highest noise levels would only likely be apparent for relatively short periods. When work is being completed in other more distant parts of the study area (ie further from an individual receiver), the noise levels would be correspondingly lower.

5.4 Commercial/Industrial and ‘Other Sensitive’ Receivers

A summary of the predicted construction noise impacts in each NCA for commercial/industrial and ‘other sensitive’ receivers is presented in **Table 25**.

Table 25 Overview of Commercial/Industrial and ‘Other Sensitive’ Receiver NML Exceedances

ID	Scenario	Number of Receiver Buildings Affected																	
		Commercial / Industrial			Child Care Centre			Educational			Public Building			Outdoor Active			Outdoor Passive		
		1 10 dB	11 20 dB	>20 dB	1 10 dB	11 20 dB	>20 dB	1 10 dB	11 20 dB	>20 dB	>20 dB	1 10 dB	11 20 dB	>20 dB	1 10 dB	11 20 dB	>20 dB	1 10 dB	11 20 dB
W.01	Preliminary work, utilities, earthwork and drainage - peak	10	14	4	2	-	1	23	13	-	-	-	1	-	2	1	2	-	-
W.02	Preliminary work, utilities, earthwork and drainage - typical	14	1	-	-	1	-	4	-	-	-	1	-	1	-	1	-	-	-
W.03	Road and intersection work - peak	10	9	9	2	1	-	25	13	-	-	-	1	1	2	-	2	-	-
W.04	Road and intersection work - typical	8	4	-	1	-	-	4	-	-	-	1	-	2	-	-	-	-	-
W.05	Compound operation - peak	9	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
W.06	Compound operation - typical	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
W.07	Landscaping and finishing work - peak	7	14	1	2	-	1	18	4	-	-	-	1	1	1	1	2	-	-
W.08	Landscaping and finishing work - typical	12	-	-	1	-	-	3	-	-	-	1	-	1	-	1	-	-	-
Key to Impacts		Clearly Audible					Moderately Intrusive					Highly Intrusive							

The assessment of receivers shows that commercial/industrial and ‘other sensitive’ receivers are predicted to be impacted during all work scenarios. ‘Highly intrusive’ or ‘moderately intrusive’ worst-case impacts are predicted at the nearest ‘other sensitive’ and commercial receivers when noisy work is nearby, including:

- KU Milperra Preschool
- Western Sydney University
- Milperra Public School
- Milperra Community Hall
- Gordon Parker Reserve, Milperra Reserve and Milperra Tennis Courts.

The worst-case impacts are predicted based on the work occurring at the closest point to each ‘other sensitive’ receiver. This would only occur for a short time at each receiver as work would progressively move along the alignment.

5.5 Sleep Disturbance

A sleep disturbance screening assessment has been undertaken for the construction work and a summary is tabulated in **Appendix C**.

Review of the predictions shows that the sleep disturbance screening criterion is likely to be exceeded when night work occurs near residential receivers. The receivers which would potentially be affected by sleep disturbance impacts are generally the same receivers where 'moderately intrusive' and 'highly intrusive' night-time impacts have been predicted (see **Figure 5 to Figure 7 in Section 5.3**).

The requirements for night-time work would be confirmed as the proposal progresses. Construction mitigation and management measures are discussed further in **Section 7.1**.

5.6 Construction Vibration Assessment

Vibration offset distances for the vibration intensive equipment required to complete the work have been determined from the CNVG minimum working distances for cosmetic damage and human response (see **Table 12**). Buildings within the minimum working distances have been determined and the assessment is summarised in **Figure 9**.

Cosmetic Damage Assessment

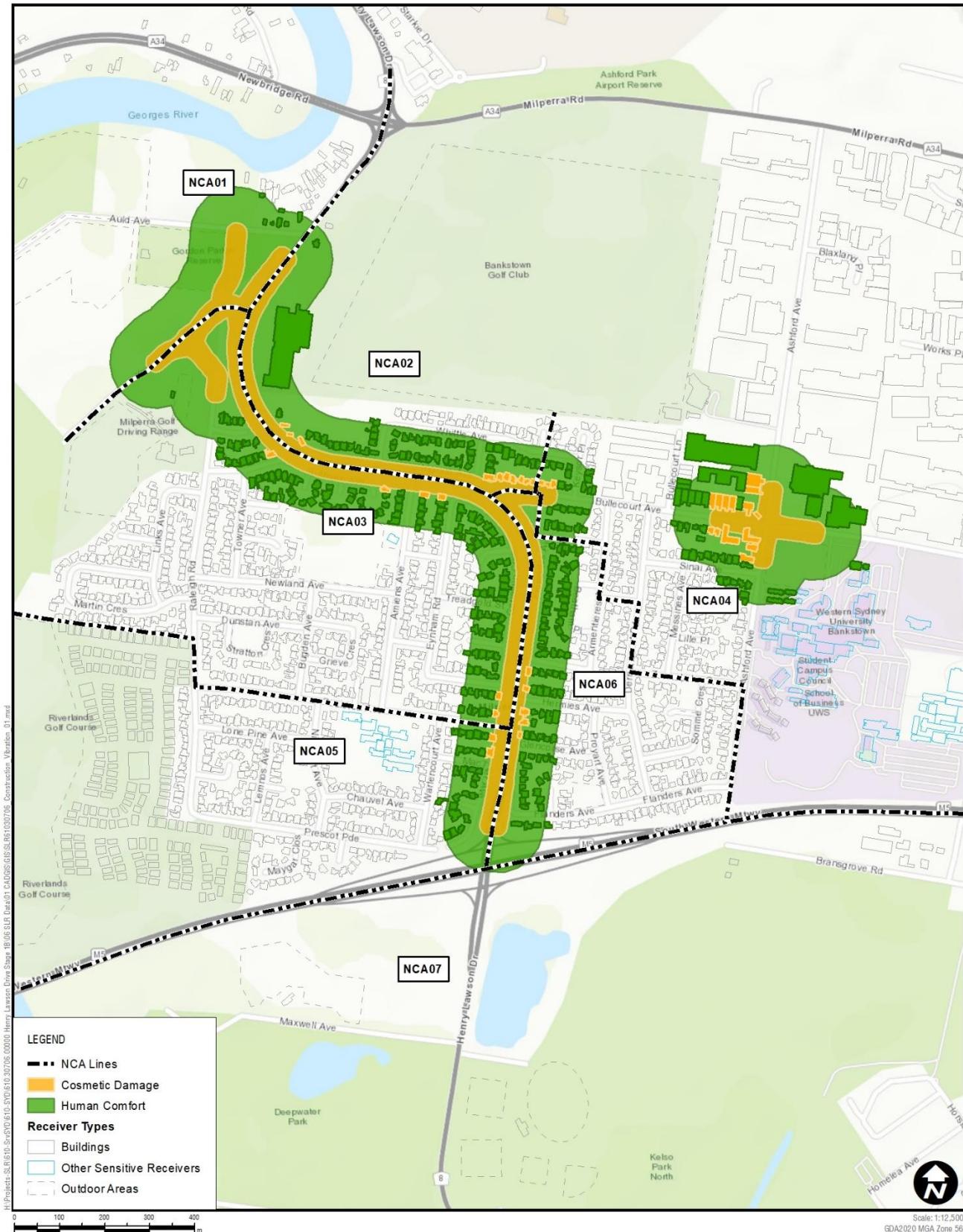
The figure shows that front-row receivers near to on Henry Lawson Drive and the intersection of Bullecourt Avenue and Ashford Avenue are likely to be within the minimum working distance for cosmetic damage (ie 20 m for a vibratory roller) and mitigation is required to be considered. Buildings in other parts of the study area are generally sufficiently distant to be outside the minimum distance.

Human Comfort Vibration Assessment

Certain receivers in the study area are also within the human comfort minimum working distance (ie 100 m) and occupants of affected buildings may be able to perceive vibration impacts at times when vibration intensive equipment is in use. Where impacts are perceptible, they would likely only be apparent for relatively short durations when vibration intensive equipment is nearby.

Construction mitigation and management measures are discussed further in **Section 7.1**.

Figure 9 Construction Vibration Assessment



5.7 Cumulative Impacts

Cumulative construction noise impacts can occur where multiple work activities are being completed near to a particular receiver at the same time. There is potential for cumulative construction impacts from multiple construction activities being completed in different areas of the proposal.

Since the construction scenarios required for various stages of the proposal would generally require similar items of equipment, concurrent construction work being completed near to a particular area could theoretically increase the worst-case noise levels in this report by around 3 dB (ie a logarithmic adding of two sources of noise at the same level).

The likelihood of worst-case noise levels being generated by two different work activities at the same time is, however, considered low and rather than increase construction noise levels, the impact of concurrent work would generally be limited to a potential increase in the duration, and annoyance, of noise impacts on the affected receivers.

In practice, construction noise levels in any one location would vary and would be frequently much lower than the worst-case scenario assessed due to construction staging moving work around within the proposal area and, in many cases, only a few items of equipment being used at any one time.

5.8 Construction Traffic Noise Assessment

Construction related traffic has the potential to temporarily increase road traffic noise levels at receivers that are near to haulage routes. Indicative construction traffic volumes on the proposed construction haulage routes are detailed in **Table 26**.

Table 26 Indicative Construction Traffic Volumes

Vehicle Type	Number of Vehicles Per Day				Roads Likely to be Used
	Daily Average	Daily Maximum	AM Peak	PM Peak	
Arterial and Sub Arterial Roads					
Heavy vehicles	50	72	43	29	Henry Lawson Drive Milperra Road Newbridge Road Bullecourt Avenue Ashford Avenue Pozieres Avenue
Light vehicles	140	250	150	100	
Raleigh Road (Local Road)					
Heavy vehicles	9	12	7	5	Raleigh Road
Light vehicles	36	68	41	27	
Auld Road (Local Road)					
Heavy vehicles	6	9	5	3	Auld Avenue
Light vehicles	8	15	8	6	

The above shows that proposal would require relatively low numbers of construction traffic compared to the high existing volumes on arterial roads in the area, such as Henry Lawson Drive, Milperra Road and Newbridge Road (ie around 20,000 to 40,000 vehicles daily). The proposed construction traffic volumes are also relatively low compared to existing volumes on sub-arterial roads in the study area such as Bullecourt Avenue, Ashford Avenue and Pozieres Avenue (ie around 3,000 to 10,000 vehicles daily).

The potential increase in noise due to construction traffic on major arterial and sub-arterial roads is predicted to be less than 1.0 dB and not likely to result in any noticeable traffic noise impacts (which is defined as an increase of greater than 2.0 dB).

Smaller local roads such as Raleigh Road and Auld Avenue have relatively low existing traffic volumes with a small proportion of heavy vehicles (ie around 300 to 1,000 vehicles daily). The increase in noise due to construction traffic on these local roads is predicted to potentially be greater than 2.0 dB depending on the percentage of construction traffic that uses these roads.

The existing and construction traffic noise levels on the local roads have been predicted based on the worst-case peak hour volumes and are summarised in **Table 27**. It is assumed that both the AM and PM peak movements would occur during the daytime period of 7 am – 10 pm as defined in the RNP.

Table 27 Construction Traffic Noise on Local Roads

Road	Criteria	Predicted Daytime Noise Level (LAeq,1hour dBA) ¹	
		Existing	With Construction Traffic
Auld Avenue	>2.0 dB increase and LAeq,1hour 55 dBA	53	57
Rayleigh Road		57	60

Note 1: LAeq noise levels are predicted with the CoRTN algorithm at a reference distance of 10 m from the road edge. This is representative of the closest residential receivers on these roads.

The assessment of worst-case construction traffic shows that a noticeable increase in road traffic noise is likely and noise levels are predicted to exceed the relevant criteria at receivers near to Auld Avenue and Rayleigh Road if they are used as part of the proposed construction traffic routes. Feasible and reasonable mitigation measures should be considered (see **Section 7**).

Construction traffic noise is subject to the methodology used by the construction contractor and should be reviewed during later design stages.

6 Assessment of Operational Impacts

Operational road traffic noise impacts from the proposal ‘without mitigation’ have been predicted for all sensitive receivers in the study area. The operational impacts are discussed in the following sections.

6.1 Residential Receivers

The predicted operational road traffic noise levels at residential receivers are summarised in **Table 28** for the 2031 at-opening and 2041 future design scenarios. The table shows the worst-case impacts in each NCA, which are typically experienced by the receivers nearest to the proposal.

Receivers are generally most affected by the proposal in the night-time period in 2041 with respect to the RNCG criteria and RNMG triggers, and this scenario is considered to control the assessment in terms of determining the worst-case impacts and requirements for mitigation.

The predicted noise levels in 2041 are shown in **Figure 10** to **Figure 13** for the daytime and night-time scenarios with and without the project. The predicted change in noise levels (Build (with project) minus No Build (without project)) is shown in **Figure 14** for the night-time scenario. The predicted highest change at individual receivers from all scenarios is also shown in a scatter graph in **Figure 15**.

Detailed noise predictions are shown in **Appendix D** together with operational road traffic noise contours with and without the proposal.

Table 28 Predicted Road Traffic Noise Levels at Most Affected Residential Receivers in each NCA

NCA	Predicted Noise Level (dBA) ¹								Number of Triggered Buildings ²							
	At Opening (2031)				Future Design (2041)											
	No Build (without project)		Build (with project)		No Build (without project)		Build (with project)									
	Day	Night	Day	Night	Day	Night	Day	Night	Trigger 1 >2.0 dB	Trigger 2 Cumulative	Trigger 3 Acute	Total				
NCA01	-	-	-	-	-	-	-	-	-	-	-	-				
NCA02	70	65	70	65	69	63	70	64	0	31	31	31				
NCA03	71	65	72	66	71	65	72	66	3	39	39	39				
NCA04	68	62	69	63	68	62	69	63	0	7	6	7				
NCA05	70	65	72	66	70	65	72	66	0	6	4	6				
NCA06	73	68	72	67	73	67	72	66	0	33	33	33				
NCA07	-	-	-	-	-	-	-	-	-	-	-	-				
												Total 116				

Note 1: Daytime and night-time are LAeq(15hour) and LAeq(9hour) noise levels, respectively.

Note 2: The RNMG triggers are discussed in **Section 4.5.7**.

Figure 10 Predicted Operational Noise Levels without the Proposal (Daytime Scenario in 2041)

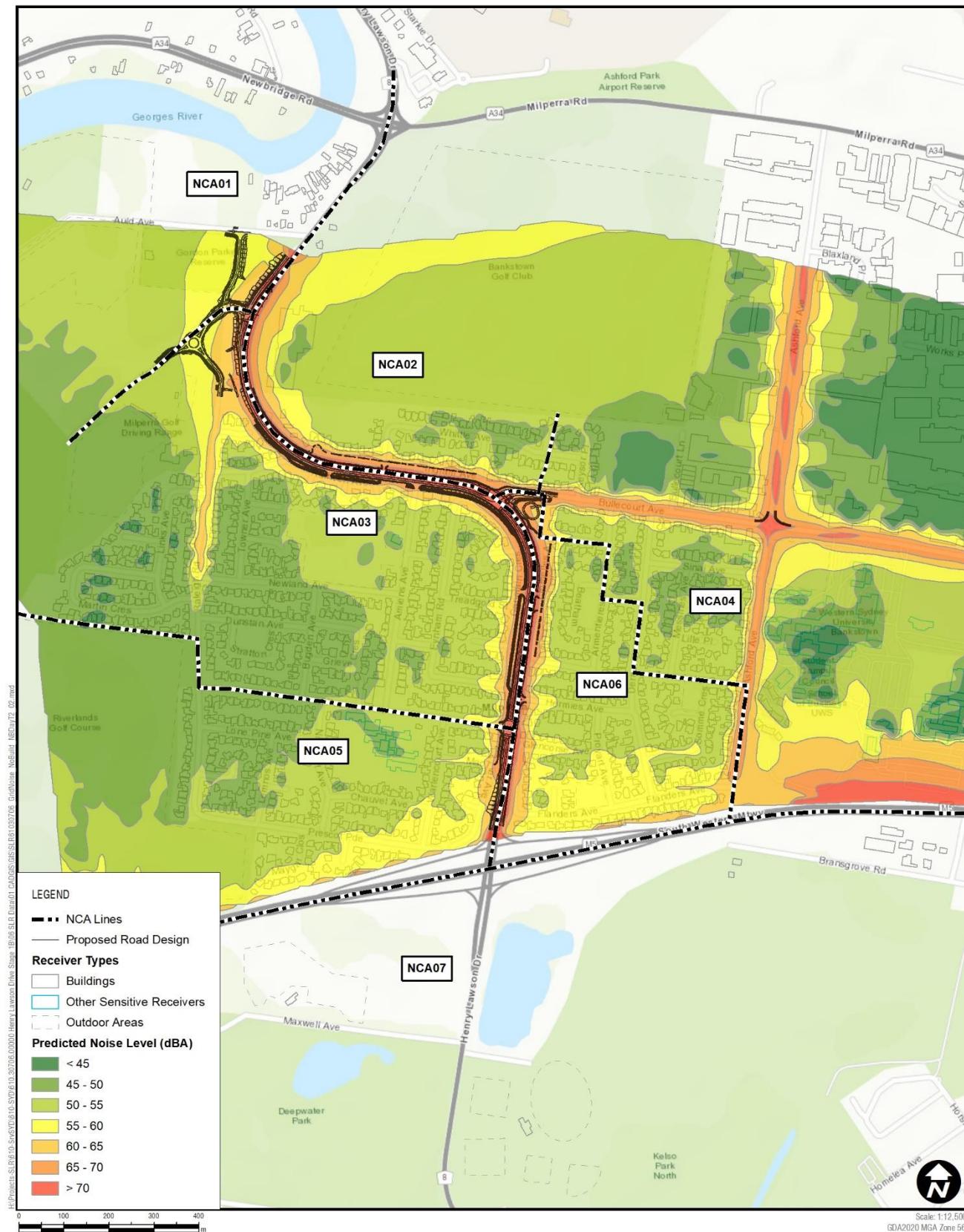


Figure 11 Predicted Operational Noise Levels with the Proposal (Daytime Scenario in 2041)

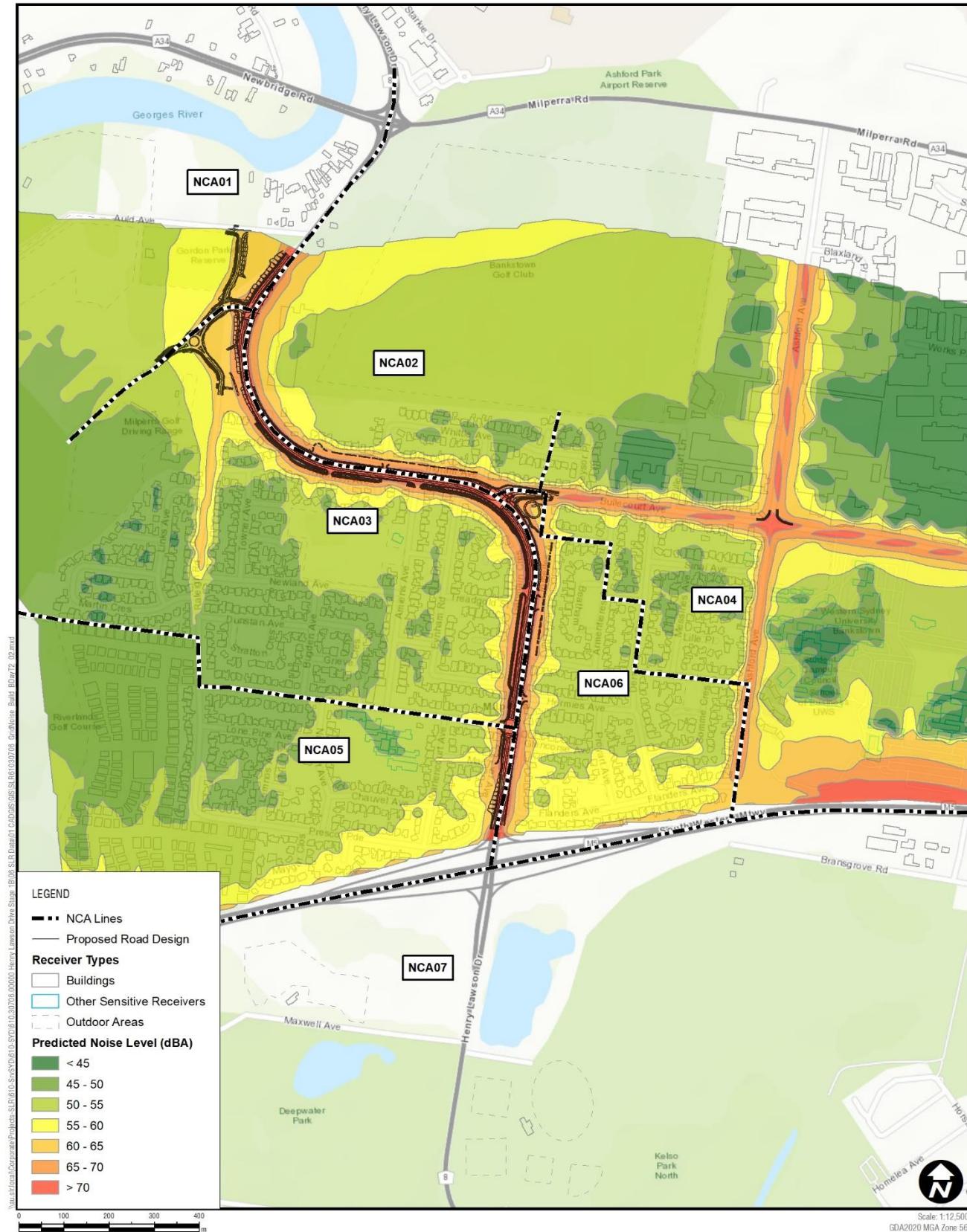


Figure 12 Predicted Operational Noise Levels without the Proposal (Night-time Scenario in 2041)

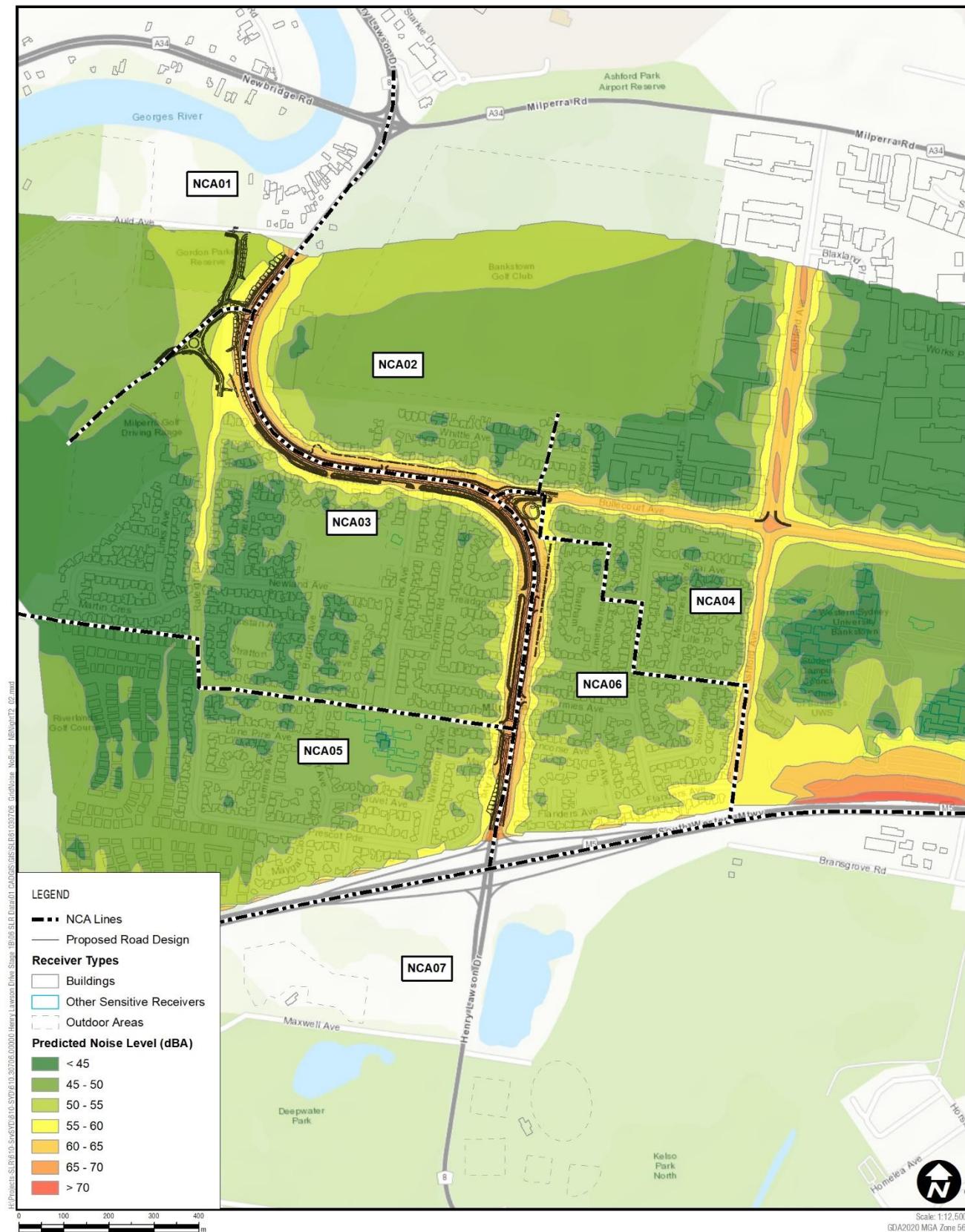
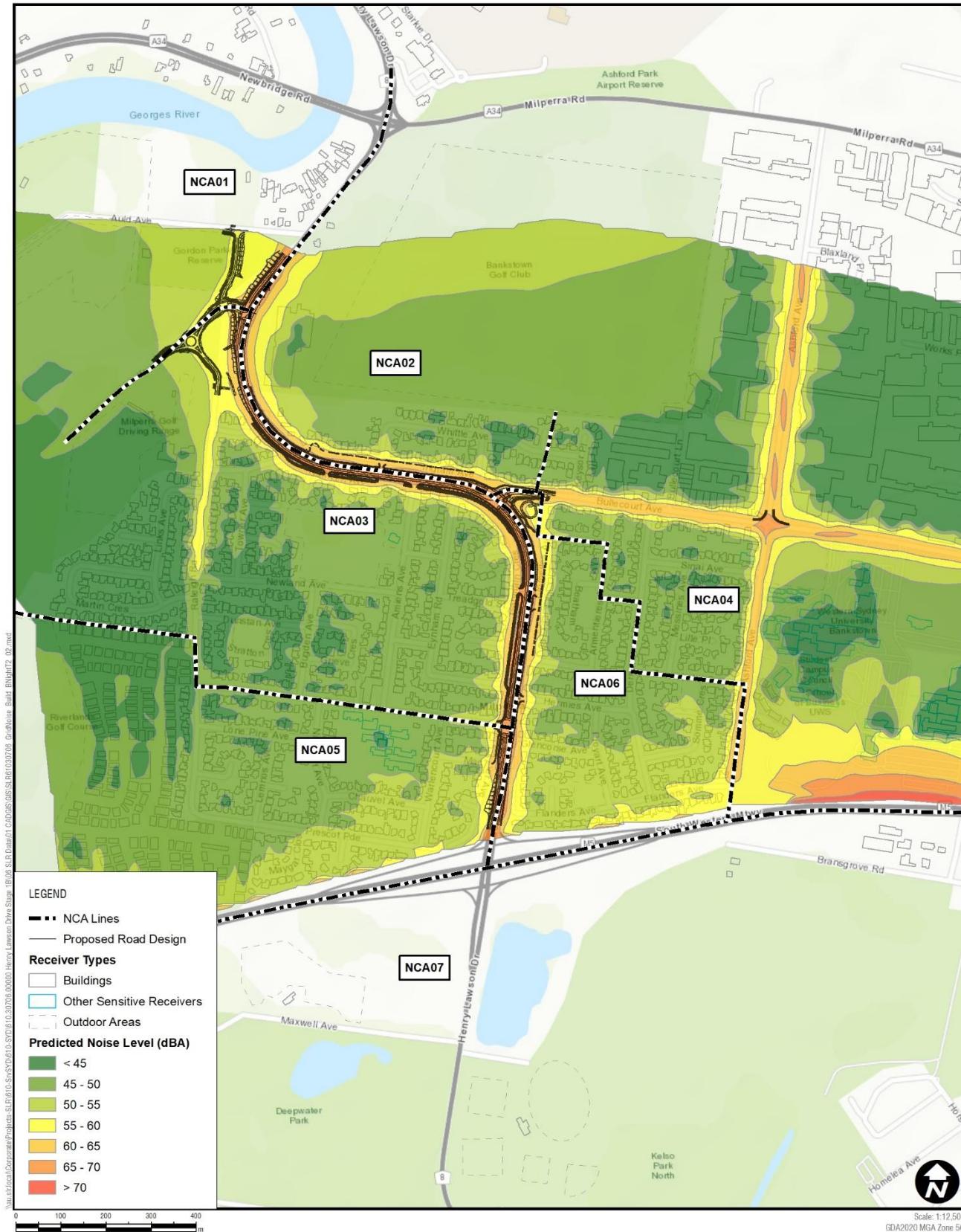


Figure 13 Predicted Operational Noise Levels with the Proposal (Night-time Scenario in 2041)

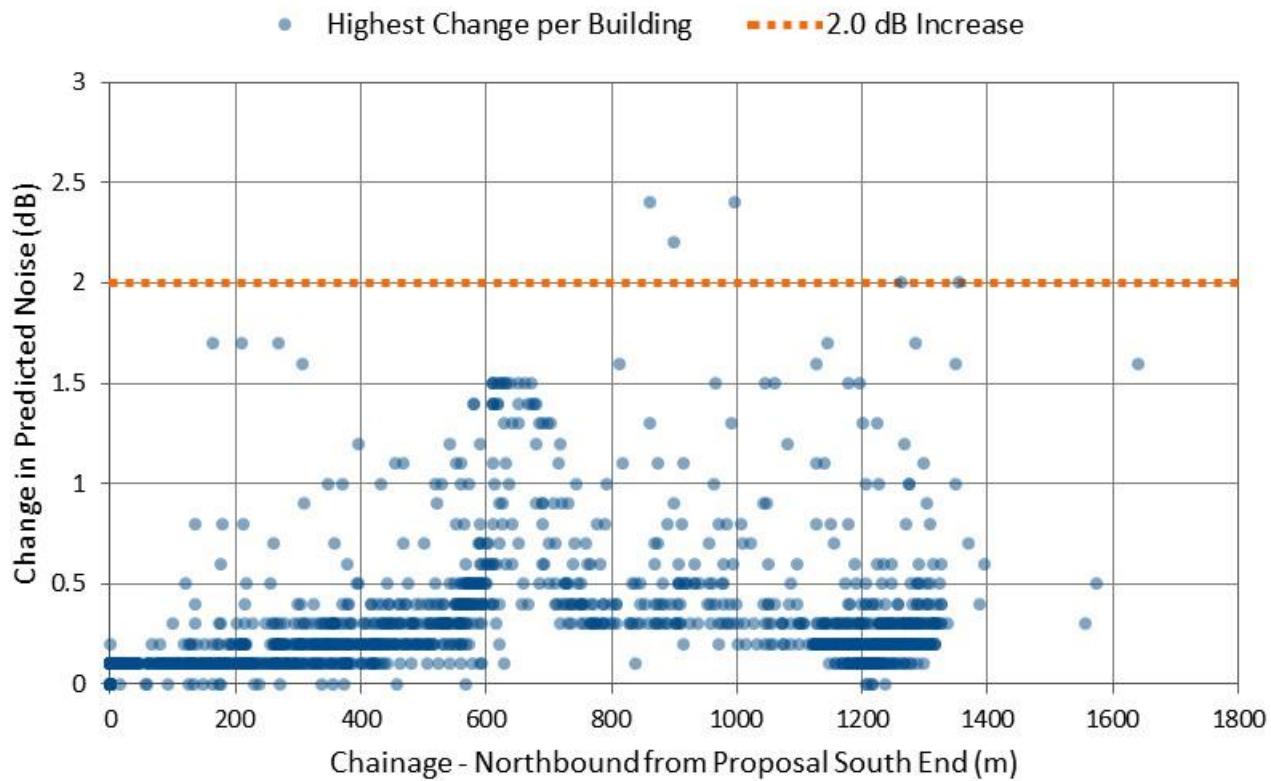


Note 1: Contours are at 1.5 m height and are free field.

Figure 14 Predicted Change in Operational Noise from the Proposal (Night-time Scenario in 2041)



Figure 15 Predicted Change in Road Traffic Noise Levels due to the Proposal



The above results show that:

- The nearest residential receivers to the proposal are subject to relatively high existing road traffic noise levels, which already exceed the RNCG criterion in many cases.
- The proposal is generally not predicted to substantially alter operational road traffic noise levels in the study area, with the majority of receivers predicted to experience noise levels after the proposal is built that are within around 1.0 dB of noise levels without the proposal. Noise levels are, however, predicted to increase by slightly more than 2.0 dB in NCA03 where widening work brings Henry Lawson Drive closer to adjacent receivers.
- Exceedances of the RNCG cumulative limit criteria (ie 5 dB or more above the RNCG controlling criterion see **Section 3.2.1**) are predicted at most first-row residential receivers are adjacent to Henry Lawson Drive.
- The majority of front-row residential receivers are also predicted to be subject to acute noise levels (ie daytime noise levels are 65 dBA or higher, or night-time noise levels are 60 dBA or higher).

In summary, the proposal is predicted to result in:

- Three residential receivers experiencing increases in traffic noise of greater than 2.0 dB
- 116 residential receivers experiencing noise levels above the cumulative limit criteria
- 113 residential receivers experiencing acute noise levels

- In total, 116 residential receiver buildings are considered eligible for consideration of additional noise mitigation, as per the operational road traffic noise criteria. These exceedances are generally due to relatively high road traffic levels (both with and without the proposal)

It is noted that certain areas of residential properties next to Henry Lawson Drive have existing private fencing along the boundary with the road corridor, which would likely provide some degree of shielding to the residential receivers themselves. Operation noise modelling does not typically take the effect of boundary fencing into account due to the number of variables associated with each individual fence (ie the material, its age and condition, height, ability to be removed by the owner, etc).

It is likely that the existing boundary fences could provide at least 5 dB additional attenuation of the noise levels presented in this report at front row receivers that have existing private fences. Therefore, the operational noise assessment results are considered conservative for these receivers, where private boundary fences exist and are in good condition.

6.2 ‘Other Sensitive’ Receivers

‘Other sensitive’ receivers that are predicted to have exceedances of the trigger levels are shown in **Table 29**. The location of the triggered ‘other sensitive’ receiver is shown in **Figure 16**. Detailed noise predictions at triggered receivers are in **Appendix D**.

Table 29 ‘Other Sensitive’ Receivers Triggers

NCA	Receiver	Floor	Type	RNMG Triggers ¹		
				Trigger 1 >2.0 dB	Trigger 2 Cumulative	Trigger 3 Acute
NCA03	KU Milperra Preschool	1	Other (Childcare)	-	Y	-
		2		-	Y	-

Note 1: The RNMG triggers are discussed in **Section 4.5.7**.

Note 2: Six separate university buildings with heights between one and five floors.

One ‘other sensitive’ receiver building is predicted to have exceedances of the operational road traffic noise criteria. This is a two floor childcare receiver in NCA03.

The criteria for certain ‘other sensitive’ receivers (ie childcare shown above) are specified as internal noise levels. As the noise model predicts external noise levels, assumptions have been made regarding the likely facade performance of these receivers. ‘Other sensitive’ receivers have been conservatively assumed to have openable windows, which corresponds to a 10 dB outside-to-inside reduction in noise through the building facade.

The impacts at ‘other sensitive’ receivers should be reviewed as the proposal progresses to determine the eligibility of each receiver for noise mitigation measures. The eligibility would be based on further inspections of each receiver to confirm the assumptions made in the noise modelling.

6.3 Receivers Eligible for Consideration of ‘Additional Noise Mitigation’

The receivers which have been identified as eligible for consideration of ‘additional noise mitigation’ (ie triggered receivers) are summarised in **Table 30** and shown in **Figure 16**.

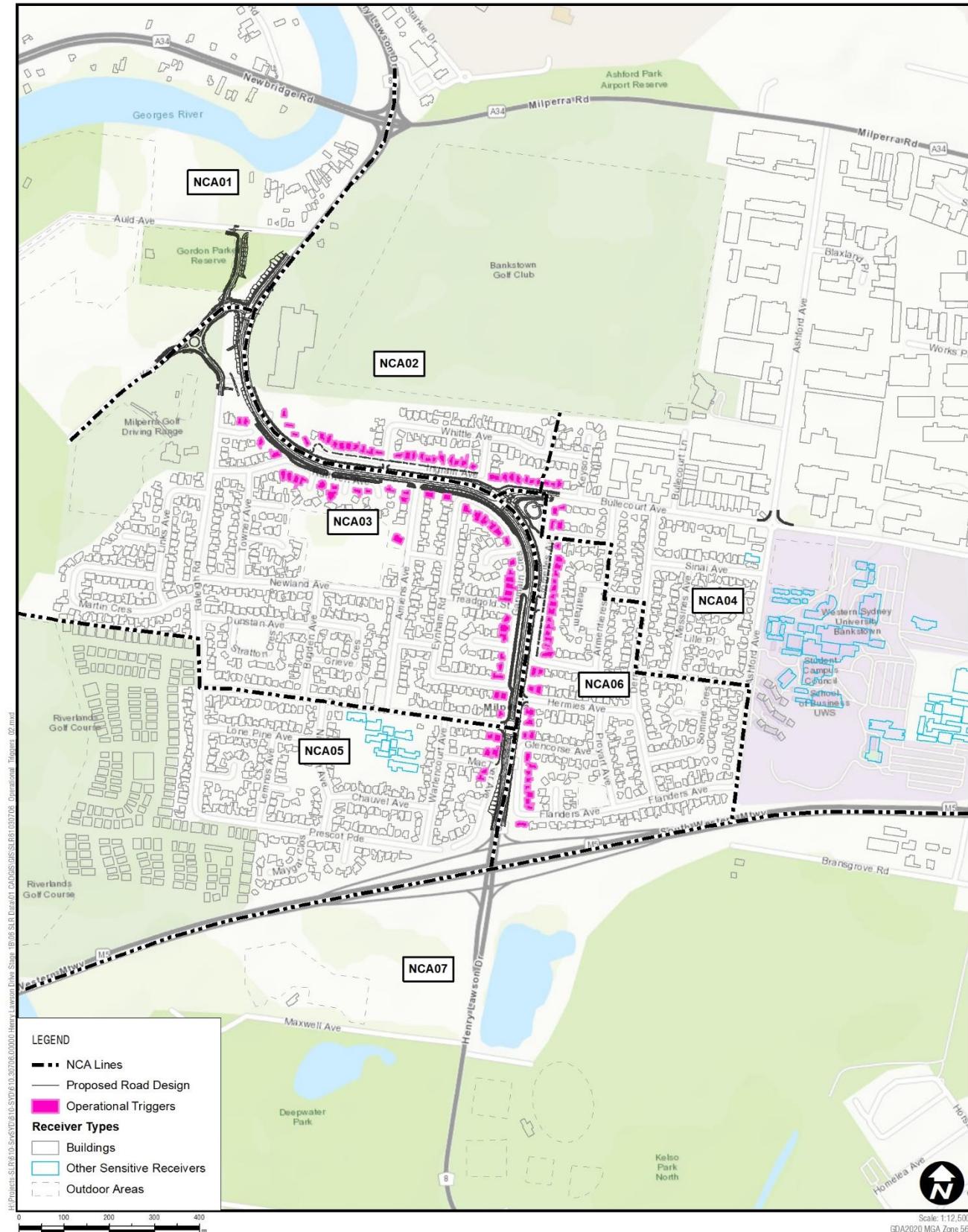
Table 30 Receivers Eligible for Consideration for 'Additional Noise Mitigation'

NCA	Number of Triggered Buildings (Floors)		Comments
	Residential	Other Sensitive	
NCA01	-	-	Receivers in this catchment are north of the proposal and no exceedances are predicted.
NCA02	31 (40)	-	The first row of residential receivers to the north of the proposal are triggered in this catchment due to noise levels exceeding the cumulative limit and being acute.
NCA03	39 (48)	1 (2)	The first row of residential receivers to the south and west of the proposal are triggered in this catchment due to noise levels exceeding the cumulative limit and being acute. Two receivers are also triggered due to noise levels increasing by >2.0 dB. The triggered 'other sensitive' receiver is KU Milperra Preschool.
NCA04	7 (9)	-	The first row of residential receivers to the north and east of the proposal are triggered in this catchment due to noise levels exceeding the cumulative limit and being acute.
NCA05	6 (7)	-	The first row of residential receivers that are north of the existing noise barrier to the west of the proposal are triggered in this catchment due to noise levels exceeding the cumulative limit and being acute.
NCA06	33 (39)	-	The first row of residential receivers to the east of the proposal are triggered in this catchment due to noise levels exceeding the cumulative limit and being acute.
NCA07	-	-	Receivers in this catchment are south the proposal and no exceedances are predicted.
Sub Total	116 (143)	1 (2)	
TOTAL	117 (145)		

Note 1: The count of 'floors' represents separate floors within each building.

In summary, the above assessment shows a total of 117 sensitive receiver buildings are predicted to have exceedances of the RNCG operational road traffic noise criteria and are therefore eligible for consideration of 'additional noise mitigation'. Operational noise mitigation measures for the proposal are discussed further in **Section 7.2**.

Figure 16 Receivers Eligible for Consideration of Additional Mitigation



6.4 Maximum Road Traffic Noise Levels

6.4.1 Existing Maximum Noise Levels

Existing maximum noise levels were measured in the study area during the noise monitoring survey and a summary of the data is shown in **Table 31**. Detailed results are provided in **Appendix D**.

Table 31 Existing Maximum Noise Level Events

Monitoring Location ¹	Total Night time Events ^{1,2}	Measured Maximum Noise Levels (dBA L _{Amax})	
		Range	Median
L01 - 5 Auld Ave, Milperra	680	65-83	71
L02 - 503 Henry Lawson Dr, Milperra	975	76-95	82
L03 - 20 Ganmain Cres, Milperra	424	65-86	71
L04 - 23 Hermies Ave, Milperra	750	69-89	76
L05 - Bullecourt Avenue, Milperra	520	65-88	73

Note 1: Maximum noise levels are defined in **Section 4.5.8**.

Note 2: Monitoring period for all locations was 22 March to 5 April 2022 for L01-L04 and 22 March to 28 March at L05.

The above table shows that existing maximum noise level events are a regular feature at the monitoring locations. Maximum noise events were measured to typically range from around 65 to 90 dBA.

Maximum noise level events towards the upper end of the range are likely to be from heavy vehicle on Henry Lawson Drive and Bullecourt Avenue, whereas the lower end of the range is likely due to nearby light vehicles.

6.4.2 Future Maximum Noise Levels

As the proposal would widen and realign certain roads there is potential for changes to maximum noise level events in the study area due to vehicles being closer to adjacent receivers. A summary of the predicted changes is provided in **Table 32**.

Table 32 Predicted Change in Maximum Noise Levels

NCA	Worst case Change (dB)	Discussion
NCA01	15	Maximum noise levels are predicted to increase by up to 15 dB at the Gordon Parker Reserve due to the new link road between Auld Avenue and Keys Parade. No sensitive receiver buildings are predicted to have increased maximum noise levels in this NCA.
NCA02	1	Maximum noise levels are predicted increase by up to 1 dB at sensitive receivers in this NCA due to the horizontal alignment of the southbound lanes on Henry Lawson Drive moving up to around 1 m closer to some of these receivers.
NCA03	4	Maximum noise levels are predicted increase by up to 4 dB at sensitive receivers in this NCA due to the horizontal alignment of the northbound lanes on Henry Lawson Drive moving up to around 13 m closer to some of these receivers.
NCA04	0	Negligible change in maximum noise levels is predicted at sensitive receivers in this NCA.
NCA05	3	Maximum noise levels are predicted increase by up to 3 dB at sensitive receivers in this NCA due to the horizontal alignment of the northbound lanes on Henry Lawson Drive moving up to around 8 m closer to some of these receivers.
NCA06	0	Negligible change in maximum noise levels is predicted at sensitive receivers in this NCA.
NCA07	0	Negligible change in maximum noise levels is predicted at sensitive receivers in this NCA.

The above assessment identifies the potential for change in maximum noise levels. The change in frequency of events is expected to generally be consistent with the change in traffic volumes resulting from the proposal (particularly heavy vehicles). Traffic volumes are predicted to increase on Henry Lawson Drive by around 10%.

This maximum noise level assessment should be used as a tool to help prioritise and rank mitigation strategies, but should not be applied as a decisive criterion in itself. The selection of feasible and reasonable mitigation measures should consider the potential change in maximum noise levels and the effect the potential mitigation would have on those levels.

The recommended operational mitigation measures are discussed in **Section 7.2**.

7 Mitigation

7.1 Construction Impacts

The ICNG acknowledges that due to the nature of construction work it is inevitable that there would be noise and vibration impacts where construction activities are near to sensitive receivers. Examples of potential mitigation and management measures which could be applied to the proposal to minimise the impacts are provided below.

A Construction Noise and Vibration Management Plan would be prepared prior to work commencing which would detail the approach to providing noise and vibration mitigation during construction. Site specific Construction Noise and Vibration Impact Statements would also be completed for work that is required to be completed outside of Standard construction hours that has potential to impact sensitive receivers.

7.1.1 Standard Mitigation Measures

The Roads and Maritime (now TfNSW) *Construction Noise and Vibration Guideline* (CNVG) contains a number of 'standard mitigation measures' for mitigating and managing construction impacts. The measures are shown in **Appendix C** and should be applied to construction of the proposal, where feasible and reasonable.

7.1.2 Additional Mitigation Measures

Where noise impacts remain after the use of 'standard mitigation measures', the CNVG requires the use of 'additional mitigation measures' where feasible and reasonable. The 'additional mitigation measures' are determined on the basis of the exceedance of the appropriate management levels. Descriptions of the various measures are in **Appendix C**. The CNVG defines how 'additional mitigation measures' are applied to airborne noise impacts and the approach is shown in **Table 33**.

Table 33 CNVG Triggers for Additional Mitigation Measures – Airborne Noise

Predicted LAeq(15minute) Airborne Noise Level at Receiver			Additional Mitigation Measures	
Perception	dBA above RBL	dBA above NML	Type ¹	Mitigation Levels ²
All hours				
75 dBA or greater		N, V, PC, RO		HNA
Standard Hours: Mon – Fri (7am – 6pm), Sat (8am – 1pm), Sun/Public Holiday (Nil)				
Noticeable	5 to 10	0	-	NML
Clearly Audible	10 to 20	<10	-	NML
Moderately Intrusive	20 to 30	10 to 20	N, V	NML+10
Highly Intrusive	>30	>20	N, V	NML+20
OOHW Period 1: Mon – Fri (6pm – 10pm), Sat (7am – 8am & 1pm – 10pm), Sun/Public Holiday (8am – 6pm)				
Noticeable	5 to 10	<5	-	NML
Clearly Audible	10 to 20	5 to 15	N, R1, DR	NML+5
Moderately Intrusive	20 to 30	15 to 25	V, N, R1, DR	NML+15
Highly Intrusive	>30	>25	V, IB, N, R1, DR, PC, SN	NML+25

Predicted LAeq(15minute) Airborne Noise Level at Receiver			Additional Mitigation Measures	
OOHW Period 2: Mon – Fri (10pm – 7am), Sat (10pm – 8am), Sun/Public Holiday (6pm – 7am)				
Noticeable	5 to 10	<5	N	NML
Clearly Audible	10 to 20	5 to 15	V, N, R2, DR	NML+5
Moderately Intrusive	20 to 30	15 to 25	V, IB, N, PC, SN, R2, DR	NML+15
Highly Intrusive	>30	>25	AA, V, IB, N, PC, SN, R2, DR	NML+25

Note 1: N = Notification, SN = Specific Notification, PC = Phone Calls, IB = Individual Briefings, R1 = Respite Period 1, R2 = Respite Period 2, RO = Project Specific Respite Offer, DR = Duration Respite, AA = Alternative Accommodation, V = Verification.

Note 2: NML = Noise Management Level, HNA = Highly Noise Affected (ie 75 dBA or greater for residential receivers).

The requirement for ‘additional mitigation measures’ would be further evaluated as the proposal progresses and detailed construction scheduling information becomes available.

7.1.3 Proposal Specific Construction Mitigation Measures

On the basis of the predictions, **Table 34** lists the proposal specific mitigation measures which are recommended to be used to minimise the impacts.

Table 34 Recommended Proposal Specific Noise Mitigation Measures

Item	Discussion and Recommendations
Construction Noise and Vibration Management Plan	<p>A Construction Noise and Vibration Management Plan (CNVMP) should be prepared before any work begins which would include:</p> <ul style="list-style-type: none"> Identification of nearby sensitive receivers Description of works, construction equipment and hours work would be completed in Criteria for the proposal and relevant licence and approval conditions Requirements for noise and vibration monitoring Details of how community consultation would be completed Procedures for handling complaints Details on how respite would be applied where ongoing high impacts are seen at certain receivers.
Construction noise and vibration assessments	<p>Location and activity specific noise and vibration impact assessments should be carried out prior to (as a minimum) activities:</p> <ul style="list-style-type: none"> With the potential to result in noise levels at or above 75 dBA at any receiver Required outside Standard construction hours likely to result in noise levels in greater than the relevant Noise Management Levels With the potential to exceed relevant criteria for vibration. <p>The assessments should confirm the predicted impacts at the relevant receivers in the vicinity of the activities to aid the selection of appropriate management measures, consistent with the requirements of the CNVG.</p>

Item	Discussion and Recommendations
Construction noise exceedances	<p>The assessment has identified that ‘highly intrusive’ impacts are likely at the nearest receivers when noise intensive equipment such as concrete saws are in use, especially during evening and night-time periods.</p> <p>Where noise intensive equipment is to be used near sensitive receivers, the work should be scheduled for Standard construction hours, where possible. If it is not possible to restrict the work to the daytime then they should be completed as early as possible in each work shift.</p> <p>Appropriate respite should also be provided to affected receivers in accordance with the CNVG and/or the proposal’s conditions of approval.</p>
Compounds with long term work	<p>Hoarding, or other shielding structures, should be used where receivers are impacted near compounds or fixed work areas with long durations. To provide effective noise mitigation, the barriers should break line-of-sight from the nearest receivers to the work and be of solid construction with minimal gaps.</p>
Construction traffic	<p>The potential impacts from construction traffic should be reviewed at a later stage when more information is available, particularly where it is required to access local roads.</p>
Monitoring	<p>Monitoring should be carried out at the start of noise and/or vibration intensive activities to confirm that actual levels are consistent with the predictions and that appropriate mitigation measures from the CNVG have been implemented.</p>
Vibration work within minimum working distance	<p>Where work is within the minimum working distances and considered likely to exceed the cosmetic damage criteria (see Figure 9):</p> <ul style="list-style-type: none"> • Different construction methods with lower source vibration levels should be investigated and implemented, where feasible • Attended vibration measurements should be undertaken at the start of the work to determine actual vibration levels at the item. Work should be ceased if the monitoring indicates vibration levels are likely to, or do, exceed the relevant criteria. <p>Certain receivers in the study area are within the human comfort minimum working distance (see to Figure 9) and occupants of affected buildings may be able to perceive vibration impacts when vibration intensive equipment is in use.</p> <p>The potential human comfort impacts and requirement for vibration intensive work should be reviewed as the proposal progresses.</p>
Building condition surveys	<p>Building condition surveys should be completed before and after the work where buildings or structures are within the minimum working distances and considered likely to exceed the cosmetic damage criteria during the use of vibration intensive equipment.</p>

7.2 Recommended Operational Road Traffic Noise Mitigation Measures

Road traffic noise levels from infrastructure projects should be reduced, where feasible and reasonable, to meet the RNCG noise criteria using mitigation. The assessment in **Section 6** predicts road traffic noise levels to the surrounding receivers without any mitigation applied to the project.

For receivers that qualify for consideration of ‘additional noise mitigation’, the RNMG requires that potential noise mitigation measures are to be considered in the following order of preference:

- At-source mitigation:
 - Quieter road pavement surfaces
- In-corridor mitigation:
 - Noise mounds
 - Noise barriers
- At-receiver mitigation:
 - At-property treatments.

7.2.1 At-Source Mitigation – Low Noise Pavements

The type of road surface can affect road traffic noise levels experienced by sensitive receivers. Jointed concrete pavements tend to be the noisiest road surface with low noise pavements such as open grade asphalt (OGA) being the quietest.

Low noise pavements are to be considered first when specifying noise mitigation as they reduce source noise levels, which provides noise level benefit to both outside areas and internal spaces. Low noise pavements have no associated visual impact and are also likely to provide noise benefits to receivers at greater distances than noise barriers. They are generally considered feasible to use where there are four or more closely spaced receivers that exceed the operational road traffic noise criteria.

Road pavement surfaces and textures must meet a number of criteria besides noise performance including structural integrity, skid resistance, water shedding, maintenance requirements and design life.

Low noise pavements are generally most effective where vehicle speeds are high, such as on motorways, and less effective where traffic speeds are slower or where traffic is required to slow down or stop. It is noted that the proposal includes several intersections, which would reduce the effectiveness of low noise pavements due to stop/start traffic.

Assessment of Pavements

The proposal includes the use of quieter noise pavements in the form of dense grade asphalt (DGA) for all redeveloped roads in the study area. The use of low noise pavements, such as OGA, are unlikely to be a suitable approach given the presence of intersections which require traffic to stop and start, and relatively low vehicle speeds, however, they should be investigated further during detailed design taking into account whole-of-life engineering considerations and the overall social, economic and environmental effects.

7.2.2 In-Corridor Mitigation – Noise Barriers

After at-source mitigation has been investigated, in-corridor mitigation should be considered, which aims to block line-of-sight from the source of noise to nearby receivers.

Noise barriers (in the form of walls or mounds) can provide significant noise reductions and also reduce both external and internal noise levels. Where space allows, raised earth mounds can be used as noise barriers and can be enhanced by placing a low wall on top. Noise walls are often more feasible than a mound as the footprint is much smaller. These methods are shown in **Figure 17**.

Figure 17 Noise Barriers

Figure 3.18b: Noise barrier using an earth fence/wall

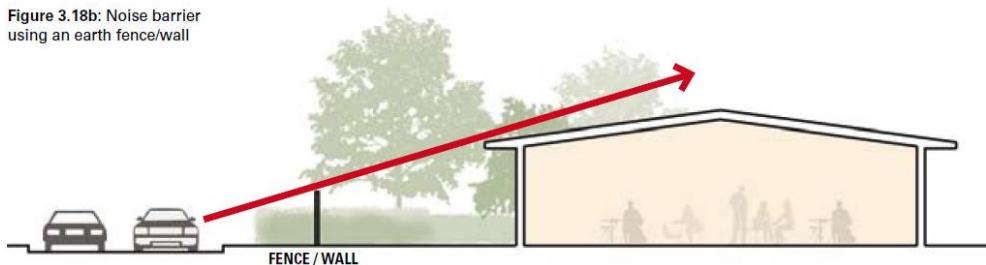
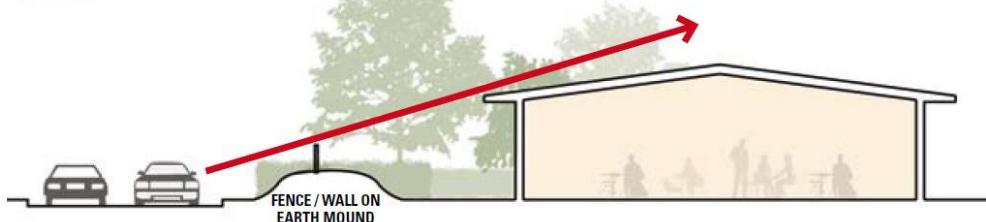


Figure 3.19: Noise barrier using a fence/wall



Note: Taken from DP&I *Development near Rail Corridors and Busy Roads – Interim Guideline*.

Noise barriers can, however, result in other impacts such as reduced access to property and utilities, visual impacts, overshadowing, changes to drainage, and safety concerns. These potential impacts need to be considered when determining if installation of noise barriers is justified.

Noise barriers are typically most efficient when receivers are located at ground floor level. As the height of a receiver increases, the noise reduction from barriers reduces due to line of sight over the top of the barrier. Because of this, noise barriers are assessed using noise predictions at ground and first floor only, with at-property treatment of individual dwellings being used for higher floors if necessary.

Assessment of Noise Barriers

As per the TfNSW *Noise Wall Design Guideline*, noise barriers have potential for visual intrusion, reduction of sunlight, loss of character and views, and social alienation. Noise barriers may compromise the community and customer experience and result in unacceptable visual impact. In addition, a noise barrier that is reasonable may not always be feasible to build. For example, stormwater flow obstruction is a key consideration in the northern section of the proposal.

Noise barriers were considered and determined not to be reasonable for the proposal as:

- The construction of new noise walls in suburban areas along Henry Lawson Drive and local roads would be incompatible with the proposal's urban design objectives. These objectives are outlined in Section 2.3.2 of the REF and include consideration of a sense of place, connectivity and wayfinding, and integration with the surrounding cultural and natural context. Noise walls would physically separate the Henry Lawson Drive road corridor from the surrounding local roads and residential properties which are currently connected through a tree-lined corridor and open spaces and would be landscaped and replanted as part of the proposal. This would substantially change the character of the road corridor and views from adjacent properties.
- There are five properties (497, 499, 503, 553 and 553A Henry Lawson Drive, Milperra) with driveway access to Henry Lawson Drive which would be maintained by the proposal. Installation of a continuous noise wall would impact the proposal's ability to maintain driveway access to these properties.

- Most residential receivers front onto the main Henry Lawson Drive alignment and so may experience shadowing if a noise wall was installed.

However, TfNSW would reinstate the existing noise wall associated with the M5 Motorway on the south-west side of Henry Lawson Drive near Mactier Avenue to align with the widened carriageway on Henry Lawson Drive.

7.2.3 At-Property Mitigation – Architectural Treatment

Residual impacts which remain after the use of at-source and in-corridor mitigation are typically addressed using at-property mitigation. At-property mitigation is also considered the most reasonable noise mitigation strategy where receivers are not grouped together or where there is community preference for this measure.

At-property treatment typically involves using architectural treatments to improve building elements such as doors, windows, vents, etc. Installation of boundary acoustic fences or walls close to the receiver can also be considered, which can have the benefit of reducing noise levels in outdoor spaces.

The assessment shows a total of 117 sensitive receiver buildings (145 receiver floors) are predicted to have exceedances of the RNCG operational road traffic noise criteria. It is noted that several of the front row receivers on the proposal section of Henry Lawson Drive have already received at-property mitigation under the TfNSW Noise Abatement Program (NAP), which provides architectural treatment measures to reduce existing road noise impacts. These receivers have been included in the assessment and are part of the 117 receiver buildings predicted to exceed the RNCG criteria. The level of treatment provided as part of the NAP should be reviewed for each receiver to confirm it adequately mitigates the predicted noise impacts from the proposal.

Sensitive receivers that are predicted to be impacted by the proposal and have not been previously received NAP treatment would most likely be mitigated using at-property treatment.

The requirements for at-property treatments would be determined using the TfNSW (previously Roads and Maritime) *At-Receiver Noise Treatment Guideline*. The guideline details the approach for specifying feasible and reasonable at-property treatments for TfNSW road projects. Five categories of treatment are specified based on the predicted exceedance of the operational road traffic noise criteria (see **Appendix D** for more details).

The architectural treatments provided by TfNSW include:

- Ventilation systems that meet Building Code of Australia fresh air requirements with the windows and doors shut
- Upgraded windows, glazing and solid core doors on the exposed facades of substantial structures only (eg masonry or insulated board cladding each with sealed underfloor)
- Upgrading window and door seals
- The sealing of wall vents
- The sealing of the underfloor below the bearers and appropriately treating sub-floors ventilation
- Roof insulation
- The sealing of eaves.

The final operational noise mitigation strategy for the proposal would be determined during detailed design. The final approach would consider community preference where appropriate. Inspection and assessment of individual receivers would also be required to determine feasible and reasonable measures where at-property treatment is considered suitable.

Receivers that are identified as being eligible for at-property noise mitigation should be identified and offered treatment prior to the start of construction work that has the potential to affect them, where possible.

8 Conclusion

Transport for NSW proposes to upgrade a 1.8-kilometre section of Henry Lawson Drive to a four-lane divided road (two lanes in each direction). The proposal also includes constructing a new local link road between Auld Avenue and Keys Parade, extending Raleigh Road and modifying the Bullecourt Avenue / Ashford Avenue intersection.

This report describes the existing noise environment in the study area, outlines the method used in the assessment and identifies the likely impacts from construction and operation of the proposal on the nearby sensitive receivers. Where impacts are predicted, appropriate measures have been recommended to mitigate and manage the impacts.

Construction Noise and Vibration

The nearest residential receivers to the proposal are predicted to be subject to ‘highly intrusive’ worst-case noise impacts, particularly when noise intensive equipment such as concrete saws are in use near to receivers. These worst-case impacts are, however, generally limited to the first rows of receivers adjacent to the proposal. Residential receivers which are further back or shielded from view are also predicted to be impacted by the proposal during noisy construction work, but to a lesser degree.

Certain work may result in traffic restrictions and would be required to occur outside standard construction hours to minimise potential traffic disruption. The noise impacts during these evening and night-time work are predicted to be increased compared to daytime work due to more stringent criteria.

The main potential source of vibration during construction of the proposal would be from vibratory rollers. The nearest receivers to the proposal are likely to be within the minimum working distances for cosmetic damage and human comfort.

The proposal should apply all feasible and reasonable work practices to reduce the potential noise and vibration impacts and a number of strategies have been recommended. The exact strategies would be determined during development of a Construction Noise and Vibration Management Plan prior to construction work commencing.

Operational Road Traffic Noise

The proposal is not predicted to significantly alter operational road traffic noise levels for most receivers in the study area. Noise levels after the proposal is built are generally expected to be within around 1 dB of noise levels without the proposal.

Exceedances of the relevant criteria are, however, predicted at the majority of adjacent front row residential receivers. These exceedances are generally due to relatively high road traffic levels (both with and without the proposal).

A total of 116 residential buildings and one ‘other sensitive’ receivers are predicted to experience noise levels that exceed the operational road traffic noise criteria and have been identified as being eligible for consideration of additional noise mitigation.

The use of at-property treatment for impacted sensitive receivers is considered the most appropriate form of noise mitigation for the proposal. However, the final noise mitigation strategy would be determined during detailed design.

APPENDIX A

Acoustic Terminology

1. Sound Level or Noise Level

The terms 'sound' and 'noise' are almost interchangeable, except that 'noise' often refers to unwanted sound.

Sound (or noise) consists of minute fluctuations in atmospheric pressure. The human ear responds to changes in sound pressure over a very wide range with the loudest sound pressure to which the human ear can respond being ten million times greater than the softest. The decibel (abbreviated as dB) scale reduces this ratio to a more manageable size by the use of logarithms.

The symbols SPL, L or LP are commonly used to represent Sound Pressure Level. The symbol LA represents A-weighted Sound Pressure Level. The standard reference unit for Sound Pressure Levels expressed in decibels is 2×10^{-5} Pa.

2. 'A' Weighted Sound Pressure Level

The overall level of a sound is usually expressed in terms of dBA, which is measured using a sound level meter with an 'A-weighting' filter. This is an electronic filter having a frequency response corresponding approximately to that of human hearing.

People's hearing is most sensitive to sounds at mid frequencies (500 Hz to 4,000 Hz), and less sensitive at lower and higher frequencies. Different sources having the same dBA level generally sound about equally loud.

A change of 1 dB or 2 dB in the level of a sound is difficult for most people to detect, whilst a 3 dB to 5 dB change corresponds to a small but noticeable change in loudness. A 10 dB change corresponds to an approximate doubling or halving in loudness. The table below lists examples of typical noise levels.

Sound Pressure Level (dBA)	Typical Source	Subjective Evaluation
130	Threshold of pain	Intolerable
120	Heavy rock concert	Extremely noisy
110	Grinding on steel	
100	Loud car horn at 3 m	Very noisy
90	Construction site with pneumatic hammering	
80	Kerbside of busy street	Loud
70	Loud radio or television	
60	Department store	Moderate to quiet
50	General Office	
40	Inside private office	Quiet to very quiet
30	Inside bedroom	
20	Recording studio	Almost silent

Other weightings (eg B, C and D) are less commonly used than A-weighting. Sound Levels measured without any weighting are referred to as 'linear', and the units are expressed as dB(lin) or dB.

3. Sound Power Level

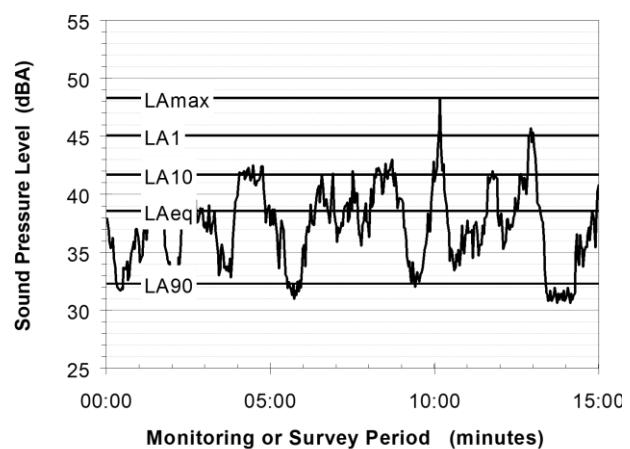
The Sound Power of a source is the rate at which it emits acoustic energy. As with Sound Pressure Levels, Sound Power Levels are expressed in decibel units (dB or dBA), but may be identified by the symbols SWL or LW, or by the reference unit 10^{-12} W.

The relationship between Sound Power and Sound Pressure is similar to the effect of an electric radiator, which is characterised by a power rating but has an effect on the surrounding environment that can be measured in terms of a different parameter, temperature.

4. Statistical Noise Levels

Sounds that vary in level over time, such as road traffic noise and most community noise, are commonly described in terms of the statistical exceedance levels LAN, where LAN is the A-weighted sound pressure level exceeded for N% of a given measurement period. For example, the LA1 is the noise level exceeded for 1% of the time, LA10 the noise exceeded for 10% of the time, and so on.

The following figure presents a hypothetical 15 minute noise survey, illustrating various common statistical indices of interest.



Of particular relevance, are:

LA1 The noise level exceeded for 1% of the 15 minute interval.

LA10 The noise level exceeded for 10% of the 15 minute interval. This is commonly referred to as the average maximum noise level.

LA90 The noise level exceeded for 90% of the sample period. This noise level is described as the average minimum background sound level (in the absence of the source under consideration), or simply the background level.

LAeq The A-weighted equivalent noise level (basically, the average noise level). It is defined as the steady sound level that contains the same amount of acoustical energy as the corresponding time-varying sound.

5. Frequency Analysis

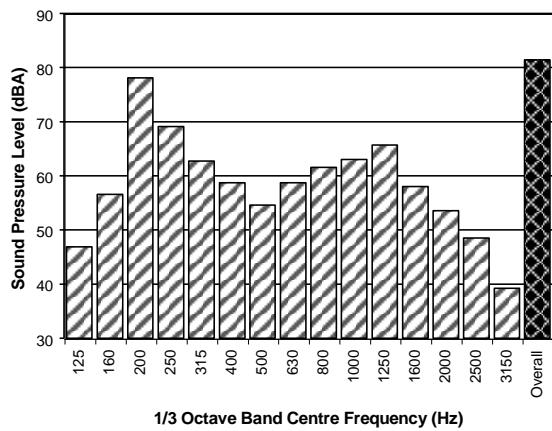
Frequency analysis is the process used to examine the tones (or frequency components) which make up the overall noise or vibration signal.

The units for frequency are Hertz (Hz), which represent the number of cycles per second.

Frequency analysis can be in:

- Octave bands (where the centre frequency and width of each band is double the previous band)
- 1/3 octave bands (three bands in each octave band)
- Narrow band (where the spectrum is divided into 400 or more bands of equal width)

The following figure shows a 1/3 octave band frequency analysis where the noise is dominated by the 200 Hz band. Note that the indicated level of each individual band is less than the overall level, which is the logarithmic sum of the bands.



6. Annoying Noise (Special Audible Characteristics)

A louder noise will generally be more annoying to nearby receivers than a quieter one. However, noise is often also found to be more annoying and result in larger impacts where the following characteristics are apparent:

- **Tonality** - tonal noise contains one or more prominent tones (ie differences in distinct frequency components between adjoining octave or 1/3 octave bands), and is normally regarded as more annoying than 'broad band' noise.
- **Impulsiveness** - an impulsive noise is characterised by one or more short sharp peaks in the time domain, such as occurs during hammering.
- **Intermittency** - intermittent noise varies in level with the change in level being clearly audible. An example would include mechanical plant cycling on and off.
- **Low Frequency Noise** - low frequency noise contains significant energy in the lower frequency bands, which are typically taken to be in the 10 to 160 Hz region.

7. Vibration

Vibration may be defined as cyclic or transient motion. This motion can be measured in terms of its displacement, velocity or acceleration. Most assessments of human response to vibration or the risk of damage to buildings use measurements of vibration velocity. These may be expressed in terms of 'peak' velocity or 'rms' velocity.

The former is the maximum instantaneous velocity, without any averaging, and is sometimes referred to as 'peak particle velocity', or PPV. The latter incorporates 'root mean squared' averaging over some defined time period.

Vibration measurements may be carried out in a single axis or alternatively as triaxial measurements (ie vertical, longitudinal and transverse).

The common units for velocity are millimetres per second (mm/s). As with noise, decibel units can also be used, in which case the reference level should always be stated. A vibration level V , expressed in mm/s can be converted to decibels by the formula $20 \log (V/V_0)$, where V_0 is the reference level (10^{-9} m/s). Care is required in this regard, as other reference levels may be used.

8. Human Perception of Vibration

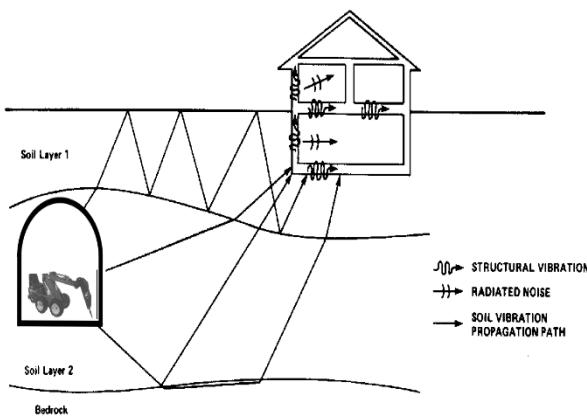
People are able to 'feel' vibration at levels lower than those required to cause even superficial damage to the most susceptible classes of building (even though they may not be disturbed by the motion). An individual's perception of motion or response to vibration depends very strongly on previous experience and expectations, and on other connotations associated with the perceived source of the vibration. For example, the vibration that a person responds to as 'normal' in a car, bus or train is considerably higher than what is perceived as 'normal' in a shop, office or dwelling.

9. Ground-borne Noise, Structure-borne Noise and Regenerated Noise

Noise that propagates through a structure as vibration and is radiated by vibrating wall and floor surfaces is termed 'structure-borne noise', 'ground-borne noise' or 'regenerated noise'. This noise originates as vibration and propagates between the source and receiver through the ground and/or building structural elements, rather than through the air.

Typical sources of ground-borne or structure-borne noise include tunnelling works, underground railways, excavation plant (eg rockbreakers), and building services plant (eg fans, compressors and generators).

The following figure presents an example of the various paths by which vibration and ground-borne noise may be transmitted between a source and receiver for construction activities occurring within a tunnel.



The term 'regenerated noise' is also used in other instances where energy is converted to noise away from the primary source. One example would be a fan blowing air through a discharge grill. The fan is the energy source and primary noise source. Additional noise may be created by the aerodynamic effect of the discharge grill in the airstream. This secondary noise is referred to as regenerated noise.

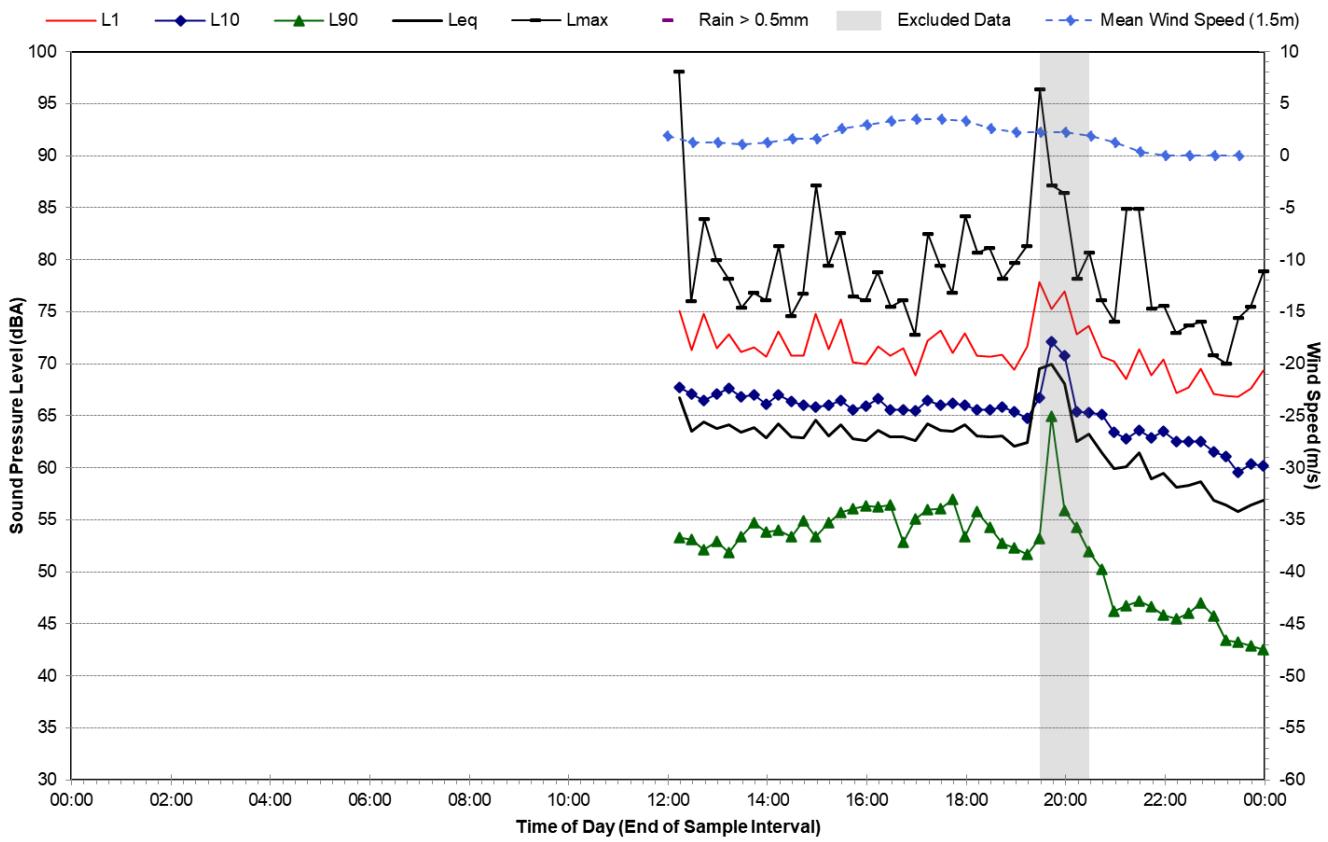
APPENDIX B

Existing Noise Monitoring

Noise Monitoring Location	L01	Map of Noise Monitoring Location																																																
Noise Monitoring Address	5 Auld Avenue, Milperra																																																	
Logger Device Type: Svantek 957, Logger Serial No: 20664 Sound Level Meter Device Type: Brüel and Kjær 2270, Sound Level Meter Serial No: 3008204																																																		
<p>Ambient noise logger deployed at residential address 5 Auld Avenue, Milperra. Logger located at a height of around 1.5 m above ground with view of Auld Avenue to the south and Henry Lawson Drive to the east.</p> <p>Attended noise measurements indicate the ambient noise environment at this location is dominated by road traffic noise from Henry Lawson Drive. Local traffic on Auld Avenue and insect noise were also noted to contribute to the L_{Aeq} at times.</p> <p>Recorded Noise Levels (L_{Amax}) 22/03/2022:</p> <ul style="list-style-type: none"> Light-vehicle traffic Henry Lawson Drive: 60-65 dBA Heavy-vehicle traffic Henry Lawson Drive: 65-72 dBA Motorbike Henry Lawson Drive: 80 dBA Light-vehicle traffic Auld Avenue: 62-69 dBA Aircraft: 55 dBA 																																																		
Ambient Noise Logging Results ICNG Defined Time Periods <table border="1"> <thead> <tr> <th rowspan="2">Monitoring Period</th> <th colspan="4">Noise Level (dBA)</th> </tr> <tr> <th>RBL</th> <th>L_{Aeq}</th> <th>L₁₀</th> <th>L₁</th> </tr> </thead> <tbody> <tr> <td>Daytime</td> <td>50</td> <td>62</td> <td>65</td> <td>69</td> </tr> <tr> <td>Evening</td> <td>46</td> <td>60</td> <td>64</td> <td>68</td> </tr> <tr> <td>Night-time</td> <td>40</td> <td>58</td> <td>60</td> <td>68</td> </tr> </tbody> </table> Ambient Noise Logging Results RNP Defined Time Periods <table border="1"> <thead> <tr> <th rowspan="2">Monitoring Period</th> <th colspan="2">Noise Level (dBA)</th> </tr> <tr> <th>L_{Aeq}(period)</th> <th>L_{Aeq}(1hour)</th> </tr> </thead> <tbody> <tr> <td>Daytime (7am-10pm)</td> <td>62</td> <td>63</td> </tr> <tr> <td>Night-time (10pm-7am)</td> <td>58</td> <td>61</td> </tr> </tbody> </table> Attended Noise Measurement Results <table border="1"> <thead> <tr> <th rowspan="2">Date</th> <th rowspan="2">Start Time</th> <th colspan="3">Measured Noise Level (dBA)</th> </tr> <tr> <th>L_{A90}</th> <th>L_{Aeq}</th> <th>L_{Amax}</th> </tr> </thead> <tbody> <tr> <td>22/03/2022</td> <td>12:03</td> <td>54</td> <td>64</td> <td>80</td> </tr> </tbody> </table>			Monitoring Period	Noise Level (dBA)				RBL	L _{Aeq}	L ₁₀	L ₁	Daytime	50	62	65	69	Evening	46	60	64	68	Night-time	40	58	60	68	Monitoring Period	Noise Level (dBA)		L _{Aeq} (period)	L _{Aeq} (1hour)	Daytime (7am-10pm)	62	63	Night-time (10pm-7am)	58	61	Date	Start Time	Measured Noise Level (dBA)			L _{A90}	L _{Aeq}	L _{Amax}	22/03/2022	12:03	54	64	80
Monitoring Period	Noise Level (dBA)																																																	
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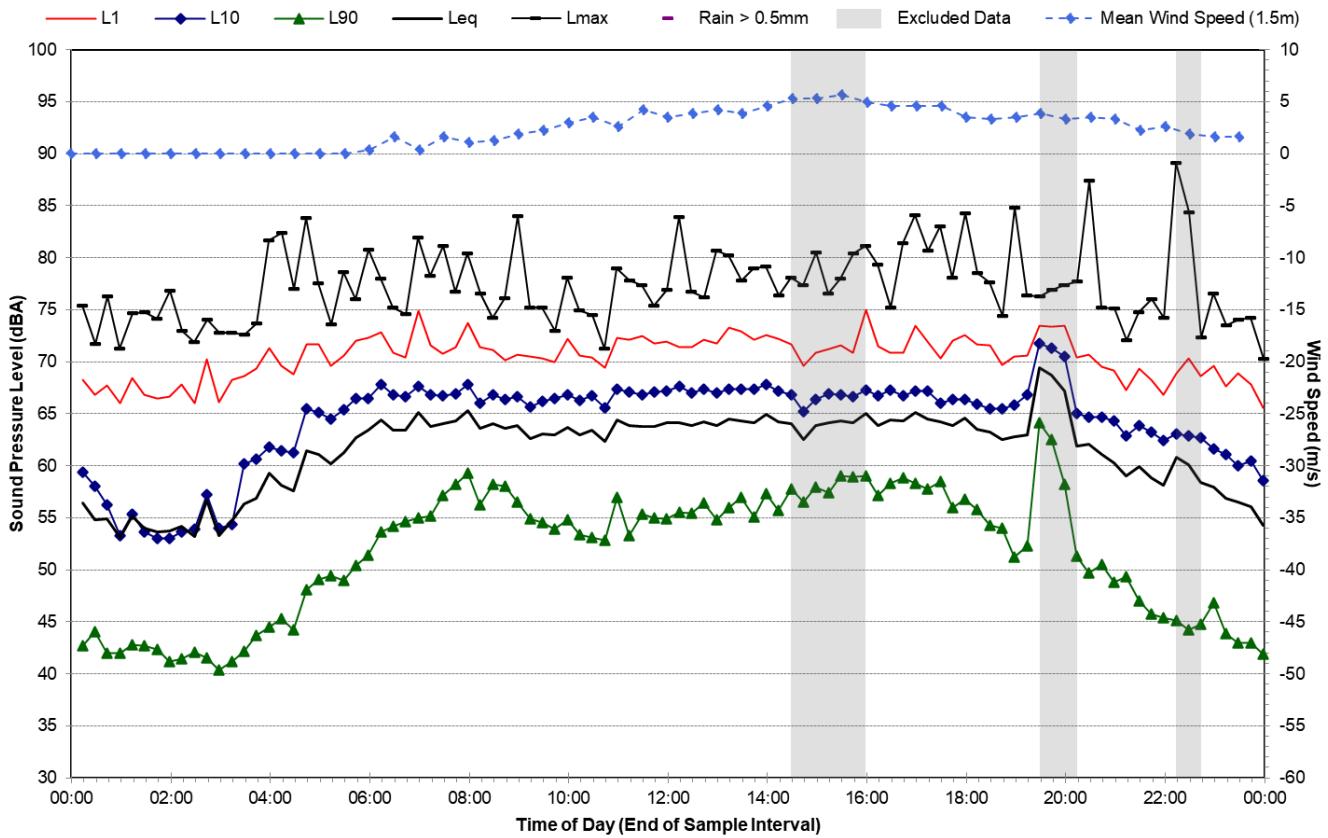
Statistical Ambient Noise Levels

5 Auld Avenue, Milperra - Tuesday, 22 March 2022



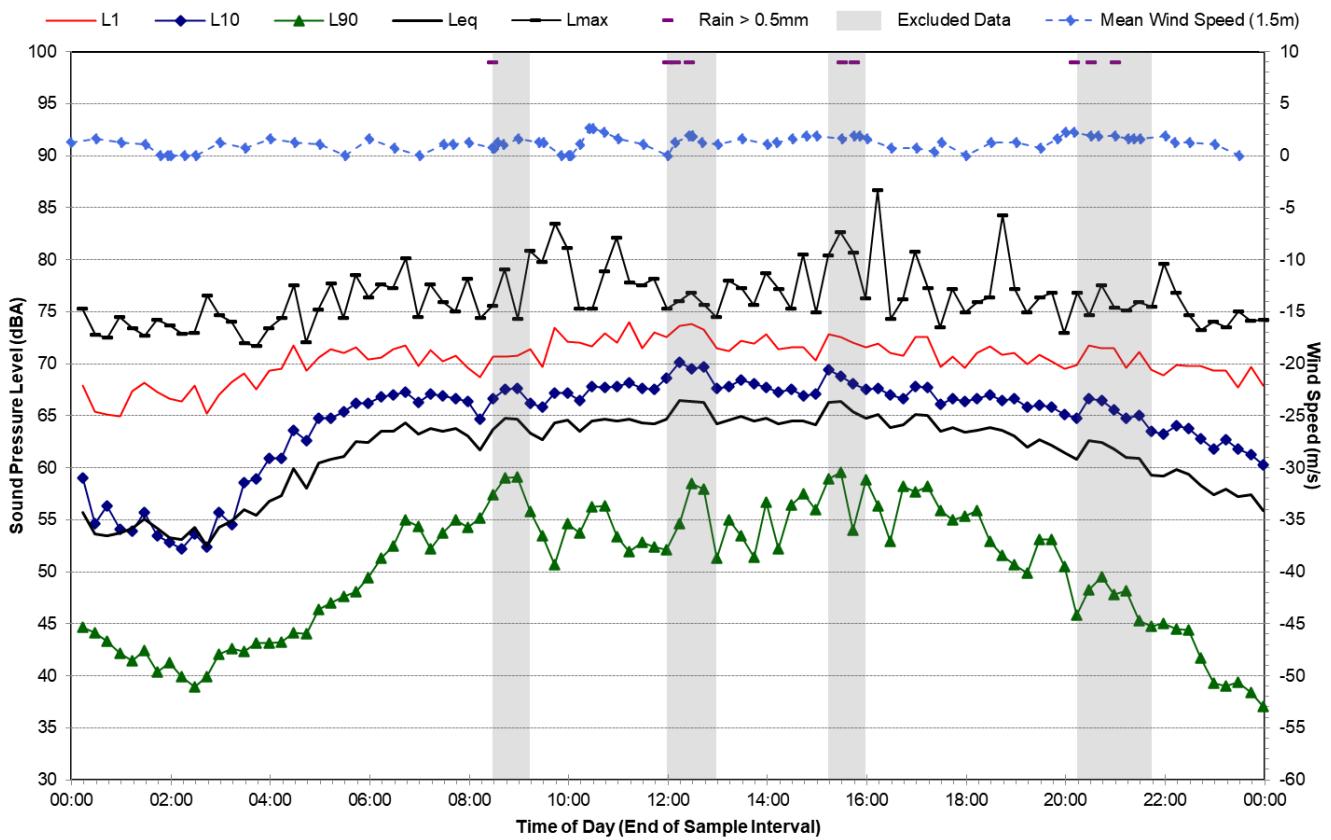
Statistical Ambient Noise Levels

5 Auld Avenue, Milperra - Wednesday, 23 March 2022



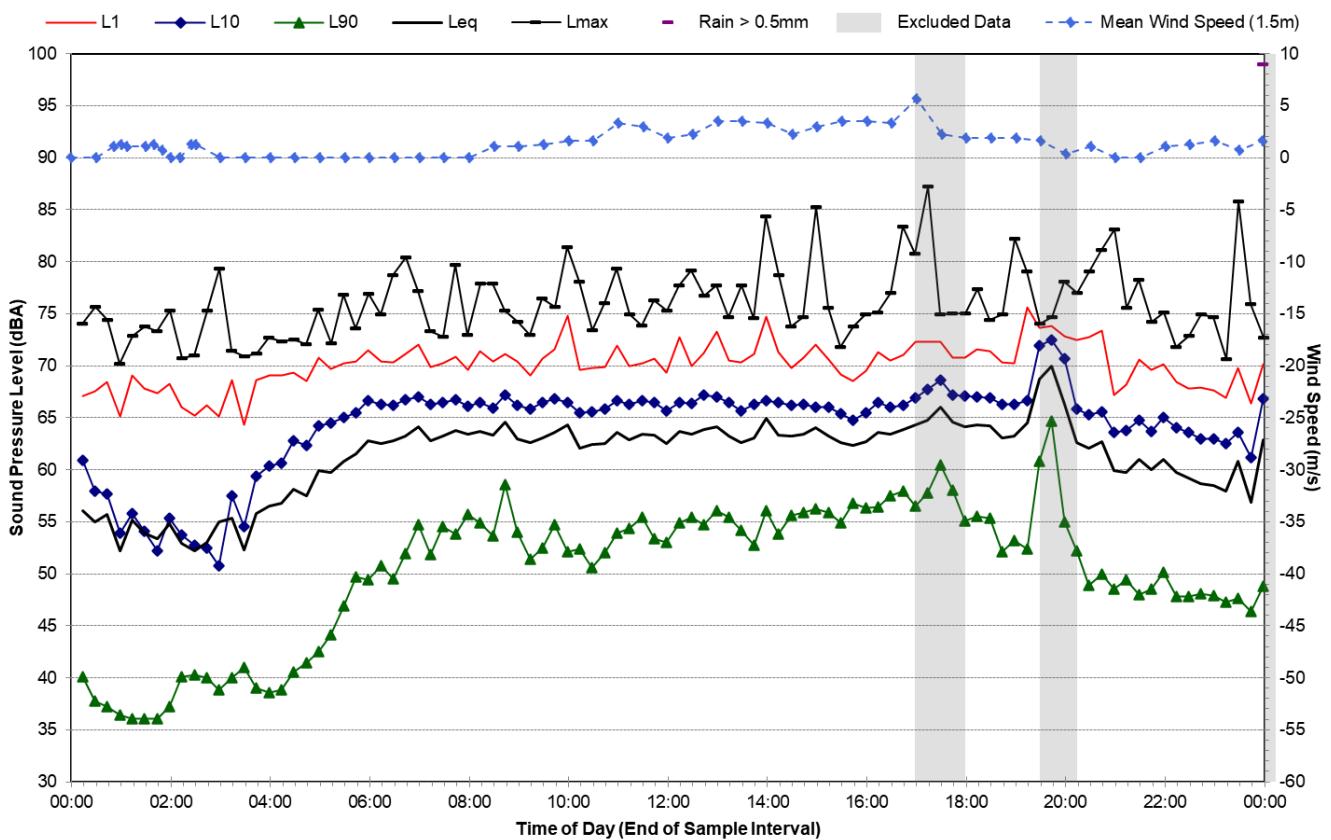
Statistical Ambient Noise Levels

5 Auld Avenue, Milperra - Thursday, 24 March 2022



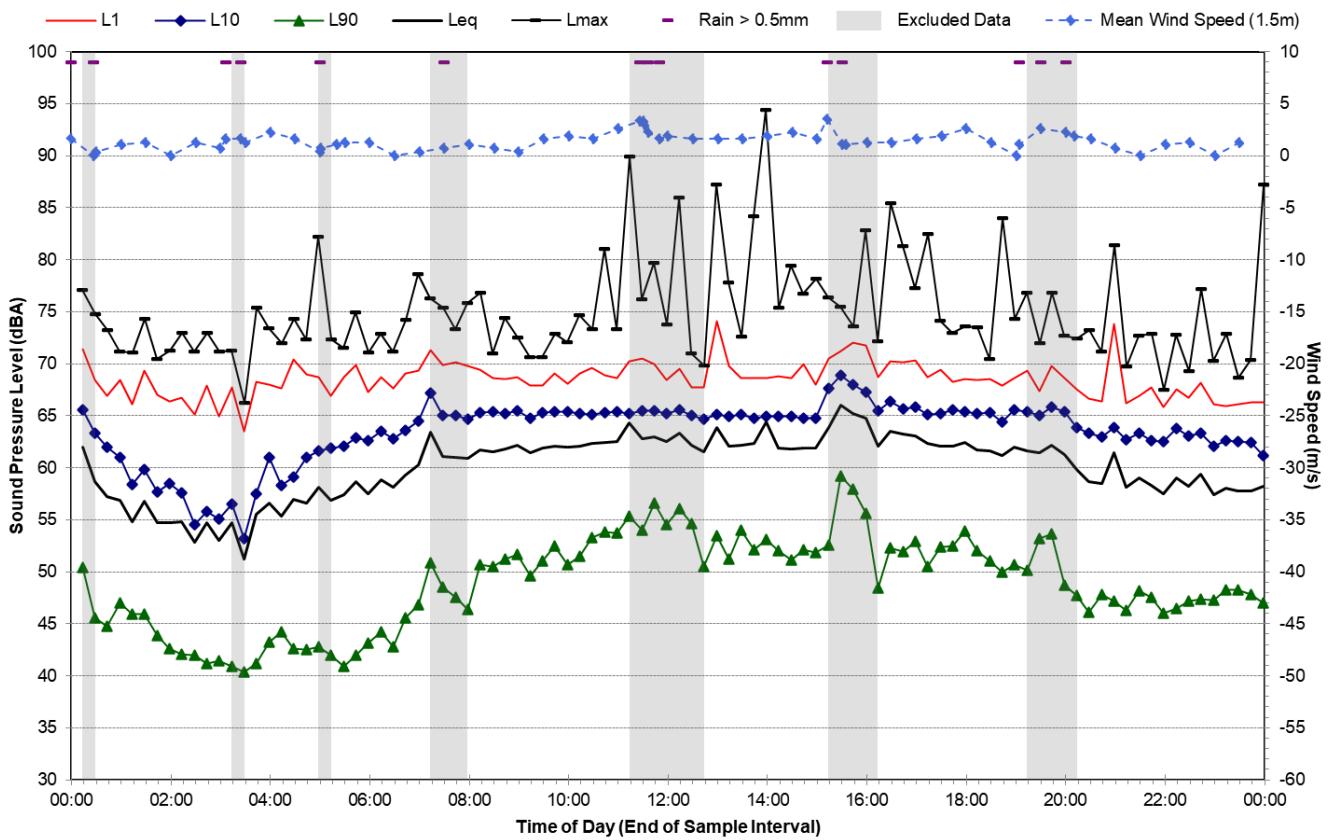
Statistical Ambient Noise Levels

5 Auld Avenue, Milperra - Friday, 25 March 2022



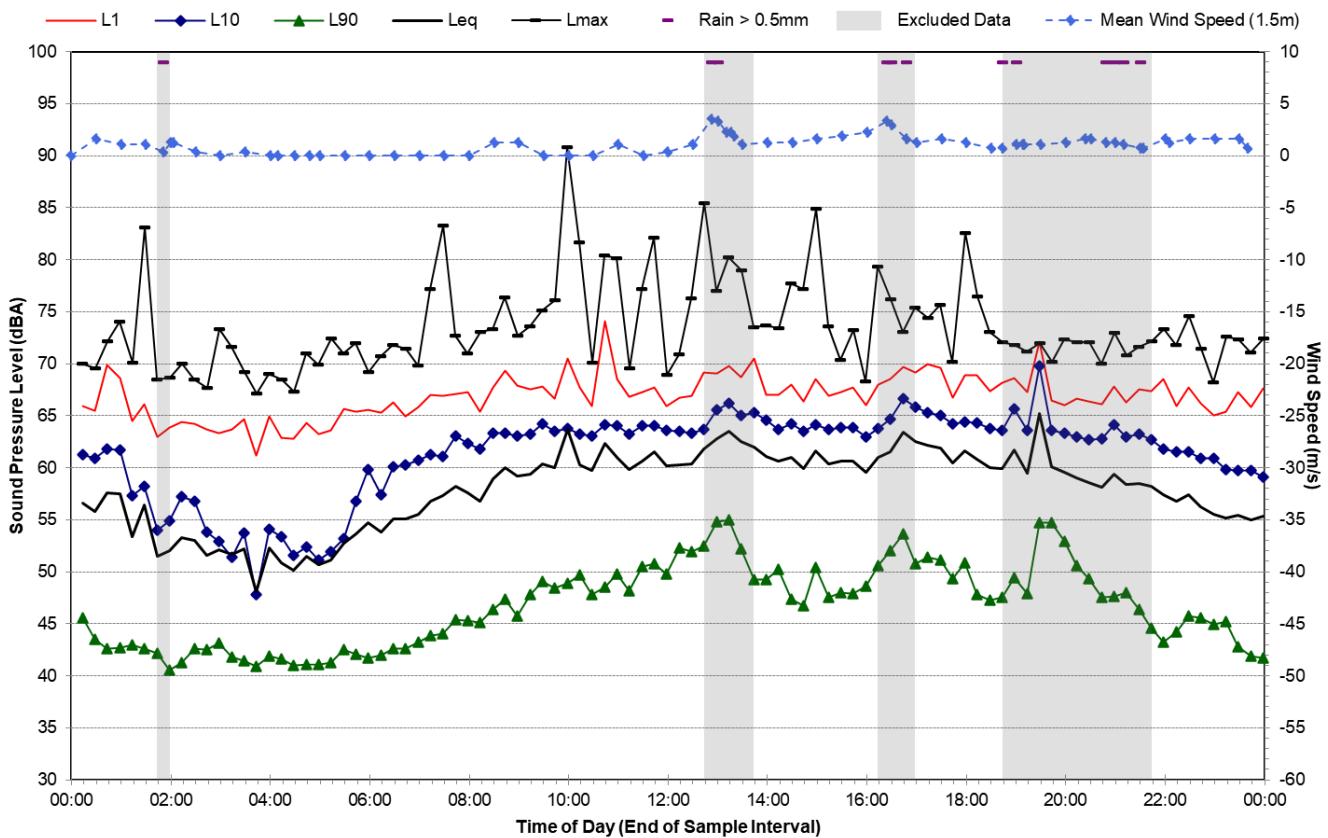
Statistical Ambient Noise Levels

5 Auld Avenue, Milperra - Saturday, 26 March 2022



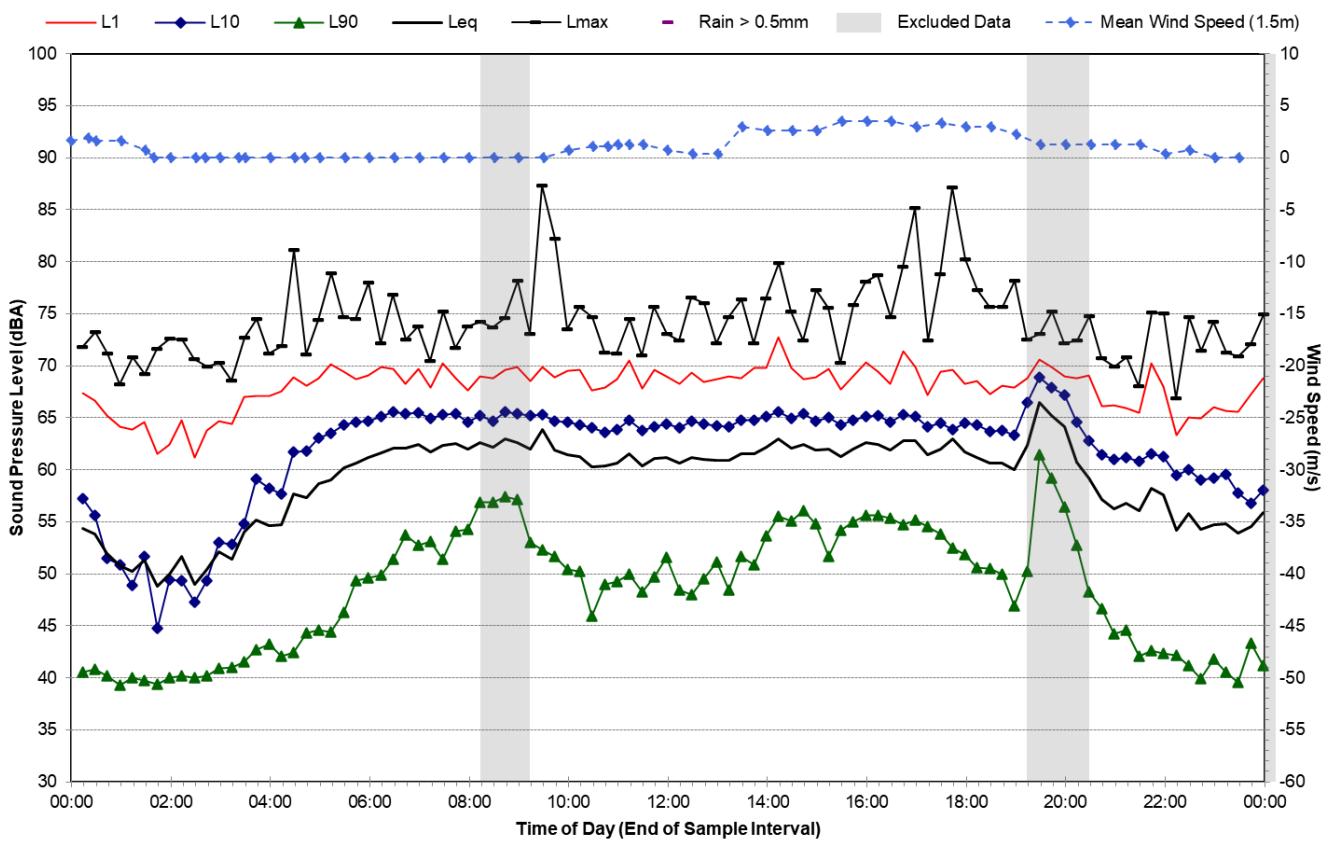
Statistical Ambient Noise Levels

5 Auld Avenue, Milperra - Sunday, 27 March 2022



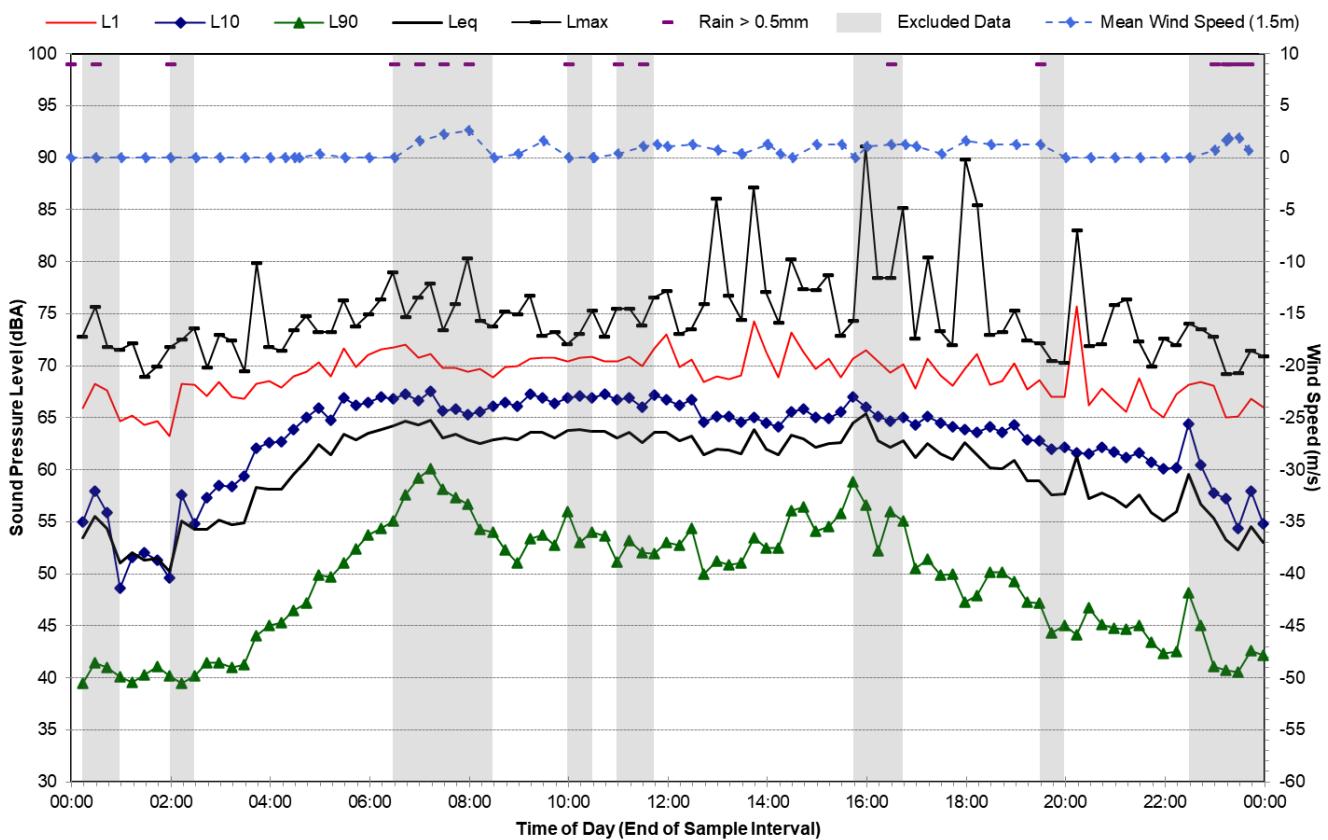
Statistical Ambient Noise Levels

5 Auld Avenue, Milperra - Monday, 28 March 2022



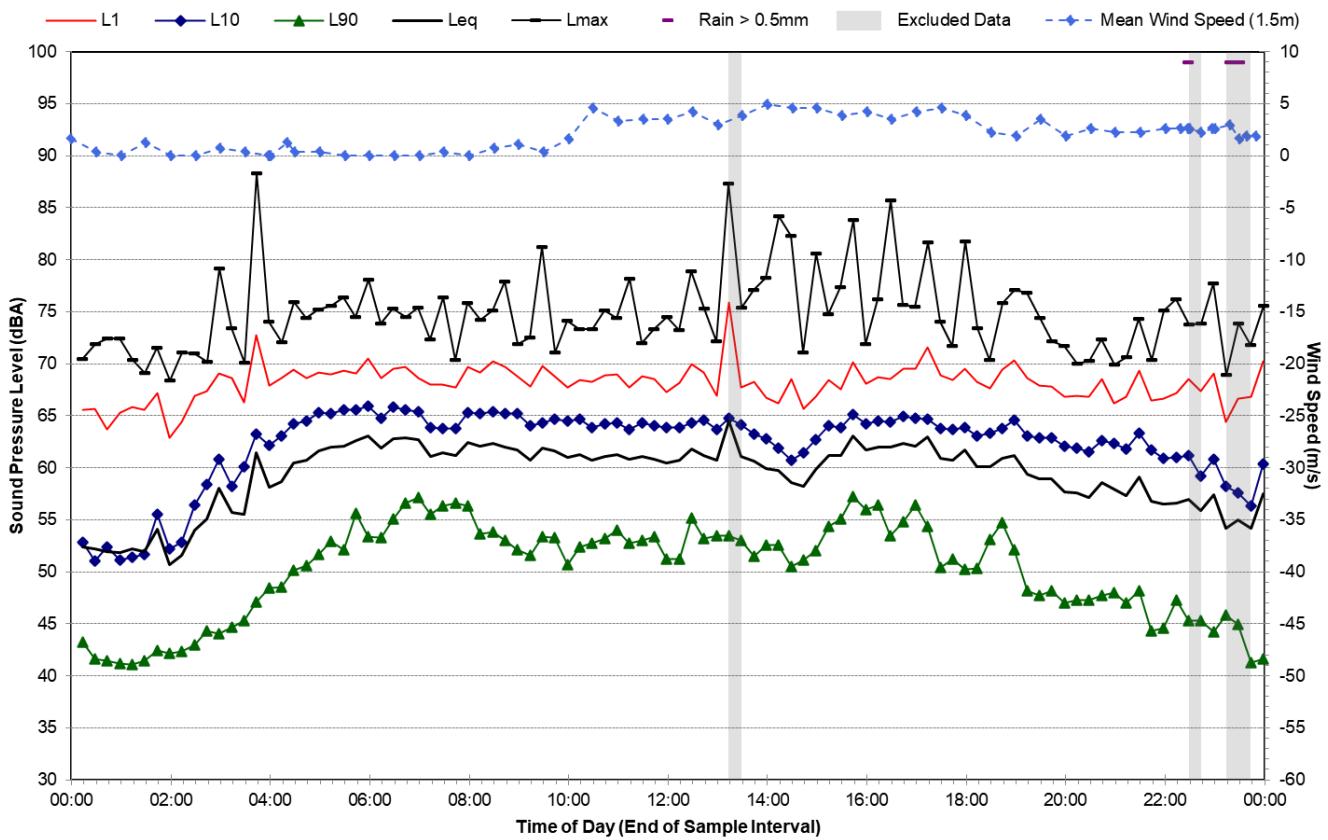
Statistical Ambient Noise Levels

5 Auld Avenue, Milperra - Tuesday, 29 March 2022



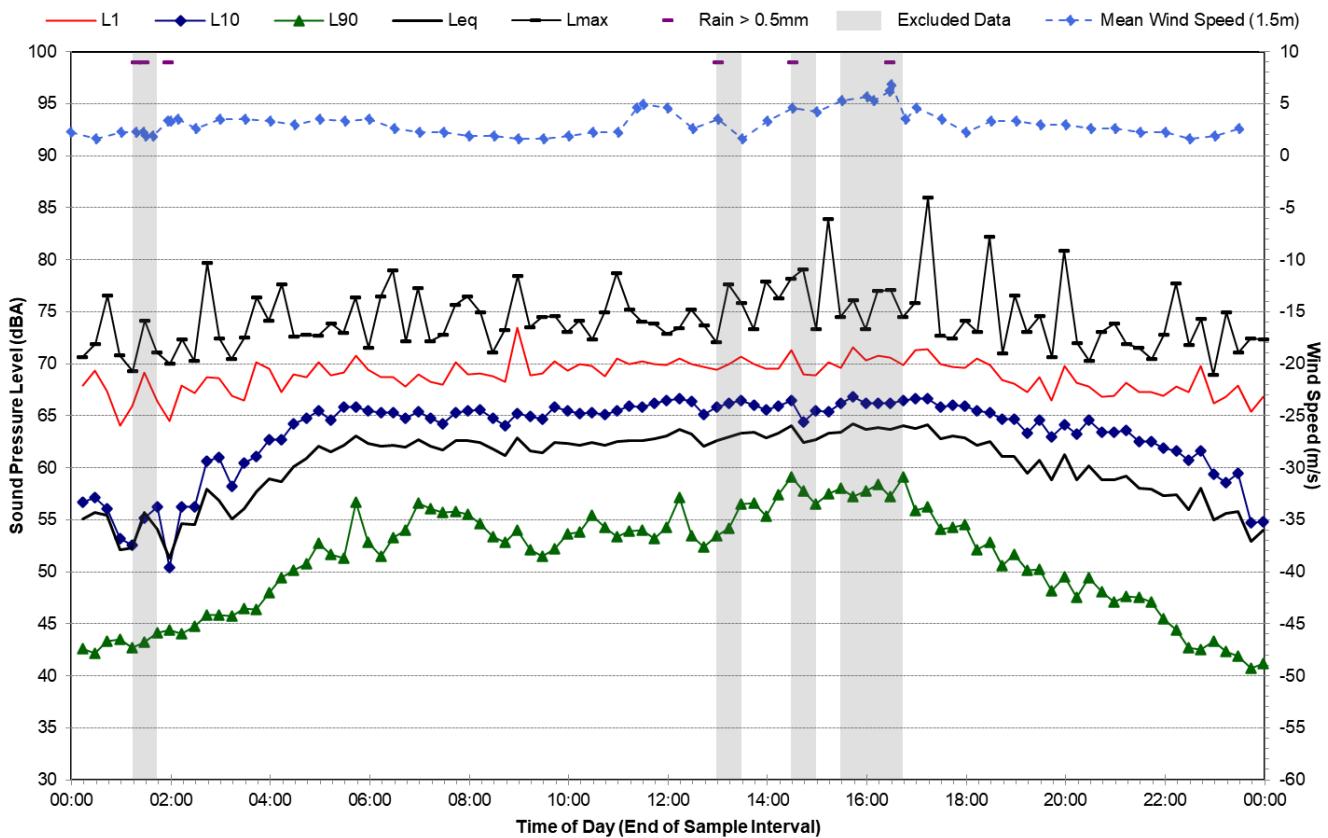
Statistical Ambient Noise Levels

5 Auld Avenue, Milperra - Wednesday, 30 March 2022



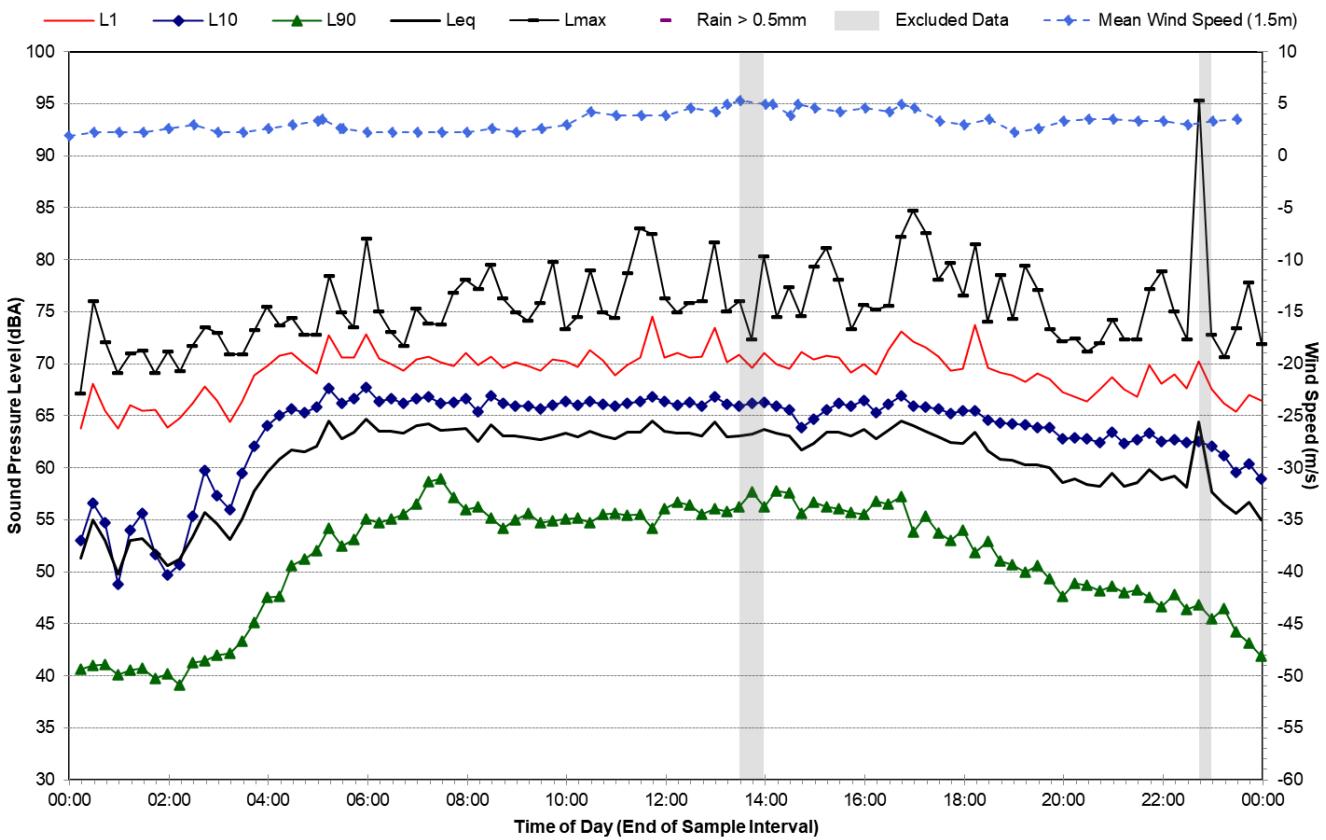
Statistical Ambient Noise Levels

5 Auld Avenue, Milperra - Thursday, 31 March 2022



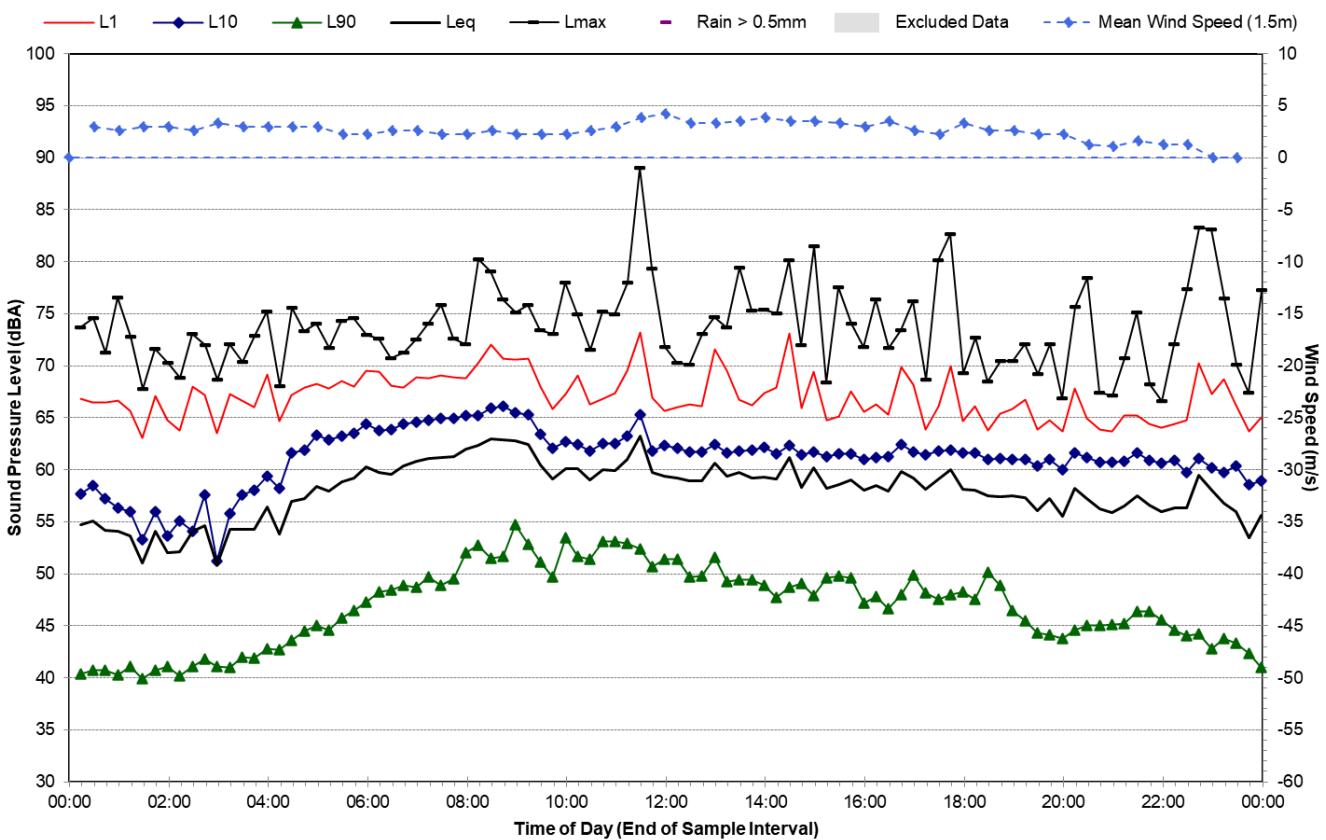
Statistical Ambient Noise Levels

5 Auld Avenue, Milperra - Friday, 1 April 2022



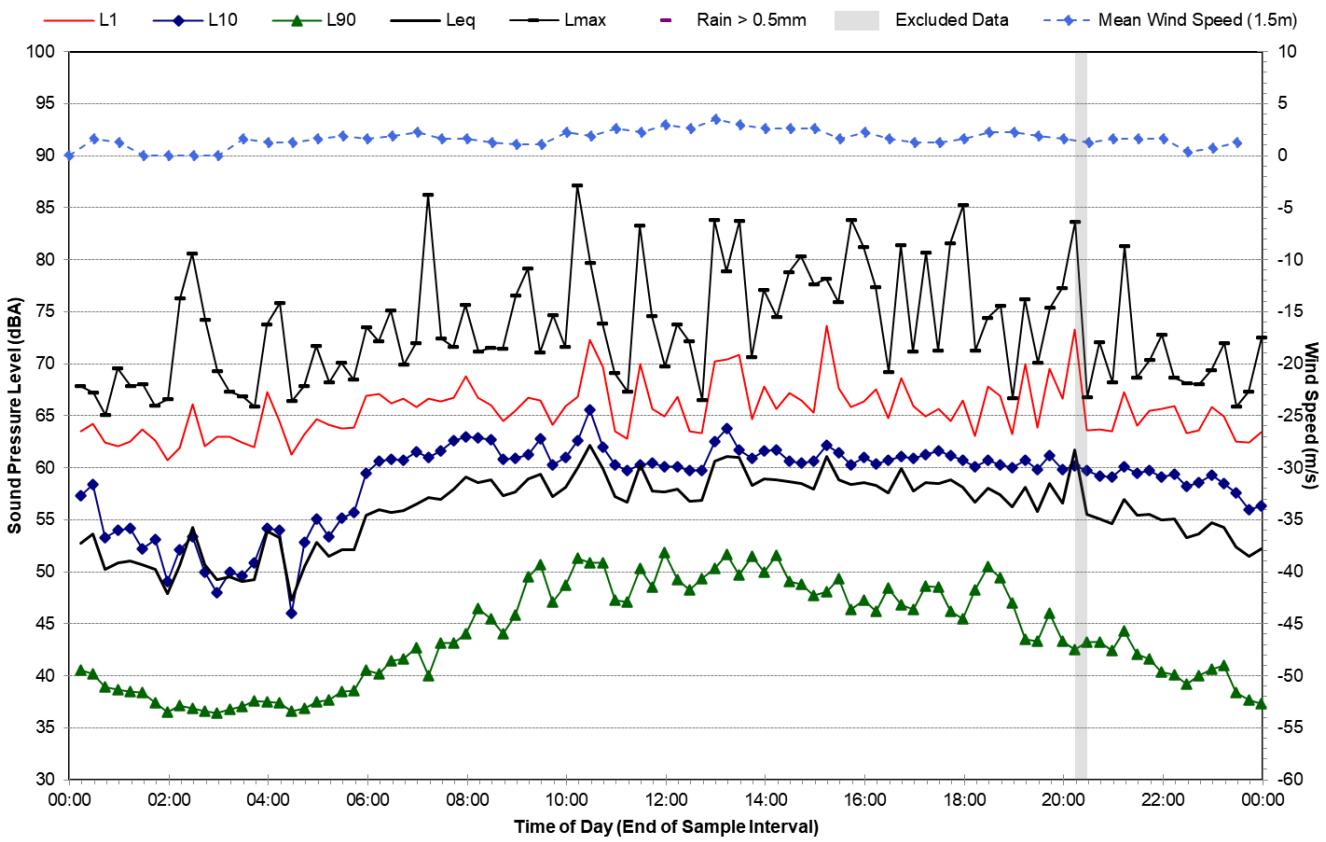
Statistical Ambient Noise Levels

5 Auld Avenue, Milperra - Saturday, 2 April 2022



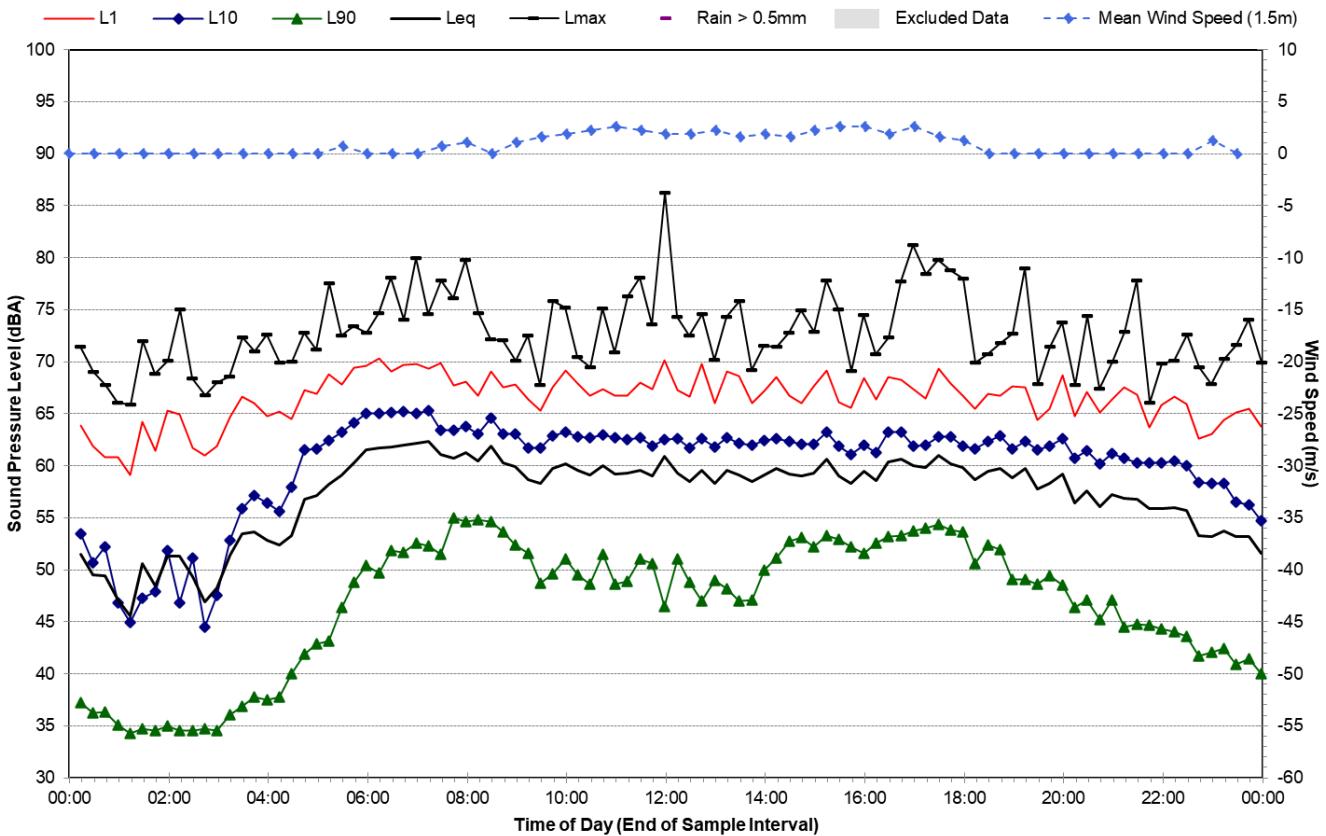
Statistical Ambient Noise Levels

5 Auld Avenue, Milperra - Sunday, 3 April 2022



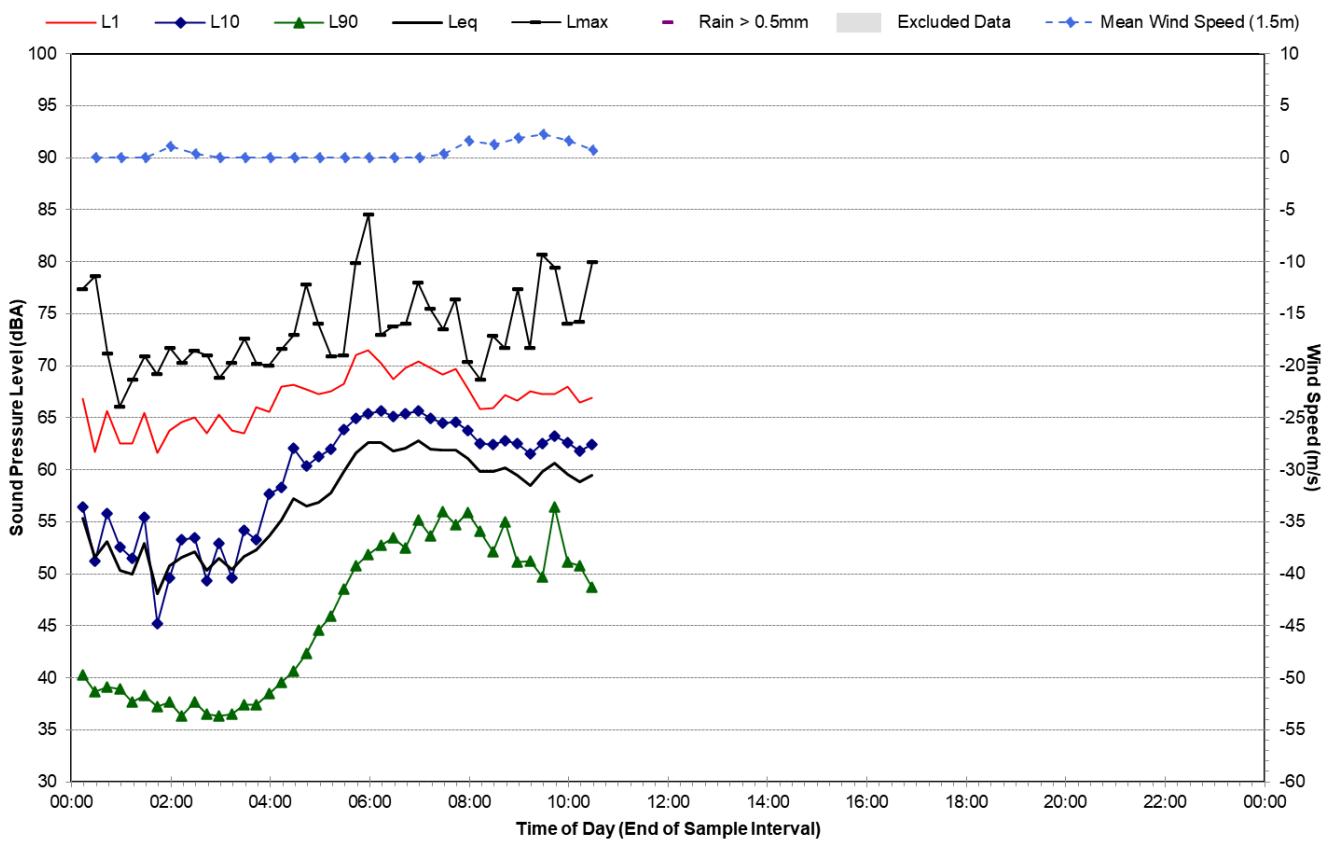
Statistical Ambient Noise Levels

5 Auld Avenue, Milperra - Monday, 4 April 2022



Statistical Ambient Noise Levels

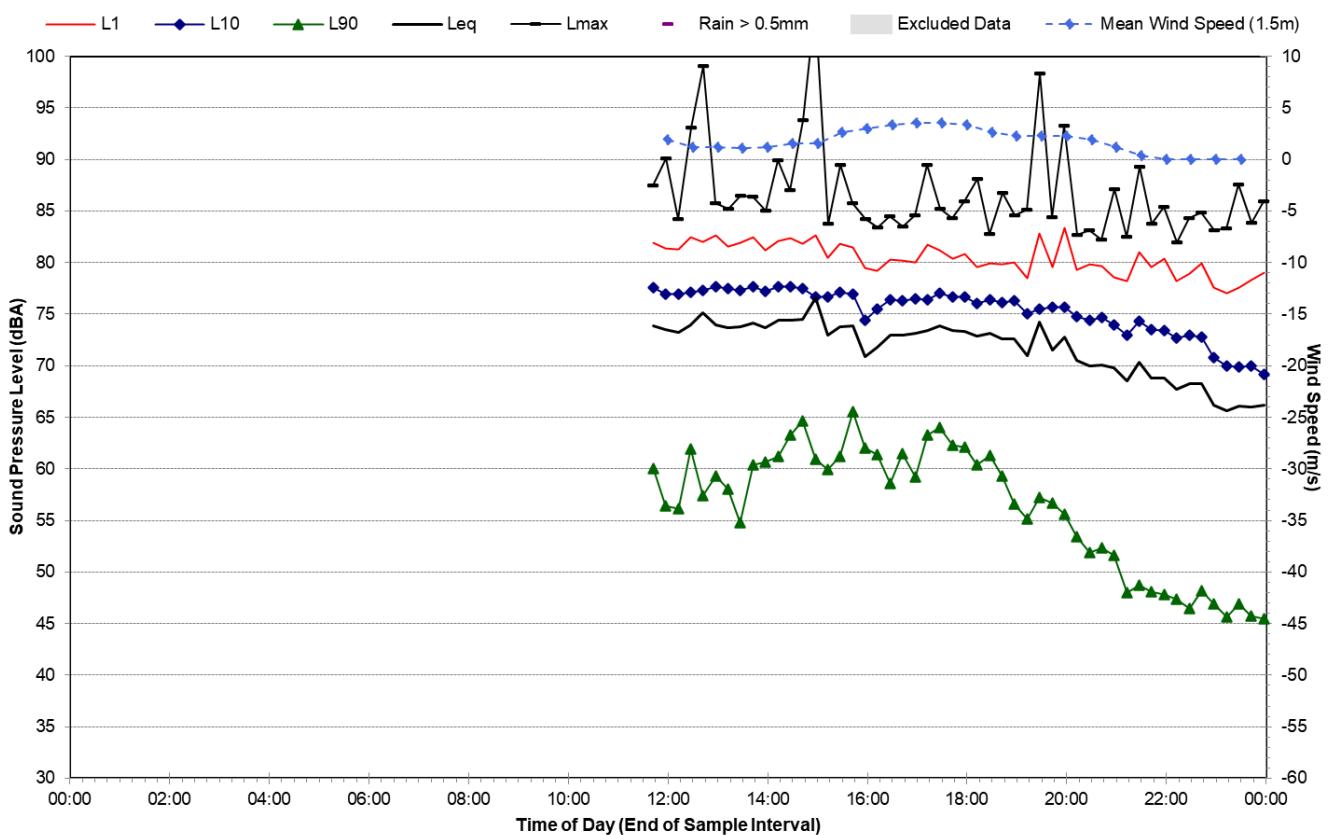
5 Auld Avenue, Milperra - Tuesday, 5 April 2022



Noise Monitoring Location	L02	Map of Noise Monitoring Location				
Noise Monitoring Address	503 Henry Lawson Drive, Milperra					
Logger Device Type: Svantek 957, Logger Serial No: 27523 Sound Level Meter Device Type: Brüel and Kjær 2270, Sound Level Meter Serial No: 3008204						
Ambient noise logger deployed at residential address 503 Henry Lawson Drive, Milperra. Logger located at a height of around 2 m above ground with direct view of Henry Lawson Drive.						
Attended noise measurements indicate the ambient noise environment at this location is dominated by road traffic noise from Henry Lawson Drive.						
Recorded Noise Levels (L _{Amax}) 22/03/2022: Light-vehicle traffic Henry Lawson Drive: 70-78 dBA Heavy-vehicle traffic Henry Lawson Drive: 75-89 dBA						
Ambient Noise Logging Results	ICNG Defined Time Periods					
Monitoring Period	Noise Level (dBA)					
	RBL	L_{Aeq}	L₁₀	L₁		
Daytime	58	74	78	82		
Evening	48	72	75	80		
Night-time	41	69	71	79		
Ambient Noise Logging Results	RNP Defined Time Periods		Photo of Noise Monitoring Location			
Monitoring Period	Noise Level (dBA)					
	L_{Aeq}(period)		L_{Aeq}(1hour)			
Daytime (7am-10pm)	74		75			
Night-time (10pm-7am)	69		73			
Attended Noise Measurement Results						
Date	Start Time	Measured Noise Level (dBA)				
		LA90	L_{Aeq}	L_{Amax}		
22/03/2022	11:23	59	73	89		

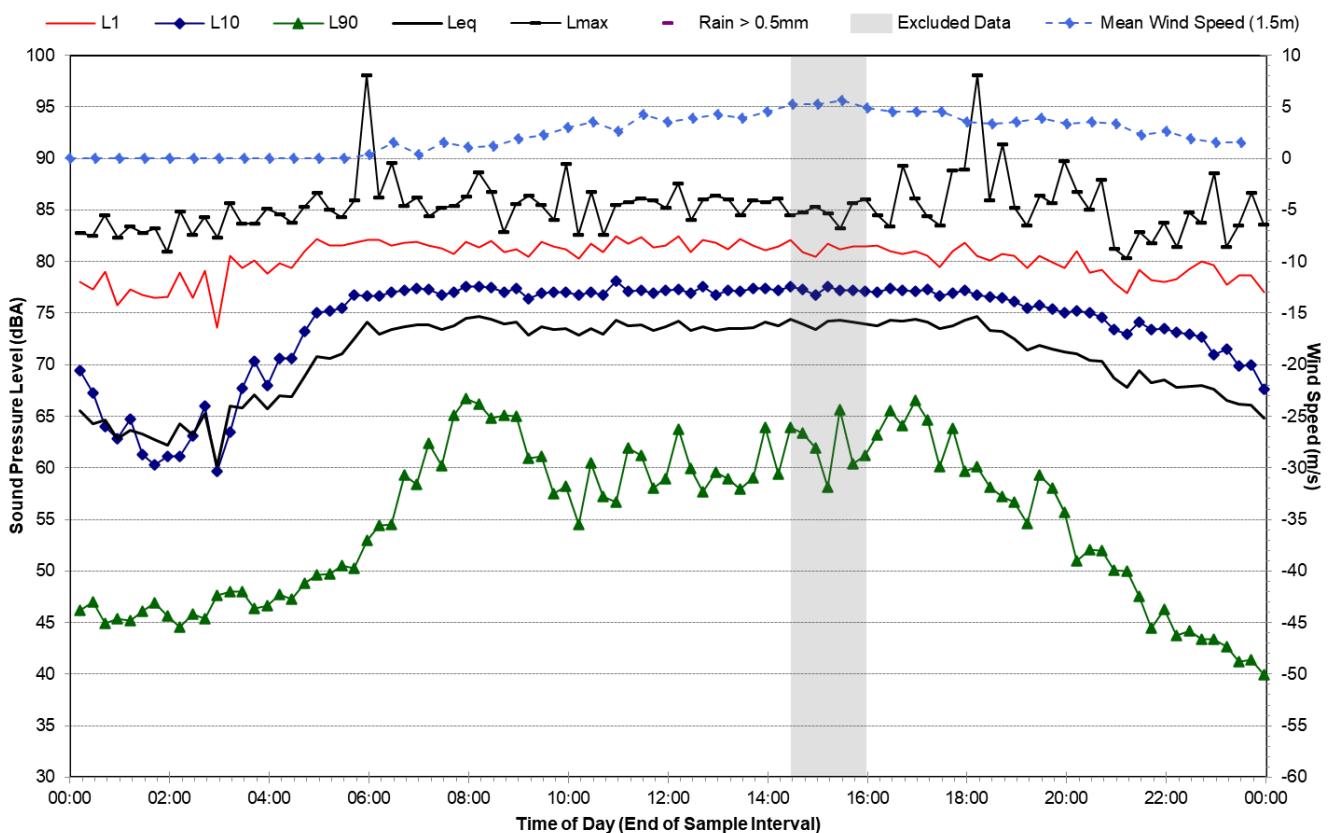
Statistical Ambient Noise Levels

503 Henry Lawson Drive, Milperra - Tuesday, 22 March 2022



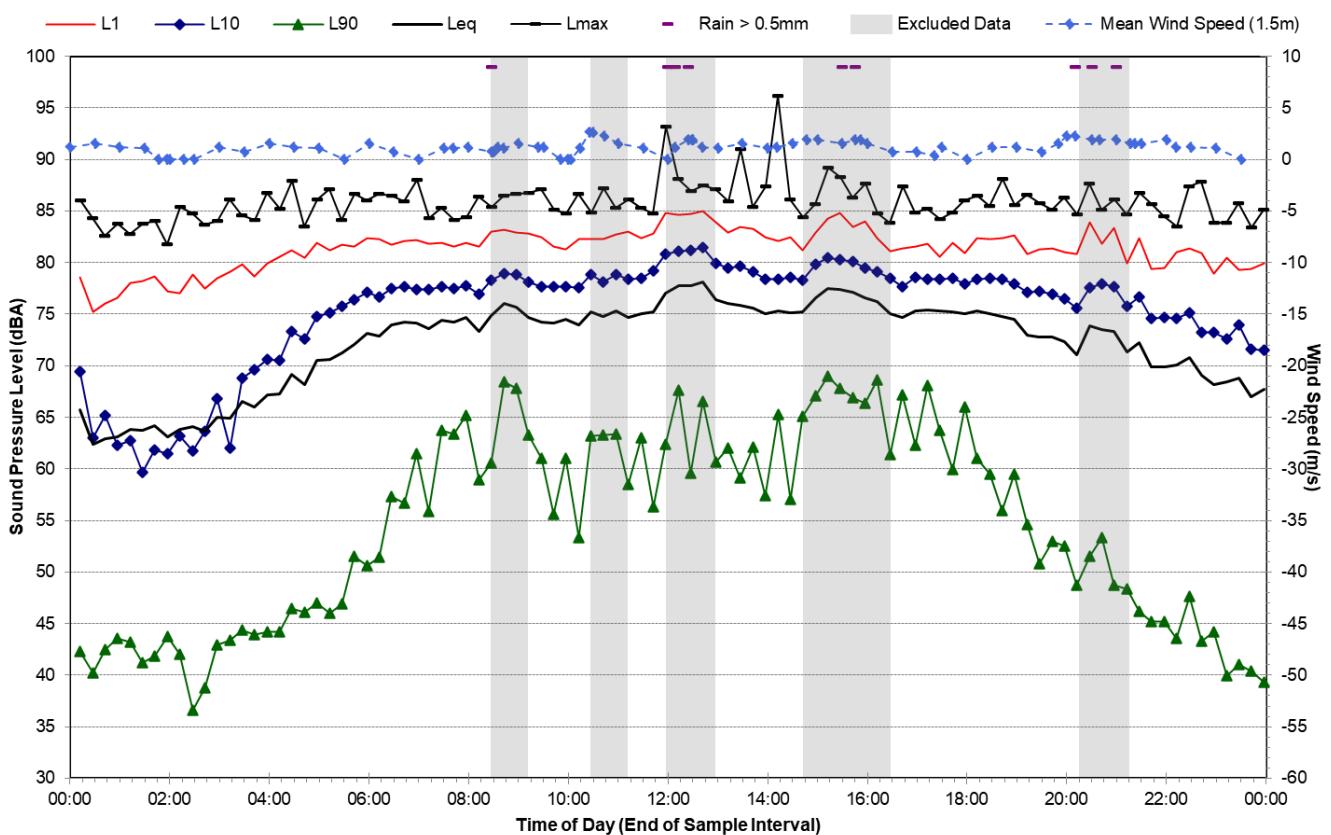
Statistical Ambient Noise Levels

503 Henry Lawson Drive, Milperra - Wednesday, 23 March 2022



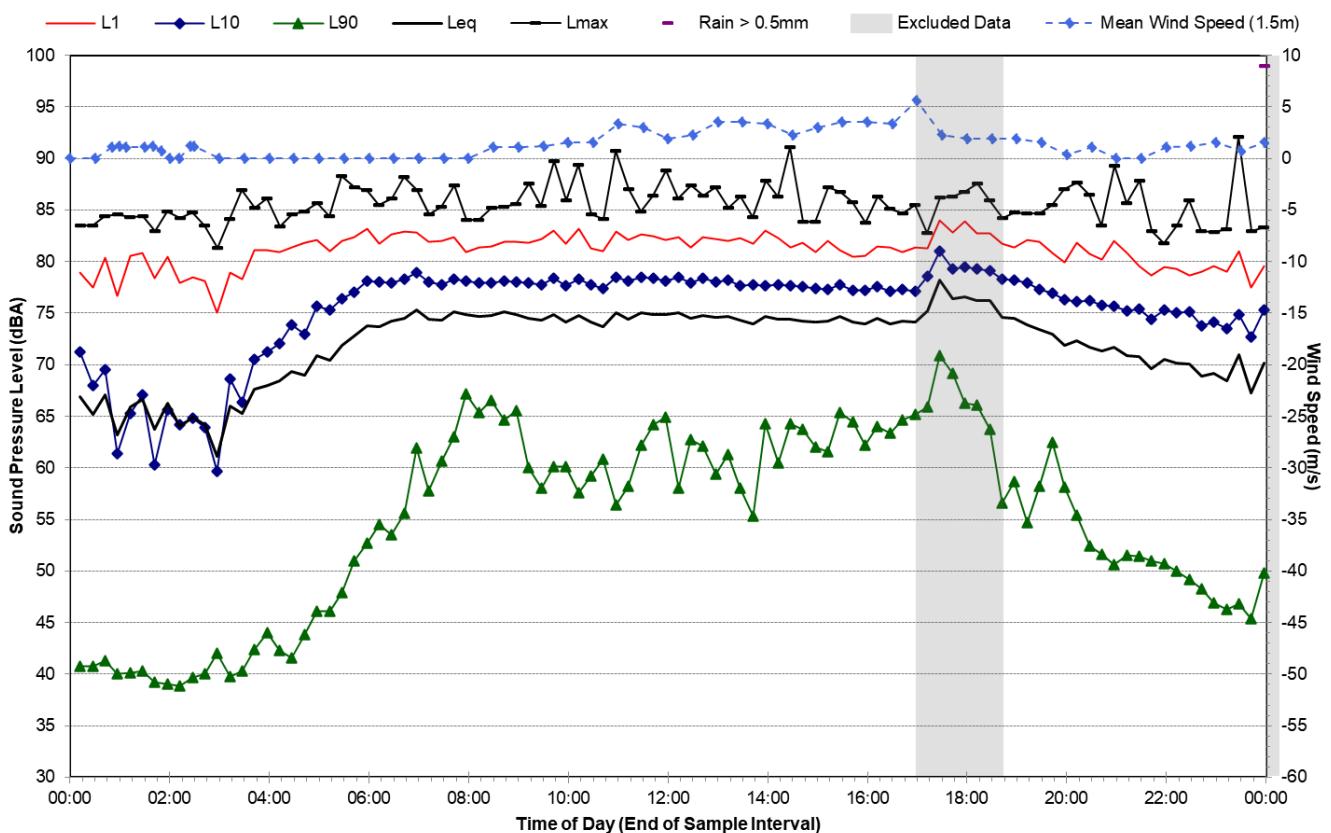
Statistical Ambient Noise Levels

503 Henry Lawson Drive, Milperra - Thursday, 24 March 2022



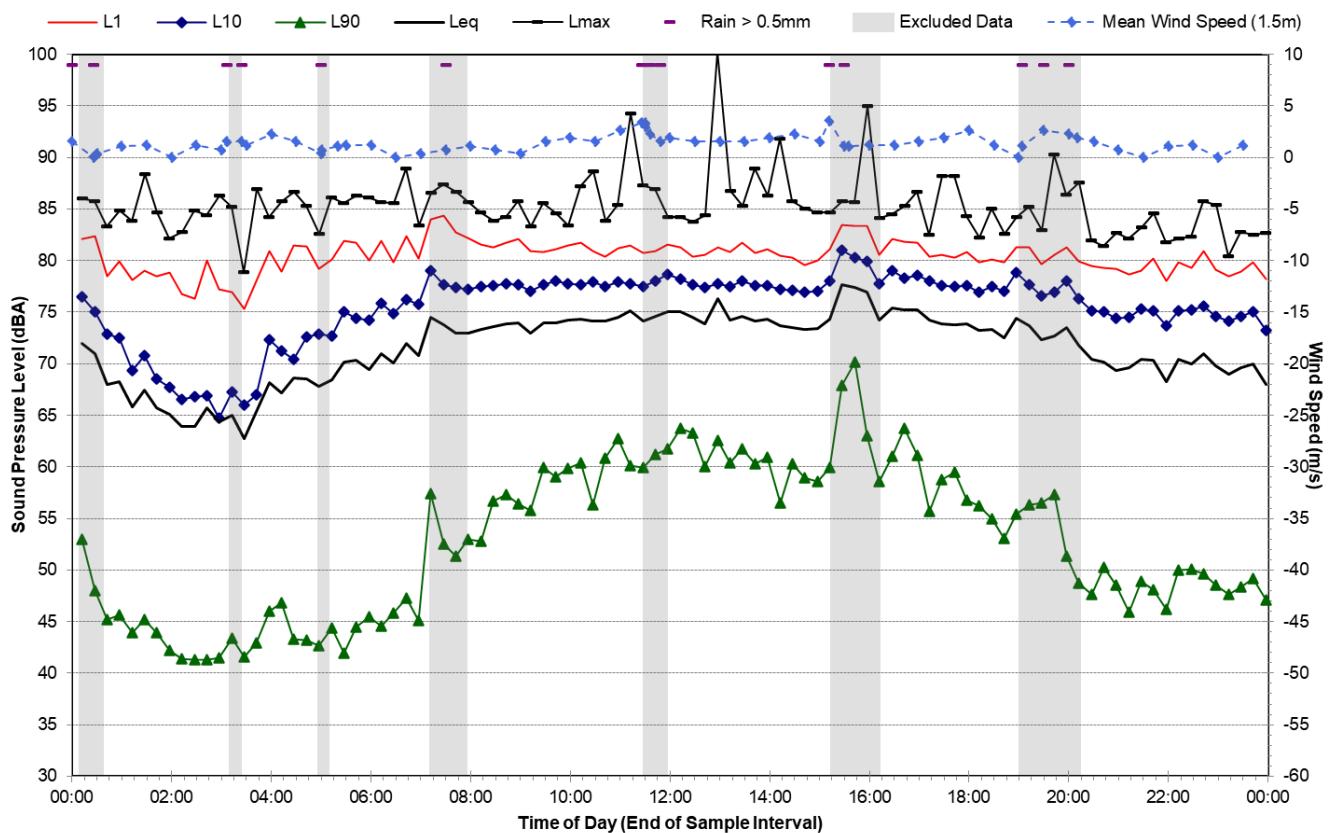
Statistical Ambient Noise Levels

503 Henry Lawson Drive, Milperra - Friday, 25 March 2022



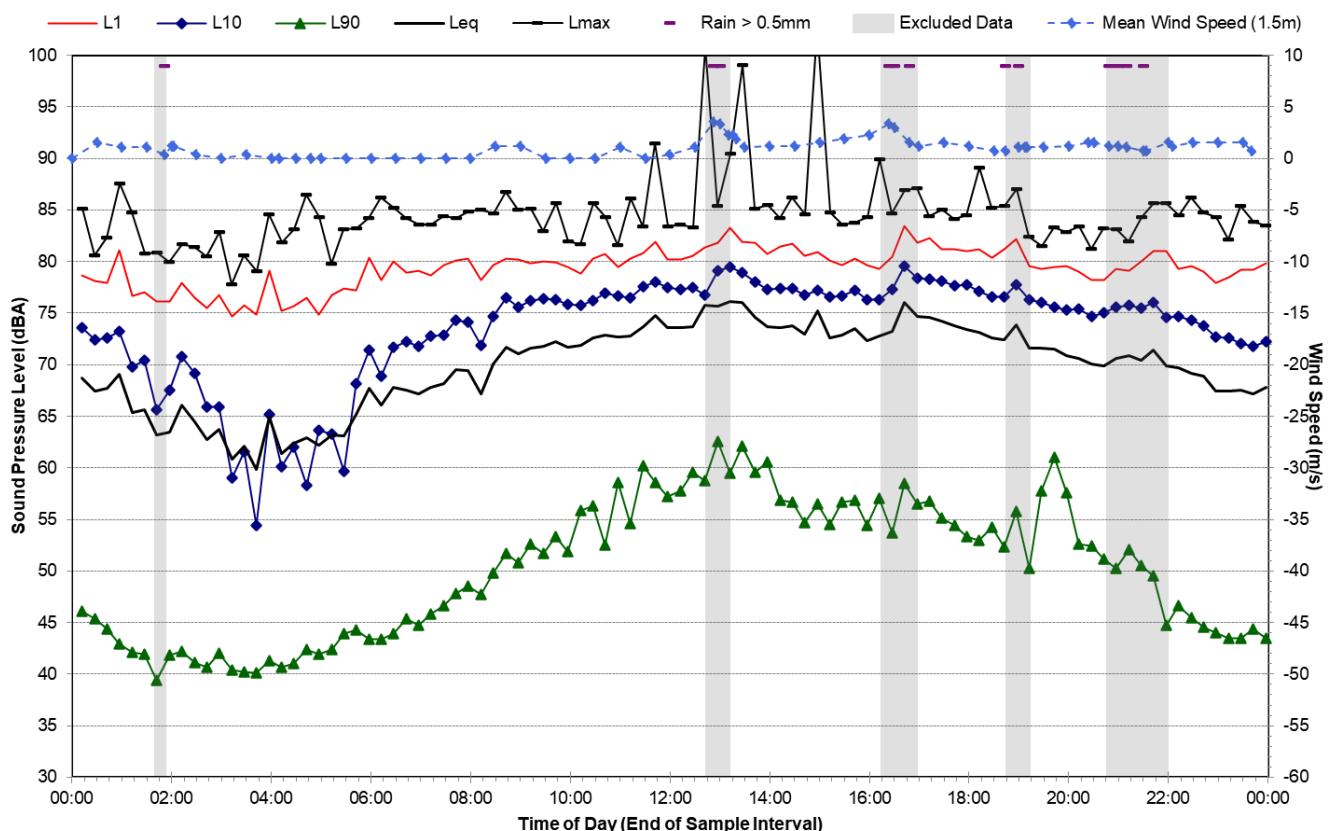
Statistical Ambient Noise Levels

503 Henry Lawson Drive, Milperra - Saturday, 26 March 2022



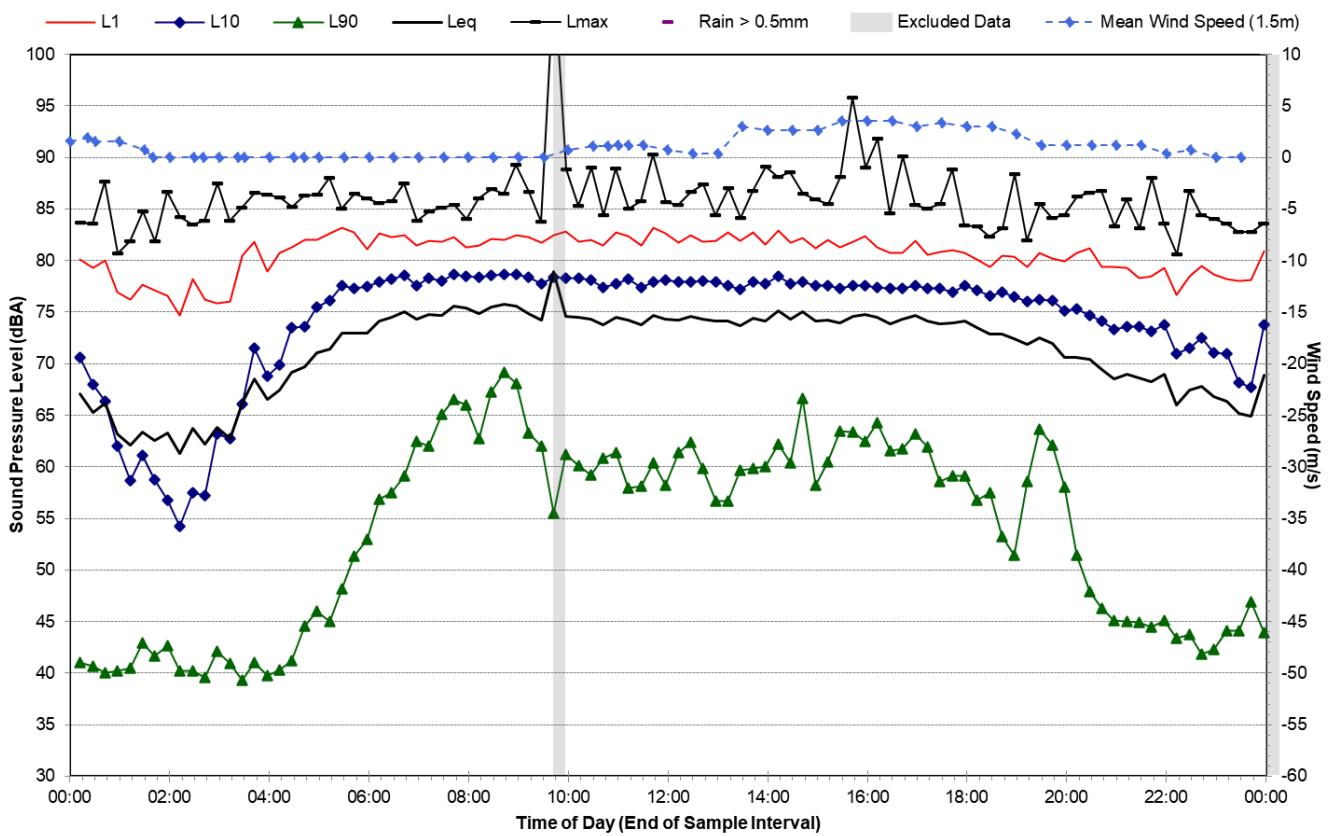
Statistical Ambient Noise Levels

503 Henry Lawson Drive, Milperra - Sunday, 27 March 2022



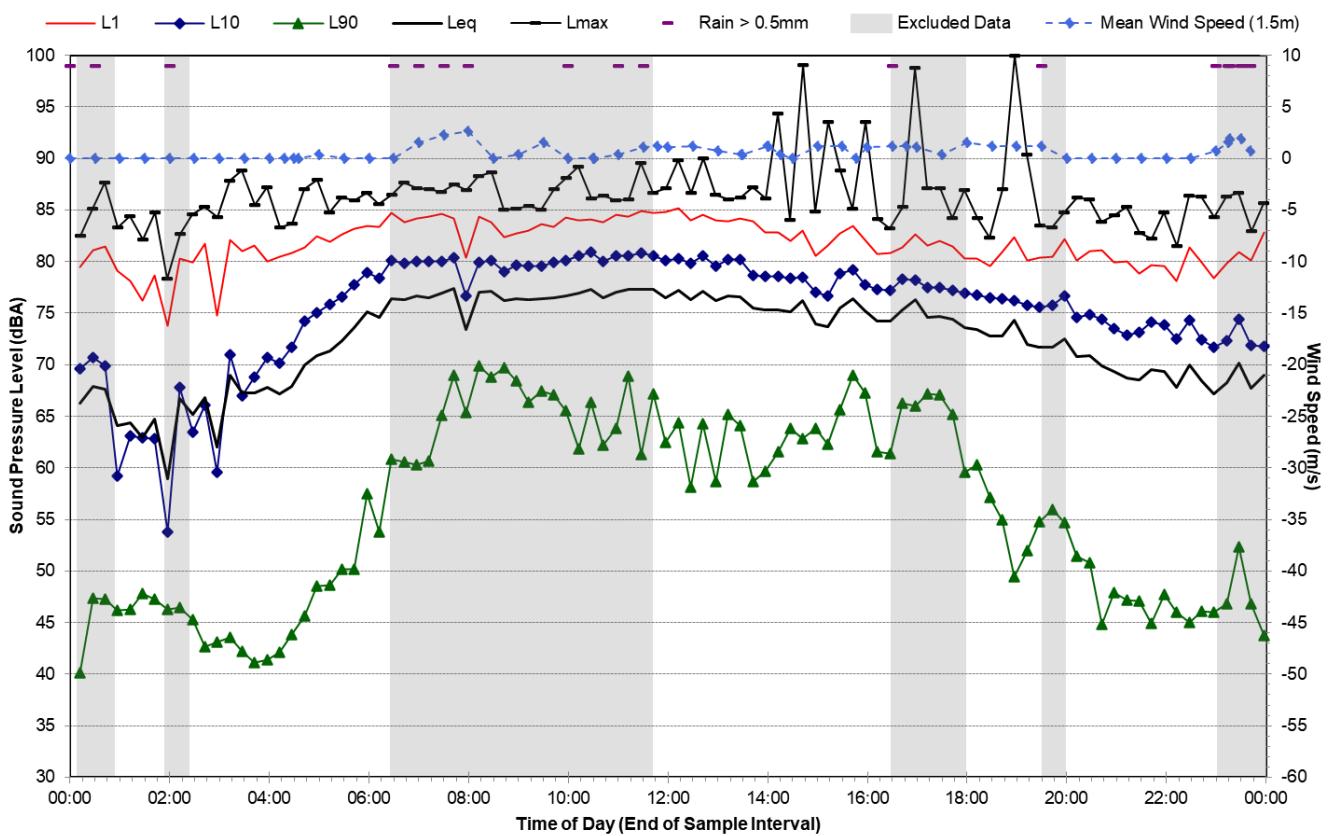
Statistical Ambient Noise Levels

503 Henry Lawson Drive, Milperra - Monday, 28 March 2022



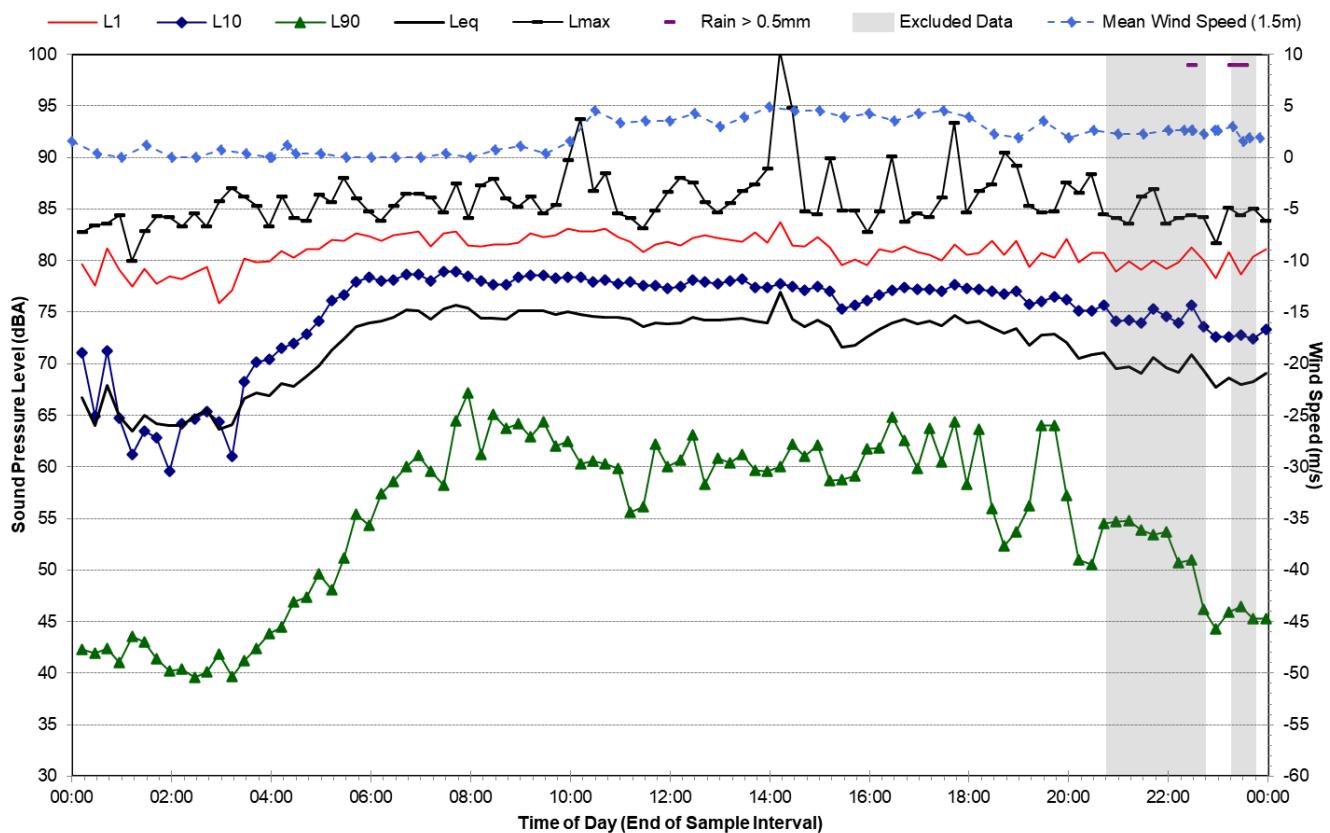
Statistical Ambient Noise Levels

503 Henry Lawson Drive, Milperra - Tuesday, 29 March 2022



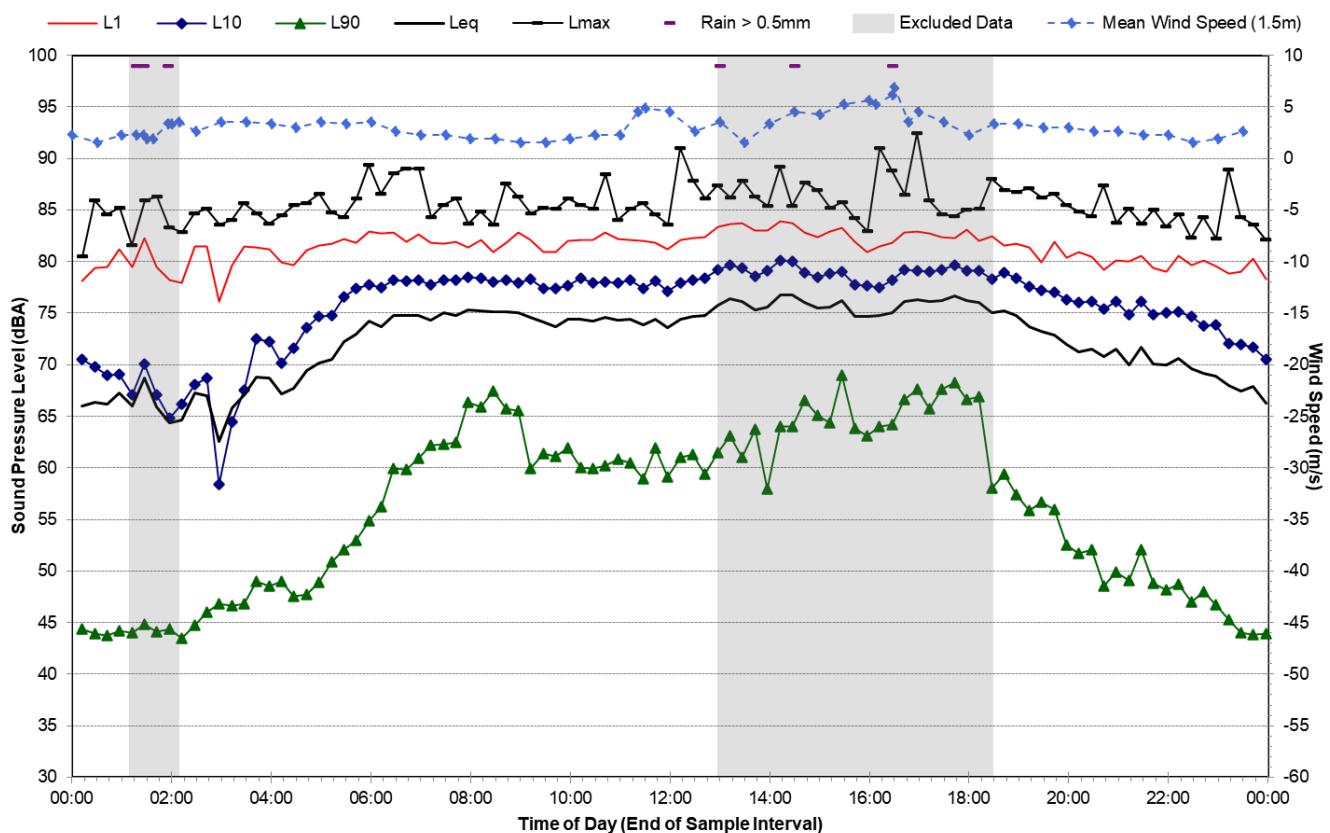
Statistical Ambient Noise Levels

503 Henry Lawson Drive, Milperra - Wednesday, 30 March 2022



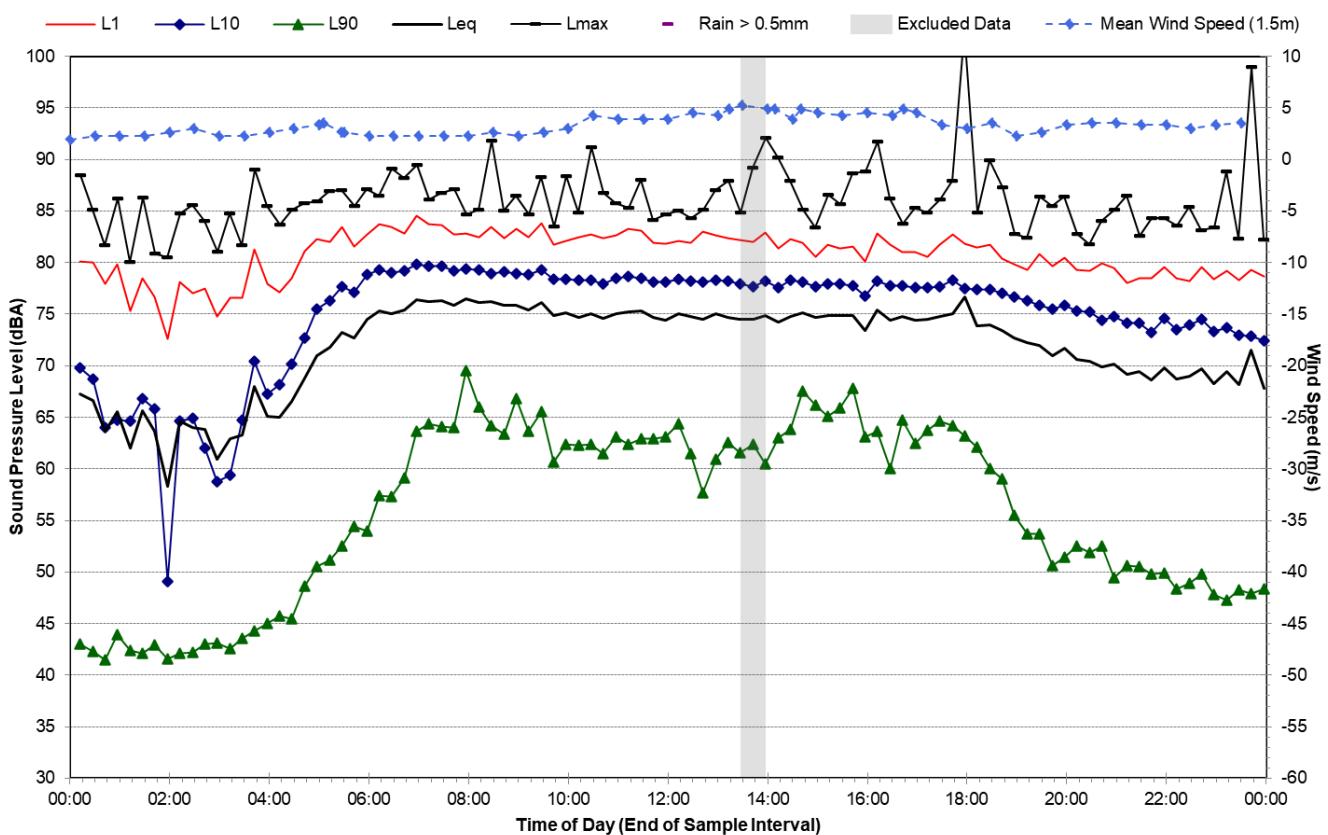
Statistical Ambient Noise Levels

503 Henry Lawson Drive, Milperra - Thursday, 31 March 2022



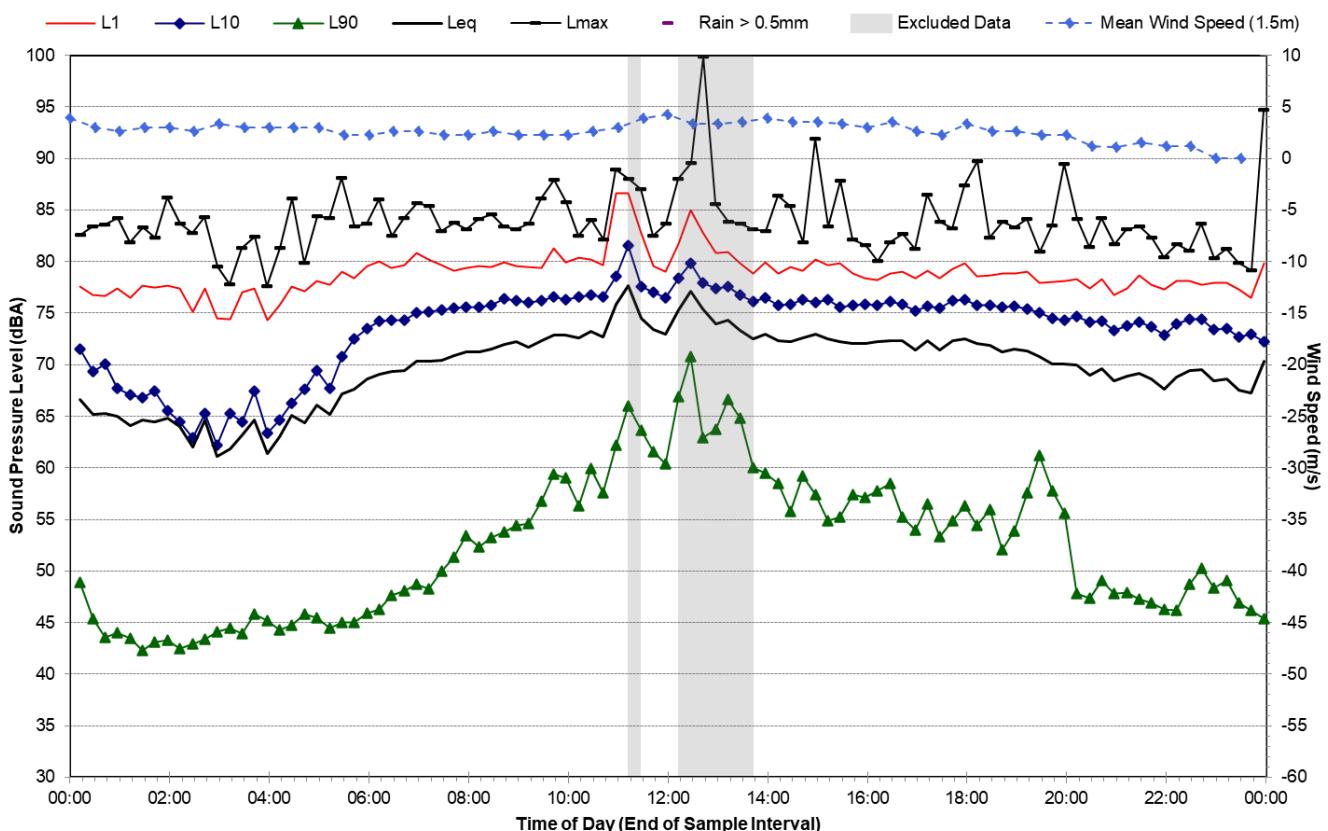
Statistical Ambient Noise Levels

503 Henry Lawson Drive, Milperra - Friday, 1 April 2022



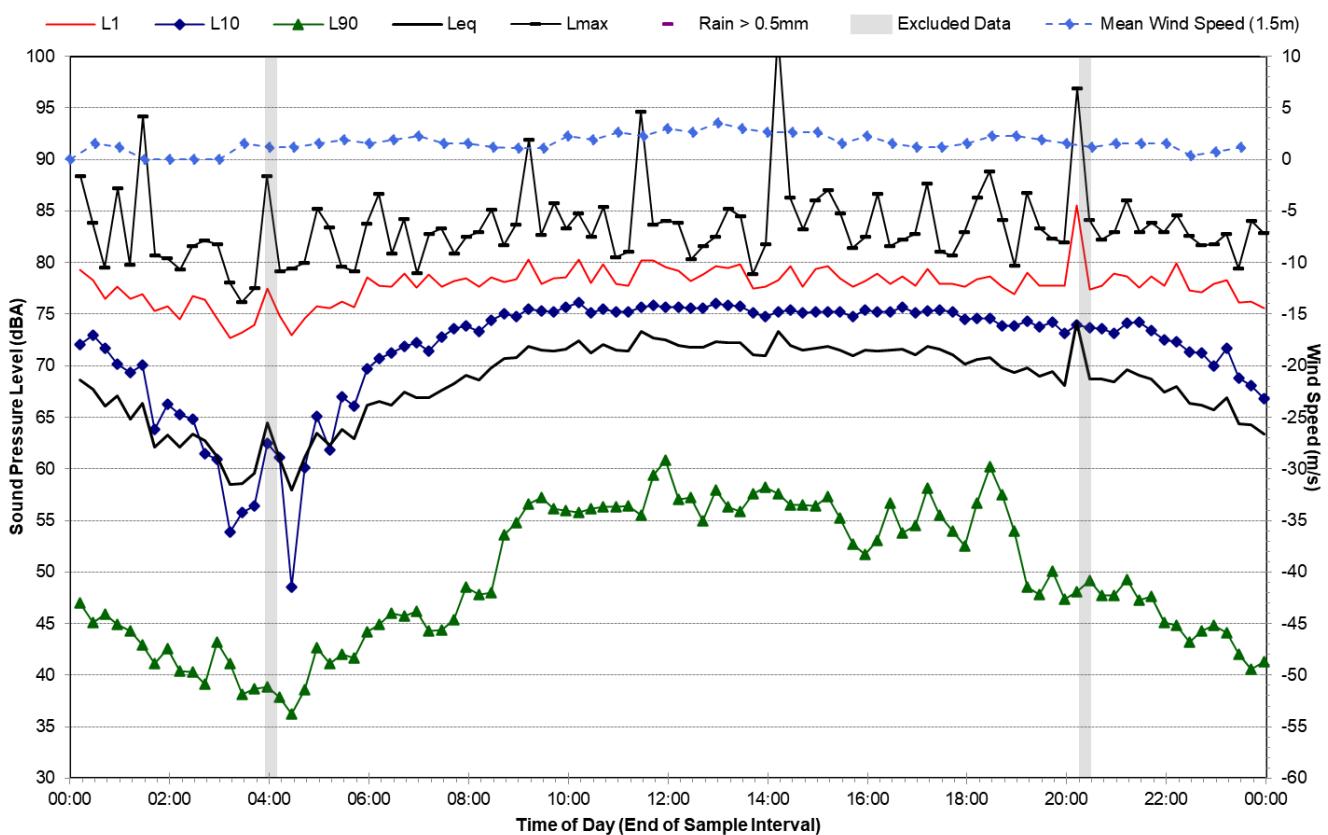
Statistical Ambient Noise Levels

503 Henry Lawson Drive, Milperra - Saturday, 2 April 2022



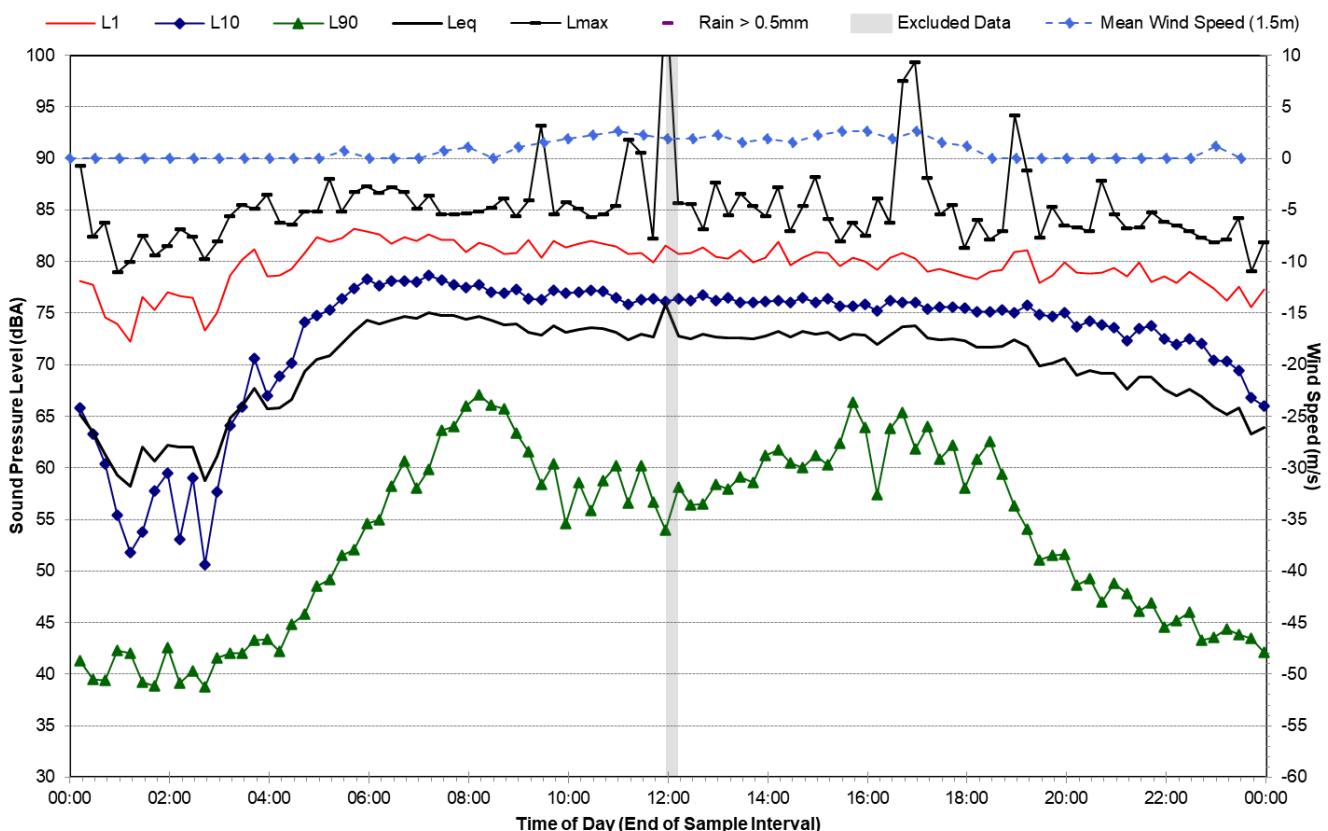
Statistical Ambient Noise Levels

503 Henry Lawson Drive, Milperra - Sunday, 3 April 2022



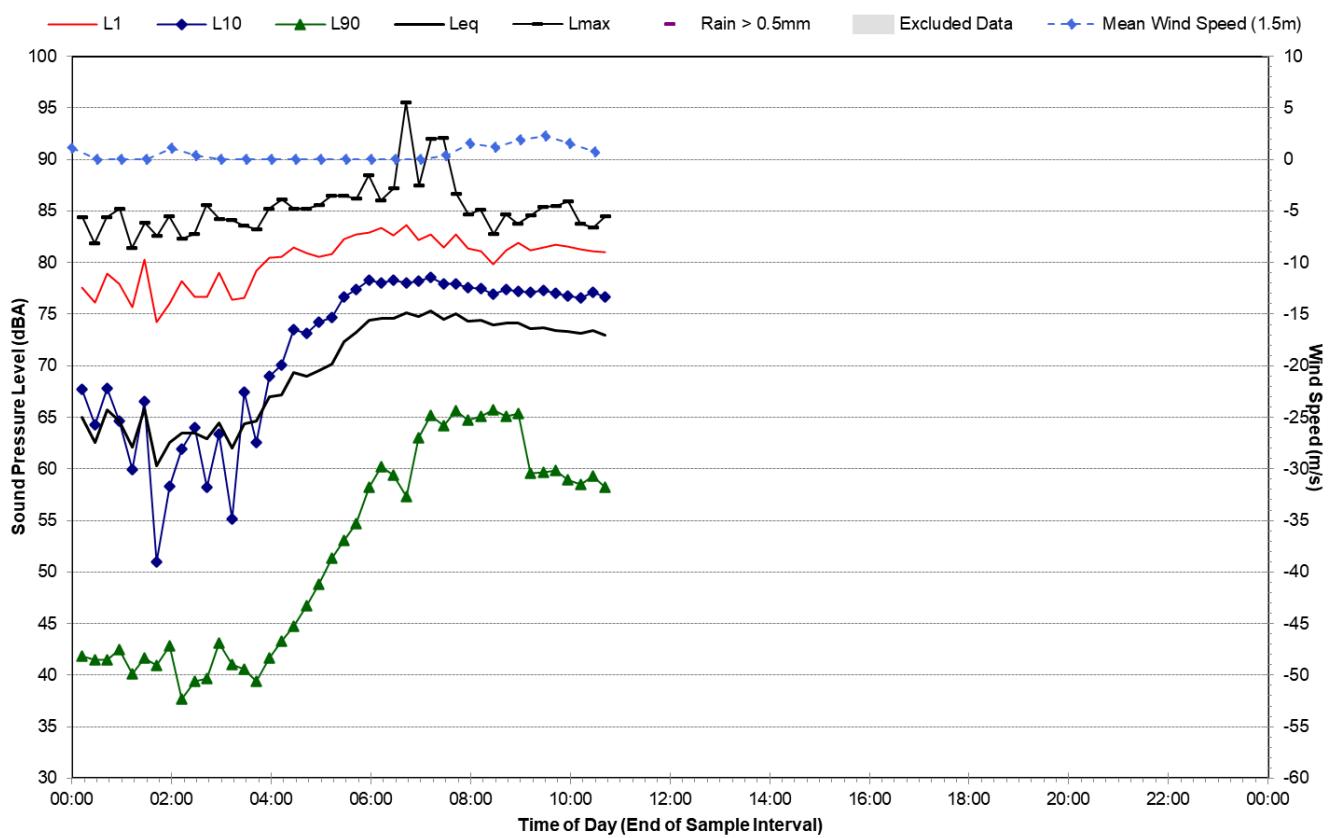
Statistical Ambient Noise Levels

503 Henry Lawson Drive, Milperra - Monday, 4 April 2022



Statistical Ambient Noise Levels

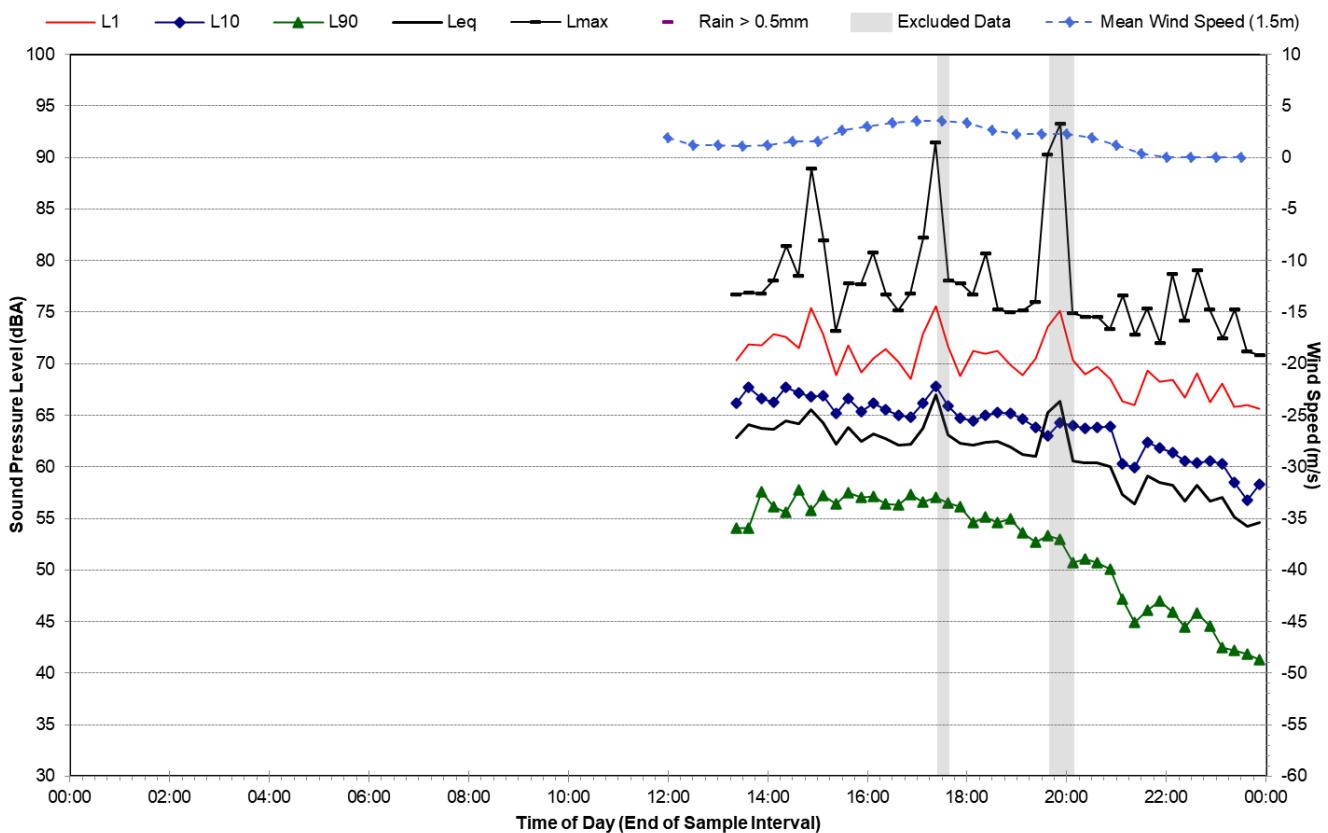
503 Henry Lawson Drive, Milperra - Tuesday, 5 April 2022



Noise Monitoring Location	L03	Map of Noise Monitoring Location		
Noise Monitoring Address	20 Ganmain Crescent, Milperra			
Logger Device Type: Svantek 957, Logger Serial No: 21884 Sound Level Meter Device Type: Brüel and Kjær 2270, Sound Level Meter Serial No: 3008204				
Ambient noise logger deployed at residential address 20 Ganmain Crescent, Milperra. Logger located at a height of around 1.5 m above ground with direct view of Ganmain Crescent and Henry Lawson Drive to the east.				
Attended noise measurements indicate the ambient noise environment at this location is dominated by road traffic noise from Henry Lawson Drive.				
Recorded Noise Levels (L _{Amax}) 22/03/2022: Light-vehicle traffic Henry Lawson Drive: 60-65 dBA Heavy-vehicle traffic Henry Lawson Drive: 65-78 dBA Aircraft: 54 dBA				
Ambient Noise Logging Results ICNG Defined Time Periods		Photo of Noise Monitoring Location		
Monitoring Period	Noise Level (dBA)			
	RBL	L _{Aeq}	L ₁₀	L ₁
Daytime	55	63	67	71
Evening	46	61	63	68
Night-time	35	58	59	68
Ambient Noise Logging Results RNP Defined Time Periods				
Monitoring Period	Noise Level (dBA)			
	L _{Aeq} (period)		L _{Aeq} (1hour)	
Daytime (7am-10pm)	63		64	
Night-time (10pm-7am)	58		62	
Attended Noise Measurement Results				
Date	Start Time	Measured Noise Level (dBA)		
		L _{A90}	L _{Aeq}	L _{Amax}
22/03/2022	13:01	53	63	78

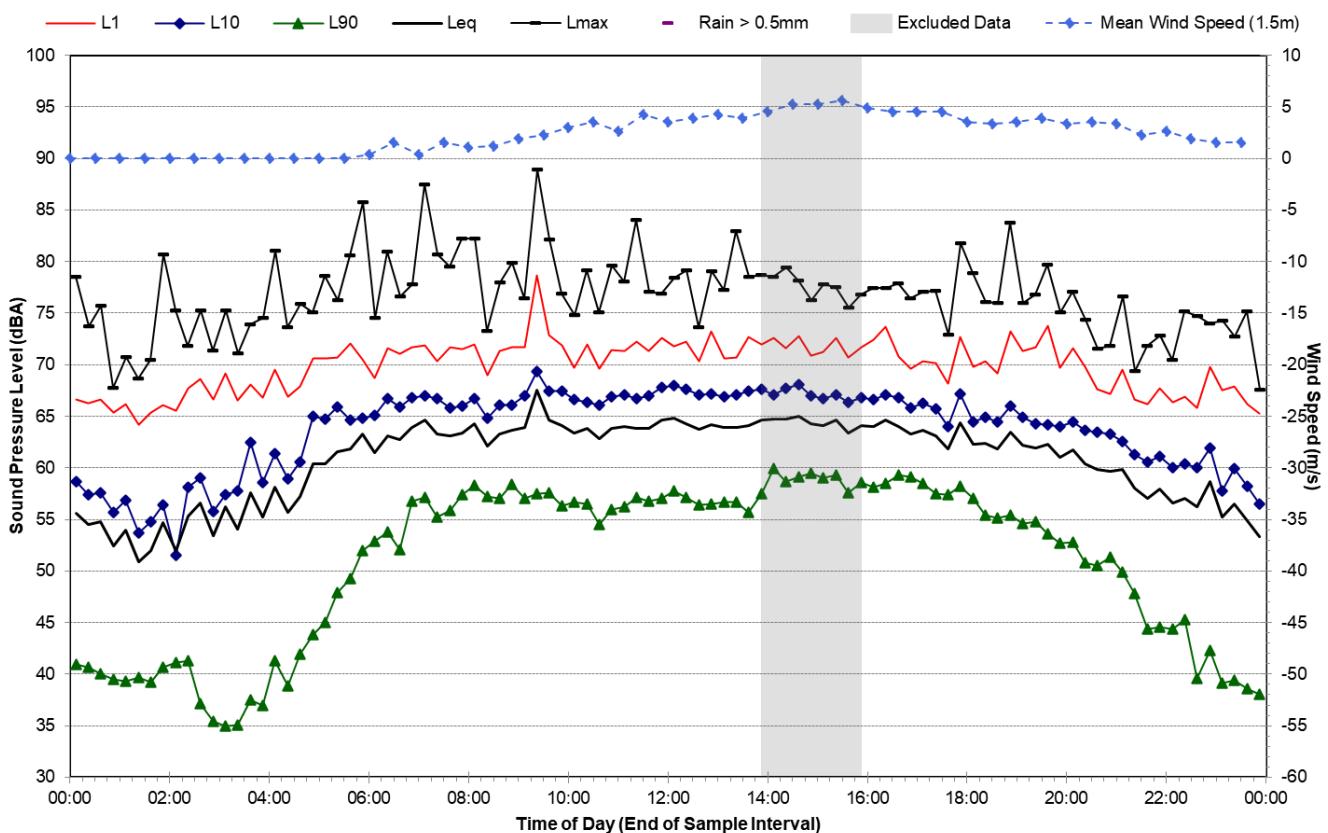
Statistical Ambient Noise Levels

20 Ganmain Crescent, Milperra - Tuesday, 22 March 2022



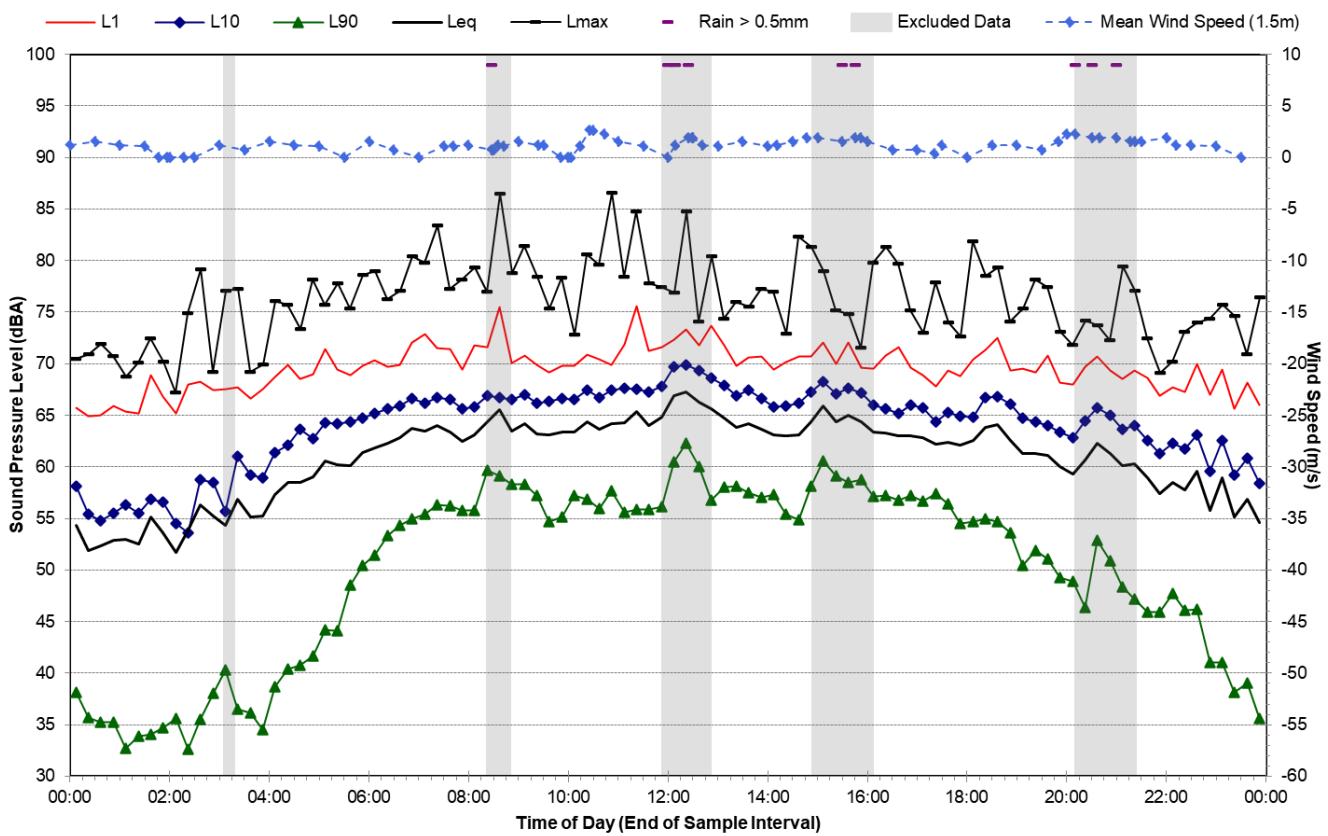
Statistical Ambient Noise Levels

20 Ganmain Crescent, Milperra - Wednesday, 23 March 2022



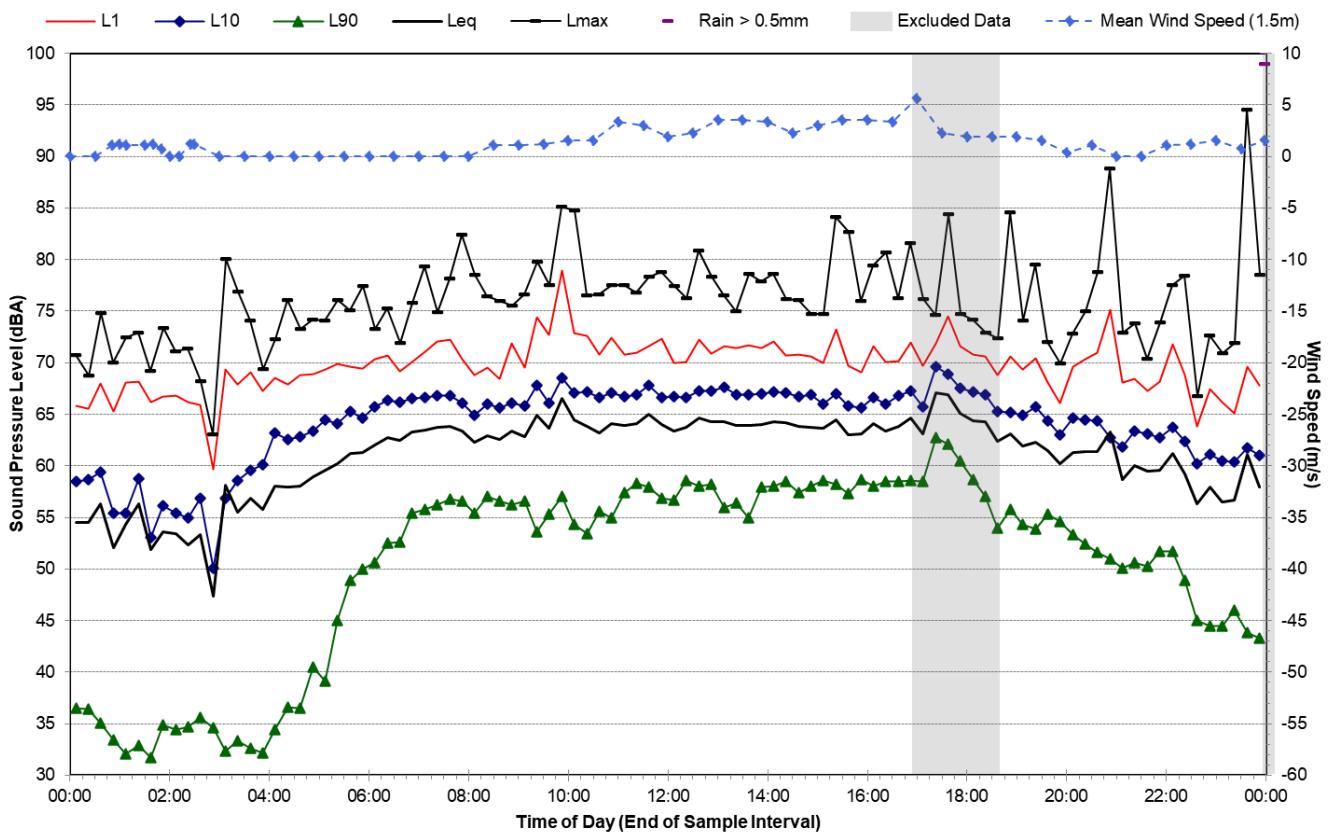
Statistical Ambient Noise Levels

20 Ganmain Crescent, Milperra - Thursday, 24 March 2022



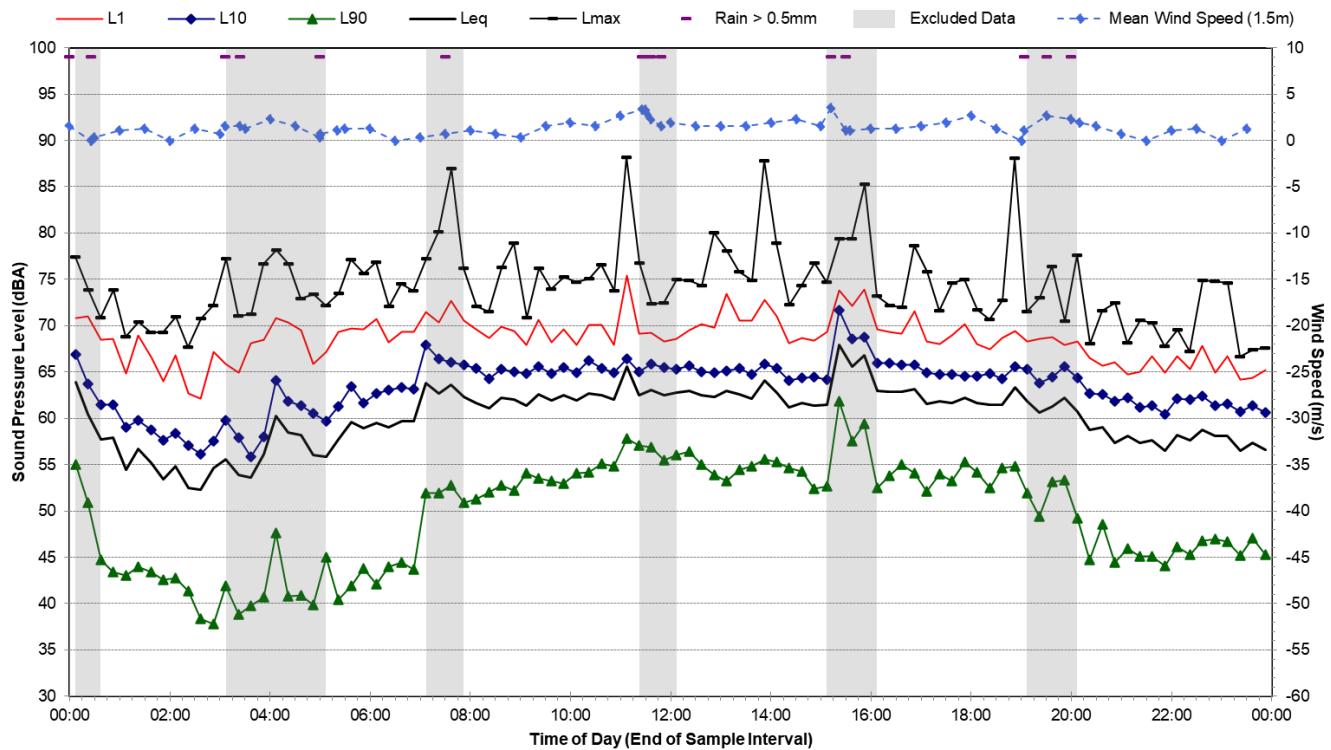
Statistical Ambient Noise Levels

20 Ganmain Crescent, Milperra - Friday, 25 March 2022



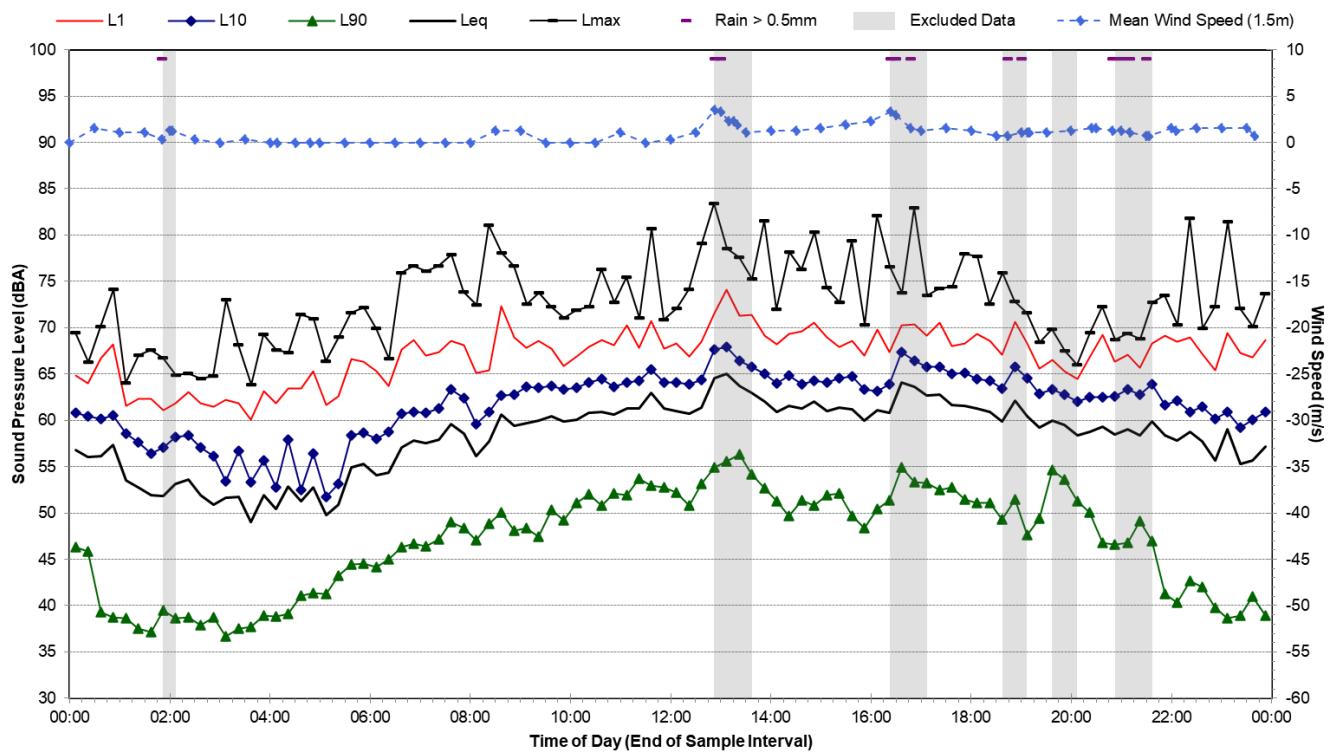
Statistical Ambient Noise Levels

20 Ganmain Crescent, Milperra - Saturday, 26 March 2022



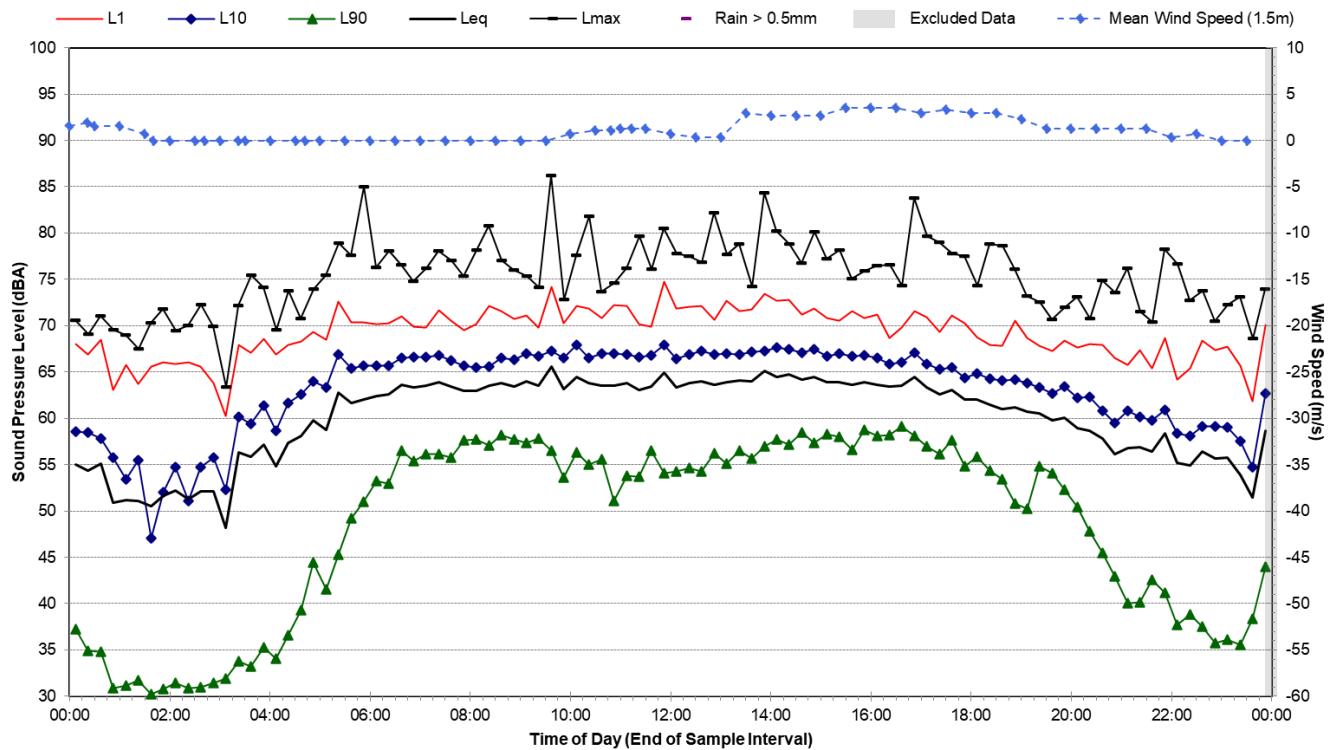
Statistical Ambient Noise Levels

20 Ganmain Crescent, Milperra - Sunday, 27 March 2022



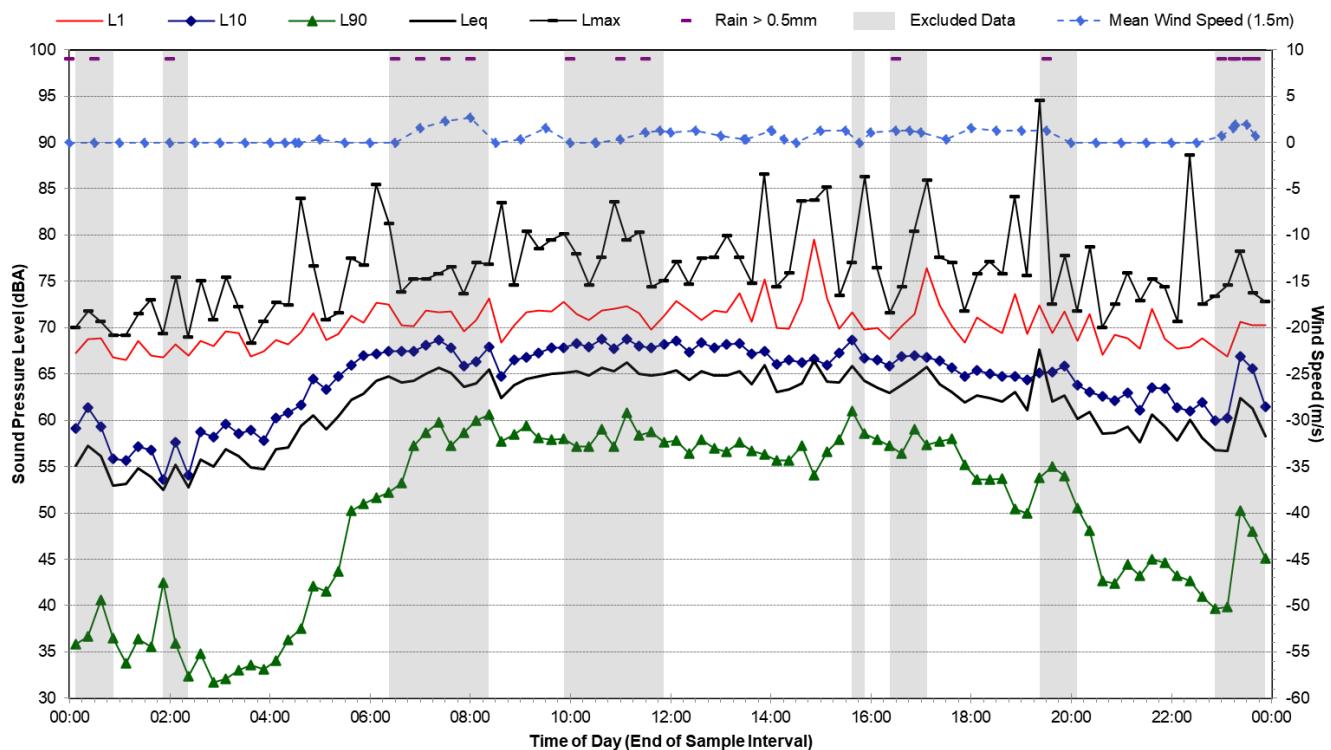
Statistical Ambient Noise Levels

20 Ganmain Crescent, Milperra - Monday, 28 March 2022



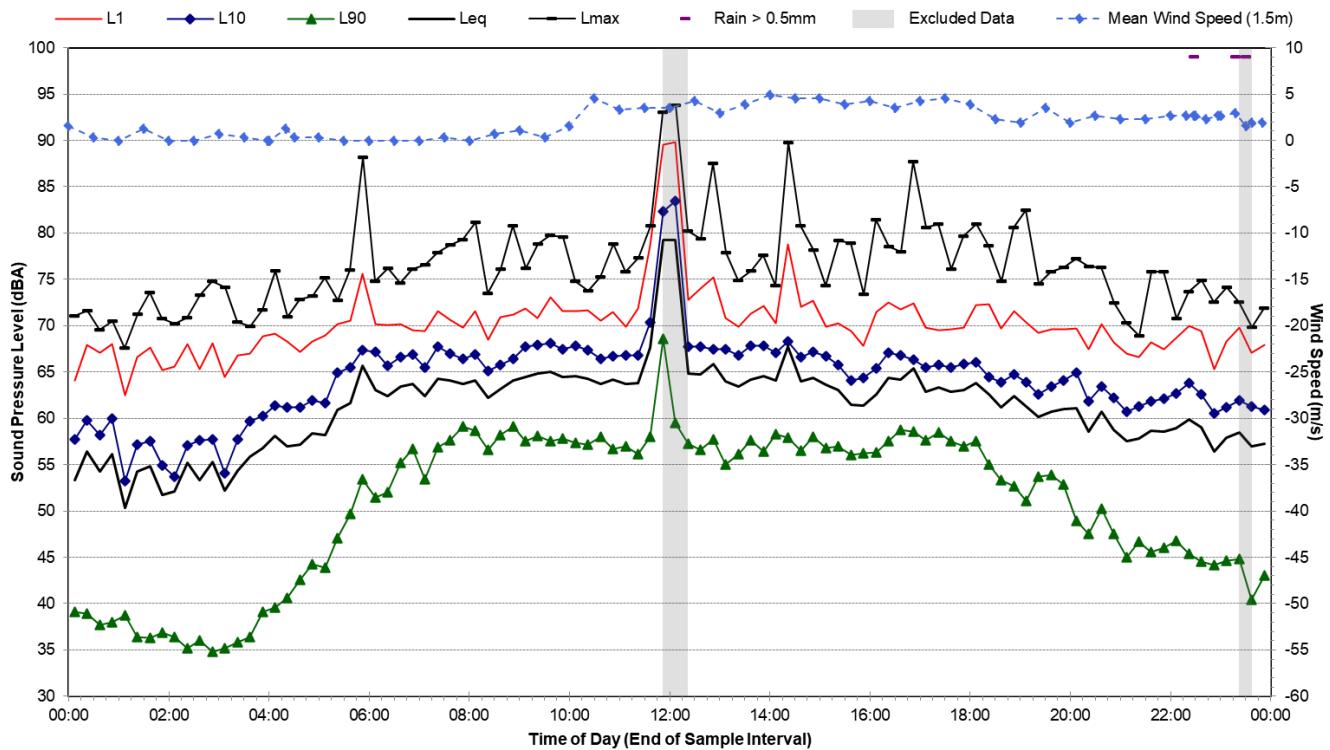
Statistical Ambient Noise Levels

20 Ganmain Crescent, Milperra - Tuesday, 29 March 2022



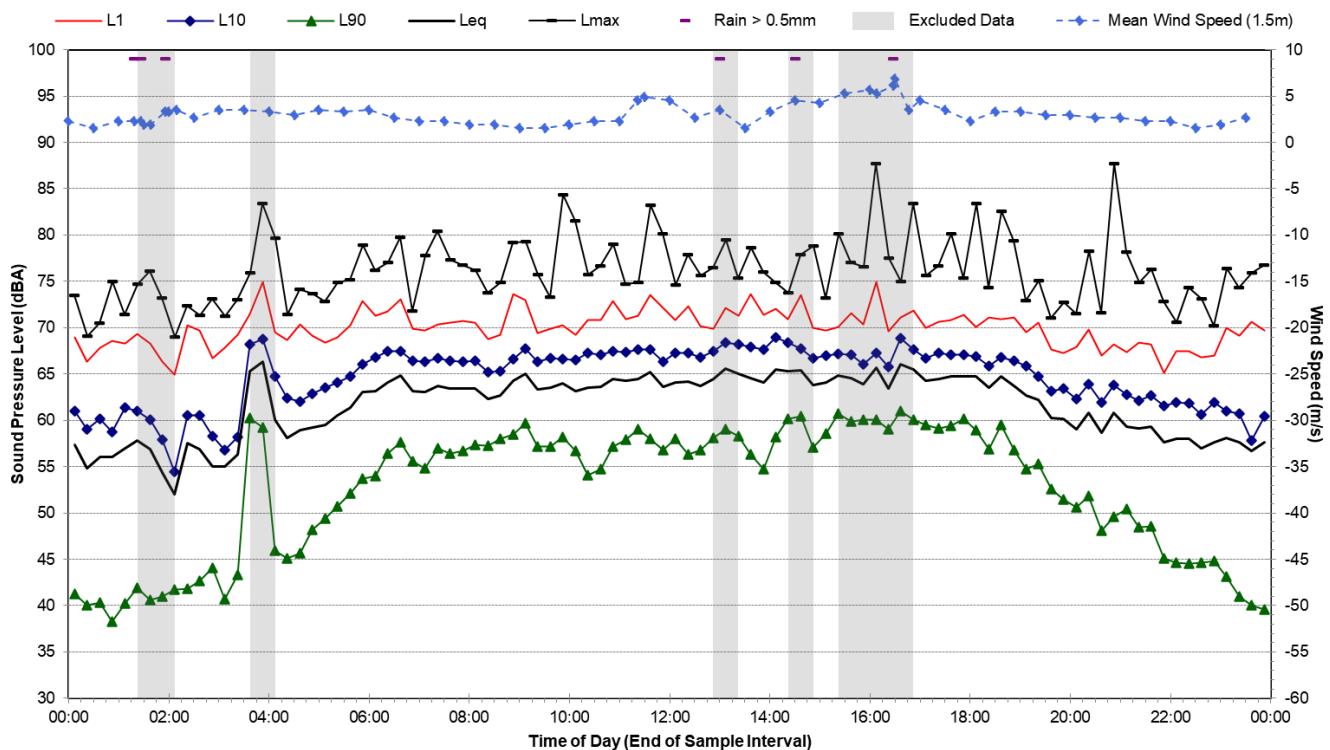
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20 Ganmain Crescent, Milperra - Wednesday, 30 March 2022



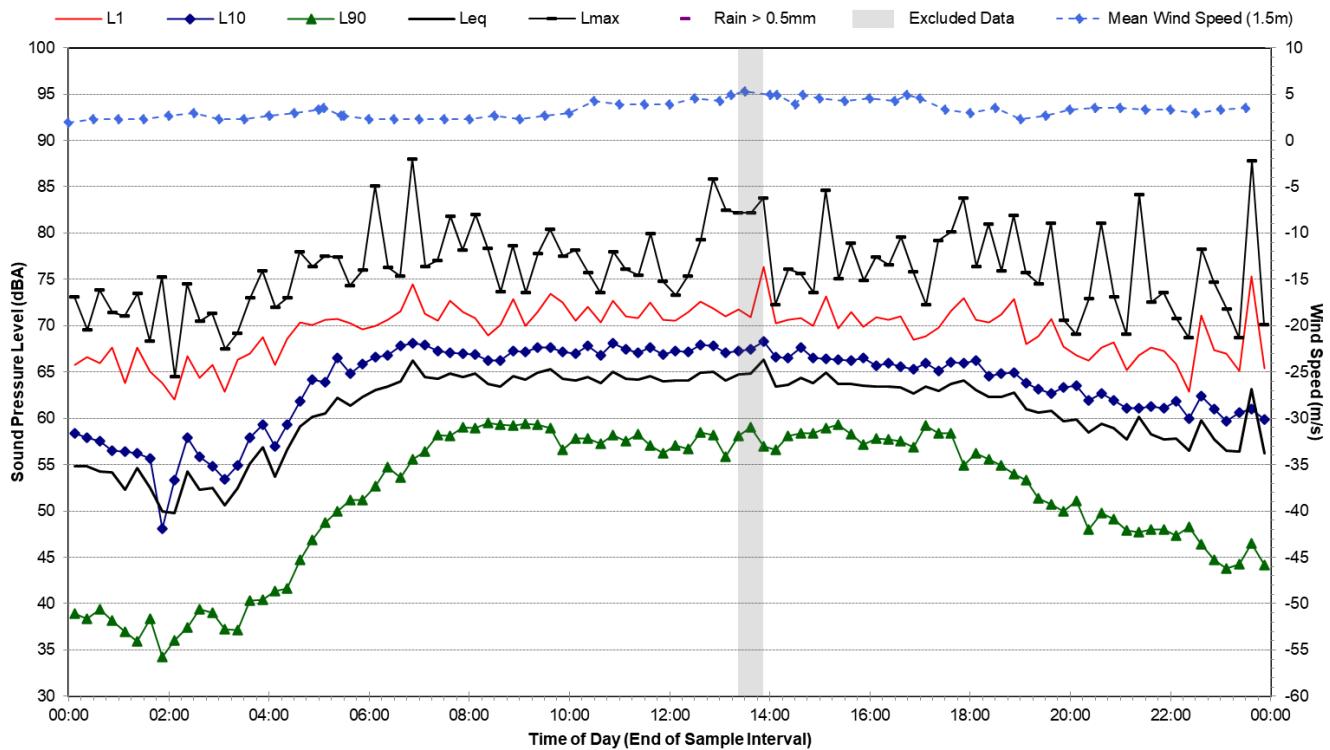
Statistical Ambient Noise Levels

20 Ganmain Crescent, Milperra - Thursday, 31 March 2022



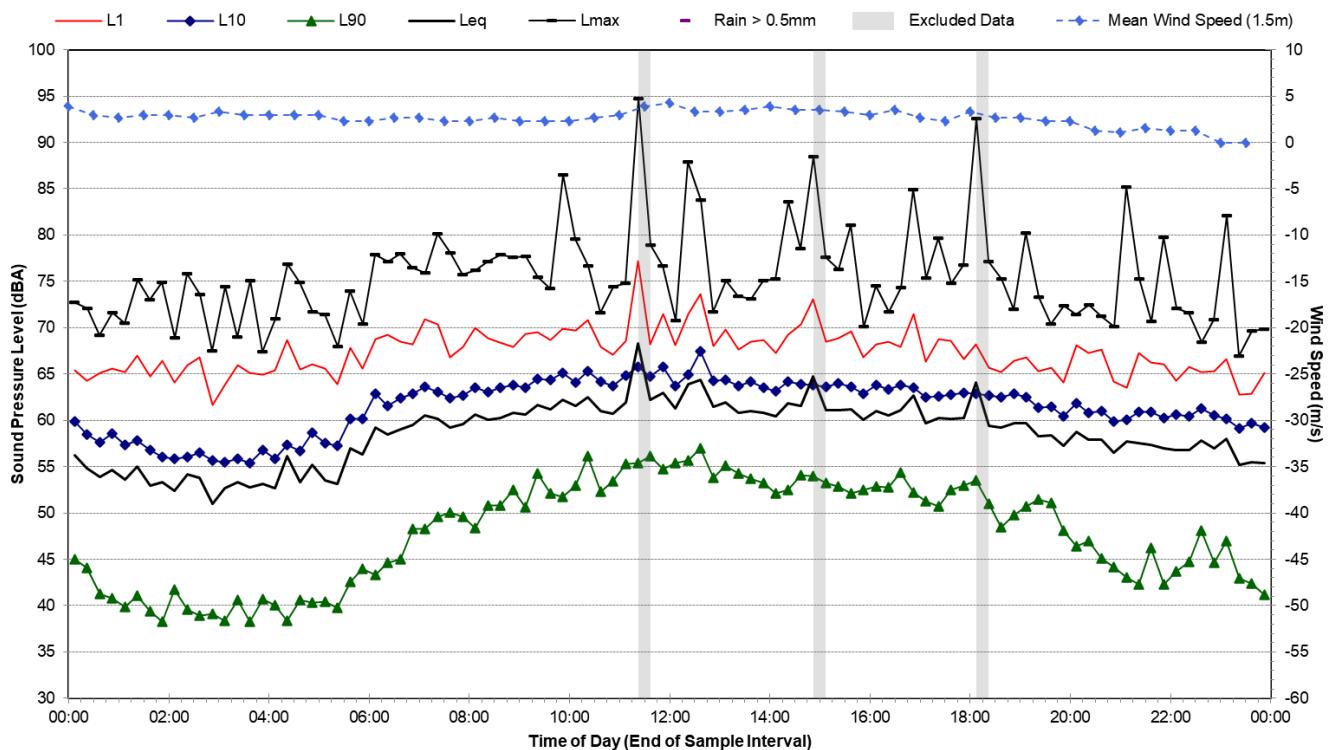
Statistical Ambient Noise Levels

20 Ganmain Crescent, Milperra - Friday, 1 April 2022



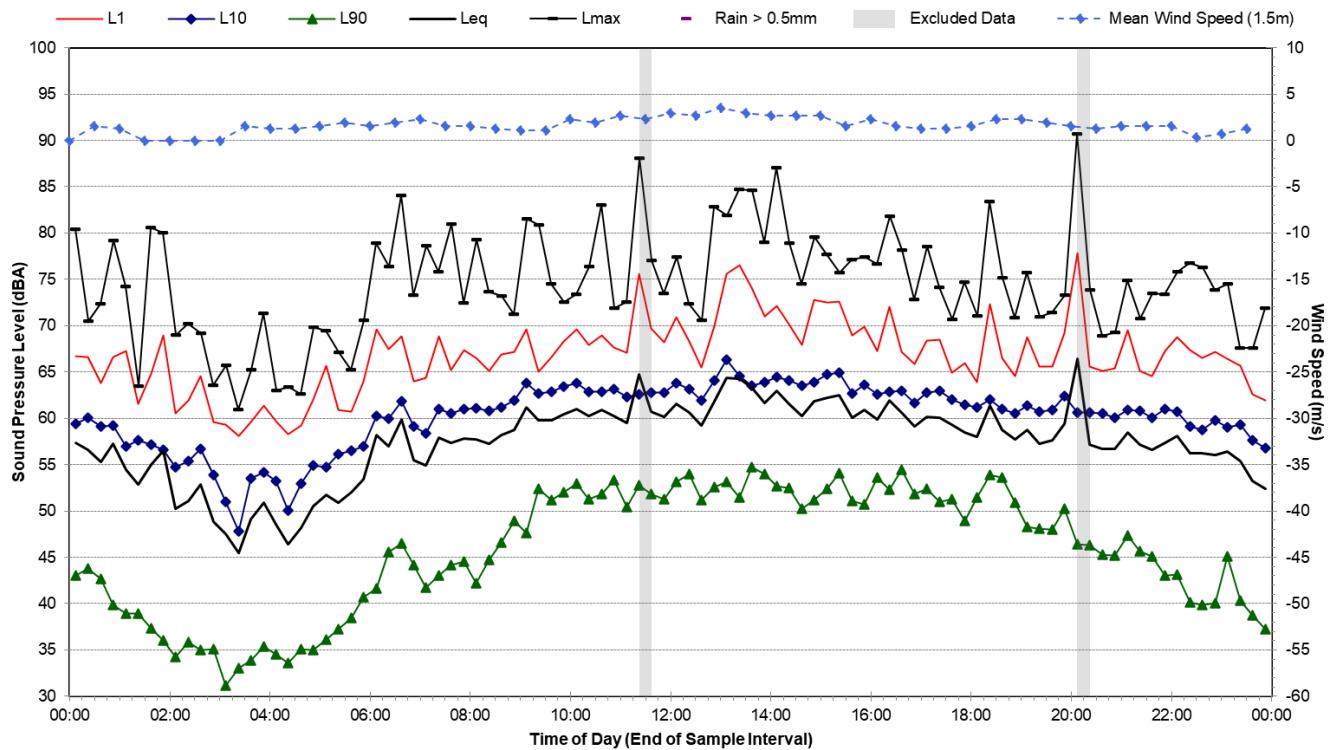
Statistical Ambient Noise Levels

20 Ganmain Crescent, Milperra - Saturday, 2 April 2022



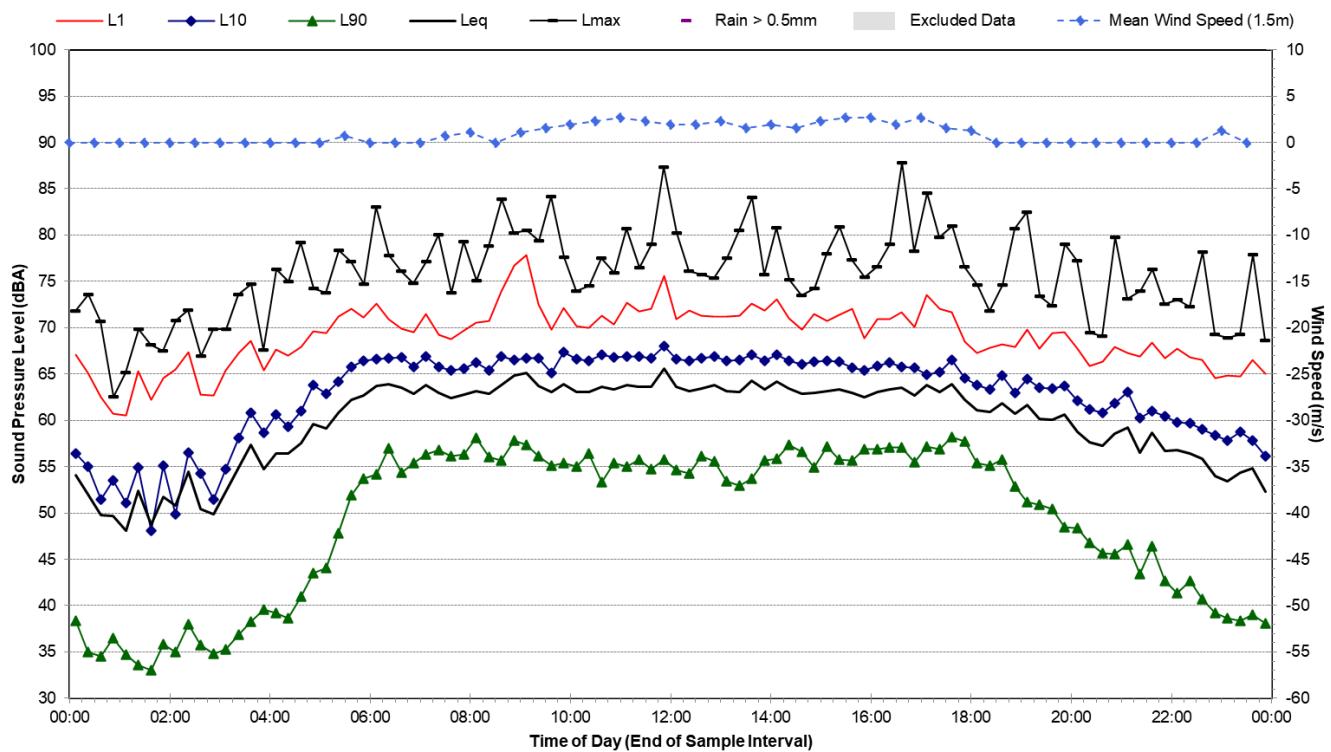
Statistical Ambient Noise Levels

20 Ganmain Crescent, Milperra - Sunday, 3 April 2022



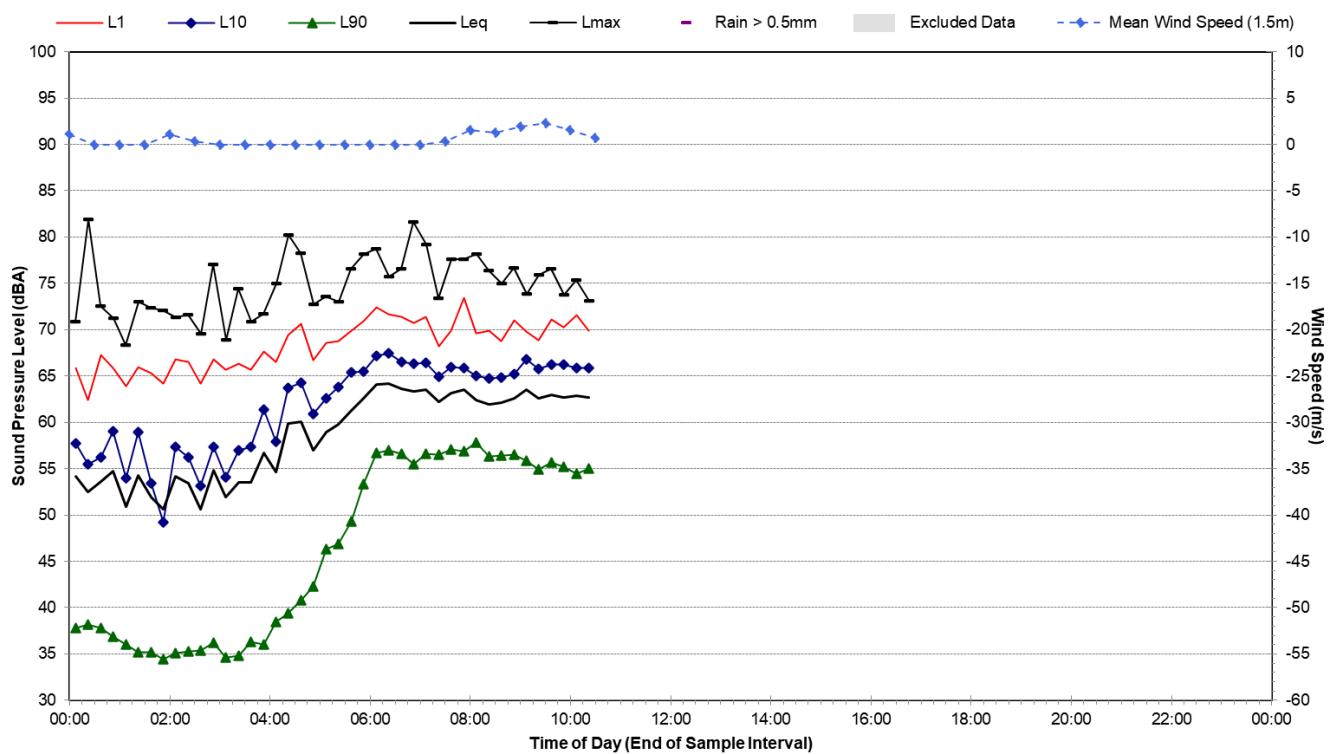
Statistical Ambient Noise Levels

20 Ganmain Crescent, Milperra - Monday, 4 April 2022



Statistical Ambient Noise Levels

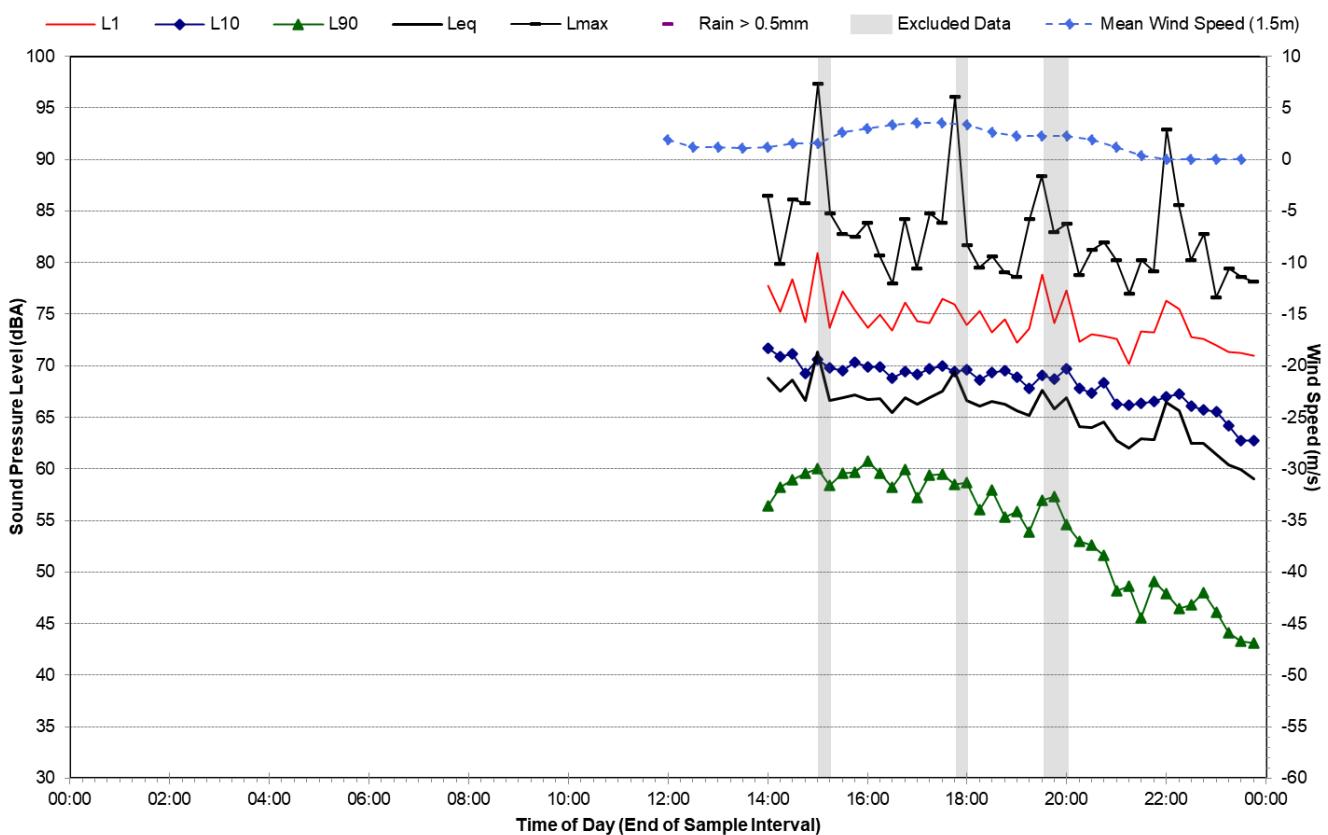
20 Ganmain Crescent, Milperra - Tuesday, 5 April 2022



Noise Monitoring Location	L04	Map of Noise Monitoring Location		
Noise Monitoring Address	23 Hermies Avenue, Milperra			
Logger Device Type: Svantek 977, Logger Serial No: 69757 Sound Level Meter Device Type: Brüel and Kjær 2270, Sound Level Meter Serial No: 3008204				
Ambient noise logger deployed at residential address 23 Hermies Avenue, Milperra. Logger located at a height of around 1.5 m above ground with direct view of Hermies Avenue to the north and Henry Lawson Drive to the west.				
Attended noise measurements indicate the ambient noise environment at this location is dominated by road traffic noise from Henry Lawson Drive.				
Recorded Noise Levels (L _{Amax}) 22/03/2022: Light-vehicle traffic Henry Lawson Drive: 65-70 dBA Heavy-vehicle traffic Henry Lawson Drive: 73-86 dBA Aircraft: 57 dBA				
Ambient Noise Logging Results ICNG Defined Time Periods				
Monitoring Period	Noise Level (dBA)			
	RBL	L _{Aeq}	L ₁₀	L ₁
Daytime	57	68	71	76
Evening	48	65	68	74
Night-time	39	63	64	73
Ambient Noise Logging Results RNP Defined Time Periods				
Monitoring Period	Noise Level (dBA)			
	L _{Aeq} (period)		L _{Aeq} (1hour)	
Daytime (7am-10pm)	67		68	
Night-time (10pm-7am)	63		66	
Attended Noise Measurement Results				
Date	Start Time	Measured Noise Level (dBA)		
		L _{A90}	L _{Aeq}	L _{Amax}
22/03/2022	13:46	56	58	86

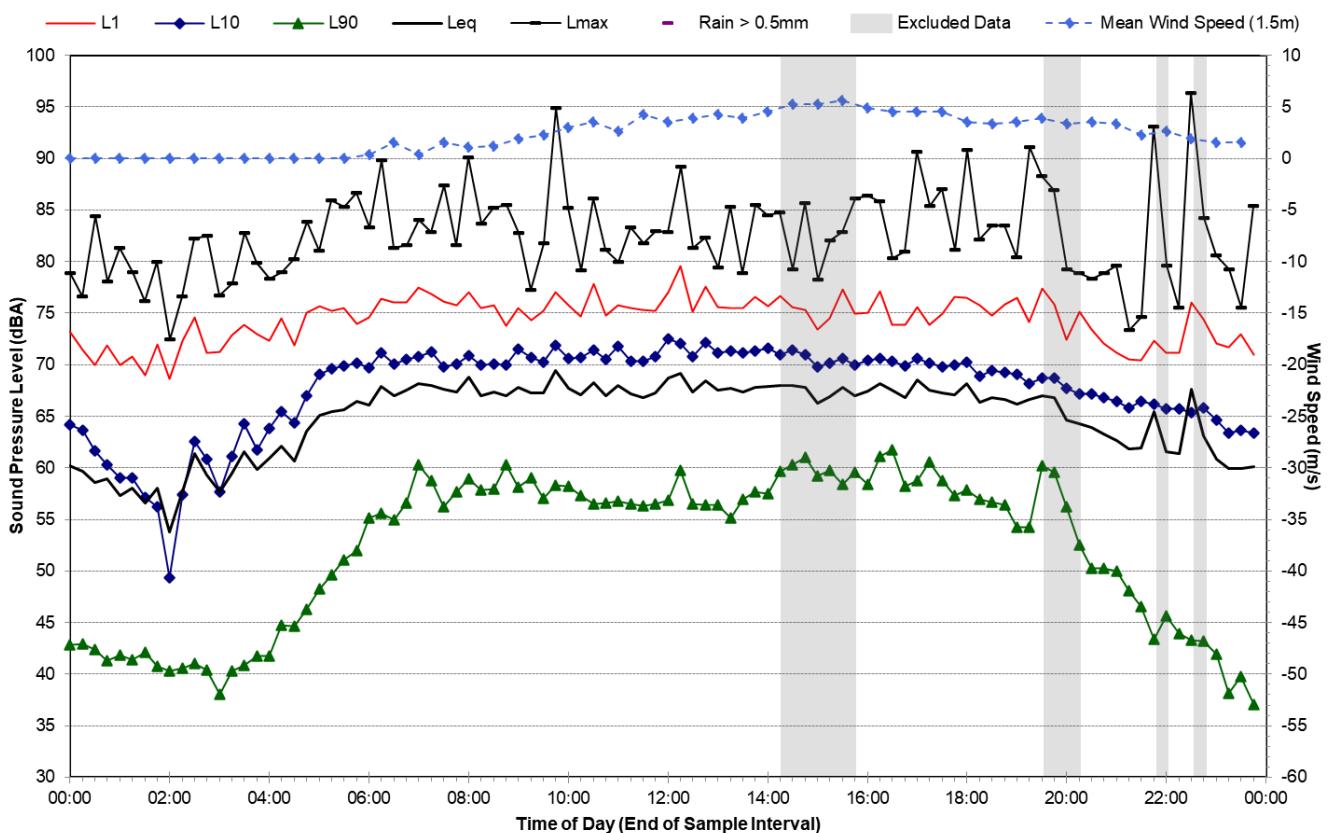
Statistical Ambient Noise Levels

23 Hermies Avenue, Milperra - Tuesday, 22 March 2022



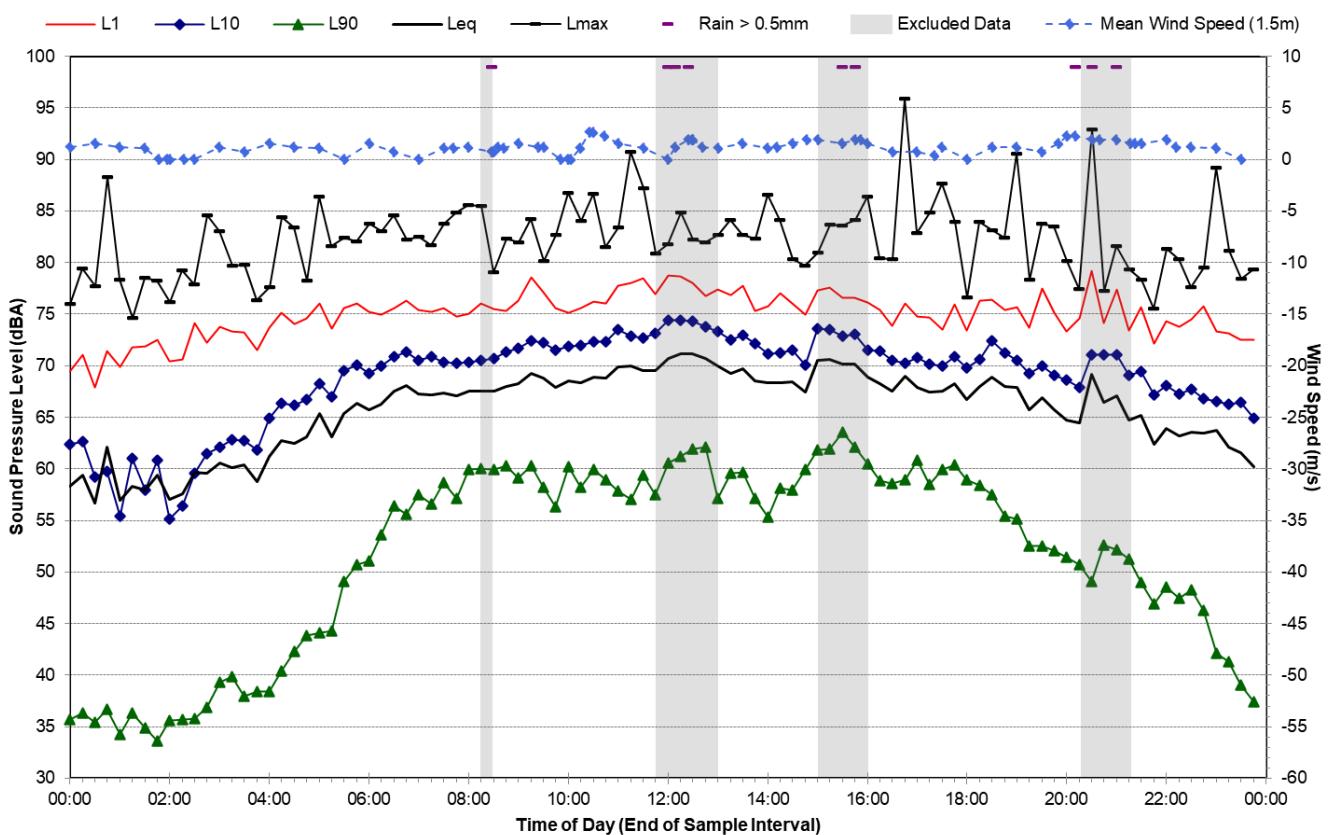
Statistical Ambient Noise Levels

23 Hermies Avenue, Milperra - Wednesday, 23 March 2022



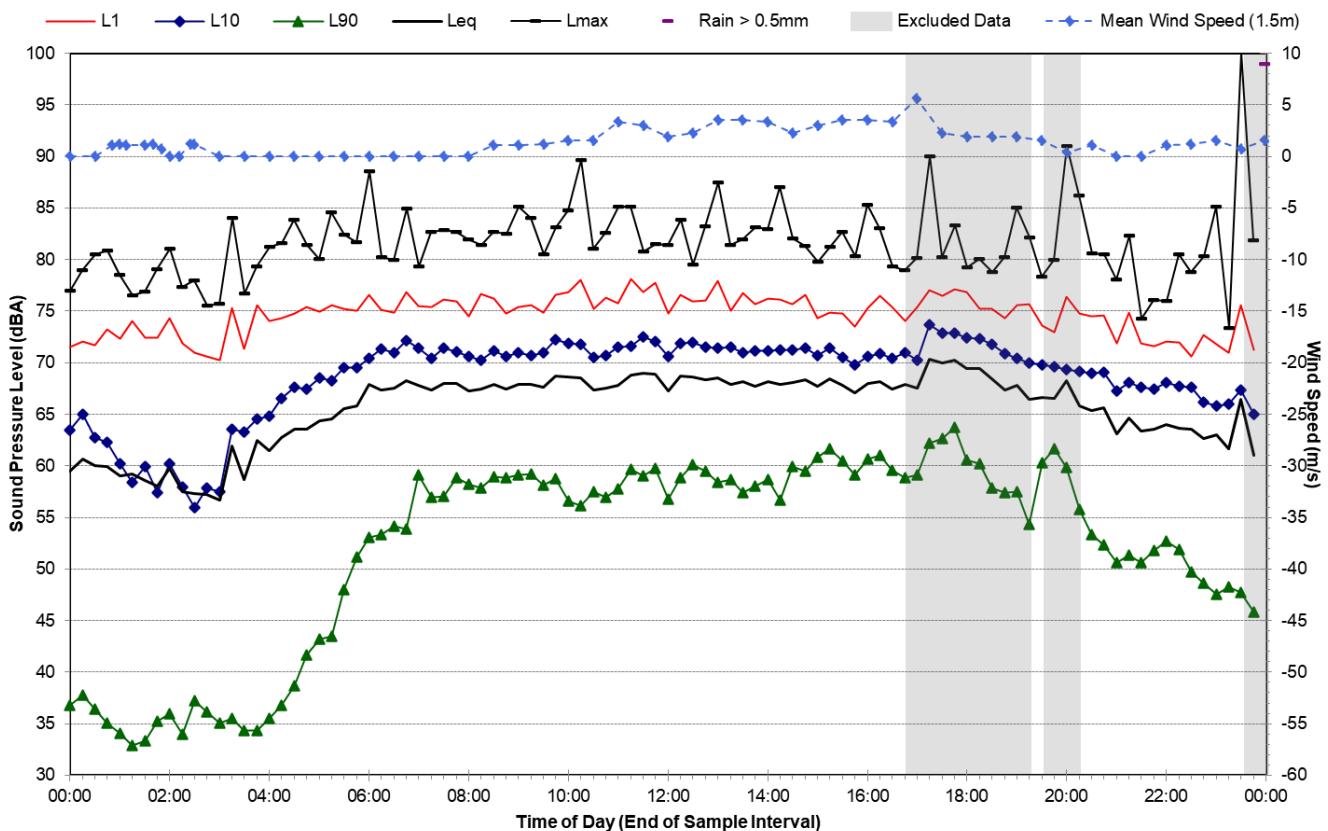
Statistical Ambient Noise Levels

23 Hermies Avenue, Milperra - Thursday, 24 March 2022



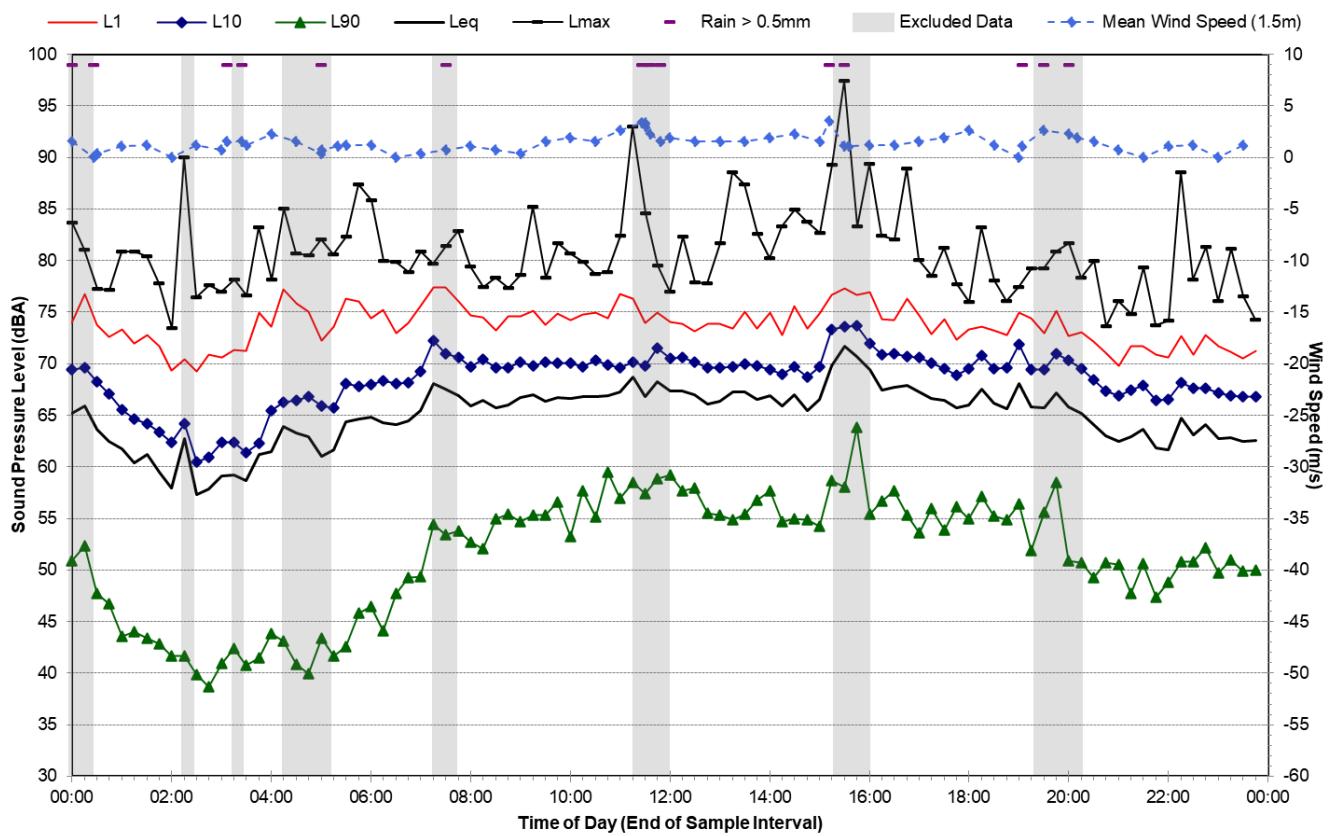
Statistical Ambient Noise Levels

23 Hermies Avenue, Milperra - Friday, 25 March 2022



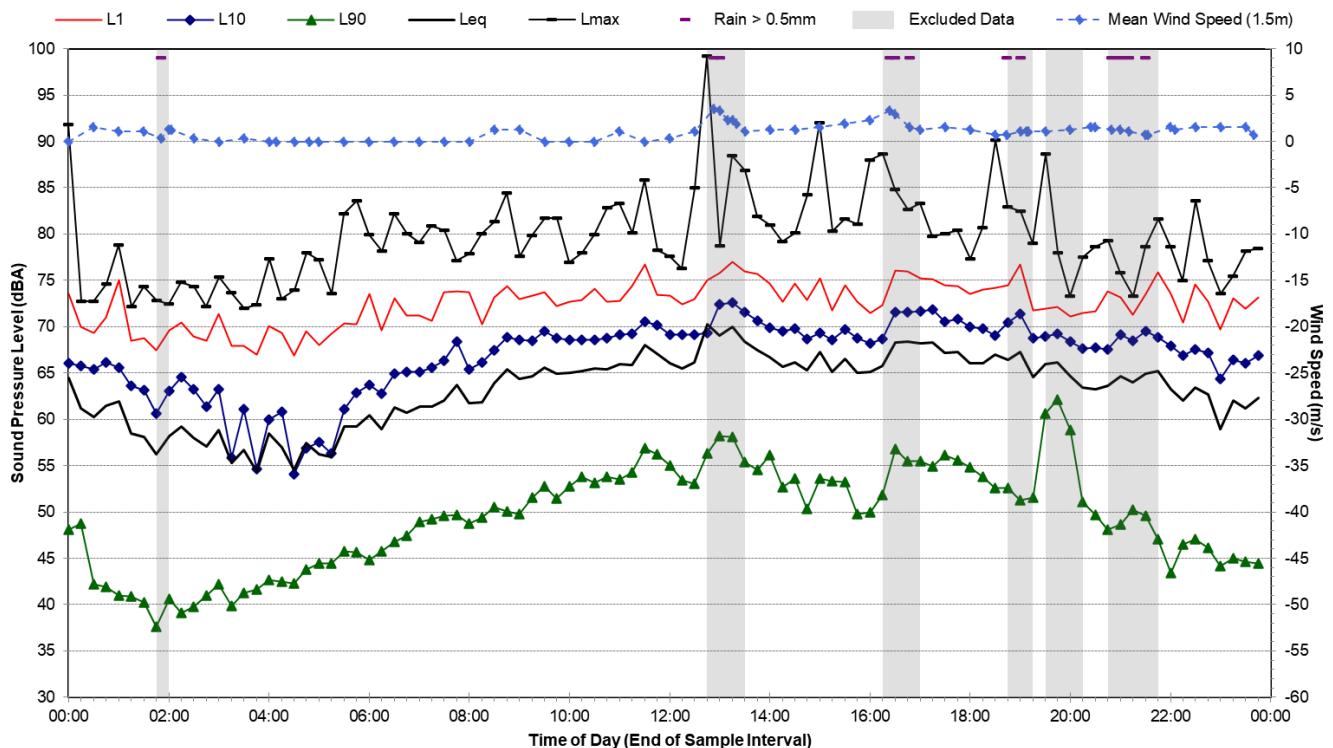
Statistical Ambient Noise Levels

23 Hermies Avenue, Milperra - Saturday, 26 March 2022



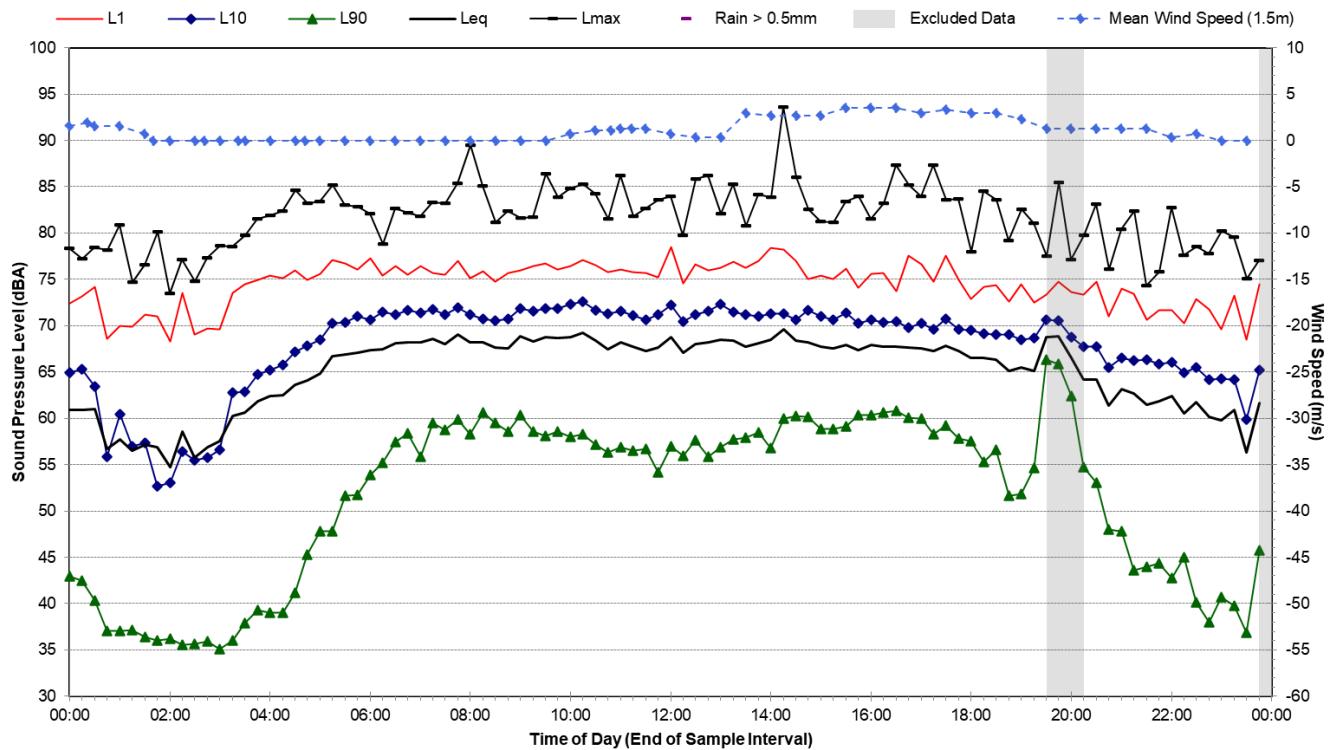
Statistical Ambient Noise Levels

23 Hermies Avenue, Milperra - Sunday, 27 March 2022



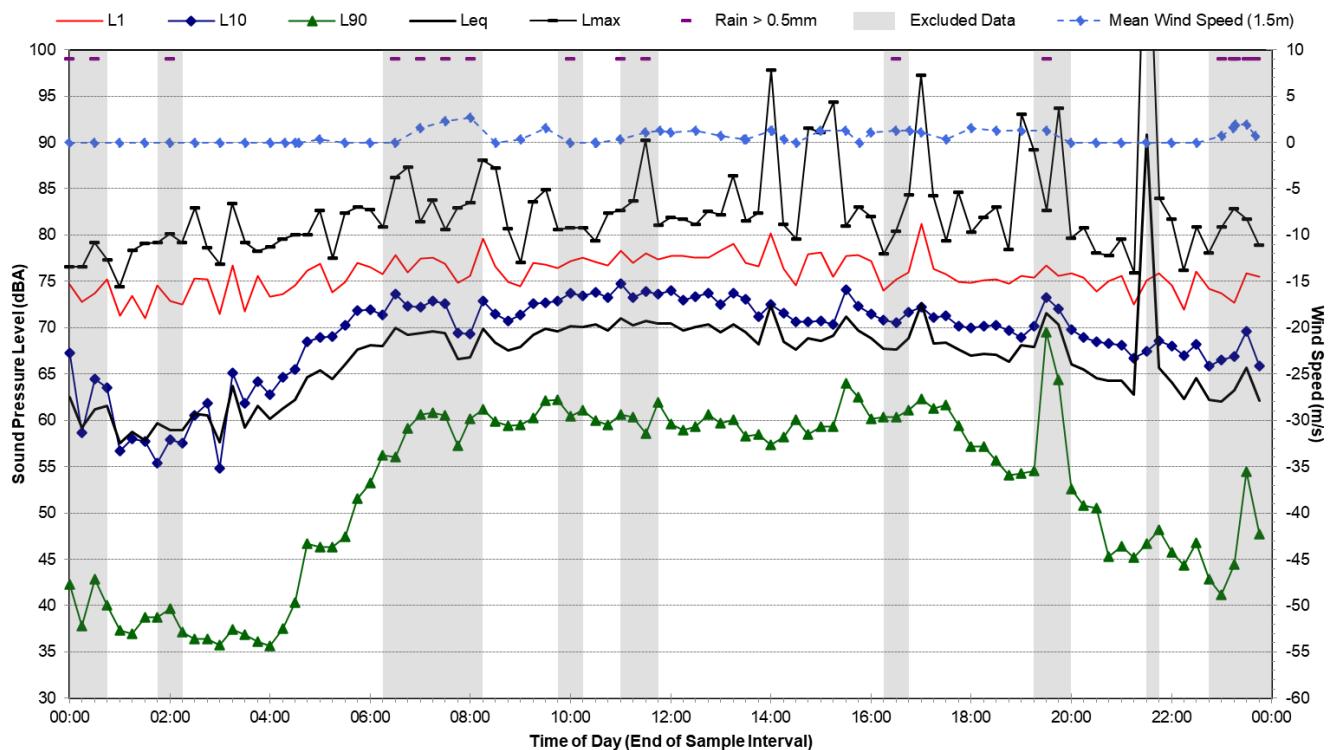
Statistical Ambient Noise Levels

23 Hermies Avenue, Milperra - Monday, 28 March 2022



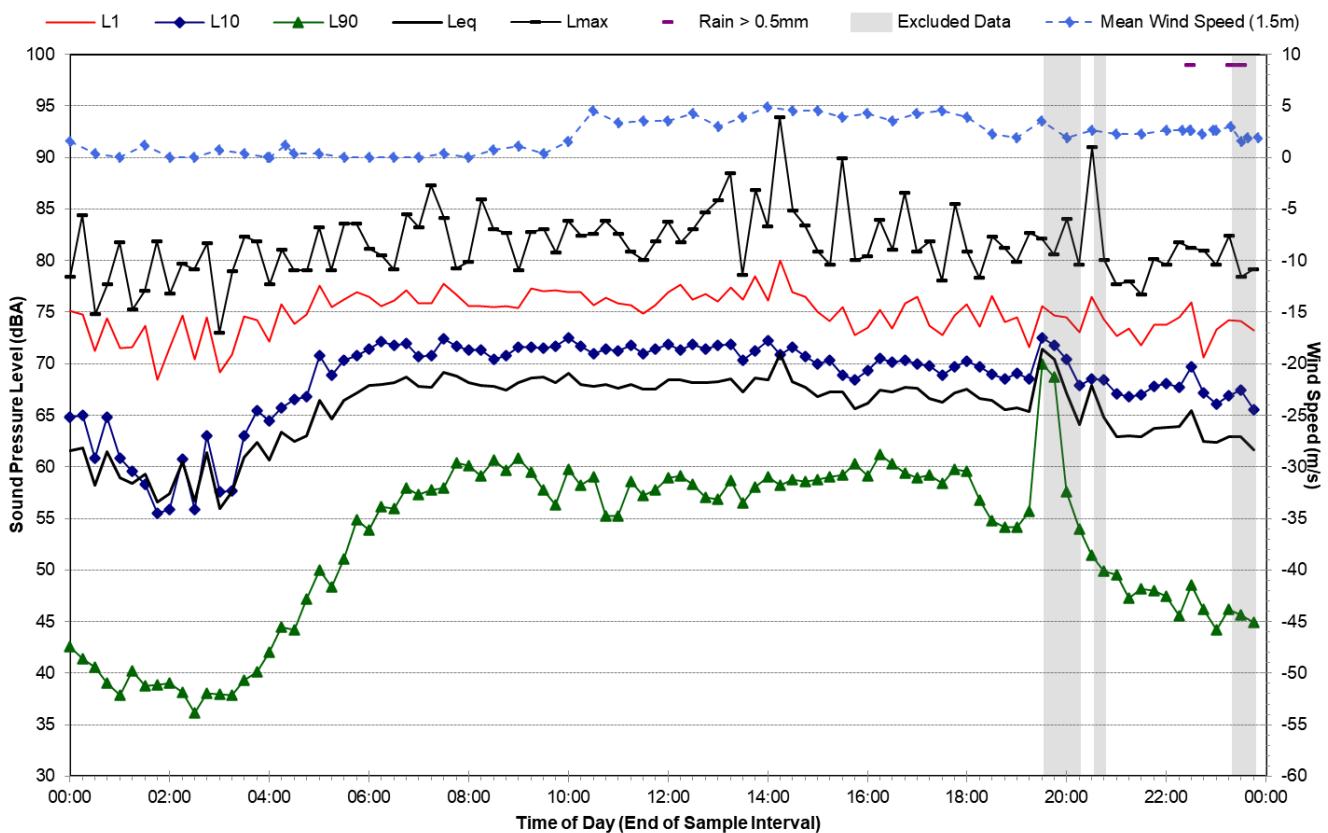
Statistical Ambient Noise Levels

23 Hermies Avenue, Milperra - Tuesday, 29 March 2022



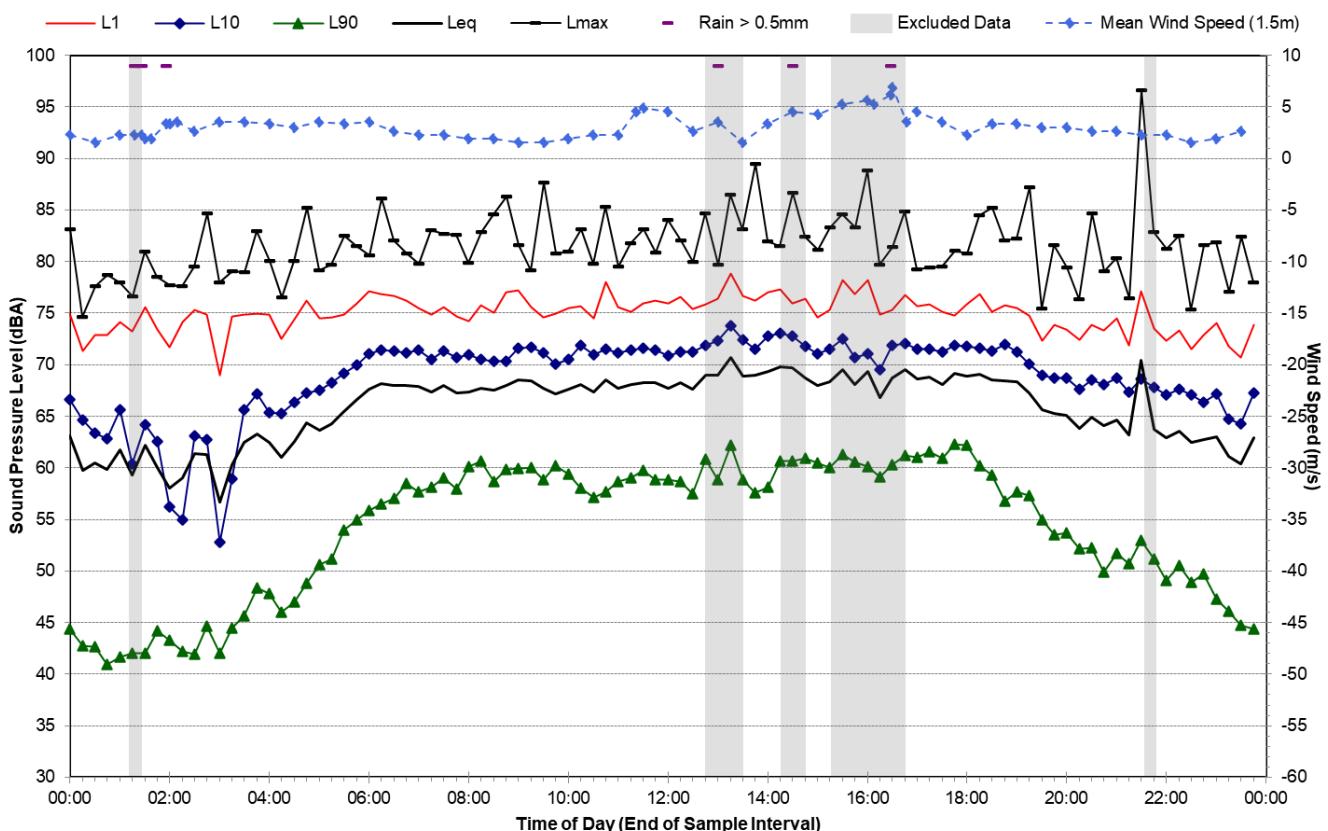
Statistical Ambient Noise Levels

23 Hermies Avenue, Milperra - Wednesday, 30 March 2022



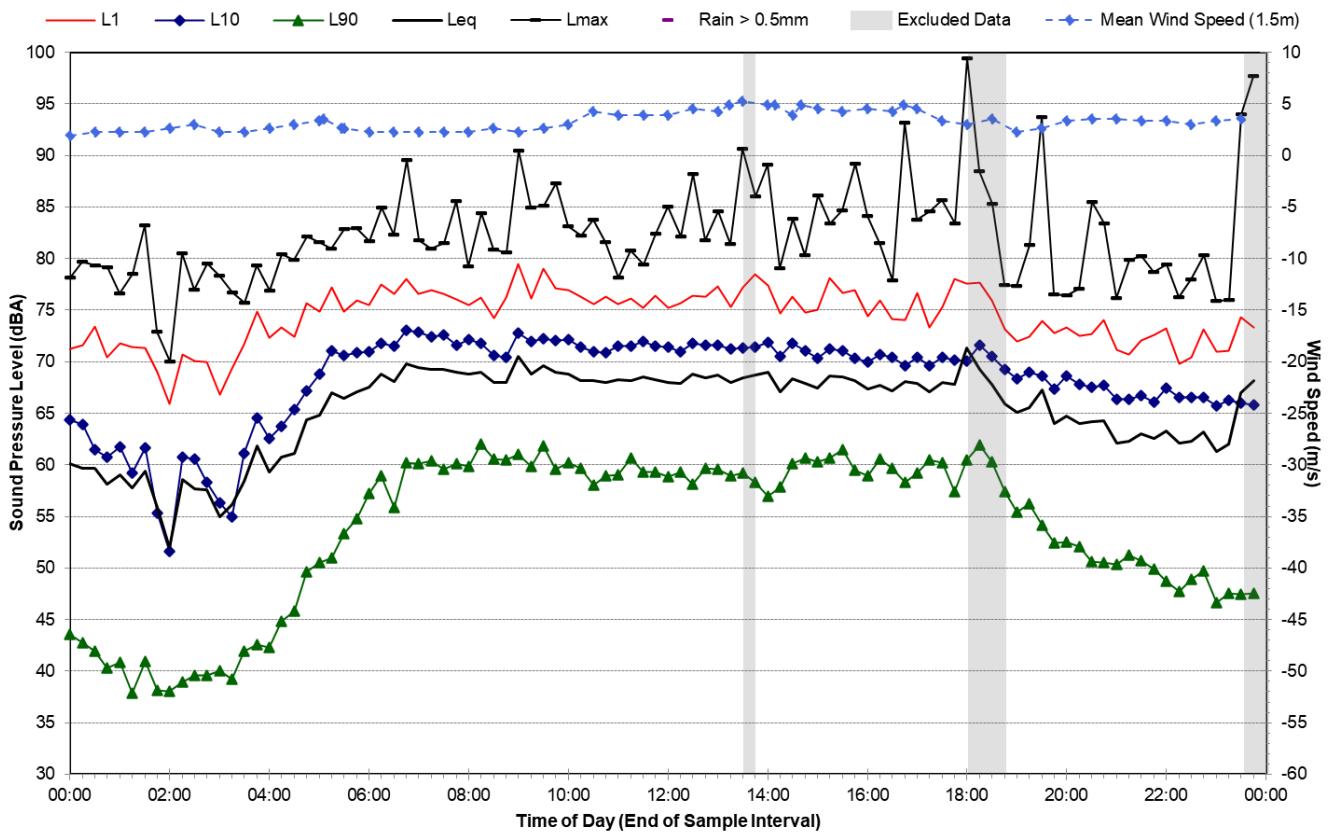
Statistical Ambient Noise Levels

23 Hermies Avenue, Milperra - Thursday, 31 March 2022



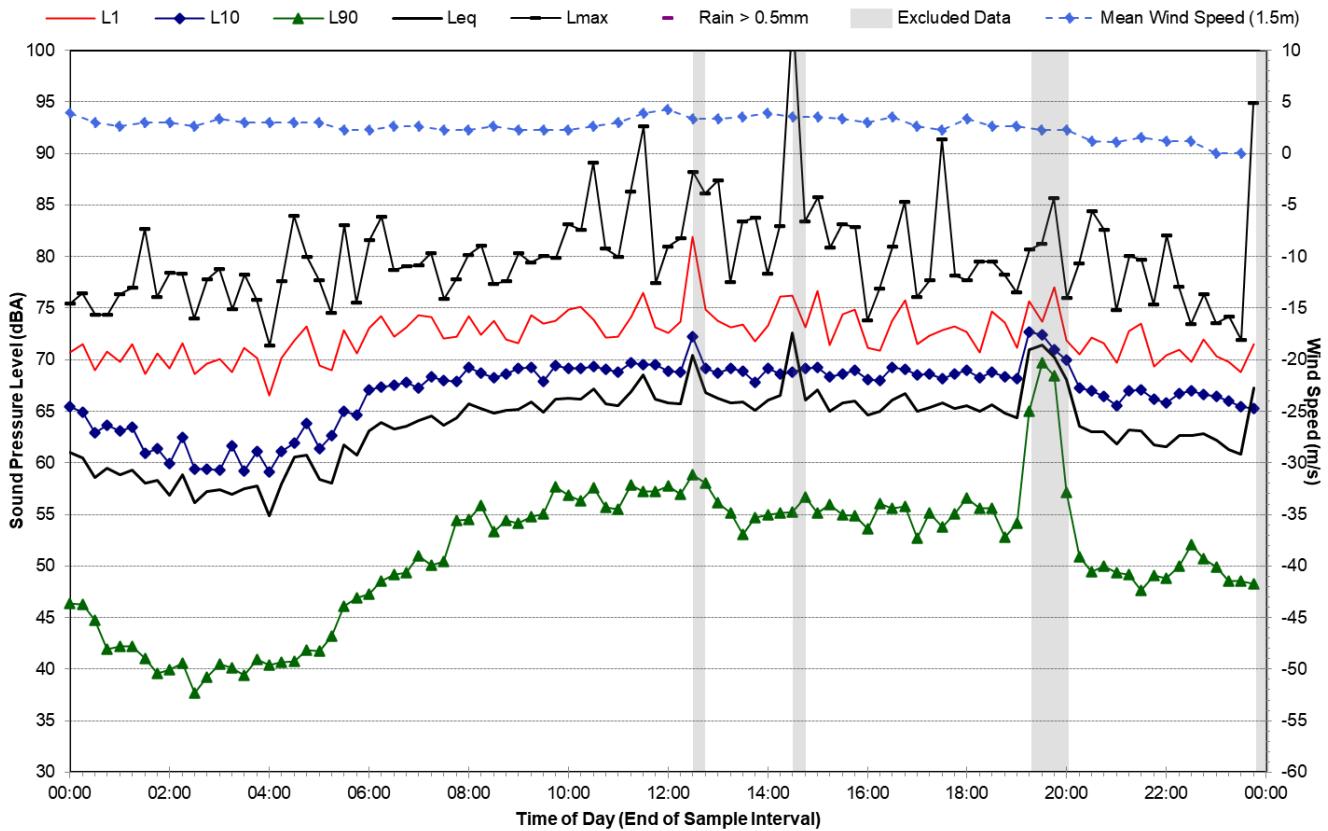
Statistical Ambient Noise Levels

23 Hermies Avenue, Milperra - Friday, 1 April 2022



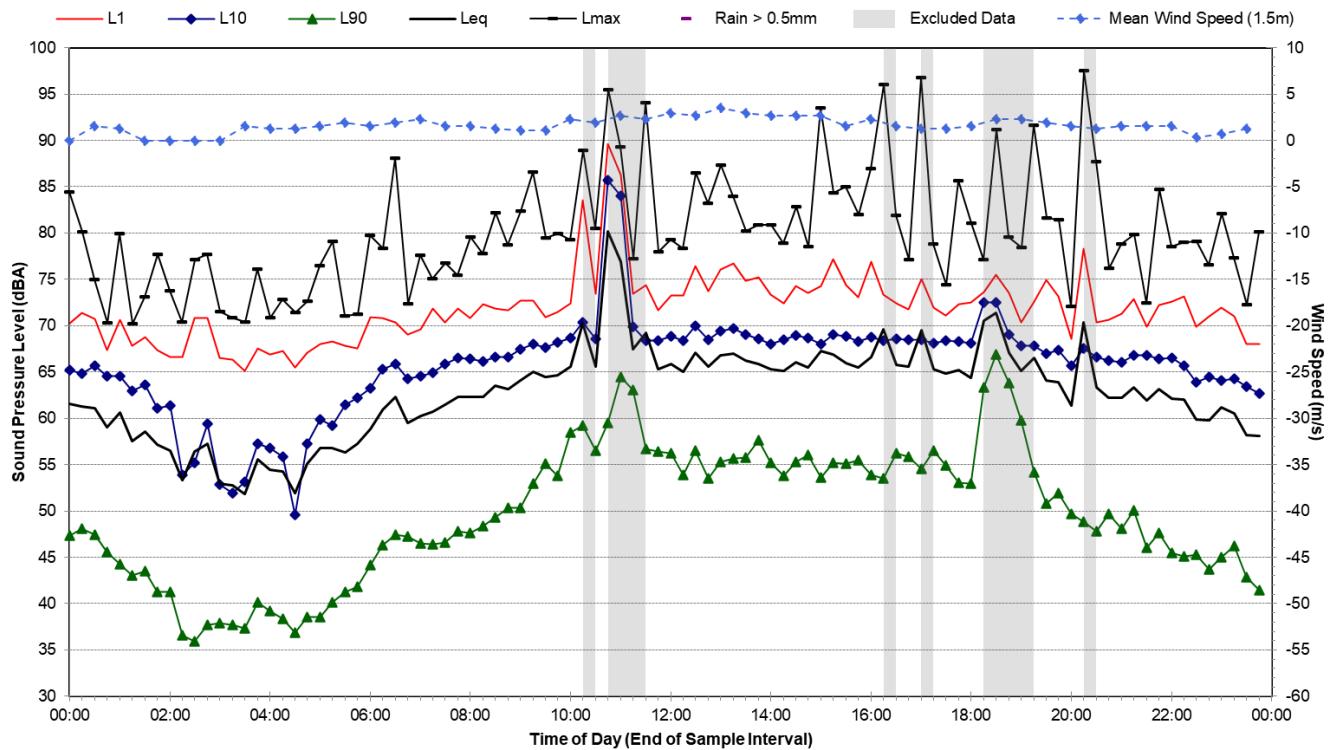
Statistical Ambient Noise Levels

23 Hermies Avenue, Milperra - Saturday, 2 April 2022



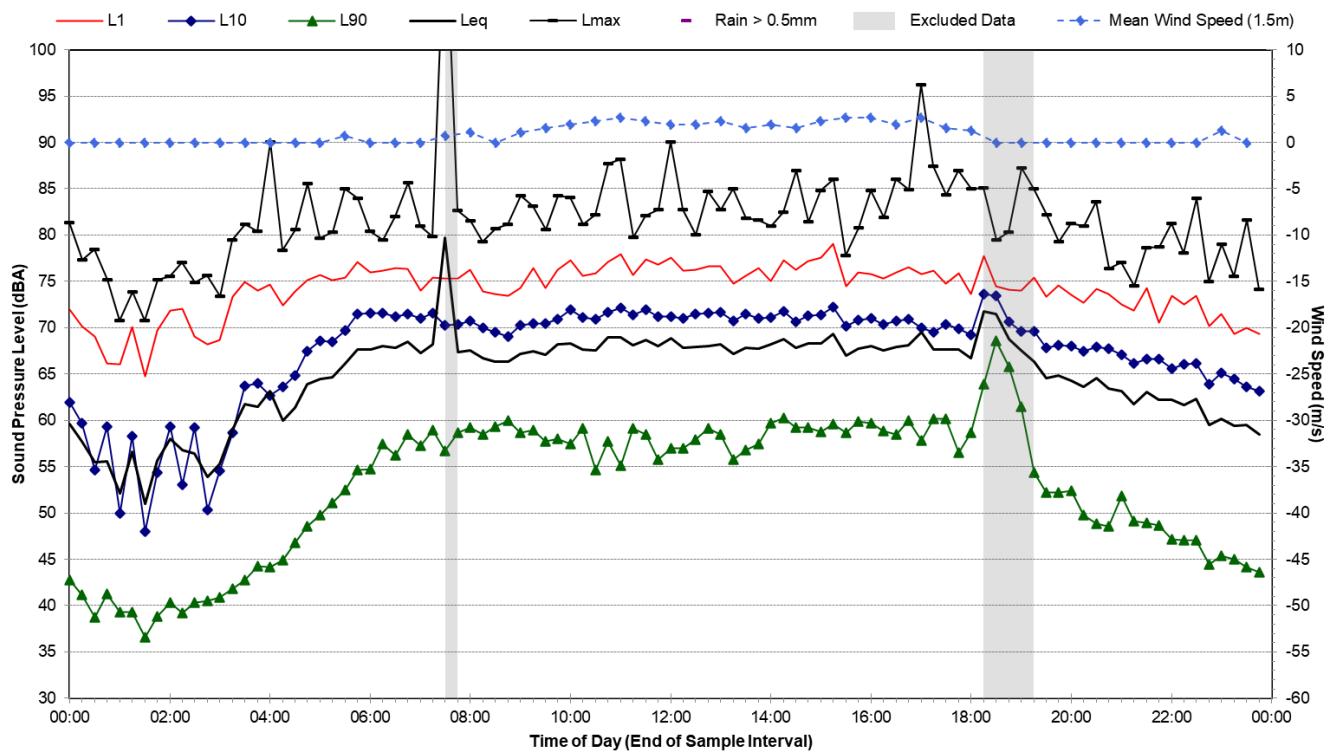
Statistical Ambient Noise Levels

23 Hermies Avenue, Milperra - Sunday, 3 April 2022



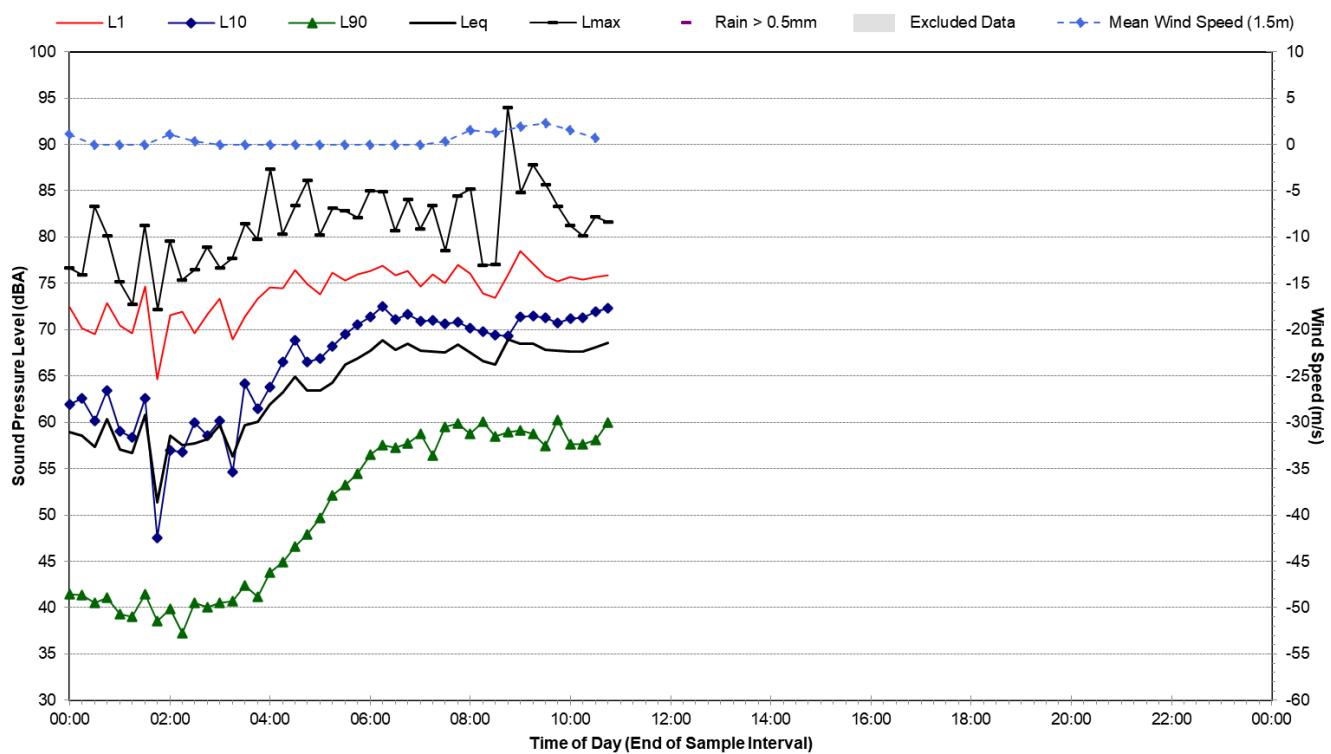
Statistical Ambient Noise Levels

23 Hermies Avenue, Milperra - Monday, 4 April 2022



Statistical Ambient Noise Levels

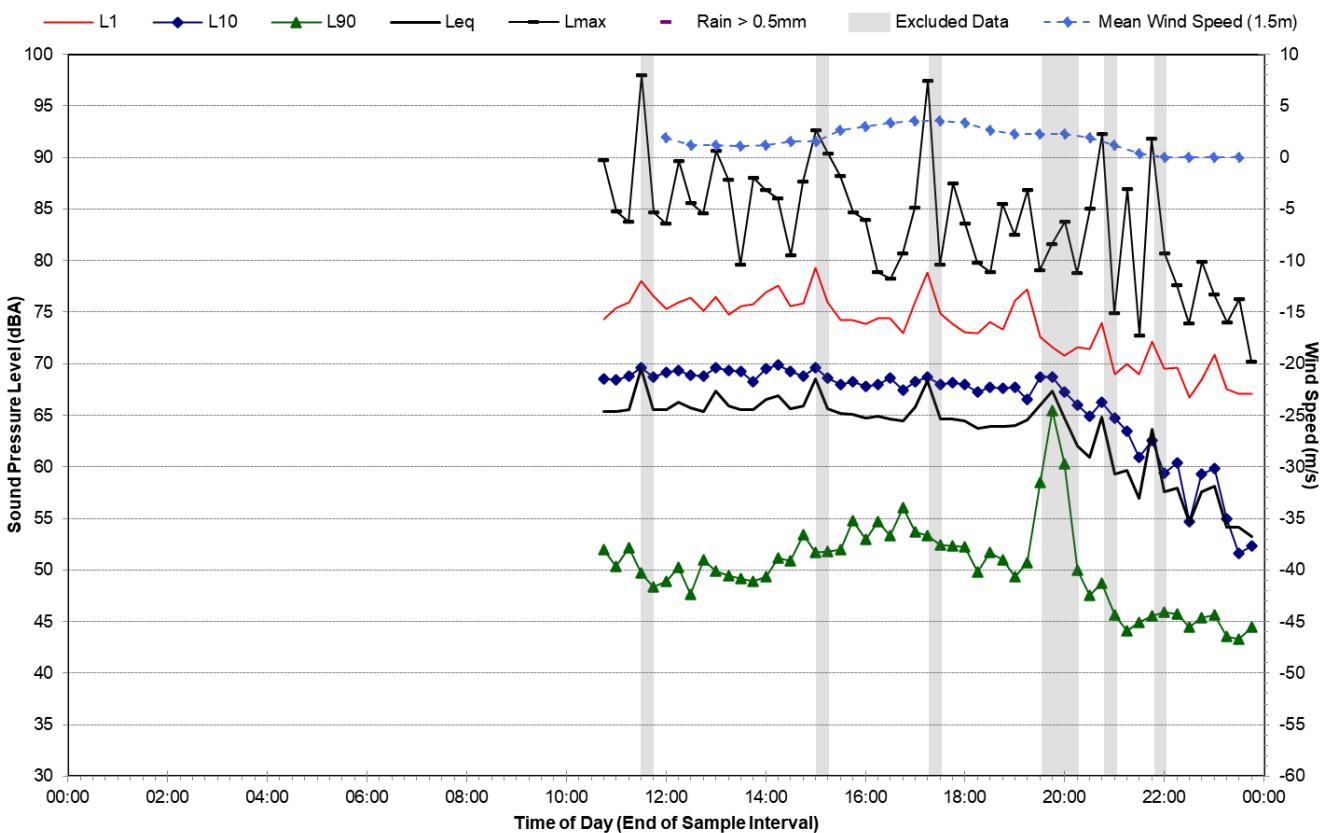
23 Hermies Avenue, Milperra - Tuesday, 5 April 2022



Noise Monitoring Location	L05	Map of Noise Monitoring Location				
Noise Monitoring Address	Bullecourt Avenue, Milperra					
Logger Device Type: Svantek 977, Logger Serial No: 69507 Sound Level Meter Device Type: Brüel and Kjær 2270, Sound Level Meter Serial No: 3008204						
Ambient noise logger deployed at park between east of 47 Bullecourt Avenue, Milperra. Logger located at a height of around 1.5 m above ground with direct view of Bullecourt Avenue to the south.						
Attended noise measurements indicate the ambient noise environment at this location is dominated by road traffic noise from Bullecourt Avenue.						
Recorded Noise Levels (L _{Amax}) 22/03/2022: Light-vehicle traffic Bullecourt Avenue: 65-72 dBA Heavy-vehicle traffic Bullecourt Avenue: 73-83 dBA Aircraft: 50 dBA						
Ambient Noise Logging Results ICNG Defined Time Periods						
Monitoring Period	Noise Level (dBA)					
	RBL	L _{Aeq}	L ₁₀	L ₁		
Daytime	50	66	69	75		
Evening	45	63	67	72		
Night-time	39	59	54	69		
Ambient Noise Logging Results RNP Defined Time Periods			Photo of Noise Monitoring Location			
Monitoring Period	Noise Level (dBA)					
	L _{Aeq} (period)		L _{Aeq} (1hour)			
Daytime (7am-10pm)	65		66			
Night-time (10pm-7am)	59		64			
Attended Noise Measurement Results						
Date	Start Time	Measured Noise Level (dBA)				
		LA ₉₀	L _{Aeq}	L _{Amax}		
22/03/2022	10:35	51	65	83		

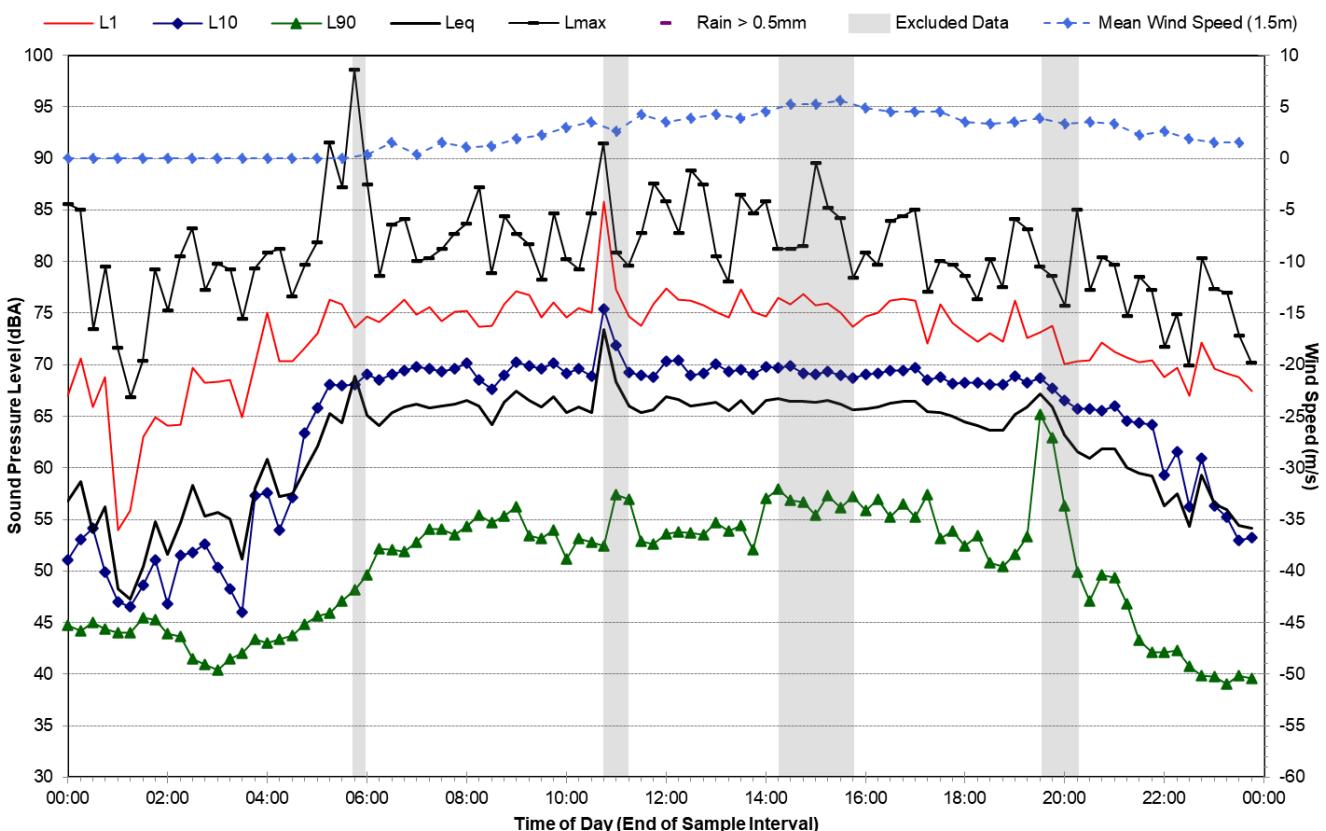
Statistical Ambient Noise Levels

Bullecourt Avenue, Milperra - Tuesday, 22 March 2022



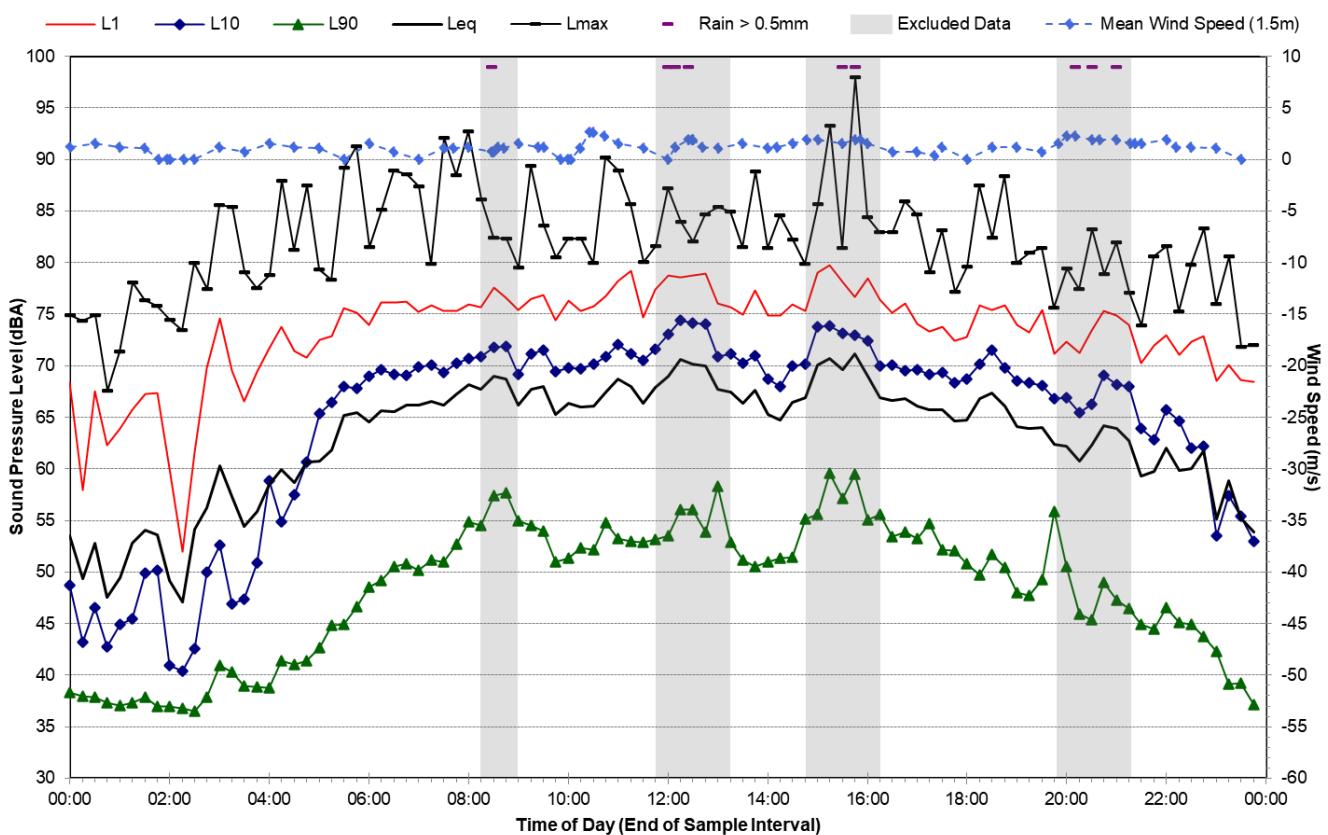
Statistical Ambient Noise Levels

Bullecourt Avenue, Milperra - Wednesday, 23 March 2022



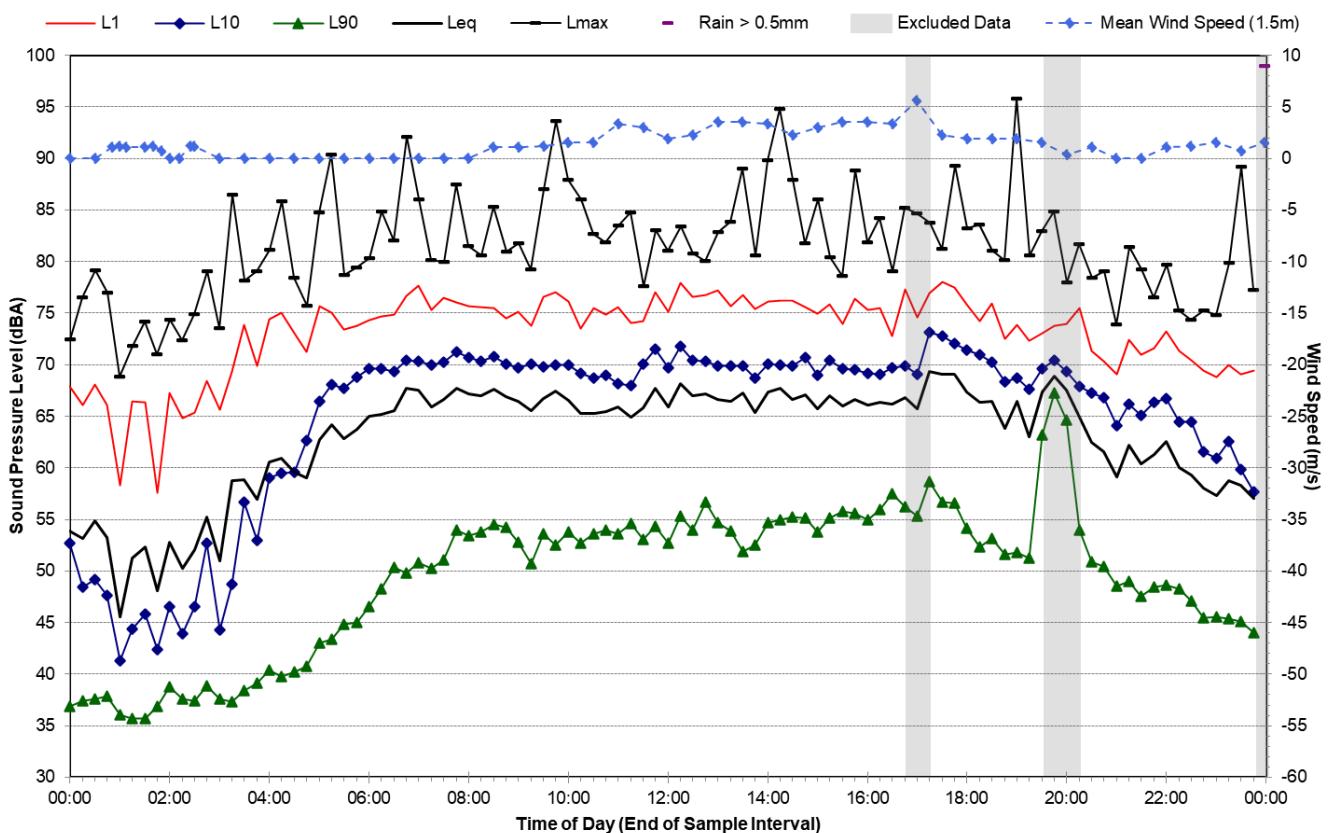
Statistical Ambient Noise Levels

Bullecourt Avenue, Milperra - Thursday, 24 March 2022



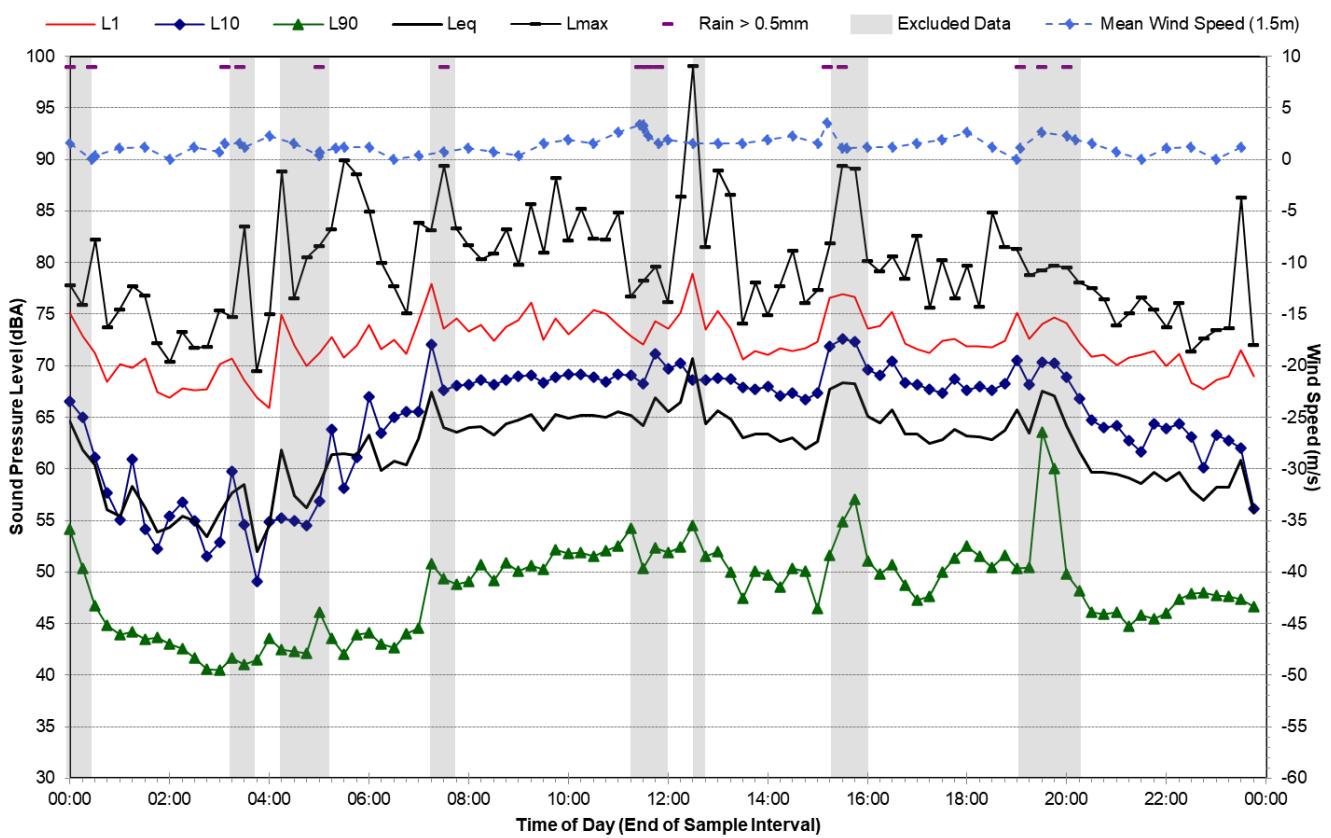
Statistical Ambient Noise Levels

Bullecourt Avenue, Milperra - Friday, 25 March 2022



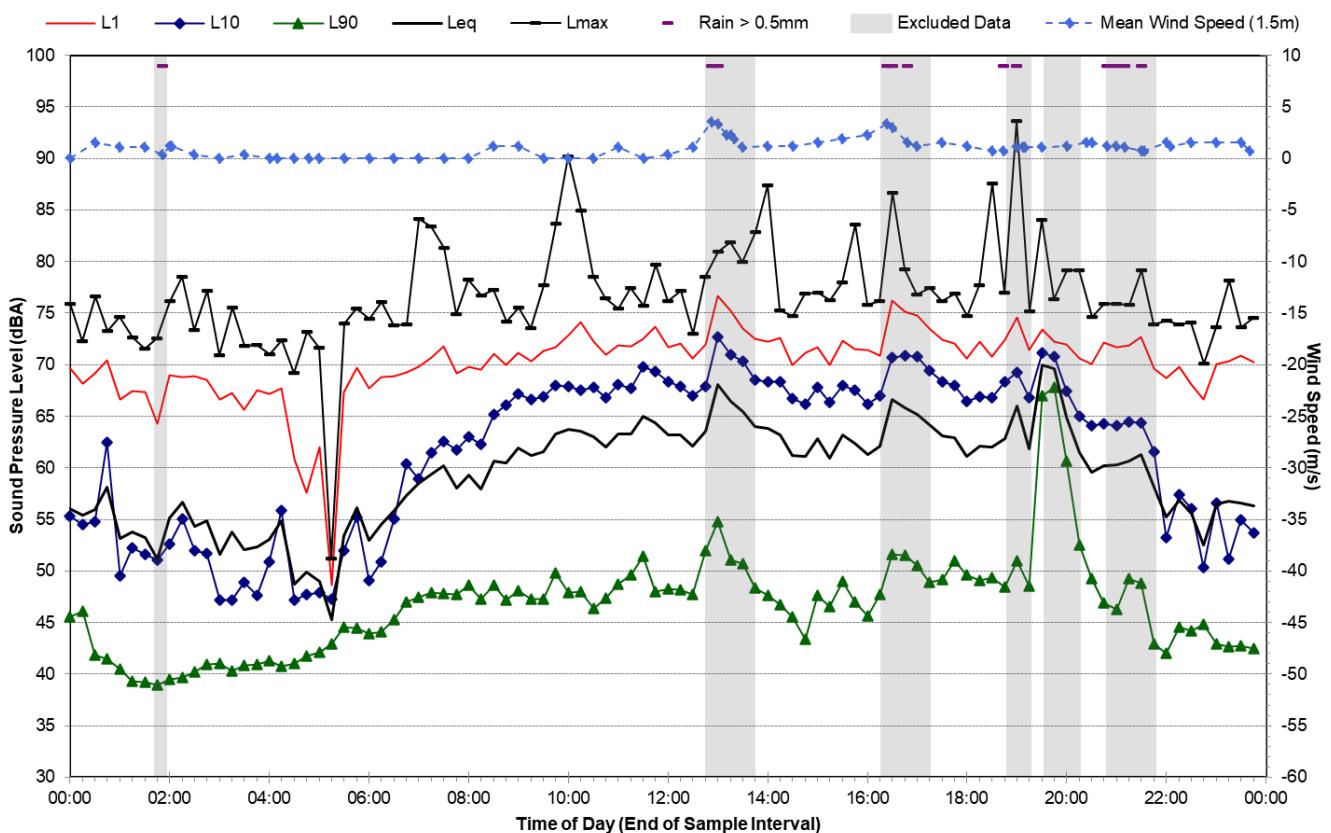
Statistical Ambient Noise Levels

Bullecourt Avenue, Milperra - Saturday, 26 March 2022



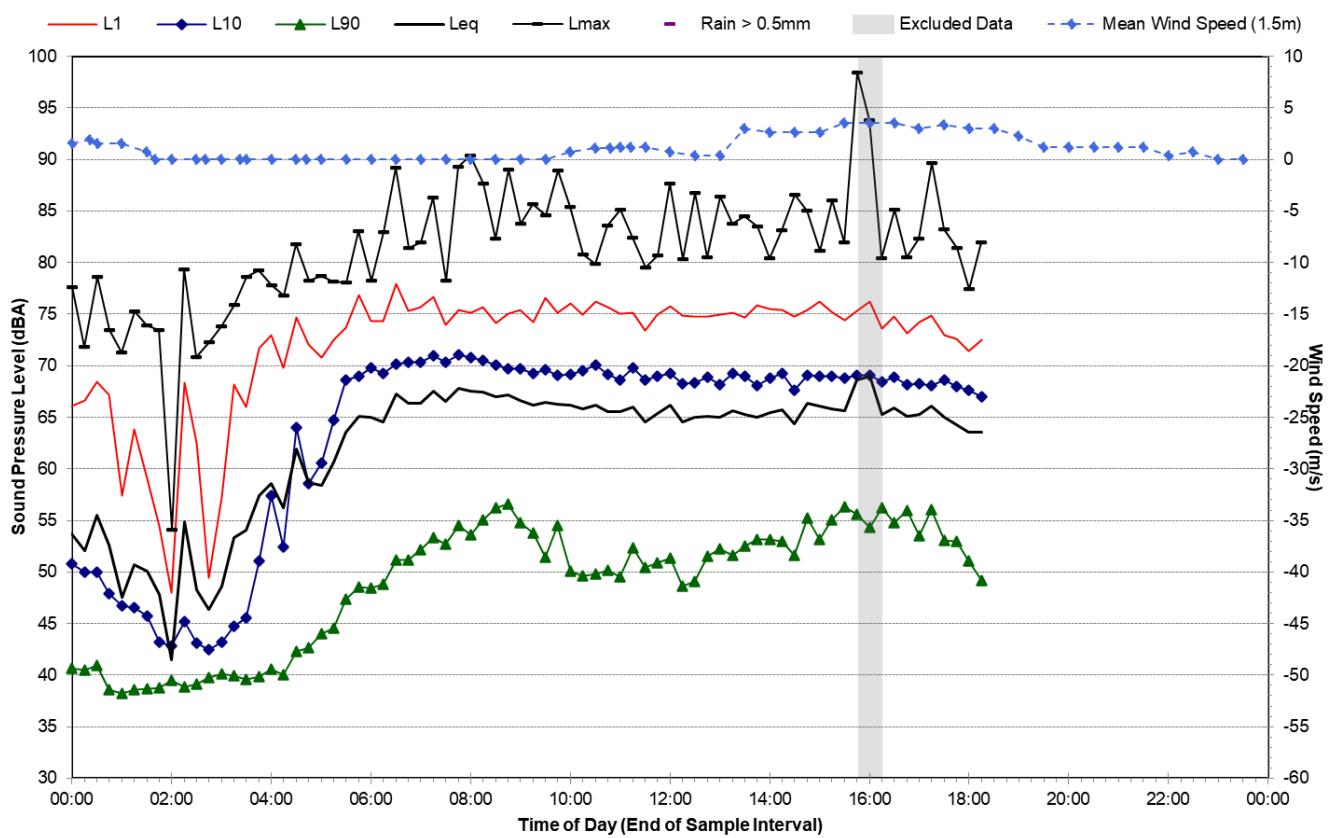
Statistical Ambient Noise Levels

Bullecourt Avenue, Milperra - Sunday, 27 March 2022



Statistical Ambient Noise Levels

Bullecourt Avenue, Milperra - Monday, 28 March 2022



APPENDIX C

Construction Information

Table 1 Equipment Lists and Sound Power Levels

		Equipment	Total Sound Power Level (dBA)	Backhoe	Compactor	Compactor	Concrete Saw ¹	Concrete Truck	Crane	Franna	Excavator (20t)	Generator	Grader	Hand Tools	Line Marking Truck	Pavement Laying Machine	Pavement Profiler	Smooth Drum	Roller	Vibratory ¹	Road Truck / Truck & Dog
				111	106	106	123	109	98	105	103	113	104	108	114	117	107	114	108	Truck	
		Estimated on-time in any 15-minute period		10	15	15	5	15	15	10	15	10	15	15	15	15	15	15	15	10	
ID	Construction scenario																				
W.01	Preliminary work, utilities, earthwork and drainage - peak	120	X	X	X	X	X	X	X	X			X							X	
W.02	Preliminary work, utilities, earthwork and drainage - typical	105 ³								X	X			X						X	
W.03	Road and intersection work - peak	121		X	X			X		X	X	X			X	X	X	X	X	X	
W.04	Road and intersection work - typical	106 ³								X	X			X						X	
W.05	Compound operation - peak	111							X	X	X		X							X	
W.06	Compound operation - typical	105 ³							X		X		X							X	
W.07	Landscaping and finishing work - peak	115						X	X	X	X	X	X								
W.08	Landscaping and finishing work - typical	104 ³						X	X	X		X									

Note 1: Equipment classed as 'annoying' in the ICNG and requires an additional 5 dB correction.

Note 2: Sound power level data is taken from the RMS *Construction Noise and Vibration Guideline*, TfNSW *Construction Noise and Vibration Strategy*, AS 2436-2010, and DEFRA Noise Database.

Note 3: 'Typical' sound power levels include an additional -5 dB correction to represent work that is not immediately adjacent a particular receiver.

Table 2 Predicted Worst-case Construction Noise Levels (dBA) – Residential Receivers

ID	Scenario	NCA01	NCA02	NCA03	NCA04	NCA05	NCA06
W.01	Preliminary work, utilities, earthwork and drainage - peak	88	90	92	90	92	93
W.02	Preliminary work, utilities, earthwork and drainage - typical	73	75	77	75	77	78
W.03	Road and intersection work - peak	75	93	89	92	90	92
W.04	Road and intersection work - typical	60	78	74	77	75	77
W.05	Compound operation - peak	74	95	80	83	58	67
W.06	Compound operation - typical	68	89	74	77	52	61
W.07	Landscaping and finishing work - peak	83	85	87	85	87	88
W.08	Landscaping and finishing work - typical	72	74	76	74	76	77

Table 3 Predicted Worst-case NML Exceedances (dB) – Residential Receivers

Period	ID	Scenario	NCA01	NCA02	NCA03	NCA04	NCA05	NCA06
Daytime	W.01	Preliminary work, utilities, earthwork and drainage - peak	28	22	27	30	27	26
	W.02	Preliminary work, utilities, earthwork and drainage - typical	13	7	12	15	12	11
	W.03	Road and intersection work - peak	15	25	24	32	25	25
	W.04	Road and intersection work - typical	-	10	9	17	10	10
	W.05	Compound operation - peak	14	27	15	23	-	-
	W.06	Compound operation - typical	8	21	9	17	-	-
	W.07	Landscaping and finishing work - peak	23	17	22	25	22	21
	W.08	Landscaping and finishing work - typical	12	6	11	14	11	10
Daytime out of Hours	W.01	Preliminary work, utilities, earthwork and drainage - peak	33	27	32	35	32	31
	W.02	Preliminary work, utilities, earthwork and drainage - typical	18	12	17	20	17	16
	W.03	Road and intersection work - peak	20	30	29	37	30	30
	W.04	Road and intersection work - typical	5	15	14	22	15	15
	W.05	Compound operation - peak	19	32	20	28	-	5
	W.06	Compound operation - typical	13	26	14	22	-	-
	W.07	Landscaping and finishing work - peak	28	22	27	30	27	26
	W.08	Landscaping and finishing work - typical	17	11	16	19	16	15
Evening	W.01	Preliminary work, utilities, earthwork and drainage - peak	37	37	41	40	41	40
	W.02	Preliminary work, utilities, earthwork and drainage - typical	22	22	26	25	26	25
	W.03	Road and intersection work - peak	24	40	38	42	39	39
	W.04	Road and intersection work - typical	9	25	23	27	24	24
	W.05	Compound operation - peak	23	42	29	33	7	14
	W.06	Compound operation - typical	17	36	23	27	1	8
	W.07	Landscaping and finishing work - peak	32	32	36	35	36	35
	W.08	Landscaping and finishing work - typical	21	21	25	24	25	24
Night	W.01	Preliminary work, utilities, earthwork and drainage - peak	43	44	52	46	52	49
	W.02	Preliminary work, utilities, earthwork and drainage - typical	28	29	37	31	37	34
	W.03	Road and intersection work - peak	30	47	49	48	50	48
	W.04	Road and intersection work - typical	15	32	34	33	35	33
	W.05	Compound operation - peak	29	49	40	39	18	23
	W.06	Compound operation - typical	23	43	34	33	12	17
	W.07	Landscaping and finishing work - peak	38	39	47	41	47	44
	W.08	Landscaping and finishing work - typical	27	28	36	30	36	33

Table 4 Predicted NML Exceedances, All Receiver Types – NCA01

ID	Scenario	Number of Receivers																						
		Total	HNA ¹	With NML Exceedance ²																				
				Standard Daytime		Out of Hours Works ³																		
				1 10 dB	11 20 dB	>20 dB	1 5 dB	6 15 dB	16 25 dB	>25 dB	1 5 dB	6 15 dB	16 25 dB	>25 dB	1 5 dB	6 15 dB	16 25 dB	1 10 dB	11 20 dB	>20 dB				
W.01	Preliminary work, utilities, earthwork and drainage - peak	88	6	15	6	4	22	15	6	4	24	23	12	5	9	44	15	9	44	17	10	17	6	4
W.02	Preliminary work, utilities, earthwork and drainage - typical	88	-	1	3	1	5	1	3	1	7	6	3	1	8	12	1	3	17	6	4	6	4	-
W.03	Road and intersection work - peak	88	1	18	7	-	21	18	7	-	22	27	16	-	9	44	18	6	41	19	4	19	4	-
W.04	Road and intersection work - typical	88	-	1	-	-	7	-	-	-	12	4	-	-	9	15	-	-	18	6	-	6	-	-
W.05	Compound operation - peak	88	-	17	4	-	8	17	4	-	4	24	4	-	13	12	17	4	12	17	4	17	4	-
W.06	Compound operation - typical	88	-	4	-	-	12	4	-	-	13	11	1	-	4	24	4	-	12	17	4	17	4	-
W.07	Landscaping and finishing work - peak	88	4	12	1	4	8	12	1	4	17	13	6	4	22	30	12	4	32	11	6	11	3	3
W.08	Landscaping and finishing work - typical	88	-	2	2	1	5	2	2	1	7	5	3	1	6	12	2	2	13	5	3	5	3	-

Note 1: Highly Noise Affected, based on ICNG definition (ie predicted noise at residential receiver is 75 dBA or greater).

Note 2: Based on worst-case predicted noise levels.

Note 3: OOH = Out of hours.

Table 5 Predicted NML Exceedances, All Receiver Types – NCA02

ID	Scenario			Number of Receivers																				
		Total	HNA ¹	With NML Exceedance ²																				
				Standard Daytime		Out of Hours Works ³																		
				Daytime OOH		Evening				Night time				Sleep Disturbance		Awakening								
				1 10 dB	11 20 dB	>20 dB	1 5 dB	6 15 dB	16 25 dB	>25 dB	1 5 dB	6 15 dB	16 25 dB	>25 dB	1 5 dB	6 15 dB	16 25 dB	>25 dB	1 10 dB	11 20 dB	>20 dB	1 10 dB	11 20 dB	>20 dB
W.01	Preliminary work, utilities, earthwork and drainage - peak	113	42	33	30	6	20	33	30	6	-	21	32	36	-	-	27	62	-	26	63	25	28	36
W.02	Preliminary work, utilities, earthwork and drainage - typical	113	1	32	-	-	4	32	-	-	20	16	32	-	9	39	13	28	26	27	36	28	35	1
W.03	Road and intersection work - peak	113	42	39	25	8	17	39	25	8	-	18	38	33	-	-	29	60	1	34	54	29	31	29
W.04	Road and intersection work - typical	113	6	15	-	-	18	15	-	-	24	32	15	-	4	49	26	10	29	31	29	32	25	6
W.05	Compound operation - peak	113	2	3	1	1	8	3	1	1	26	17	2	2	31	43	12	3	43	12	3	14	1	2
W.06	Compound operation - typical	113	2	2	-	1	2	1	-	1	10	7	1	1	29	20	2	2	43	12	3	14	1	2
W.07	Landscaping and finishing work - peak	113	36	17	32	-	21	16	32	-	1	40	16	32	-	9	39	41	5	42	42	46	11	31
W.08	Landscaping and finishing work - typical	113	-	31	-	-	5	31	-	-	22	11	31	-	14	37	12	25	40	16	32	22	32	-

Note 1: Highly Noise Affected, based on ICNG definition (ie predicted noise at residential receiver is 75 dBA or greater).

Note 2: Based on worst-case predicted noise levels.

Note 3: OOH = Out of hours.

Table 6 Predicted NML Exceedances, All Receiver Types – NCA03

ID	Scenario			Number of Receivers																				
		Total	HNA ¹	With NML Exceedance ²																				
				Standard Daytime		Out of Hours Works ³																		
						Daytime OOH				Evening				Night time				Sleep Disturbance		Awakening				
				1 10 dB	11 20 dB	>20 dB	1 5 dB	6 15 dB	16 25 dB	>25 dB	1 5 dB	6 15 dB	16 25 dB	>25 dB	1 5 dB	6 15 dB	16 25 dB	>25 dB	1 10 dB	11 20 dB	>20 dB	1 10 dB	11 20 dB	>20 dB
W.01	Preliminary work, utilities, earthwork and drainage - peak	528	93	97	40	44	101	96	40	44	114	237	84	78	-	94	247	177	66	257	195	171	72	62
W.02	Preliminary work, utilities, earthwork and drainage - typical	528	14	49	11	-	25	49	10	-	41	69	47	5	147	147	72	58	257	102	93	72	48	14
W.03	Road and intersection work - peak	528	77	114	56	9	118	112	56	9	95	261	106	55	-	72	272	174	98	259	161	161	76	28
W.04	Road and intersection work - typical	528	-	38	-	-	28	37	-	-	57	76	28	-	156	173	80	37	272	110	64	80	37	-
W.05	Compound operation - peak	528	3	1	4	-	15	2	3	-	86	40	2	2	125	337	47	4	337	47	4	15	4	-
W.06	Compound operation - typical	528	-	5	-	-	-	5	-	-	25	9	4	-	200	114	11	4	337	47	4	15	4	-
W.07	Landscaping and finishing work - peak	528	62	73	49	11	48	73	49	10	146	132	69	52	2	239	147	130	212	171	134	102	49	44
W.08	Landscaping and finishing work - typical	528	10	49	5	-	27	48	5	-	40	61	50	-	145	131	69	52	210	80	70	61	50	-

Note 1: Highly Noise Affected, based on ICNG definition (ie predicted noise at residential receiver is 75 dBA or greater).

Note 2: Based on worst-case predicted noise levels.

Note 3: OOH = Out of hours.

Table 7 Predicted NML Exceedances, All Receiver Types – NCA04

ID	Scenario			Number of Receivers																				
		Total	HNA ¹	With NML Exceedance ²																				
				Standard Daytime		Out of Hours Works ³																Sleep Disturbance		
						Daytime OOH		Evening				Night time				Sleep Disturbance		Awakening						
				1 10 dB	11 20 dB	>20 dB	1 5 dB	6 15 dB	16 25 dB	>25 dB	1 5 dB	6 15 dB	16 25 dB	>25 dB	1 5 dB	6 15 dB	16 25 dB	>25 dB	1 10 dB	11 20 dB	>20 dB	1 10 dB	11 20 dB	>20 dB
W.01	Preliminary work, utilities, earthwork and drainage - peak	332	20	130	46	17	59	129	37	15	2	123	50	21	-	32	119	43	17	131	46	119	30	13
W.02	Preliminary work, utilities, earthwork and drainage - typical	332	2	25	11	-	28	15	9	-	34	24	13	-	83	59	10	10	131	31	15	30	11	2
W.03	Road and intersection work - peak	332	21	150	49	16	43	146	40	15	-	121	56	19	-	14	138	42	29	128	37	113	22	10
W.04	Road and intersection work - typical	332	4	23	13	-	31	14	10	-	37	27	7	4	90	69	12	9	138	31	11	27	6	4
W.05	Compound operation - peak	332	9	45	18	1	32	38	18	1	47	49	23	9	49	79	39	20	79	39	20	37	18	1
W.06	Compound operation - typical	332	1	22	8	-	20	22	8	-	27	34	15	1	47	49	23	9	79	39	20	37	18	1
W.07	Landscaping and finishing work - peak	332	13	70	25	11	84	73	15	9	47	110	24	13	-	115	59	20	105	66	23	59	10	10
W.08	Landscaping and finishing work - typical	332	-	23	8	-	24	14	7	-	32	20	12	-	75	50	11	9	91	19	12	17	10	-

Note 1: Highly Noise Affected, based on ICNG definition (ie predicted noise at residential receiver is 75 dBA or greater).

Note 2: Based on worst-case predicted noise levels.

Note 3: OOH = Out of hours.

Table 8 Predicted NML Exceedances, All Receiver Types – NCA05

ID	Scenario	Number of Receivers																						
		Total	HNA ¹	With NML Exceedance ²																				
				Standard Daytime		Out of Hours Works ³																		
				Daytime OOH				Evening				Night time				Sleep Disturbance		Awakening						
				1 10 dB	11 20 dB	>20 dB	1 5 dB	6 15 dB	16 25 dB	>25 dB	1 5 dB	6 15 dB	16 25 dB	>25 dB	1 5 dB	6 15 dB	16 25 dB	1 10 dB	11 20 dB	>20 dB	1 10 dB	11 20 dB	>20 dB	
W.01	Preliminary work, utilities, earthwork and drainage - peak	267	24	45	18	4	40	41	17	4	91	70	35	17	-	118	80	57	102	88	65	63	21	12
W.02	Preliminary work, utilities, earthwork and drainage - typical	267	2	9	2	-	10	9	2	-	25	17	8	2	45	60	21	11	88	41	24	21	10	2
W.03	Road and intersection work - peak	267	16	50	10	2	39	47	10	2	102	81	36	10	-	113	90	52	128	81	46	62	17	4
W.04	Road and intersection work - typical	267	1	5	-	-	7	5	-	-	25	17	4	-	54	62	21	5	90	40	12	21	5	-
W.05	Compound operation - peak	267	-	-	-	-	-	-	-	-	43	2	-	-	107	125	4	-	125	4	-	-	-	-
W.06	Compound operation - typical	267	-	-	-	-	-	-	-	-	2	-	-	-	67	45	-	-	125	4	-	-	-	-
W.07	Landscaping and finishing work - peak	267	12	26	9	2	29	22	9	2	36	59	17	10	31	132	60	32	148	63	33	41	18	6
W.08	Landscaping and finishing work - typical	267	2	8	2	-	7	8	2	-	19	17	9	-	36	59	17	10	65	29	16	17	9	-

Note 1: Highly Noise Affected, based on ICNG definition (ie predicted noise at residential receiver is 75 dBA or greater).

Note 2: Based on worst-case predicted noise levels.

Note 3: OOH = Out of hours.

Table 9 Predicted NML Exceedances, All Receiver Types – NCA06

ID	Scenario			Number of Receivers																				
		Total	HNA ¹	With NML Exceedance ²																				
				Standard Daytime		Out of Hours Works ³																Sleep Disturbance		
						Daytime OOH		Evening		Night time		Sleep Disturbance		Awakening										
				1 10 dB	11 20 dB	>20 dB	1 5 dB	6 15 dB	16 25 dB	>25 dB	1 5 dB	6 15 dB	16 25 dB	>25 dB	1 5 dB	6 15 dB	16 25 dB	>25 dB	1 10 dB	11 20 dB	>20 dB	1 10 dB	11 20 dB	>20 dB
W.01	Preliminary work, utilities, earthwork and drainage - peak	277	62	63	24	17	62	63	24	17	47	137	53	39	-	67	121	87	47	136	92	121	48	39
W.02	Preliminary work, utilities, earthwork and drainage - typical	277	4	32	1	-	8	32	1	-	27	36	29	-	78	68	36	26	136	53	39	48	35	4
W.03	Road and intersection work - peak	277	49	72	31	5	73	71	31	5	35	151	56	34	-	46	147	82	68	132	75	130	38	29
W.04	Road and intersection work - typical	277	5	21	-	-	15	21	-	-	33	45	12	-	86	94	41	8	147	49	33	44	27	4
W.05	Compound operation - peak	277	-	-	-	-	2	-	-	-	15	9	-	-	111	44	7	-	44	7	-	5	-	-
W.06	Compound operation - typical	277	-	-	-	-	-	-	-	-	6	1	-	-	24	16	1	-	44	7	-	5	-	-
W.07	Landscaping and finishing work - peak	277	39	37	32	1	35	36	32	1	81	83	36	29	-	145	68	62	127	83	65	68	36	26
W.08	Landscaping and finishing work - typical	277	4	29	-	-	10	29	-	-	25	36	26	-	77	68	28	24	111	38	35	36	32	1

Note 1: Highly Noise Affected, based on ICNG definition (ie predicted noise at residential receiver is 75 dBA or greater).

Note 2: Based on worst-case predicted noise levels.

Note 3: OOH = Out of hours.

Table 10 Predicted NML Exceedances, All Receiver Types – NCA07

ID	Scenario	Number of Receivers																								
		Total	HNA ¹	With NML Exceedance ²																						
				Standard Daytime		Out of Hours Works ³																				
				Daytime OOH				Evening				Night time				Sleep Disturbance		Awakening								
				1 10 dB	1 10 dB	1 10 dB	>20 dB	1 5 dB	6 15 dB	16 25 dB	>25 dB	1 5 dB	6 15 dB	16 25 dB	>25 dB	1 5 dB	6 15 dB	16 25 dB	>25 dB	1 10 dB	1 10 dB	1 10 dB	>20 dB	>20 dB	>20 dB	>20 dB
W.01	Preliminary work, utilities, earthwork and drainage - peak	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
W.02	Preliminary work, utilities, earthwork and drainage - typical	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
W.03	Road and intersection work - peak	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
W.04	Road and intersection work - typical	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
W.05	Compound operation - peak	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
W.06	Compound operation - typical	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
W.07	Landscaping and finishing work - peak	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
W.08	Landscaping and finishing work - typical	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

Note 1: Highly Noise Affected, based on ICNG definition (ie predicted noise at residential receiver is 75 dBA or greater).

Note 2: Based on worst-case predicted noise levels.

Note 3: OOH = Out of hours.

Table 11 CNVG Standard Mitigation and Management Measures

Action Required	Applies To	Details
Management measures		
Implementation of any project specific mitigation measures required.	Airborne noise	Implementation of any project specific mitigation measures required.
Implement community consultation or notification measures.	Airborne noise Ground-borne noise & vibration	Notification detailing work activities, dates and hours, impacts and mitigation measures, indication of work schedule over the night time period, any operational noise benefits from the works (where applicable) and contact telephone number. Notification should be a minimum of 7 calendar days prior to the start of works. For projects other than maintenance works more advanced consultation or notification may be required. Please contact Roads and Maritime Communication and Stakeholder Engagement for guidance. Website (If required) Contact telephone number for community Email distribution list (if required) Community drop in session (if required by approval conditions).
Site inductions	Airborne noise Ground-borne noise & vibration	All employees, contractors and subcontractors are to receive an environmental induction. The induction must at least include: <ul style="list-style-type: none"> • all project specific and relevant standard noise and vibration mitigation measures • relevant licence and approval conditions • permissible hours of work • any limitations on high noise generating activities • location of nearest sensitive receivers • construction employee parking areas • designated loading/unloading areas and procedures • site opening/closing times (including deliveries) • environmental incident procedures.
Behavioural practices	Airborne noise	No swearing or unnecessary shouting or loud stereos/radios on site. No dropping of materials from height, throwing of metal items and slamming of doors.
Verification	Airborne noise Ground-borne noise & vibration	Where specified under Appendix C of the CNVG a noise verification program is to be carried out for the duration of the works in accordance with the Construction Noise and Vibration Management Plan and any approval and licence conditions.
Attended vibration measurements	Ground-borne vibration	Where required attended vibration measurements should be undertaken at the commencement of vibration generating activities to confirm that vibration levels are within the acceptable range to prevent cosmetic building damage.
Update Construction Environmental Management Plans	Airborne noise Ground-borne noise & vibration	The CEMP must be regularly updated to account for changes in noise and vibration management issues and strategies.
Building condition surveys	Vibration Blasting	Undertake building dilapidation surveys on all buildings located within the buffer zone prior to commencement of activities with the potential to cause property damage

Action Required	Applies To	Details
Source controls		
Construction hours and scheduling	Airborne noise Ground-borne noise & vibration	Where feasible and reasonable, construction should be carried out during the standard daytime working hours. Work generating high noise and/or vibration levels should be scheduled during less sensitive time periods.
Construction respite period during normal hours and out-of-hours work	Ground-borne noise & vibration Airborne noise	See Appendix C of the CNVG for more details on the following respite measures: <ul style="list-style-type: none"> • Respite Offers (RO) • Respite Period 1 (R1) • Respite Period 2 (R2) • Duration Respite (DR)
Equipment selection.	Airborne noise Ground-borne noise & vibration	Use quieter and less vibration emitting construction methods where feasible and reasonable. For example, when piling is required, bored piles rather than impact-driven piles will minimise noise and vibration impacts. Similarly, diaphragm wall construction techniques, in lieu of sheet piling, will have significant noise and vibration benefits. Ensure plant including the silencer is well maintained.
Plant noise levels.	Airborne-noise	The noise levels of plant and equipment must have operating Sound Power or Sound Pressure Levels compliant with the criteria in Appendix H of the CNVG. Implement a noise monitoring audit program to ensure equipment remains within the more stringent of the manufacturers specifications or Appendix H of the CNVG.
Rental plant and equipment.	Airborne-noise	The noise levels of plant and equipment items are to be considered in rental decisions and in any case cannot be used on site unless compliant with the criteria in Table 2 of the CNVG.
Use and siting of plant.	Airborne-noise	The offset distance between noisy plant and adjacent sensitive receivers is to be maximised. Plant used intermittently to be throttled down or shut down. Noise-emitting plant to be directed away from sensitive receivers. Only have necessary equipment on site.
Plan worksites and activities to minimise noise and vibration.	Airborne noise Ground-borne vibration	Locate compounds away from sensitive receivers and discourage access from local roads. Plan traffic flow, parking and loading/unloading areas to minimise reversing movements within the site. Where additional activities or plant may only result in a marginal noise increase and speed up works, consider limiting duration of impact by concentrating noisy activities at one location and move to another as quickly as possible. Very noisy activities should be scheduled for normal working hours. If the work can not be undertaken during the day, it should be completed before 11:00pm. Where practicable, work should be scheduled to avoid major student examination periods when students are studying for examinations such as before or during Higher School Certificate and at the end of higher education semesters. If programmed night work is postponed the work should be re-programmed and the approaches in this guideline apply again.
Reduced equipment power	Airborne noise Ground-borne vibration	Use only the necessary size and power.
Non-tonal and ambient sensitive reversing alarms	Airborne noise	Non-tonal reversing beepers (or an equivalent mechanism) must be fitted and used on all construction vehicles and mobile plant regularly used on site and for any out of hours work. Consider the use of ambient sensitive alarms that adjust output relative to the ambient noise level.

Action Required	Applies To	Details
Minimise disturbance arising from delivery of goods to construction sites.	Airborne noise	<p>Loading and unloading of materials/deliveries is to occur as far as possible from sensitive receivers.</p> <p>Select site access points and roads as far as possible away from sensitive receivers.</p> <p>Dedicated loading/unloading areas to be shielded if close to sensitive receivers.</p> <p>Delivery vehicles to be fitted with straps rather than chains for unloading, wherever possible.</p> <p>Avoid or minimise these out of hours movements where possible.</p>
Engine compression brakes	Construction vehicles	<p>Limit the use of engine compression brakes at night and in residential areas.</p> <p>Ensure vehicles are fitted with a maintained Original Equipment Manufacturer exhaust silencer or a silencer that complies with the National Transport Commission's 'In-service test procedure' and standard.</p>
Path controls		
Shield stationary noise sources such as pumps, compressors, fans etc.	Airborne noise	Stationary noise sources should be enclosed or shielded where feasible and reasonable whilst ensuring that the occupational health and safety of workers is maintained. Appendix D of AS 2436:2010 lists materials suitable for shielding.
Shield sensitive receivers from noisy activities.	Airborne noise	Use structures to shield residential receivers from noise such as site shed placement; earth bunds; fencing; erection of operational stage noise barriers (where practicable) and consideration of site topography when situating plant.
Receptor control		
Structural surveys and vibration monitoring	Ground-borne vibration	<p>Pre-construction surveys of the structural integrity of vibration sensitive buildings may be warranted.</p> <p>At locations where there are high-risk receptors, vibration monitoring should be conducted during the activities causing vibration.</p>
See Appendix C of the CNVG for additional measures	Airborne noise Ground-borne vibration	In some instances additional mitigation measures may be required.

Table 12 CNVG 'Additional Mitigation Measures'

Additional Mitigation Measure	Description
Notification (letterbox drop or equivalent)	Advanced warning of works and potential disruptions can assist in reducing the impact on the community. The notification may consist of a letterbox drop (or equivalent) detailing work activities, time periods over which these will occur, impacts and mitigation measures. Notification should be a minimum of five working days prior to the start of works.
Specific notifications (SN)	Specific notifications are letterbox dropped (or equivalent) to identified stakeholders no later than seven calendar days ahead of construction activities that are likely to exceed the noise objectives. The specific notification provides additional information when relevant and informative to more highly affected receivers than covered in general letterbox drops.
Phone calls (PC)	Phone calls detailing relevant information made to affected stakeholders within seven calendar days of proposed work. Phone calls provide affected stakeholders with personalised contact and tailored advice, with the opportunity to provide comments on the proposed work and specific needs.
Individual briefings (IB)	Individual briefings are used to inform stakeholders about the impacts of high noise activities and mitigation measures that will be implemented. Project representatives would visit identified stakeholders at least 48 hours ahead of potentially disturbing construction activities. Individual briefings provide affected stakeholders with personalised contact and tailored advice, with the opportunity to comment on the project.
Respite Offers (RO)	Respite Offers should be considered where there are high noise and vibration generating activities near receivers. As a guide work should be carried out in continuous blocks that do not exceed three hours each, with a minimum respite period of one hour between each block. The actual duration of each block of work and respite should be flexible to accommodate the usage of and amenity at nearby receivers. The purpose of such an offer is to provide residents with respite from an ongoing impact. This measure is evaluated on a project-by-project basis, and may not be applicable to all projects.
Respite Period 1 (R1)	Out of hours construction noise in 'out of hours period 1' shall be limited to no more than three consecutive evenings per week except where there is a Duration Respite. For night work these periods of work should be separated by not less than one week and no more than six evenings per month.
Respite Period 2 (R2)	Night time construction noise in 'out of hours period 2' shall be limited to two consecutive nights except for where there is a Duration Respite. For night work these periods of work should be separated by not less than one week and six nights per month. Where possible, high noise generating works shall be completed before 11pm.
Duration Respite (DR)	Respite offers and respite periods 1 and 2 may be counterproductive in reducing the impact on the community for longer duration projects. In this instance and where it can be strongly justified it may be beneficial to increase the work duration, number of evenings or nights worked through Duration Respite so that the project can be completed more quickly. The project team should engage with the community where noise levels are expected to exceed the NML to demonstrate support for Duration Respite.
Alternative Accommodation (AA)	Alternative accommodation may be offered to residents living in close proximity to construction works that are likely to experience highly intrusive noise levels. The specifics of the offer should be identified on a project-by-project basis. Additional aspects for consideration shall include whether the highly intrusive activities occur throughout the night or before midnight.
Verification (V)	Verification of construction noise and vibration levels should occur to ensure the actual impacts are consistent with the predicted levels. Appendix F of the CNVG contains further details about verification of Noise and Vibration levels as part of routine checks of noise levels or following reasonable complaints.

APPENDIX D

Operational Information

Table 1 Traffic Volumes – At-Opening 2031

Road Section	No Build (without project) 2031				Build (with project) 2031			
	Day (15 hour)		Night (9 hour)		Day (15 hour)		Night (9 hour)	
	Light Vehicles	Heavy Vehicles	Light Vehicles	Heavy Vehicles	Light Vehicles	Heavy Vehicles	Light Vehicles	Heavy Vehicles
Henry Lawson Drive - Northbound								
Henry Lawson Drive south of Pozieres Ave	10,111	1,393	1,683	184	10,349	1,425	1,723	188
Henry Lawson Drive between Pozieres and Bullecourt Ave	9,377	1,292	1,561	170	10,372	1,429	1,726	188
Henry Lawson Drive between Bullecourt Ave and Keys Parade	8,652	809	1,226	118	10,033	938	1,422	137
Henry Lawson Drive north of Keys Parade	9,377	916	1,314	154	9,859	963	1,382	161
Henry Lawson Drive - Southbound								
Henry Lawson Drive north of Keys Parade	8,586	864	1,182	188	8,891	895	1,224	195
Henry Lawson Drive between Bullecourt Ave and Keys Parade	7,359	700	1,044	161	7,737	736	1,098	169
Henry Lawson Drive between Pozieres and Bullecourt Ave	7,274	961	1,011	169	7,235	956	1,006	168
Henry Lawson Drive south of Pozieres Ave	8,823	1,166	1,227	205	8,989	1,188	1,250	208
M5 Motorway - Eastbound								
M5 Mainline	38,932	3,636	10,203	1,283	38,932	3,636	10,203	1,283
M5 On Ramp	2,773	451	528	132	2,812	458	536	134
M5 Off Ramp	4,283	697	816	204	4,244	691	809	202
M5 Motorway - Westbound								
M5 Mainline	38,566	3,866	6,779	899	38,566	3,866	6,779	899
M5 On Ramp	4,945	873	805	142	4,872	860	793	140
M5 Off Ramp	2,880	508	469	83	2,997	529	488	86
Other Roads								
Bullecourt Ave - Eastbound	3,247	408	291	54	4,082	514	366	67
Bullecourt Ave - Westbound	2,639	234	388	34	3,432	304	504	44
Auld Ave Link Road - Northbound	0	0	0	0	1,045	102	146	17
Auld Ave Link Road - Southbound	0	0	0	0	44	4	6	1
Keys Parade between Auld Ave link road and Raleigh Road Link Road - Northbound	510	50	72	8	1,244	121	174	20
Keys Parade between Auld Ave link road and Raleigh Road Link Road - Southbound	28	3	4	1	583	59	80	13
Raleigh Road Link Road - Northbound	602	59	84	10	582	57	82	10
Raleigh Road Link Road - Southbound	428	43	59	9	413	42	57	9
Ashford Ave south of Bullecourt Ave - Northbound	2,250	310	375	41	2,261	311	376	41
Ashford Ave south of Bullecourt Ave - Southbound	1,375	182	191	32	1,769	234	246	41

Road Section	No Build (without project) 2031				Build (with project) 2031			
	Day (15 hour)		Night (9 hour)		Day (15 hour)		Night (9 hour)	
	Light Vehicles	Heavy Vehicles	Light Vehicles	Heavy Vehicles	Light Vehicles	Heavy Vehicles	Light Vehicles	Heavy Vehicles
Ashford Ave north of Bullecourt Ave - Northbound	4,496	619	748	82	3,902	537	650	71
Ashford Ave north of Bullecourt Ave - Southbound	3,345	442	465	78	3,056	404	425	71
Newbridge Rd - Eastbound	21,769	2,901	5,082	677	21,962	2,927	5,127	683
Newbridge Rd - Westbound	15,468	1,650	4,077	435	16,201	1,728	4,270	456
Milperra Rd - Eastbound	15,395	2,052	3,594	479	15,910	2,120	3,714	495
Milperra Rd - Westbound	12,833	1,369	3,382	361	12,443	1,327	3,279	350

Table 2 Traffic Volumes – Future Design Year 2040

Road Section	No Build (without project) 2041				Build (with project) 2041			
	Day (15 hour)		Night (9 hour)		Day (15 hour)		Night (9 hour)	
	Light Vehicles	Heavy Vehicles	Light Vehicles	Heavy Vehicles	Light Vehicles	Heavy Vehicles	Light Vehicles	Heavy Vehicles
Henry Lawson Drive Northbound								
South of Pozieres Ave	10,277	1,415	1,711	187	10,920	1,504	1,818	198
Between Pozieres and Bullecourt Ave	9,536	1,313	1,587	173	10,606	1,461	1,766	193
Between Bullecourt Ave and Keys Parade	8,560	800	1,213	117	10,317	965	1,462	141
North of Keys Parade	9,437	921	1,322	155	10,186	995	1,428	167
Henry Lawson Drive Southbound								
North of Keys Parade - Southbound	8,649	871	1,191	189	9,518	958	1,310	208
Between Bullecourt Ave and Keys Parade	7,514	715	1,066	165	8,317	791	1,180	182
Between Pozieres and Bullecourt Ave	7,382	975	1,026	171	7,483	989	1,040	174
South of Pozieres Ave Southbound	9,202	1,216	1,279	213	9,534	1,260	1,325	221
M5 Motorway Eastbound								
M5 Mainline	41,888	3,912	10,978	1,381	41,888	3,912	10,978	1,381
M5 On Ramp	2,784	453	530	133	2,919	475	556	139
M5 Off Ramp	5,846	952	1,114	278	6,256	1,018	1,192	298
M5 Motorway Westbound								
M5 Mainline	41,446	4,155	7,285	966	41,446	4,155	7,285	966
M5 On Ramp	4,814	849	784	138	4,766	841	776	137
M5 Off Ramp	2,909	513	474	84	2,887	510	470	83
Other Roads								
Bullecourt Ave - Eastbound	3,445	433	309	57	4,367	549	392	72
Bullecourt Ave - Westbound	2,351	209	345	30	3,733	331	548	48
Auld Ave Link Road - Northbound	0	0	0	0	1,005	98	141	16
Auld Ave Link Road - Southbound	0	0	0	0	48	5	7	1

Road Section	No Build (without project) 2041				Build (with project) 2041			
	Day (15 hour)		Night (9 hour)		Day (15 hour)		Night (9 hour)	
	Light Vehicles	Heavy Vehicles	Light Vehicles	Heavy Vehicles	Light Vehicles	Heavy Vehicles	Light Vehicles	Heavy Vehicles
Keys Parade between Auld Ave link road and Raleigh Road Link Road - Northbound	765	75	107	13	1,631	159	229	27
Keys Parade between Auld Ave link road and Raleigh Road Link Road - Southbound	12	1	2	0	599	60	82	13
Raleigh Road Link Road - Northbound	642	63	90	11	650	63	91	11
Raleigh Road Link Road - Southbound	409	41	56	9	432	44	60	9
Ashford Ave south of Bullecourt Ave - Northbound	2,545	350	424	46	2,522	347	420	46
Ashford Ave south of Bullecourt Ave - Southbound	1,425	188	198	33	1,696	224	236	39
Ashford Ave north of Bullecourt Ave - Northbound	4,968	684	827	90	4,023	554	670	73
Ashford Ave north of Bullecourt Ave - Southbound	3,199	423	445	74	2,986	395	415	69
Newbridge Rd - Eastbound	22,037	2,937	5,145	686	23,021	3,068	5,375	716
Newbridge Rd - Westbound	16,130	1,721	4,251	454	16,795	1,792	4,426	472
Milperra Rd - Eastbound	15,552	2,073	3,631	484	15,853	2,113	3,701	493
Milperra Rd - Westbound	13,391	1,429	3,529	377	13,233	1,412	3,488	372

Table 3 Existing Traffic Volumes – Validation

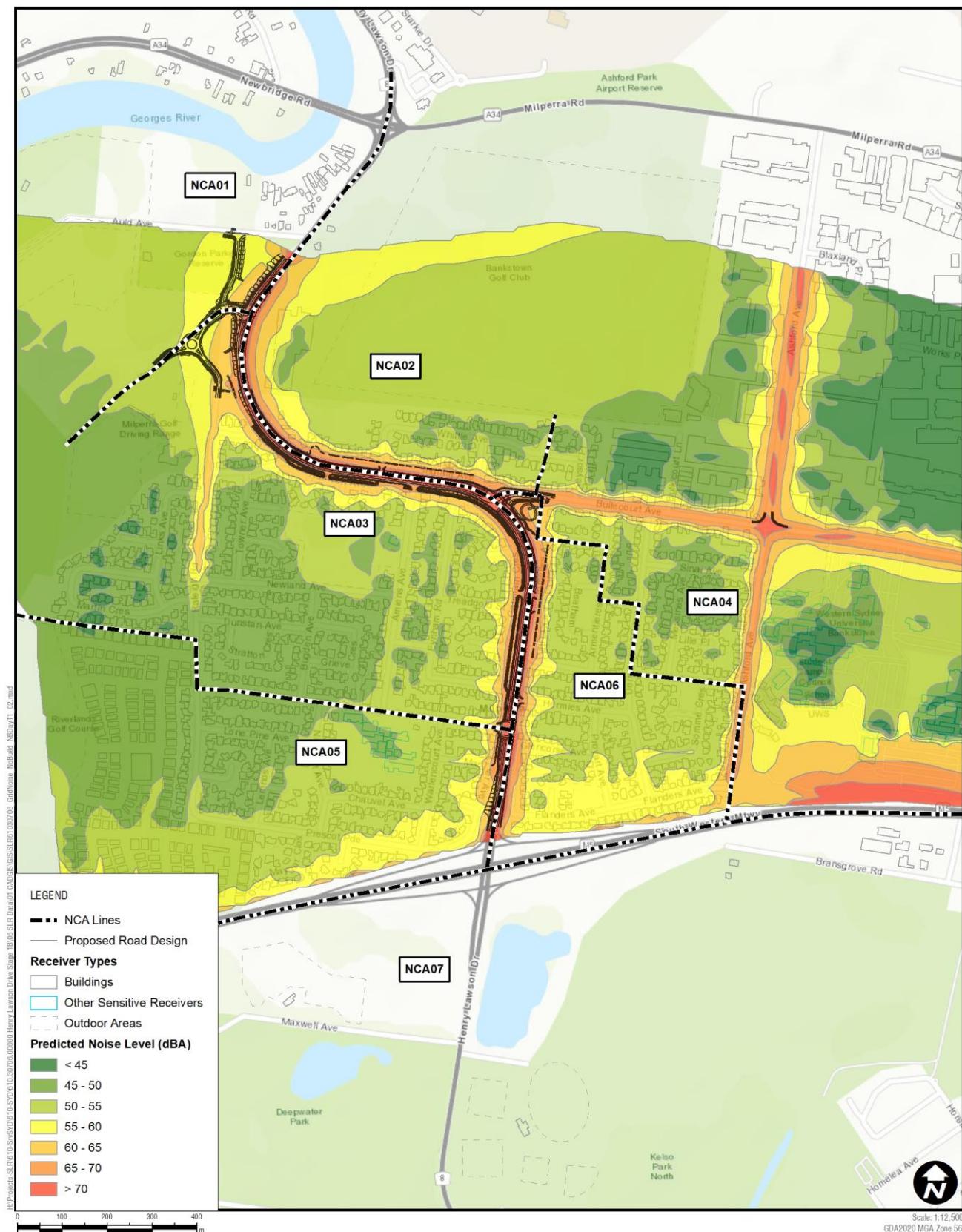
Road Section	Existing Traffic 2022					
	Day (15 hour)			Night (9 hour)		
	Light Vehicles	Heavy Vehicles	Speed km/h	Light Vehicles	Heavy Vehicles	Speed km/h
Henry Lawson Drive – Northbound						
Between M5 and Bullecourt Ave	10,533	1,480	45	1,680	166	53
Between Bullecourt Ave and Raleigh Rd	10,625	1,171	50	1,465	138	53
Between Raleigh Rd and Auld Ave	11,122	1,265	44	1,558	163	54
Henry Lawson Drive – Southbound						
Between Raleigh Rd and Auld Ave	10,033	1,173	47	1,360	233	54
Between Bullecourt Ave and Raleigh Rd	9,414	1,098	51	1,302	221	54
Between M5 and Bullecourt Ave	10,294	1,500	50	1,406	230	53
Bullecourt Avenue						
Bullecourt Ave - Eastbound	4,757	642	47	399	73	51
Bullecourt Ave - Westbound	4,040	446	46	549	61	48

Project and Non-Project Roads



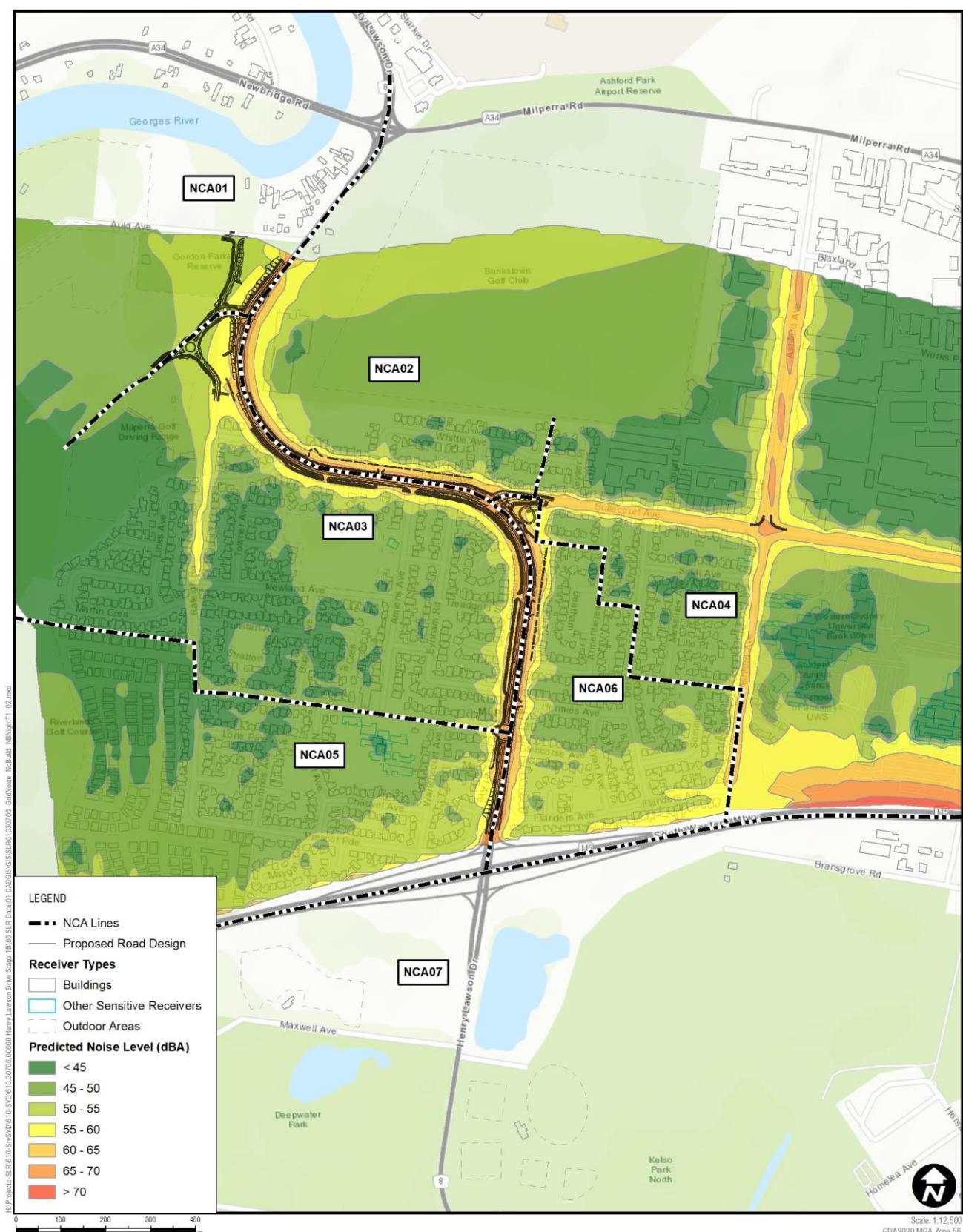
Operational Road Traffic Noise Contours

Figure 1 Predicted Noise Levels No Build 2031 Daytime



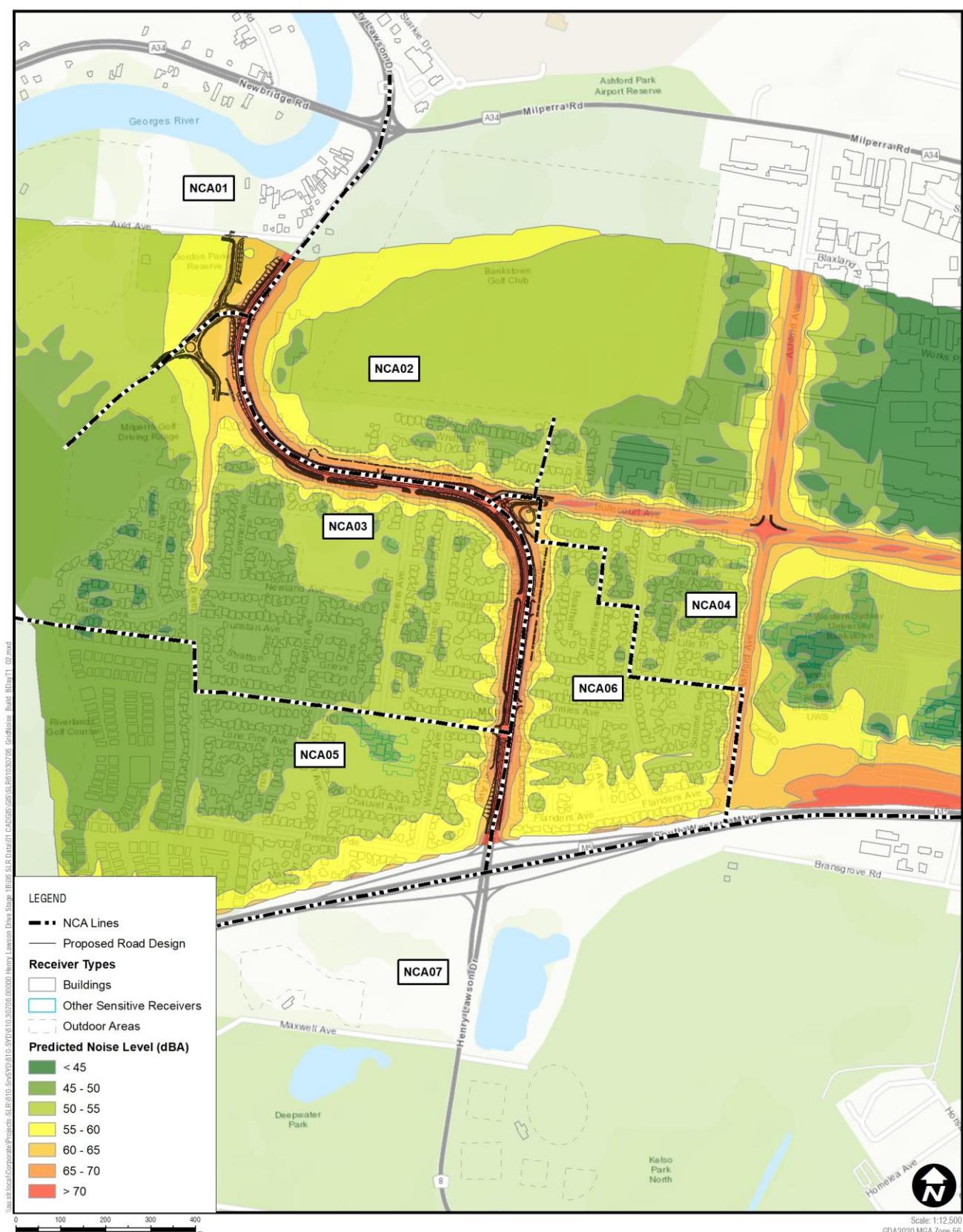
Note: Contours are at 1.5 m height and are free field

Figure 2 Predicted Noise Levels No Build 2031 Night-time



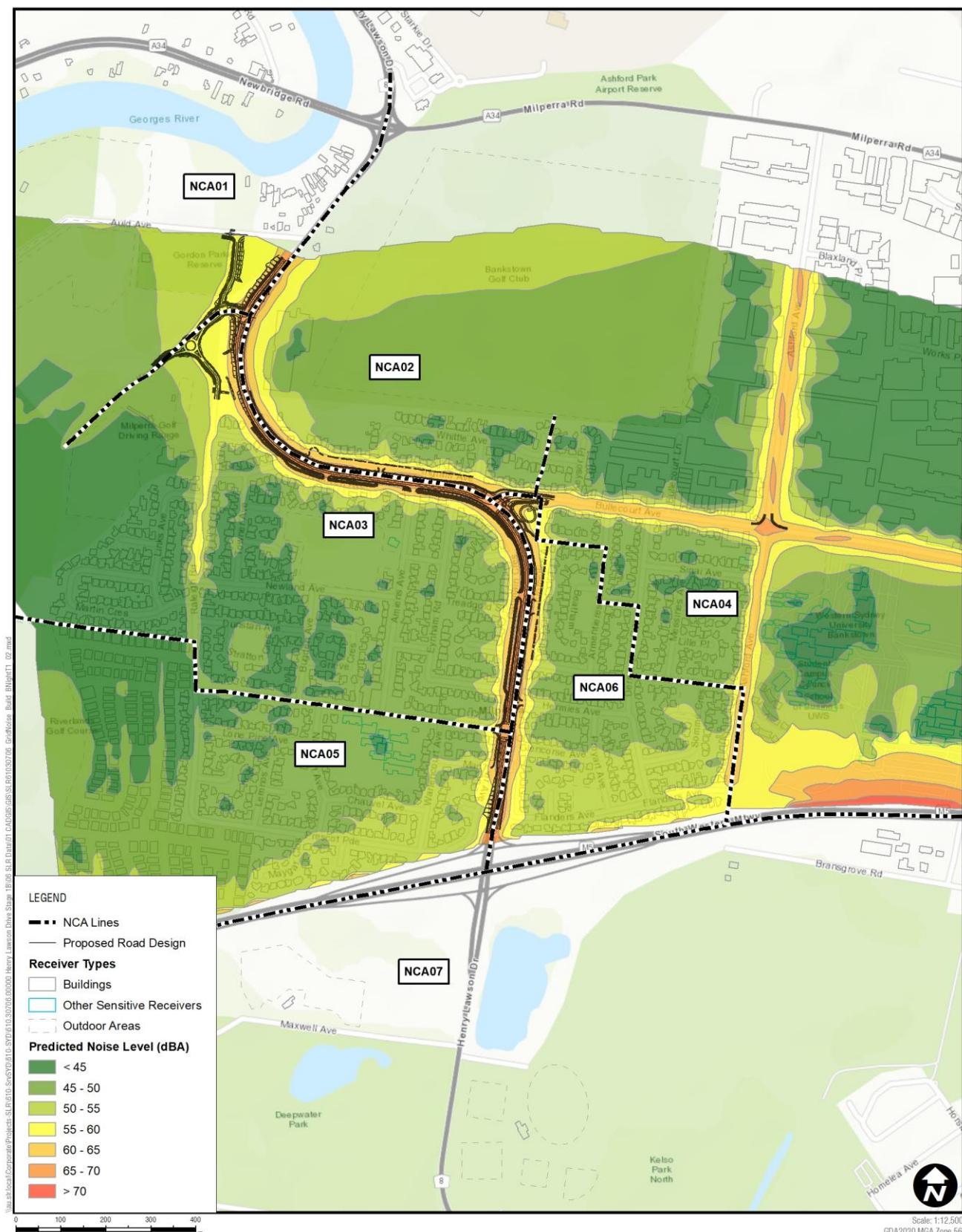
Note: Contours are at 1.5 m height and are free field.

Figure 3 Predicted Noise Levels Build 2031 Daytime



Note: Contours are at 1.5 m height and are free field.

Figure 4 Predicted Noise Levels Build 2031 Night-time



Note: Contours are at 1.5 m height and are free field.

Figure 5 Predicted Noise Levels No Build 2041 Daytime

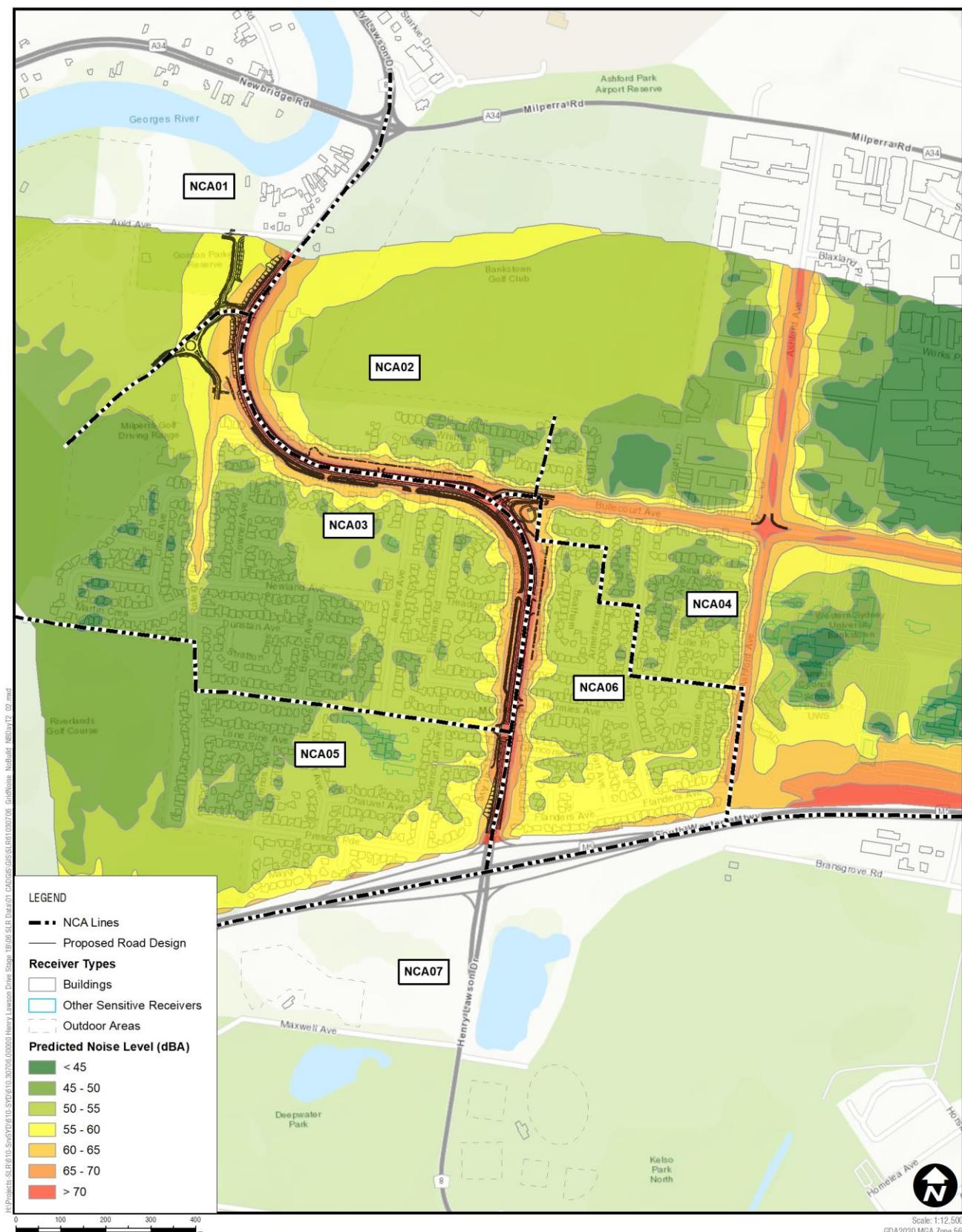
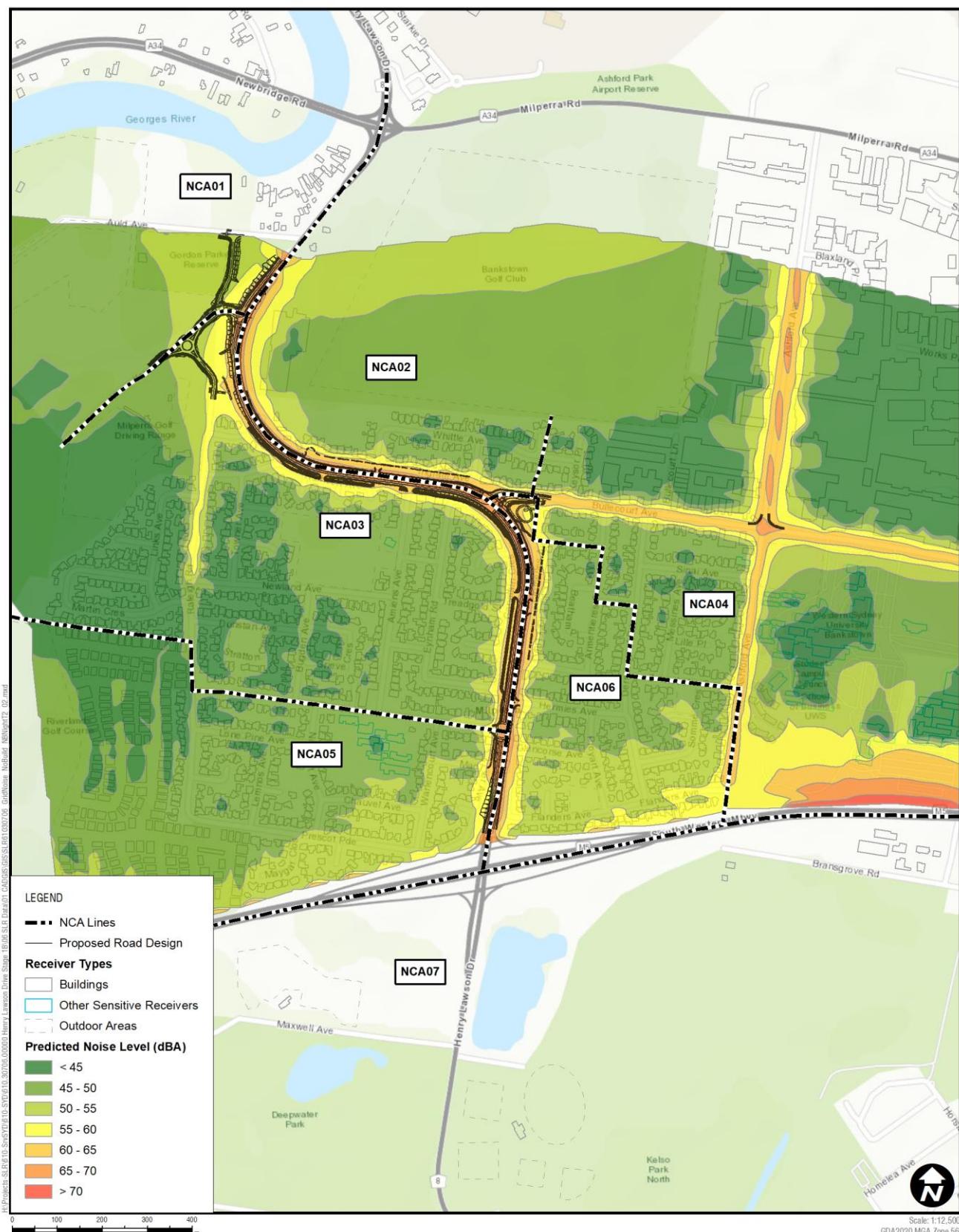


Figure 6 Predicted Noise Levels No Build 2041 Night-time



Note: Contours are at 1.5 m height and are free field.

Figure 7 Predicted Noise Levels Build 2041 Daytime

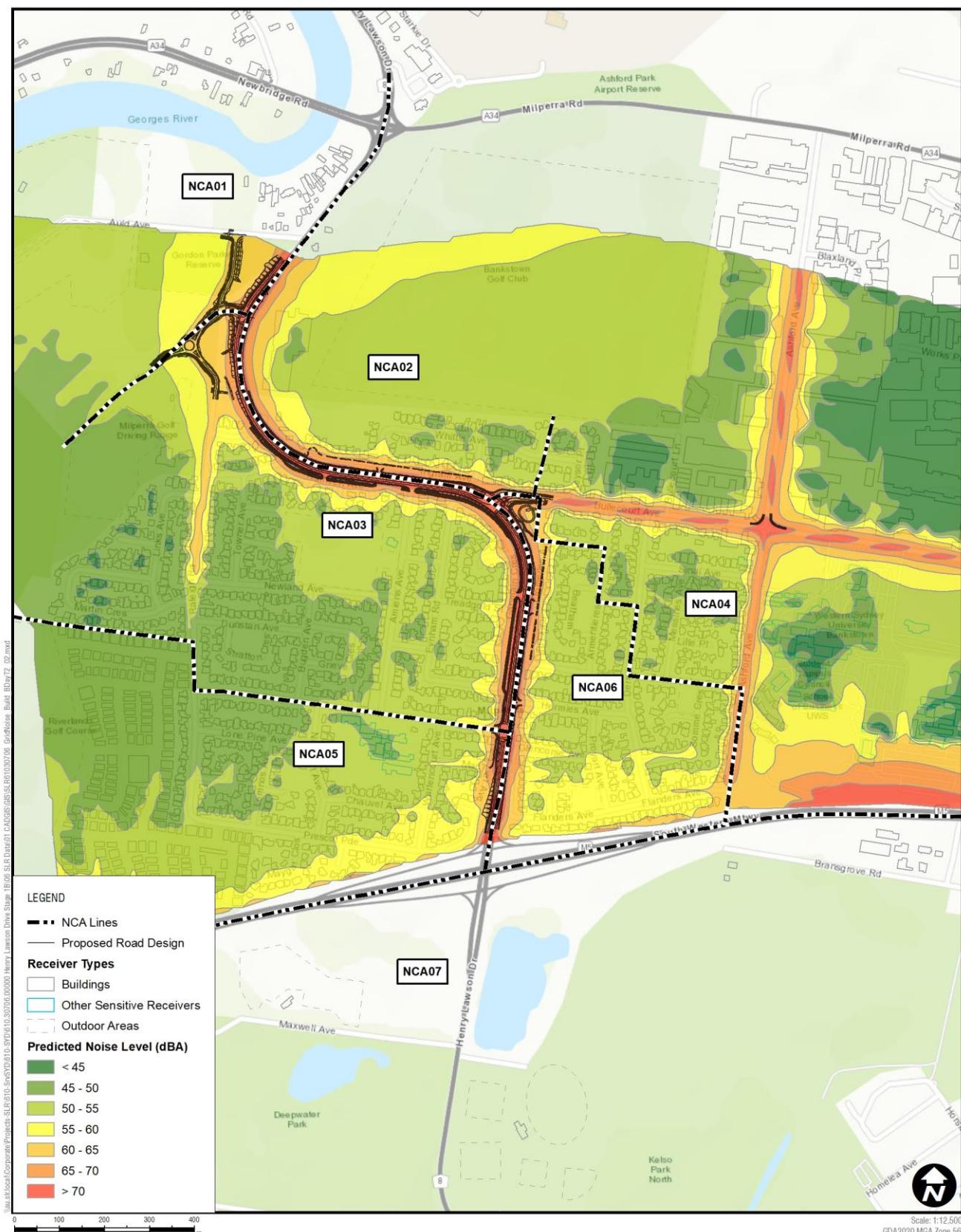
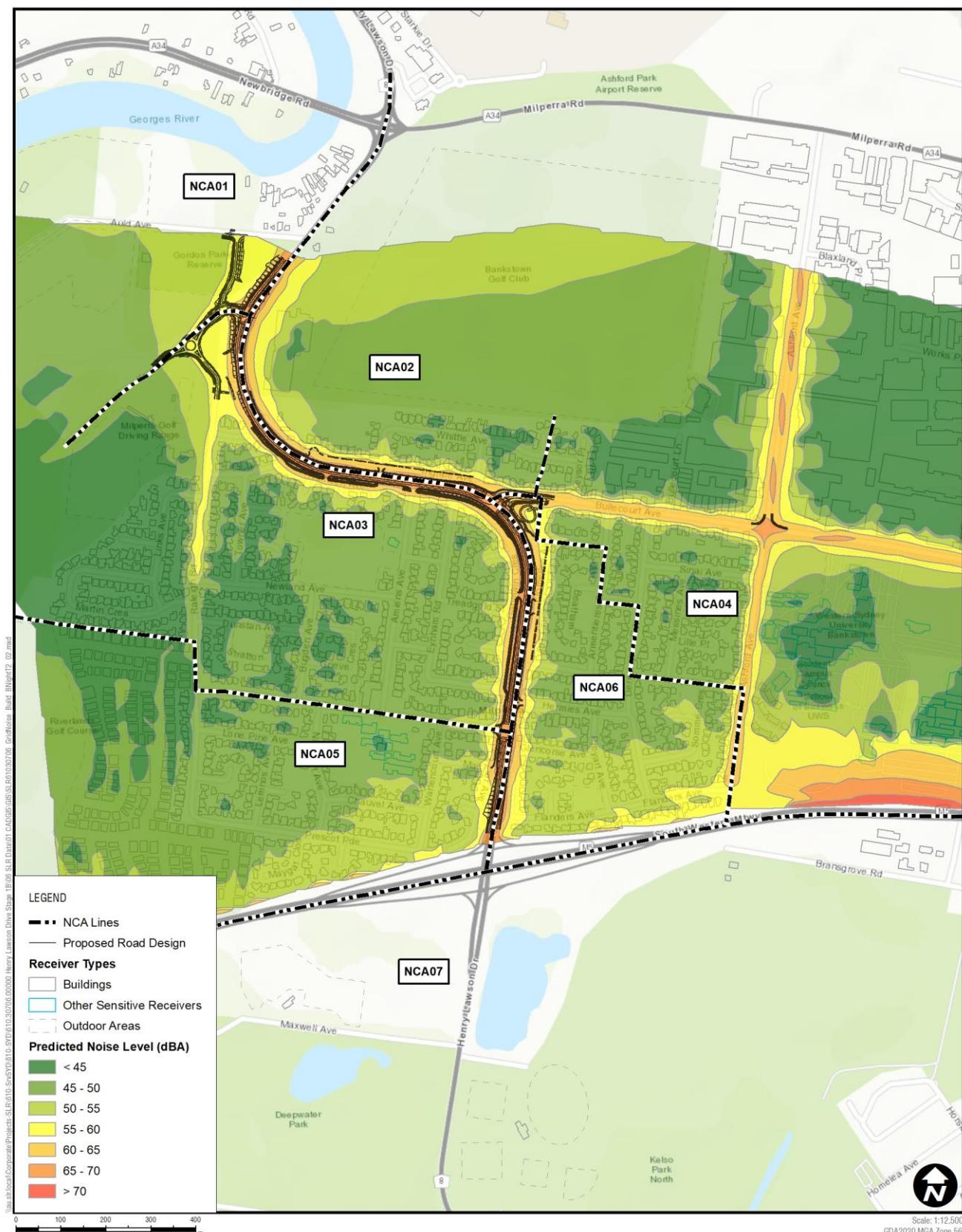


Figure 8 Predicted Noise Levels Build 2041 Night-time



Note: Contours are at 1.5 m height and are free field.

Existing Maximum Noise Levels

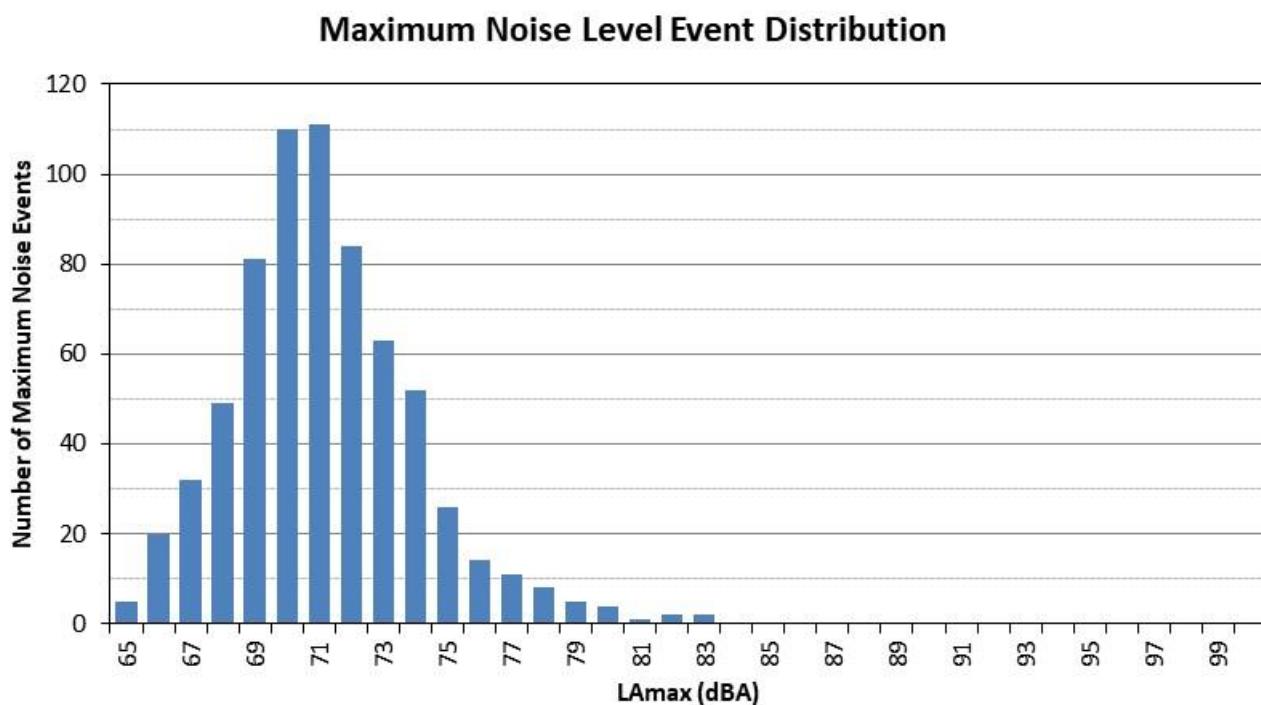
L01 – 5 Auld Avenue, Milperra

Table 4 L01 Maximum Noise Level Events

Monitoring Date	Number of Maximum Noise Events per Hour (L _{Amax} Noise Levels, dBA)										
	00:00 01:00	01:00 02:00	02:00 03:00	03:00 04:00	04:00 05:00	05:00 06:00	06:00 07:00	22:00 23:00	23:00 00:00	Total/ (Range)	
22-Mar-22	n/a ¹	n/a ¹	n/a ¹	n/a ¹	n/a ¹	n/a ¹	n/a ¹	5 (73-74)	6 (72-76)	11 (72-76)	
23-Mar-22	9 (71-75)	14 (69-75)	12 (70-74)	4 (73-78)	4 (76-77)	2 (78-81)	1 (82)	-	6 (71-74)	52 (69-82)	
24-Mar-22	10 (69-75)	12 (70-74)	13 (69-73)	13 (71-74)	6 (74-78)	2 (77-79)	-	2 (74-75)	7 (72-75)	65 (69-79)	
25-Mar-22	7 (71-74)	17 (69-74)	8 (69-79)	11 (71-73)	3 (73-75)	1 (77)	1 (79)	-	1 (76)	49 (69-79)	
26-Mar-22	1 (75)	7 (71-74)	9 (69-73)	6 (70-75)	4 (72-74)	2 (74-75)	1 (74)	1 (75)	-	31 (69-75)	
27-Mar-22	5 (72-74)	3 (70-71)	3 (69-73)	7 (67-72)	11 (66-71)	7 (69-72)	-	5 (71-74)	7 (71-73)	48 (66-74)	
28-Mar-22	10 (68-73)	12 (65-73)	12 (66-73)	11 (69-74)	2 (74)	1 (78)	-	5 (71-75)	5 (71-72)	58 (65-78)	
29-Mar-22	3 (70-72)	8 (67-72)	10 (68-73)	13 (70-74)	1 (76)	-	-	-	2 (73)	37 (67-76)	
30-Mar-22	10 (69-71)	9 (67-72)	13 (68-72)	5 (71-79)	6 (73-80)	1 (76)	-	-	3 (72-74)	47 (67-80)	
31-Mar-22	11 (71-76)	3 (70-77)	11 (69-74)	5 (71-80)	3 (73-74)	-	-	1 (76)	3 (74-75)	37 (69-80)	
1-Apr-22	11 (69-72)	12 (68-72)	10 (67-71)	11 (69-73)	3 (72-76)	1 (78)	1 (82)	2 (75-79)	1 (80)	52 (67-82)	
2-Apr-22	6 (71-76)	9 (70-74)	7 (69-73)	9 (69-72)	11 (70-75)	3 (73-76)	1 (75)	-	5 (75-83)	51 (69-83)	
3-Apr-22	3 (74-77)	3 (67-70)	9 (65-68)	7 (68-74)	8 (66-74)	7 (67-75)	7 (68-72)	3 (72-73)	1 (69)	48 (65-77)	
4-Apr-22	4 (68-72)	7 (66-71)	10 (65-72)	9 (66-75)	10 (69-72)	-	-	2 (73-76)	2 (70-71)	44 (65-76)	
5-Apr-22	5 (70-72)	8 (68-78)	12 (66-72)	12 (67-71)	10 (68-70)	2 (73-74)	1 (76)	n/a ¹	n/a ¹	50 (66-78)	

Note 1: This period was outside of the period of unattended noise monitoring.

Figure 9 L01 Maximum Noise Level Event Distribution of Monitoring Period



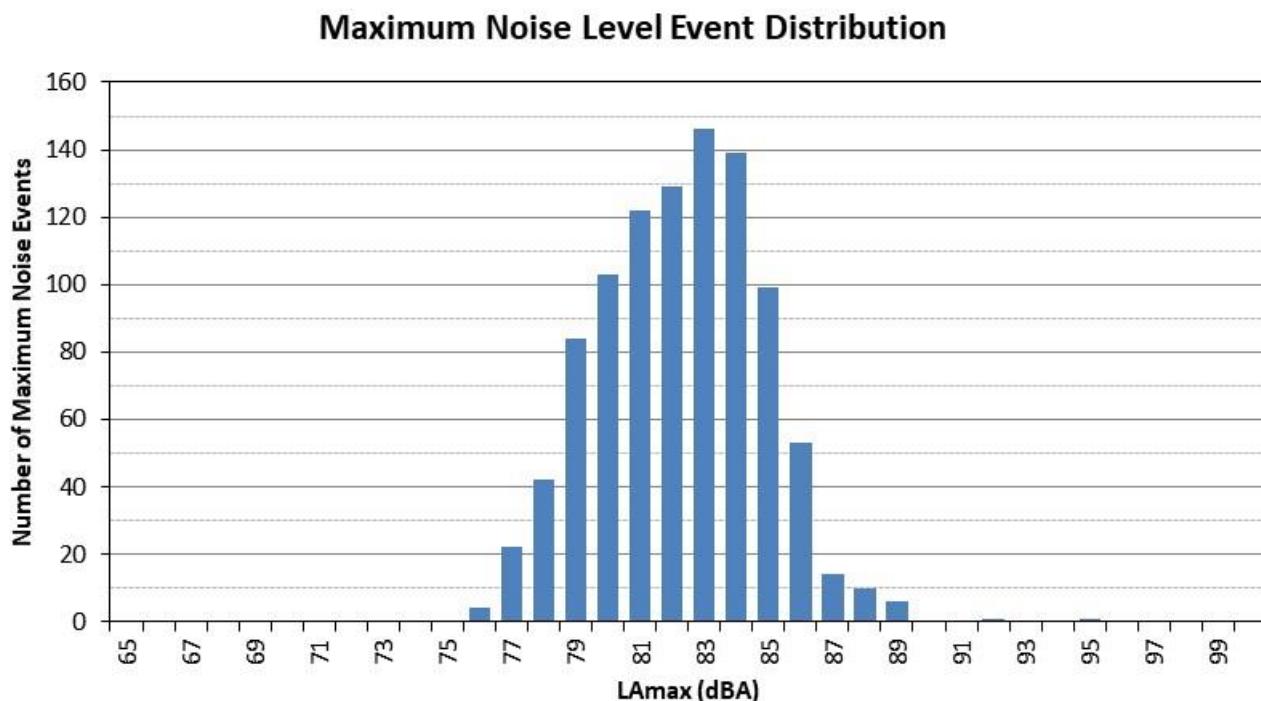
L02 – 503 Henry Lawson Drive, Milperra

Table 5 L02 Maximum Noise Level Events

Monitoring Date	Number of Maximum Noise Events per Hour (L _{Amax} Noise Levels, dBA)										
	00:00 01:00	01:00 02:00	02:00 03:00	03:00 04:00	04:00 05:00	05:00 06:00	06:00 07:00	22:00 23:00	23:00 00:00	Total/ (Range)	
22-Mar-22	n/a1	n/a1	n/a1	n/a1	n/a1	n/a1	n/a1	6 (83-85)	13 (81-88)	19 (81-88)	
23-Mar-22	15 (80-83)	19 (78-83)	17 (79-86)	19 (81-85)	6 (84-87)	-	-	4 (83-89)	11 (81-83)	91 (78-89)	
24-Mar-22	16 (79-86)	18 (79-84)	17 (79-85)	12 (82-86)	2 (85)	-	-	2 (86-88)	7 (83-86)	74 (79-88)	
25-Mar-22	13 (81-85)	18 (81-85)	14 (78-85)	16 (82-87)	2 (85-86)	-	-	1 (86)	1 (92)	65 (78-92)	
26-Mar-22	-	8 (81-88)	6 (80-86)	9 (81-87)	6 (83-87)	6 (86)	2 (87-89)	2 (85-86)	1 (85)	40 (80-89)	
27-Mar-22	4 (83-88)	5 (80-85)	10 (79-81)	12 (78-85)	13 (78-87)	12 (81-86)	7 (82-85)	3 (84-86)	5 (83-85)	71 (78-88)	
28-Mar-22	11 (81-88)	14 (78-85)	13 (78-88)	19 (82-86)	8 (85-86)	1 (88)	-	7 (82-84)	5 (82-84)	78 (78-88)	
29-Mar-22	1 (83)	7 (79-85)	11 (81-88)	16 (83-89)	5 (85-87)	-	-	6 (84-86)	5 (84-86)	51 (79-89)	
30-Mar-22	11 (81-84)	17 (79-84)	12 (80-86)	15 (82-87)	7 (84-86)	-	-	-	3 (84-85)	65 (79-87)	
31-Mar-22	10 (82-85)	-	16 (82-85)	16 (83-86)	3 (85-87)	2 (88-89)	-	1 (86)	4 (84-89)	52 (82-89)	
1-Apr-22	20 (81-86)	14 (78-86)	14 (78-86)	12 (81-86)	9 (84-86)	-	-	1 (85)	2 (85)	72 (78-86)	
2-Apr-22	6 (81-84)	16 (80-86)	12 (78-84)	11 (78-82)	7 (81-86)	8 (83-87)	2 (85-86)	-	2 (85-95)	64 (78-95)	
3-Apr-22	3 (85-88)	8 (80-86)	10 (77-82)	9 (78-87)	16 (76-81)	14 (77-85)	10 (79-84)	2 (84-85)	5 (82-84)	77 (76-88)	
4-Apr-22	6 (80-84)	9 (77-82)	17 (77-82)	21 (76-82)	17 (81-85)	10 (84-85)	-	3 (83-84)	5 (82-84)	88 (76-85)	
5-Apr-22	6 (81-83)	11 (79-84)	15 (79-85)	16 (79-86)	14 (80-85)	5 (84-86)	1 (89)	n/a1	n/a1	68 (79-89)	

Note 1: This period was outside of the period of unattended noise monitoring.

Figure 10 L02 Maximum Noise Level Event Distribution of Monitoring Period



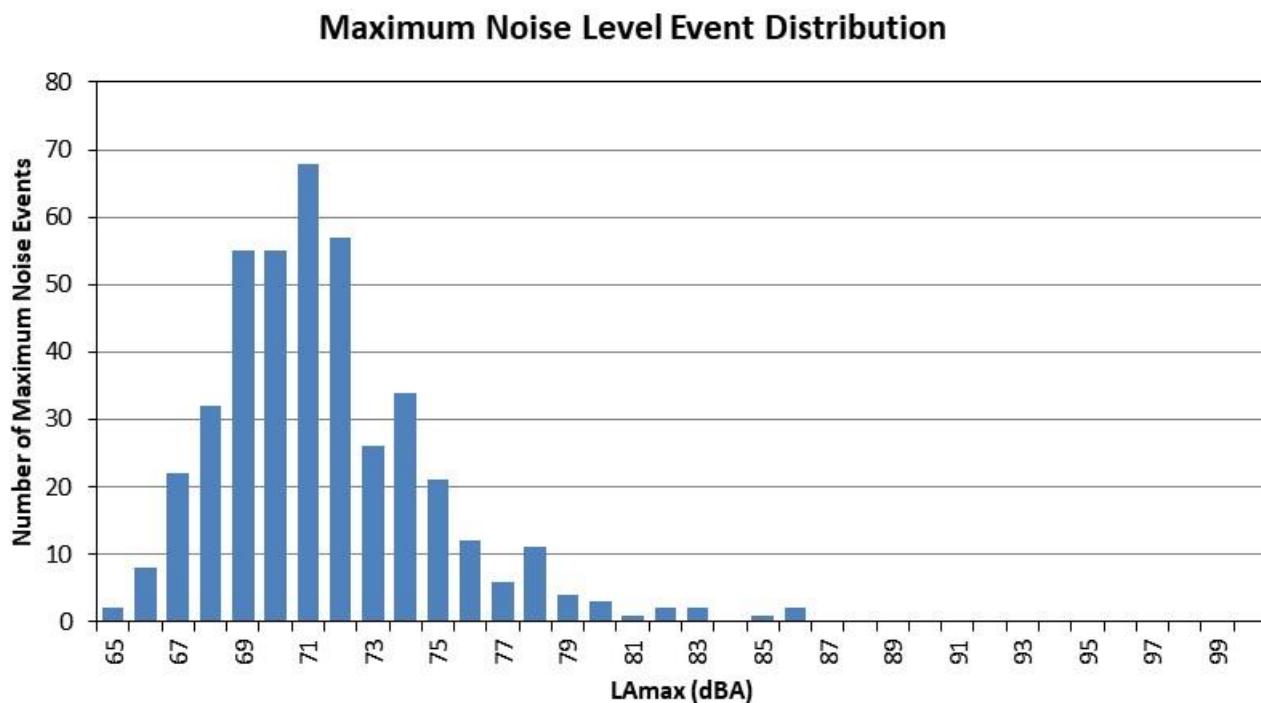
L03 – 20 Ganmain Crescent, Milperra

Table 6 L03 Maximum Noise Level Events

Monitoring Date	Number of Maximum Noise Events per Hour (L _{Amax} Noise Levels, dBA)										
	00:00 01:00	01:00 02:00	02:00 03:00	03:00 04:00	04:00 05:00	05:00 06:00	06:00 07:00	22:00 23:00	23:00 00:00	Total/ (Range)	
22-Mar-22	n/a1	n/a1	n/a1	n/a1	n/a1	n/a1	n/a1	3 (72-73)	6 (71-73)	9 (71-73)	
23-Mar-22	4 (69-76)	7 (68-70)	9 (70-72)	3 (72-74)	4 (74-75)	2 (78)	1 (85)	3 (72-74)	4 (70-72)	37 (68-85)	
24-Mar-22	7 (68-71)	7 (69-72)	3 (70-72)	2 (72)	3 (74-78)	1 (78)	2 (78-79)	5 (73-75)	1 (71)	31 (68-79)	
25-Mar-22	3 (70-72)	7 (69-73)	4 (69-79)	4 (72)	2 (74)	1 (76)	-	1 (75)	1 (76)	23 (69-79)	
26-Mar-22	-	2 (70-71)	3 (68-71)	-	-	5 (75-76)	-	2 (75)	1 (72)	13 (68-76)	
27-Mar-22	1 (73)	1 (68)	1 (69)	4 (66-68)	6 (67-68)	3 (69-71)	5 (72-76)	3 (72-82)	4 (72-81)	28 (66-82)	
28-Mar-22	8 (69-70)	7 (67-68)	7 (67-70)	3 (72)	3 (74)	1 (78)	-	5 (71-73)	2 (71-72)	36 (67-78)	
29-Mar-22	-	6 (69-71)	8 (69-75)	3 (72)	2 (74-75)	1 (77)	1 (82)	-	-	21 (69-82)	
30-Mar-22	3 (70-72)	5 (68-71)	8 (69-75)	4 (71)	2 (75-76)	3 (79-83)	-	1 (74)	2 (73-74)	28 (68-83)	
31-Mar-22	2 (71)	1 (71)	6 (71-72)	-	2 (74)	1 (77)	1 (80)	3 (73-76)	7 (72-76)	23 (71-80)	
1-Apr-22	6 (70-71)	8 (67-69)	8 (68-72)	6 (70-72)	3 (76-78)	1 (78)	1 (86)	5 (73-75)	3 (75-86)	41 (67-86)	
2-Apr-22	3 (70-72)	3 (69-70)	6 (69-73)	2 (68-69)	7 (71-77)	2 (73-74)	2 (75-76)	-	-	25 (68-77)	
3-Apr-22	3 (72-73)	7 (70-79)	4 (66-68)	3 (67-78)	3 (65-66)	3 (67-70)	5 (69-73)	4 (73-74)	4 (72-76)	36 (65-79)	
4-Apr-22	1 (71)	6 (66-69)	7 (66-70)	7 (67-72)	6 (71-72)	4 (74-75)	1 (78)	2 (73)	4 (72-73)	38 (66-78)	
5-Apr-22	3 (69)	5 (69-71)	6 (68-71)	10 (69-73)	4 (70-71)	5 (74-80)	2 (77)	n/a1	n/a1	35 (68-80)	

Note 1: This period was outside of the period of unattended noise monitoring.

Figure 11 L03 Maximum Noise Level Event Distribution of Monitoring Period



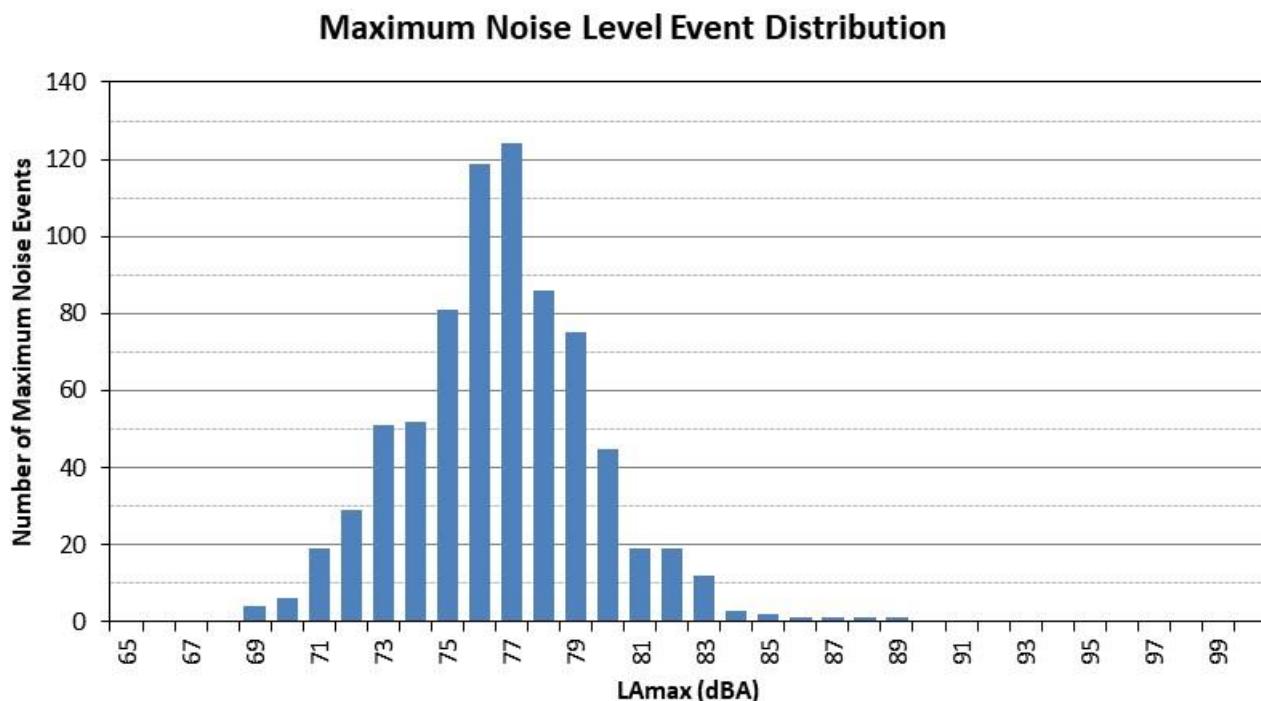
L04 – 23 Hermies Avenue, Milperra

Table 7 L04 Maximum Noise Level Events

Monitoring Date	Number of Maximum Noise Events per Hour (L _{Amax} Noise Levels, dBA)										
	00:00 01:00	01:00 02:00	02:00 03:00	03:00 04:00	04:00 05:00	05:00 06:00	06:00 07:00	22:00 23:00	23:00 00:00	Total/ (Range)	
22-Mar-22	n/a1	n/a1	n/a1	n/a1	n/a1	n/a1	n/a1	5 (79-86)	10 (75-79)	15 (75-86)	
23-Mar-22	7 (74-78)	11 (72-79)	14 (74-82)	10 (76-78)	6 (78-80)	2 (81-82)	2 (83-84)	2 (80-84)	5 (75-77)	59 (72-84)	
24-Mar-22	7 (75-88)	11 (73-78)	12 (75-79)	12 (75-80)	2 (79-82)	1 (83)	-	2 (79)	6 (77-79)	53 (73-88)	
25-Mar-22	11 (76-79)	14 (74-80)	9 (72-78)	12 (76-84)	3 (79-81)	2 (85-87)	-	2 (79-85)	-	53 (72-87)	
26-Mar-22	1 (81)	7 (75-80)	5 (75-76)	8 (75-81)	-	6 (81-83)	3 (80)	2 (81-89)	2 (79-80)	34 (75-89)	
27-Mar-22	4 (76-79)	1 (74)	5 (74-75)	8 (72-77)	9 (71-78)	9 (74-81)	7 (76-79)	3 (77-78)	3 (78)	49 (71-81)	
28-Mar-22	7 (75-78)	13 (72-79)	10 (74-77)	14 (77-82)	6 (79-83)	5 (82)	-	6 (76-80)	3 (76-80)	64 (72-83)	
29-Mar-22	6 (75-77)	5 (74-79)	13 (75-80)	12 (77-82)	5 (79-82)	-	-	2 (78-80)	-	43 (74-82)	
30-Mar-22	8 (76-77)	13 (73-77)	10 (74-78)	9 (76-79)	4 (79-81)	1 (82)	-	5 (79-81)	1 (79)	51 (73-82)	
31-Mar-22	5 (76-79)	9 (75-81)	13 (76-80)	8 (77-80)	6 (78-80)	1 (82)	-	3 (78-82)	5 (77-78)	50 (75-82)	
1-Apr-22	10 (75-80)	9 (72-79)	7 (73-80)	13 (75-79)	6 (78-82)	1 (83)	-	3 (78)	-	49 (72-83)	
2-Apr-22	3 (75-76)	10 (73-78)	10 (73-78)	10 (72-76)	7 (76-78)	3 (77-83)	2 (79-83)	-	-	45 (72-83)	
3-Apr-22	3 (76-79)	3 (73-74)	6 (71-73)	11 (70-77)	14 (69-76)	8 (70-77)	5 (73-79)	5 (78-80)	5 (77-80)	60 (69-80)	
4-Apr-22	4 (75-80)	8 (71-75)	10 (71-76)	10 (71-76)	11 (77-81)	9 (78-80)	-	5 (77-81)	3 (76-77)	60 (71-81)	
5-Apr-22	8 (74-76)	11 (74-80)	12 (73-80)	14 (73-77)	11 (75-78)	7 (79-80)	2 (82)	n/a1	n/a1	65 (73-82)	

Note 1: This period was outside of the period of unattended noise monitoring.

Figure 12 L04 Maximum Noise Level Event Distribution of Monitoring Period



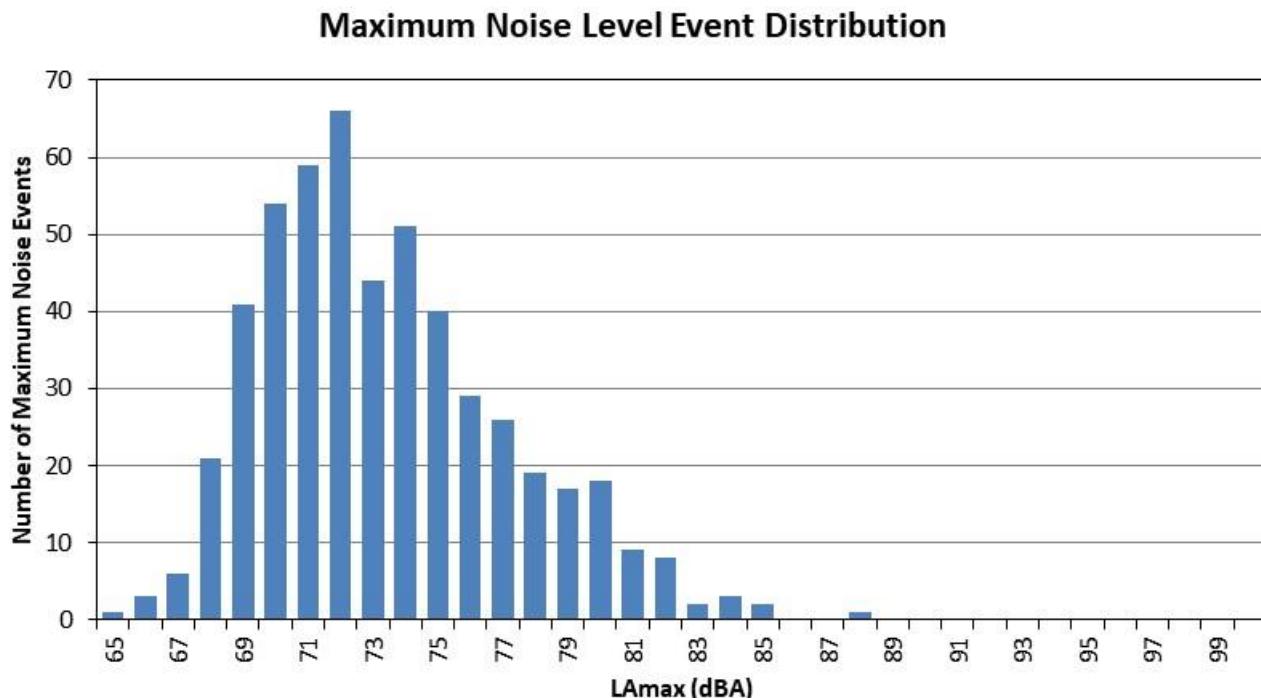
L05 – Bullecourt Avenue, Milperra

Table 8 L05 Maximum Noise Level Events

Monitoring Date	Number of Maximum Noise Events per Hour (L _{Amax} Noise Levels, dBA)										
	00:00 01:00	01:00 02:00	02:00 03:00	03:00 04:00	04:00 05:00	05:00 06:00	06:00 07:00	22:00 23:00	23:00 00:00	Total/ (Range)	
22-Mar-22	n/a1	n/a1	n/a1	n/a1	n/a1	n/a1	n/a1	7 (74-79)	10 (70-76)	17 (70-79)	
23-Mar-22	9 (72-85)	9 (67-79)	10 (71-83)	11 (74-81)	12 (75-80)	1 (81)	1 (82)	7 (73-77)	19 (70-73)	79 (67-85)	
24-Mar-22	15 (65-73)	13 (68-76)	10 (72-81)	15 (72-79)	12 (75-88)	2 (80-81)	1 (81)	6 (75-80)	10 (71-81)	84 (65-88)	
25-Mar-22	13 (68-77)	15 (67-74)	18 (68-75)	12 (74-82)	12 (76-78)	2 (79-80)	3 (82)	5 (74-75)	1 (80)	81 (67-82)	
26-Mar-22	3 (75-82)	14 (71-78)	14 (70-75)	2 (72-74)	-	5 (79-85)	7 (77-84)	5 (73-75)	6 (73-78)	56 (70-85)	
27-Mar-22	13 (71-77)	19 (69-75)	17 (70-79)	20 (68-76)	12 (67-73)	18 (68-75)	13 (72-74)	19 (71-74)	16 (71-78)	147 (67-79)	
28-Mar-22	12 (68-73)	6 (68-73)	10 (68-79)	14 (72-79)	9 (75-80)	3 (80-82)	2 (82-84)	n/a1	n/a1	56 (68-84)	

Note 1: This period was outside of the period of unattended noise monitoring.

Figure 13 L05 Maximum Noise Level Event Distribution of Monitoring Period



Receiver Assessment Table

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation				
									At Opening (2026)		Future Design (2036)		No Build		Build		No Build		Build		D		N		D		
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N	
NCA01.OOA.0087.01	NCA01	1	312868	6243513	Other (Outdoor Active)	Gordon Parker Reserve	60	-	P	58	53	59	54	58	53	59	54	-	-	-	-	-	-	-	-	-	-
NCA01.OOA.0088.01	NCA01	1	312561	6243658	Other (Outdoor Active)	Vale Of Ah Reserve	60	-	P	53	49	53	49	53	49	53	50	-	-	-	-	-	-	-	-	-	-
NCA01.OOA.0089.01	NCA01	1	312626	6243501	Other (Outdoor Active)	Vale Of Ah Reserve 2	60	-	P	53	49	53	50	53	49	54	50	-	-	-	-	-	-	-	-	-	-
NCA02.OOA.0325.01	NCA02	1	313647	6243451	Other (Outdoor Active)	Bankstown Golf Club	60	-	P	56	52	56	52	56	52	57	53	-	-	-	-	-	-	-	-	-	-
NCA02.RES.0155.01	NCA02	1	313647	6243018	Residential	61 Bullecourt Av, Milperra Nsw 2214	60	55	P	68	62	69	63	68	62	69	63	-	-	Y	Y	Y	Y	Y	Y	Y	Y
NCA02.RES.0156.01	NCA02	1	313631	6243019	Residential	63 Bullecourt Av, Milperra Nsw 2214	60	55	P	68	62	69	63	68	62	69	63	-	-	Y	Y	Y	Y	Y	Y	Y	Y
NCA02.RES.0157.01	NCA02	1	313619	6243024	Residential	65 Bullecourt Av, Milperra Nsw 2214	60	55	P	67	61	68	62	67	61	68	62	-	-	Y	Y	Y	Y	Y	Y	Y	Y
NCA02.RES.0158.01	NCA02	1	313601	6243024	Residential	67 Bullecourt Av, Milperra Nsw 2214	60	55	P	69	63	69	63	69	63	70	64	-	-	Y	Y	Y	Y	Y	Y	Y	Y
NCA02.RES.0159.01	NCA02	1	313587	6243029	Residential	69 Bullecourt Av, Milperra Nsw 2214	60	55	P	68	62	68	62	68	62	68	62	-	-	Y	Y	Y	Y	Y	Y	Y	Y
NCA02.RES.0160.01	NCA02	1	313572	6243029	Residential	71 Bullecourt Av, Milperra Nsw 2214	60	55	P	69	63	69	63	69	63	69	63	-	-	Y	Y	Y	Y	Y	Y	Y	Y
NCA02.RES.0171.01	NCA02	1	313082	6243170	Residential	497 Henry Lawson Dr, Milperra Nsw 2214	60	55	P	65	60	65	60	65	60	65	60	-	-	Y	Y	Y	Y	Y	Y	Y	Y
NCA02.RES.0172.01	NCA02	1	313094	6243144	Residential	499 Henry Lawson Dr, Milperra Nsw 2214	60	55	P	68	63	68	63	68	63	68	63	-	-	Y	Y	Y	Y	Y	Y	Y	Y
NCA02.RES.0173.01	NCA02	1	313106	6243124	Residential	503 Henry Lawson Dr, Milperra Nsw 2214	60	55	P	69	64	69	64	69	64	69	64	-	-	Y	Y	Y	Y	Y	Y	Y	Y
NCA02.RES.0187.01	NCA02	1	313552	6243071	Residential	2 Ingram Av, Milperra Nsw 2214	60	55	P	58	53	58	53	58	53	58	53	-	-	-	-	-	-	-	-	-	-
NCA02.RES.0188.01	NCA02	1	313553	6243058	Residential	4 Ingram Av, Milperra Nsw 2214	60	55	P	60	55	60	55	60	56	60	55	-	-	-	-	-	-	-	-	-	-
NCA02.RES.0189.01	NCA02	1	313550	6243043	Residential	6 Ingram Av, Milperra Nsw 2214	60	55	P	62	57	62	57	62	57	62	57	-	-	-	-	-	-	-	-	-	-
NCA02.RES.0190.01	NCA02	1	313548	6243028	Residential	8 Ingram Av, Milperra Nsw 2214	60	55	P	69	64	69	64	69	64	69	64	-	-	Y	Y	Y	Y	Y	Y	Y	Y
NCA02.RES.0191.01	NCA02	1	313550	6243095	Residential	2A Ingram Av, Milperra Nsw 2214	60	55	P	56	51	55	51	56	51	56	51	-	-	-	-	-	-	-	-	-	-
NCA02.RES.0192.01	NCA02	1	313508	6243102	Residential	1 Ingram Av, Milperra Nsw 2214	60	55	P	53	49	54	49	54	49	54	49	-	-	-	-	-	-	-	-	-	-
NCA02.RES.0193.01	NCA02	1	313508	6243084	Residential	3 Ingram Av, Milperra Nsw 2214	60	55	P	57	52	57	52	57	53	57	53	-	-	-	-	-	-	-	-	-	-
NCA02.RES.0194.01	NCA02	1	313507	6243068	Residential	5 Ingram Av, Milperra Nsw 2214	60	55	P	61	56	61	56	61	56	61	56	-	-	-	-	-	-	-	-	-	-
NCA02.RES.0195.01	NCA02	1	313501	6243052	Residential	7 Ingram Av, Milperra Nsw 2214	60	55	P	67	62	67	62	67	62	67	62	-	-	Y	Y	Y	Y	Y	Y	Y	Y
NCA02.RES.0196.01	NCA02	1	313482	6243063	Residential	11 Ingram Av, Milperra Nsw 2214	60	55	P	67	62	67	62	67	62	67	62	-	-	Y	Y	Y	Y	Y	Y	Y	Y
NCA02.RES.0197.01	NCA02	1	313464	6243061	Residential	13 Ingram Av, Milperra Nsw 2214	60	55	P	67	62	67	62	67	62	67	62	-	-	Y	Y	Y	Y	Y	Y	Y	Y
NCA02.RES.0198.01	NCA02	1	313453	6243066	Residential	15 Ingram Av, Milperra Nsw 2214	60	55	P	67	62	67	62	67	62	67	62	-	-	Y	Y	Y	Y	Y	Y	Y	Y
NCA02.RES.0199.01	NCA02	1	313432	6243071	Residential	17 Ingram Av, Milperra Nsw 2214	60	55	P	67	62	67	62	67	62	67	62	-	-	Y	Y	Y	Y	Y	Y	Y	Y
NCA02.RES.0200.01	NCA02	1	313415	6243068	Residential	19 Ingram Av, Milperra Nsw 2214	60	55	P	67	62	67	62	67	62	67	62	-	-	Y	Y	Y	Y	Y	Y	Y	Y
NCA02.RES.0201.01	NCA02	1	313401	6243069	Residential	21 Ingram Av, Milperra Nsw 2214	60	55	P	67	62	67	62	67	62	67	62	-	-	Y	Y	Y	Y	Y	Y	Y	Y
NCA02.RES.0202.01	NCA02	1	313388	6243074	Residential	23 Ingram Av, Milperra Nsw 2214	60	55	P	67	62	67	62	67	62	67	62	-	-	Y	Y	Y	Y	Y	Y	Y	Y
NCA02.RES.0203.01	NCA02	1	313370	6243076	Residential	25 Ingram Av, Milperra Nsw 2214	60																				

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation			
									At Opening (2026)				Future Design (2036)				D		N		D		N			
									No Build		Build		No Build		Build		D		N		D		N			
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N		
NCA02.RES.0283.01	NCA02	1	313295	6243151	Residential	62 Whittle Av, Milperra NSW 2214	60	55	P	55	50	55	50	55	50	55	51	-	-	-	-	-	-	-	-	-
NCA02.RES.0284.01	NCA02	1	313291	6243135	Residential	64 Whittle Av, Milperra NSW 2214	60	55	P	56	52	56	52	56	52	57	52	-	-	-	-	-	-	-	-	-
NCA02.RES.0285.01	NCA02	1	313292	6243121	Residential	66 Whittle Av, Milperra NSW 2214	60	55	P	57	52	57	53	57	53	58	53	-	-	-	-	-	-	-	-	-
NCA02.RES.0286.01	NCA02	1	313290	6243106	Residential	68 Whittle Av, Milperra NSW 2214	60	55	P	58	54	59	54	58	54	59	54	-	-	-	-	-	-	-	-	-
NCA02.RES.0287.01	NCA02	1	313441	6243149	Residential	1/44 Whittle Av, Milperra NSW 2214	60	55	P	54	49	54	49	54	49	54	49	-	-	-	-	-	-	-	-	-
NCA02.RES.0288.01	NCA02	1	313375	6243165	Residential	1/52 Whittle Av, Milperra NSW 2214	60	55	P	53	49	53	49	53	49	54	50	-	-	-	-	-	-	-	-	-
NCA02.RES.0289.01	NCA02	1	313346	6243173	Residential	2/56 Whittle Av, Milperra NSW 2214	60	55	P	55	51	55	51	55	51	55	51	-	-	-	-	-	-	-	-	-
NCA02.RES.0290.01	NCA02	1	313603	6243133	Residential	24A Whittle Av, Milperra NSW 2214	60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA02.RES.0294.01	NCA02	1	313658	6243058	Residential	9 Whittle Av, Milperra NSW 2214	60	55	P	54	50	55	50	54	50	55	50	-	-	-	-	-	-	-	-	-
NCA02.RES.0295.01	NCA02	1	313645	6243060	Residential	11 Whittle Av, Milperra NSW 2214	60	55	P	55	50	56	51	56	51	56	51	-	-	-	-	-	-	-	-	-
NCA02.RES.0296.01	NCA02	1	313629	6243063	Residential	13 Whittle Av, Milperra NSW 2214	60	55	P	56	51	56	51	56	51	56	51	-	-	-	-	-	-	-	-	-
NCA02.RES.0297.01	NCA02	1	313614	6243067	Residential	15 Whittle Av, Milperra NSW 2214	60	55	P	55	50	55	50	55	50	56	51	-	-	-	-	-	-	-	-	-
NCA02.RES.0298.01	NCA02	1	313600	6243081	Residential	17 Whittle Av, Milperra NSW 2214	60	55	P	54	49	54	49	54	49	55	50	-	-	-	-	-	-	-	-	-
NCA02.RES.0299.01	NCA02	1	313585	6243082	Residential	19 Whittle Av, Milperra NSW 2214	60	55	P	54	49	54	49	54	49	55	50	-	-	-	-	-	-	-	-	-
NCA02.RES.0300.01	NCA02	1	313569	6243093	Residential	21 Whittle Av, Milperra NSW 2214	60	55	P	53	48	53	48	53	48	53	48	-	-	-	-	-	-	-	-	-
NCA02.RES.0301.01	NCA02	1	313486	6243102	Residential	27 Whittle Av, Milperra NSW 2214	60	55	P	55	50	55	51	55	50	56	51	-	-	-	-	-	-	-	-	-
NCA02.RES.0302.01	NCA02	1	313472	6243103	Residential	29 Whittle Av, Milperra NSW 2214	60	55	P	57	52	57	52	57	52	57	52	-	-	-	-	-	-	-	-	-
NCA02.RES.0303.01	NCA02	1	313457	6243104	Residential	31 Whittle Av, Milperra NSW 2214	60	55	P	56	52	56	52	56	52	57	52	-	-	-	-	-	-	-	-	-
NCA02.RES.0304.01	NCA02	1	313436	6243107	Residential	33 Whittle Av, Milperra NSW 2214	60	55	P	55	50	55	51	55	51	56	51	-	-	-	-	-	-	-	-	-
NCA02.RES.0305.01	NCA02	1	313424	6243112	Residential	35 Whittle Av, Milperra NSW 2214	60	55	P	55	50	55	51	55	50	56	51	-	-	-	-	-	-	-	-	-
NCA02.RES.0306.01	NCA02	1	313407	6243111	Residential	37 Whittle Av, Milperra NSW 2214	60	55	P	55	50	55	50	55	50	55	50	-	-	-	-	-	-	-	-	-
NCA02.RES.0307.01	NCA02	1	313392	6243111	Residential	39 Whittle Av, Milperra NSW 2214	60	55	P	56	51	56	51	56	51	56	51	-	-	-	-	-	-	-	-	-
NCA02.RES.0308.01	NCA02	1	313376	6243117	Residential	41 Whittle Av, Milperra NSW 2214	60	55	P	55	51	56	51	55	51	56	51	-	-	-	-	-	-	-	-	-
NCA02.RES.0309.01	NCA02	1	313361	6243116	Residential	43 Whittle Av, Milperra NSW 2214	60	55	P	56	51	56	52	56	52	57	52	-	-	-	-	-	-	-	-	-
NCA02.RES.0310.01	NCA02	1	313342	6243126	Residential	47 Whittle Av, Milperra NSW 2214	60	55	P	54	50	54	50	54	50	55	50	-	-	-	-	-	-	-	-	-
NCA02.RES.0311.01	NCA02	1	313337	6243106	Residential	49 Whittle Av, Milperra NSW 2214	60	55	P	59	54	59	54	59	54	59	54	-	-	-	-	-	-	-	-	-
NCA02.RES.0312.01	NCA02	1	313335	6243095	Residential	51 Whittle Av, Milperra NSW 2214	60	55	P	61	56	61	56	61	56	61	56	-	-	-	-	-	-	-	-	-
NCA02.RES.0313.01	NCA02	1	313336	6243077	Residential	53 Whittle Av, Milperra NSW 2214	60	55	P	67	62	67	62	67	62	67	62	-	-	Y	Y	Y	Y	Y	Y	-
NCA02.RES.0314.01	NCA02	1	313444	6243167	Residential	2/44 Whittle Av, Milperra NSW 2214	60	55	P	53	49	53	49	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA02.RES.0315.01	NCA02	1	313391	6243167	Residential	2/50 Whittle Av, Milperra NSW 2214	60	55	P	53	49	53	49	53	49	54	49</									

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation					
									At Opening (2026)				Future Design (2036)				D		N		D		N					
									No Build		Build		No Build		Build		D		N		D		N					
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N				
NCA03.RES.0356.01	NCA03	1	313375	6242793	Residential	23 Amiens Av, Milperra Nsw 2214			60	55	P	54	49	54	49	54	49	54	50	-	-	-	-	-	-	-		
NCA03.RES.0357.01	NCA03	1	313378	6242780	Residential	25 Amiens Av, Milperra Nsw 2214			60	55	P	54	49	54	49	54	50	54	50	-	-	-	-	-	-	-		
NCA03.RES.0358.01	NCA03	1	313374	6242763	Residential	27 Amiens Av, Milperra Nsw 2214			60	55	P	54	50	54	50	54	50	55	50	-	-	-	-	-	-	-		
NCA03.RES.0359.01	NCA03	1	313374	6242748	Residential	29 Amiens Av, Milperra Nsw 2214			60	55	P	54	49	54	49	54	49	54	50	-	-	-	-	-	-	-		
NCA03.RES.0360.01	NCA03	1	313369	6242734	Residential	31 Amiens Av, Milperra Nsw 2214			60	55	P	53	49	53	49	53	49	54	49	-	-	-	-	-	-	-		
NCA03.RES.0361.01	NCA03	1	313364	6242718	Residential	33 Amiens Av, Milperra Nsw 2214			60	55	P	53	49	54	49	54	50	54	50	-	-	-	-	-	-	-		
NCA03.RES.0362.01	NCA03	1	313362	6242699	Residential	35 Amiens Av, Milperra Nsw 2214			60	55	P	53	49	53	49	53	49	54	49	-	-	-	-	-	-	-		
NCA03.RES.0363.01	NCA03	1	313360	6242681	Residential	37 Amiens Av, Milperra Nsw 2214			60	55	P	54	50	54	50	54	50	54	50	-	-	-	-	-	-	-		
NCA03.RES.0364.01	NCA03	1	313348	6242637	Residential	39 Amiens Av, Milperra Nsw 2214			60	55	P	53	49	53	49	53	49	53	49	-	-	-	-	-	-	-		
NCA03.RES.0365.01	NCA03	1	313352	6242615	Residential	41 Amiens Av, Milperra Nsw 2214			60	55	P	54	50	54	50	54	50	54	50	-	-	-	-	-	-	-		
NCA03.RES.0366.01	NCA03	1	313349	6242602	Residential	43 Amiens Av, Milperra Nsw 2214			60	55	P	54	50	54	50	54	50	54	50	-	-	-	-	-	-	-		
NCA03.RES.0367.01	NCA03	1	313347	6242587	Residential	45 Amiens Av, Milperra Nsw 2214			60	55	P	54	50	54	50	55	51	55	51	-	-	-	-	-	-	-		
NCA03.RES.0368.01	NCA03	1	313347	6242571	Residential	47 Amiens Av, Milperra Nsw 2214			60	55	P	55	50	55	51	55	51	55	51	-	-	-	-	-	-	-		
NCA03.RES.0369.01	NCA03	1	313344	6242556	Residential	49 Amiens Av, Milperra Nsw 2214			60	55	P	53	49	53	49	54	50	54	50	-	-	-	-	-	-	-		
NCA03.RES.0370.01	NCA03	1	313400	6242976	Residential	1A Amiens Av, Milperra Nsw 2214			60	55	P	61	56	62	56	61	56	62	57	-	-	-	-	-	-	-		
NCA03.RES.0371.01	NCA03	1	313396	6242945	Residential	3A Amiens Av, Milperra Nsw 2214			60	55	P	57	52	57	52	57	52	58	53	-	-	-	-	-	-	-		
NCA03.RES.0372.01	NCA03	1	312975	6243102	Residential	4 Borella Rd, Milperra Nsw 2214			60	55	P	57	52	57	52	57	52	58	53	-	-	-	-	-	-	-		
NCA03.RES.0373.01	NCA03	1	312990	6243098	Residential	6 Borella Rd, Milperra Nsw 2214			60	55	P	60	55	60	55	60	55	60	55	-	-	-	-	-	-	-		
NCA03.RES.0374.01	NCA03	1	313009	6243104	Residential	8 Borella Rd, Milperra Nsw 2214			60	55	P	63	58	64	58	63	58	64	59	-	-	-	-	-	-	-		
NCA03.RES.0375.01	NCA03	1	313030	6243106	Residential	10 Borella Rd, Milperra Nsw 2214			60	55	P	68	63	69	64	68	63	69	64	-	-	Y	Y	Y	Y	Y		
NCA03.RES.0376.01	NCA03	1	312954	6243161	Residential	1 Borella Rd, Milperra Nsw 2214			60	55	P	63	58	63	58	63	58	63	58	-	-	-	-	-	-	-		
NCA03.RES.0377.01	NCA03	1	312967	6243157	Residential	3 Borella Rd, Milperra Nsw 2214			60	55	P	63	58	63	58	63	58	63	58	-	-	-	-	-	-	-		
NCA03.RES.0378.01	NCA03	1	312984	6243153	Residential	5 Borella Rd, Milperra Nsw 2214			60	55	P	63	58	64	59	63	58	64	59	-	-	-	-	-	-	-		
NCA03.RES.0379.01	NCA03	1	312997	6243152	Residential	7 Borella Rd, Milperra Nsw 2214			60	55	P	67	62	69	63	67	62	69	64	-	-	Y	Y	Y	Y	Y		
NCA03.RES.0380.01	NCA03	1	313159	6242579	Residential	2 Bugden Av, Milperra Nsw 2214			60	55	P	52	48	52	48	52	49	53	49	-	-	-	-	-	-	-		
NCA03.RES.0381.01	NCA03	1	313164	6242670	Residential	4 Bugden Av, Milperra Nsw 2214			60	55	P	50	46	50	46	50	46	51	46	-	-	-	-	-	-	-		
NCA03.RES.0382.01	NCA03	1	313171	6242685	Residential	6 Bugden Av, Milperra Nsw 2214			60	55	P	50	46	50	46	50	47	50	46	51	47	-	-	-	-	-	-	-
NCA03.RES.0383.01	NCA03	1	313178	6242751	Residential	24 Bugden Av, Milperra Nsw 2214			60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-		
NCA03.RES.0384.01	NCA03	1	313183	6242768	Residential	26 Bugden Av, Milperra Nsw 2214			60	55	P	51	47	52	48	52	48	52	48	-	-	-	-	-	-	-		
NCA03.RES.0385.01	NCA03	1	313106	6242590	Residential	1 Bugden Av, Milperra Nsw 2214			60	55	P	52	48	52	48	52	48	52	48	-	-	-</						

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation			
									At Opening (2026)				Future Design (2036)				D		N		D		N			
									No Build		Build		No Build		Build		D		N		D		N			
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N		
NCA03.RES.0450.01	NCA03	1	313068	6242726	Residential	21 Dunstan Av, Milperra NSW 2214	60	55	P	52	48	52	48	52	49	53	49	-	-	-	-	-	-	-	-	-
NCA03.RES.0451.01	NCA03	1	313084	6242722	Residential	23 Dunstan Av, Milperra NSW 2214	60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA03.RES.0452.01	NCA03	1	313098	6242727	Residential	25 Dunstan Av, Milperra NSW 2214	60	55	P	51	47	52	47	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA03.RES.0453.01	NCA03	1	313115	6242719	Residential	27 Dunstan Av, Milperra NSW 2214	60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA03.RES.0454.01	NCA03	1	313131	6242720	Residential	29 Dunstan Av, Milperra NSW 2214	60	55	P	52	48	52	48	52	48	53	49	-	-	-	-	-	-	-	-	-
NCA03.RES.0455.01	NCA03	1	313537	6242595	Residential	4 Eynham Rd, Milperra NSW 2214	60	55	P	57	53	58	53	58	53	58	53	-	-	-	-	-	-	-	-	-
NCA03.RES.0456.01	NCA03	1	313522	6242599	Residential	6 Eynham Rd, Milperra NSW 2214	60	55	P	58	53	58	53	58	53	58	53	-	-	-	-	-	-	-	-	-
NCA03.RES.0457.01	NCA03	1	313506	6242601	Residential	8 Eynham Rd, Milperra NSW 2214	60	55	P	57	52	57	52	57	53	57	53	-	-	-	-	-	-	-	-	-
NCA03.RES.0458.01	NCA03	1	313492	6242603	Residential	10 Eynham Rd, Milperra NSW 2214	60	55	P	56	52	57	52	57	52	57	52	-	-	-	-	-	-	-	-	-
NCA03.RES.0459.01	NCA03	1	313477	6242608	Residential	12 Eynham Rd, Milperra NSW 2214	60	55	P	55	51	56	51	56	51	56	51	-	-	-	-	-	-	-	-	-
NCA03.RES.0460.01	NCA03	1	313438	6242604	Residential	16 Eynham Rd, Milperra NSW 2214	60	55	P	54	50	54	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA03.RES.0461.01	NCA03	1	313436	6242622	Residential	18 Eynham Rd, Milperra NSW 2214	60	55	P	53	49	53	49	53	49	54	49	-	-	-	-	-	-	-	-	-
NCA03.RES.0462.01	NCA03	1	313445	6242637	Residential	20 Eynham Rd, Milperra NSW 2214	60	55	P	55	51	55	51	55	51	55	51	-	-	-	-	-	-	-	-	-
NCA03.RES.0463.01	NCA03	1	313446	6242652	Residential	22 Eynham Rd, Milperra NSW 2214	60	55	P	55	50	55	50	55	50	55	51	-	-	-	-	-	-	-	-	-
NCA03.RES.0464.01	NCA03	1	313449	6242668	Residential	24 Eynham Rd, Milperra NSW 2214	60	55	P	55	51	55	51	55	51	56	51	-	-	-	-	-	-	-	-	-
NCA03.RES.0465.01	NCA03	1	313451	6242683	Residential	26 Eynham Rd, Milperra NSW 2214	60	55	P	55	50	55	50	55	51	55	51	-	-	-	-	-	-	-	-	-
NCA03.RES.0466.01	NCA03	1	313451	6242698	Residential	28 Eynham Rd, Milperra NSW 2214	60	55	P	54	50	54	50	55	50	55	50	-	-	-	-	-	-	-	-	-
NCA03.RES.0467.01	NCA03	1	313455	6242712	Residential	30 Eynham Rd, Milperra NSW 2214	60	55	P	54	50	54	50	54	50	55	50	-	-	-	-	-	-	-	-	-
NCA03.RES.0468.01	NCA03	1	313462	6242774	Residential	36 Eynham Rd, Milperra NSW 2214	60	55	P	55	50	55	50	55	50	55	51	-	-	-	-	-	-	-	-	-
NCA03.RES.0469.01	NCA03	1	313468	6242788	Residential	38 Eynham Rd, Milperra NSW 2214	60	55	P	54	50	54	50	54	50	55	50	-	-	-	-	-	-	-	-	-
NCA03.RES.0470.01	NCA03	1	313469	6242819	Residential	40 Eynham Rd, Milperra NSW 2214	60	55	P	54	49	54	49	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA03.RES.0471.01	NCA03	1	313471	6242833	Residential	42 Eynham Rd, Milperra NSW 2214	60	55	P	53	48	53	48	53	48	53	48	-	-	-	-	-	-	-	-	-
NCA03.RES.0472.01	NCA03	1	313472	6242853	Residential	46 Eynham Rd, Milperra NSW 2214	60	55	P	54	50	55	50	55	50	55	50	-	-	-	-	-	-	-	-	-
NCA03.RES.0473.01	NCA03	1	313476	6242868	Residential	48 Eynham Rd, Milperra NSW 2214	60	55	P	55	50	55	50	55	50	55	50	-	-	-	-	-	-	-	-	-
NCA03.RES.0474.01	NCA03	1	313477	6242883	Residential	50 Eynham Rd, Milperra NSW 2214	60	55	P	54	50	55	50	54	50	55	50	-	-	-	-	-	-	-	-	-
NCA03.RES.0475.01	NCA03	1	313491	6242895	Residential	52 Eynham Rd, Milperra NSW 2214	60	55	P	53	49	54	49	53	49	54	49	-	-	-	-	-	-	-	-	-
NCA03.RES.0476.01	NCA03	1	313478	6242897	Residential	52 Eynham Rd, Milperra NSW 2214	60	55	P	53	49	54	49	54	49	54	50	-	-	-	-	-	-	-	-	-
NCA03.RES.0477.01	NCA03	1	313482	6242914	Residential	54 Eynham Rd, Milperra NSW 2214	60	55	P	56	51	56	51	56	51	57	52	-	-	-	-	-	-	-	-	-
NCA03.RES.0478.01	NCA03	1	313516	6242906	Residential	56 Eynham Rd, Milperra NSW 2214	60	55	P	56	51	56	51	56	51	57	51	-	-	-	-	-	-	-	-	-
NCA03.RES.0479.01	NCA03	1	313482	6242940	Residential	58 Eynham Rd, Milperra NSW 2214	60	55	P	56	51	57	52	56	51	57</td										

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation			
									At Opening (2026)				Future Design (2036)				D		N		D		N			
									No Build		Build		No Build		Build		D		N		D		N			
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N		
NCA03.RES.0512.01	NCA03	1	313428	6242864	Residential	55 Eynham Rd, Milperra Nsw 2214			60	55	P	54	49	54	50	54	50	54	50	-	-	-	-	-	-	-
NCA03.RES.0513.01	NCA03	1	313426	6242881	Residential	57 Eynham Rd, Milperra Nsw 2214			60	55	P	55	50	55	50	55	50	55	51	-	-	-	-	-	-	-
NCA03.RES.0514.01	NCA03	1	313430	6242896	Residential	59 Eynham Rd, Milperra Nsw 2214			60	55	P	55	50	55	51	55	50	55	51	-	-	-	-	-	-	-
NCA03.RES.0515.01	NCA03	1	313434	6242909	Residential	61 Eynham Rd, Milperra Nsw 2214			60	55	P	55	50	55	51	55	50	55	51	-	-	-	-	-	-	-
NCA03.RES.0516.01	NCA03	1	313432	6242926	Residential	63 Eynham Rd, Milperra Nsw 2214			60	55	P	56	51	56	52	56	51	57	52	-	-	-	-	-	-	-
NCA03.RES.0517.01	NCA03	1	313437	6242939	Residential	65 Eynham Rd, Milperra Nsw 2214			60	55	P	56	51	56	51	56	51	56	52	-	-	-	-	-	-	-
NCA03.RES.0518.01	NCA03	1	313442	6242955	Residential	67 Eynham Rd, Milperra Nsw 2214			60	55	P	59	54	60	55	59	54	60	55	-	-	-	-	-	-	-
NCA03.RES.0519.01	NCA03	1	313442	6242971	Residential	69 Eynham Rd, Milperra Nsw 2214			60	55	P	63	58	64	59	63	58	64	59	-	-	-	-	-	-	-
NCA03.RES.0520.01	NCA03	1	313444	6242985	Residential	71 Eynham Rd, Milperra Nsw 2214			60	55	P	68	63	70	65	68	63	71	65	Y	Y	Y	Y	Y	Y	Y
NCA03.RES.0521.01	NCA03	1	313562	6242608	Residential	4 Ganmain Cr, Milperra Nsw 2214			60	55	P	67	61	68	62	67	61	68	62	-	-	Y	Y	Y	Y	Y
NCA03.RES.0522.01	NCA03	1	313569	6242674	Residential	8 Ganmain Cr, Milperra Nsw 2214			60	55	P	67	62	68	62	67	62	68	62	-	-	Y	Y	Y	Y	Y
NCA03.RES.0523.01	NCA03	1	313570	6242694	Residential	10 Ganmain Cr, Milperra Nsw 2214			60	55	P	67	61	68	62	67	62	68	62	-	-	Y	Y	Y	Y	Y
NCA03.RES.0524.01	NCA03	1	313574	6242758	Residential	14 Ganmain Cr, Milperra Nsw 2214			60	55	P	66	61	67	62	66	61	67	62	-	-	Y	Y	Y	Y	Y
NCA03.RES.0525.01	NCA03	1	313580	6242772	Residential	16 Ganmain Cr, Milperra Nsw 2214			60	55	P	66	61	67	61	66	61	67	61	-	-	Y	Y	Y	Y	Y
NCA03.RES.0526.01	NCA03	1	313583	6242787	Residential	18 Ganmain Cr, Milperra Nsw 2214			60	55	P	67	62	69	63	68	62	69	63	-	-	Y	Y	Y	Y	Y
NCA03.RES.0527.01	NCA03	1	313582	6242802	Residential	20 Ganmain Cr, Milperra Nsw 2214			60	55	P	66	61	67	61	66	61	67	62	-	-	Y	Y	Y	Y	Y
NCA03.RES.0528.01	NCA03	1	313585	6242817	Residential	22 Ganmain Cr, Milperra Nsw 2214			60	55	P	66	61	67	61	66	61	67	62	-	-	Y	Y	Y	Y	Y
NCA03.RES.0529.01	NCA03	1	313556	6242908	Residential	28 Ganmain Cr, Milperra Nsw 2214			60	55	P	67	61	68	62	67	61	68	62	-	-	Y	Y	Y	Y	Y
NCA03.RES.0530.01	NCA03	1	313544	6242920	Residential	30 Ganmain Cr, Milperra Nsw 2214			60	55	P	67	61	68	62	67	61	68	62	-	-	Y	Y	Y	Y	Y
NCA03.RES.0531.01	NCA03	1	313526	6242933	Residential	32 Ganmain Cr, Milperra Nsw 2214			60	55	P	66	61	67	62	66	61	67	62	-	-	Y	Y	Y	Y	Y
NCA03.RES.0532.01	NCA03	1	313511	6242942	Residential	34 Ganmain Cr, Milperra Nsw 2214			60	55	P	66	61	67	62	66	61	67	62	-	-	Y	Y	Y	Y	Y
NCA03.RES.0533.01	NCA03	1	313549	6242634	Residential	2 Goolagong Ct, Milperra Nsw 2214			60	55	P	62	57	62	57	62	57	63	57	-	-	-	-	-	-	-
NCA03.RES.0534.01	NCA03	1	313519	6242637	Residential	4 Goolagong Ct, Milperra Nsw 2214			60	55	P	57	52	57	52	57	52	57	52	-	-	-	-	-	-	-
NCA03.RES.0535.01	NCA03	1	313481	6242647	Residential	6 Goolagong Ct, Milperra Nsw 2214			60	55	P	56	52	57	52	56	52	57	52	-	-	-	-	-	-	-
NCA03.RES.0536.01	NCA03	1	313494	6242691	Residential	8 Goolagong Ct, Milperra Nsw 2214			60	55	P	56	51	56	51	56	51	56	51	-	-	-	-	-	-	-
NCA03.RES.0537.01	NCA03	1	313533	6242685	Residential	10 Goolagong Ct, Milperra Nsw 2214			60	55	P	58	53	58	53	58	53	58	53	-	-	-	-	-	-	-
NCA03.RES.0538.01	NCA03	1	313565	6242631	Residential	1 Goolagong Ct, Milperra Nsw 2214			60	55	P	67	62	68	63	67	62	68	63	-	-	Y	Y	Y	Y	Y
NCA03.RES.0539.01	NCA03	1	313533	6242636	Residential	3 Goolagong Ct, Milperra Nsw 2214			60	55	P	58	53	59	53	58	53	59	54	-	-	-	-	-	-	-
NCA03.RES.0540.01	NCA03	1	313499	6242638	Residential	5 Goolagong Ct, Milperra Nsw 2214			60	55	P	54	50	55	50	55	50	55	50	-	-	-	-	-	-	-
NCA03.RES.0541.01	NCA03	1	313480	6242676	Residential	7 Goolagong Ct, Milperra Nsw 2214			60	55	P															

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									At Opening (2026)				Future Design (2036)				D		N		D		N			
									No Build		Build		No Build		Build		D		N		D		N			
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N		
NCA03.RES.0590.01	NCA03	1	312847	6242976	Residential	8 Links Av, Milperra Nsw 2214	60	55	P	51	46	51	47	51	47	51	47	-	-	-	-	-	-	-	-	-
NCA03.RES.0591.01	NCA03	1	312844	6242953	Residential	10 Links Av, Milperra Nsw 2214	60	55	P	51	47	51	47	51	47	51	47	-	-	-	-	-	-	-	-	-
NCA03.RES.0592.01	NCA03	1	312840	6242932	Residential	12 Links Av, Milperra Nsw 2214	60	55	P	50	46	51	46	51	46	51	47	-	-	-	-	-	-	-	-	-
NCA03.RES.0593.01	NCA03	1	312841	6242913	Residential	14 Links Av, Milperra Nsw 2214	60	55	P	51	46	51	47	51	47	51	47	-	-	-	-	-	-	-	-	-
NCA03.RES.0594.01	NCA03	1	312839	6242898	Residential	16 Links Av, Milperra Nsw 2214	60	55	P	50	46	50	46	50	46	50	46	-	-	-	-	-	-	-	-	-
NCA03.RES.0595.01	NCA03	1	312839	6242882	Residential	18 Links Av, Milperra Nsw 2214	60	55	P	50	46	50	46	50	46	50	46	-	-	-	-	-	-	-	-	-
NCA03.RES.0596.01	NCA03	1	312836	6242865	Residential	20 Links Av, Milperra Nsw 2214	60	55	P	49	45	50	46	50	46	50	46	-	-	-	-	-	-	-	-	-
NCA03.RES.0597.01	NCA03	1	312832	6242850	Residential	22 Links Av, Milperra Nsw 2214	60	55	P	49	46	50	46	50	46	50	46	-	-	-	-	-	-	-	-	-
NCA03.RES.0598.01	NCA03	1	312831	6242834	Residential	24 Links Av, Milperra Nsw 2214	60	55	P	49	45	50	46	50	46	50	46	-	-	-	-	-	-	-	-	-
NCA03.RES.0599.01	NCA03	1	312828	6242819	Residential	26 Links Av, Milperra Nsw 2214	60	55	P	49	45	49	45	50	45	50	46	-	-	-	-	-	-	-	-	-
NCA03.RES.0600.01	NCA03	1	312826	6242802	Residential	28 Links Av, Milperra Nsw 2214	60	55	P	49	45	50	46	50	46	50	46	-	-	-	-	-	-	-	-	-
NCA03.RES.0601.01	NCA03	1	312826	6242785	Residential	30 Links Av, Milperra Nsw 2214	60	55	P	49	46	50	46	50	46	50	46	-	-	-	-	-	-	-	-	-
NCA03.RES.0602.01	NCA03	1	312833	6242769	Residential	32 Links Av, Milperra Nsw 2214	60	55	P	50	46	50	46	50	46	50	46	-	-	-	-	-	-	-	-	-
NCA03.RES.0603.01	NCA03	1	312870	6243024	Residential	3 Links Av, Milperra Nsw 2214	60	55	P	54	50	54	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA03.RES.0604.01	NCA03	1	312854	6243025	Residential	5 Links Av, Milperra Nsw 2214	60	55	P	53	48	53	49	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA03.RES.0605.01	NCA03	1	312839	6243026	Residential	7 Links Av, Milperra Nsw 2214	60	55	P	51	46	51	47	51	46	51	47	-	-	-	-	-	-	-	-	-
NCA03.RES.0606.01	NCA03	1	312801	6243009	Residential	11 Links Av, Milperra Nsw 2214	60	55	P	50	46	50	46	50	46	51	46	-	-	-	-	-	-	-	-	-
NCA03.RES.0607.01	NCA03	1	312803	6242992	Residential	13 Links Av, Milperra Nsw 2214	60	55	P	50	46	50	46	50	46	51	46	-	-	-	-	-	-	-	-	-
NCA03.RES.0608.01	NCA03	1	312805	6242974	Residential	15 Links Av, Milperra Nsw 2214	60	55	P	50	46	50	46	50	46	51	47	-	-	-	-	-	-	-	-	-
NCA03.RES.0609.01	NCA03	1	312800	6242959	Residential	17 Links Av, Milperra Nsw 2214	60	55	P	49	45	49	45	49	45	50	46	-	-	-	-	-	-	-	-	-
NCA03.RES.0610.01	NCA03	1	312778	6242979	Residential	19 Links Av, Milperra Nsw 2214	60	55	P	49	46	50	46	50	46	50	46	-	-	-	-	-	-	-	-	-
NCA03.RES.0611.01	NCA03	1	312757	6242963	Residential	21 Links Av, Milperra Nsw 2214	60	55	P	49	46	50	46	49	46	50	46	-	-	-	-	-	-	-	-	-
NCA03.RES.0612.01	NCA03	1	312758	6242940	Residential	23 Links Av, Milperra Nsw 2214	60	55	P	49	45	49	45	49	46	50	46	-	-	-	-	-	-	-	-	-
NCA03.RES.0613.01	NCA03	1	312799	6242935	Residential	25 Links Av, Milperra Nsw 2214	60	55	P	50	46	50	46	50	46	50	46	-	-	-	-	-	-	-	-	-
NCA03.RES.0614.01	NCA03	1	312787	6242868	Residential	29 Links Av, Milperra Nsw 2214	60	55	P	50	46	50	46	50	46	50	46	-	-	-	-	-	-	-	-	-
NCA03.RES.0615.01	NCA03	1	312787	6242848	Residential	31 Links Av, Milperra Nsw 2214	60	55	P	50	46	50	46	50	46	50	46	-	-	-	-	-	-	-	-	-
NCA03.RES.0616.01	NCA03	1	312783	6242831	Residential	33 Links Av, Milperra Nsw 2214	60	55	P	50	46	50	46	50	46	50	46	-	-	-	-	-	-	-	-	-
NCA03.RES.0661.01	NCA03	1	312785	6242786	Residential	2 Martin Cr, Milperra Nsw 2214	60	55	P	50	46	50	46	50	46	50	47	-	-	-	-	-	-	-	-	-
NCA03.RES.0662.01	NCA03	1	312769	6242791	Residential	4 Martin Cr, Milperra Nsw 2214	60	55	P	49	45	49	45	49	45	49	45	-	-	-	-	-	-	-	-	-
NCA03.RES.0663.01	NCA03	1	312752	6242793	Residential	6 Martin Cr, Milperra Nsw 2214	60	55	P	48	44	48	44	48	44	49	45	-	-	-	-					

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation			
									At Opening (2026)				Future Design (2036)				D		N		D		N			
									No Build		Build		No Build		Build		D		N		D		N			
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N		
NCA03.RES.0696.01	NCA03	1	312591	6242755	Residential	29 Martin Cr, Milperra Nsw 2214			60	55	P	48	45	48	45	49	45	49	45	-	-	-	-	-	-	-
NCA03.RES.0697.01	NCA03	1	312580	6242741	Residential	31 Martin Cr, Milperra Nsw 2214			60	55	P	50	47	50	47	50	47	51	47	-	-	-	-	-	-	-
NCA03.RES.0698.01	NCA03	1	312593	6242720	Residential	33 Martin Cr, Milperra Nsw 2214			60	55	P	49	46	49	46	49	46	49	46	-	-	-	-	-	-	-
NCA03.RES.0699.01	NCA03	1	312612	6242730	Residential	35 Martin Cr, Milperra Nsw 2214			60	55	P	49	46	49	46	50	46	50	46	-	-	-	-	-	-	-
NCA03.RES.0700.01	NCA03	1	312624	6242721	Residential	37 Martin Cr, Milperra Nsw 2214			60	55	P	49	46	50	46	50	46	50	46	-	-	-	-	-	-	-
NCA03.RES.0701.01	NCA03	1	312643	6242719	Residential	39 Martin Cr, Milperra Nsw 2214			60	55	P	48	44	48	45	48	45	49	45	-	-	-	-	-	-	-
NCA03.RES.0702.01	NCA03	1	312661	6242719	Residential	41 Martin Cr, Milperra Nsw 2214			60	55	P	48	45	48	45	49	45	49	45	-	-	-	-	-	-	-
NCA03.RES.0703.01	NCA03	1	312675	6242716	Residential	43 Martin Cr, Milperra Nsw 2214			60	55	P	49	45	49	45	49	45	49	45	-	-	-	-	-	-	-
NCA03.RES.0704.01	NCA03	1	312692	6242715	Residential	45 Martin Cr, Milperra Nsw 2214			60	55	P	49	45	49	45	49	46	49	46	-	-	-	-	-	-	-
NCA03.RES.0705.01	NCA03	1	312710	6242711	Residential	47 Martin Cr, Milperra Nsw 2214			60	55	P	50	46	50	46	50	46	50	46	-	-	-	-	-	-	-
NCA03.RES.0706.01	NCA03	1	312725	6242712	Residential	49 Martin Cr, Milperra Nsw 2214			60	55	P	50	46	50	46	50	47	51	47	-	-	-	-	-	-	-
NCA03.RES.0707.01	NCA03	1	312743	6242710	Residential	51 Martin Cr, Milperra Nsw 2214			60	55	P	48	44	49	45	49	45	49	45	-	-	-	-	-	-	-
NCA03.RES.0708.01	NCA03	1	312756	6242705	Residential	53 Martin Cr, Milperra Nsw 2214			60	55	P	49	45	49	45	49	45	49	45	-	-	-	-	-	-	-
NCA03.RES.0709.01	NCA03	1	312776	6242705	Residential	55 Martin Cr, Milperra Nsw 2214			60	55	P	50	46	50	46	50	46	50	46	-	-	-	-	-	-	-
NCA03.RES.0710.01	NCA03	1	312791	6242707	Residential	57 Martin Cr, Milperra Nsw 2214			60	55	P	50	46	50	46	50	46	50	47	-	-	-	-	-	-	-
NCA03.RES.0711.01	NCA03	1	312807	6242712	Residential	59 Martin Cr, Milperra Nsw 2214			60	55	P	49	45	49	45	49	45	49	45	-	-	-	-	-	-	-
NCA03.RES.0712.01	NCA03	1	312825	6242717	Residential	61 Martin Cr, Milperra Nsw 2214			60	55	P	49	45	49	45	49	45	49	45	-	-	-	-	-	-	-
NCA03.RES.0713.01	NCA03	1	312820	6242691	Residential	63 Martin Cr, Milperra Nsw 2214			60	55	P	48	45	48	45	49	45	49	45	-	-	-	-	-	-	-
NCA03.RES.0714.01	NCA03	1	312843	6242692	Residential	65 Martin Cr, Milperra Nsw 2214			60	55	P	50	46	50	46	50	46	50	46	-	-	-	-	-	-	-
NCA03.RES.0715.01	NCA03	1	312846	6242728	Residential	67 Martin Cr, Milperra Nsw 2214			60	55	P	48	45	49	45	49	45	49	45	-	-	-	-	-	-	-
NCA03.RES.0716.01	NCA03	1	312686	6242846	Residential	11A Martin Cr, Milperra Nsw 2214			60	55	P	49	46	50	46	50	46	50	46	-	-	-	-	-	-	-
NCA03.RES.0741.01	NCA03	1	313240	6242979	Residential	2 Moncrieff Pl, Milperra Nsw 2214			60	55	P	60	55	61	56	61	56	61	56	-	-	-	-	-	-	-
NCA03.RES.0742.01	NCA03	1	313209	6242959	Residential	4 Moncrieff Pl, Milperra Nsw 2214			60	55	P	58	53	59	54	58	53	59	54	-	-	-	-	-	-	-
NCA03.RES.0743.01	NCA03	1	313187	6242990	Residential	6 Moncrieff Pl, Milperra Nsw 2214			60	55	P	60	55	61	56	60	55	61	56	-	-	-	-	-	-	-
NCA03.RES.0744.01	NCA03	1	313245	6242997	Residential	1 Moncrieff Pl, Milperra Nsw 2214			60	55	P	66	61	67	62	66	61	67	62	-	-	Y	Y	Y	Y	Y
NCA03.RES.0745.01	NCA03	1	313227	6242960	Residential	3 Moncrieff Pl, Milperra Nsw 2214			60	55	P	58	53	59	54	58	54	59	54	-	-	-	-	-	-	-
NCA03.RES.0746.01	NCA03	1	313186	6242965	Residential	5 Moncrieff Pl, Milperra Nsw 2214			60	55	P	57	52	57	52	57	52	57	52	-	-	-	-	-	-	-
NCA03.RES.0747.01	NCA03	1	313194	6243007	Residential	7 Moncrieff Pl, Milperra Nsw 2214			60	55	P	66	61	67	62	66	61	67	62	-	-	Y	Y	Y	Y	Y
NCA03.RES.0748.01	NCA03	1	313294	6242746	Residential	4 Newland Av, Milperra Nsw 2214			60	55	P	53	49	53	49	53	49	54	49	-	-	-	-	-	-	-
NCA03.RES.0749.01	NCA03	1	313278	6242749	Residential	6 Newland Av, Milperra Nsw 2214			60	55	P	53	49	54	49	54	49	54	50	-	-	-	-	-	-	-
NCA03.RES.																										

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation			
									At Opening (2026)				Future Design (2036)				D		N		D		N			
									No Build		Build		No Build		Build		D		N		D		N			
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N		
NCA03.RES.0803.01	NCA03	1	313385	6242637	Residential	6 Oakleigh Av, Milperra Nsw 2214	60	55	P	53	48	53	48	53	48	53	49	-	-	-	-	-	-	-	-	-
NCA03.RES.0804.01	NCA03	1	313381	6242686	Residential	3 Oakleigh Av, Milperra Nsw 2214	60	55	P	54	50	54	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA03.RES.0805.01	NCA03	1	313163	6242994	Residential	2 Ousley Pl, Milperra Nsw 2214	60	55	P	60	55	61	55	60	55	61	56	-	-	-	-	-	-	-	-	-
NCA03.RES.0806.01	NCA03	1	313135	6242972	Residential	4 Ousley Pl, Milperra Nsw 2214	60	55	P	58	53	58	54	58	53	59	54	-	-	-	-	-	-	-	-	-
NCA03.RES.0807.01	NCA03	1	313108	6242995	Residential	6 Ousley Pl, Milperra Nsw 2214	60	55	P	57	52	58	53	57	53	58	53	-	-	-	-	-	-	-	-	-
NCA03.RES.0808.01	NCA03	1	313166	6243012	Residential	1 Ousley Pl, Milperra Nsw 2214	60	55	P	66	61	68	63	66	61	68	63	-	-	Y	Y	Y	Y	Y	Y	-
NCA03.RES.0809.01	NCA03	1	313154	6242975	Residential	3 Ousley Pl, Milperra Nsw 2214	60	55	P	58	53	59	54	58	53	59	54	-	-	-	-	-	-	-	-	-
NCA03.RES.0810.01	NCA03	1	313111	6242977	Residential	5 Ousley Pl, Milperra Nsw 2214	60	55	P	57	52	57	53	57	52	58	53	-	-	-	-	-	-	-	-	-
NCA03.RES.0811.01	NCA03	1	313067	6242910	Residential	2 Peeler Pl, Milperra Nsw 2214	60	55	P	52	47	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA03.RES.0812.01	NCA03	1	313084	6242936	Residential	2 Peeler Pl, Milperra Nsw 2214	60	55	P	53	49	53	49	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA03.RES.0813.01	NCA03	1	313110	6242860	Residential	4 Peeler Pl, Milperra Nsw 2214	60	55	P	53	49	53	49	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA03.RES.0814.01	NCA03	1	313042	6242863	Residential	8 Peeler Pl, Milperra Nsw 2214	60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA03.RES.0815.01	NCA03	1	313069	6242845	Residential	6A Peeler Pl, Milperra Nsw 2214	60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA03.RES.0816.01	NCA03	1	313048	6242910	Residential	1 Peeler Pl, Milperra Nsw 2214	60	55	P	52	48	52	48	52	48	53	48	-	-	-	-	-	-	-	-	-
NCA03.RES.0817.01	NCA03	1	313108	6242880	Residential	3 Peeler Pl, Milperra Nsw 2214	60	55	P	53	49	53	49	53	49	54	49	-	-	-	-	-	-	-	-	-
NCA03.RES.0818.01	NCA03	1	313089	6242845	Residential	5 Peeler Pl, Milperra Nsw 2214	60	55	P	52	47	52	48	52	47	52	48	-	-	-	-	-	-	-	-	-
NCA03.RES.0819.01	NCA03	1	313055	6242857	Residential	7 Peeler Pl, Milperra Nsw 2214	60	55	P	52	48	53	48	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA03.RES.0823.01	NCA03	1	312786	6242914	Residential	2 Piper Cl, Milperra Nsw 2214	60	55	P	49	45	49	45	49	46	50	46	-	-	-	-	-	-	-	-	-
NCA03.RES.0824.01	NCA03	1	312752	6242916	Residential	4 Piper Cl, Milperra Nsw 2214	59	55	P	47	43	47	43	47	44	48	44	-	-	-	-	-	-	-	-	-
NCA03.RES.0825.01	NCA03	1	312716	6242915	Residential	6 Piper Cl, Milperra Nsw 2214	60	55	P	50	46	50	46	50	46	50	46	-	-	-	-	-	-	-	-	-
NCA03.RES.0826.01	NCA03	1	312687	6242886	Residential	8 Piper Cl, Milperra Nsw 2214	60	55	P	49	45	49	46	49	46	50	46	-	-	-	-	-	-	-	-	-
NCA03.RES.0827.01	NCA03	1	312713	6242868	Residential	10 Piper Cl, Milperra Nsw 2214	60	55	P	50	46	50	46	50	46	50	46	-	-	-	-	-	-	-	-	-
NCA03.RES.0828.01	NCA03	1	312750	6242865	Residential	12 Piper Cl, Milperra Nsw 2214	60	55	P	49	45	49	46	50	46	50	46	-	-	-	-	-	-	-	-	-
NCA03.RES.0829.01	NCA03	1	312799	6242906	Residential	1 Piper Cl, Milperra Nsw 2214	60	55	P	50	46	50	46	50	46	50	46	-	-	-	-	-	-	-	-	-
NCA03.RES.0830.01	NCA03	1	312768	6242913	Residential	3 Piper Cl, Milperra Nsw 2214	60	55	P	49	46	50	46	50	46	50	46	-	-	-	-	-	-	-	-	-
NCA03.RES.0831.01	NCA03	1	312734	6242922	Residential	5 Piper Cl, Milperra Nsw 2214	60	55	P	48	44	48	44	48	45	49	45	-	-	-	-	-	-	-	-	-
NCA03.RES.0832.01	NCA03	1	312703	6242896	Residential	7 Piper Cl, Milperra Nsw 2214	60	55	P	50	46	50	46	50	46	50	47	-	-	-	-	-	-	-	-	-
NCA03.RES.0833.01	NCA03	1	312667	6242870	Residential	9 Piper Cl, Milperra Nsw 2214	60	55	P	49	45	49	45	49	45	49	45	-	-	-	-	-	-	-	-	-
NCA03.RES.0834.01	NCA03	1	312734	6242865	Residential	11 Piper Cl, Milperra Nsw 2214	60	55	P	49	45	49	45	49	45	49	45	-	-	-	-	-	-	-	-	-
NCA03.RES.0835.01	NCA03	1	312766	6242861	Residential	13 Piper Cl, Milperra Nsw 2214	60	55	P	49	45	49	45	49	46	50	46	-	-							

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation			
									At Opening (2026)				Future Design (2036)				D		N		D		N			
									No Build		Build		No Build		Build		D		N		D		N			
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N		
NCA03.RES.0906.01	NCA03	1	313533	6242507	Residential	7A Pozieres Av, Milperra Nsw 2214	60	55	P	61	56	62	57	62	57	62	57	-	-	-	-	-	-	-	-	-
NCA03.RES.0952.01	NCA03	1	312921	6242608	Residential	26 Raleigh Rd, Milperra Nsw 2214	60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA03.RES.0953.01	NCA03	1	312923	6242623	Residential	28 Raleigh Rd, Milperra Nsw 2214	60	55	P	51	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA03.RES.0954.01	NCA03	1	312919	6242642	Residential	30 Raleigh Rd, Milperra Nsw 2214	60	55	P	51	47	51	47	51	47	51	48	-	-	-	-	-	-	-	-	-
NCA03.RES.0955.01	NCA03	1	312919	6242660	Residential	32 Raleigh Rd, Milperra Nsw 2214	60	55	P	51	47	51	47	51	47	51	47	-	-	-	-	-	-	-	-	-
NCA03.RES.0956.01	NCA03	1	312917	6242676	Residential	34 Raleigh Rd, Milperra Nsw 2214	60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA03.RES.0957.01	NCA03	1	312919	6242695	Residential	36 Raleigh Rd, Milperra Nsw 2214	60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA03.RES.0958.01	NCA03	1	312923	6242758	Residential	44 Raleigh Rd, Milperra Nsw 2214	60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA03.RES.0959.01	NCA03	1	312920	6242824	Residential	48 Raleigh Rd, Milperra Nsw 2214	60	55	P	59	54	59	54	59	54	59	54	-	-	-	-	-	-	-	-	-
NCA03.RES.0960.01	NCA03	1	312922	6242841	Residential	50 Raleigh Rd, Milperra Nsw 2214	60	55	P	59	54	59	54	59	55	60	55	-	-	-	-	-	-	-	-	-
NCA03.RES.0961.01	NCA03	1	312923	6242857	Residential	52 Raleigh Rd, Milperra Nsw 2214	60	55	P	59	54	59	54	59	55	60	55	-	-	-	-	-	-	-	-	-
NCA03.RES.0962.01	NCA03	1	312925	6242873	Residential	54 Raleigh Rd, Milperra Nsw 2214	60	55	P	59	54	59	54	59	55	60	55	-	-	-	-	-	-	-	-	-
NCA03.RES.0963.01	NCA03	1	312932	6242887	Residential	56 Raleigh Rd, Milperra Nsw 2214	60	55	P	57	53	57	53	58	53	58	53	-	-	-	-	-	-	-	-	-
NCA03.RES.0964.01	NCA03	1	312930	6242902	Residential	58 Raleigh Rd, Milperra Nsw 2214	60	55	P	60	55	60	55	60	55	60	55	-	-	-	-	-	-	-	-	-
NCA03.RES.0965.01	NCA03	1	312931	6242918	Residential	60 Raleigh Rd, Milperra Nsw 2214	60	55	P	60	55	59	55	60	55	60	55	-	-	-	-	-	-	-	-	-
NCA03.RES.0966.01	NCA03	1	312932	6242934	Residential	62 Raleigh Rd, Milperra Nsw 2214	60	55	P	60	55	60	55	60	55	60	55	-	-	-	-	-	-	-	-	-
NCA03.RES.0967.01	NCA03	1	312936	6242949	Residential	64 Raleigh Rd, Milperra Nsw 2214	60	55	P	60	55	60	55	60	55	60	55	-	-	-	-	-	-	-	-	-
NCA03.RES.0968.01	NCA03	1	312953	6242964	Residential	66 Raleigh Rd, Milperra Nsw 2214	60	55	P	53	49	53	49	53	49	54	49	-	-	-	-	-	-	-	-	-
NCA03.RES.0969.01	NCA03	1	312935	6242963	Residential	66 Raleigh Rd, Milperra Nsw 2214	60	55	P	59	54	59	55	59	55	60	55	-	-	-	-	-	-	-	-	-
NCA03.RES.0970.01	NCA03	1	312938	6242979	Residential	68 Raleigh Rd, Milperra Nsw 2214	60	55	P	60	55	60	55	60	55	60	55	-	-	-	-	-	-	-	-	-
NCA03.RES.0971.01	NCA03	1	312940	6242995	Residential	70 Raleigh Rd, Milperra Nsw 2214	60	55	P	60	55	60	55	60	55	60	55	-	-	-	-	-	-	-	-	-
NCA03.RES.0972.01	NCA03	1	312950	6243059	Residential	74 Raleigh Rd, Milperra Nsw 2214	60	55	P	60	55	60	55	60	55	60	55	-	-	-	-	-	-	-	-	-
NCA03.RES.0973.01	NCA03	1	312951	6243076	Residential	76 Raleigh Rd, Milperra Nsw 2214	60	55	P	60	55	60	55	60	55	60	55	-	-	-	-	-	-	-	-	-
NCA03.RES.0974.01	NCA03	1	312951	6243090	Residential	78 Raleigh Rd, Milperra Nsw 2214	60	55	P	60	55	60	55	60	55	60	55	-	-	-	-	-	-	-	-	-
NCA03.RES.0975.01	NCA03	1	312953	6243110	Residential	80 Raleigh Rd, Milperra Nsw 2214	60	55	P	60	55	60	55	60	55	60	55	-	-	-	-	-	-	-	-	-
NCA03.RES.0994.01	NCA03	1	312867	6242686	Residential	51 Raleigh Rd, Milperra Nsw 2214	60	55	P	52	48	52	48	52	48	53	49	-	-	-	-	-	-	-	-	-
NCA03.RES.0995.01	NCA03	1	312868	6242702	Residential	53 Raleigh Rd, Milperra Nsw 2214	60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA03.RES.0996.01	NCA03	1	312868	6242720	Residential	55 Raleigh Rd, Milperra Nsw 2214	60	55	P	52	48	53	48	53	48	53	49	-	-	-	-	-	-	-	-	-
NCA03.RES.0997.01	NCA03	1	312868	6242738	Residential	57 Raleigh Rd, Milperra Nsw 2214	60	55	P	53	48	53	49	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA03.RES.0998.01	NCA03	1	312866	6242807	Residential	61 Raleigh Rd, Milperra Nsw 2214	60	55	P	56	51	56	51	56	51	56	51	-	-	-						

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation			
									At Opening (2026)				Future Design (2036)				D		N		D		N			
									No Build		Build		No Build		Build		D		N		D		N			
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N		
NCA03.RES.1036.01	NCA03	1	312969	6243062	Residential	1 Ruthven Av, Milperra Nsw 2214	60	55	P	54	50	54	50	55	50	55	50	-	-	-	-	-	-	-	-	-
NCA03.RES.1037.01	NCA03	1	312985	6243059	Residential	3 Ruthven Av, Milperra Nsw 2214	60	55	P	54	50	54	50	54	50	55	50	-	-	-	-	-	-	-	-	-
NCA03.RES.1038.01	NCA03	1	313002	6243064	Residential	5 Ruthven Av, Milperra Nsw 2214	60	55	P	56	51	57	52	56	51	57	52	-	-	-	-	-	-	-	-	-
NCA03.RES.1039.01	NCA03	1	313031	6243073	Residential	9 Ruthven Av, Milperra Nsw 2214	60	55	P	59	54	60	55	59	55	60	55	-	-	-	-	-	-	-	-	-
NCA03.RES.1040.01	NCA03	1	313046	6243077	Residential	11 Ruthven Av, Milperra Nsw 2214	60	55	P	61	56	62	57	61	56	62	57	-	-	-	-	-	-	-	-	-
NCA03.RES.1041.01	NCA03	1	313062	6243080	Residential	13 Ruthven Av, Milperra Nsw 2214	60	55	P	69	64	71	65	69	64	71	65	-	-	Y	Y	Y	Y	Y	Y	-
NCA03.RES.1042.01	NCA03	1	313017	6243068	Residential	7A Ruthven Av, Milperra Nsw 2214	60	55	P	58	53	59	54	58	53	59	54	-	-	-	-	-	-	-	-	-
NCA03.RES.1043.01	NCA03	1	313015	6242938	Residential	2 Sadlier Av, Milperra Nsw 2214	60	55	P	52	47	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA03.RES.1044.01	NCA03	1	313035	6242942	Residential	4 Sadlier Av, Milperra Nsw 2214	60	55	P	52	47	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA03.RES.1045.01	NCA03	1	313053	6242942	Residential	6 Sadlier Av, Milperra Nsw 2214	60	55	P	52	48	53	48	53	48	53	48	-	-	-	-	-	-	-	-	-
NCA03.RES.1046.01	NCA03	1	313071	6242938	Residential	8 Sadlier Av, Milperra Nsw 2214	60	55	P	53	49	53	49	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA03.RES.1047.01	NCA03	1	313024	6242991	Residential	1 Sadlier Av, Milperra Nsw 2214	60	55	P	51	47	52	47	51	47	52	48	-	-	-	-	-	-	-	-	-
NCA03.RES.1048.01	NCA03	1	313040	6242988	Residential	3 Sadlier Av, Milperra Nsw 2214	60	55	P	51	47	52	47	51	47	52	47	-	-	-	-	-	-	-	-	-
NCA03.RES.1049.01	NCA03	1	313055	6242991	Residential	5 Sadlier Av, Milperra Nsw 2214	60	55	P	54	49	54	50	54	49	54	50	-	-	-	-	-	-	-	-	-
NCA03.RES.1050.01	NCA03	1	313070	6242984	Residential	7 Sadlier Av, Milperra Nsw 2214	60	55	P	52	47	52	48	52	48	53	48	-	-	-	-	-	-	-	-	-
NCA03.RES.1051.01	NCA03	1	313087	6242988	Residential	9 Sadlier Av, Milperra Nsw 2214	60	55	P	54	50	54	50	54	50	55	50	-	-	-	-	-	-	-	-	-
NCA03.RES.1052.01	NCA03	1	312952	6242695	Residential	2 Stratton Cr, Milperra Nsw 2214	60	55	P	51	47	51	47	51	48	52	48	-	-	-	-	-	-	-	-	-
NCA03.RES.1053.01	NCA03	1	312949	6242677	Residential	4 Stratton Cr, Milperra Nsw 2214	60	55	P	51	47	51	47	51	48	52	48	-	-	-	-	-	-	-	-	-
NCA03.RES.1054.01	NCA03	1	312945	6242657	Residential	6 Stratton Cr, Milperra Nsw 2214	60	55	P	51	48	51	48	51	48	52	48	-	-	-	-	-	-	-	-	-
NCA03.RES.1055.01	NCA03	1	312951	6242634	Residential	8 Stratton Cr, Milperra Nsw 2214	60	55	P	51	47	51	47	51	47	51	47	-	-	-	-	-	-	-	-	-
NCA03.RES.1056.01	NCA03	1	312968	6242617	Residential	10 Stratton Cr, Milperra Nsw 2214	60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA03.RES.1057.01	NCA03	1	312982	6242615	Residential	12 Stratton Cr, Milperra Nsw 2214	60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA03.RES.1058.01	NCA03	1	313012	6242614	Residential	14 Stratton Cr, Milperra Nsw 2214	60	55	P	51	48	51	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA03.RES.1059.01	NCA03	1	313032	6242612	Residential	16 Stratton Cr, Milperra Nsw 2214	60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA03.RES.1060.01	NCA03	1	313053	6242609	Residential	18 Stratton Cr, Milperra Nsw 2214	60	55	P	52	48	52	49	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA03.RES.1061.01	NCA03	1	313075	6242612	Residential	20 Stratton Cr, Milperra Nsw 2214	60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA03.RES.1062.01	NCA03	1	313080	6242632	Residential	22 Stratton Cr, Milperra Nsw 2214	60	55	P	51	47	51	47	51	47	51	47	-	-	-	-	-	-	-	-	-
NCA03.RES.1063.01	NCA03	1	313076	6242653	Residential	24 Stratton Cr, Milperra Nsw 2214	60	55	P	50	47	51	47	51	47	51	47	-	-	-	-	-	-	-	-	-
NCA03.RES.1064.01	NCA03	1	312977	6242989	Residential	4 Towner Av, Milperra Nsw 2214	60	55	P	53	49	53	49	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA03.RES.1065.01	NCA03	1	312979	6242973	Residential	6 Towner Av, Milperra Nsw 2214	60	55	P	53	48	53	49	53	49	53	49									

Name	NCA	Flr	Easting	Northing	RecType	Address		NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation			
										At Opening (2026)		Future Design (2036)		No Build		Build		No Build		Build		D		N		D	
								D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N		
NCA04.OED.1628.01	NCA04	1	314507	6242449	Other (Educational)	273 Horsley Rd, Milperra Nsw 2214		50	-	H	67	66	67	66	67	66	67	66	-	-	-	-	-	-	-	-	-
NCA04.OED.1629.01	NCA04	1	314495	6242478	Other (Educational)	273 Horsley Rd, Milperra Nsw 2214		50	-	H	61	61	61	61	62	61	62	61	-	-	-	-	-	-	-	-	-
NCA04.OED.1630.01	NCA04	1	314539	6242475	Other (Educational)	273 Horsley Rd, Milperra Nsw 2214		50	-	H	52	52	52	52	53	52	53	52	-	-	-	-	-	-	-	-	-
NCA04.OED.1631.01	NCA04	1	314558	6242493	Other (Educational)	273 Horsley Rd, Milperra Nsw 2214		50	-	H	50	49	50	49	51	50	51	50	-	-	-	-	-	-	-	-	-
NCA04.OED.1632.01	NCA04	1	314547	6242450	Other (Educational)	273 Horsley Rd, Milperra Nsw 2214		50	-	H	66	66	66	66	67	66	67	66	-	-	-	-	-	-	-	-	-
NCA04.OED.1633.01	NCA04	1	314592	6242451	Other (Educational)	273 Horsley Rd, Milperra Nsw 2214		50	-	H	66	65	66	65	66	65	66	65	-	-	-	-	-	-	-	-	-
NCA04.OED.1634.01	NCA04	1	314534	6242538	Other (Educational)	273 Horsley Rd, Milperra Nsw 2214		50	-	H	56	55	56	55	56	55	56	56	-	-	-	-	-	-	-	-	-
NCA04.OED.1635.01	NCA04	1	314589	6242527	Other (Educational)	273 Horsley Rd, Milperra Nsw 2214		50	-	H	52	51	52	51	52	52	52	52	-	-	-	-	-	-	-	-	-
NCA04.OED.1636.01	NCA04	1	314588	6242576	Other (Educational)	273 Horsley Rd, Milperra Nsw 2214		50	-	H	54	53	54	53	54	53	54	53	-	-	-	-	-	-	-	-	-
NCA04.OED.1774.01	NCA04	1	314287	6242535	Other (Educational)	Western Sydney University		50	-	H	62	61	62	61	62	62	62	62	-	-	-	-	-	-	-	-	-
NCA04.OED.1775.01	NCA04	1	314229	6242555	Other (Educational)	Western Sydney University		50	-	H	55	54	55	54	55	55	56	55	-	-	-	-	-	-	-	-	-
NCA04.OED.1776.01	NCA04	1	314233	6242533	Other (Educational)	Western Sydney University		50	-	H	61	61	61	61	62	61	62	61	-	-	-	-	-	-	-	-	-
NCA04.OED.1777.01	NCA04	1	314197	6242582	Other (Educational)	Western Sydney University		50	-	H	58	57	58	57	58	57	58	57	-	-	-	-	-	-	-	-	-
NCA04.OED.1778.01	NCA04	1	314171	6242673	Other (Educational)	Western Sydney University		50	-	H	64	62	65	62	65	62	65	62	-	-	-	-	-	-	-	-	-
NCA04.OED.1779.01	NCA04	1	314187	6242691	Other (Educational)	Western Sydney University		50	-	H	54	53	55	53	55	53	55	54	-	-	-	-	-	-	-	-	-
NCA04.OED.1780.01	NCA04	1	314158	6242694	Other (Educational)	Western Sydney University		50	-	H	66	63	66	63	66	63	66	64	-	-	-	-	-	-	-	-	-
NCA04.OED.1781.01	NCA04	1	314167	6242714	Other (Educational)	Western Sydney University		50	-	H	66	63	66	64	66	63	66	64	-	-	-	-	-	-	-	-	-
NCA04.OED.1782.01	NCA04	1	314197	6242712	Other (Educational)	Western Sydney University		50	-	H	57	55	57	55	57	55	58	55	-	-	-	-	-	-	-	-	-
NCA04.OED.1783.01	NCA04	1	314237	6242754	Other (Educational)	Western Sydney University		50	-	H	53	51	53	52	53	51	54	52	-	-	-	-	-	-	-	-	-
NCA04.OED.1784.01	NCA04	1	314215	6242753	Other (Educational)	Western Sydney University		50	-	H	55	53	55	53	55	53	55	53	-	-	-	-	-	-	-	-	-
NCA04.OED.1785.01	NCA04	1	314183	6242755	Other (Educational)	Western Sydney University		50	-	H	65	62	65	63	65	63	65	63	-	-	-	-	-	-	-	-	-
NCA04.OED.1786.01	NCA04	1	314275	6242735	Other (Educational)	Western Sydney University		50	-	H	55	53	55	53	55	54	56	54	-	-	-	-	-	-	-	-	-
NCA04.OED.1787.01	NCA04	1	314382	6242739	Other (Educational)	Western Sydney University		50	-	H	54	52	54	52	54	52	55	53	-	-	-	-	-	-	-	-	-
NCA04.OED.1788.01	NCA04	1	314260	6242597	Other (Educational)	Western Sydney University		50	-	H	54	53	54	53	55	53	55	53	-	-	-	-	-	-	-	-	-
NCA04.OED.1789.01	NCA04	1	314239	6242694	Other (Educational)	Western Sydney University		50	-	H	53	51	53	51	53	51	53	51	-	-	-	-	-	-	-	-	-
NCA04.OED.1790.01	NCA04	1	314207	6242640	Other (Educational)	Western Sydney University		50	-	H	58	56	58	56	58	56	58	56	-	-	-	-	-	-	-	-	-
NCA04.OED.1791.01	NCA04	1	314288	6242642	Other (Educational)	Western Sydney University		50	-	H	55	55	55	55	56	55	56	55	-	-	-	-	-	-	-	-	-
NCA04.OED.1792.01	NCA04	1	314215	6242663	Other (Educational)	Western Sydney University		50	-	H	55	53	56	54	56	54	56	54	-	-	-	-	-	-	-	-	-
NCA04.OED.1793.01	NCA04	1	314332	6242677	Other (Educational)	Western Sydney University		50	-	H	55	55	55	55	56	55	56	55	-	-	-	-	-	-	-	-	-
NCA04.OED.1794.01	NCA04	1	314245	6242772	Other (Educational)	Western Sydney University		50	-	H	57	54	57	55	57	54	58	55	-	-	-	-	-	-	-	-	-
NCA04.OED.1795.01	NCA04	1	314218	6242773	Other (Educational)	Western Sydney University																					

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation			
									At Opening (2026)				Future Design (2036)				D		N		D		N			
									No Build		Build		No Build		Build		D		N		D		N			
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N		
NCA04.RES.0261.01	NCA04	1	313713	6243133	Residential	8 Whittle Av, Milperra Nsw 2214			60	55	P	51	47	52	48	52	48	52	48	-	-	-	-	-	-	-
NCA04.RES.0262.01	NCA04	1	313697	6243138	Residential	10 Whittle Av, Milperra Nsw 2214			60	55	P	54	49	54	49	54	49	54	50	-	-	-	-	-	-	-
NCA04.RES.0291.01	NCA04	1	313705	6243054	Residential	3 Whittle Av, Milperra Nsw 2214			60	55	P	53	49	54	49	53	49	54	49	-	-	-	-	-	-	-
NCA04.RES.0292.01	NCA04	1	313690	6243055	Residential	5 Whittle Av, Milperra Nsw 2214			60	55	P	54	49	54	50	54	50	55	50	-	-	-	-	-	-	-
NCA04.RES.0293.01	NCA04	1	313675	6243057	Residential	7 Whittle Av, Milperra Nsw 2214			60	55	P	55	50	55	50	55	50	55	51	-	-	-	-	-	-	-
NCA04.RES.1312.01	NCA04	1	313836	6242945	Residential	2 Armentieres Av, Milperra Nsw 2214			60	55	P	68	62	69	63	68	62	69	63	-	-	-	-	-	-	-
NCA04.RES.1313.01	NCA04	1	313834	6242927	Residential	4 Armentieres Av, Milperra Nsw 2214			60	55	P	59	53	60	54	59	53	60	54	-	-	-	-	-	-	-
NCA04.RES.1314.01	NCA04	1	313834	6242912	Residential	6 Armentieres Av, Milperra Nsw 2214			60	55	P	57	51	57	52	57	51	58	52	-	-	-	-	-	-	-
NCA04.RES.1315.01	NCA04	1	313831	6242896	Residential	8 Armentieres Av, Milperra Nsw 2214			60	55	P	56	51	57	51	56	51	57	52	-	-	-	-	-	-	-
NCA04.RES.1316.01	NCA04	1	313831	6242880	Residential	10 Armentieres Av, Milperra Nsw 2214			60	55	P	55	50	55	50	55	50	56	51	-	-	-	-	-	-	-
NCA04.RES.1317.01	NCA04	1	313830	6242865	Residential	12 Armentieres Av, Milperra Nsw 2214			60	55	P	55	50	55	50	55	50	56	51	-	-	-	-	-	-	-
NCA04.RES.1318.01	NCA04	1	313826	6242851	Residential	14 Armentieres Av, Milperra Nsw 2214			60	55	P	55	50	55	50	55	50	55	51	-	-	-	-	-	-	-
NCA04.RES.1319.01	NCA04	1	313831	6242836	Residential	16 Armentieres Av, Milperra Nsw 2214			60	55	P	54	49	54	49	54	49	54	49	-	-	-	-	-	-	-
NCA04.RES.1320.01	NCA04	1	313831	6242820	Residential	18 Armentieres Av, Milperra Nsw 2214			60	55	P	53	49	54	49	54	49	54	49	-	-	-	-	-	-	-
NCA04.RES.1321.01	NCA04	1	313827	6242805	Residential	20 Armentieres Av, Milperra Nsw 2214			60	55	P	53	49	54	49	54	49	54	49	-	-	-	-	-	-	-
NCA04.RES.1343.01	NCA04	1	313789	6242953	Residential	1 Armentieres Av, Milperra Nsw 2214			60	55	P	69	62	70	63	68	62	70	64	-	-	-	-	-	-	-
NCA04.RES.1344.01	NCA04	1	313790	6242934	Residential	3 Armentieres Av, Milperra Nsw 2214			60	55	P	59	53	60	54	59	53	60	54	-	-	-	-	-	-	-
NCA04.RES.1345.01	NCA04	1	313786	6242919	Residential	5 Armentieres Av, Milperra Nsw 2214			60	55	P	57	51	58	52	57	51	58	52	-	-	-	-	-	-	-
NCA04.RES.1346.01	NCA04	1	313784	6242903	Residential	7 Armentieres Av, Milperra Nsw 2214			60	55	P	56	51	56	51	56	51	57	51	-	-	-	-	-	-	-
NCA04.RES.1361.01	NCA04	1	314119	6242833	Residential	132 Ashford Av, Milperra Nsw 2214			60	55	P	65	59	65	59	65	59	65	60	-	-	-	-	-	-	-
NCA04.RES.1362.01	NCA04	1	314113	6242767	Residential	136 Ashford Av, Milperra Nsw 2214			60	55	P	65	59	65	60	65	60	65	60	-	-	-	-	-	-	-
NCA04.RES.1363.01	NCA04	1	314114	6242734	Residential	140 Ashford Av, Milperra Nsw 2214			60	55	P	65	60	66	60	66	60	66	60	-	-	-	-	-	-	-
NCA04.RES.1364.01	NCA04	1	314108	6242720	Residential	142 Ashford Av, Milperra Nsw 2214			60	55	P	64	58	64	59	64	59	64	59	-	-	-	-	-	-	-
NCA04.RES.1365.01	NCA04	1	314091	6242699	Residential	144 Ashford Av, Milperra Nsw 2214			60	55	P	53	49	53	49	53	49	54	49	-	-	-	-	-	-	-
NCA04.RES.1366.01	NCA04	1	314107	6242704	Residential	144 Ashford Av, Milperra Nsw 2214			60	55	P	67	61	67	62	67	62	67	62	-	-	-	-	-	-	-
NCA04.RES.1367.01	NCA04	1	314103	6242689	Residential	146 Ashford Av, Milperra Nsw 2214			60	55	P	66	61	66	61	67	61	67	61	-	-	-	-	-	-	-
NCA04.RES.1368.01	NCA04	1	314102	6242667	Residential	148 Ashford Av, Milperra Nsw 2214			60	55	P	65	60	66	60	66	60	66	60	-	-	-	-	-	-	-
NCA04.RES.1369.01	NCA04	1	314098	6242654	Residential	150 Ashford Av, Milperra Nsw 2214			60	55	P	65	60	66	60	66	60	66	60	-	-	-	-	-	-	-
NCA04.RES.1370.01	NCA04	1	314099	6242637	Residential	152 Ashford Av, Milperra Nsw 2214			60	55	P	65	60	65	60	66	60	66	60	-	-	-	-	-	-	-
NCA04.RES.1371.01	NCA04	1	314099	6242623	Residential	154 Ashford Av, Milperra Nsw 2214			60	55	P	66	61	66	61	67	61	67	61	-	-	-	-			

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation			
									At Opening (2026)				Future Design (2036)				D		N		D		N			
									No Build		Build		No Build		Build		D		N		D		N			
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N		
NCA04.RES.1464.01	NCA04	1	313877	6242905	Residential	66 Dernancourt Pde, Milperra NSW 2214	60	55	P	56	50	56	51	56	50	57	51	-	-	-	-	-	-	-	-	-
NCA04.RES.1465.01	NCA04	1	313881	6242922	Residential	68 Dernancourt Pde, Milperra NSW 2214	60	55	P	57	52	58	53	57	52	59	53	-	-	-	-	-	-	-	-	-
NCA04.RES.1466.01	NCA04	1	313881	6242939	Residential	70 Dernancourt Pde, Milperra NSW 2214	60	55	P	68	62	69	62	68	61	69	63	-	-	-	-	-	-	-	-	-
NCA04.RES.1477.01	NCA04	1	313881	6242623	Residential	23 Dernancourt Pde, Milperra NSW 2214	60	55	P	54	50	54	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA04.RES.1478.01	NCA04	1	313890	6242641	Residential	25 Dernancourt Pde, Milperra NSW 2214	60	55	P	52	48	53	48	53	48	53	49	-	-	-	-	-	-	-	-	-
NCA04.RES.1479.01	NCA04	1	313893	6242655	Residential	27 Dernancourt Pde, Milperra NSW 2214	60	55	P	53	49	53	49	53	49	54	49	-	-	-	-	-	-	-	-	-
NCA04.RES.1480.01	NCA04	1	313892	6242670	Residential	29 Dernancourt Pde, Milperra NSW 2214	60	55	P	54	50	54	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA04.RES.1481.01	NCA04	1	313903	6242685	Residential	31 Dernancourt Pde, Milperra NSW 2214	60	55	P	54	49	54	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA04.RES.1482.01	NCA04	1	313897	6242700	Residential	33 Dernancourt Pde, Milperra NSW 2214	60	55	P	54	50	54	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA04.RES.1483.01	NCA04	1	313902	6242716	Residential	35 Dernancourt Pde, Milperra NSW 2214	60	55	P	54	50	54	50	54	50	55	50	-	-	-	-	-	-	-	-	-
NCA04.RES.1484.01	NCA04	1	313907	6242731	Residential	37 Dernancourt Pde, Milperra NSW 2214	60	55	P	54	50	54	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA04.RES.1485.01	NCA04	1	313908	6242745	Residential	39 Dernancourt Pde, Milperra NSW 2214	60	55	P	53	49	53	49	54	49	54	50	-	-	-	-	-	-	-	-	-
NCA04.RES.1486.01	NCA04	1	313911	6242761	Residential	41 Dernancourt Pde, Milperra NSW 2214	60	55	P	53	49	53	49	53	49	54	49	-	-	-	-	-	-	-	-	-
NCA04.RES.1487.01	NCA04	1	313910	6242777	Residential	43 Dernancourt Pde, Milperra NSW 2214	60	55	P	53	49	53	49	53	49	54	49	-	-	-	-	-	-	-	-	-
NCA04.RES.1488.01	NCA04	1	313920	6242791	Residential	45 Dernancourt Pde, Milperra NSW 2214	60	55	P	52	48	52	48	52	48	53	48	-	-	-	-	-	-	-	-	-
NCA04.RES.1489.01	NCA04	1	313921	6242884	Residential	51 Dernancourt Pde, Milperra NSW 2214	60	55	P	55	50	55	50	55	50	56	50	-	-	-	-	-	-	-	-	-
NCA04.RES.1490.01	NCA04	1	313922	6242900	Residential	53 Dernancourt Pde, Milperra NSW 2214	60	55	P	56	50	56	51	56	50	57	51	-	-	-	-	-	-	-	-	-
NCA04.RES.1492.01	NCA04	1	313910	6242792	Residential	45A Dernancourt Pde, Milperra NSW 2214	60	55	P	52	48	53	48	53	48	53	48	-	-	-	-	-	-	-	-	-
NCA04.RES.1534.01	NCA04	1	313759	6242912	Residential	4 Fromelles Av, Milperra NSW 2214	60	55	P	56	51	56	51	56	51	56	51	-	-	-	-	-	-	-	-	-
NCA04.RES.1535.01	NCA04	1	313744	6242915	Residential	6 Fromelles Av, Milperra NSW 2214	60	55	P	57	52	57	52	57	52	57	52	-	-	-	-	-	-	-	-	-
NCA04.RES.1536.01	NCA04	1	313724	6242914	Residential	8 Fromelles Av, Milperra NSW 2214	60	55	P	58	53	58	53	58	53	58	53	-	-	-	-	-	-	-	-	-
NCA04.RES.1537.01	NCA04	1	313709	6242919	Residential	10 Fromelles Av, Milperra NSW 2214	60	55	P	60	55	60	55	60	55	60	55	-	-	-	-	-	-	-	-	-
NCA04.RES.1538.01	NCA04	1	313677	6242924	Residential	14 Fromelles Av, Milperra NSW 2214	60	55	P	66	60	65	60	66	60	65	60	-	-	Y	Y	Y	Y	Y	Y	-
NCA04.RES.1539.01	NCA04	1	313694	6242923	Residential	12A Fromelles Av, Milperra NSW 2214	60	55	P	62	57	61	56	62	57	62	56	-	-	-	-	-	-	-	-	-
NCA04.RES.1637.01	NCA04	1	314000	6242689	Residential	2 Lille Pl, Milperra NSW 2214	60	55	P	53	49	54	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA04.RES.1638.01	NCA04	1	314033	6242688	Residential	4 Lille Pl, Milperra NSW 2214	60	55	P	54	50	54	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA04.RES.1639.01	NCA04	1	314069	6242665	Residential	6 Lille Pl, Milperra NSW 2214	60	55	P	54	50	54	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA04.RES.1640.01	NCA04	1	314047	6242635	Residential	8 Lille Pl, Milperra NSW 2214	60	55	P	53	49	53	49	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA04.RES.1641.01	NCA04	1	314011	6242642	Residential	10 Lille Pl, Milperra NSW 2214	60	55	P	54	50	54	50	54	50	54	51	-	-	-	-	-	-	-	-	-
NCA04.RES.1642.01	NCA04	1	313977	6242644	Residential	12 Lille Pl, Milperra NSW 2214	60	55	P	54	51															

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation			
									At Opening (2026)				Future Design (2036)				D		N		D		N			
									No Build		Build		No Build		Build		D		N		D		N			
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N		
NCA04.RES.1687.01	NCA04	1	313978	6242623	Residential	11 Messines Av, Milperra Nsw 2214	60	55	P	54	50	54	51	55	51	55	51	-	-	-	-	-	-	-	-	-
NCA04.RES.1688.01	NCA04	1	313971	6242606	Residential	13 Messines Av, Milperra Nsw 2214	60	55	P	55	51	55	51	55	51	55	51	-	-	-	-	-	-	-	-	-
NCA04.RES.1689.01	NCA04	1	313997	6242780	Residential	1A Messines Av, Milperra Nsw 2214	60	55	P	51	47	52	47	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA04.RES.1690.01	NCA04	1	313941	6242725	Residential	10 Messines Ave, Milperra Nsw 2214	60	55	P	52	48	53	48	53	48	53	49	-	-	-	-	-	-	-	-	-
NCA04.RES.1707.01	NCA04	1	314095	6242845	Residential	2 Sinai Av, Milperra Nsw 2214	60	55	P	54	49	54	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA04.RES.1708.01	NCA04	1	314081	6242846	Residential	4 Sinai Av, Milperra Nsw 2214	60	55	P	54	49	54	50	54	50	55	50	-	-	-	-	-	-	-	-	-
NCA04.RES.1709.01	NCA04	1	314066	6242850	Residential	6 Sinai Av, Milperra Nsw 2214	60	55	P	54	49	54	49	54	49	54	50	-	-	-	-	-	-	-	-	-
NCA04.RES.1710.01	NCA04	1	314049	6242850	Residential	8 Sinai Av, Milperra Nsw 2214	60	55	P	52	47	53	47	52	47	53	48	-	-	-	-	-	-	-	-	-
NCA04.RES.1711.01	NCA04	1	314033	6242856	Residential	10 Sinai Av, Milperra Nsw 2214	60	55	P	52	47	52	47	52	47	53	47	-	-	-	-	-	-	-	-	-
NCA04.RES.1712.01	NCA04	1	314018	6242854	Residential	12 Sinai Av, Milperra Nsw 2214	60	55	P	52	48	53	48	53	48	53	48	-	-	-	-	-	-	-	-	-
NCA04.RES.1713.01	NCA04	1	314001	6242855	Residential	14 Sinai Av, Milperra Nsw 2214	60	55	P	52	47	52	47	52	47	53	47	-	-	-	-	-	-	-	-	-
NCA04.RES.1714.01	NCA04	1	313969	6242859	Residential	18 Sinai Av, Milperra Nsw 2214	60	55	P	53	49	54	49	53	49	54	49	-	-	-	-	-	-	-	-	-
NCA04.RES.1715.01	NCA04	1	313954	6242858	Residential	20 Sinai Av, Milperra Nsw 2214	60	55	P	53	49	53	49	53	49	54	49	-	-	-	-	-	-	-	-	-
NCA04.RES.1716.01	NCA04	1	313933	6242859	Residential	22 Sinai Av, Milperra Nsw 2214	60	55	P	54	49	54	49	54	49	54	50	-	-	-	-	-	-	-	-	-
NCA04.RES.1717.01	NCA04	1	313914	6242863	Residential	24 Sinai Av, Milperra Nsw 2214	60	55	P	55	50	55	50	55	50	55	50	-	-	-	-	-	-	-	-	-
NCA04.RES.1718.01	NCA04	1	314124	6242789	Residential	1 Sinai Av, Milperra Nsw 2214	60	55	P	64	59	65	59	65	59	65	60	-	-	-	-	-	-	-	-	-
NCA04.RES.1719.01	NCA04	1	314108	6242793	Residential	3 Sinai Av, Milperra Nsw 2214	60	55	P	57	52	57	52	57	52	58	53	-	-	-	-	-	-	-	-	-
NCA04.RES.1720.01	NCA04	1	314091	6242796	Residential	5 Sinai Av, Milperra Nsw 2214	60	55	P	55	50	55	50	55	50	56	51	-	-	-	-	-	-	-	-	-
NCA04.RES.1721.01	NCA04	1	314076	6242798	Residential	7 Sinai Av, Milperra Nsw 2214	60	55	P	53	48	54	49	54	48	54	49	-	-	-	-	-	-	-	-	-
NCA04.RES.1722.01	NCA04	1	314061	6242800	Residential	9 Sinai Av, Milperra Nsw 2214	60	55	P	52	47	53	47	52	47	53	48	-	-	-	-	-	-	-	-	-
NCA04.RES.1723.01	NCA04	1	314046	6242801	Residential	11 Sinai Av, Milperra Nsw 2214	60	55	P	53	48	53	48	53	48	53	49	-	-	-	-	-	-	-	-	-
NCA04.RES.1724.01	NCA04	1	314030	6242804	Residential	13 Sinai Av, Milperra Nsw 2214	60	55	P	52	48	53	48	52	48	53	48	-	-	-	-	-	-	-	-	-
NCA04.RES.1725.01	NCA04	1	314013	6242801	Residential	15 Sinai Av, Milperra Nsw 2214	60	55	P	52	48	52	48	53	48	53	48	-	-	-	-	-	-	-	-	-
NCA04.RES.1726.01	NCA04	1	313943	6242808	Residential	21 Sinai Av, Milperra Nsw 2214	60	55	P	53	49	53	49	53	49	54	49	-	-	-	-	-	-	-	-	-
NCA04.RES.1727.01	NCA04	1	313926	6242811	Residential	23 Sinai Av, Milperra Nsw 2214	60	55	P	53	49	53	49	53	49	54	49	-	-	-	-	-	-	-	-	-
NCA04.RES.1728.01	NCA04	1	313912	6242811	Residential	25 Sinai Av, Milperra Nsw 2214	60	55	P	53	49	54	49	54	49	54	49	-	-	-	-	-	-	-	-	-
NCA04.RES.1729.01	NCA04	1	313984	6242857	Residential	16 Sinai Ave, Milperra Nsw 2214	60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA04.RES.1757.01	NCA04	1	314071	6242595	Residential	4 Zonnebeke Cr, Milperra Nsw 2214	60	55	P	58	53	58	53	58	53	58	54	-	-	-	-	-	-	-	-	-
NCA04.RES.1758.01	NCA04	1	314056	6242598	Residential	6 Zonnebeke Cr, Milperra Nsw 2214	60	55	P	56	52	56	52	56	52	57	52	-	-	-	-	-	-	-	-	-
NCA04.RES.1759.01	NCA04	1	314039	6242600	Residential	8 Zonnebeke Cr, Milperra Nsw 2214	60	55	P	55	51	55	51	55	52	56	52	-	-	-						

Name	NCA	Flr	Easting	Northing	RecType	Address		NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation			
										At Opening (2026)				Future Design (2036)				No Build		Build		No Build		Build			
								D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N		
										P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P		
NCA05.RES.0392.01	NCA05	1	312982	6242414	Residential	4 Cambrai Pl, Milperra Nsw 2214		60	55	P	53	50	53	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA05.RES.0393.01	NCA05	1	313005	6242386	Residential	6 Cambrai Pl, Milperra Nsw 2214		60	55	P	52	49	52	49	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA05.RES.0394.01	NCA05	1	312999	6242347	Residential	8 Cambrai Pl, Milperra Nsw 2214		60	55	P	52	49	52	49	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA05.RES.0395.01	NCA05	1	312968	6242321	Residential	10 Cambrai Pl, Milperra Nsw 2214		60	55	P	51	48	51	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA05.RES.0396.01	NCA05	1	312935	6242339	Residential	12 Cambrai Pl, Milperra Nsw 2214		60	55	P	53	49	53	49	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA05.RES.0397.01	NCA05	1	312944	6242379	Residential	1 Cambrai Pl, Milperra Nsw 2214		60	55	P	53	50	53	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA05.RES.0398.01	NCA05	1	312959	6242411	Residential	3 Cambrai Pl, Milperra Nsw 2214		60	55	P	52	49	52	49	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA05.RES.0399.01	NCA05	1	312995	6242409	Residential	5 Cambrai Pl, Milperra Nsw 2214		60	55	P	53	49	53	49	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA05.RES.0400.01	NCA05	1	312999	6242368	Residential	7 Cambrai Pl, Milperra Nsw 2214		60	55	P	53	49	53	49	53	50	53	50	-	-	-	-	-	-	-	-	-
NCA05.RES.0401.01	NCA05	1	312988	6242331	Residential	9 Cambrai Pl, Milperra Nsw 2214		60	55	P	52	49	52	49	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA05.RES.0402.01	NCA05	1	312950	6242324	Residential	11 Cambrai Pl, Milperra Nsw 2214		60	55	P	53	50	53	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA05.RES.0403.01	NCA05	1	312915	6242347	Residential	13 Cambrai Pl, Milperra Nsw 2214		60	55	P	53	50	53	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA05.RES.0404.01	NCA05	1	313230	6242294	Residential	4 Chauvel Av, Milperra Nsw 2214		60	55	P	57	53	57	53	57	53	57	54	-	-	-	-	-	-	-	-	-
NCA05.RES.0405.01	NCA05	1	313244	6242292	Residential	6 Chauvel Av, Milperra Nsw 2214		60	55	P	57	54	57	54	57	54	58	54	-	-	-	-	-	-	-	-	-
NCA05.RES.0406.01	NCA05	1	313260	6242288	Residential	8 Chauvel Av, Milperra Nsw 2214		60	55	P	57	54	57	54	57	54	58	54	-	-	-	-	-	-	-	-	-
NCA05.RES.0407.01	NCA05	1	313275	6242288	Residential	10 Chauvel Av, Milperra Nsw 2214		60	55	P	57	54	57	54	58	54	58	54	-	-	-	-	-	-	-	-	-
NCA05.RES.0408.01	NCA05	1	313289	6242286	Residential	12 Chauvel Av, Milperra Nsw 2214		60	55	P	57	54	57	54	58	54	58	54	-	-	-	-	-	-	-	-	-
NCA05.RES.0409.01	NCA05	1	313306	6242282	Residential	14 Chauvel Av, Milperra Nsw 2214		60	55	P	57	54	57	54	57	54	57	54	-	-	-	-	-	-	-	-	-
NCA05.RES.0410.01	NCA05	1	313323	6242282	Residential	16 Chauvel Av, Milperra Nsw 2214		60	55	P	58	54	58	54	58	55	58	55	-	-	-	-	-	-	-	-	-
NCA05.RES.0411.01	NCA05	1	313342	6242278	Residential	18 Chauvel Av, Milperra Nsw 2214		60	55	P	59	55	59	55	59	56	59	56	-	-	-	-	-	-	-	-	-
NCA05.RES.0412.01	NCA05	1	313357	6242277	Residential	20A Chauvel Av, Milperra Nsw 2214		60	55	P	59	55	59	55	59	55	59	55	-	-	-	-	-	-	-	-	-
NCA05.RES.0413.01	NCA05	1	313222	6242342	Residential	3 Chauvel Av, Milperra Nsw 2214		60	55	P	55	52	55	52	56	52	56	52	-	-	-	-	-	-	-	-	-
NCA05.RES.0414.01	NCA05	1	313236	6242341	Residential	5 Chauvel Av, Milperra Nsw 2214		60	55	P	56	52	56	52	56	52	56	52	-	-	-	-	-	-	-	-	-
NCA05.RES.0415.01	NCA05	1	313254	6242340	Residential	7 Chauvel Av, Milperra Nsw 2214		60	55	P	55	52	55	52	55	52	56	52	-	-	-	-	-	-	-	-	-
NCA05.RES.0416.01	NCA05	1	313268	6242336	Residential	9 Chauvel Av, Milperra Nsw 2214		60	55	P	56	53	56	53	57	53	57	53	-	-	-	-	-	-	-	-	-
NCA05.RES.0417.01	NCA05	1	313285	6242335	Residential	11 Chauvel Av, Milperra Nsw 2214		60	55	P	56	53	57	53	57	53	57	53	-	-	-	-	-	-	-	-	-
NCA05.RES.0418.01	NCA05	1	313299	6242339	Residential	13 Chauvel Av, Milperra Nsw 2214		60	55	P	56	53	56	53	57	53	57	53	-	-	-	-	-	-	-	-	-
NCA05.RES.0419.01	NCA05	1	313314	6242332	Residential	15 Chauvel Av, Milperra Nsw 2214		60	55	P	57	53	57	53	57	53	57	53	-	-	-	-	-	-	-	-	-
NCA05.RES.0420.01	NCA05	1	313330	6242326	Residential	17 Chauvel Av, Milperra Nsw 2214		60	55	P	57	53	57	53	57	54	57	54	-	-	-	-	-	-	-	-	-
NCA05.RES.0421.01	NCA05	1	313349	6242329	Residential	19 Chauvel Av, Milperra Nsw 2214		60	55	P	57	54	57	54	58	54	58	54	-	-	-	-	-	-	-	-	-
NCA05.RES.0422.01	NCA05	1	313363	6242322	Residential	21 Chauvel Av, Milperra Nsw 2214		60	55	P	56	53	56	53	57	53	57	53	-	-	-	-	-	-	-	-	-
NCA05.RES.0571.01	NCA05	1	313081	6242404	Residential	2 Lemnos Av, Milperra Nsw 2214		60	55	P	53	50	53	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA05.RES.0572.01	NCA05	1	313075	6242388	Residential	4 Lemnos Av, Milperra Nsw 2214		60	55	P	52	49	53	49	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA05.RES.0573.01	NCA05	1	313073	6242371	Residential	6 Lemnos Av, Milperra Nsw 2214		60	55	P	54	50	54	50	54	51	54	51	-	-	-	-	-	-	-	-	-
NCA05.RES.0574.01	NCA05	1	313075	6242356	Residential	8 Lemnos Av																					

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation			
									At Opening (2026)				Future Design (2036)				D		N		D		N			
									No Build		Build		No Build		Build		D		N		D		N			
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N		
NCA05.RES.0632.01	NCA05	1	313037	6242484	Residential	11 Lone Pine Av, Milperra Nsw 2214	60	55	P	53	49	53	49	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA05.RES.0633.01	NCA05	1	313020	6242483	Residential	13 Lone Pine Av, Milperra Nsw 2214	60	55	P	53	49	53	49	53	49	53	50	-	-	-	-	-	-	-	-	-
NCA05.RES.0634.01	NCA05	1	313005	6242487	Residential	15 Lone Pine Av, Milperra Nsw 2214	60	55	P	52	49	52	49	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA05.RES.0635.01	NCA05	1	312989	6242489	Residential	17 Lone Pine Av, Milperra Nsw 2214	60	55	P	53	49	53	49	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA05.RES.0636.01	NCA05	1	312973	6242488	Residential	19 Lone Pine Av, Milperra Nsw 2214	60	55	P	51	48	51	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA05.RES.0637.01	NCA05	1	312960	6242489	Residential	21 Lone Pine Av, Milperra Nsw 2214	60	55	P	52	48	52	48	52	49	52	49	-	-	-	-	-	-	-	-	-
NCA05.RES.0638.01	NCA05	1	312945	6242494	Residential	23 Lone Pine Av, Milperra Nsw 2214	60	55	P	52	48	52	48	52	49	53	49	-	-	-	-	-	-	-	-	-
NCA05.RES.0639.01	NCA05	1	313550	6242418	Residential	8 Mactier Av, Milperra Nsw 2214	60	55	P	70	64	71	66	70	65	72	66	-	-	Y	Y	Y	Y	Y	Y	-
NCA05.RES.0640.01	NCA05	1	313533	6242418	Residential	10 Mactier Av, Milperra Nsw 2214	60	55	P	62	57	62	57	63	58	-	-	-	-	-	-	-	-	-	-	-
NCA05.RES.0641.01	NCA05	1	313517	6242421	Residential	12 Mactier Av, Milperra Nsw 2214	60	55	P	60	55	61	56	60	56	61	56	-	-	-	-	-	-	-	-	-
NCA05.RES.0642.01	NCA05	1	313499	6242422	Residential	14 Mactier Av, Milperra Nsw 2214	60	55	P	59	55	59	55	59	55	60	55	-	-	-	-	-	-	-	-	-
NCA05.RES.0643.01	NCA05	1	313482	6242422	Residential	16 Mactier Av, Milperra Nsw 2214	60	55	P	59	54	59	54	59	55	59	55	-	-	-	-	-	-	-	-	-
NCA05.RES.0644.01	NCA05	1	313439	6242225	Residential	1 Mactier Av, Milperra Nsw 2214	60	55	P	61	58	61	58	62	58	62	58	-	-	-	-	-	-	-	-	-
NCA05.RES.0645.01	NCA05	1	313455	6242234	Residential	3 Mactier Av, Milperra Nsw 2214	60	55	P	61	57	61	57	61	58	62	58	-	-	-	-	-	-	-	-	-
NCA05.RES.0646.01	NCA05	1	313469	6242241	Residential	5 Mactier Av, Milperra Nsw 2214	60	55	P	61	57	61	57	61	58	-	-	-	-	-	-	-	-	-	-	-
NCA05.RES.0647.01	NCA05	1	313486	6242248	Residential	7 Mactier Av, Milperra Nsw 2214	60	55	P	61	57	61	57	61	57	-	-	-	-	-	-	-	-	-	-	-
NCA05.RES.0648.01	NCA05	1	313499	6242270	Residential	9 Mactier Av, Milperra Nsw 2214	60	55	P	62	57	62	57	62	57	-	-	-	-	-	-	-	-	-	-	-
NCA05.RES.0649.01	NCA05	1	313469	6242299	Residential	13 Mactier Av, Milperra Nsw 2214	60	55	P	59	55	59	55	60	55	60	55	-	-	-	-	-	-	-	-	-
NCA05.RES.0650.01	NCA05	1	313476	6242318	Residential	15 Mactier Av, Milperra Nsw 2214	60	55	P	60	55	60	55	60	56	-	-	-	-	-	-	-	-	-	-	-
NCA05.RES.0651.01	NCA05	1	313496	6242326	Residential	17 Mactier Av, Milperra Nsw 2214	60	55	P	59	55	59	55	60	55	60	55	-	-	-	-	-	-	-	-	-
NCA05.RES.0652.01	NCA05	1	313513	6242322	Residential	19 Mactier Av, Milperra Nsw 2214	60	55	P	64	59	64	59	64	59	64	59	-	-	-	-	-	-	-	-	-
NCA05.RES.0653.01	NCA05	1	313514	6242347	Residential	21 Mactier Av, Milperra Nsw 2214	60	55	P	63	58	63	58	63	58	64	59	-	-	-	-	-	-	-	-	-
NCA05.RES.0654.01	NCA05	1	313518	6242362	Residential	23 Mactier Av, Milperra Nsw 2214	60	55	P	65	59	65	60	65	60	65	60	-	-	Y	Y	-	-	Y	-	-
NCA05.RES.0655.01	NCA05	1	313526	6242376	Residential	25 Mactier Av, Milperra Nsw 2214	60	55	P	65	60	66	61	65	60	66	61	-	-	Y	Y	Y	Y	Y	Y	-
NCA05.RES.0656.01	NCA05	1	313511	6242379	Residential	27 Mactier Av, Milperra Nsw 2214	60	55	P	59	54	60	55	59	54	60	55	-	-	-	-	-	-	-	-	-
NCA05.RES.0657.01	NCA05	1	313492	6242373	Residential	29 Mactier Av, Milperra Nsw 2214	60	55	P	60	56	60	56	60	56	61	56	-	-	-	-	-	-	-	-	-
NCA05.RES.0658.01	NCA05	1	313475	6242376	Residential	31 Mactier Av, Milperra Nsw 2214	60	55	P	58	53	58	53	58	54	58	54	-	-	-	-	-	-	-	-	-
NCA05.RES.0659.01	NCA05	1	313454	6242388	Residential	33 Mactier Av, Milperra Nsw 2214	60	55	P	57	53	57	53	58	53	58	54	-	-	-	-	-	-	-	-	-
NCA05.RES.0660.01	NCA05	1	313472	6242279	Residential	11 Mactier Ave, Milperra Nsw 2214	60	55	P	59	55	59	55	60	56	60	56	-	-	-	-	-	-	-	-	-
NCA05.RES.0717.01	NCA05	1	313098	6242199	Residential	4 Maygar Cl, Milperra Nsw 2214	60	55	P	57	54	57	54													

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation			
									At Opening (2026)				Future Design (2036)				D		N		D		N			
									No Build		Build		No Build		Build		D		N		D		N			
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N		
NCA05.RES.0790.01	NCA05	1	313208	6242301	Residential	20 Nieuport Av, Milperra Nsw 2214			60	55	P	55	52	55	52	56	52	56	52	-	-	-	-	-	-	-
NCA05.RES.0791.01	NCA05	1	313204	6242288	Residential	22 Nieuport Av, Milperra Nsw 2214			60	55	P	56	53	56	53	57	53	57	53	-	-	-	-	-	-	-
NCA05.RES.0792.01	NCA05	1	313201	6242268	Residential	24 Nieuport Av, Milperra Nsw 2214			60	55	P	56	53	56	53	56	53	57	53	-	-	-	-	-	-	-
NCA05.RES.0793.01	NCA05	1	313195	6242252	Residential	26 Nieuport Av, Milperra Nsw 2214			60	55	P	58	54	58	54	58	55	58	55	-	-	-	-	-	-	-
NCA05.RES.0794.01	NCA05	1	313144	6242497	Residential	1 Nieuport Av, Milperra Nsw 2214			60	55	P	52	49	52	49	53	49	53	49	-	-	-	-	-	-	-
NCA05.RES.0795.01	NCA05	1	313141	6242480	Residential	3 Nieuport Av, Milperra Nsw 2214			60	55	P	52	49	53	49	53	49	53	49	-	-	-	-	-	-	-
NCA05.RES.0796.01	NCA05	1	313135	6242464	Residential	5 Nieuport Av, Milperra Nsw 2214			60	55	P	52	49	52	49	53	49	53	49	-	-	-	-	-	-	-
NCA05.RES.0797.01	NCA05	1	313135	6242395	Residential	7 Nieuport Av, Milperra Nsw 2214			60	55	P	53	50	53	50	53	50	54	50	-	-	-	-	-	-	-
NCA05.RES.0798.01	NCA05	1	313151	6242334	Residential	11 Nieuport Av, Milperra Nsw 2214			60	55	P	55	51	55	51	55	51	55	51	-	-	-	-	-	-	-
NCA05.RES.0799.01	NCA05	1	313157	6242317	Residential	13 Nieuport Av, Milperra Nsw 2214			60	55	P	54	51	54	51	55	51	55	51	-	-	-	-	-	-	-
NCA05.RES.0800.01	NCA05	1	313154	6242302	Residential	15 Nieuport Av, Milperra Nsw 2214			60	55	P	55	51	55	51	55	51	55	51	-	-	-	-	-	-	-
NCA05.RES.0801.01	NCA05	1	313151	6242286	Residential	17 Nieuport Av, Milperra Nsw 2214			60	55	P	55	52	55	52	56	52	56	52	-	-	-	-	-	-	-
NCA05.RES.0820.01	NCA05	1	313109	6242309	Residential	2 Peronne Cl, Milperra Nsw 2214			60	55	P	55	52	55	52	55	52	56	52	-	-	-	-	-	-	-
NCA05.RES.0821.01	NCA05	1	313085	6242304	Residential	1 Peronne Cl, Milperra Nsw 2214			60	55	P	55	52	55	52	55	52	55	52	-	-	-	-	-	-	-
NCA05.RES.0822.01	NCA05	1	313119	6242330	Residential	3 Peronne Cl, Milperra Nsw 2214			60	55	P	54	51	54	51	55	51	55	51	-	-	-	-	-	-	-
NCA05.RES.0836.01	NCA05	1	313555	6242451	Residential	2 Pozieres Av, Milperra Nsw 2214			60	55	P	70	65	72	66	70	65	72	66	-	-	Y	Y	Y	Y	Y
NCA05.RES.0837.01	NCA05	1	313539	6242454	Residential	4 Pozieres Av, Milperra Nsw 2214			60	55	P	64	59	64	59	64	59	65	59	-	-	Y	-	-	-	Y
NCA05.RES.0838.01	NCA05	1	313522	6242457	Residential	6 Pozieres Av, Milperra Nsw 2214			60	55	P	61	56	61	56	61	56	62	56	-	-	-	-	-	-	-
NCA05.RES.0839.01	NCA05	1	313506	6242458	Residential	8 Pozieres Av, Milperra Nsw 2214			60	55	P	58	54	58	54	58	54	58	54	-	-	-	-	-	-	-
NCA05.RES.0840.01	NCA05	1	313488	6242462	Residential	10 Pozieres Av, Milperra Nsw 2214			60	55	P	57	53	57	53	57	53	58	53	-	-	-	-	-	-	-
NCA05.RES.0841.01	NCA05	1	313472	6242463	Residential	12 Pozieres Av, Milperra Nsw 2214			60	55	P	57	53	57	53	57	53	58	53	-	-	-	-	-	-	-
NCA05.RES.0842.01	NCA05	1	313457	6242464	Residential	14 Pozieres Av, Milperra Nsw 2214			60	55	P	57	53	57	53	57	53	57	53	-	-	-	-	-	-	-
NCA05.RES.0843.01	NCA05	1	313420	6242465	Residential	16 Pozieres Av, Milperra Nsw 2214			60	55	P	57	53	57	53	57	53	57	53	-	-	-	-	-	-	-
NCA05.RES.0844.01	NCA05	1	313384	6242476	Residential	20 Pozieres Av, Milperra Nsw 2214			60	55	P	55	51	55	51	56	52	56	52	-	-	-	-	-	-	-
NCA05.RES.0856.01	NCA05	1	313203	6242500	Residential	26 Pozieres Av, Milperra Nsw 2214			60	55	P	53	49	53	49	53	50	54	50	-	-	-	-	-	-	-
NCA05.RES.0857.01	NCA05	1	313140	6242514	Residential	28 Pozieres Av, Milperra Nsw 2214			60	55	P	52	49	52	49	53	49	53	49	-	-	-	-	-	-	-
NCA05.RES.0858.01	NCA05	1	313119	6242513	Residential	30 Pozieres Av, Milperra Nsw 2214			60	55	P	52	48	52	48	53	49	53	49	-	-	-	-	-	-	-
NCA05.RES.0859.01	NCA05	1	313103	6242514	Residential	32 Pozieres Av, Milperra Nsw 2214			60	55	P	51	48	51	48	52	48	52	48	-	-	-	-	-	-	-
NCA05.RES.0860.01	NCA05	1	313090	6242515	Residential	34 Pozieres Av, Milperra Nsw 2214			60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-
NCA05.RES.0861.01	NCA05	1	313076	6242516	Residential	36 Pozieres Av, Milperra Nsw 2214			60	55	P	53	49	53	49	53	49	53	49	-	-	-	-	-		

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation			
									At Opening (2026)				Future Design (2036)				D		N		D		N			
									No Build		Build		No Build		Build		D		N		D		N			
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N		
NCA05.RES.0928.01	NCA05	1	313241	6242254	Residential	17 Prescot Pde, Milperra Nsw 2214	60	55	P	58	55	58	55	59	55	59	55	-	-	-	-	-	-	-	-	-
NCA05.RES.0929.01	NCA05	1	313155	6242268	Residential	25 Prescot Pde, Milperra Nsw 2214	60	55	P	56	52	56	52	56	52	56	52	-	-	-	-	-	-	-	-	-
NCA05.RES.0930.01	NCA05	1	313138	6242266	Residential	27 Prescot Pde, Milperra Nsw 2214	60	55	P	55	52	55	52	56	52	56	52	-	-	-	-	-	-	-	-	-
NCA05.RES.0931.01	NCA05	1	313122	6242269	Residential	29 Prescot Pde, Milperra Nsw 2214	60	55	P	55	52	55	52	56	52	56	52	-	-	-	-	-	-	-	-	-
NCA05.RES.0932.01	NCA05	1	313106	6242270	Residential	31 Prescot Pde, Milperra Nsw 2214	60	55	P	55	52	55	52	56	52	56	52	-	-	-	-	-	-	-	-	-
NCA05.RES.0933.01	NCA05	1	313091	6242273	Residential	33 Prescot Pde, Milperra Nsw 2214	60	55	P	54	51	54	51	54	51	55	51	-	-	-	-	-	-	-	-	-
NCA05.RES.0934.01	NCA05	1	313074	6242275	Residential	35 Prescot Pde, Milperra Nsw 2214	60	55	P	54	51	54	51	55	51	55	51	-	-	-	-	-	-	-	-	-
NCA05.RES.0935.01	NCA05	1	313011	6242285	Residential	37 Prescot Pde, Milperra Nsw 2214	60	55	P	55	51	55	51	55	51	55	51	-	-	-	-	-	-	-	-	-
NCA05.RES.0936.01	NCA05	1	312976	6242293	Residential	41 Prescot Pde, Milperra Nsw 2214	60	55	P	54	51	54	51	55	51	55	51	-	-	-	-	-	-	-	-	-
NCA05.RES.0937.01	NCA05	1	312962	6242293	Residential	43 Prescot Pde, Milperra Nsw 2214	60	55	P	54	50	54	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA05.RES.0938.01	NCA05	1	312946	6242294	Residential	45 Prescot Pde, Milperra Nsw 2214	60	55	P	54	50	54	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA05.RES.0939.01	NCA05	1	312930	6242296	Residential	47 Prescot Pde, Milperra Nsw 2214	60	55	P	54	51	54	51	55	51	55	51	-	-	-	-	-	-	-	-	-
NCA05.RES.0940.01	NCA05	1	312992	6242287	Residential	Dupl 1 39 Prescot Pde, Milperra Nsw 2214	60	55	P	54	51	54	51	55	51	55	51	-	-	-	-	-	-	-	-	-
NCA05.RES.0941.01	NCA05	1	313220	6242255	Residential	19B Prescot Pde, Milperra Nsw 2214	60	55	P	57	54	57	54	58	54	58	54	-	-	-	-	-	-	-	-	-
NCA05.RES.0942.01	NCA05	1	312911	6242293	Residential	2 Raleigh Rd, Milperra Nsw 2214	60	55	P	54	50	54	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA05.RES.0943.01	NCA05	1	312909	6242311	Residential	4 Raleigh Rd, Milperra Nsw 2214	60	55	P	54	50	54	50	54	51	54	51	-	-	-	-	-	-	-	-	-
NCA05.RES.0944.01	NCA05	1	312912	6242329	Residential	6 Raleigh Rd, Milperra Nsw 2214	60	55	P	54	50	54	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA05.RES.0945.01	NCA05	1	312921	6242384	Residential	10 Raleigh Rd, Milperra Nsw 2214	60	55	P	53	49	53	49	53	50	53	50	-	-	-	-	-	-	-	-	-
NCA05.RES.0946.01	NCA05	1	312921	6242403	Residential	12 Raleigh Rd, Milperra Nsw 2214	60	55	P	53	50	53	50	53	50	53	50	-	-	-	-	-	-	-	-	-
NCA05.RES.0947.01	NCA05	1	312927	6242420	Residential	14 Raleigh Rd, Milperra Nsw 2214	60	55	P	52	49	52	49	52	49	53	49	-	-	-	-	-	-	-	-	-
NCA05.RES.0948.01	NCA05	1	312925	6242437	Residential	16 Raleigh Rd, Milperra Nsw 2214	60	55	P	52	49	52	49	52	49	53	49	-	-	-	-	-	-	-	-	-
NCA05.RES.0949.01	NCA05	1	312927	6242454	Residential	18 Raleigh Rd, Milperra Nsw 2214	60	55	P	52	49	52	49	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA05.RES.0950.01	NCA05	1	312921	6242490	Residential	20 Raleigh Rd, Milperra Nsw 2214	60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA05.RES.0951.01	NCA05	1	312921	6242510	Residential	22 Raleigh Rd, Milperra Nsw 2214	60	55	P	51	48	51	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA05.RES.0976.01	NCA05	1	312852	6242279	Residential	1 Raleigh Rd, Milperra Nsw 2214	60	55	P	53	49	53	49	53	50	53	50	-	-	-	-	-	-	-	-	-
NCA05.RES.0977.01	NCA05	1	312854	6242292	Residential	3 Raleigh Rd, Milperra Nsw 2214	60	55	P	54	50	54	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA05.RES.0978.01	NCA05	1	312858	6242311	Residential	5 Raleigh Rd, Milperra Nsw 2214	60	55	P	54	50	54	50	54	51	54	51	-	-	-	-	-	-	-	-	-
NCA05.RES.0979.01	NCA05	1	312860	6242340	Residential	9 Raleigh Rd, Milperra Nsw 2214	60	55	P	53	50	53	50	53	50	54	50	-	-	-	-	-	-	-	-	-
NCA05.RES.0980.01	NCA05	1	312862	6242357	Residential	11 Raleigh Rd, Milperra Nsw 2214	60	55	P	51	47	51	48	51	48	52	48	-	-	-	-	-	-	-	-	-
NCA05.RES.0981.01	NCA05	1	312864	6242370	Residential	13 Raleigh Rd, Milperra Nsw 2214	60	55	P	53	49	53	49	53	49											

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation			
									At Opening (2026)				Future Design (2036)				D		N		D		N			
									No Build		Build		No Build		Build		D		N		D		N			
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N		
NCA05.RES.1111.01	NCA05	1	313400	6242361	Residential	15 Warlencourt Av, Milperra Nsw 2214	60	55	P	58	54	58	54	58	54	58	54	-	-	-	-	-	-	-	-	-
NCA05.RES.1112.01	NCA05	1	313397	6242379	Residential	17 Warlencourt Av, Milperra Nsw 2214	60	55	P	58	54	58	54	58	54	58	54	-	-	-	-	-	-	-	-	-
NCA05.RES.1113.01	NCA05	1	313404	6242395	Residential	19 Warlencourt Av, Milperra Nsw 2214	60	55	P	58	54	58	54	58	54	58	54	-	-	-	-	-	-	-	-	-
NCA05.RES.1114.01	NCA05	1	313406	6242412	Residential	21 Warlencourt Av, Milperra Nsw 2214	60	55	P	58	54	58	54	58	54	58	54	-	-	-	-	-	-	-	-	-
NCA05.RES.1115.01	NCA05	1	313406	6242428	Residential	23 Warlencourt Av, Milperra Nsw 2214	60	55	P	57	53	57	53	57	53	57	53	-	-	-	-	-	-	-	-	-
NCA05.RES.1116.01	NCA05	1	313409	6242446	Residential	25 Warlencourt Av, Milperra Nsw 2214	60	55	P	56	52	56	52	56	52	56	52	-	-	-	-	-	-	-	-	-
NCA05.RES.1121.01	NCA05	1	312872	6242661	Residential	Riverlands Development	60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA05.RES.1122.01	NCA05	1	312849	6242663	Residential	Riverlands Development	60	55	P	51	48	51	48	51	48	51	48	-	-	-	-	-	-	-	-	-
NCA05.RES.1123.01	NCA05	1	312829	6242665	Residential	Riverlands Development	60	55	P	50	47	50	47	50	47	51	47	-	-	-	-	-	-	-	-	-
NCA05.RES.1124.01	NCA05	1	312813	6242667	Residential	Riverlands Development	60	55	P	50	47	50	47	50	47	51	47	-	-	-	-	-	-	-	-	-
NCA05.RES.1125.01	NCA05	1	312793	6242669	Residential	Riverlands Development	60	55	P	50	46	50	46	50	47	50	47	-	-	-	-	-	-	-	-	-
NCA05.RES.1126.01	NCA05	1	312771	6242672	Residential	Riverlands Development	60	55	P	50	46	50	46	50	46	50	46	-	-	-	-	-	-	-	-	-
NCA05.RES.1127.01	NCA05	1	312753	6242673	Residential	Riverlands Development	60	55	P	50	46	50	46	50	46	50	46	-	-	-	-	-	-	-	-	-
NCA05.RES.1128.01	NCA05	1	312738	6242675	Residential	Riverlands Development	60	55	P	50	46	50	46	50	46	50	46	-	-	-	-	-	-	-	-	-
NCA05.RES.1129.01	NCA05	1	312718	6242678	Residential	Riverlands Development	60	55	P	51	47	51	47	51	47	51	47	-	-	-	-	-	-	-	-	-
NCA05.RES.1130.01	NCA05	1	312698	6242681	Residential	Riverlands Development	60	55	P	49	46	50	46	50	46	50	46	-	-	-	-	-	-	-	-	-
NCA05.RES.1131.01	NCA05	1	312677	6242684	Residential	Riverlands Development	60	55	P	49	46	49	46	50	46	50	46	-	-	-	-	-	-	-	-	-
NCA05.RES.1132.01	NCA05	1	312654	6242687	Residential	Riverlands Development	60	55	P	49	46	49	46	50	46	50	46	-	-	-	-	-	-	-	-	-
NCA05.RES.1133.01	NCA05	1	312635	6242689	Residential	Riverlands Development	60	55	P	50	46	50	46	50	46	50	46	-	-	-	-	-	-	-	-	-
NCA05.RES.1134.01	NCA05	1	312620	6242691	Residential	Riverlands Development	60	55	P	49	46	49	46	50	46	50	46	-	-	-	-	-	-	-	-	-
NCA05.RES.1135.01	NCA05	1	312601	6242695	Residential	Riverlands Development	60	55	P	50	47	50	47	51	47	51	47	-	-	-	-	-	-	-	-	-
NCA05.RES.1136.01	NCA05	1	312870	6242614	Residential	Riverlands Development	60	55	P	51	47	51	47	51	48	52	48	-	-	-	-	-	-	-	-	-
NCA05.RES.1137.01	NCA05	1	312871	6242595	Residential	Riverlands Development	60	55	P	51	47	51	47	51	48	52	48	-	-	-	-	-	-	-	-	-
NCA05.RES.1138.01	NCA05	1	312870	6242576	Residential	Riverlands Development	60	55	P	50	47	50	47	51	47	51	47	-	-	-	-	-	-	-	-	-
NCA05.RES.1139.01	NCA05	1	312843	6242615	Residential	Riverlands Development	60	55	P	51	48	51	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA05.RES.1140.01	NCA05	1	312840	6242594	Residential	Riverlands Development	60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA05.RES.1141.01	NCA05	1	312838	6242576	Residential	Riverlands Development	60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA05.RES.1142.01	NCA05	1	312835	6242558	Residential	Riverlands Development	60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA05.RES.1143.01	NCA05	1	312836	6242537	Residential	Riverlands Development	60	55	P	52	48	52	48	52	49	52	49	-	-	-	-	-	-	-	-	-
NCA05.RES.1144.01	NCA05	1	312837	6242516	Residential	Riverlands Development	60	55	P	52	48	52	48	52	49	52	49	-	-	-	-	-	-	-	-	-
NCA05.RES.1145.01	NCA05	1	312837	6242500	Residential	Riverlands Development	60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA05.RES.1146.01	NCA05	1	312838																							

Name	NCA	Fir	Easting	Northing	RecType	Address		NCG Criteria		Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation		
											At Opening (2026)				Future Design (2036)				D		N		D		N		
								No Build		Build		No Build		Build		D		N		D		N		D			
								D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N		
NCA05.RES.1177.01	NCA05	1	312924	6242139	Residential	Riverlands Development		60	55	P	56	53	56	53	57	53	57	53	-	-	-	-	-	-	-	-	-
NCA05.RES.1178.01	NCA05	1	312921	6242122	Residential	Riverlands Development		60	55	P	58	55	58	55	58	55	58	55	-	-	-	-	-	-	-	-	-
NCA05.RES.1179.01	NCA05	1	312912	6242096	Residential	Riverlands Development		60	55	P	60	56	60	56	60	57	60	57	-	-	-	-	-	-	-	-	-
NCA05.RES.1180.01	NCA05	1	312932	6242096	Residential	Riverlands Development		60	55	P	60	56	60	56	60	57	60	57	-	-	-	-	-	-	-	-	-
NCA05.RES.1181.01	NCA05	1	312951	6242110	Residential	Riverlands Development		60	55	P	59	56	59	56	60	56	60	56	-	-	-	-	-	-	-	-	-
NCA05.RES.1182.01	NCA05	1	312950	6242133	Residential	Riverlands Development		60	55	P	56	53	57	53	57	53	57	53	-	-	-	-	-	-	-	-	-
NCA05.RES.1183.01	NCA05	1	312953	6242152	Residential	Riverlands Development		60	55	P	56	52	56	52	56	53	56	53	-	-	-	-	-	-	-	-	-
NCA05.RES.1184.01	NCA05	1	312961	6242177	Residential	Riverlands Development		60	55	P	55	52	55	52	56	52	56	52	-	-	-	-	-	-	-	-	-
NCA05.RES.1185.01	NCA05	1	312839	6242210	Residential	Riverlands Development		60	55	P	55	51	55	51	55	52	55	52	-	-	-	-	-	-	-	-	-
NCA05.RES.1186.01	NCA05	1	312859	6242208	Residential	Riverlands Development		60	55	P	54	51	54	51	54	51	54	51	-	-	-	-	-	-	-	-	-
NCA05.RES.1187.01	NCA05	1	312878	6242205	Residential	Riverlands Development		60	55	P	54	51	54	51	54	51	54	51	-	-	-	-	-	-	-	-	-
NCA05.RES.1188.01	NCA05	1	312848	6242183	Residential	Riverlands Development		60	55	P	55	52	55	52	56	52	56	52	-	-	-	-	-	-	-	-	-
NCA05.RES.1189.01	NCA05	1	312850	6242161	Residential	Riverlands Development		60	55	P	56	52	56	52	56	53	56	53	-	-	-	-	-	-	-	-	-
NCA05.RES.1190.01	NCA05	1	312850	6242142	Residential	Riverlands Development		60	55	P	58	55	58	55	59	55	59	55	-	-	-	-	-	-	-	-	-
NCA05.RES.1191.01	NCA05	1	312848	6242124	Residential	Riverlands Development		60	55	P	59	56	59	56	60	56	60	56	-	-	-	-	-	-	-	-	-
NCA05.RES.1192.01	NCA05	1	312875	6242185	Residential	Riverlands Development		60	55	P	55	51	55	51	55	52	55	52	-	-	-	-	-	-	-	-	-
NCA05.RES.1193.01	NCA05	1	312877	6242173	Residential	Riverlands Development		60	55	P	55	51	55	51	55	52	55	52	-	-	-	-	-	-	-	-	-
NCA05.RES.1194.01	NCA05	1	312879	6242157	Residential	Riverlands Development		60	55	P	55	52	55	52	56	52	56	52	-	-	-	-	-	-	-	-	-
NCA05.RES.1195.01	NCA05	1	312878	6242139	Residential	Riverlands Development		60	55	P	56	53	56	53	56	53	56	53	-	-	-	-	-	-	-	-	-
NCA05.RES.1196.01	NCA05	1	312876	6242121	Residential	Riverlands Development		60	55	P	59	56	59	56	60	56	60	56	-	-	-	-	-	-	-	-	-
NCA05.RES.1197.01	NCA05	1	312803	6242214	Residential	Riverlands Development		60	55	P	55	51	55	51	55	52	55	52	-	-	-	-	-	-	-	-	-
NCA05.RES.1198.01	NCA05	1	312779	6242216	Residential	Riverlands Development		60	55	P	54	51	54	51	55	51	55	51	-	-	-	-	-	-	-	-	-
NCA05.RES.1199.01	NCA05	1	312757	6242215	Residential	Riverlands Development		60	55	P	55	51	55	51	55	52	55	52	-	-	-	-	-	-	-	-	-
NCA05.RES.1200.01	NCA05	1	312768	6242189	Residential	Riverlands Development		60	55	P	56	52	56	52	56	52	56	52	-	-	-	-	-	-	-	-	-
NCA05.RES.1201.01	NCA05	1	312773	6242172	Residential	Riverlands Development		60	55	P	57	54	57	54	58	54	58	54	-	-	-	-	-	-	-	-	-
NCA05.RES.1202.01	NCA05	1	312777	6242154	Residential	Riverlands Development		60	55	P	60	56	60	56	60	57	60	57	-	-	-	-	-	-	-	-	-
NCA05.RES.1203.01	NCA05	1	312776	6242134	Residential	Riverlands Development		60	55	P	60	57	60	57	61	57	61	57	-	-	-	-	-	-	-	-	-
NCA05.RES.1204.01	NCA05	1	312803	6242130	Residential	Riverlands Development		60	55	P	60	57	60	57	60	57	60	57	-	-	-	-	-	-	-	-	-
NCA05.RES.1205.01	NCA05	1	312806	6242149	Residential	Riverlands Development		60	55	P	55	52	55	52	56	52	56	52	-	-	-	-	-	-	-	-	-
NCA05.RES.1206.01	NCA05	1	312803	6242167	Residential	Riverlands Development		60	55	P	55	51	55	51	55	52	55	52	-	-	-	-	-	-	-	-	-
NCA05.RES.1207.01	NCA05	1	312800	6242185	Residential	Riverlands Development		60	55	P	54	51	54	51	55	51	55	51	-	-	-	-	-	-	-	-	-
NCA05.RES.1208.01	NCA05	1	312712	6242220	Residential	Riverlands Development		60	55	P	54	51	54	51	55	51	55	51	-	-	-	-	-	-	-	-	-
NCA05.RES.1209.01	NCA05	1	312717	6242199	Residential	Riverlands Development		60	55	P	55	51	55	51	55	52	55	52	-	-	-	-	-	-	-	-	-
NCA05.RES.1210.01	NCA05	1	312723	6242179	Residential	Riverlands Development		60	55	P	55	52	55	52	56	52	56	52	-	-	-	-	-	-	-	-	-
NCA05.RES.1211.01	NCA05	1	312729	6242161	Residential	Riverlands Development		60	55	P	56	53	56	53	56	53	56	53	-	-	-	-	-	-	-	-	-
NCA05.RES.1212.01	NCA05	1	312733	6242141	Residential	Riverlands Development		60	55	P	61	57	61	57	61	58	61	58	-	-	-	-	-				

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation			
									At Opening (2026)				Future Design (2036)				D		N		D					
									No Build	Build	No Build	Build	No Build	Build	No Build	Build	D	N	D	N	D	N	D	N		
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N		
NCA05.RES.1239.01	NCA05	1	312783	6242337	Residential	Riverlands Development	60	55	P	53	50	53	50	53	50	53	50	-	-	-	-	-	-	-	-	-
NCA05.RES.1240.01	NCA05	1	312778	6242312	Residential	Riverlands Development	60	55	P	53	50	54	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA05.RES.1241.01	NCA05	1	312767	6242291	Residential	Riverlands Development	60	55	P	53	50	53	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA05.RES.1242.01	NCA05	1	312761	6242268	Residential	Riverlands Development	60	55	P	54	50	54	50	54	51	54	51	-	-	-	-	-	-	-	-	-
NCA05.RES.1243.01	NCA05	1	312735	6242261	Residential	Riverlands Development	60	55	P	54	51	54	51	55	51	55	51	-	-	-	-	-	-	-	-	-
NCA05.RES.1244.01	NCA05	1	312711	6242258	Residential	Riverlands Development	60	55	P	54	51	54	51	55	51	55	51	-	-	-	-	-	-	-	-	-
NCA05.RES.1245.01	NCA05	1	312691	6242259	Residential	Riverlands Development	60	55	P	54	51	54	51	55	51	55	51	-	-	-	-	-	-	-	-	-
NCA05.RES.1246.01	NCA05	1	312671	6242261	Residential	Riverlands Development	60	55	P	56	53	56	53	57	53	57	53	-	-	-	-	-	-	-	-	-
NCA05.RES.1247.01	NCA05	1	312646	6242265	Residential	Riverlands Development	60	55	P	55	51	55	51	55	52	55	52	-	-	-	-	-	-	-	-	-
NCA05.RES.1248.01	NCA05	1	312664	6242328	Residential	Riverlands Development	60	55	P	53	49	53	49	53	50	53	50	-	-	-	-	-	-	-	-	-
NCA05.RES.1249.01	NCA05	1	312672	6242344	Residential	Riverlands Development	60	55	P	52	49	52	49	52	49	53	49	-	-	-	-	-	-	-	-	-
NCA05.RES.1250.01	NCA05	1	312676	6242359	Residential	Riverlands Development	60	55	P	52	49	52	49	52	49	52	49	-	-	-	-	-	-	-	-	-
NCA05.RES.1251.01	NCA05	1	312681	6242375	Residential	Riverlands Development	60	55	P	52	49	53	49	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA05.RES.1252.01	NCA05	1	312683	6242393	Residential	Riverlands Development	60	55	P	52	49	52	49	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA05.RES.1253.01	NCA05	1	312685	6242412	Residential	Riverlands Development	60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA05.RES.1254.01	NCA05	1	312712	6242408	Residential	Riverlands Development	60	55	P	52	48	52	48	52	49	52	49	-	-	-	-	-	-	-	-	-
NCA05.RES.1255.01	NCA05	1	312713	6242387	Residential	Riverlands Development	60	55	P	52	48	52	48	52	49	52	49	-	-	-	-	-	-	-	-	-
NCA05.RES.1256.01	NCA05	1	312711	6242370	Residential	Riverlands Development	60	55	P	52	49	52	49	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA05.RES.1257.01	NCA05	1	312710	6242354	Residential	Riverlands Development	60	55	P	52	49	52	49	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA05.RES.1258.01	NCA05	1	312709	6242338	Residential	Riverlands Development	60	55	P	53	49	53	49	53	50	53	50	-	-	-	-	-	-	-	-	-
NCA05.RES.1259.01	NCA05	1	312699	6242323	Residential	Riverlands Development	60	55	P	52	49	52	49	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA05.RES.1260.01	NCA05	1	312655	6242557	Residential	Riverlands Development	60	55	P	51	48	51	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA05.RES.1261.01	NCA05	1	312662	6242527	Residential	Riverlands Development	60	55	P	51	48	51	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA05.RES.1262.01	NCA05	1	312667	6242510	Residential	Riverlands Development	60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA05.RES.1263.01	NCA05	1	312670	6242495	Residential	Riverlands Development	60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA05.RES.1264.01	NCA05	1	312674	6242480	Residential	Riverlands Development	60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA05.RES.1265.01	NCA05	1	312679	6242464	Residential	Riverlands Development	60	55	P	52	48	52	48	52	49	52	49	-	-	-	-	-	-	-	-	-
NCA05.RES.1266.01	NCA05	1	312686	6242446	Residential	Riverlands Development	60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA05.RES.1267.01	NCA05	1	312714	6242449	Residential	Riverlands Development	60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA05.RES.1268.01	NCA05	1	312711	6242467	Residential	Riverlands Development	60	55	P	51	48	51	48	51	48	51	48	-	-	-	-	-	-	-	-	-
NCA05.RES.1269.01	NCA05	1	312708	6242484	Residential	Riverlands Development	60	55	P	51	48	51	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA05.RES.1270.01	NCA05	1	312705	6242499	Residential	Riverlands Development	60	55	P	51	48	51	48	52	48	52	48	-	-	-	-	-	-	-	-	-
NCA05.RES.1271.01	NCA05	1	312704	6242514	Residential	Riverlands Development	60	5																		

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation			
									At Opening (2026)				Future Design (2036)				D		N		D		N			
									No Build		Build		No Build		Build		D		N		D		N			
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N		
NCA05.RES.1301.01	NCA05	1	312797	6242613	Residential	Riverlands Development			60	55	P	51	47	51	47	51	48	51	48	-	-	-	-	-	-	-
NCA05.RES.1302.01	NCA05	1	312794	6242592	Residential	Riverlands Development			60	55	P	51	47	51	47	51	48	51	48	-	-	-	-	-	-	-
NCA05.RES.1303.01	NCA05	1	312768	6242595	Residential	Riverlands Development			60	55	P	51	48	51	48	52	48	52	48	-	-	-	-	-	-	-
NCA05.RES.1304.01	NCA05	1	312752	6242597	Residential	Riverlands Development			60	55	P	51	47	51	47	51	48	51	48	-	-	-	-	-	-	-
NCA05.RES.1305.01	NCA05	1	312736	6242599	Residential	Riverlands Development			60	55	P	51	48	51	48	52	48	52	48	-	-	-	-	-	-	-
NCA05.RES.1306.01	NCA05	1	312719	6242601	Residential	Riverlands Development			60	55	P	52	48	52	48	52	48	52	48	-	-	-	-	-	-	-
NCA05.RES.1307.01	NCA05	1	312697	6242603	Residential	Riverlands Development			60	55	P	51	47	51	47	51	48	51	48	-	-	-	-	-	-	-
NCA05.RES.1308.01	NCA05	1	312676	6242605	Residential	Riverlands Development			60	55	P	51	48	51	48	51	48	52	48	-	-	-	-	-	-	-
NCA05.RES.1309.01	NCA05	1	312660	6242606	Residential	Riverlands Development			60	55	P	50	47	50	47	51	47	51	47	-	-	-	-	-	-	-
NCA05.RES.1310.01	NCA05	1	312771	6242388	Residential	Riverlands Development			60	55	P	53	49	53	49	53	49	53	49	-	-	-	-	-	-	-
NCA06.OOP.1771.01	NCA06	1	313994	6242542	Other (Outdoor Passive)	Frank Moulang Reserve			55	-	P	54	51	54	51	55	51	55	51	-	-	-	-	-	-	-
NCA06.OOP.1773.01	NCA06	1	313764	6242321	Other (Outdoor Passive)	Tompson Reserve			55	-	P	58	54	58	54	58	55	58	55	-	-	-	-	-	-	-
NCA06.RES.1322.01	NCA06	1	313815	6242741	Residential	24 Armentieres Av, Milperra Nsw 2214			60	55	P	54	50	54	50	54	50	55	50	-	-	-	-	-	-	-
NCA06.RES.1323.01	NCA06	1	313811	6242724	Residential	30 Armentieres Av, Milperra Nsw 2214			60	55	P	54	50	55	50	54	50	55	50	-	-	-	-	-	-	-
NCA06.RES.1324.01	NCA06	1	313808	6242704	Residential	32 Armentieres Av, Milperra Nsw 2214			60	55	P	55	50	55	50	55	50	55	51	-	-	-	-	-	-	-
NCA06.RES.1325.01	NCA06	1	313807	6242689	Residential	34 Armentieres Av, Milperra Nsw 2214			60	55	P	54	50	54	50	54	50	55	50	-	-	-	-	-	-	-
NCA06.RES.1326.01	NCA06	1	313805	6242672	Residential	36 Armentieres Av, Milperra Nsw 2214			60	55	P	54	50	54	50	54	50	55	50	-	-	-	-	-	-	-
NCA06.RES.1327.01	NCA06	1	313804	6242659	Residential	38 Armentieres Av, Milperra Nsw 2214			60	55	P	55	50	55	51	55	51	55	51	-	-	-	-	-	-	-
NCA06.RES.1328.01	NCA06	1	313799	6242643	Residential	40 Armentieres Av, Milperra Nsw 2214			60	55	P	54	50	55	50	55	50	55	50	-	-	-	-	-	-	-
NCA06.RES.1329.01	NCA06	1	313798	6242628	Residential	42 Armentieres Av, Milperra Nsw 2214			60	55	P	55	51	55	51	55	51	55	51	-	-	-	-	-	-	-
NCA06.RES.1330.01	NCA06	1	313800	6242613	Residential	44 Armentieres Av, Milperra Nsw 2214			60	55	P	55	51	55	51	55	51	55	51	-	-	-	-	-	-	-
NCA06.RES.1331.01	NCA06	1	313802	6242597	Residential	46 Armentieres Av, Milperra Nsw 2214			60	55	P	54	50	54	50	55	50	55	50	-	-	-	-	-	-	-
NCA06.RES.1332.01	NCA06	1	313793	6242576	Residential	48 Armentieres Av, Milperra Nsw 2214			60	55	P	55	51	55	51	55	51	55	51	-	-	-	-	-	-	-
NCA06.RES.1333.01	NCA06	1	313772	6242572	Residential	50 Armentieres Av, Milperra Nsw 2214			60	55	P	54	50	54	50	55	51	55	51	-	-	-	-	-	-	-
NCA06.RES.1334.01	NCA06	1	313757	6242578	Residential	52 Armentieres Av, Milperra Nsw 2214			60	55	P	54	50	54	50	54	50	54	50	-	-	-	-	-	-	-
NCA06.RES.1335.01	NCA06	1	313726	6242586	Residential	56 Armentieres Av, Milperra Nsw 2214			60	55	P	57	52	57	52	57	52	57	52	-	-	-	-	-	-	-
NCA06.RES.1336.01	NCA06	1	313712	6242588	Residential	58 Armentieres Av, Milperra Nsw 2214			60	55	P	57	53	57	52	58	53	57	53	-	-	-	-	-	-	-
NCA06.RES.1337.01	NCA06	1	313696	6242592	Residential	60 Armentieres Av, Milperra Nsw 2214			60	55	P	58	53	58	53	58	53	58	53	-	-	-	-	-	-	-
NCA06.RES.1338.01	NCA06	1	313681	6242594	Residential	62 Armentieres Av, Milperra Nsw 2214			60	55	P	60	55	59	54	60	55	60	55	-	-	-	-	-	-	-
NCA06.RES.1339.01	NCA06	1	313666	6242594	Residential	64 Armentieres Av, Milperra Nsw 2214			60	55	P	62	57	62	57	63	57	62	57	-	-	-	-	-	-	-
NCA06.RES.1340.01	NCA06	1	313650	6242597	Residential	66 Armentieres Av, Milperra Nsw 2214			60	55	P	66	60	65												

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation			
									At Opening (2026)				Future Design (2036)				D		N		D		N			
									No Build		Build		No Build		Build		D		N		D		N			
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N		
NCA06.RES.1397.01	NCA06	1	313737	6242834	Residential	12 Beatham Pl, Milperra NSW 2214			60	55	P	55	50	55	51	55	51	55	51	-	-	-	-	-	-	-
NCA06.RES.1398.01	NCA06	1	313735	6242667	Residential	1 Beatham Pl, Milperra NSW 2214			60	55	P	56	51	56	51	56	51	56	52	-	-	-	-	-	-	-
NCA06.RES.1399.01	NCA06	1	313703	6242689	Residential	3 Beatham Pl, Milperra NSW 2214			60	55	P	57	52	57	52	57	52	57	52	-	-	-	-	-	-	-
NCA06.RES.1400.01	NCA06	1	313709	6242728	Residential	5 Beatham Pl, Milperra NSW 2214			60	55	P	57	52	57	52	57	52	57	52	-	-	-	-	-	-	-
NCA06.RES.1401.01	NCA06	1	313713	6242758	Residential	7 Beatham Pl, Milperra NSW 2214			60	55	P	57	52	57	52	57	52	57	52	-	-	-	-	-	-	-
NCA06.RES.1402.01	NCA06	1	313718	6242789	Residential	9 Beatham Pl, Milperra NSW 2214			60	55	P	57	52	57	52	57	52	57	52	-	-	-	-	-	-	-
NCA06.RES.1403.01	NCA06	1	313719	6242825	Residential	11 Beatham Pl, Milperra NSW 2214			60	55	P	56	51	56	51	56	51	56	51	-	-	-	-	-	-	-
NCA06.RES.1404.01	NCA06	1	313757	6242828	Residential	13 Beatham Pl, Milperra NSW 2214			60	55	P	55	50	55	50	55	50	55	50	-	-	-	-	-	-	-
NCA06.RES.1436.01	NCA06	1	313868	6242352	Residential	4 Dernancourt Pde, Milperra NSW 2214			60	55	P	60	57	61	57	61	57	61	57	-	-	-	-	-	-	-
NCA06.RES.1437.01	NCA06	1	313863	6242368	Residential	6 Dernancourt Pde, Milperra NSW 2214			60	55	P	59	56	59	56	60	56	60	56	-	-	-	-	-	-	-
NCA06.RES.1438.01	NCA06	1	313864	6242385	Residential	8 Dernancourt Pde, Milperra NSW 2214			60	55	P	59	56	59	56	59	56	59	56	-	-	-	-	-	-	-
NCA06.RES.1439.01	NCA06	1	313857	6242397	Residential	10 Dernancourt Pde, Milperra NSW 2214			60	55	P	58	55	59	55	59	55	59	55	-	-	-	-	-	-	-
NCA06.RES.1440.01	NCA06	1	313855	6242414	Residential	12 Dernancourt Pde, Milperra NSW 2214			60	55	P	58	55	58	55	58	55	58	55	-	-	-	-	-	-	-
NCA06.RES.1441.01	NCA06	1	313854	6242426	Residential	14 Dernancourt Pde, Milperra NSW 2214			60	55	P	58	54	58	54	58	54	58	54	-	-	-	-	-	-	-
NCA06.RES.1442.01	NCA06	1	313848	6242443	Residential	16 Dernancourt Pde, Milperra NSW 2214			60	55	P	58	54	58	54	58	55	58	55	-	-	-	-	-	-	-
NCA06.RES.1443.01	NCA06	1	313848	6242462	Residential	18 Dernancourt Pde, Milperra NSW 2214			60	55	P	56	53	56	53	56	53	57	53	-	-	-	-	-	-	-
NCA06.RES.1444.01	NCA06	1	313832	6242551	Residential	24 Dernancourt Pde, Milperra NSW 2214			60	55	P	54	51	54	51	55	51	55	51	-	-	-	-	-	-	-
NCA06.RES.1445.01	NCA06	1	313834	6242566	Residential	26 Dernancourt Pde, Milperra NSW 2214			60	55	P	55	51	55	51	55	51	55	51	-	-	-	-	-	-	-
NCA06.RES.1446.01	NCA06	1	313830	6242582	Residential	28 Dernancourt Pde, Milperra NSW 2214			60	55	P	54	51	55	51	55	51	55	51	-	-	-	-	-	-	-
NCA06.RES.1447.01	NCA06	1	313834	6242599	Residential	30 Dernancourt Pde, Milperra NSW 2214			60	55	P	54	50	54	50	55	50	55	51	-	-	-	-	-	-	-
NCA06.RES.1448.01	NCA06	1	313837	6242612	Residential	32 Dernancourt Pde, Milperra NSW 2214			60	55	P	54	50	54	50	55	51	55	51	-	-	-	-	-	-	-
NCA06.RES.1449.01	NCA06	1	313840	6242628	Residential	34 Dernancourt Pde, Milperra NSW 2214			60	55	P	54	49	54	49	54	50	54	50	-	-	-	-	-	-	-
NCA06.RES.1450.01	NCA06	1	313840	6242643	Residential	36 Dernancourt Pde, Milperra NSW 2214			60	55	P	53	49	53	49	53	49	54	49	-	-	-	-	-	-	-
NCA06.RES.1451.01	NCA06	1	313843	6242656	Residential	38 Dernancourt Pde, Milperra NSW 2214			60	55	P	54	50	54	50	54	50	54	50	-	-	-	-	-	-	-
NCA06.RES.1452.01	NCA06	1	313845	6242674	Residential	40 Dernancourt Pde, Milperra NSW 2214			60	55	P	54	50	54	50	54	50	55	50	-	-	-	-	-	-	-
NCA06.RES.1453.01	NCA06	1	313847	6242688	Residential	42 Dernancourt Pde, Milperra NSW 2214			60	55	P	54	50	54	50	55	50	55	51	-	-	-	-	-	-	-
NCA06.RES.1454.01	NCA06	1	313848	6242704	Residential	44 Dernancourt Pde, Milperra NSW 2214			60	55	P	54	50	55	50	55	50	55	51	-	-	-	-	-	-	-
NCA06.RES.1455.01	NCA06	1	313855	6242719	Residential	46 Dernancourt Pde, Milperra NSW 2214			60	55	P	54	50	54	50	54	50	55	50	-	-	-	-	-	-	-
NCA06.RES.1456.01	NCA06	1	313854	6242734	Residential	48 Dernancourt Pde, Milperra NSW 2214			60	55	P	54	50	54	50	54	50	54	50	-	-	-	-	-	-	-
NCA06.RES.1467.01	NCA06	1	313922	6242338	Residential	1 Dernancourt Pde, Milperra NSW 2214			60	55	P	61	58	61	58	62	58	62	58	-	-					

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation				
									At Opening (2026)				Future Design (2036)				D		N		D		N				
									No Build		Build		No Build		Build		D		N		D		N				
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N			
NCA06.RES.1515.01	NCA06	1	313679	6242256	Residential	48 Flanders Av, Milperra Nsw 2214	60	55	P	61	57	61	57	61	58	61	58	-	-	-	-	-	-	-	-	-	
NCA06.RES.1516.01	NCA06	1	313655	6242256	Residential	50 Flanders Av, Milperra Nsw 2214	60	55	P	61	57	61	57	61	57	61	57	-	-	-	-	-	-	-	-	-	
NCA06.RES.1517.01	NCA06	1	313633	6242255	Residential	52 Flanders Av, Milperra Nsw 2214	60	55	P	62	58	62	58	62	58	62	58	-	-	-	-	-	-	-	-	-	
NCA06.RES.1518.01	NCA06	1	313610	6242259	Residential	54 Flanders Av, Milperra Nsw 2214	60	55	P	64	59	63	58	64	59	63	59	-	-	-	-	-	-	-	-	-	
NCA06.RES.1519.01	NCA06	1	313893	6242287	Residential	24A Flanders Av, Milperra Nsw 2214	60	55	P	64	61	64	61	64	61	64	61	-	-	-	-	-	-	-	-	-	
NCA06.RES.1520.01	NCA06	1	313777	6242264	Residential	38A Flanders Av, Milperra Nsw 2214	60	55	P	62	59	62	59	63	59	63	59	-	-	-	-	-	-	-	-	-	
NCA06.RES.1521.01	NCA06	1	314066	6242365	Residential	1 Flanders Av, Milperra Nsw 2214	60	55	P	68	64	69	64	69	64	69	64	-	-	-	-	-	-	-	-	-	
NCA06.RES.1522.01	NCA06	1	314050	6242365	Residential	3 Flanders Av, Milperra Nsw 2214	60	55	P	63	60	63	60	64	60	64	60	-	-	-	-	-	-	-	-	-	
NCA06.RES.1523.01	NCA06	1	314027	6242364	Residential	5 Flanders Av, Milperra Nsw 2214	60	55	P	63	59	63	59	63	60	63	60	-	-	-	-	-	-	-	-	-	
NCA06.RES.1524.01	NCA06	1	314015	6242365	Residential	7 Flanders Av, Milperra Nsw 2214	60	55	P	63	60	63	60	63	60	63	60	-	-	-	-	-	-	-	-	-	
NCA06.RES.1525.01	NCA06	1	314000	6242361	Residential	9 Flanders Av, Milperra Nsw 2214	60	55	P	63	60	63	60	63	60	63	60	-	-	-	-	-	-	-	-	-	
NCA06.RES.1526.01	NCA06	1	313984	6242359	Residential	11 Flanders Av, Milperra Nsw 2214	60	55	P	63	60	63	60	63	60	63	60	-	-	-	-	-	-	-	-	-	
NCA06.RES.1527.01	NCA06	1	313971	6242352	Residential	13 Flanders Av, Milperra Nsw 2214	60	55	P	63	60	63	60	63	60	63	60	-	-	-	-	-	-	-	-	-	
NCA06.RES.1528.01	NCA06	1	313956	6242346	Residential	15 Flanders Av, Milperra Nsw 2214	60	55	P	63	59	63	59	63	60	63	60	-	-	-	-	-	-	-	-	-	
NCA06.RES.1529.01	NCA06	1	313939	6242351	Residential	17 Flanders Av, Milperra Nsw 2214	60	55	P	62	59	62	59	63	59	63	59	-	-	-	-	-	-	-	-	-	
NCA06.RES.1530.01	NCA06	1	313877	6242336	Residential	19 Flanders Av, Milperra Nsw 2214	60	55	P	61	58	61	58	62	58	62	58	-	-	-	-	-	-	-	-	-	
NCA06.RES.1531.01	NCA06	1	313865	6242329	Residential	21 Flanders Av, Milperra Nsw 2214	60	55	P	61	58	61	58	62	58	62	58	-	-	-	-	-	-	-	-	-	
NCA06.RES.1532.01	NCA06	1	313846	6242328	Residential	23 Flanders Av, Milperra Nsw 2214	60	55	P	61	58	61	58	62	58	62	58	-	-	-	-	-	-	-	-	-	
NCA06.RES.1533.01	NCA06	1	313827	6242324	Residential	25 Flanders Av, Milperra Nsw 2214	60	55	P	61	57	61	57	61	58	61	58	-	-	-	-	-	-	-	-	-	
NCA06.RES.1540.01	NCA06	1	313784	6242862	Residential	1 Fromelles Av, Milperra Nsw 2214	60	55	P	55	50	56	51	55	51	56	51	-	-	-	-	-	-	-	-	-	
NCA06.RES.1541.01	NCA06	1	313769	6242867	Residential	3 Fromelles Av, Milperra Nsw 2214	60	55	P	56	51	56	51	56	52	57	52	-	-	-	-	-	-	-	-	-	
NCA06.RES.1542.01	NCA06	1	313748	6242865	Residential	5 Fromelles Av, Milperra Nsw 2214	60	55	P	57	52	57	52	57	52	57	52	-	-	-	-	-	-	-	-	-	
NCA06.RES.1543.01	NCA06	1	313735	6242869	Residential	7 Fromelles Av, Milperra Nsw 2214	60	55	P	57	52	57	52	57	52	57	52	-	-	-	-	-	-	-	-	-	
NCA06.RES.1544.01	NCA06	1	313717	6242868	Residential	9 Fromelles Av, Milperra Nsw 2214	60	55	P	59	54	59	54	60	54	59	54	-	-	-	-	-	-	-	-	-	
NCA06.RES.1545.01	NCA06	1	313705	6242870	Residential	11 Fromelles Av, Milperra Nsw 2214	60	55	P	60	55	60	55	60	55	60	55	-	-	-	-	-	-	-	-	-	
NCA06.RES.1546.01	NCA06	1	313689	6242876	Residential	13 Fromelles Av, Milperra Nsw 2214	60	55	P	66	61	65	60	66	61	65	60	-	-	Y	Y	Y	Y	Y	Y	Y	Y
NCA06.RES.1547.01	NCA06	1	313692	6242846	Residential	15 Fromelles Av, Milperra Nsw 2214	60	55	P	67	61	66	61	67	61	66	61	-	-	Y	Y	Y	Y	Y	Y	Y	Y
NCA06.RES.1548.01	NCA06	1	313689	6242831	Residential	17 Fromelles Av, Milperra Nsw 2214	60	55	P	67	62	67	61	67	62	67	61	-	-	Y	Y	Y	Y	Y	Y	Y	Y
NCA06.RES.1549.01	NCA06	1	313684	6242815	Residential	19 Fromelles Av, Milperra Nsw 2214	60	55	P	68	62	67	61	68	62	67	62	-	-	Y	Y	Y	Y	Y	Y	Y	Y
NCA06.RES.1550.01	NCA06	1	313682	6242798	Residential	21 Fromelles Av, Milperra Nsw 2214	60	55																			

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation			
									At Opening (2026)				Future Design (2036)				D		N		D		N			
									No Build		Build		No Build		Build		D		N		D		N			
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N		
NCA06.RES.1583.01	NCA06	1	313662	6242452	Residential	13 Glencorse Av, Milperra Nsw 2214	60	55	P	61	57	61	56	62	57	61	57	-	-	-	-	-	-	-	-	-
NCA06.RES.1584.01	NCA06	1	313646	6242453	Residential	15 Glencorse Av, Milperra Nsw 2214	60	55	P	63	58	63	58	63	58	63	58	-	-	-	-	-	-	-	-	-
NCA06.RES.1585.01	NCA06	1	313632	6242456	Residential	17 Glencorse Av, Milperra Nsw 2214	60	55	P	66	61	65	60	66	61	66	61	-	-	-	Y	Y	Y	Y	Y	-
NCA06.RES.1586.01	NCA06	1	313616	6242456	Residential	19 Glencorse Av, Milperra Nsw 2214	60	55	P	73	67	71	66	73	67	72	66	-	-	-	Y	Y	Y	Y	Y	-
NCA06.RES.1587.01	NCA06	1	313700	6242385	Residential	1/10 Glencorse Av, Milperra Nsw 2214	60	55	P	58	54	58	54	59	55	59	55	-	-	-	-	-	-	-	-	-
NCA06.RES.1588.01	NCA06	1	313941	6242470	Residential	2 Hamel Cl, Milperra Nsw 2214	60	55	P	58	54	58	54	58	55	58	55	-	-	-	-	-	-	-	-	-
NCA06.RES.1589.01	NCA06	1	313925	6242478	Residential	2 Hamel Cl, Milperra Nsw 2214	60	55	P	56	53	57	53	57	53	57	53	-	-	-	-	-	-	-	-	-
NCA06.RES.1590.01	NCA06	1	313921	6242514	Residential	4 Hamel Cl, Milperra Nsw 2214	60	55	P	57	54	57	54	58	54	58	54	-	-	-	-	-	-	-	-	-
NCA06.RES.1591.01	NCA06	1	313957	6242532	Residential	6 Hamel Cl, Milperra Nsw 2214	60	55	P	58	54	58	54	58	55	58	55	-	-	-	-	-	-	-	-	-
NCA06.RES.1592.01	NCA06	1	313964	6242477	Residential	1 Hamel Cl, Milperra Nsw 2214	60	55	P	59	55	59	55	59	55	59	55	-	-	-	-	-	-	-	-	-
NCA06.RES.1593.01	NCA06	1	313929	6242494	Residential	3 Hamel Cl, Milperra Nsw 2214	60	55	P	57	54	57	54	58	54	58	54	-	-	-	-	-	-	-	-	-
NCA06.RES.1594.01	NCA06	1	313937	6242530	Residential	5 Hamel Cl, Milperra Nsw 2214	60	55	P	58	55	58	55	58	55	59	55	-	-	-	-	-	-	-	-	-
NCA06.RES.1595.01	NCA06	1	313626	6242485	Residential	553 Henry Lawson Dr, Milperra Nsw 2214	60	55	P	73	67	71	66	73	67	72	66	-	-	Y	Y	Y	Y	Y	-	
NCA06.RES.1596.01	NCA06	1	313647	6242484	Residential	553A Henry Lawson Dr, Milperra Nsw 2214	60	55	P	60	55	60	55	60	55	60	55	-	-	-	-	-	-	-	-	-
NCA06.RES.1597.01	NCA06	1	313836	6242534	Residential	2 Hermies Av, Milperra Nsw 2214	60	55	P	55	52	55	52	56	52	56	52	-	-	-	-	-	-	-	-	-
NCA06.RES.1598.01	NCA06	1	313815	6242534	Residential	4 Hermies Av, Milperra Nsw 2214	60	55	P	56	52	56	52	56	52	56	52	-	-	-	-	-	-	-	-	-
NCA06.RES.1599.01	NCA06	1	313799	6242538	Residential	6 Hermies Av, Milperra Nsw 2214	60	55	P	56	52	56	52	57	53	57	53	-	-	-	-	-	-	-	-	-
NCA06.RES.1600.01	NCA06	1	313782	6242537	Residential	8 Hermies Av, Milperra Nsw 2214	60	55	P	57	53	57	53	57	53	57	53	-	-	-	-	-	-	-	-	-
NCA06.RES.1601.01	NCA06	1	313767	6242542	Residential	10 Hermies Av, Milperra Nsw 2214	60	55	P	57	53	57	53	57	53	57	53	-	-	-	-	-	-	-	-	-
NCA06.RES.1602.01	NCA06	1	313751	6242541	Residential	12 Hermies Av, Milperra Nsw 2214	60	55	P	57	53	57	53	57	53	57	53	-	-	-	-	-	-	-	-	-
NCA06.RES.1603.01	NCA06	1	313735	6242543	Residential	14 Hermies Av, Milperra Nsw 2214	60	55	P	56	52	56	52	57	53	57	53	-	-	-	-	-	-	-	-	-
NCA06.RES.1604.01	NCA06	1	313721	6242549	Residential	16 Hermies Av, Milperra Nsw 2214	60	55	P	57	52	57	52	57	53	57	53	-	-	-	-	-	-	-	-	-
NCA06.RES.1605.01	NCA06	1	313707	6242549	Residential	18 Hermies Av, Milperra Nsw 2214	60	55	P	57	53	57	53	57	53	58	53	-	-	-	-	-	-	-	-	-
NCA06.RES.1606.01	NCA06	1	313692	6242549	Residential	20 Hermies Av, Milperra Nsw 2214	60	55	P	58	54	58	54	58	54	59	54	-	-	-	-	-	-	-	-	-
NCA06.RES.1607.01	NCA06	1	313676	6242553	Residential	22 Hermies Av, Milperra Nsw 2214	60	55	P	60	55	60	55	60	55	60	55	-	-	-	-	-	-	-	-	-
NCA06.RES.1608.01	NCA06	1	313661	6242555	Residential	24 Hermies Av, Milperra Nsw 2214	60	55	P	61	56	61	56	61	56	61	56	-	-	-	-	-	-	-	-	-
NCA06.RES.1609.01	NCA06	1	313647	6242557	Residential	26 Hermies Av, Milperra Nsw 2214	60	55	P	64	59	64	59	64	59	64	59	-	-	-	-	-	-	-	-	-
NCA06.RES.1610.01	NCA06	1	313630	6242559	Residential	28 Hermies Av, Milperra Nsw 2214	60	55	P	73	68	72	67	73	68	72	67	-	-	Y	Y	Y	Y	Y	-	
NCA06.RES.1611.01	NCA06	1	313849	6242484	Residential	1 Hermies Av, Milperra Nsw 2214	60	55	P	56	53	56	53	57	53	57	53	-	-	-	-	-	-	-	-	-
NCA06.RES.1612.01	NCA06	1	313831	6242483	Residential	3 Hermies Av, Milperra Nsw 2214	60	55	P	56	53	56	53	57												

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation			
									At Opening (2026)				Future Design (2036)				D		N		D		N			
									No Build		Build		No Build		Build		D		N		D		N			
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N		
NCA06.RES.1702.01	NCA06	1	313810	6242421	Residential	13 Proyart Av, Milperra Nsw 2214			60	55	P	58	54	58	54	58	54	58	54	-	-	-	-	-	-	-
NCA06.RES.1703.01	NCA06	1	313813	6242437	Residential	15 Proyart Av, Milperra Nsw 2214			60	55	P	57	54	57	54	58	54	58	54	-	-	-	-	-	-	-
NCA06.RES.1704.01	NCA06	1	313822	6242449	Residential	17 Proyart Av, Milperra Nsw 2214			60	55	P	56	53	56	53	57	53	57	53	-	-	-	-	-	-	-
NCA06.RES.1705.01	NCA06	1	313807	6242468	Residential	19 Proyart Av, Milperra Nsw 2214			60	55	P	56	53	56	53	57	53	57	53	-	-	-	-	-	-	-
NCA06.RES.1706.01	NCA06	1	313810	6242489	Residential	21 Proyart Av, Milperra Nsw 2214			60	55	P	56	52	56	52	56	52	56	52	-	-	-	-	-	-	-
NCA06.RES.1730.01	NCA06	1	313906	6242383	Residential	2 Somme Cr, Milperra Nsw 2214			60	55	P	59	55	59	55	59	55	59	55	-	-	-	-	-	-	-
NCA06.RES.1731.01	NCA06	1	313925	6242385	Residential	4 Somme Cr, Milperra Nsw 2214			60	55	P	58	55	58	55	59	55	59	55	-	-	-	-	-	-	-
NCA06.RES.1732.01	NCA06	1	313938	6242389	Residential	6 Somme Cr, Milperra Nsw 2214			60	55	P	58	55	58	55	59	55	59	55	-	-	-	-	-	-	-
NCA06.RES.1733.01	NCA06	1	313954	6242393	Residential	8 Somme Cr, Milperra Nsw 2214			60	55	P	59	55	59	55	59	56	59	56	-	-	-	-	-	-	-
NCA06.RES.1734.01	NCA06	1	313969	6242392	Residential	10 Somme Cr, Milperra Nsw 2214			60	55	P	59	56	59	56	59	56	59	56	-	-	-	-	-	-	-
NCA06.RES.1735.01	NCA06	1	313985	6242395	Residential	12 Somme Cr, Milperra Nsw 2214			60	55	P	59	55	59	55	59	56	59	56	-	-	-	-	-	-	-
NCA06.RES.1736.01	NCA06	1	313999	6242396	Residential	14 Somme Cr, Milperra Nsw 2214			60	55	P	59	55	59	55	59	56	59	56	-	-	-	-	-	-	-
NCA06.RES.1737.01	NCA06	1	314017	6242399	Residential	16 Somme Cr, Milperra Nsw 2214			60	55	P	61	57	61	57	61	57	61	57	-	-	-	-	-	-	-
NCA06.RES.1738.01	NCA06	1	314037	6242400	Residential	18 Somme Cr, Milperra Nsw 2214			60	55	P	60	56	60	56	60	56	60	56	-	-	-	-	-	-	-
NCA06.RES.1739.01	NCA06	1	314029	6242423	Residential	18 Somme Cr, Milperra Nsw 2214			60	55	P	58	55	58	55	59	55	59	55	-	-	-	-	-	-	-
NCA06.RES.1740.01	NCA06	1	314029	6242437	Residential	20 Somme Cr, Milperra Nsw 2214			60	55	P	59	56	59	56	60	56	60	56	-	-	-	-	-	-	-
NCA06.RES.1741.01	NCA06	1	314029	6242455	Residential	22 Somme Cr, Milperra Nsw 2214			60	55	P	59	56	59	56	60	56	60	56	-	-	-	-	-	-	-
NCA06.RES.1742.01	NCA06	1	314034	6242469	Residential	24 Somme Cr, Milperra Nsw 2214			60	55	P	59	56	60	56	60	56	60	56	-	-	-	-	-	-	-
NCA06.RES.1743.01	NCA06	1	314036	6242484	Residential	26 Somme Cr, Milperra Nsw 2214			60	55	P	59	55	59	55	59	56	59	56	-	-	-	-	-	-	-
NCA06.RES.1744.01	NCA06	1	314049	6242493	Residential	28 Somme Cr, Milperra Nsw 2214			60	55	P	59	55	59	55	59	55	59	55	-	-	-	-	-	-	-
NCA06.RES.1745.01	NCA06	1	314036	6242498	Residential	28 Somme Cr, Milperra Nsw 2214			60	55	P	55	52	56	52	56	52	56	52	-	-	-	-	-	-	-
NCA06.RES.1746.01	NCA06	1	314040	6242514	Residential	30 Somme Cr, Milperra Nsw 2214			60	55	P	58	54	58	54	58	55	58	55	-	-	-	-	-	-	-
NCA06.RES.1747.01	NCA06	1	314045	6242527	Residential	32 Somme Cr, Milperra Nsw 2214			60	55	P	55	51	55	51	55	52	55	52	-	-	-	-	-	-	-
NCA06.RES.1748.01	NCA06	1	313896	6242427	Residential	1 Somme Cr, Milperra Nsw 2214			60	55	P	59	56	59	56	60	56	60	56	-	-	-	-	-	-	-
NCA06.RES.1749.01	NCA06	1	313910	6242428	Residential	3 Somme Cr, Milperra Nsw 2214			60	55	P	60	56	60	56	60	57	60	57	-	-	-	-	-	-	-
NCA06.RES.1750.01	NCA06	1	313925	6242432	Residential	5 Somme Cr, Milperra Nsw 2214			60	55	P	60	56	60	56	60	57	60	57	-	-	-	-	-	-	-
NCA06.RES.1751.01	NCA06	1	313941	6242439	Residential	7 Somme Cr, Milperra Nsw 2214			60	55	P	60	56	60	56	60	56	60	56	-	-	-	-	-	-	-
NCA06.RES.1752.01	NCA06	1	313955	6242439	Residential	9 Somme Cr, Milperra Nsw 2214			60	55	P	59	56	59	56	60	56	60	56	-	-	-	-	-	-	-
NCA06.RES.1753.01	NCA06	1	313971	6242443	Residential	11 Somme Cr, Milperra Nsw 2214			60	55	P	59	55	59	55	59	55	59	55	-	-	-	-	-	-	-
NCA06.RES.1754.01	NCA06	1	313985	6242444	Residential	13 Somme Cr, Milperra Nsw 2214			60	55	P	59	55	59	55	59	55	59	55	-	-	-	-	-	-	-
N																										

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation				
									At Opening (2026)				Future Design (2036)				No Build		Build		No Build		Build				
							D	N	D		N		D		N		D		N		D		N				
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N			
NCA02.RES.0301.01	NCA02	2	313486	6243102	Residential	27 Whittle Av, Milperra Nsw 2214	60	55	P	60	55	60	55	60	55	60	55	-	-	-	-	-	-	-	-	-	
NCA02.RES.0306.01	NCA02	2	313407	6243111	Residential	37 Whittle Av, Milperra Nsw 2214	60	55	P	59	54	59	54	59	54	60	55	-	-	-	-	-	-	-	-	-	
NCA02.RES.0307.01	NCA02	2	313392	6243111	Residential	39 Whittle Av, Milperra Nsw 2214	60	55	P	59	54	60	55	59	54	60	55	-	-	-	-	-	-	-	-	-	
NCA02.RES.0314.01	NCA02	2	313444	6243167	Residential	2/44 Whittle Av, Milperra Nsw 2214	60	55	P	55	51	55	51	55	51	55	51	-	-	-	-	-	-	-	-	-	
NCA03.OCC.0332.01	NCA03	2	313334	6242892	Other (Childcare)	12 Amiens Av, Milperra Nsw 2214	45	-	H	57	55	57	55	57	55	56	56	-	-	-	-	-	-	-	-	Y	
NCA03.RES.0328.01	NCA03	2	313349	6242979	Residential	4 Amiens Av, Milperra Nsw 2214	60	55	P	65	60	65	60	65	60	66	60	-	-	-	-	Y	Y	Y	Y	Y	
NCA03.RES.0334.01	NCA03	2	313318	6242752	Residential	26 Amiens Av, Milperra Nsw 2214	60	55	P	55	50	55	50	55	51	55	51	-	-	-	-	-	-	-	-	-	
NCA03.RES.0340.01	NCA03	2	313302	6242654	Residential	38 Amiens Av, Milperra Nsw 2214	60	55	P	54	50	55	50	55	50	55	51	-	-	-	-	-	-	-	-	-	
NCA03.RES.0343.01	NCA03	2	313298	6242605	Residential	44 Amiens Av, Milperra Nsw 2214	60	55	P	55	51	55	51	55	51	55	51	-	-	-	-	-	-	-	-	-	
NCA03.RES.0344.01	NCA03	2	313295	6242590	Residential	46A Amiens Av, Milperra Nsw 2214	60	55	P	55	51	55	51	55	51	55	51	-	-	-	-	-	-	-	-	-	
NCA03.RES.0347.01	NCA03	2	313400	6242960	Residential	3 Amiens Av, Milperra Nsw 2214	60	55	P	60	55	61	56	60	55	61	56	-	-	-	-	-	-	-	-	-	
NCA03.RES.0349.01	NCA03	2	313390	6242916	Residential	7 Amiens Av, Milperra Nsw 2214	60	55	P	57	53	58	53	57	53	58	53	-	-	-	-	-	-	-	-	-	
NCA03.RES.0350.01	NCA03	2	313393	6242900	Residential	9 Amiens Av, Milperra Nsw 2214	60	55	P	56	52	57	52	56	52	57	52	-	-	-	-	-	-	-	-	-	
NCA03.RES.0352.01	NCA03	2	313385	6242870	Residential	13 Amiens Av, Milperra Nsw 2214	60	55	P	56	51	56	51	56	51	56	51	-	-	-	-	-	-	-	-	-	
NCA03.RES.0364.01	NCA03	2	313348	6242637	Residential	39 Amiens Av, Milperra Nsw 2214	60	55	P	55	51	55	51	55	51	55	51	-	-	-	-	-	-	-	-	-	
NCA03.RES.0370.01	NCA03	2	313400	6242976	Residential	1A Amiens Av, Milperra Nsw 2214	60	55	P	63	57	63	58	63	58	64	58	-	-	-	-	-	-	-	-	-	
NCA03.RES.0371.01	NCA03	2	313396	6242945	Residential	3A Amiens Av, Milperra Nsw 2214	60	55	P	59	54	59	54	59	54	60	55	-	-	-	-	-	-	-	-	-	
NCA03.RES.0378.01	NCA03	2	312984	6243153	Residential	5 Borella Rd, Milperra Nsw 2214	60	55	P	66	61	67	62	66	61	67	62	-	-	Y	Y	Y	Y	Y	Y	Y	Y
NCA03.RES.0381.01	NCA03	2	313164	6242670	Residential	4 Bugden Av, Milperra Nsw 2214	60	55	P	53	49	53	49	53	49	53	49	-	-	-	-	-	-	-	-	-	
NCA03.RES.0382.01	NCA03	2	313171	6242685	Residential	6 Bugden Av, Milperra Nsw 2214	60	55	P	53	49	53	49	53	49	54	50	-	-	-	-	-	-	-	-	-	
NCA03.RES.0385.01	NCA03	2	313106	6242590	Residential	1 Bugden Av, Milperra Nsw 2214	60	55	P	53	49	53	49	53	49	53	49	-	-	-	-	-	-	-	-	-	
NCA03.RES.0386.01	NCA03	2	313106	6242605	Residential	3 Bugden Av, Milperra Nsw 2214	60	55	P	53	50	53	50	54	50	54	50	-	-	-	-	-	-	-	-	-	
NCA03.RES.0423.01	NCA03	2	313572	6242841	Residential	2 Cowper Ct, Milperra Nsw 2214	60	55	P	62	57	63	58	62	57	63	58	-	-	-	-	-	-	-	-	-	
NCA03.RES.0424.01	NCA03	2	313550	6242810	Residential	4 Cowper Ct, Milperra Nsw 2214	60	55	P	60	55	60	55	60	55	61	55	-	-	-	-	-	-	-	-	-	
NCA03.RES.0426.01	NCA03	2	313504	6242849	Residential	8 Cowper Ct, Milperra Nsw 2214	60	55	P	58	53	58	53	58	53	59	54	-	-	-	-	-	-	-	-	-	
NCA03.RES.0429.01	NCA03	2	313588	6242840	Residential	1 Cowper Ct, Milperra Nsw 2214	60	55	P	68	62	69	63	68	62	69	63	-	-	Y	Y	Y	Y	Y	Y	Y	Y
NCA03.RES.0430.01	NCA03	2	313556	6242833	Residential	3 Cowper Ct, Milperra Nsw 2214	60	55	P	59	54	60	55	60	55	60	55	-	-	-	-	-	-	-	-	-	
NCA03.RES.0431.01	NCA03	2	313532	6242807	Residential	5 Cowper Ct, Milperra Nsw 2214	60	55	P	58	53	58	53	59	54	59	54	-	-	-	-	-	-	-	-	-	
NCA03.RES.0432.01	NCA03	2	313500	6242828	Residential	7 Cowper Ct, Milperra Nsw 2214	60	55	P	57	53	58	53	58	53	58	53	-	-	-	-	-	-	-	-	-	
NCA03.RES.0436.01	NCA03	2	313072	6242673	Residential	16 Dunstan Av, Milperra Nsw 2214	60	55	P	53	49	53	49	53	49	54	50	-	-	-	-	-	-	-	-	-	
NCA03.RES.0439.01	NCA03	2	313124	6242670	Residential	22 Dunstan Av, Milperra Nsw 2214	60	55	P	53	49	53	50	54	50	54	50	-	-	-	-	-	-	-	-	-	
NCA03.RES.0441.01	NCA03	2	312928	6242735	Residential	3 Dunstan Av, Milperra Nsw 2214	60	55	P	52	48	53	48	53	48	53	49	-	-	-	-	-	-	-	-	-	
NCA03.RES.0452.01	NCA03	2	313098	6242727	Residential	25 Dunstan Av, Milperra Nsw 2214	60	55	P	54	50	54	50	54	50	54	50	-	-	-	-	-	-	-	-	-	
NCA03.RES.0454.01	NCA03	2	313131	6242720	Residential	29 Dunstan Av, Milperra Nsw 2214	60	55	P	53	49	54	50	54	50	54	50	-	-	-	-	-	-	-	-	-	
NCA03.RES.0460.01	NCA03	2	313438	6242604	Residential	16 Eynham Rd, Milperra Nsw 2214	60	55	P	56	51																

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation			
									At Opening (2026)				Future Design (2036)				D		N		D		N			
									No Build		Build		No Build		Build		D		N		D		N			
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N		
NCA03.RES.0906.01	NCA03	2	313533	6242507	Residential	7A Pozieres Av, Milperra Nsw 2214	60	55	P	63	58	63	58	63	58	64	59	-	-	-	-	-	-	-	-	-
NCA03.RES.0955.01	NCA03	2	312919	6242660	Residential	32 Raleigh Rd, Milperra Nsw 2214	60	55	P	53	49	53	49	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA03.RES.0975.01	NCA03	2	312953	6243110	Residential	80 Raleigh Rd, Milperra Nsw 2214	60	55	P	61	56	61	56	61	56	61	56	-	-	-	-	-	-	-	-	-
NCA03.RES.0997.01	NCA03	2	312868	6242738	Residential	57 Raleigh Rd, Milperra Nsw 2214	60	55	P	54	50	54	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA03.RES.0998.01	NCA03	2	312866	6242807	Residential	61 Raleigh Rd, Milperra Nsw 2214	60	55	P	57	52	57	52	57	52	57	52	-	-	-	-	-	-	-	-	-
NCA03.RES.1000.01	NCA03	2	312870	6242841	Residential	65 Raleigh Rd, Milperra Nsw 2214	60	55	P	60	55	60	55	61	56	61	56	-	-	-	-	-	-	-	-	-
NCA03.RES.1001.01	NCA03	2	312867	6242858	Residential	67 Raleigh Rd, Milperra Nsw 2214	60	55	P	57	52	57	52	57	52	57	52	-	-	-	-	-	-	-	-	-
NCA03.RES.1002.01	NCA03	2	312874	6242874	Residential	69 Raleigh Rd, Milperra Nsw 2214	60	55	P	62	57	62	57	62	57	62	57	-	-	-	-	-	-	-	-	-
NCA03.RES.1003.01	NCA03	2	312875	6242891	Residential	71 Raleigh Rd, Milperra Nsw 2214	60	55	P	62	57	62	57	62	57	62	57	-	-	-	-	-	-	-	-	-
NCA03.RES.1019.01	NCA03	2	313036	6243022	Residential	12 Ruthven Av, Milperra Nsw 2214	60	55	P	60	55	60	55	60	55	60	55	-	-	-	-	-	-	-	-	-
NCA03.RES.1021.01	NCA03	2	313067	6243029	Residential	16 Ruthven Av, Milperra Nsw 2214	60	55	P	62	57	63	58	62	57	63	58	-	-	-	-	-	-	-	-	-
NCA03.RES.1027.01	NCA03	2	313265	6242954	Residential	36 Ruthven Av, Milperra Nsw 2214	60	55	P	61	56	62	57	61	56	62	57	-	-	-	-	-	-	-	-	-
NCA03.RES.1028.01	NCA03	2	313295	6242946	Residential	38 Ruthven Av, Milperra Nsw 2214	60	55	P	60	55	60	55	60	55	60	56	-	-	-	-	-	-	-	-	-
NCA03.RES.1029.01	NCA03	2	313283	6242950	Residential	38 Ruthven Av, Milperra Nsw 2214	60	55	P	60	55	61	56	60	55	61	56	-	-	-	-	-	-	-	-	-
NCA03.RES.1030.01	NCA03	2	313307	6242951	Residential	40 Ruthven Av, Milperra Nsw 2214	60	55	P	60	55	61	56	60	55	61	56	-	-	-	-	-	-	-	-	-
NCA03.RES.1034.01	NCA03	2	313081	6243034	Residential	18A Ruthven Av, Milperra Nsw 2214	60	55	P	65	60	66	61	65	60	66	61	-	-	Y	Y	Y	Y	Y	Y	-
NCA03.RES.1038.01	NCA03	2	313002	6243064	Residential	5 Ruthven Av, Milperra Nsw 2214	60	55	P	59	54	59	54	59	54	60	55	-	-	-	-	-	-	-	-	-
NCA03.RES.1042.01	NCA03	2	313017	6243068	Residential	7A Ruthven Av, Milperra Nsw 2214	60	55	P	61	56	61	56	61	56	61	56	-	-	-	-	-	-	-	-	-
NCA03.RES.1045.01	NCA03	2	313053	6242942	Residential	6 Sadlier Av, Milperra Nsw 2214	60	55	P	55	51	55	51	55	51	55	51	-	-	-	-	-	-	-	-	-
NCA03.RES.1048.01	NCA03	2	313040	6242988	Residential	3 Sadlier Av, Milperra Nsw 2214	60	55	P	55	51	55	51	55	51	56	51	-	-	-	-	-	-	-	-	-
NCA03.RES.1050.01	NCA03	2	313070	6242984	Residential	7 Sadlier Av, Milperra Nsw 2214	60	55	P	56	51	56	52	56	52	57	52	-	-	-	-	-	-	-	-	-
NCA03.RES.1052.01	NCA03	2	312952	6242695	Residential	2 Stratton Cr, Milperra Nsw 2214	60	55	P	53	49	53	49	53	50	54	50	-	-	-	-	-	-	-	-	-
NCA03.RES.1055.01	NCA03	2	312951	6242634	Residential	8 Stratton Cr, Milperra Nsw 2214	60	55	P	52	48	53	49	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA03.RES.1062.01	NCA03	2	313080	6242632	Residential	22 Stratton Cr, Milperra Nsw 2214	60	55	P	52	49	52	49	52	49	53	49	-	-	-	-	-	-	-	-	-
NCA03.RES.1063.01	NCA03	2	313076	6242653	Residential	24 Stratton Cr, Milperra Nsw 2214	60	55	P	53	49	53	49	53	49	53	49	-	-	-	-	-	-	-	-	-
NCA03.RES.1076.01	NCA03	2	313017	6242907	Residential	9 Towner Av, Milperra Nsw 2214	60	55	P	54	50	54	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA03.RES.1083.01	NCA03	2	313505	6242776	Residential	10 Treadgold St, Milperra Nsw 2214	60	55	P	58	53	58	54	58	54	59	54	-	-	-	-	-	-	-	-	-
NCA04.OCC.1799.01	NCA04	2	314501	6242703	Other (Childcare)	Western Sydney University Early Learning	45	-	H	56	55	57	55	57	55	57	56	-	-	-	-	-	-	-	-	-
NCA04.OED.1622.01	NCA04	2	314391	6242421	Other (Educational)	Milperra College 271 Horsley Rd, Milperra Nsw 2214	50	-	H	71	71	71	71	72	71	72	71	-	-	-	-	-	-	-	-	-
NCA04.OED.1623.01	NCA04	2	314420	6242468	Other (Educational)	Milperra College 271 Horsley Rd, Milperra Nsw 2214	50	-	H	67	66	67	66	67	66</td											

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation			
									At Opening (2026)				Future Design (2036)				D		N		D		N			
									No Build		Build		No Build		Build		D		N		D		N			
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N		
NCA04.RES.1319.01	NCA04	2	313831	6242836	Residential	16 Armentieres Av, Milperra Nsw 2214	60	55	P	56	51	56	51	56	51	57	52	-	-	-	-	-	-	-	-	-
NCA04.RES.1321.01	NCA04	2	313827	6242805	Residential	20 Armentieres Av, Milperra Nsw 2214	60	55	P	55	51	56	51	56	51	56	51	-	-	-	-	-	-	-	-	-
NCA04.RES.1344.01	NCA04	2	313790	6242934	Residential	3 Armentieres Av, Milperra Nsw 2214	60	55	P	63	57	64	58	63	57	64	58	-	-	-	-	-	-	-	-	-
NCA04.RES.1367.01	NCA04	2	314103	6242689	Residential	146 Ashford Av, Milperra Nsw 2214	60	55	P	66	61	67	61	67	61	67	62	-	-	-	-	-	-	-	-	-
NCA04.RES.1369.01	NCA04	2	314098	6242654	Residential	150 Ashford Av, Milperra Nsw 2214	60	55	P	66	60	66	61	66	61	66	61	-	-	-	-	-	-	-	-	-
NCA04.RES.1391.01	NCA04	2	313850	6242778	Residential	5A Bapaume Pl, Milperra	60	55	P	55	50	55	50	55	50	55	51	-	-	-	-	-	-	-	-	-
NCA04.RES.1426.01	NCA04	2	313922	6242926	Residential	24 Bullecourt Av, Milperra Nsw 2214	60	55	P	68	62	69	63	68	62	69	63	-	-	-	-	-	-	-	-	-
NCA04.RES.1431.01	NCA04	2	313699	6242962	Residential	48 Bullecourt Av, Milperra Nsw 2214	60	55	P	66	60	67	61	66	60	67	61	-	-	Y	Y	-	-	Y	-	-
NCA04.RES.1433.01	NCA04	2	313860	6242939	Residential	Unit 2 32 Bullecourt Av, Milperra Nsw 2214	60	55	P	67	61	68	62	67	61	69	62	-	-	-	-	-	-	-	-	-
NCA04.RES.1457.01	NCA04	2	313865	6242799	Residential	52 Dernancourt Pde, Milperra Nsw 2214	60	55	P	55	51	55	51	55	51	56	51	-	-	-	-	-	-	-	-	-
NCA04.RES.1465.01	NCA04	2	313881	6242922	Residential	68 Dernancourt Pde, Milperra Nsw 2214	60	55	P	59	53	59	54	59	53	60	54	-	-	-	-	-	-	-	-	-
NCA04.RES.1478.01	NCA04	2	313890	6242641	Residential	25 Dernancourt Pde, Milperra Nsw 2214	60	55	P	54	50	54	50	54	50	55	50	-	-	-	-	-	-	-	-	-
NCA04.RES.1490.01	NCA04	2	313922	6242900	Residential	53 Dernancourt Pde, Milperra Nsw 2214	60	55	P	57	51	58	52	57	52	58	52	-	-	-	-	-	-	-	-	-
NCA04.RES.1492.01	NCA04	2	313910	6242792	Residential	45A Dernancourt Pde, Milperra Nsw 2214	60	55	P	54	50	55	50	54	50	55	50	-	-	-	-	-	-	-	-	-
NCA04.RES.1536.01	NCA04	2	313724	6242914	Residential	8 Fromelles Av, Milperra Nsw 2214	60	55	P	60	54	60	55	60	55	60	55	-	-	-	-	-	-	-	-	-
NCA04.RES.1537.01	NCA04	2	313709	6242919	Residential	10 Fromelles Av, Milperra Nsw 2214	60	55	P	63	57	63	57	63	58	63	58	-	-	-	-	-	-	-	-	-
NCA04.RES.1539.01	NCA04	2	313694	6242923	Residential	12A Fromelles Av, Milperra Nsw 2214	60	55	P	65	60	65	60	65	60	65	60	-	-	Y	Y	Y	Y	Y	Y	-
NCA04.RES.1640.01	NCA04	2	314047	6242635	Residential	8 Lille Pl, Milperra Nsw 2214	60	55	P	56	52	56	52	56	52	56	52	-	-	-	-	-	-	-	-	-
NCA04.RES.1644.01	NCA04	2	314053	6242686	Residential	5 Lille Pl, Milperra Nsw 2214	60	55	P	55	51	55	51	55	51	55	51	-	-	-	-	-	-	-	-	-
NCA04.RES.1666.01	NCA04	2	313984	6242715	Residential	12 Merris Pl, Milperra Nsw 2214	60	55	P	53	49	54	49	54	49	54	49	-	-	-	-	-	-	-	-	-
NCA04.RES.1670.01	NCA04	2	314038	6242712	Residential	9 Merris Pl, Milperra Nsw 2214	60	55	P	54	50	54	50	54	50	55	51	-	-	-	-	-	-	-	-	-
NCA04.RES.1672.01	NCA04	2	314036	6242763	Residential	3A Merris Pl, Milperra Nsw 2214	60	55	P	53	49	53	49	53	49	54	49	-	-	-	-	-	-	-	-	-
NCA04.RES.1673.01	NCA04	2	313951	6242786	Residential	2 Messines Av, Milperra Nsw 2214	60	55	P	53	49	53	49	53	49	54	49	-	-	-	-	-	-	-	-	-
NCA04.RES.1682.01	NCA04	2	313930	6242630	Residential	22 Messines Av, Milperra Nsw 2214	60	55	P	55	52	55	52	56	52	56	52	-	-	-	-	-	-	-	-	-
NCA04.RES.1684.01	NCA04	2	313962	6242805	Residential	2B Messines Av, Milperra Nsw 2214	60	55	P	54	49	54	49	54	49	54	50	-	-	-	-	-	-	-	-	-
NCA04.RES.1685.01	NCA04	2	313996	6242802	Residential	1 Messines Av, Milperra Nsw 2214	60	55	P	54	49	54	49	54	49	54	50	-	-	-	-	-	-	-	-	-
NCA04.RES.1689.01	NCA04	2	313997	6242780	Residential	1A Messines Av, Milperra Nsw 2214	60	55	P	53	49	54	49	54	49	54	49	-	-	-	-	-	-	-	-	-
NCA04.RES.1690.01	NCA04	2	313941	6242725	Residential	10 Messines Ave, Milperra Nsw 2214	60	55	P	54	50	54	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA04.RES.1710.01	NCA04	2	314049	6242850	Residential	8 Sinai Av, Milperra Nsw 2214	60	55	P	55	51	56	51	56	51	56	51	-	-	-	-	-	-	-	-	-
NCA04.RES.1711.01	NCA04	2	314033	6242856	Residential	10 Sinai Av, Milperra Nsw 2214	60	55	P	55	50	55														

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation			
									At Opening (2026)				Future Design (2036)				D		N		D		N			
									No Build		Build		No Build		Build		D		N		D		N			
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N		
NCA05.RES.0576.01	NCA05	2	313058	6242308	Residential	12 Lemnos Av, Milperra Nsw 2214	60	55	P	55	52	55	52	56	52	56	52	-	-	-	-	-	-	-	-	-
NCA05.RES.0577.01	NCA05	2	313053	6242291	Residential	14 Lemnos Av, Milperra Nsw 2214	60	55	P	55	52	55	52	56	52	56	52	-	-	-	-	-	-	-	-	-
NCA05.RES.0579.01	NCA05	2	313037	6242439	Residential	1 Lemnos Av, Milperra Nsw 2214	60	55	P	53	49	53	49	53	50	53	50	-	-	-	-	-	-	-	-	-
NCA05.RES.0621.01	NCA05	2	313075	6242428	Residential	10 Lone Pine Av, Milperra Nsw 2214	60	55	P	54	51	54	51	55	51	55	51	-	-	-	-	-	-	-	-	-
NCA05.RES.0628.01	NCA05	2	313099	6242476	Residential	3 Lone Pine Av, Milperra Nsw 2214	60	55	P	54	50	54	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA05.RES.0630.01	NCA05	2	313068	6242479	Residential	7 Lone Pine Av, Milperra Nsw 2214	60	55	P	54	50	54	50	54	51	54	51	-	-	-	-	-	-	-	-	-
NCA05.RES.0636.01	NCA05	2	312973	6242488	Residential	19 Lone Pine Av, Milperra Nsw 2214	60	55	P	54	50	54	50	54	50	54	50	-	-	-	-	-	-	-	-	-
NCA05.RES.0640.01	NCA05	2	313533	6242418	Residential	10 Mactier Av, Milperra Nsw 2214	60	55	P	66	61	67	61	66	61	67	62	-	-	Y	Y	Y	Y	Y	Y	-
NCA05.RES.0643.01	NCA05	2	313482	6242422	Residential	16 Mactier Av, Milperra Nsw 2214	60	55	P	60	56	60	56	60	56	61	56	-	-	-	-	-	-	-	-	-
NCA05.RES.0645.01	NCA05	2	313455	6242234	Residential	3 Mactier Av, Milperra Nsw 2214	60	55	P	63	60	63	60	64	60	64	60	-	-	-	-	-	-	-	-	-
NCA05.RES.0647.01	NCA05	2	313486	6242248	Residential	7 Mactier Av, Milperra Nsw 2214	60	55	P	63	59	63	59	63	59	63	59	-	-	-	-	-	-	-	-	-
NCA05.RES.0648.01	NCA05	2	313499	6242270	Residential	9 Mactier Av, Milperra Nsw 2214	60	55	P	64	59	64	59	64	60	64	60	-	-	-	-	-	-	-	-	-
NCA05.RES.0649.01	NCA05	2	313469	6242299	Residential	13 Mactier Av, Milperra Nsw 2214	60	55	P	61	57	61	57	62	57	62	58	-	-	-	-	-	-	-	-	-
NCA05.RES.0655.01	NCA05	2	313526	6242376	Residential	25 Mactier Av, Milperra Nsw 2214	60	55	P	67	61	67	62	67	61	67	62	-	-	Y	Y	Y	Y	Y	Y	-
NCA05.RES.0656.01	NCA05	2	313511	6242379	Residential	27 Mactier Av, Milperra Nsw 2214	60	55	P	62	57	62	57	62	57	62	58	-	-	-	-	-	-	-	-	-
NCA05.RES.0659.01	NCA05	2	313454	6242388	Residential	33 Mactier Av, Milperra Nsw 2214	60	55	P	60	55	60	55	60	55	60	56	-	-	-	-	-	-	-	-	-
NCA05.RES.0660.01	NCA05	2	313472	6242279	Residential	11 Mactier Ave, Milperra Nsw 2214	60	55	P	62	58	62	58	62	58	62	58	-	-	-	-	-	-	-	-	-
NCA05.RES.0725.01	NCA05	2	313123	6242140	Residential	9 Maygar Cl, Milperra Nsw 2214	60	55	P	64	61	64	61	64	61	65	61	-	-	-	-	-	-	-	-	-
NCA05.RES.0727.01	NCA05	2	313085	6242132	Residential	13 Maygar Cl, Milperra Nsw 2214	60	55	P	63	60	63	60	64	60	64	60	-	-	-	-	-	-	-	-	-
NCA05.RES.0733.01	NCA05	2	313141	6242175	Residential	5A Maygar Cl, Milperra Nsw 2214	60	55	P	61	58	61	58	61	58	61	58	-	-	-	-	-	-	-	-	-
NCA05.RES.0737.01	NCA05	2	313199	6242208	Residential	8 Meteren Cl, Milperra Nsw 2214	60	55	P	61	58	61	58	62	58	62	58	-	-	-	-	-	-	-	-	-
NCA05.RES.0740.01	NCA05	2	313183	6242183	Residential	7 Meteren Cl, Milperra Nsw 2214	60	55	P	62	59	62	59	62	59	62	59	-	-	-	-	-	-	-	-	-
NCA05.RES.0789.01	NCA05	2	313203	6242336	Residential	18 Nieuport Av, Milperra Nsw 2214	60	55	P	57	53	57	53	57	53	57	53	-	-	-	-	-	-	-	-	-
NCA05.RES.0790.01	NCA05	2	313208	6242301	Residential	20 Nieuport Av, Milperra Nsw 2214	60	55	P	57	54	57	54	58	54	58	54	-	-	-	-	-	-	-	-	-
NCA05.RES.0794.01	NCA05	2	313144	6242497	Residential	1 Nieuport Av, Milperra Nsw 2214	60	55	P	54	50	54	51	54	51	55	51	-	-	-	-	-	-	-	-	-
NCA05.RES.0797.01	NCA05	2	313135	6242395	Residential	7 Nieuport Av, Milperra Nsw 2214	60	55	P	54	51	54	51	55	51	55	51	-	-	-	-	-	-	-	-	-
NCA05.RES.0822.01	NCA05	2	313119	6242330	Residential	3 Peronne Cl, Milperra Nsw 2214	60	55	P	56	53	56	53	56	53	56	53	-	-	-	-	-	-	-	-	-
NCA05.RES.0838.01	NCA05	2	313522	6242457	Residential	6 Pozieres Av, Milperra Nsw 2214	60	55	P	64	59	64	59	64	59	64	59	-	-	-	-	-	-	-	-	-
NCA05.RES.0839.01	NCA05	2	313506	6242458	Residential	8 Pozieres Av, Milperra Nsw 2214	60	55	P	59	55	59	55	60	55	60	55	-	-	-	-	-	-	-	-	-
NCA05.RES.0859.01	NCA05	2	313103	6242514	Residential	32 Pozieres Av, Milperra Nsw 2214	60	55	P	53	49	53	49													

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation			
									At Opening (2026)				Future Design (2036)				D		N		D		N			
									No Build		Build		No Build		Build		D		N		D		N			
									D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N		
NCA06.RES.1340.01	NCA06	2	313650	6242597	Residential	66 Armentieres Av, Milperra Nsw 2214	60	55	P	68	63	68	62	68	63	68	62	-	-	Y	Y	Y	Y	Y	Y	-
NCA06.RES.1342.01	NCA06	2	313742	6242584	Residential	54A Armentieres Av, Milperra Nsw 2214	60	55	P	57	53	57	53	57	53	58	53	-	-	-	-	-	-	-	-	-
NCA06.RES.1348.01	NCA06	2	313780	6242828	Residential	13 Armentieres Av, Milperra Nsw 2214	60	55	P	57	52	57	52	57	52	57	52	-	-	-	-	-	-	-	-	-
NCA06.RES.1357.01	NCA06	2	313667	6242636	Residential	37 Armentieres Av, Milperra Nsw 2214	60	55	P	68	63	67	62	68	63	68	62	-	-	Y	Y	Y	Y	Y	Y	-
NCA06.RES.1358.01	NCA06	2	313781	6242819	Residential	13A Armentieres Av, Milperra Nsw 2214	60	55	P	56	52	57	52	57	52	57	52	-	-	-	-	-	-	-	-	-
NCA06.RES.1374.01	NCA06	2	314093	6242544	Residential	178 Ashford Av, Milperra Nsw 2214	60	55	P	68	62	68	63	68	63	68	63	-	-	-	-	-	-	-	-	-
NCA06.RES.1383.01	NCA06	2	314069	6242403	Residential	198 Ashford Av, Milperra Nsw 2214	60	55	P	67	62	67	63	67	63	67	63	-	-	-	-	-	-	-	-	-
NCA06.RES.1396.01	NCA06	2	313719	6242802	Residential	10 Beatham Pl, Milperra Nsw 2214	60	55	P	61	55	61	56	61	55	61	56	-	-	-	-	-	-	-	-	-
NCA06.RES.1402.01	NCA06	2	313718	6242789	Residential	9 Beatham Pl, Milperra Nsw 2214	60	55	P	63	58	63	58	63	58	63	58	-	-	-	-	-	-	-	-	-
NCA06.RES.1403.01	NCA06	2	313719	6242825	Residential	11 Beatham Pl, Milperra Nsw 2214	60	55	P	62	56	62	56	62	56	62	57	-	-	-	-	-	-	-	-	-
NCA06.RES.1444.01	NCA06	2	313832	6242551	Residential	24 Dernancourt Pde, Milperra Nsw 2214	60	55	P	57	53	57	53	57	54	57	54	-	-	-	-	-	-	-	-	-
NCA06.RES.1449.01	NCA06	2	313840	6242628	Residential	34 Dernancourt Pde, Milperra Nsw 2214	60	55	P	56	53	57	53	57	53	57	53	-	-	-	-	-	-	-	-	-
NCA06.RES.1450.01	NCA06	2	313840	6242643	Residential	36 Dernancourt Pde, Milperra Nsw 2214	60	55	P	56	51	56	51	56	51	56	52	-	-	-	-	-	-	-	-	-
NCA06.RES.1468.01	NCA06	2	313916	6242356	Residential	3 Dernancourt Pde, Milperra Nsw 2214	60	55	P	63	60	63	60	63	60	63	60	-	-	-	-	-	-	-	-	-
NCA06.RES.1469.01	NCA06	2	313902	6242455	Residential	5 Dernancourt Pde, Milperra Nsw 2214	60	55	P	58	55	58	55	59	55	59	55	-	-	-	-	-	-	-	-	-
NCA06.RES.1475.01	NCA06	2	313880	6242562	Residential	19 Dernancourt Pde, Milperra Nsw 2214	60	55	P	58	55	58	55	58	55	59	55	-	-	-	-	-	-	-	-	-
NCA06.RES.1491.01	NCA06	2	313886	6242500	Residential	11A Dernancourt Pde, Milperra Nsw 2214	60	55	P	57	53	57	53	57	54	58	54	-	-	-	-	-	-	-	-	-
NCA06.RES.1514.01	NCA06	2	313697	6242255	Residential	46 Flanders Av, Milperra Nsw 2214	60	55	P	65	61	65	61	65	62	65	62	-	-	-	-	-	-	-	-	-
NCA06.RES.1518.01	NCA06	2	313610	6242259	Residential	54 Flanders Av, Milperra Nsw 2214	60	55	P	66	61	66	61	66	62	67	62	-	-	Y	Y	Y	Y	Y	Y	-
NCA06.RES.1519.01	NCA06	2	313893	6242287	Residential	24A Flanders Av, Milperra Nsw 2214	60	55	P	67	63	67	63	67	64	67	64	-	-	-	-	-	-	-	-	-
NCA06.RES.1533.01	NCA06	2	313827	6242324	Residential	25 Flanders Av, Milperra Nsw 2214	60	55	P	62	59	62	59	63	59	63	59	-	-	-	-	-	-	-	-	-
NCA06.RES.1556.01	NCA06	2	313671	6242697	Residential	33 Fromelles Av, Milperra Nsw 2214	60	55	P	69	64	68	63	69	64	69	63	-	-	Y	Y	Y	Y	Y	Y	-
NCA06.RES.1559.01	NCA06	2	313665	6242655	Residential	39 Fromelles Av, Milperra Nsw 2214	60	55	P	68	63	68	62	68	63	68	62	-	-	Y	Y	Y	Y	Y	Y	-
NCA06.RES.1560.01	NCA06	2	313666	6242649	Residential	39A Fromelles Av, Milperra Nsw 2214	60	55	P	69	63	68	63	69	63	68	63	-	-	Y	Y	Y	Y	Y	Y	-
NCA06.RES.1563.01	NCA06	2	313734	6242392	Residential	6 Glencorse Av, Milperra Nsw 2214	60	55	P	61	57	61	57	61	57	61	57	-	-	-	-	-	-	-	-	-
NCA06.RES.1565.01	NCA06	2	313705	6242400	Residential	10 Glencorse Av, Milperra Nsw 2214	60	55	P	60	56	60	56	60	56	60	56	-	-	-	-	-	-	-	-	-
NCA06.RES.1566.01	NCA06	2	313675	6242405	Residential	14 Glencorse Av, Milperra Nsw 2214	60	55	P	60	56	60	56	61	56	61	56	-	-	-	-	-	-	-	-	-
NCA06.RES.1575.01	NCA06	2	313624	6242310	Residential	32 Glencorse Av, Milperra Nsw 2214	60	55	P	67	62	67	62	67	62	67	62	-	-	Y	Y	Y	Y	Y	Y	-
NCA06.RES.1576.01	NCA06	2	313626	6242297	Residential	34 Glencorse Av, Milperra Nsw 2214	60	55	P	66	61	66	61	67	62	66	61	-	-	Y	Y	Y	Y	Y	Y	-
NCA06.RES.1581.01	NCA06	2	313691	6242448	Residential</																					

Name	NCA	Flr	Easting	Northing	RecType	Address	NCG Criteria	Period	Predicted Noise Level (dBA) ¹								> 2 dB Increase ²		Cumulative Limit ³		Project Acute ⁴		Eligible for Consideration of Additional Mitigation			
									At Opening (2026)				Future Design (2036)				D		N		D		N			
									No Build		Build		No Build		Build		D		N		D		N			
D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N			
NCA04.OED.1634.01	NCA04	3	314534	6242538	Other (Educational)	273 Horsley Rd, Milperra Nsw 2214	50	-	H	59	58	59	58	59	58	59	58	-	-	-	-	-	-	-	-	-
NCA04.OED.1635.01	NCA04	3	314589	6242527	Other (Educational)	273 Horsley Rd, Milperra Nsw 2214	50	-	H	57	57	58	57	58	57	58	57	-	-	-	-	-	-	-	-	-
NCA04.OED.1636.01	NCA04	3	314588	6242576	Other (Educational)	273 Horsley Rd, Milperra Nsw 2214	50	-	H	58	57	58	57	58	57	58	57	-	-	-	-	-	-	-	-	-
NCA04.OED.1774.01	NCA04	3	314287	6242535	Other (Educational)	Western Sydney University	50	-	H	63	63	63	63	64	63	64	63	-	-	-	-	-	-	-	-	-
NCA04.OED.1787.01	NCA04	3	314382	6242739	Other (Educational)	Western Sydney University	50	-	H	56	53	56	54	56	53	57	54	-	-	-	-	-	-	-	-	-
NCA04.OED.1788.01	NCA04	3	314260	6242597	Other (Educational)	Western Sydney University	50	-	H	58	58	58	58	59	58	59	58	-	-	-	-	-	-	-	-	-
NCA04.OED.1789.01	NCA04	3	314239	6242694	Other (Educational)	Western Sydney University	50	-	H	57	55	58	56	58	56	58	56	-	-	-	-	-	-	-	-	-
NCA04.OED.1790.01	NCA04	3	314207	6242640	Other (Educational)	Western Sydney University	50	-	H	61	58	61	59	61	59	61	59	-	-	-	-	-	-	-	-	-
NCA04.OED.1791.01	NCA04	3	314288	6242642	Other (Educational)	Western Sydney University	50	-	H	57	57	57	57	58	57	58	57	-	-	-	-	-	-	-	-	-
NCA04.OED.1792.01	NCA04	3	314215	6242663	Other (Educational)	Western Sydney University	50	-	H	59	57	60	58	60	58	60	58	-	-	-	-	-	-	-	-	-
NCA04.OED.1793.01	NCA04	3	314332	6242677	Other (Educational)	Western Sydney University	50	-	H	58	57	58	57	58	57	58	57	-	-	-	-	-	-	-	-	-
NCA04.OED.1797.01	NCA04	3	314372	6242800	Other (Educational)	Western Sydney University	50	-	H	58	56	59	56	58	56	59	57	-	-	-	-	-	-	-	-	-
NCA04.OED.1798.01	NCA04	3	314368	6242832	Other (Educational)	Western Sydney University	50	-	H	63	60	64	61	63	60	65	61	-	-	-	-	-	-	-	-	-
NCA04.OPW.1624.01	NCA04	3	314605	6242466	Other (Place of Worship)	273 Horsley Rd, Milperra Nsw 2214	50	50	H	59	58	59	58	59	58	59	58	-	-	-	-	-	-	-	-	-
NCA04.RES.1426.01	NCA04	3	313922	6242926	Residential	24 Bullecourt Av, Milperra Nsw 2214	60	55	P	68	62	69	63	68	62	69	63	-	-	-	-	-	-	-	-	-
NCA04.RES.1478.01	NCA04	3	313890	6242641	Residential	25 Dernancourt Pde, Milperra Nsw 2214	60	55	P	56	53	57	53	57	53	57	53	-	-	-	-	-	-	-	-	-
NCA04.RES.1800.01	NCA04	3	314184	6242453	Residential	Western Sydney University Villiage	60	55	P	64	61	64	61	64	61	64	61	-	-	-	-	-	-	-	-	-
NCA04.RES.1801.01	NCA04	3	314161	6242468	Residential	Western Sydney University Villiage	60	55	P	63	59	63	59	63	59	63	60	-	-	-	-	-	-	-	-	-
NCA04.RES.1802.01	NCA04	3	314140	6242483	Residential	Western Sydney University Villiage	60	55	P	64	59	64	59	64	59	64	60	-	-	-	-	-	-	-	-	-
NCA04.RES.1803.01	NCA04	3	314205	6242483	Residential	Western Sydney University Villiage	60	55	P	64	60	64	60	64	60	64	60	-	-	-	-	-	-	-	-	-
NCA04.RES.1804.01	NCA04	3	314180	6242497	Residential	Western Sydney University Villiage	60	55	P	63	59	63	59	63	59	63	59	-	-	-	-	-	-	-	-	-
NCA04.RES.1805.01	NCA04	3	314158	6242521	Residential	Western Sydney University Villiage	60	55	P	61	56	61	57	61	57	62	57	-	-	-	-	-	-	-	-	-
NCA04.RES.1806.01	NCA04	3	314190	6242530	Residential	Western Sydney University Villiage	60	55	P	60	57	60	57	61	57	61	57	-	-	-	-	-	-	-	-	-
NCA04.RES.1807.01	NCA04	3	314140	6242542	Residential	Western Sydney University Villiage	60	55	P	65	60	65	60	65	60	66	60	-	-	-	-	-	-	-	-	-
NCA04.RES.1808.01	NCA04	3	314172	6242550	Residential	Western Sydney University Villiage	60	55	P	57	53	57	53	58	54	58	54	-	-	-	-	-	-	-	-	-
NCA04.RES.1809.01	NCA04	3	314155	6242571	Residential	Western Sydney University Villiage	60	55	P	63	58	63	58	63	58	64	58	-	-	-	-	-	-	-	-	-
NCA06.RES.1654.01	NCA06	3	313663	6242296	Residential	1 Menin Pl, Milperra Nsw 2214	60	55	P	63	59	63	59	64	59	64	59	-	-	-	-	-	-	-	-	-
NCA06.RES.1747.01	NCA06	3	314045	6242527	Residential	32 Somme Cr, Milperra Nsw 2214	60	55	P	61	57	61	57	62	57	62	58	-	-	-	-	-	-	-	-	-
NCA04.OED.1622.01	NCA04	4	314391	6242421	Other (Educational)	Milperra College 271 Horsley Rd, Milperra Nsw 2214	50	-	H	72	72	72	72	73	72	73	72	-	-	-	-	-	-	-	-	-
NCA04.OED.1623.01	NCA04	4	314420	6242468	Other (Educational)	Milperra College 271 Horsley Rd, Milperra Nsw 2214	50	-	H	68	67	68	67	68	68	68	68	-	-	-	-	-	-	-	-	-
NCA04.OED.1774.01	NCA04	4	314287	6242535	Other (Educational)	Western Sydney University	50	-	H	64	63	64	63	64	63	64	63	-	-	-	-</					

Deemed to Comply At-Property Treatment Mitigation Packages (TfNSW At-Receiver Noise Treatment Guideline)

Construction	Treatment Package Type				
	1	2	3	4	5
Exceedance, dBA	1-5	6-8	9-11	12-14	>14
All	<ul style="list-style-type: none"> Optional ceiling fans¹ Mechanical ventilation (MV)² New acoustic seals for windows Seal around window architraves / door jambs Seal all vents and openings 	<ul style="list-style-type: none"> As per Category 1 treatments External solid core door (40mm) with perimeter acoustic seals, drop seals and threshold seals 			
Brick veneer or double brick Window area less than or equal to 20% floor area		<p>For 6 dBA exceedance:</p> <ul style="list-style-type: none"> 6.38mm laminate and roof insulation (R4.0 215mm thick) or 6.5mm lam with acoustic interlayer <p>For 7 dBA exceedance:</p> <ul style="list-style-type: none"> 8.5mm lam with acoustic interlayer or 10.38mm lam <p>For 8 dBA exceedance:</p> <ul style="list-style-type: none"> 8.5mm lam with acoustic interlayer or 10.5mm lam with acoustic interlayer or 10mm acrylic panel with nominally 100mm gap or >4mm secondary window with 100mm gap or equivalent 	<ul style="list-style-type: none"> Roof insulation (R4.0 215mm thick) 8.5mm lam with acoustic interlayer or 10.38mm lam <p>Otherwise:</p> <ul style="list-style-type: none"> 10.5mm lam with acoustic interlayer or 10mm acrylic panel with nominally 100mm gap or >4mm secondary window with 100mm gap or equivalent 	<ul style="list-style-type: none"> >4mm secondary window with 100mm gap, or equivalent Roof insulation (R4.0 215mm thick) 	<ul style="list-style-type: none"> >6mm secondary window with nominally 100mm gap, or equivalent Roof insulation (R4.0 215mm thick)
Brick veneer or double brick Sliding door area less than or equal to 50% wall area	<ul style="list-style-type: none"> 6.38mm lam, or equivalent 	<ul style="list-style-type: none"> 6.5mm lam with acoustic interlayer, or equivalent Roof insulation (R4.0 215mm thick) <p>Or</p> <ul style="list-style-type: none"> 8.5mm lam with acoustic interlayer, or equivalent 	<ul style="list-style-type: none"> 8.5mm lam with acoustic interlayer or >4mm secondary window with nominally 100mm gap, or equivalent Roof insulation (R4.0 215mm thick) 		<ul style="list-style-type: none"> >6mm secondary window with nominally 100mm gap, or equivalent Roof insulation (R4.0 215mm thick)
Lightweight Window area less than or equal to 20% floor area	<ul style="list-style-type: none"> Seal subfloor Roof insulation (R4.0 215mm thick) 	<ul style="list-style-type: none"> As per Category 1 treatments For 8 dBA exceedance: <ul style="list-style-type: none"> 10mm acrylic panel with nominally 100mm gap, or equivalent Re-sheet wall lining (1x 6mm fibre cement sheeting with nominal board weight of 11 kg/m² and 1 x 13mm plasterboard with nominal board weight of 10.5 kg/m² to finish, or equivalent) Wall insulation (R2.7 90mm thick) <p>Otherwise:</p> <ul style="list-style-type: none"> 10mm acrylic panel with 100mm gap, or equivalent Additional wall lining (1 x 13mm plasterboard with nominal board weight of 10.5 kg/m² to finish, or equivalent) 	<ul style="list-style-type: none"> As per Category 1 treatments 10mm acrylic panel with nominally 100mm gap, or equivalent Re-sheet wall lining (1x 6mm fibre cement sheeting with nominal board weight of 11 kg/m² and 1 x 13mm plasterboard with nominal board weight of 10.5 kg/m² to finish, or equivalent) Wall insulation (R2.7 90mm thick) Resilient mount to isolate wall lining and stud 	<ul style="list-style-type: none"> As per Category 1 treatments >4mm secondary window with nominally 100mm gap, or equivalent Re-sheet wall lining (1x 6mm fibre cement sheeting with nominal board weight of 11 kg/m² and 1 x 13mm plasterboard with nominal board weight of 10.5 kg/m² to finish, or equivalent) Wall insulation (R2.7 90mm thick) Resilient mount to isolate wall lining and stud 	<ul style="list-style-type: none"> As per Category 1 treatments >6mm secondary window with nominally 100mm gap, or equivalent Re-sheet wall lining (1x 6mm fibre cement sheeting with nominal board weight of 11 kg/m² and 1 x 13mm plasterboard with nominal board weight of 10.5 kg/m² to finish, or equivalent) Wall insulation (R2.7 90mm thick) Resilient mount to isolate wall lining and stud

Note 1: Ceiling fans should have Direct Current (DC) electric motors to minimise noise.

Note 2: Mechanical ventilation (MV) should be installed so that fresh air is ducted from an unaffected building facade. Mechanical fan noise should meet the recommended noise levels in AS2107.

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