M12 Motorway

Operational Noise and Vibration Review

Transport for NSW

25 January 2023

→ The Power of Commitment

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The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on information obtained from, and testing undertaken at or in connection with, specific sample points. Site conditions at other parts of the site may be different from the site conditions found at the specific sample points. Investigations undertaken in respect of this report are constrained by the particular site conditions, such as the location of buildings, services and vegetation. As a result, not all relevant site features and conditions may have been identified in this report. Site conditions may change after the date of this Report. GHD does not accept responsibility arising from, or in connection with, any change to the site conditions. GHD is also not responsible for updating this report if the site conditions change.

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Executive summary

This Operational Noise and Vibration Review (ONVR) has been prepared to address the Conditions of Approval (CoA) issued on 23 April 2021 for the M12 Motorway project located between the M7 Motorway at Cecil Hills and The Northern Road at Luddenham (the project). The project would involve construction of a new four-lane divided carriageway linking The Northern Road and The M7 Motorway with direct access into the proposed Western Sydney International Airport. The new carriageway would be about 16 km in length.

Potential operational and construction noise impacts were assessed at the concept design stage in the October 2019 Environmental Impact Statement (EIS) and the May 2020 Amendment Report prepared for the project.

A review of the EIS and Amendment Report has been undertaken as part of this ONVR to identify where additional noise monitoring was required, changes to the road design and subsequently changes to the recommended operational noise mitigation measures. The road design changes include the following:

– Change of the road surface from concrete to low noise diamond grind concrete
– Simplification of the Airport Access Road interchange in the M12 West package of works
– Adjustments of the vertical alignment of the road design.

This ONVR identifies the operational noise mitigation measures based on the final detailed design alignment for the M12 West and M12 Central package. The M12 East package has not been included in this ONVR as the design has not been finalised. An ONVR for the M12 East package would be prepared once the M12 East detailed design has been finalised.

Operational road traffic noise impacts and mitigation measures have been assessed in accordance with the *Road Noise Policy* (RNP) (DECCW, 2011), the *Noise Criteria Guideline* (NCG) (Roads and Maritime, 2015) and the *Noise Mitigation Guideline* (NMG) (Roads and Maritime, 2015).

Road traffic noise levels were modelled based on the final detailed design alignment for the Opening Year (2026) and the Design Year (2036). The Design Year (2036) model was used to assess potential noise mitigation strategies in the order of preference outlined in the RNP: quieter pavements, noise barriers and architectural treatments.

Two low noise pavement options were considered as part of this ONVR. Low noise diamond grind concrete is proposed as part of the design along the M12 Motorway alignment.

Seven noise barriers were assessed as part of this ONVR with two barriers in the M12 West package and five in the M12 Central package. A review of the feasible and reasonable considerations as outlined in the NMG indicates that the noise barriers are not considered reasonable mitigation options due to inadequate reductions in road traffic noise levels, benefiting receivers are isolated and the potential to augment noise barriers to accommodate future road project developments. This is consistent with the outcomes of the Amendment Report submissions report.

At-property treatments have been recommended for the sensitive receivers that are predicted to be noise impacted by road traffic noise from the project. Indicative treatment packages have been recommended based on the level of predicted impact. A site survey shall be undertaken to confirm the building condition, building construction and details of existing building acoustic treatments. Sensitive receivers that qualify for at-property treatments would be contacted by TfNSW.

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Item	Description
Acute noise level	A level of road traffic noise of: 65 dBA or more for the day period between 7 am to 10 pm, or 60 dBA or more for the night period between 10 pm to 7 am. The level is measures as an equivalent continuous noise level (L_{Aeq}) 1 metre from the building façade
ARRNTG	*At-Receiver Road Noise Treatment Guideline* (Transport for NSW, 2022)
Closely spaced group of residences	Residences are generally considered closely spaced where the façades are separated by less than 20 metres
Controlling criterion	Whichever of the day or night-time L_{Aeq} criteria (*Noise Criteria Guideline*) is exceeded by the greatest amount
Cumulative limit	A total noise level that is 5 dBA above the *Noise Criteria Guideline* criteria in the build year
dB	Decibel is the logarithmic unit used for expressing the sound pressure level (SPL) or power level (SWL) in acoustics.
dBA	Frequency weighting filter used to measure 'A-weighted' sound pressure levels, which conforms approximately to the human ear response, as our hearing is less sensitive at very low and very high frequencies.
ENMM	*Environmental Noise Management Manual* (Roads and Traffic Authority, 2001)
Isolated single residences and isolated groups of closely spaced receivers	Single residences of closely spaced groups of residences in numbers of three of less are considered isolated where they are separated from other residences by more than 100 metres. Where residences are between 20 metres and 100 metres, they may be considered isolated but this depends on examining surrounding development more broadly.
$L_{Aeq(period)}$	Equivalent sound pressure level: the steady sound level that, over a specified period of time, would produce the same energy equivalence as the fluctuating sound level actually occurring.
$L_{Aeq(15\ hour)}$	The LAeq noise level for the period 7 am to 10 pm.
$L_{Aeq(9\ hour)}$	The LAeq noise level for the period 10 pm to 7 am.
$L_{Aeq(1\ hour)}$	The highest hourly LAeq noise level during the day and night periods.
Low noise pavement	Low noise pavement is pavement that has an emission 2 dBA lower or more than dense graded asphalt
NCG	*Noise Criteria Guideline* (Roads and Maritime, 2015)
New road	A road is new for any of the following cases: A project proposes road construction in an undeveloped corridor A road project changes the functional class of the road A widening, curve straightening or adjustment of the corridor where the upgrade road pavement has been substantially realigned A duplication where the new lanes have been substantially realigned from the existing corridor in which case the existing lanes are also assessed as a new road development type A bypass where the upgraded road extends beyond the existing road corridor
NMG	*Noise Mitigation Guideline* (Roads and Maritime, 2015)
NMVG	*Model Validation Guideline* (Roads and Maritime, 2018)
Receiver	A noise sensitive receiver included the following: residences, schools, child care centres, places of worship, health care institutions.
Redeveloped road	A road is redeveloped if the purpose or outcome of the upgrade will result in one or more of the following: Increase in the traffic-carrying capacity Increases in the number of heavy vehicles by 50 per cent or more on the road where the physical works are located. For the road to be considered redeveloped rather than new, the pavement should not be substantially realigned.
RNP	*Road Noise Policy* (DECCW, 2011)

Item	Description
Substantially realigned	A road will be substantially realigned when the new carriageway in the road project is more than approximately six times the total existing lane width from the edge of the existing road corridor.
Transition zone	The 'transition zone' is the area either side of the physical transition point between road function classes (e.g. arterial vs local) or road development types (e.g. new vs redeveloped)

1. Introduction

1.1 Purpose of this report

Transport for NSW (TfNSW) propose to build the M12 Motorway between the M7 Motorway at Cecil Hills and The Northern Road at Luddenham ('the project'). The project would involve construction of a new four-lane divided carriageway linking The Northern Road and The M7 Motorway with direct access into the proposed Western Sydney International Airport. The new carriageway would be about 16 km in length.

Potential operational and construction noise impacts were assessed at the concept design stage in the October 2019 Environmental Impact Statement (EIS) and the May 2020 amendment report prepared for the project. The detailed design stage of the project has been split into three packages described below and shown in Figure 1.1.

– **M12 West:** located between The Northern Road, Luddenham and about 250 metres east of Badgerys Creek.
– **M12 Central:** located between about 250 metres east of Badgerys Creek and the Western Sydney Parklands at Cecil Road, Cecil Park
– **M12 East:** located between the Western Sydney Parklands at Cecil Road, Cecil Park and about 150 m east of the M7 Motorway. The M12 East package has been further separated into the Elizabeth Drive Connection package and the M7/M12 Interchange package.

This Operational Noise and Vibration Review (ONVR) has been prepared by GHD Pty Ltd (GHD) for the final design of the M12 West and M12 Central packages of the project:

The 80 percent M12 East detailed design which comprises of the following packages have not been assessed in this ONVR:

– 80 percent detailed design for the Elizabeth Drive Connection
– 100 percent strategic design for the M7/M12 Interchange.

An ONVR for the M12 East package would be prepared once the M12 East detailed design has been finalised.

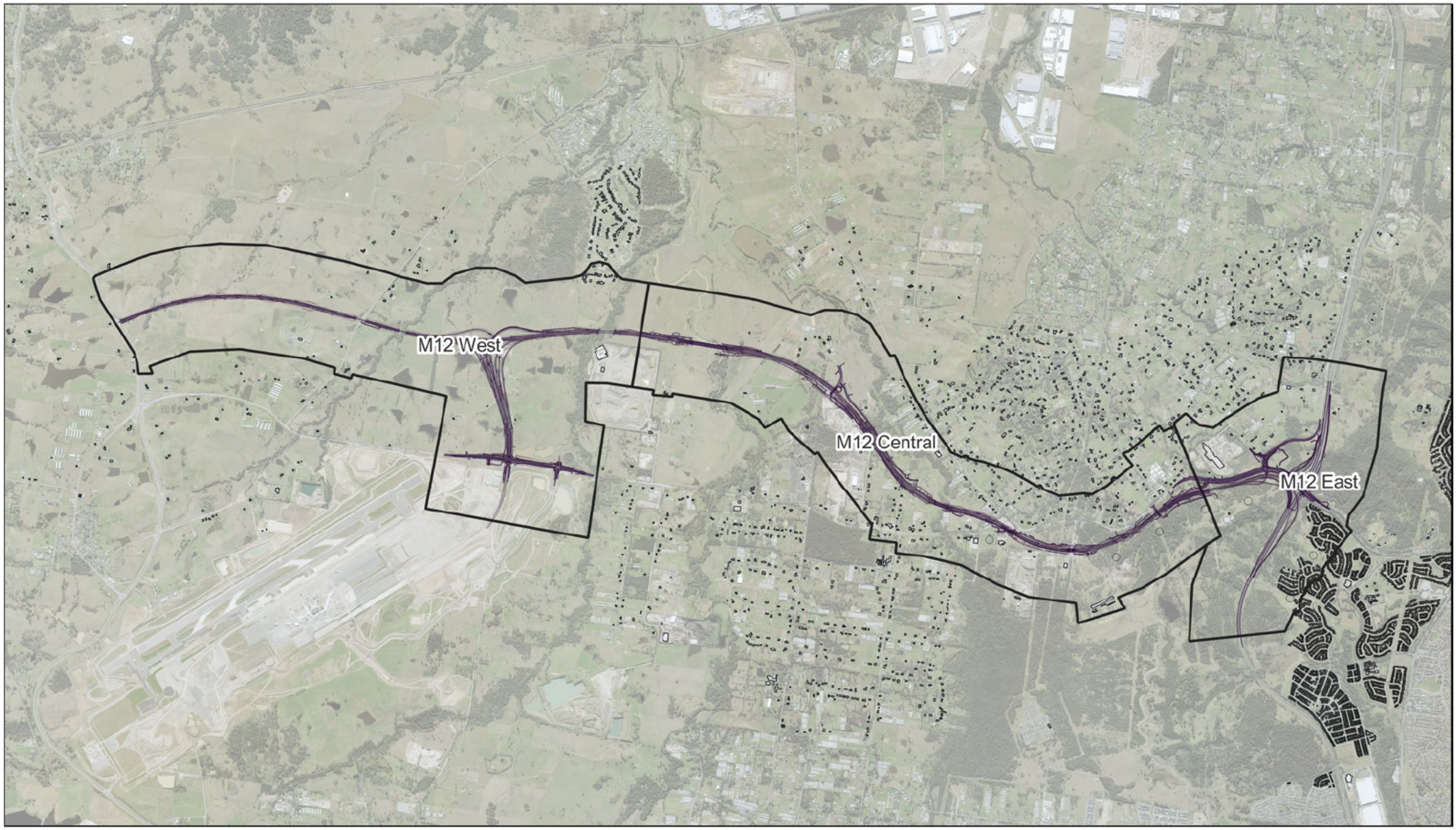
1.2 Scope

The purpose of this ONVR is to address the Conditions of Approval (CoA) for the project to confirm operational noise mitigation measures that would be implemented.

The scope for the ONVR is discussed in the following section:

– Review the EIS report and Amendment Report (AR) undertaken for the environmental assessment to provide relevant data for input into the detailed design for noise mitigation.
– Review the EIS report and AR recommendations for operational noise mitigation
– Identification of design changes to the project since the completion of any operational noise assessment included within the environmental assessment for the project
– Confirm the operational noise objectives and levels for existing sensitive receivers
– Identify and confirm the operational noise impacts based on modelling of the final detailed design alignment
– Confirm the operational noise mitigation requirements based on the predicted operational noise impacts.

The report should be read in conjunction with the limitations described at the start of this document.



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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

Legend

- M12 study area
- M12 road design
- Sensitive receivers

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Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

Project location

Project No. **12520102**
Revision No. **A**
Date. **03/08/2022**

Figure 1.1

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2. Environmental objectives

2.1 Conditions of approval

The Minister's Conditions of Approval (CoA) for the Project were issued on 23 April 2021. The CoA relevant to operational noise are provided in Table 2.1.

Table 2.1 Minister's Conditions of Approval for operational noise

Item	Condition of Approval	Section referenced in this report
Operational Noise		
E50	An independent and experienced noise specialist must be approved by the Planning Secretary to verify the validity (including being accurate and consistent with the requirements of this approval) of the: (a) Operational noise modelling required under **Conditions E51**; (b) **Operational Noise Review** required under **Condition E52**; and (c) **Operational Noise Compliance Report** required under **Condition E60**. The Planning Secretary's approval of the noise specialist must be sought no later than one (1) month before undertaking operational noise modelling. Each verification must be submitted to the Planning Secretary for information within 30 days of the verification and be attached to submitted documentation as relevant.	Section 2.4 Section 2.4 Section 11.5
Noise Mitigation – Operational Noise Modelling		
E51	Noise modelling of the detailed design must be undertaken and address the following parameters: (a) Application of source emission corrections to take into account the proportions of heavy vehicles; (b) Modelling heavy vehicles using three distinct sources in line with Appendix B4 of the NSW *Road Noise Policy* (DECCW, 2011); (c) Road surface corrections to address the assessment timeframes outlined in the NSW *Road Noise Policy* (DECCW, 2011) corresponding to the year of opening, and ten (10) years after opening; and (d) Meteorological conditions in accordance with the NSW *Road Noise Policy*	Section 5.3 Section 5.3 Section 5.4 Section 3.4 Section 4.1
Operational Noise Mitigation Measures		
E52	An **Operational Noise Review (ONR)** must be prepared (based on the detailed design of the CSSI) to confirm noise mitigation measures that would be implemented for the operation of the CSSI. The **ONR** must be prepared in consultation with the Planning Secretary and relevant council(s) and must: (a) Confirm the appropriate operational noise objectives and levels for existing sensitive receivers; (b) Confirm the operational noise impacts based on the final design of the CSSI and modelling undertaken under **Condition E51**, including operational daytime $L_{Aeq,15\ hour}$ and night-time $L_{Aeq,9\text{-}hour}$ traffic noise contours; (c) Review the suitability of the operational noise mitigation measures identified in the documents listed in **Condition A1** and, where necessary, investigate and identify additional noise and vibration mitigation measures required to achieve the noise criteria outlined in the NSW *Road Noise Policy* (DECCW, 2011), including the timing of implementation; (d) Include a consultation strategy to seek feedback from directly affected landowners on the noise and vibration mitigation measures; and (e) Procedures for the management of operational noise and vibration complaints. The **ONR** must be undertaken at the Proponent's expense and be submitted to the Planning Secretary for information prior to implementing at-property noise mitigation, unless otherwise agreed by the Planning Secretary.	Section 1.1 Section 7 Section 8 Appendix E - Appendix F Section 7 Section 8 Section 10 Section 10

Item	Condition of Approval	Section referenced in this report
	The Proponent must implement the identified noise mitigation measures and make the **ONR** publicly available following its submission to the Planning Secretary for information. *Note: The design of noise barriers and the like must be undertaken in consultation with the community as part of the Place, Design and Landscape Plan required under **Condition E69**.*	
E57	All operational noise mitigation measures must be implemented prior to operation of the CSSI	Section 8
Operational Noise Validation		
E58	Within 12 months of the commencement of operation of the CSSI, the Proponent must undertake monitoring of operational noise to compare actual noise performance of the CSSI against the noise performance predicted in the review of operational noise mitigation measures required by **Condition E52**.	Section 11
E59	Classified traffic counts must be undertaken simultaneously with noise measurements to confirm traffic volumes and traffic mix assumptions.	Section 11
Operational Noise Compliance Report		
E60	An **Operational Noise Compliance Report (ONCR)** must be prepared to document the findings of the operational noise monitoring carried out under **Condition E58**. The **ONCR** must be prepared in accordance with the Model Validation Guideline (RMS, 16 May 2018 Version 1.1) and must address the following:	
	(a) compliance with the operational noise levels predicted in the review of operational noise mitigation measures required under **Condition E52**;	Section 11
	(b) compliance with the operational noise levels in terms of criteria and noise goals established in the NSW Road Noise Policy (DECCW, 2011);	Section 11
	(c) methodology, location and frequency of noise monitoring undertaken, including grouping monitoring sites at which CSSI noise levels are ascertained with specific reference to locations indicative of impacts on receivers. Monitoring locations must be grouped by - (i) pavement type, (ii) topography;	
	(d) visibility of sensitive receivers, i.e. line of sight and shielded by mounds and/or noise walls;	Section 11
	(e) model light and heavy vehicles separately;	Section 11
	(f) pavement corrections for light and heavy vehicles;	Section 11
	(g) details on the acoustic performance of the different pavement types used for the CSSI ;	Section 11
	(h) effects of meteorological conditions on traffic noise consistent with the requirements of the NSW Road Noise Policy (DECCW, 2011);	Section 11
	(i) details of any complaints and enquiries received in relation to operational noise generated by the CSSI between the date of commencement of operation and the date the report was prepared;	Section 11
	(j) any required recalibrations of the noise model taking into consideration factors such as noise monitoring, and actual traffic numbers and proportions;	Section 11
	(k) an assessment of the performance and effectiveness of applied noise mitigation measures together with a review and if necessary, reassessment of mitigation measures; and	Section 11
	(l) identification of additional measures to those identified in the review of noise mitigation measures required by **Condition E52**, that are to be implemented with the objective of meeting the criteria outlined in the NSW Road Noise Policy (DECCW, 2011), when these measures are to be implemented and how their effectiveness is to be measured and reported to the Planning Secretary and the EPA.	Section 11
	The **ONCR** must be submitted to the Planning Secretary and the EPA for information within 60 days of completing the operational noise monitoring (required by **Condition E58**) and be made publicly available.	

Item	Condition of Approval	Section referenced in this report
	Any additional measures identified in **Condition E60(l)** must be implemented within 18 months of submitting the **ONCR** to the Planning Secretary, unless an alternative timeframe is agreed to by the Planning Secretary.	

2.2 Guidelines

This report has been prepared with consideration to the following guidelines:

- *Noise Criteria Guideline* (NCG) (Roads and Maritime, 2015)
- *Noise Mitigation Guideline* (NMG) (Roads and Maritime, 2015)
- *Noise Model Validation Guideline* (NMVG) (Roads and Maritime, 2017)
- *Road Noise Policy* (RNP) (DECCW, 2011)
- *At-receiver Road Noise Treatment Guideline* (ARRNTG) (Transport for NSW, 2022)
- *Environmental Noise Management Manual* (ENMM) (RTA, 2001).

2.3 Referenced documentation

The following documents have been referenced during the preparation of this report:

- M12 Motorway Environmental Impact Statement Appendix K Noise and Vibration Assessment Report (Roads and Maritime, October 2019)
- M12 Motorway Amendment Report: Noise and vibration updated technical report (Transport for NSW, May 2020)
- M12 Motorway Amendment Report submissions report (Transport for NSW, December 2020)
- Environmental Impact Assessment Procedure: Preparing an Operational Traffic and Construction Noise and Vibration Assessment (Roads and Maritime, June 2016).

2.4 Independent verification

In accordance with CoA E50, an independent and experienced noise specialist (Renzo Tonin & Associates) has been approved by the Department of Planning and Environment on 9 December 2021 to verify the validity of the operational noise modelling and operational noise review. The verification is provided in Appendix A.

3. Existing environment

3.1 Noise sensitive receivers

3.1.1 Noise catchment areas

The noise catchment areas (NCA) defined in the AR have been adopted for this assessment. Ten NCAs were defined in the AR and are categorised based on regions which would typically have similar ambient noise sources.

A summary of the number of receivers modelled in each NCA is provided in Table 3.1 and shown in Figure 3.1. Descriptions of each NCA from the M12 Motorway EIS are provided in Table 3.2.

Table 3.1 Noise catchment area summary

NCA	M12 Package	Number of structures	Number of residential structures
NCA01	M12 East	17	16
NCA02	M12 East	381	379
NCA03	M12 East, M12 Central	28	28
NCA04	M12 East, M12 Central	131	125
NCA05	M12 East, M12 Central	11	1
NCA06	M12 Central	22	18
NCA07	M12 Central, M12 West	30	30
NCA08	M12 West	0	0
NCA09	M12 West	10	10
NCA10	M12 West	0	0
Total		**630**	**607**

Table 3.2 Noise catchment area descriptions

NCA	Description
NCA01	This catchment area is located along Wallgrove Road and to the east of the M7 Motorway and extends south to Elizabeth Drive. Receivers in this catchment are largely residential with the nearest receiver located to the east of the project, however Western Sydney Parklands (passive recreation) covers a large portion to the catchment to the east of the M7 Motorway. Saints Peter and Paul Assyrian Church of the East are located in the west of the catchment. This catchment represents receivers adjacent to the M7 Motorway and in the suburban area of Abbotsbury where the noise environment is dominated by road traffic noise from the M7 Motorway and/or Elizabeth Drive.
NCA02	This catchment area is located to the south of Elizabeth Drive and east of the M7 Motorway. It is primarily suburban residential with the nearest receivers located to the east of the project. Cecil Hills Public School is located in the north of the catchment and Cecil Hills High School in the south of the catchment. Head Start Long Day Care is located in the north of the catchment.
NCA03	This catchment area is located to the north of Elizabeth Drive and west of the M7 Motorway, extending to the west of Mamre Road. It is set back from Elizabeth Drive and the M7 to represent receivers which are not adjacent to the existing major roads. The nearest receivers are located north of the project on Mamre Road. Do Re Mi Child Care Centre is located in the southwest of the catchment. This catchment represents receivers further from the project where the noise environment is likely to be dominated by road traffic noise from Mamre Road and/or distant road traffic noise from the M7 Motorway and Elizabeth Drive.
NCA04	This catchment area is located to the north of Elizabeth Drive and west of the M7 Motorway and extends west to the intersection of Devonshire Road and Cross Street. It represents receivers along the eastern section of Elizabeth Drive and is primarily residential with the nearest receivers located adjacent the project on the north of Elizabeth Drive. Irfan College is located in the centre of the catchment adjacent to Elizabeth Drive. This catchment represents receivers close to the project where the noise environment is dominated by road traffic noise from Elizabeth Drive.

NCA	Description
NCA05	This catchment area is located to the south of Elizabeth Drive and west of the M7 Motorway and extends west to Kemps Creek. It primarily consists of the Western Sydney Parklands with no residential receivers. The Sydney International Shooting centre is located in the centre of the catchment.
NCA06	This catchment area is located to the west of Kemps Creek and east of South Creek and extends to the north and south of Elizabeth Drive. It primarily consists of rural residential receivers. Kemps Creek Children's Cottage is located in the centre of the catchment. This catchment represents receivers close to the project where the noise environment is dominated by Elizabeth Drive, and those further from the project where the primary source of road traffic noise is likely to be the same section of Elizabeth Drive.
NCA07	This catchment area is located to the west of Kemps Creek, east of Cosgrove Creek, and north of Elizabeth Drive. It is set back from Elizabeth Drive to represent receivers which are not adjacent to the existing major roads. This catchment primarily consists of rural residential receivers and a cluster of residential dwellings 500 metres to the north of the project. This catchment represents rural receivers where there is likely to be minimal influence on the noise environment from existing road traffic noise sources.
NCA08	This catchment area is located along the western section of Elizabeth Drive to the west of South Creek and east of The Northern Road. This catchment is primarily rural residential. Part of this catchment is within the footprint of the future Western Sydney Airport. This catchment represents rural receivers where the primary source of road traffic noise is likely to be the western section of Elizabeth Drive.
NCA09	This catchment area is located to the west of Cosgrove Creek, east of The Northern Road, and north of Elizabeth Drive. It is set back from Elizabeth Drive and The Northern Road to represent receivers which are not adjacent to the existing major roads. This catchment is primarily rural residential with the nearest receivers located adjacent to the project on the east of Luddenham Road. This catchment represents rural receivers where the primary source of road traffic noise is likely to be Luddenham Road.
NCA10	This catchment area is located along The Northern Road. It is primarily rural residential with the nearest receivers located opposite the west end of the project to the west of The Northern Road. This catchment represents rural receivers where the primary source of road traffic noise is likely to be The Northern Road.

3.1.2 Noise sensitive receivers

Noise sensitive receivers in this assessment were initially based off the sensitive receiver dataset used for the AR. The AR included and classified all buildings located within the operational noise assessment study area.

Additional buildings, not included in the AR dataset, have been included in this ONVR based on a review of recent aerial imagery. Building classifications have also been updated based on additional information provided by Transport for NSW. Properties and buildings that would be acquired as part of the project have been excluded from this assessment.

An overview of the modelled noise sensitive receivers is provided in Table 3.3 and shown in the following figures:

- M12 West: Figure 3.2
- M12 Central: Figure 3.3.

Note that structures corresponding to commercial and industrial receivers have been included in the modelling for shielding purposes however have not been explicitly assessed as these receiver types do not have road traffic noise level targets.

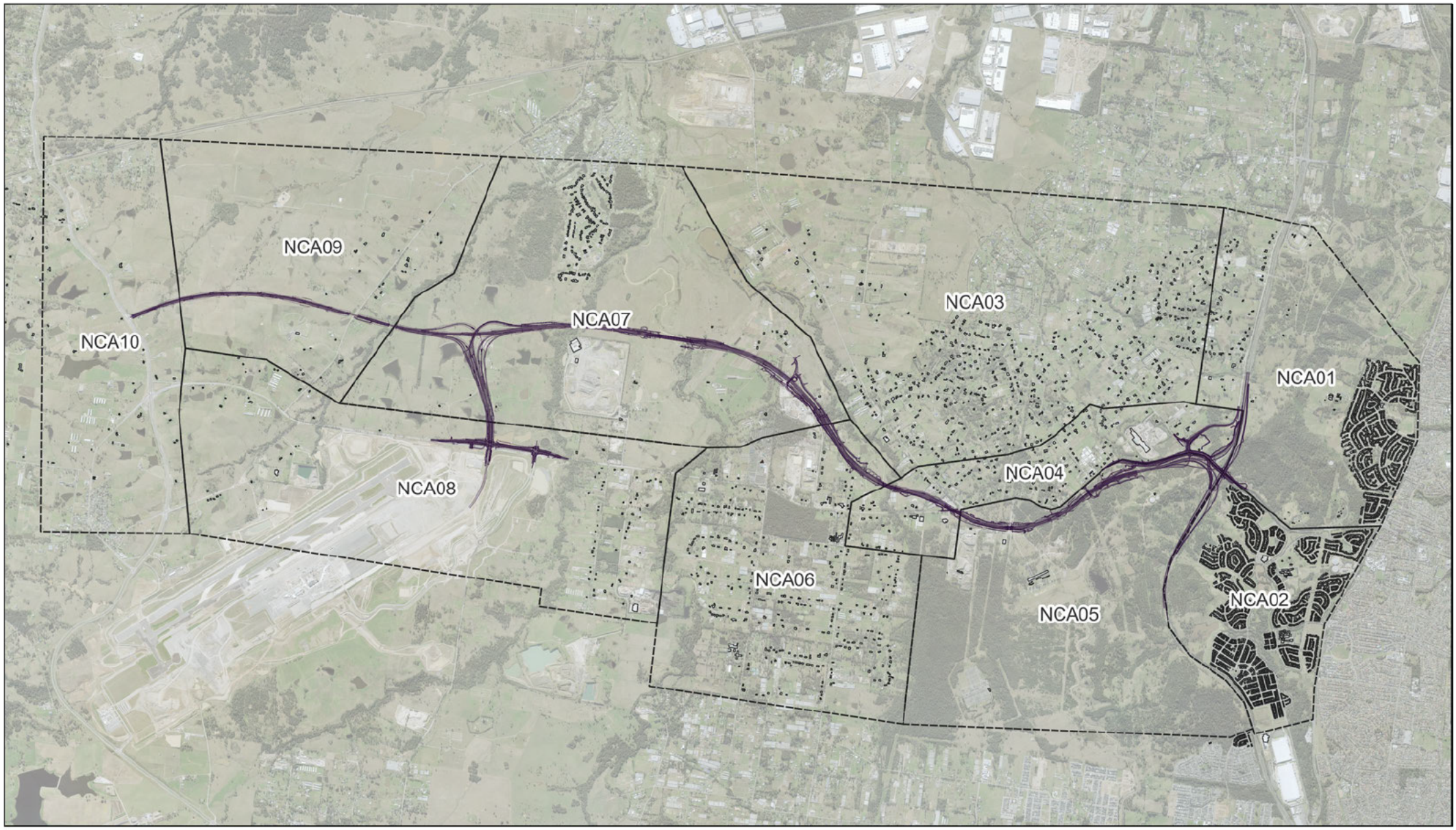
Table 3.3 Number of modelled noise sensitive receivers

Receiver type	M12 West	M12 Central
Residential	26	166
Educational institute	0	5
Place of worship	0	1
Active recreation	0	9
Passive recreation	0	4
Total	**26**	**185**

The non-residential receivers that have been considered in this assessment are detailed in Table 3.4.

Table 3.4 Non-residential sensitive receivers

Receiver ID	Address	NCA	Package of works	Receiver type
2	LOT 1 / DP875790	NCA05	M12 Central	Active recreation
56	LOT 1 / DP875790	NCA05	M12 Central	Active recreation
72	LOT 1 / DP875790	NCA05	M12 Central	Active recreation
436	LOT 1 / DP875790	NCA05	M12 Central	Active recreation
647	LOT 1 / DP875790	NCA05	M12 Central	Active recreation
1019	LOT 1 / DP875790	NCA05	M12 Central	Active recreation
4272	2089 - 2109 ELIZABETH DRIVE, CECIL PARK	NCA04	M12 Central	Educational institute
4273	2089 - 2109 ELIZABETH DRIVE, CECIL PARK	NCA04	M12 Central	Educational institute
4274	2089 - 2109 ELIZABETH DRIVE, CECIL PARK	NCA04	M12 Central	Educational institute
4275	2089 - 2109 ELIZABETH DRIVE, CECIL PARK	NCA04	M12 Central	Educational institute
4276	2089 - 2109 ELIZABETH DRIVE, CECIL PARK	NCA04	M12 Central	Educational institute
5542	1650 ELIZABETH DRIVE, KEMPS CREEK	NCA06	M12 Central	Passive recreation
5543	1650 ELIZABETH DRIVE, KEMPS CREEK	NCA06	M12 Central	Active recreation
8010	LOT 3 / DP1087825	NCA05	M12 Central	Passive recreation
8011	LOT 3 / DP1087825	NCA05	M12 Central	Passive recreation
8012	1490 ELIZABETH DRIVE, CECIL PARK	NCA04	M12 Central	Active recreation
8014	1650 ELIZABETH DRIVE, KEMPS CREEK	NCA06	M12 Central	Active recreation
8024	LOT 3 / DP1087825	NCA05	M12 Central	Passive recreation
9002	81 CLIFTON AVENUE, KEMPS CREEK	NCA06	M12 Central	Place of worship



Paper Size ISO A4

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- M12 road design
- Noise catchment area
- Sensitive receiver

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Noise catchment areas

Project No. **12520102**
Revision No. **A**
Date. **03/08/2022**

Figure 3.1

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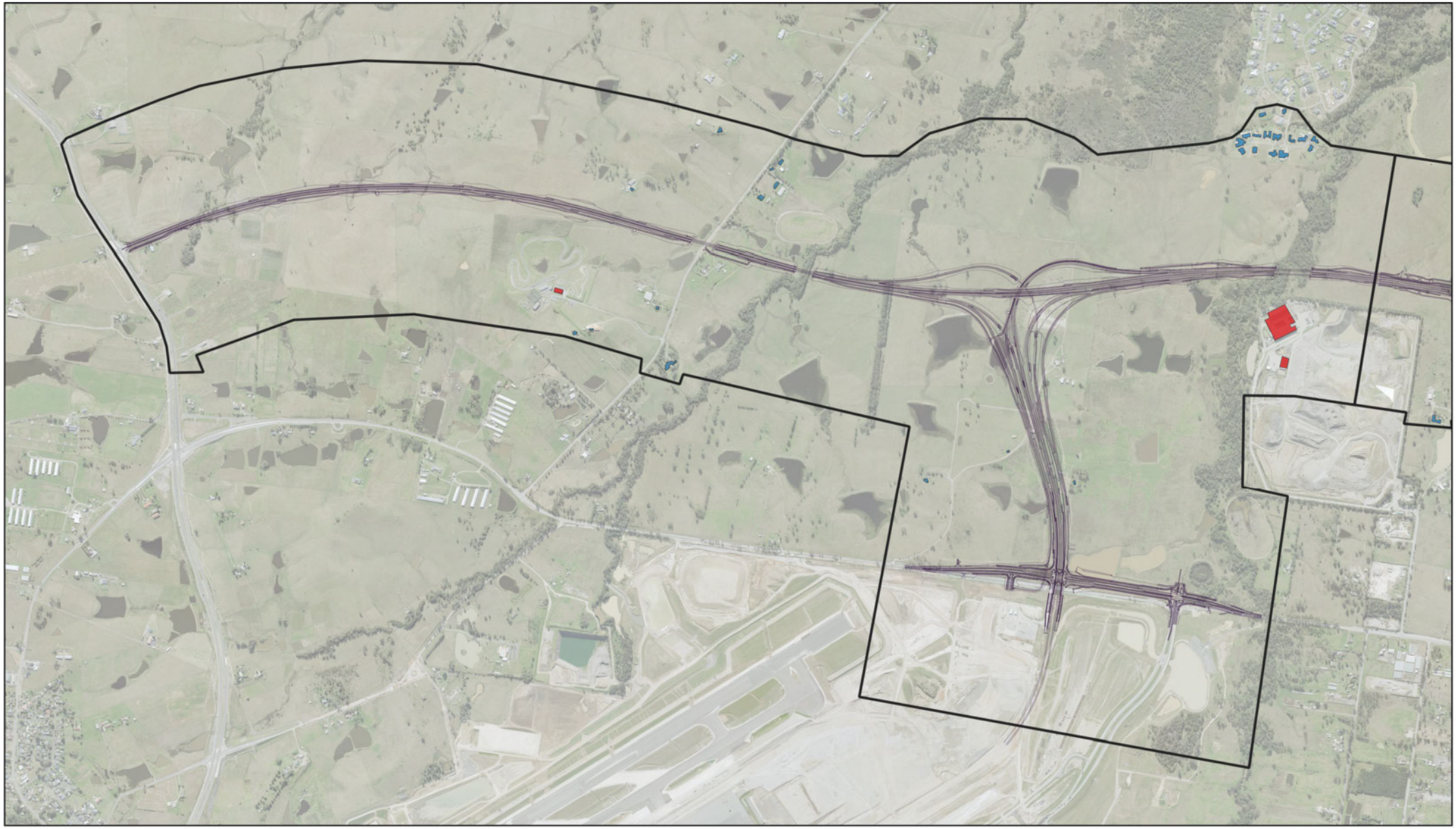

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- M12 road design
- Study area
- Commercial / Industrial
- Educational institute
- Active receation
- Passive recreation
- Place of worship
- Residential

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M12 West
Modelled sensitive receivers

Project No. **12520102**
Revision No. **A**
Date. **03/08/2022**

Figure 3.2

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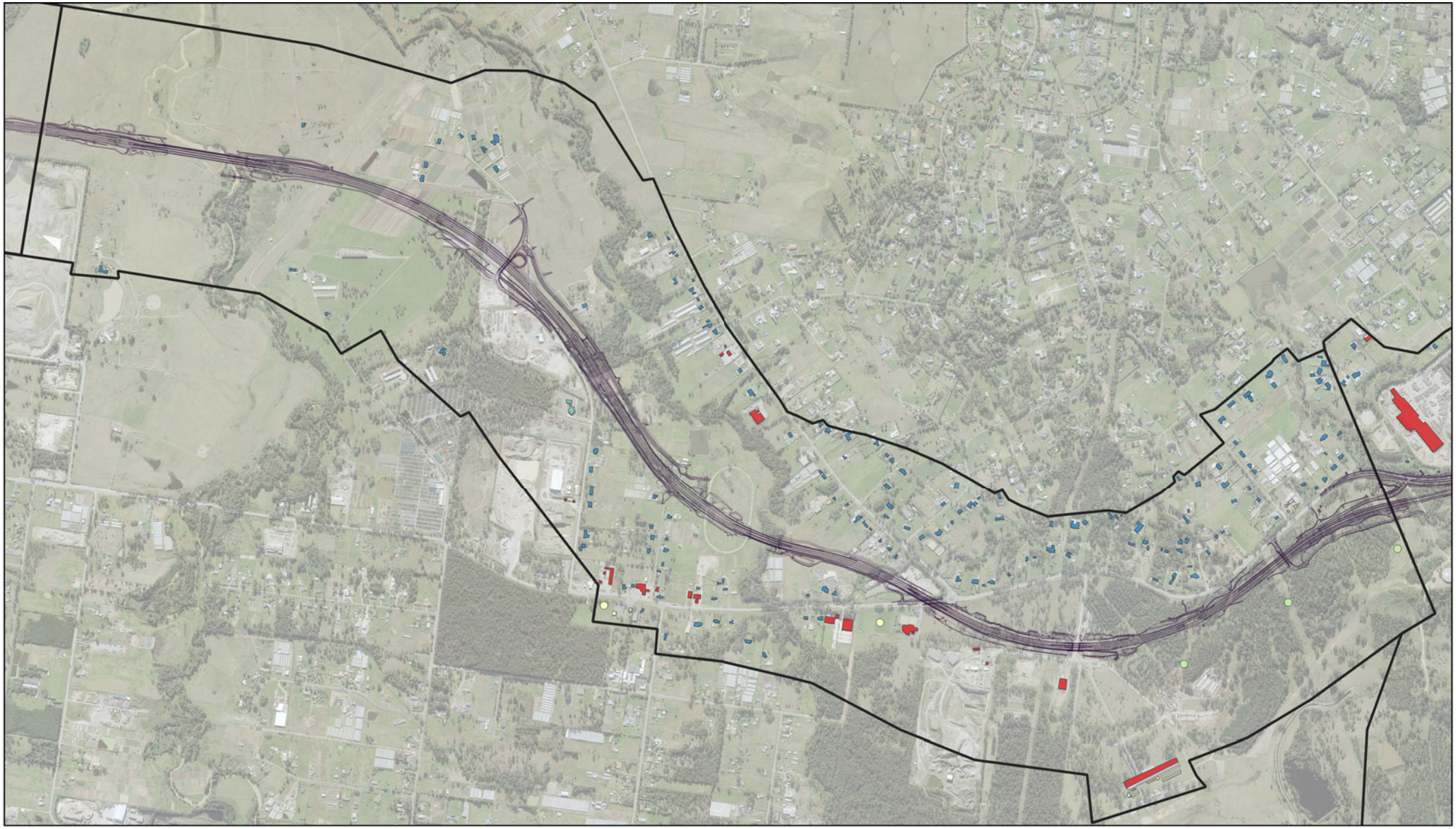
Created By: vlau



Paper Size ISO A4

0 200 400 600 m

Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- M12 road design
- Study area
- Commercial / Industrial
- Educational institute
- Active receation
- Passive recreation
- Place of worship
- Residential

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 Central
Modelled sensitive receivers

Project No. 12520102
Revision No. A
Date. 03/08/2022

Figure 3.3

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Data Source: MetroMap - Imagery (Date captured: 20/09/2021, Date extracted: 03/08/2022)

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3.2 EIS noise monitoring summary

Noise monitoring was undertaken at 15 locations for the EIS assessment in 2017. The EIS noise monitoring locations are positioned primarily within the M12 West and M12 Central packages of the project. One location was located within the M12 East package (L01) however has been removed from this ONVR as it does not apply.

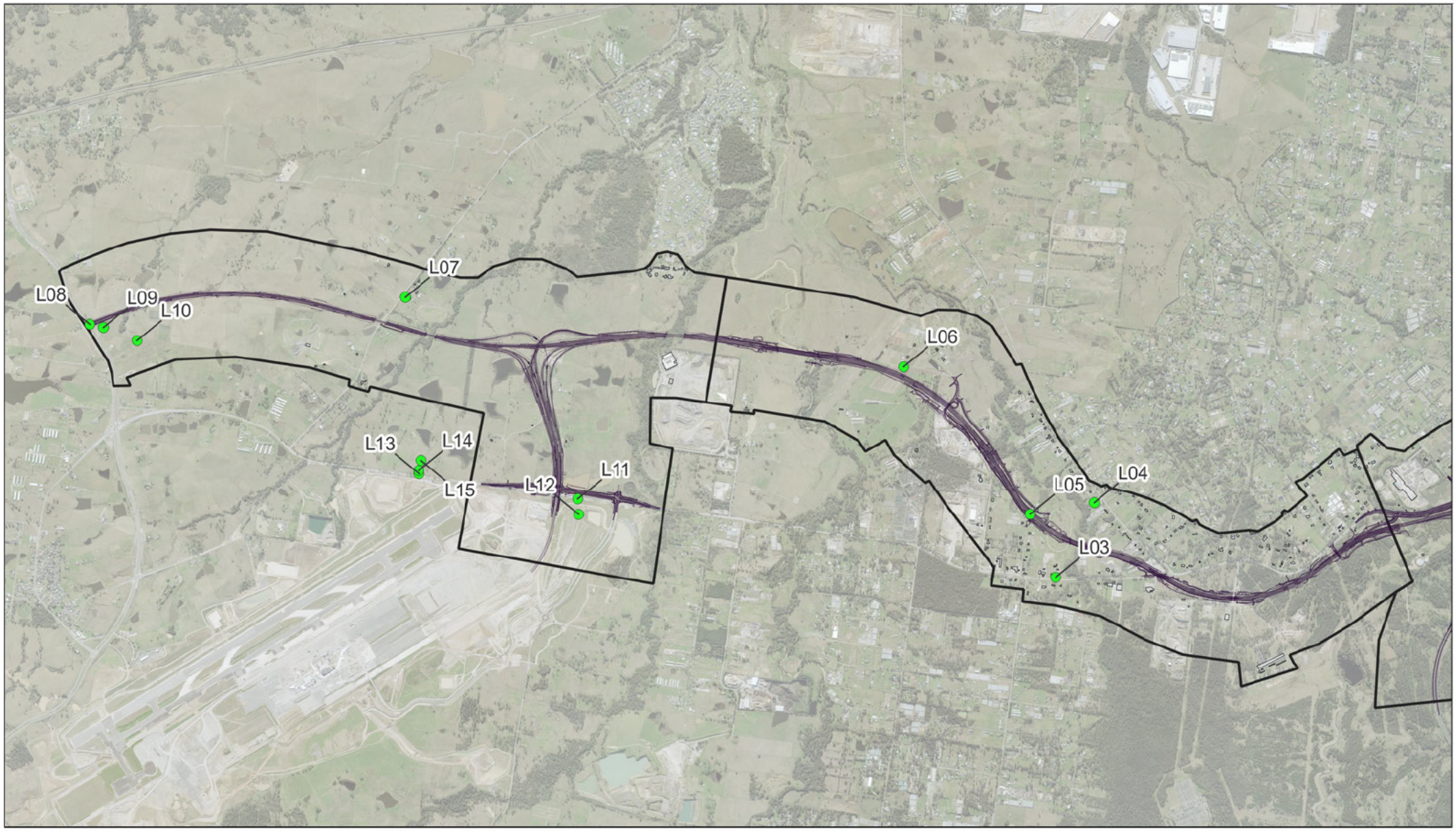
A summary of the measured background and road traffic noise levels at all monitoring locations is provided in Table 3.5 and shown in Figure 3.5.

Table 3.5 Measured EIS noise levels, dBA

EIS ID	Address	Distance to road	Background noise level (RBL)[1]			Road traffic noise level[2]	
			Day	Evening	Night	Day	Night
L02	Western Sydney Parklands, Cecil Hills	500 m	36	39	41	46	45
L03	1383 Elizabeth Drive, Kemps Creek	18 m	54	48	37	66	63
L04	1219 Mamre Road, Kemps Creek	80 m	48	46	37	57	55
L05	12-20 Salisbury Avenue, Kemps Creek	600 m	39	42	35	49	48
L06	203 Clifton Avenue, Kemps Creek	275 m	34	35	31	53	44
L07	740 Luddenham Road, Luddenham	35 m	40	36	31	56	52
L08	2828 The Northern Road, Luddenham	45 m	46	50	34	60	59
L09	2828 The Northern Road, Luddenham	140 m	44	48	36	56	55
L10	2828 The Northern Road, Luddenham	340 m	40	44	37	51	49
L11	2300 Elizabeth Drive, Badgerys Creek	15 m	46	40	31	69	66
L12	2300 Elizabeth Drive, Badgerys Creek	145 m	40	37	30	49	48
L13	1853-2109 Elizabeth Drive, Badgerys Creek	20 m	42	38	33	64	60
L14	1853-2109 Elizabeth Drive, Badgerys Creek	50 m	42	39	33	55	52
L15	1853-2109 Elizabeth Drive, Badgerys Creek	150 m	39	40	34	52	49

Note 1: Periods for background noise levels are based on the *Noise Policy for Industry* (NPfI) (EPA, 2017). Day: 7 am to 6 pm Monday to Saturday, 8 am to 6 pm Sunday. Evening: 6 pm to 10 pm. Night: 10 pm to 7 am Monday to Saturday, 10 pm to 8 am Monday to Sunday.

Note 2: Periods for road traffic noise levels are based on the *Road Noise Policy* (RNP) (DECCW, 2011). Day: 7 am to 10 pm. Night: 10 pm to 7 am.



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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- M12 road design
- Noise monitoring location
- Study area

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EIS noise monitoring locations

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Figure 3.4

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Data Source: MetroMap - Imagery (Date captured: 20/09/2021, Date extracted: 03/08/2022)

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3.3 Noise monitoring

3.3.1 Methodology

A review of the EIS noise monitoring locations was undertaken to determine areas where noise monitoring had not been undertaken. Additional noise monitoring within the eastern side of the M12 Central footprint was undertaken during the following period to determine existing road traffic noise levels prior to opening of the road project:

– 18 November 2020 to 27 November 2020: Monitoring at two locations over nine days.

The methodology for the noise monitoring was:

– Noise monitoring was undertaken using Svantek environmental noise loggers which were programmed to accumulate the L_{A90}, L_{A10} and L_{Aeq} noise descriptors continuously over the entire monitoring period
– Meteorological data was sourced from the Bureau of Meteorology's Horsley Park Automatic Weather Station, station number 67119, located about 4 km north of the project site
– A calibration check was performed on the noise monitoring equipment using a sound level calibrator with a sound pressure level of 94 dB(A) at 1 kHz. At completion of the measurements, the meter's calibration was re-checked to ensure the sensitivity of the noise monitoring equipment had not varied. The noise loggers were found to be within the acceptable tolerance of ± 0.5 dB(A)
– The data collected by the loggers was downloaded and analysed. Data was excluded during periods where average wind speeds were greater than 5 m/s or when rainfall occurred.

3.3.2 Unattended noise monitoring results

Noise monitoring was undertaken at residential receivers located near Elizabeth Drive to the east and west of the M7 Motorway. The two residential locations are below:

– **M4:** Free-field located at 2065-2071 Elizabeth Drive, Cecil Hills
– **M5:** Free-field located at 1239-1245 Elizabeth Drive, Mount Vernon.

Noise monitoring locations and equipment details are provided in Table 3.6.

A map showing the noise monitoring locations is provided in Figure 3.5.

Table 3.6 Noise monitoring location and equipment details (round one)

Detail	M4	M5
Location	2065-2071 Elizabeth Drive, Cecil Hills	1239-1245 Elizabeth Drive, Mount Vernon
Easting / Northing (m)	299109 / 6249527	297712 / 6249035
Measurement start	19 November 2020	18 November 2020
Measurement end	27 November 2020	27 November 2020
Equipment details	Svantek 977 / 36873	Svantek 977 / 45733
Equipment settings	A weighted, Fast time response 15 minute intervals	A weighted, Fast time response 15 minute intervals
Calibration drift	+0.3 dB	+0.0 dB
Distance to road, m	40	15
Site photo		

Road traffic noise levels during the day and night-time periods were calculated from the measured noise levels in accordance with the *Road Noise Policy* (DECCW, 2011). The measured weekday road traffic noise levels are summarised in Table 3.7. Measured daily noise levels and noise level charts are provided in Appendix B.

Table 3.7 Noise monitoring results summary

Location	Road traffic noise levels (free field), dBA		Road traffic noise levels (façade corrected, dBA)	
	Day $L_{Aeq(15\ hour)}$	Night $L_{Aeq(9\ hour)}$	Day $L_{Aeq(15\ hour)}$	Night $L_{Aeq(9\ hour)}$
M4	63	61	66	63
M5	70	66	73	68

Note: Periods for road traffic noise levels are based on the *Road Noise Policy* (RNP) (DECCW, 2011). Day: 7 am to 10 pm. Night: 10 pm to 7 am.

3.3.3 Attended noise monitoring

Attended noise monitoring was undertaken during set-up of the long-term unattended noise monitors to determine and quantify the noise sources that contribute to the ambient noise environment. Attended noise measurements were undertaken using a Svantek 979 (SN: 27100) at 1.5 m above ground level.

The attended measurements were taken adjacent to the unattended noise monitoring location. A calibration check was performed before and after the measurements and the sensitivity of the meter was found to be within the acceptable tolerances. Meteorological conditions during the attended measurements were calm and no additional filtering due to adverse weather conditions were required.

A summary of the attended noise observations including the measured background (LA90) and ambient (LAeq) noise levels are provided in Table 3.8.

Table 3.8 Attended noise monitoring summary, dBA

Location	Date and time	$L_{A90(15\ minute)}$	$L_{Aeq(15\ minute)}$	Observations
M4	18/11/2020 10:30 am	54	62	Elizabeth Drive is dominant Car passbys: 55 to 63 dBA Truck passbys: 60 to 70 dBA
M5	19/11/2020 09:45 am	55	71	Elizabeth Drive is dominant Car passbys: 62 to 70 dBA Truck passbys: 70 to 85 dBA

Paper Size ISO A4

0 200 400 600 800 m

Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- Noise monitoring locations
- M12 road design
- Study area
- Sensitive receiver

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

Noise monitoring locations

Project No. **12520102**
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Date. **03/08/2022**

Figure 3.5

Document Path: \\ghdnet\ghd\AU\Sydney\Projects\21\12520102\Tech\Noise\00_GIS\12520102_GIS.qgz

Data Source: MetroMap - Imagery (Date captured: 20/09/2021, Date extracted: 03/08/2022)

Created By: vlau

3.4 Meteorological conditions

Noise enhancing weather conditions such as source-to-receiver wind directions and temperature inversions have the potential to increase noise levels at a sensitive receiver. Meteorological data from two Bureau of Meteorology weather stations have been analysed during the day and night-time periods in order to identify the potential for noise enhancing conditions.

The data has been processed in accordance with the *Noise Policy for Industry* (NPfI) (EPA, 2017) which states that at least one year's worth of meteorological data should be used in the analysis. The frequency of occurrence of temperature inversions have been determined using the sigma-theta method due to a lack of available cloud data.

3.4.1 Horsley Park

The Bureau of Meteorology's Horsley Park Automatic Weather Station, station number 067119, is located about 4 km north of the project site. The annual wind roses during the day and night-time periods are provided in Figure 3.6. During the day, the wind directions are predominantly from the north and south-east. During the night, the wind directions are predominantly from the south-west and sensitive receivers located to the north-east of the M12 road alignment would likely experience source-to-receiver winds that can enhance noise.

During the day-time period the atmosphere is generally unstable and temperature inversions are unlikely to occur. The night-time period shows a very stable atmosphere with F and G stability categories for over 30 percent of the total night-time period. The project area would be subject to temperature inversions during the night-time period which have the potential to enhance noise propagation.

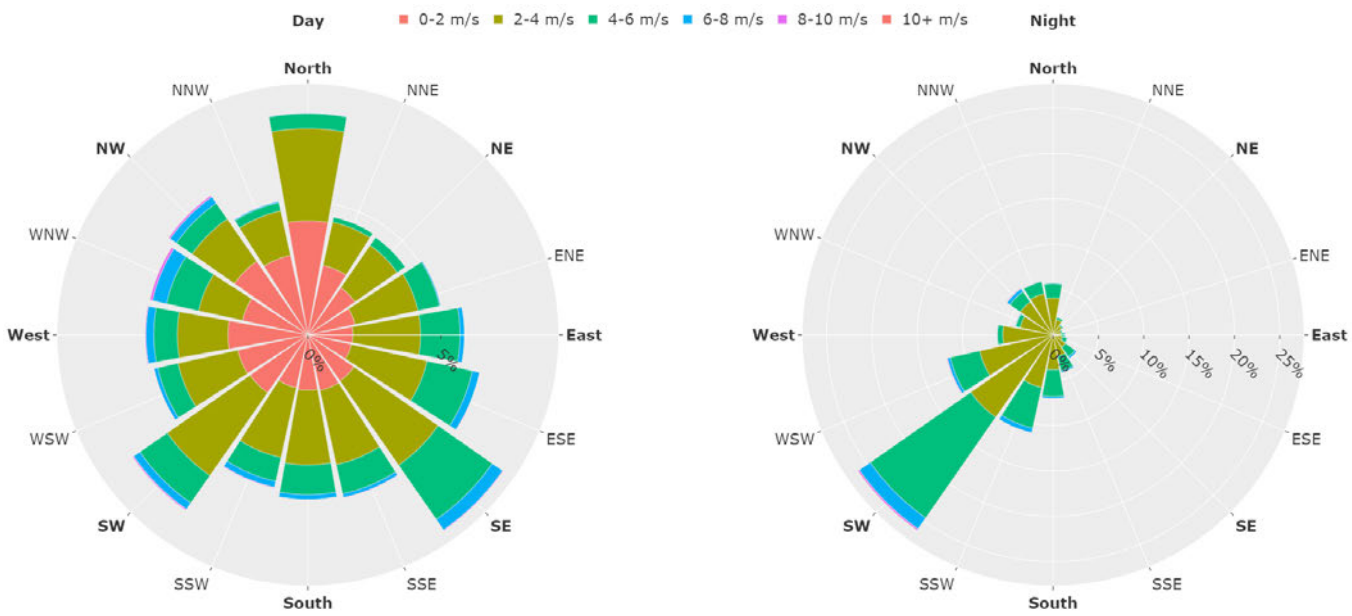


Figure 3.6 Horsley Park wind rose

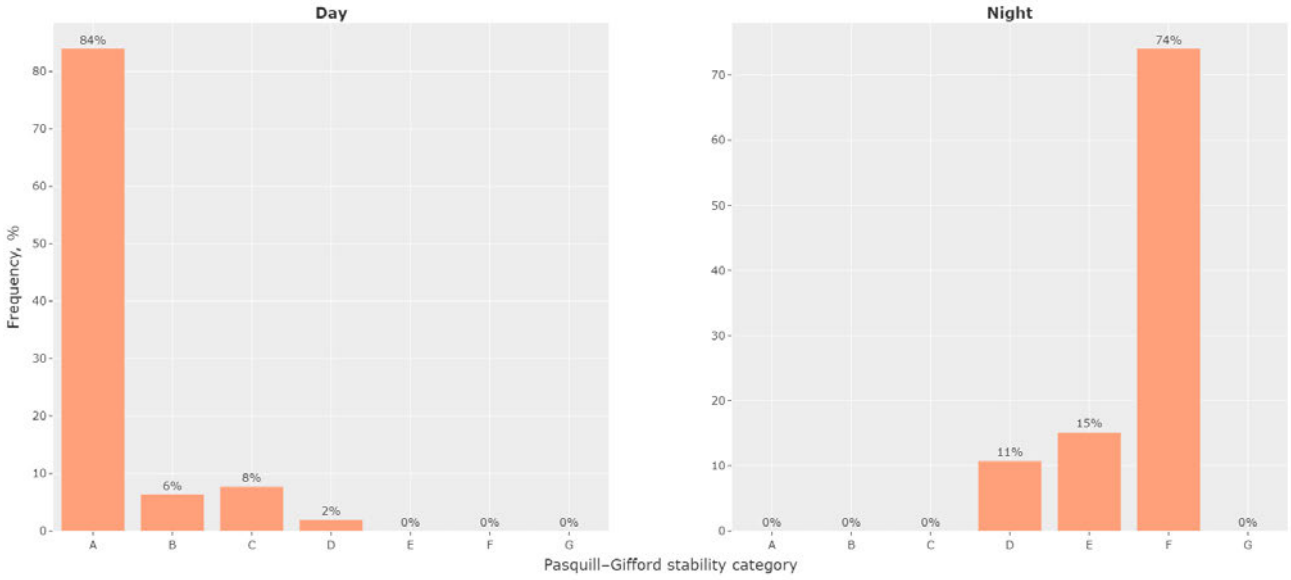


Figure 3.7 Horsley Park stability category

3.4.2 Badgerys Creek

The Bureau of Meteorology's Badgerys Creek Automatic Weather Station, station number 067108, is located about 3 km south of the project site. The annual wind rose during the day and night-time periods are provided in Figure 3.8. During the day, the wind directions are predominantly from the north to north-eastern and south-western sectors. During the night, the wind directions are predominantly from the south-west and sensitive receivers located to the north-east of the M12 road alignment would likely experience source-to-receiver winds that can enhance noise.

During the day-time period the atmosphere is generally unstable and temperature inversions are unlikely to occur. The night-time period shows a very stable atmosphere with F and G stability categories for over 30 percent of the total night-time period. The project area would be subject to temperature inversions during the night-time period which have the potential to enhance noise propagation.

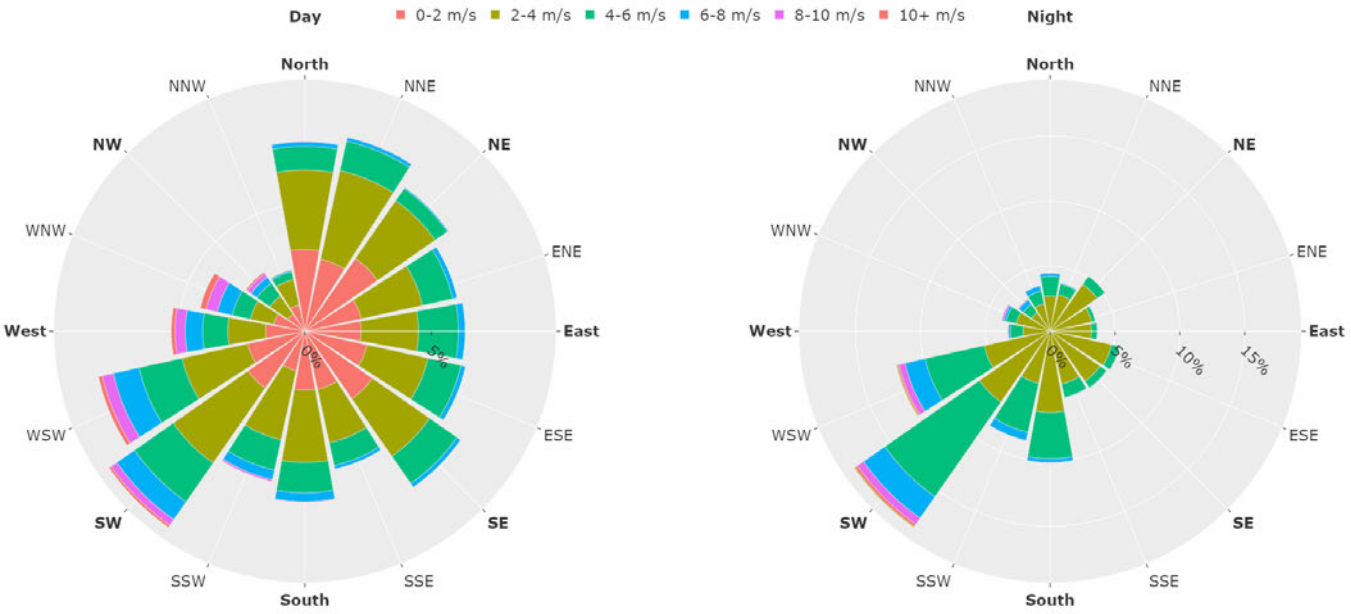


Figure 3.8 Badgerys Creek wind rose

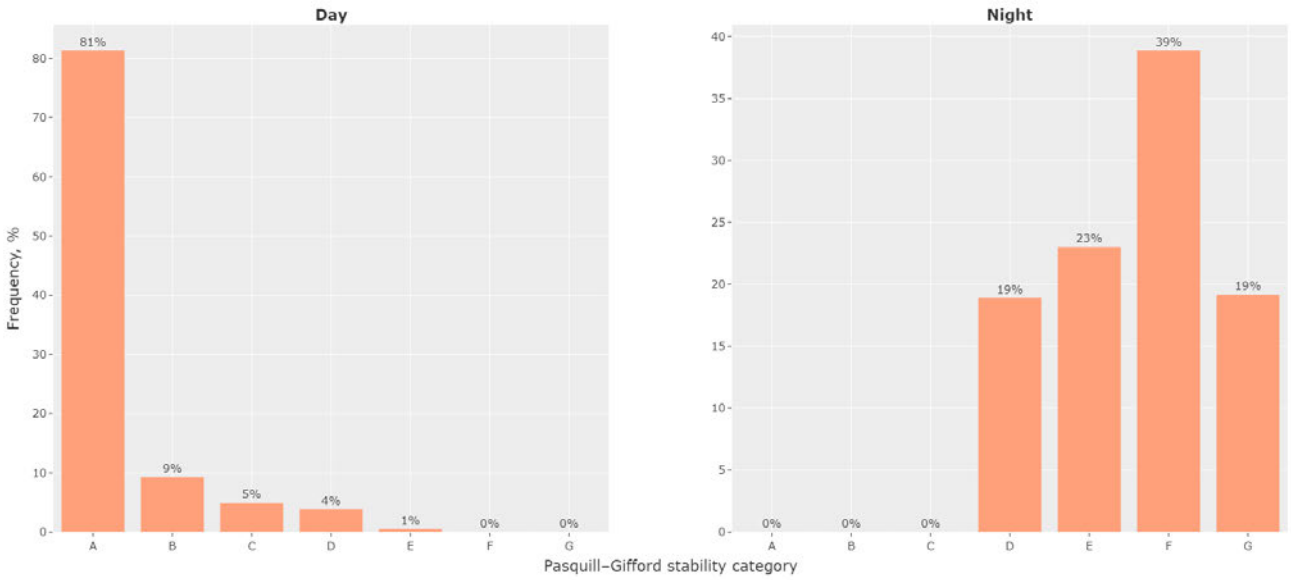


Figure 3.9 Badgerys Creeks stability category

4. Assessment criteria

4.1 Noise criteria guideline

Road traffic noise assessment criteria is provided in the *Noise Criteria Guideline* (Roads and Maritime, 2015). The NCG outlines the approach Transport for NSW adopts to implement the objectives of the *Road Noise Policy* (DECCW, 2011). Operational road traffic noise has been assessed with reference to these guidelines in accordance with E52 of the CoA.

An overview of the approach and assessment criteria adopted for this project is provided in the following section.

4.1.1 Study area

The assessment study area has been selected in accordance with the guidance provided in the *Road Noise Policy* (DECCW, 2011) and the *Noise Criteria Guideline* (Roads and Maritime, 2015).

All buildings located within 600 m from the centreline of the outermost lane of traffic on each side of M12 Motorway alignment has been included in this assessment. The NCG notes that this limit (i.e. 600 m) is *"based on the limit of accuracy of currently approved road traffic noise models"*.

The study area has been adjusted at the edges to include blocks of closely spaced receivers. This adjustment ensures that potential noise impacts at all closely spaced groups of receivers are considered.

The study area and the sensitive receivers included in the assessment are shown in Figure 3.2 to Figure 3.3.

4.1.2 Assessment timeframe

The road traffic noise impact assessment years are provided in Table 4.1. For each assessed year, noise levels are determined for the following scenarios:

- **'No build' option:** road traffic noise levels that would have occurred if the project had not proceeded
- **'Build' option:** road traffic noise levels that would occur if the project proceeds.

Table 4.1 Assessment timeframes

Timeframe	Description	Adopted year for assessment
Opening year	The year of the project road opening	2026
Design year	Ten years after the project road opening	2036

Assessment during the opening year is undertaken to determine the potential for noise issues arising from opening of the road project. These issues can assist in determining the potential community reaction to the changes in noise level.

Assessment during the design year is undertaken to determine the potential for long-term noise issues once the surrounding road network has stabilised. Noise mitigation is considered based on the noise impacts predicted during the design year.

4.1.3 Assessment criteria for residential land uses

Noise criteria are assigned to sensitive receivers using the *Noise Criteria Guideline* (Roads and Maritime, 2015).

The following factors contribute to the road traffic noise assessment criteria that is assigned to a residential land use:

- Type of development (new or redeveloped). A description of the development types is provided in the glossary.
- Functional class / road category of the road.

Following consideration of the factors above, the assessment criteria can be adjusted depending on whether the residence is located within a transition zone or located in an area where the relative increase criteria applies.

Road traffic noise assessment criteria for residential land uses are provided in Table 4.2.

Table 4.2 Residential road traffic noise assessment criteria

Road category	Type of project / land use	Assessment criteria, dBA	
		Day 7 am to 10 pm	Night 10 pm to 7 am
Freeway / arterial / sub-arterial roads	Existing residences affected by noise from new freeway/arterial/sub-arterial road corridors	$L_{Aeq(15\ hour)}$ 55 (external)	$L_{Aeq(9\ hour)}$ 50 (external)
	Existing residences affected by noise from redevelopment of existing freeway/arterial/sub-arterial roads	$L_{Aeq(15\ hour)}$ 60 (external)	$L_{Aeq(9\ hour)}$ 55 (external)
	Existing residences affected by both new roads and redevelopment of existing freeway/arterial/sub-arterial roads in a Transition Zone	Between $L_{Aeq(15\ hour)}$ 55-60 (external)	Between $L_{Aeq(9\ hour)}$ 50-55 (external)
	Existing residences affected by increases in traffic noise of 12 dBA or more from new freeway/arterial/sub-arterial roads	Between $L_{Aeq(15\ hour)}$ 42-55 (external)	Between $L_{Aeq(9\ hour)}$ 42-50 (external)
	Existing residences affected by increases in traffic noise of 12 dBA or more from existing freeway/arterial/sub-arterial roads	Between $L_{Aeq(15\ hour)}$ 42-60 (external)	Between $L_{Aeq(9\ hour)}$ 42-55 (external)

4.1.4 Assessment criteria for non-residential land uses

Road traffic noise assessment criteria for non-residential land uses are provided in Table 4.3.

Table 4.3 Non-residential road traffic noise assessment criteria

Existing sensitive land use	Assessment criteria, dBA	
	Day (7 am to 10 pm)	Night (7 am to 10 pm)
School classrooms	$L_{Aeq(1\ hour)}$ 40 (internal) $L_{Aeq(1\ hour)}$ 50 (external)[1]	-
Places of worship	$L_{Aeq(1\ hour)}$ 40 (internal) $L_{Aeq(1\ hour)}$ 50 (external)[1]	$L_{Aeq(1\ hour)}$ 40 (internal) $L_{Aeq(1\ hour)}$ 50 (external)[1]
Open space (active use)	$L_{Aeq(15\ hour)}$ 60 (external)	-
Open space (passive use)	$L_{Aeq(15\ hour)}$ 55 (external)	-

Note 1: The external noise criteria has been determined based on a 10 dBA addition to the internal noise criteria. This is based on a typical reduction of 10 dBA through an open window.

4.1.5 Meteorological conditions

Condition E51(d) of the CoA states that noise modelling of the detailed design must be undertaken based on meteorological conditions in accordance with the NSW *Road Noise Policy* (DECCW, 2011). The RNP states that noise criteria for the project do not need to be met under adverse meteorological conditions. An analysis of meteorological conditions and the potential impact on traffic noise propagation in the study area has been provided in Section 3.4.

The algorithm used to model road traffic noise (CoRTN) provides the following statement: "*… noise propagation conditions are consistent with moderately adverse wind conditions …*". Annex 4 of the UK Standards for Highways provides additional context and states that during the development of the algorithms used for CoRTN, measurements were undertaken to develop the relationship between traffic flow and noise levels. These measurements were undertaken during adverse wind conditions (i.e. a wind from the source to the receiver).

Road traffic noise has been modelled using CoRTN which was developed during adverse wind conditions. Therefore, the modelled noise levels would account for noise enhancing weather conditions and the assessment would likely be conservative during the day-time period and representative during the night-time period.

4.2 Noise mitigation guideline

Roads and Maritime road traffic projects use the *Noise Mitigation Guideline* (Roads and Maritime, 2015) to describe the principles to be applied when reviewing feasible and reasonable noise mitigation for road traffic noise. The NMG recognises that the criteria recommended by the NCG are not always practicable and that it is not always feasible and reasonable to expect that the criteria are achieved.

The NMG provides principles and recommendations that should be considered when assessing whether noise mitigation is feasible and reasonable. These include:

– Noise mitigation should be designed to reduce noise levels to the criteria at qualifying receivers
– Following corridor and road design, residual exceedances of the noise criteria may be addressed at qualifying receivers using, in order of preference (RNP section 3.4.1), quieter road surfaces, barriers and at-property treatments.
– Noise barrier evaluation processes must:
    - Give preference to reducing outdoor noise levels and the number of at-property treatments, and
    - Provide efficient barrier heights and extents without disregarding lengths of effective noise barrier in front of eligible groups of receivers
– Noise mitigation shall be evaluated and installed where feasible and reasonable.

An overview of the noise mitigation assessment process that is applied following corridor planning and road design is provided in the following section. This section would apply to all receivers that are predicted to have residual exceedances above the NCG criteria to determine whether they qualify for noise mitigation.

4.2.1 Assessment process

The NMG provides three triggers where a receiver may qualify for consideration of noise mitigation (beyond the adoption of source control measures implemented through road design and traffic management measures). These triggers only apply for receivers with exceedances above the NCG criteria. The triggers are:

– The predicted ‘build’ noise level is 5 dBA or more above the criteria (exceeds the cumulative limit) and the receiver is significantly influenced by project road noise, regardless of the incremental impact of the project
– The noise level contribution from the road project is acute. This applies even if the total noise level at the receiver is dominated by another road
– The predicted ‘build’ noise level is more than 2 dBA above the ‘no-build’ level.

4.2.2 Noise mitigation measures

The NMG provides a staged approach in the assessment of noise mitigation noting that preference is given to reducing noise during corridor planning and road design rather than through the use of specific noise mitigation measures. The staged approach is based on the *Road Noise Policy* (DECCW, 2011) which provides the following options in order of preference for application:

1. **Source control:** quieter road surfaces
2. **Path control:** noise mounds
3. **Path control:** noise barriers
4. **Receiver control:** at-property treatments.

Section 7 of the NMG provides further details on each mitigation measure. At-property treatments would only be investigated where source and path controls are not considered feasible or reasonable. The NMG considers source and path controls reasonable where there are four or more closely spaced receivers (i.e. receivers whose

façades are separated by less than 20 m) that would receive a benefit from implementation of these mitigation measures.

Where the possibility of a noise mound or noise barrier arises, further assessment would be required in accordance with Section 8 of the NMG. Section 8 of the NMG details the barrier assessment process and specifies the number of residences that should receive an adequate noise benefit for a path control measure to be considered reasonable.

4.2.3 Feasible and reasonable assessment

The NMG details feasible and reasonable considerations that should be taken into account once an optimal barrier design height has been identified. The feasibility assessment typically refer to the engineering constraints that must be considered and the reasonable assessment looks at the cost and equity considerations.

Feasible considerations

A noise barrier would only be considered feasible if it can be practically built. Engineering constraints that should be considered include:

– Does construction of the noise wall restrict vision and introduce safety issues to the road users
– Are there space limitations due to road corridor site constraints or utility exclusion zones
– Will there be drainage impacts which may impede floodway and stormwater flow
– Maintenance requirements including access and cost
– Ground conditions and wind loading
– Shadowing effects
– Whether driveway access is required.

Reasonable considerations

Reasonable measures that should be factored in when judging whether the overall noise benefits provide significant social, economic or environmental benefits include:

– The noise reduction provided and the overall number of people that benefit from the mitigation
– Existing and future noise levels, including changes in noise levels in the build and design year and the extent of any exceedance of the noise criteria
– Potential for a mitigation measure to reduce noise during construction as well as from road traffic after the project is complete
– The cost of mitigation, including the cost of noise mitigation measures as a percentage of the total project cost and the ongoing maintenance and operational costs
– Relative weighting of treatments with respect to protection of outdoor areas or only internal living spaces
– Whether comparable noise mitigation measures have been provided at other locations in the project or for other similar projects and surrounding network.

Community considerations

Community considerations should also be taken into account in the feasible and reasonable assessment. These considerations would be identified as a result of community consultation session and may include:

– Reduction in noise barrier height if the optimised noise barrier is deemed to be too high
– Community views and wishes on noise wall type (transparent/opaque, materials)
– Visual impacts for the community surrounding the road project and for road users.

Aesthetic impacts should be considered in accordance with the *Noise Wall Design Guideline* (Roads and Maritime 2016). This document outlines general principles that should be considered to improve the urban design of noise walls.

5. Operational noise assessment methodology

5.1 Methodology

The methodology for the operational road traffic noise assessment is as follows:

- The assessment study area was established in accordance with the *Noise Criteria Guideline* (Roads and Maritime, 2015) as shown in Figure 1.1
- Project roads and associated side roads were identified
- The road project development type was identified
- Road classification changes were reviewed based on the forecast no-build and build traffic volumes during the design year
- Transition zones were established between new and redeveloped sections
- Transition zones between the project road and existing roads were identified
- Road traffic noise levels were modelled for the scenarios identified for this assessment
- Potential noise impacts were determined by assessing the modelled noise levels against the road traffic noise assessment criteria
- Potential noise mitigation measures were reviewed to minimise road traffic noise impacts where impacts were identified.

5.2 Assessment scenarios

The scenarios provided in Table 5.1 have been modelled to determine the potential road traffic noise impacts on land uses identified within the assessment study area.

Table 5.1 Assessment scenarios for road traffic noise

Timeframe	Year	Scenario	Description
Opening year	2026	No Build	Traffic flow on the existing alignment
		Build	Traffic flow on the proposed alignment
Design year	2036	No Build	Traffic flow on the existing alignment
		Build	Traffic flow on the proposed alignment

5.3 Noise modelling inputs

The noise model inputs and assumptions for the existing, 2026 and 2036 No Build and Build scenarios are presented in Table 5.2. The noise model prepared for the EIS has been used as the base for the detailed design noise model. The road design and surrounding terrain was updated based on the detailed design road alignment and elevations.

Changes to the EIS noise model are described as part of the preliminary operational traffic noise assessment in section 6.

Table 5.2 Operational noise model inputs and assumptions

Input / assumption	Description
Software	SoundPLAN Version 8.2
Prediction algorithm	United Kingdom Department of Transport Calculation of Road Traffic Noise (CoRTN) based on the application of the three source height method

Input / assumption	Description
Model inputs	
Topography	Based on LiDAR data
Road elevations	Based on the following detailed design drawings M12 West: 100 percent M12 Central: 100 percent
Buildings	Based on AR noise model. Additional buildings have been identified and integrated into the model based on aerial imagery.
Receiver location	1 m from the building façade
Receiver height	Ground floor 1.5 m above ground First floor 4.5 m above ground
Ground absorption	0.75
Input parameters	
Validation model road surface adjustment	Dense Graded Asphalt (DGA) +0 dBA
Validation model traffic volumes	Based on measured traffic count data. Traffic count data was processed to obtain the light vehicle and heavy vehicle volumes for modelling. Measured volumes are provided in Appendix D.
Validation model traffic speeds	Based on measured traffic count data. Measured speeds are provided in Appendix D.
No-build road surface adjustments	Dense Graded Asphalt (DGA) +0 dBA Open Grade Asphalt (OGA) -2 dBA Concrete +3 dBA
Build road surface adjustments	Plain Concrete Pavement (PCP) +3 dBA Dense Graded Asphalt (DGA) +0 dBA (on bridges) Open Graded Asphalt (OGA) -2 dBA (mitigation scenario) Low Noise Diamond Grind (LNDG) concrete +0 dBA (mitigation scenario)
No-build and build traffic volumes	Based on the amendment report. Discussed in section 5.5.
No-build and build traffic speeds	Provided in Appendix D.
Noise barriers	No existing noise barriers are identified in the M12 West or M12 Central design packages
Corrections	
Façade correction	+2.5 dBA
CoRTN conversion factor	- 3 dBA for conversion between $L_{A10(1\ hour)}$ levels and $L_{Aeq(1\ hour)}$ levels
Source height and correction	Cars 0.5 m, +0 dBA correction Truck tyres 0.5 m, -5.4 dBA correction Truck engines 1.5 m, -2.4 dBA correction Truck exhausts 3.6 m, -8.6 dBA correction
Calculation settings	
Low traffic flow correction	Disabled
Search radius	3000 m
Contour grid spacing	20 m
Contour grid height	1.5 m above ground

5.4 Identified roads

Project and non-project roads were identified for the operational road traffic noise assessment. A road is considered a project road when a segment of the road fits the description for a new or redeveloped road. Details on new and redeveloped roads are provided in Section 5 of the *Noise Criteria Guideline* (Roads and Maritime, 2015).

Project roads are defined in the AR as roads where there are design or engineering changes proposed as part of the project. Roads with no changes are considered non-project roads. This definition has been adopted for the ONVR.

The project and non-project road locations are provided in Appendix C.

5.4.1 Project roads

For this assessment, the project roads and road classifications in Table 5.3 have been adopted. Existing roads which have been substantially realigned are considered new roads.

Table 5.3 Project roads and classification

Road name	Functional class of road		Substantially realigned	Type of road project (as per NCG)
	Before project	After project		
M12 Motorway	n/a	Arterial	No	New
WSA Access Road	n/a	Arterial	No	New
Elizabeth Drive (connection to WSA interchange)	Arterial	Arterial	Yes	New
Clifton Avenue - Between the northern lot boundary of Lot 7 / DP 812284 to the southern lot boundary of Lot 47 / DP734854	Local	Local	Yes	New
Clifton Avenue - North of the northern lot boundary of 7 / DP812284 - South of the southern lot boundary of Lot 47 / DP734854	Local	Local	No	Redeveloped

5.4.2 Non-project roads

Significant side roads that link with the project road have been included for the assessment. These roads are considered non-project roads and have been provided in Table 5.4.

Non-project roads have been included in the assessment to assist in determining the applicable assessment criteria in addition to determining the appropriate noise mitigation where relevant.

Table 5.4 Non-project roads and classifications

Road name	Functional class of road	
	Before project	After project
Elizabeth Drive	Arterial	Arterial
Duff Road	Collector	Collector
Mamre Road	Sub-arterial	Sub-arterial
Devonshire Road	Collector	Collector
Salisbury Avenue	Local	Local
Clifton Avenue	Local	Local

Road name	Functional class of road	
	Before project	After project
Western Road	Collector	Collector
Martin Road	Local	Local
Adams Road	Collector	Collector
Luddenham Road	Sub-arterial	Sub-arterial
The Northern Road	Arterial	Arterial
The Old Northern Road	Arterial	Arterial

5.4.3 Pavement surfaces

The modelled pavement surfaces for the project roads included in this assessment are provided in Table 5.5. The modelled pavement surfaces along the project roads are based on the AR pavement design for the no-mitigation case. Alternative pavement surfaces along the M12 Motorway alignment are considered as part of section 8 of this ONVR.

The detailed design pavement design uses a low noise diamond grind (LNDG) concrete along the M12 Motorway alignment. This has a surface correction of +0 dBA which is lower than the concrete surface correction (+3 dBA) used to assess the no-mitigation case. This would reduce total noise levels by up to 3 dBA. This level of reduction would be expected where the dominant noise source is the M12 Motorway. Areas which have noise contribution from other roads would receive a lower reduction in noise level.

Table 5.5 Modelled project road pavement surface

Road	Detailed design pavement surface	Pavement correction
M12 Motorway	Plain concrete pavement (PCP)	+ 3 dBA
M12 Motorway (bridges / interchanges)	Dense graded asphalt (DGA)	+ 0 dBA
WSA Access Road	Plain concrete pavement	+ 3 dBA

All non-project roads have been modelled with a dense graded asphalt (DGA) surface with a +0 dBA correction.

The non-project roads are existing roads and no change to the road surface are proposed due to the project.

5.5 Traffic data

5.5.1 Existing traffic flows

Existing traffic volumes along Elizabeth Drive were measured as part of the noise model validation process using automatic traffic counters (ATC) at the two locations listed in Table 5.6.

Traffic volumes along the M7 Motorway have been obtained from the Traffic Monitoring and Classification System (TMCS) loop stations 21 to 25 at the northbound and southbound locations.

Measured existing traffic volumes are summarised in Appendix D.

Table 5.6 Traffic count locations

Location ID	Location	Closest noise monitoring location
ATC 1	Elizabeth Drive, 600 m east of M7	M4
ATC 2	Elizabeth Drive, west of Cecil Road	M4

5.5.2 Future traffic flows

Projected no-build and build traffic volumes in 2026 and 2036 are based on LU16 traffic flows provided in the amendment report. These traffic volumes are reproduced in Appendix D.

The amendment report volumes assume that a link connecting Elizabeth Drive to the south, the M12 Motorway and Mamre Road to the north would be operational in the 2036 design year. This link would increase traffic volumes near Salisbury Avenue.

The assumption of an operational link has been removed from this assessment as this change is not proposed as part of the project. As a result, 2036 Build traffic volumes along Salisbury Avenue have been adjusted to match volumes in the 2026 Build case. Traffic volumes using this link has been redirected onto Elizabeth Drive and Mamre Road. This change was approved by TfNSW.

5.6 Noise model validation

Noise model validation is undertaken for road traffic projects to demonstrate that the noise model produced for the existing situation is an accurate representation of the real world within the limitations of the algorithm.

The noise model validation process determines the variation between the predicted road traffic noise levels (using measured traffic volumes) with the measured traffic noise levels at each noise monitoring location.

Noise model validation results are presented in the following sections:

– EIS noise model validation results
– Noise model validation results from additional noise monitoring undertaken as part of this assessment.

5.6.1 EIS noise model validation summary

The EIS validation noise model has been re-run for this ONVR and results are provided in Table 5.7. The ONVR re-run of the EIS validation model includes the following changes:

– Adjusting validation receiver height for location L12 from 0 m above terrain to 1.5 m above terrain
– Correcting the day-time hours from 6 am-10 pm to 7 am-10 pm.

Two noise monitoring locations (L01 and L06) were excluded from the EIS validation noise model as they were not considered appropriate locations due to the distance from the existing roads.

Table 5.7 EIS noise model validation summary

Location	$L_{Aeq(15\ hour)}$ Day(7 am to 10 pm), dBA			$L_{Aeq(9\ hour)}$ Night (10 pm to 7 am), dBA		
	Measured	Modelled	Change	Measured	Modelled	Change
L03	67.2	68.1	0.9	63.5	64.1	0.6
L04	57.5	57.4	-0.1	53.5	53.1	-0.4
L05	48.0	47.7	-0.3	44.4	43.4	-1
L07	56.3	57.1	0.8	52.3	52.7	0.4
L08	60.4	62.2	1.8	58.7	58.1	-0.6
L09	56.0	56.0	0	55.7	51.7	-4
L10	50.8	51.0	0.2	49.3	46.7	-2.6
L11	70.0	69.9	-0.1	66.4	65.1	-1.3
L12	48.6	54.1	5.5	45.3	49.5	4.2
L13	64.7	66.2	1.5	60.9	61.8	0.9
L14	55.9	59.5	3.6	52.7	55	2.3
L15	51.6	54.6	3	49.5	50	0.5
Median			**0.9**			**0.0**

The EIS states that *"'At locations where the model is overpredicting (L12, L14, and L15), it is likely that localised shielding from ground terrain is influencing the line of sight between the monitoring locations and the nearest road. While the noise model incorporates 3D LIDAR ground contours, small changes in ground elevation over large distances can result in differences between the predicted and measured levels.'"*

5.6.2 Additional noise model validation

Additional noise model validation was undertaken in the M12 Central section. Noise levels in this area were dominated by road traffic noise from Elizabeth Drive. A comparison of the measured and modelled road traffic noise levels during the day-time and night-time periods is provided in Table 5.8 for the additional monitoring undertaken as part of the ONVR.

Table 5.8 Noise model validation summary

Location	$L_{Aeq(15\ hour)}$ Day (7 am to 10 pm)			$L_{Aeq(9\ hour)}$ Night (10 pm to 7 am)		
	Measured	Modelled	Change	Measured	Modelled	Change
M4	63	64.7	1.7	60.8	61.3	0.5
M5	70.4	70.4	0	65.7	66.9	1.2
Median			**0.9**			**0.9**
Standard deviation			**1.2**			**0.5**

5.6.3 Noise model validation outcomes

Predicted road traffic noise levels using the validation noise model in the M12 Central and M12 West section are within ±2.0 dBA of the measured noise levels during the day and night-time period.

No calibration factors have been applied to the no-build and build noise levels.

6. Previous operational noise assessment

6.1 EIS assessment outcomes

Condition E51(c) of the CoA states that the operational noise mitigation measures identified in the Amendment Report be reviewed to identify whether they are suitable with the detailed design road alignment.

A summary of the Amendment Report recommendations are provided in the following section.

6.1.1 No-mitigation results

The Amendment Report provides a summary of the number of receivers that qualify for consideration of additional noise mitigation. The Option 2 (with the Elizabeth Drive Connection) summary is replicated in Table 6.1.

The predicted noise levels provided in Annexure D of the Amendment Report have been processed to group the number of qualifying receivers into their NCAs and their receiver type.

Table 6.1 Receivers considered for additional noise mitigation in the Amendment Report

Noise catchment area	Floors		Buildings	
	Residential	Non-residential	Residential	Non-residential
NCA01	3	2	2	1
NCA02	0	0	0	0
NCA03	44	0	32	0
NCA04	190	7	127	7
NCA05	0	4	0	1
NCA06	28	0	19	0
NCA07	27	0	20	0
NCA08	0	0	0	0
NCA09	14	0	10	0
NCA10	1	0	1	0
Sub-total	**307**	**13**	**211**	**9**
Total	**320**		**220**	

6.1.2 Noise barrier assessment

The EIS report and amendment report were reviewed to identify locations where additional noise mitigation should be considered during the detailed design assessment. Noise mitigation considered in the EIS included low noise pavement surfaces and noise barriers.

A summary of the assessed noise barriers in the EIS and amendment report is provided in Table 6.2.

Table 6.2 Amendment report barrier summary

AR barrier ID	Location	EIS report outcome	Amendment report outcome (Option 2)
NW.01	On northern boundary of carriageway west of Luddenham Road to the WSIA interchange	Not reasonable – does not remove any triggered receivers.	Not reasonable – does not remove any triggered receivers.
NW.02	On northern boundary of carriageway, east of	5.0 m – provides an insertion loss of 5 dBA to at least one receiver.	5.5 m – does not provide the required insertion loss. Provides an insertion

AR barrier ID	Location	EIS report outcome	Amendment report outcome (Option 2)
	South Creek to Clifton Avenue overbridge	Subject to feasible and reasonable considerations.	loss of 5 dB to at least one receiver at a height of 5.0 m. Recommend to assess feasible and reasonable considerations at a height lower than 5.5 m.
NW.03	On northern boundary of carriageway, from Clifton Avenue overbridge to Kemps Creek	5.0 m – provides an insertion loss of 5 dBA to at least one receiver. Subject to feasible and reasonable considerations.	6.0 m – does not provide the required insertion loss. Provides an insertion loss of 5 dB to at least one receiver at a height of 5.0 m. Subject to feasible and reasonable considerations.
NW.04	On northern boundary of carriageway, from Kemps Creek to Western Sydney Parklands	7.0 m – provides an insertion loss of 10 dBA to at least one receiver. Subject to feasible and reasonable considerations.	8.0 m – provides an insertion loss of 10 dBA to at least one receiver. Subject to feasible and reasonable considerations. Lower barrier heights should be considered.
NW.05	On northern boundary of carriageway, within Western Sydney Parklands	Not reasonable – does not provide the required insertion loss.	Not reasonable – does not provide the required insertion loss.
NW.06	On southern boundary of carriageway, from Clifton Avenue overbridge to Elizabeth Drive	5.0 m – provides an insertion loss of 5 dBA to at least one receiver. Subject to feasible and reasonable considerations.	Not reasonable – does not remove any triggered receivers.
NW.07	On northern boundary of the realigned Wallgrove Road	Not considered.	Not reasonable – does not remove any triggered receivers.
NW.08	On northern boundary of carriageway, east of the WSIA interchange	Not considered.	Not reasonable – does not remove any triggered receivers.

The AR submissions report provides a discussion on the feasibility and reasonableness of each identified noise barrier. This discussion is provided in Table 6.3.

Table 6.3 Amendment report submissions report summary

AR barrier ID	Potential visual impact with barrier	Number of potentially benefitting receivers and NCA	Assessment results / discussion
NW.02	Moderate-low (viewpoint 11 in the EIS) Negligible (viewpoint 12 in the EIS)	Four receivers in NCA07	Four receivers achieve at least a 2 dB insertion loss - The noise barrier does not achieve the required insertion loss of at least 5 dB and therefore has not been considered further in accordance with the NMG. Discussion: - 6 out of 10 residences would still require at-property treatments with a noise barrier in place - Since the amendment report, further design development in this area of the project has resulted in NW.02 being moved further from the road to allow for maintenance access and provision of the shared user path, the vertical alignment of the road has also been lowered in this area. These design refinements have reduced the effectiveness of the barrier when compared to the amendment report design.
NW.03	Negligible (viewpoint	16 receivers in NCA03	The noise barrier would provide an insertion loss of: - 7.7dB maximum benefit at a single isolated residence

AR barrier ID	Potential visual impact with barrier	Number of potentially benefitting receivers and NCA	Assessment results / discussion
	13 in the EIS) High-moderate (viewpoint 16 in the EIS)		- No other receiver would receive at least a 5dB insertion loss from this barrier - 16 receivers achieve at least a 2dB insertion loss. Discussion: - Land between the Motorway and the receivers is subject to future development with changed land uses under the Western Sydney Aerotropolis Plan, including commercial and light industry, reducing the future effectiveness of the barrier - No future residential land uses would be allowed under the Western Sydney Aerotropolis Plan - A large proportion of wall would be demolished as part of the proposed future Mamre / Devonshire road connection - NW.03 would be located directly under one of the future flight paths for the WSIA - 12 out of 18 residences would still require at-property treatment with a wall in place - Design and constructability issues associated with building a 5 metre high wall on a bridge.
NW.04	High-moderate (viewpoint 17 in the EIS) Moderate-Low (viewpoint 18 in the EIS)	8 receivers in NCA04	The noise barrier would provide an insertion loss of: - 7.2dB for the most benefiting receiver and 6.2 dB for one other receiver. However, the benefit was found to be due to the building shielding noise from Mamre Road. This introduces a pocket of lower noise behind the building. The barrier is not predicted to achieve a 5 dBA insertion loss on the other façades of the building. - Overall 8 receivers achieve an insertion loss of at least 2dB. Discussion: - The barrier would require a substantial structural element to be constructed in landscape identified as having a high visual sensitivity and would increase the resulting visual impact of the project - NW.04 would be partly located under one of the future flight paths for the WSIA - The barrier would not provide a noise attenuation benefit to residences to the north-east of the project that is outside of the Western Sydney Aerotropolis Plan 2020. This land is currently impacted by noise from Mamre Road during the day and night, which would remain the case in 2036 if the M12 was not built. - 70 out of 71 triggered residences would still require at property treatment with a wall in place - The noise barrier would require a gap to allow for the 500kV transmissions line.
NW.06	Moderate-Low (viewpoint 15 in the EIS) High-moderate (viewpoint 16 in the EIS)	23 receivers in NCA04 and NCA06	The noise barrier would provide an insertion loss of: - 7.2dB for the most benefiting receiver and 7.0 dB for one other receiver - Overall 23 receivers achieve an insertion loss of at least 2dB. Discussion: - A large proportion of wall would be demolished as part of the proposed future Mamre / Devonshire road connection - The barrier would require a substantial structural element to be constructed in landscape identified as having a moderate visual sensitivity and would increase the resulting visual impact of the project

AR barrier ID	Potential visual impact with barrier	Number of potentially benefitting receivers and NCA	Assessment results / discussion
			- NW.06 would be partly located under one of the future flight paths for the WSIA - 40 out of 47 triggered residences would still require at property mitigation - The noise barrier would require a gap to allow for the 500kV transmissions line.

6.2 Alignment changes

The EIS project road alignment has been refined as part of the detailed design process which changes the horizontal and vertical alignment of the EIS assessed road. The main changes are located within the M12 West package where the Airport Access Road interchange has been simplified for the following alignments:

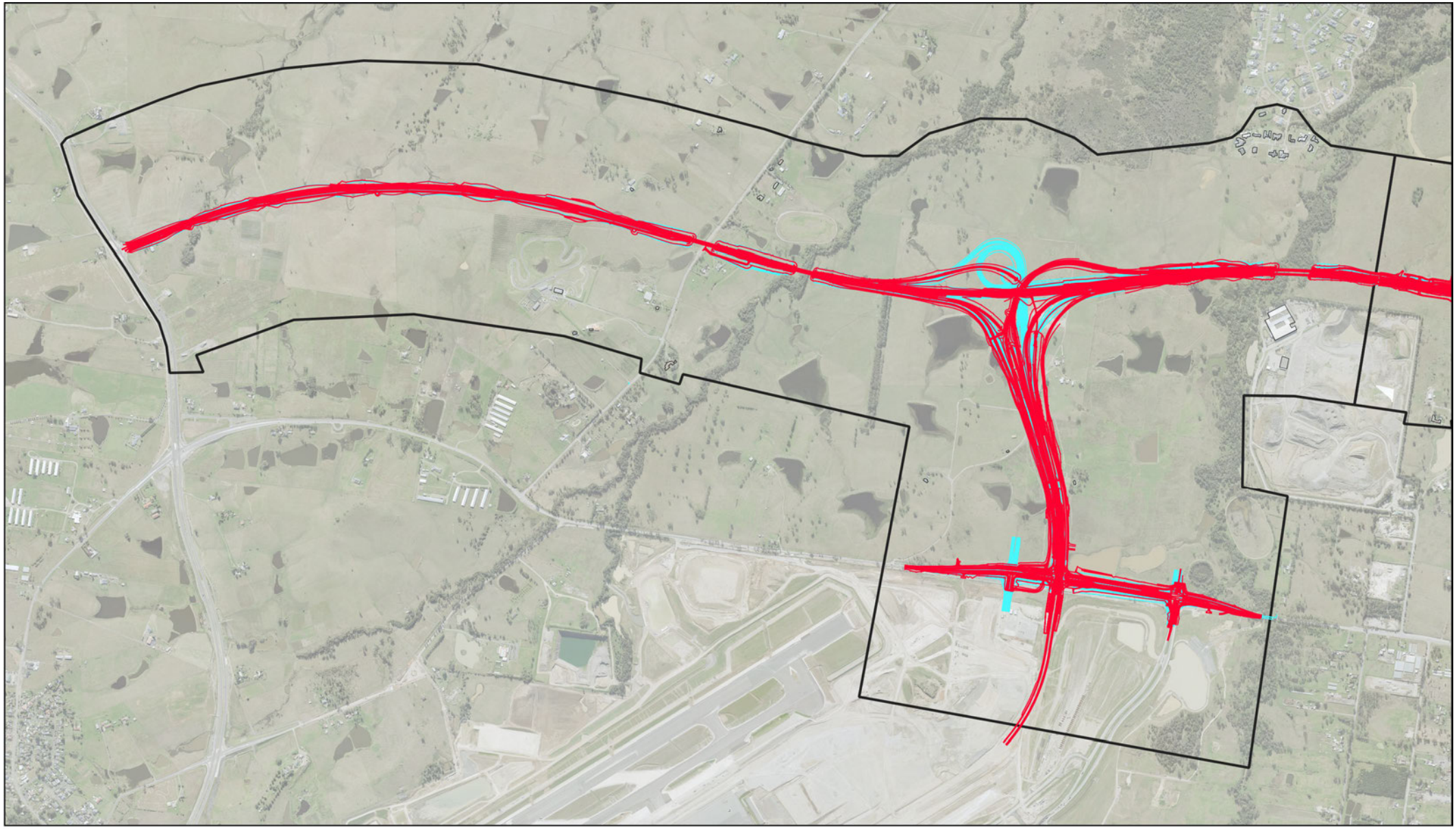
– M12 Motorway eastbound to Airport Access Road southbound

– Airport Access Road northbound to M12 Motorway eastbound.

The changes in this area include a reduction in the horizontal footprint of the road alignment and an increase in the vertical alignment of the road. This change is not likely to have a significant impact on noise emission from the project as no sensitive receivers are located near the Airport Access Road interchange.

The M12 Central changes are limited to the adjustment of bridge abutments in addition to changes to the vertical elevation near the Clifton Avenue bridge. Noise levels in this area are expected to decrease as the detailed design alignment is lower.

An overlay of the EIS and detailed design road alignments are provided in Figure 6.1 for M12 West and Figure 6.2 for M12 Central.



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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- Detailed design alignment
- EIS road alignment
- Study area
- Sensitive receiver

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 West
EIS and detailed design
Road alignments

Project No. **12520102**
Revision No. **A**
Date. **03/08/2022**

Figure 6.1

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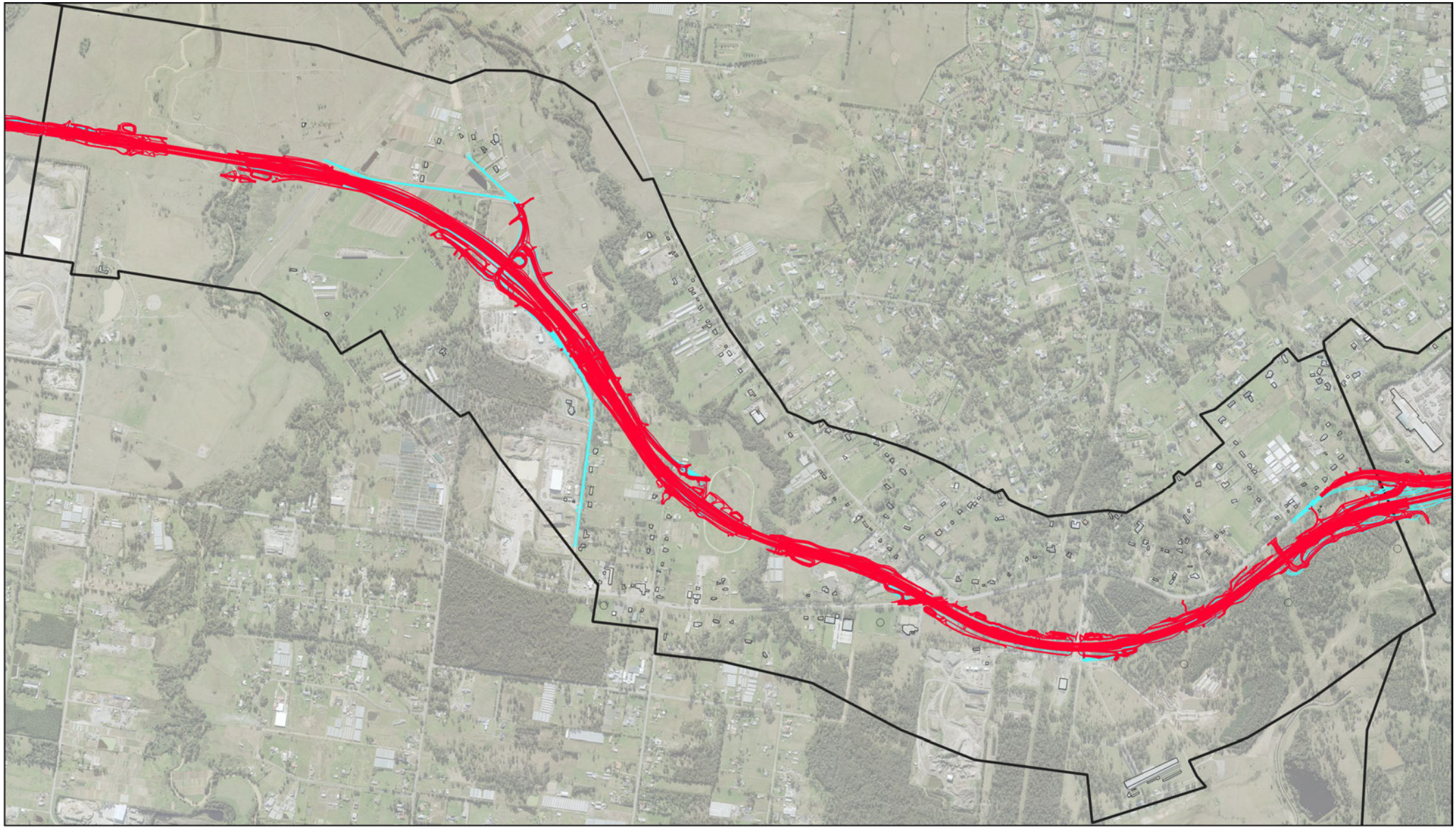

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- Detailed design alignment
- EIS road alignment
- Study area
- Sensitive receiver

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 Central
EIS and detailed design
Road alignments

Project No. **12520102**
Revision No. **A**
Date. **03/08/2022**

Figure 6.2

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7. Operational noise assessment

7.1 M12 West

7.1.1 Operational noise criteria

Operational noise criteria has been assigned based on the procedure specified in the NCG. A summary of the road classifications has been provided in Section 5.4.

Noise contribution differences have been calculated to determine the noise criteria at residential receivers. Noise criteria for each modelled receiver is provided in Appendix E and the contribution difference maps are shown in Figure 7.2 and Figure 7.3.

7.1.2 Predicted no-mitigation noise levels

Overall predicted no-mitigation noise levels for the M12 West package of the project are provided in Appendix E for all façades and buildings. The presented noise levels have been assessed against the NCG noise criteria and receivers which qualify for consideration of additional noise mitigation have been identified in accordance with the NMG procedures.

7.1.3 Exceedance summary

Noise levels were processed to identify the number of exceedances on each floor for all modelled buildings. This assessment identifies a single exceedance per floor even in cases where multiple façades exceed the operational noise criteria. The number of exceedances are based on all modelled floors and façades and not the most affected façade as the most affected façade is not always the façade with the exceedance. The most affected façade has been defined as the façade which receives the highest noise contribution from the project roads.

The number of floors that exceed the NCG controlling criterion for all modelled assessment scenarios are presented in Table 7.1.

Table 7.1 M12 West – Exceedances of NCG criteria

Receiver type	2026 No Build		2026 Build		2036 No Build		2036 Build	
	Day	Night	Day	Night	Day	Night	Day	Night
Residential	6	9	16	16	6	9	23	25
Non-residential	0	0	0	0	0	0	0	0

As discussed in section 4.2, additional noise mitigation is not always considered reasonable and feasible due to a predicted exceedance of the NCG criteria. Predicted noise levels at each façade were assessed against each NMG trigger to determine whether the building qualifies for consideration of additional mitigation. Exceedances of the 'change in noise level' trigger have only been calculated for receivers that exceed the NCG noise criteria.

The number of receiver floors that exceed each NMG trigger for the no-mitigation case are provided in Table 7.2 and shown in the following figures. The assessment period in these periods is based on the period where the most number of exceedances are predicted.

- Cumulative limit (day-time): Figure 7.4
- Acute criteria (day-time): Figure 7.5
- Increase in noise level (night-time): Figure 7.6.

Note that receivers which qualify for consideration of additional mitigation may exceed multiple NMG triggers. In addition, each building may qualify for consideration of additional mitigation multiple times as each façade and floor are assessed separately.

A summary of the total number of floors and buildings that qualify for consideration of additional noise mitigation is provided in Table 7.3.

Table 7.2 M12 West – Exceedances of NMG triggers

	Cumulative limit		Acute criteria		Increase in noise level (2036)		Relative increase		Qualify for noise mitigation
	Day	Night	Day	Night	Day	Night	Day	Night	
Residential	10	9	1	1	23	25	3	7	25
Non-residential	0	0	0	0	0	0	0	0	0

Table 7.3 M12 West – Number of receivers considered for noise mitigation

NCA	Residential		Non-residential	
	Floors	Buildings	Floors	Buildings
NCA07	13	12	0	0
NCA08	0	0	0	0
NCA09	12	10	0	0
NCA10	0	0	0	0
Total	**25**	**22**	**0**	**0**

7.1.4 Assessment of impacts in the no-mitigation case

A total of 22 residential buildings (25 residential floors) qualify for consideration of additional noise mitigation. The primary noise mitigation trigger is due to the predicted road traffic noise level increase with 25 out of 25 residential floors predicted to experience build noise levels:

- Above the NCG noise criteria, and
- More than 2 dBA above no-build levels.

Noise levels are predicted to be above the cumulative limit at 10 residential floors during the day and nine residential floors during the night. The cumulative limit is exceeded as the project would introduce a new road which would impact façades which are currently exposed to low levels of road traffic noise.

The project road contribution is predicted to be acute at one residential floor during the day (levels 65 dBA and above) and night-time period (levels 60 dBA and above).

The relative increase criteria is predicted to be exceeded three residential floors during the day and seven residential floors during the night. These receivers are located far from existing roads and would experience low levels of existing road traffic noise. There are no predicted exceedances of the relative increase criteria during the day.

7.1.5 Sensitivity analysis

A change to the predicted noise levels would change the number of buildings that would qualify for consideration of additional noise mitigation. A sensitivity analysis was undertaken to identify these changes using the following methodology:

- Apply a correction factor from -5 to 5 dBA in 1 dBA increments to the 2036 No-Build and Build predicted noise levels. A correction factor of 0 represents the “no-mitigation case” used to assess potential impacts
- Determine the number of buildings that would qualify for consideration of additional noise mitigation with the corrected noise levels.
- Potential changes are discussed using a change in noise level of 3 dBA. This would correspond to a change in road traffic volumes by a factor of 2.

The change in number of buildings that would qualify for consideration of additional noise mitigation is shown in Figure 7.1 for the day-time period. The sensitivity analysis shows that five additional buildings would qualify for consideration if the predicted noise levels were to increase by at least 3 dBA. Conversely, three fewer buildings would qualify if the predicted noise levels were to decrease by at least 3 dBA.

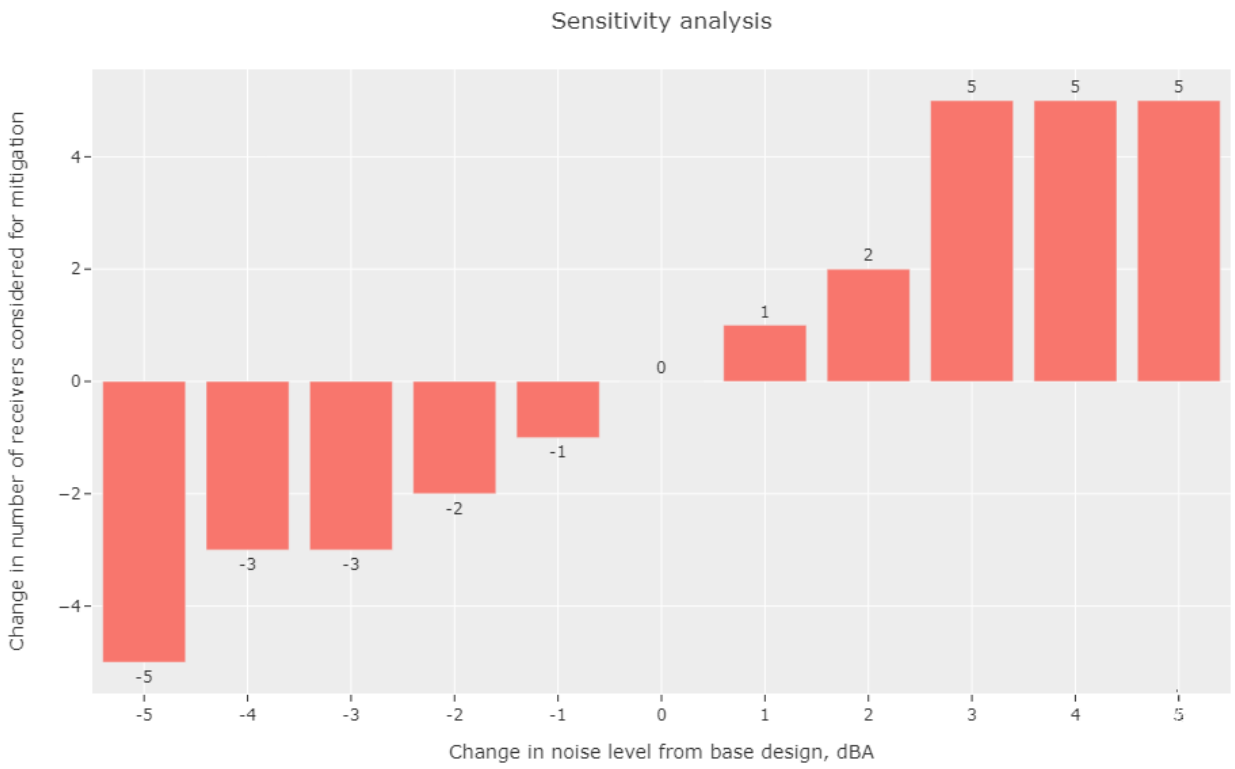


Figure 7.1 M12 West sensitivity analysis

7.1.6 Comparison to EIS results

A comparison between the number of treatments recommended in the EIS Amendment Report and the number of treatments recommended in this ONVR is provided in Table 7.4 for sensitive receivers located in the M12 West package of works. The ONVR treatments are provided in Table 7.3.

Refinement of the road alignment during detailed design has changed the number of residential receivers that would qualify for consideration of additional noise mitigation. The receivers where the recommendations have changed between the AR and ONVR are listed in Table 7.5 and shown in Figure 7.7. These include the following:

– Receivers which were identified in the AR but no longer qualify
– Receivers which were not identified in the AR but now qualify.

The detailed design assessment identifies seven additional receivers which did not qualify for mitigation in the AR. These are located in NCA07 and have been identified due to increasing the study area around Farmingdale Court, Luddenham. The study area was increased during detailed design as the AR study area only considered impacts located on the southern side of Farmingdale Court. This study area was altered following consultation with TfNSW.

Five receivers which were identified for mitigation in the AR would no longer qualify based on the detailed design assessment. The breakdown of the five receivers follows:

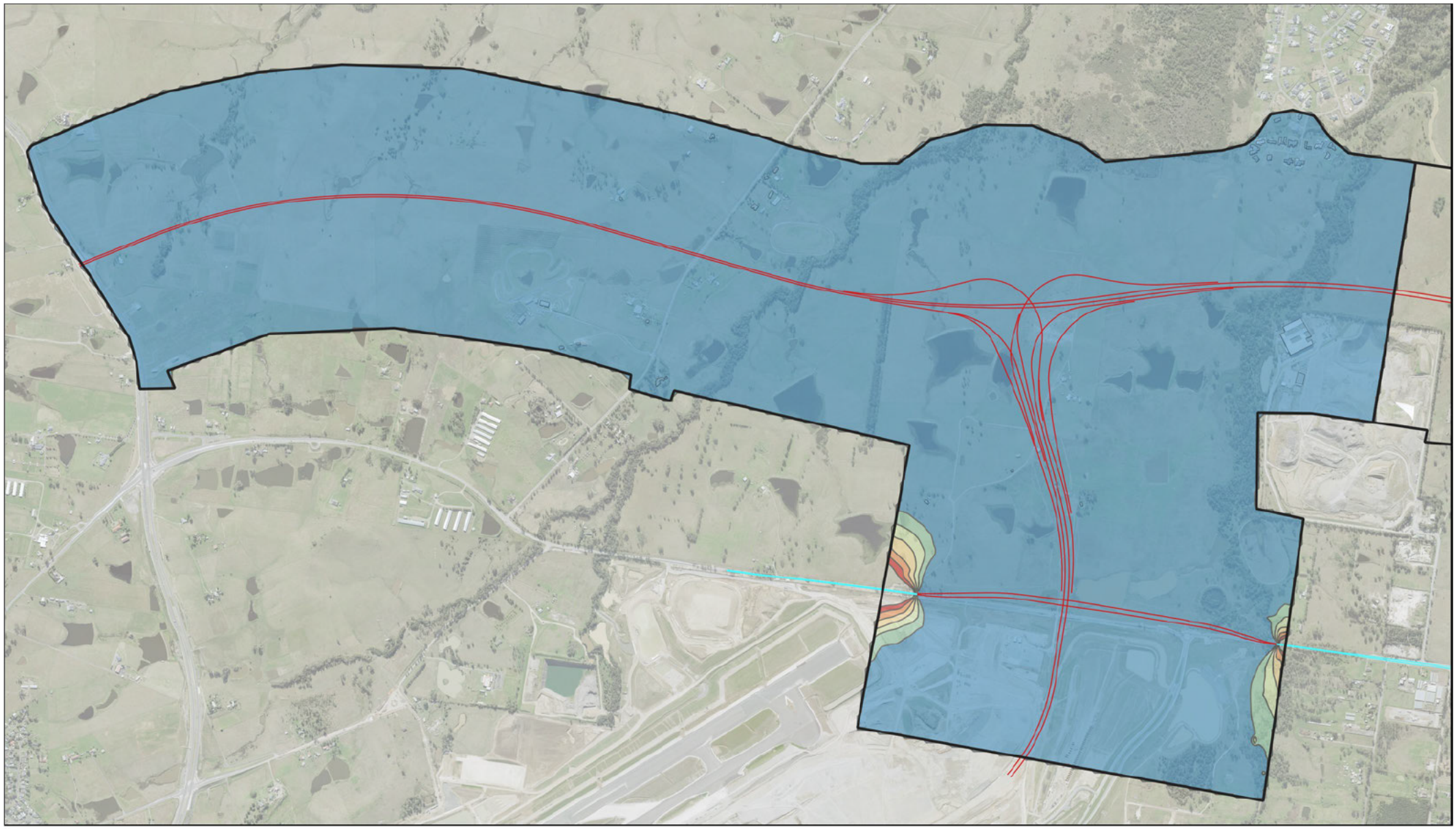
– Two receivers (4884, 4887) have been removed based on ground truthing undertaken in the detailed design assessment. These receivers were identified to be single storey structures therefore the modelled first floor receiver was removed
– One receiver (5067) has been removed based on ground truthing undertaken in the detailed design assessment. This receiver has been demolished as part of The Northern Road upgrade
– Two receivers (5149, 5167) have been acquired as part of the project.

Table 7.4 M12 West – Difference between the EIS and detailed design results

NCA	EIS Amendment Report results				Difference between ONVR and AR number of treatments			
	Residential		Non-residential		Residential		Non-residential	
	Floors	Buildings	Floors	Buildings	Floors	Buildings	Floors	Buildings
NCA07	8	7	0	0	5	5	0	0
NCA08	0	0	0	0	0	0	0	0
NCA09	14	10	0	0	-2	0	0	0
NCA10	1	1	0	0	-1	-1	0	0
Total	**23**	**18**	**0**	**0**	**2**	**4**	**0**	**0**

Table 7.5 M12 West – Receivers where recommendations on additional noise mitigation have changed

Receiver ID	Address	NCA	Receiver Type	Floor
Receivers that no longer qualify				
4884	734 LUDDENHAM ROAD, LUDDENHAM	NCA09	Residential	F 1
4887	710 - 732 LUDDENHAM ROAD, LUDDENHAM	NCA09	Residential	F 1
5067	2830 - 2844 THE NORTHERN ROAD, LUDDENHAM	NCA10	Residential	GF
5149	MCGARVIE SMITH FARM	NCA07	Residential	GF
5167	MCGARVIE SMITH FARM	NCA07	Residential	GF
Additional receivers that qualify				
6032	5 FARMINGDALE COURT, LUDDENHAM	NCA07	Residential	GF
6033	7 FARMINGDALE COURT, LUDDENHAM	NCA07	Residential	GF
6036	2 FARMINGDALE COURT, LUDDENHAM	NCA07	Residential	GF
6104	3 BRIDPORT PLACE, LUDDENHAM	NCA07	Residential	GF
9006	18 FARMINGDALE COURT, LUDDENHAM	NCA07	Residential	GF
9007	17 FARMINGDALE COURT, LUDDENHAM	NCA07	Residential	GF
9008	6 FARMINGDALE COURT, LUDDENHAM	NCA07	Residential	GF



Paper Size ISO A4

0 200 400 600 800 m

Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

Legend

Noise criteria, dBA
- 60
- 59
- 58
- 57
- 56
- 55
- Sensitive receiver

- Study area
- New
- Redeveloped

GHD

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M12 West
Operational noise criteria (day)

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Date. **03/08/2022**

Figure 7.2

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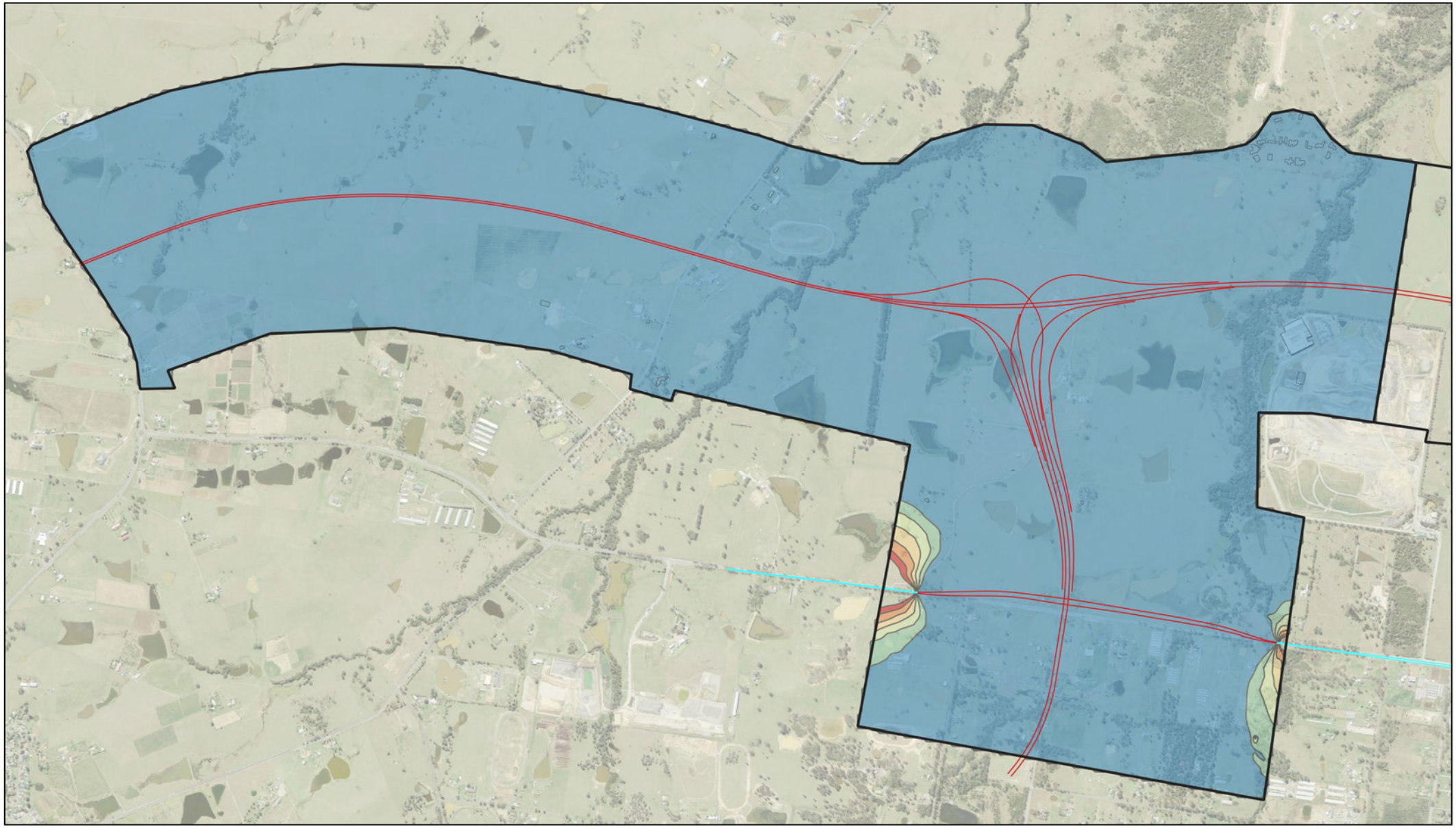

Paper Size ISO A4

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

Noise criteria, dBA
- 55
- 54
- 53
- 52
- 51
- 50
- Sensitive receiver

- Study area
- New
- Redeveloped

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 West
Operational noise criteria (night)

Project No. **12520102**
Revision No. **A**
Date. **03/08/2022**

Figure 7.3

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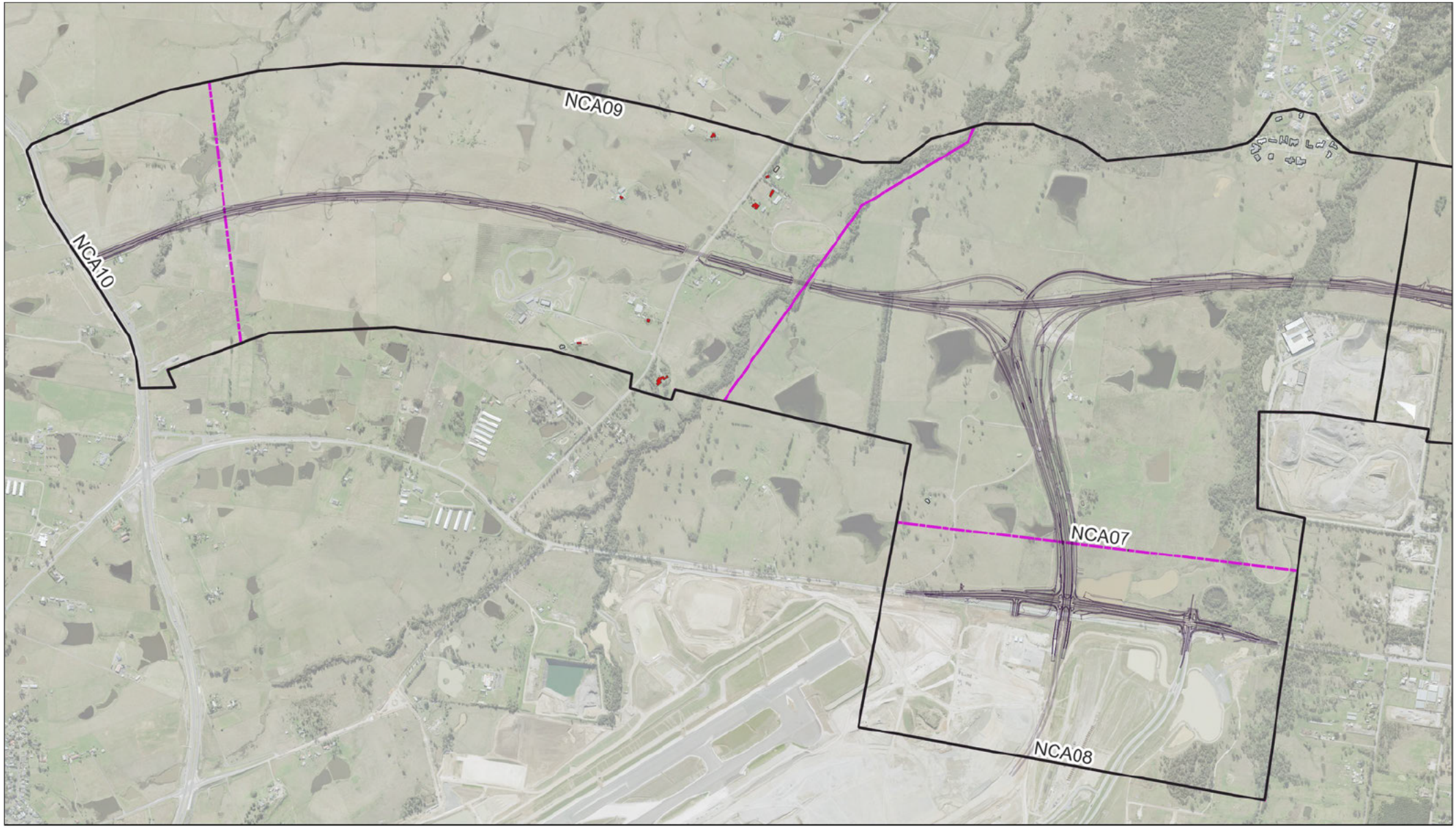

Paper Size ISO A4

0 200 400 600 800 m

Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

Legend

M12 road design
Study area
Noise catchment area

Above cumulative limit

Yes
No

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 West
Receivers with noise levels above the cumulative limit

Project No. **12520102**
Revision No. **A**
Date. **03/08/2022**

Figure 7.4

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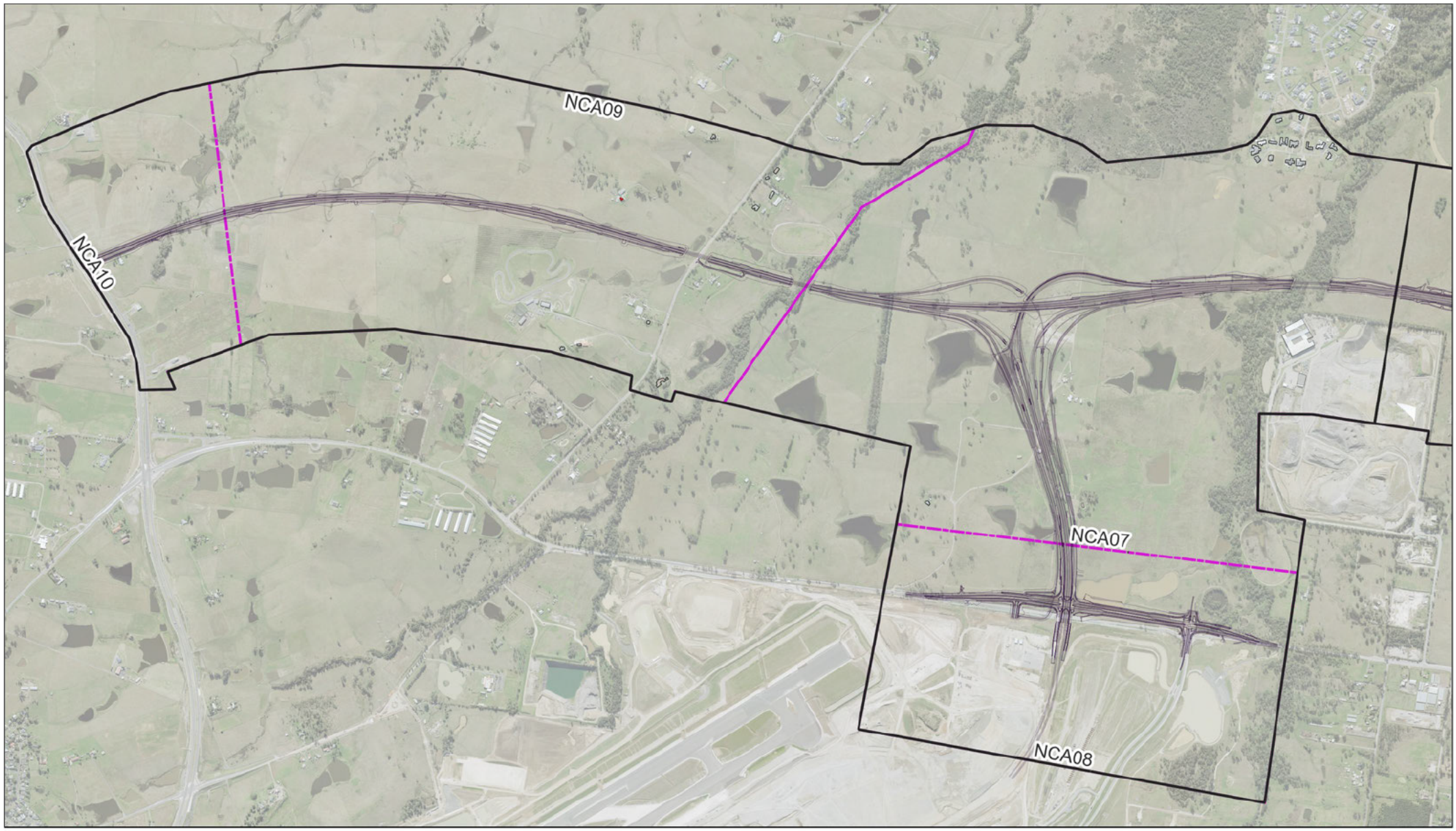

Paper Size ISO A4

0 200 400 600 800 m

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

Legend

M12 road design
Study area
Noise catchment area

Above acute noise limit

Yes
No

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 West
Receivers with acute noise levels

Project No. **12520102**
Revision No. **A**
Date. **03/08/2022**

Figure 7.5

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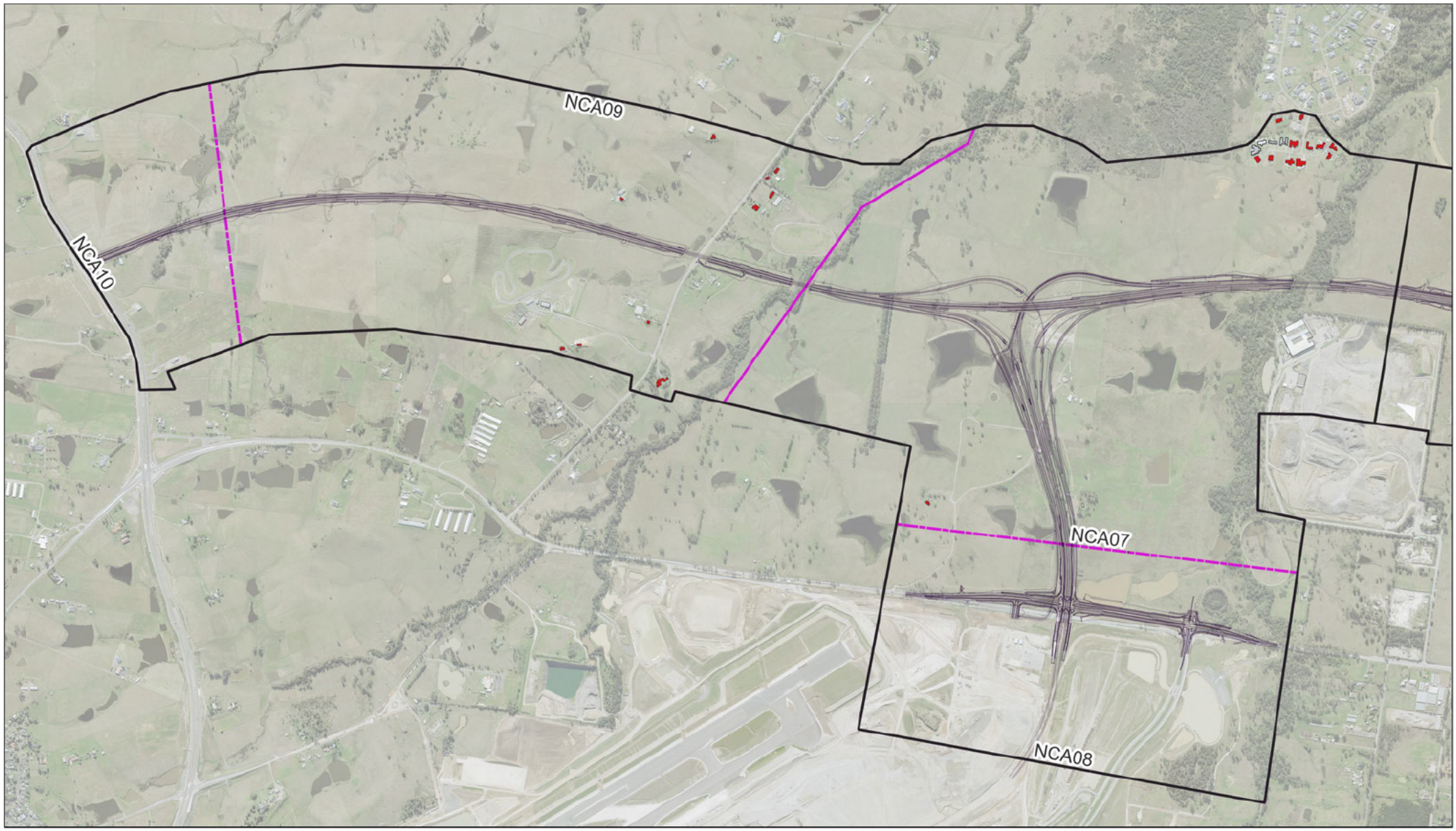

Paper Size ISO A4

0 200 400 600 800 m

N

Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

Legend

M12 road design
Study area
Noise catchment area

Increase by > 2 dBA
Yes
No

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 West Receivers where noise levels are above the NCG criteria and increase by > 2 dBA

Project No. **12520102**
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Figure 7.6

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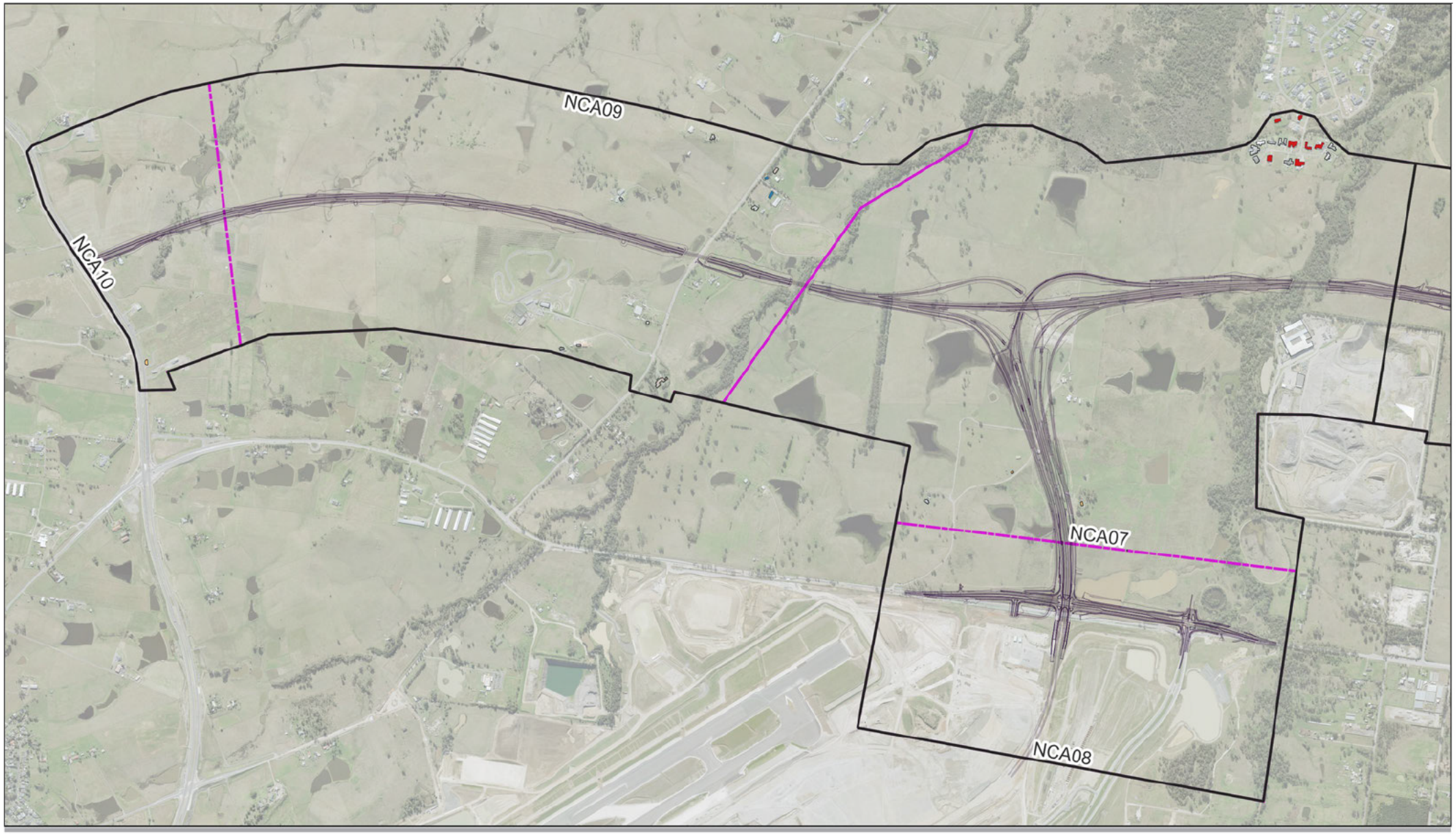

Paper Size ISO A4

0 200 400 600 800 m

N

Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

Legend

- M12 road design
- Study area
- Noise catchment area
- Additional floors
- Removed floors
- No longer assessed (acquired/classification change)
- No change

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 West
Changes to noise mitigation from EIS results

Project No. **12520102**
Revision No. **A**
Date. **03/08/2022**

Figure 7.7

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7.2 M12 Central

7.2.1 Operational noise criteria

Operational noise criteria has been assigned based on the procedure specified in the NCG. A summary of the road classifications has been provided in Section 5.4.

Noise contribution differences have been calculated to determine the noise criteria at residential receivers. Noise criteria for each modelled receiver is provided in Appendix F and the contribution difference maps are shown in Figure 7.9 and Figure 7.10.

7.2.2 Predicted no-mitigation noise levels

Overall predicted no-mitigation noise levels for the M12 Central package of the project are provided in Appendix F for all façades and buildings. The presented noise levels have been assessed against the NCG noise criteria and receivers which qualify for consideration of additional noise mitigation have been identified in accordance with the NMG procedures.

7.2.3 Exceedance summary

Noise levels were processed to identify the number of exceedances on each floor for all modelled buildings. This assessment identifies a single exceedance per floor even in cases where multiple façades exceed the operational noise criteria. The number of exceedances are based on all modelled floors and façades and not the most affected façade as the most affected façade is not always the façade with the exceedance. The most affected façade has been defined as the façade which receivers the highest noise contribution from the project roads.

The number of floors that exceed the NCG controlling criterion for all modelled assessment scenarios are presented in Table 7.6.

Table 7.6 M12 Central – Exceedances of NCG criteria

Receiver type	2026 No Build		2026 Build		2036 No Build		2036 Build	
	Day	Night	Day	Night	Day	Night	Day	Night
Residential	178	178	206	208	187	186	222	223
Non-residential	11	0	13	1	11	0	13	1

As discussed in section 4.2, additional noise mitigation is not always considered reasonable and feasible due to a predicted exceedance of the NCG criteria. Predicted noise levels at each façade were assessed against each NMG trigger to determine whether the building qualifies for consideration of additional mitigation. Exceedances of the 'increase in noise level' trigger have only been calculated for receivers that exceed the NCG noise criteria.

The number of receiver floors that exceed each NMG trigger for the no-mitigation case are provided in Table 7.7 and shown in the following figures. The assessment period in these periods is based on the period where the most number of exceedances are predicted.

- Cumulative limit (day-time): Figure 7.11
- Acute criteria (day-time): Figure 7.12
- Increase in noise level (night-time): Figure 7.13.

Note that receivers which qualify for consideration of additional mitigation may exceed multiple NMG triggers. In addition, each building may qualify for consideration of additional mitigation multiple times as each façade and floor are assessed separately.

A summary of the total number of floors and buildings that qualify for consideration of additional noise mitigation is provided in Table 7.8.

Table 7.7 M12 Central – Exceedances of NMG triggers

	Cumulative limit		Acute criteria		Increase in noise level (2036)		Relative increase		Qualify for noise mitigation
	Day	Night	Day	Night	Day	Night	Day	Night	
Residential	139	141	28	31	197	211	2	3	214
Non-residential	8	1	2	1	9	1	0	0	9

Table 7.8 M12 Central – Number of receivers considered for noise mitigation

NCA	Residential		Non-residential	
	Floors	Buildings	Floors	Buildings
NCA03	38	27	0	0
NCA04	136	98	5	5
NCA05	0	0	3	3
NCA06	21	18	1	1
NCA07	19	14	0	0
Total	**214**	**157**	**9**	**9**

7.2.4 Assessment of impacts in the no-mitigation case

A total of 157 residential buildings (214 residential floors) qualify for consideration of additional noise mitigation. The primary noise mitigation trigger is due to the predicted road traffic noise level increase with 211 out of 214 residential floors predicted to experience build noise levels:

- Above the NCG noise criteria, and
- More than 2 dBA above no-build levels.

Noise levels are predicted to be above the cumulative limit at 139 residential floors during the day and 141 residential floors during the night. The cumulative limit is exceeded as the project would introduce a new road which would impact façades which are currently exposed to low levels of road traffic noise.

The project road contribution is predicted to be acute at 28 residential floors during the day (levels 65 dBA and above) and 31 residential floors during the night (levels 60 dBA and above). These residences are located near the project road alignment on Elizabeth Drive, Mamre Road, Clifton Avenue and Salisbury Avenue.

The relative increase criteria is predicted to be exceeded at two residential floors during the day and three residential floors during the night. These receivers, located on the western side of the M12 Central study area, are located far from existing roads and would experience low levels of existing road traffic noise.

7.2.5 Sensitivity analysis

A change to the predicted noise levels would change the number of buildings that would qualify for consideration of additional noise mitigation. A sensitivity analysis was undertaken to identify these changes using the following methodology:

- Apply a correction factor from -5 to 5 dBA in 1 dBA increments to the 2036 No-Build and Build predicted noise levels. A correction factor of 0 represents the “no-mitigation case” used to assess potential impacts
- Determine the number of buildings that would qualify for consideration of additional noise mitigation with the corrected noise levels
- Potential changes are discussed using a change in noise level of 3 dBA. This would correspond to a change in road traffic volumes by a factor of 2.

The change in number of buildings that would qualify for consideration of additional noise mitigation is shown in Figure 7.8 for the day-time period. The sensitivity analysis shows that 12 additional buildings would qualify for

consideration if the predicted noise levels were to increase by at least 3 dBA. Conversely, 31 fewer buildings would qualify if the predicted noise levels were to decrease by at least 3 dBA.

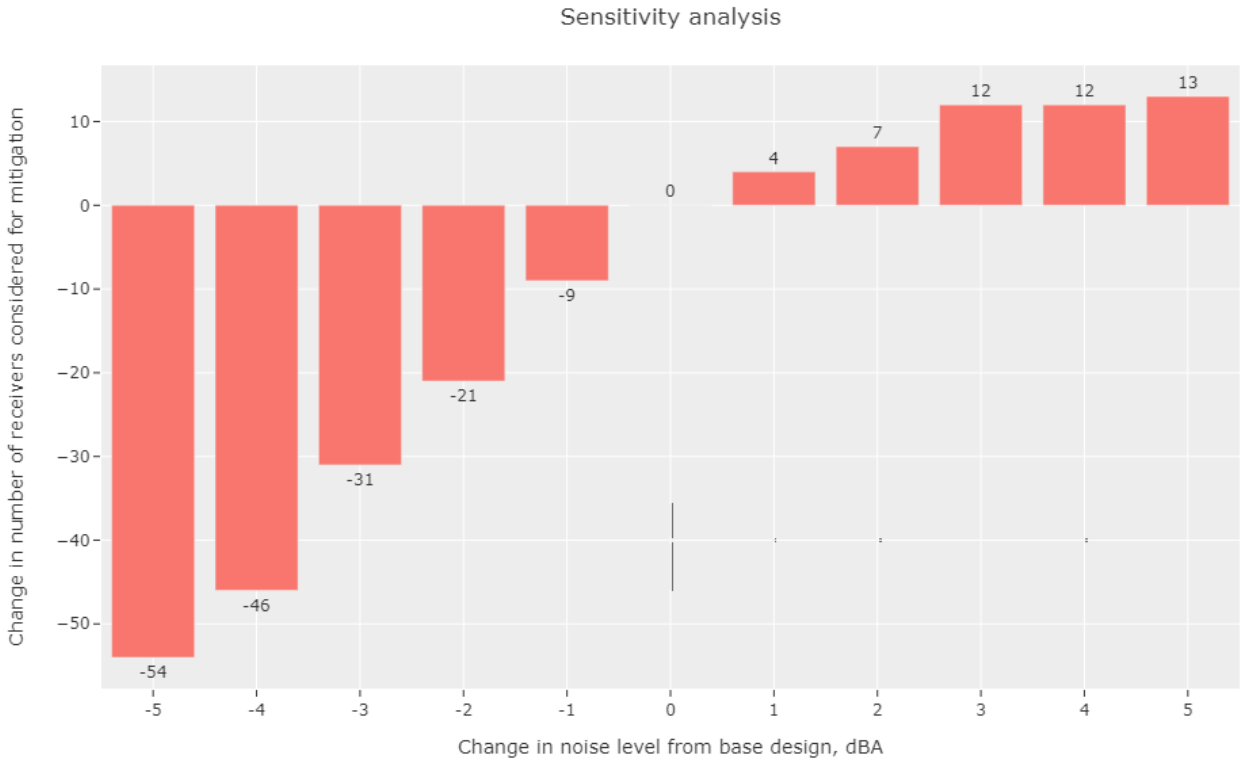


Figure 7.8 M12 Central sensitivity analysis

7.2.6 Comparison to EIS results

A comparison between the number of treatments recommended in the EIS Amendment Report and the number of treatments recommended in this ONVR is provided in Table 7.9 for sensitive receivers located in the M12 Central package of works. The ONVR treatments are provided in Table 7.8.

Refinement of the road alignment during detailed design has changed the number of residential receivers that would qualify for consideration of additional noise mitigation. The receivers where the recommendations have changed between the AR and ONVR are listed in Table 7.10 and shown in Figure 7.14. These include the following:

– Receivers which were identified in the AR but no longer qualify
– Receivers which were not identified in the AR but now qualify.

The detailed design assessment identifies eight additional receiver floors which did not qualify for mitigation in the AR. The breakdown of these eight receivers are as follows:

– Four receiver floors are from buildings that were not present in the AR model (9001-9004)
– Two receiver floors are non-residential receivers (8010, 8024) with a recreational land use
– Two receiver floors are residential receivers (two floors of 4826).

Forty one receiver floors which were identified for mitigation in the AR would no longer qualify based on the detailed design assessment. These receivers have been removed based on ground truthing undertaken in the detailed design assessment including the removal of first floor receivers for single storey structures and the reclassification of structures from residential to garages.

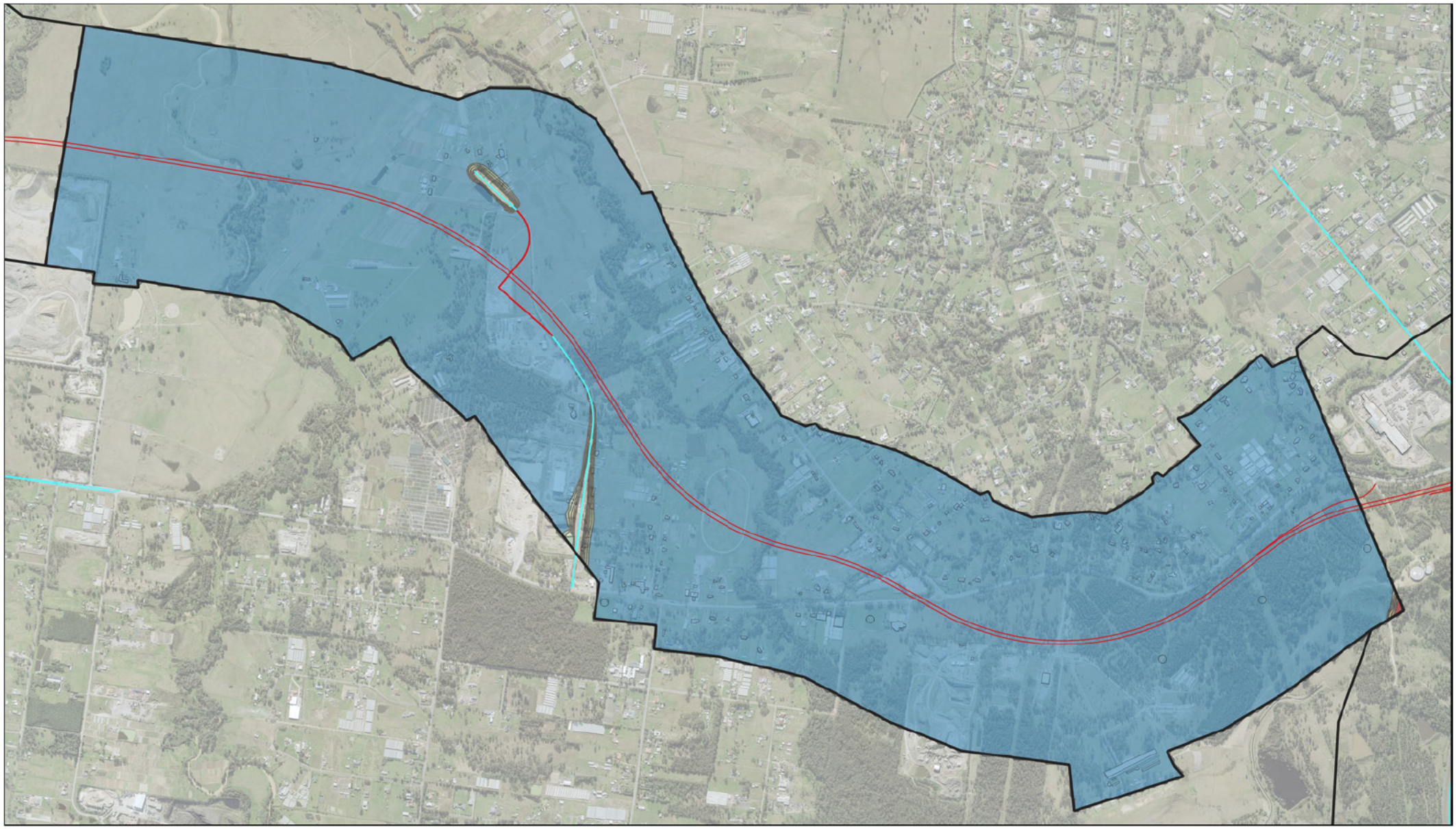
Table 7.9 M12 Central – Difference between EIS and detailed design results

NCA	EIS Amendment Report results				Difference between ONVR and AR number of treatments			
	Residential		Non-residential		Residential		Non-residential	
	Floors	Buildings	Floors	Buildings	Floors	Buildings	Floors	Buildings
NCA03	44	32	0	0	-6	-5	0	0
NCA04	164	111	7	7	-28	-13	-2	-2
NCA05	0	0	4	1	0	0	-1	2
NCA06	28	19	0	0	-7	-1	1	1
NCA07	19	13	0	0	0	1	0	0
Total	**255**	**175**	**11**	**8**	**-41**	**-18**	**-2**	**1**

Table 7.10 M12 Central – Receivers where recommendations on additional noise mitigation have changed

Receiver ID	Address	NCA	Receiver Type	Floor
Receivers that no longer qualify				
4692	1226 - 1232 MAMRE ROAD, MOUNT VERNON	NCA03	Garage	GF
4800	1097 - 1099 MAMRE ROAD, KEMPS CREEK	NCA03	Garage	GF
4801	1097 - 1099 MAMRE ROAD, KEMPS CREEK	NCA03	Garage	GF
4802	1101 - 1105 MAMRE ROAD, KEMPS CREEK	NCA03	Garage	GF
4804	1101 - 1105 MAMRE ROAD, KEMPS CREEK	NCA03	Garage	GF
4809	1127 - 1133 MAMRE ROAD, KEMPS CREEK	NCA03	Garage	GF
4813	1149 - 1155 MAMRE ROAD, KEMPS CREEK	NCA03	Residential	F 1
161	1183-1185 ELIZABETH DRIVE, CECIL PARK	NCA04	Garage	GF
4193	47 - 49 BROLEN WAY, CECIL PARK	NCA04	Garage	GF
4195	51 - 53 BROLEN WAY, CECIL PARK	NCA04	Residential	F 1
4220	11 RIGNEY CLOSE, CECIL PARK	NCA04	Residential	F 1
4223	9 - 10 RIGNEY CLOSE, CECIL PARK	NCA04	Residential	F 1
4228	92 - 106 DUFF ROAD, CECIL PARK	NCA04	Residential	F 1
4276	2089 - 2109 ELIZABETH DRIVE, CECIL PARK	NCA04	Educational institute	GF
4277	1 - 7 DUFF ROAD, CECIL PARK	NCA04	Garage	GF
4278	1 - 7 DUFF ROAD, CECIL PARK	NCA04	Residential	F 1
4288	20 - 38 DUFF ROAD, CECIL PARK	NCA04	Garage	GF
4300	2131 ELIZABETH DRIVE, CECIL PARK	NCA04	Garage	GF
4301	2131 ELIZABETH DRIVE, CECIL PARK	NCA04	Garage	GF
4306	2213 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF
4306	2213 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	F 1
4307	2213 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF
4309	2229 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF
4309	2229 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	F 1
4319	2149 ELIZABETH DRIVE, CECIL PARK	NCA04	Garage	GF
4582	340 - 344 MOUNT VERNON ROAD, MOUNT VERNON	NCA04	Residential	F 1
4583	346 - 356 MOUNT VERNON ROAD, MOUNT VERNON	NCA04	Residential	F 1

Receiver ID	Address	NCA	Receiver Type	Floor
4584	1306 MAMRE ROAD, MOUNT VERNON	NCA04	Residential	F 1
4588	343 MOUNT VERNON ROAD, MOUNT VERNON	NCA04	Residential	F 1
4695	1341 - 1347 ELIZABETH DRIVE, KEMPS CREEK	NCA04	Residential	F 1
4696	1349 - 1355 ELIZABETH DRIVE, KEMPS CREEK	NCA04	Residential	F 1
4701	1560 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF
4701	1560 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	F 1
4702	1560 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF
5576	1630 ELIZABETH DRIVE, KEMPS CREEK	NCA04	Residential	F 1
5577	1610 ELIZABETH DRIVE, KEMPS CREEK	NCA04	Residential	GF
5577	1610 ELIZABETH DRIVE, KEMPS CREEK	NCA04	Residential	F 1
8013	LOT 160 / DP 32140	NCA04	Passive recreation	GF
5544	1431 - 1433 ELIZABETH DRIVE, KEMPS CREEK	NCA06	Residential	F 1
5548	442 CLIFTON AVENUE, KEMPS CREEK	NCA06	Residential	F 1
5551	422 CLIFTON AVENUE, KEMPS CREEK	NCA06	Residential	F 1
5553	395 - 409 CLIFTON AVENUE, KEMPS CREEK	NCA06	Residential	F 1
5559	13 – 23 SALISBURY AVENUE, KEMPS CREEK	NCA06	Residential	GF
5563	SALISBURY AVENUE, KEMPS CREEK	NCA06	Residential	F 1
5569	1431 - 1433 ELIZABETH DRIVE, KEMPS CREEK	NCA06	Residential	F 1
4833	203 - 229 CLIFTON AVENUE, KEMPS CREEK	NCA07	Residential	F 1
4834	203 - 229 CLIFTON AVENUE, KEMPS CREEK	NCA07	Residential	F 1
4844	885A MAMRE ROAD, KEMPS CREEK	NCA07	Residential	GF
Additional receivers that qualify				
4826	316 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF
4826	316 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	F 1
8010	LOT 3 / DP1087825	NCA05	Passive recreation	GF
8024	LOT 3 / DP1087825	NCA05	Passive recreation	GF
9001	1271 - 1277 ELIZABETH DRIVE, MOUNT VERNO	NCA04	Residential	GF
9002	81 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Place of worship	GF
9003	1117 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF
9004	258 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF



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Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

Noise criteria, dBA
- 60
- 59
- 58
- 57
- 56
- 55
- Sensitive receiver

- Study area
- New
- Redeveloped

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 Central
Operational noise criteria (day)

Project No. **12520102**
Revision No. **A**
Date. **03/08/2022**

Figure 7.9

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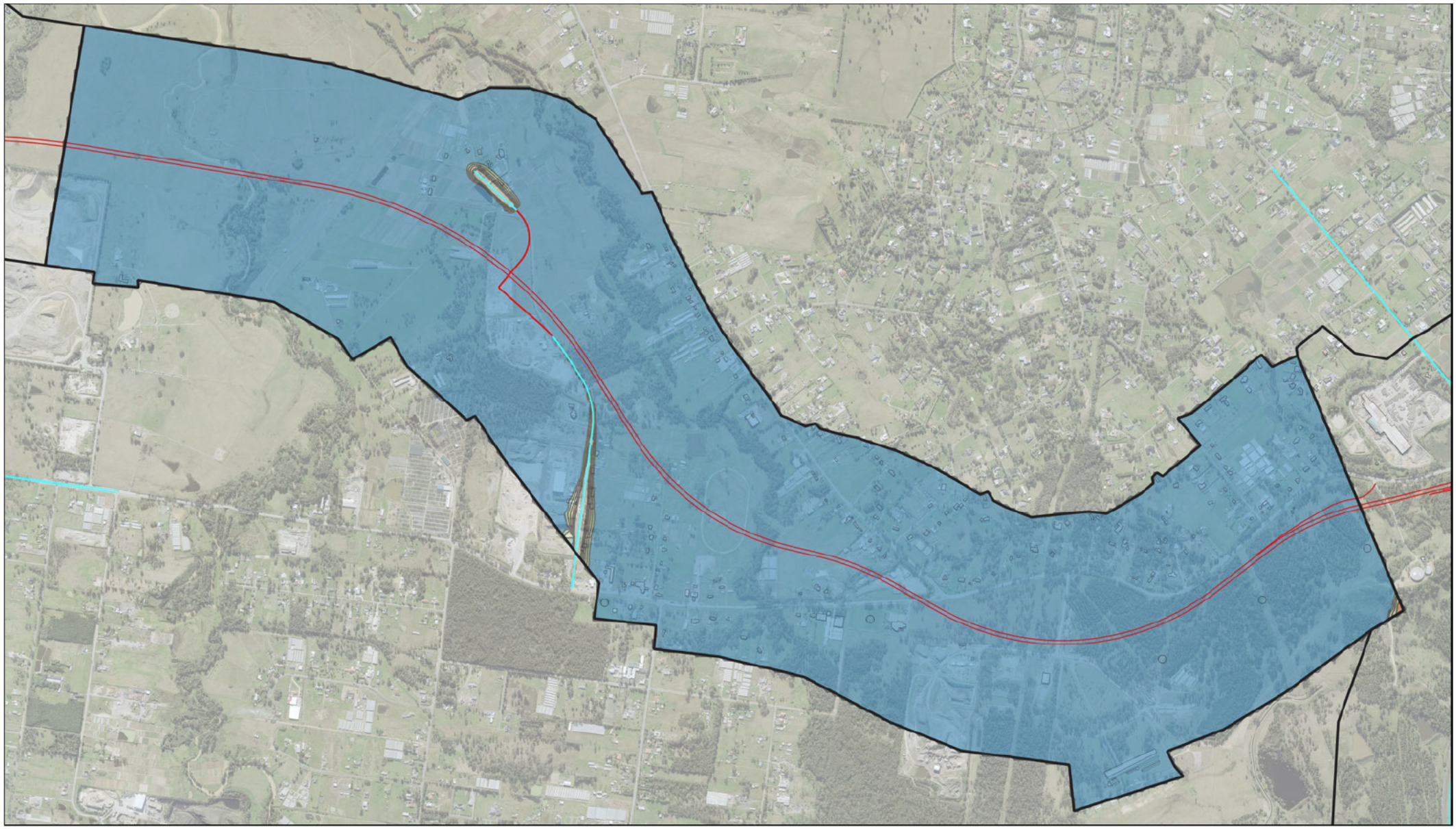

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

Noise criteria, dBA
- 55
- 54
- 53
- 52
- 51
- 50
- Sensitive receiver

- Study area
- New
- Redeveloped

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 Central
Operational noise criteria (night)

Project No. **12520102**
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Date. **03/08/2022**

Figure 7.10

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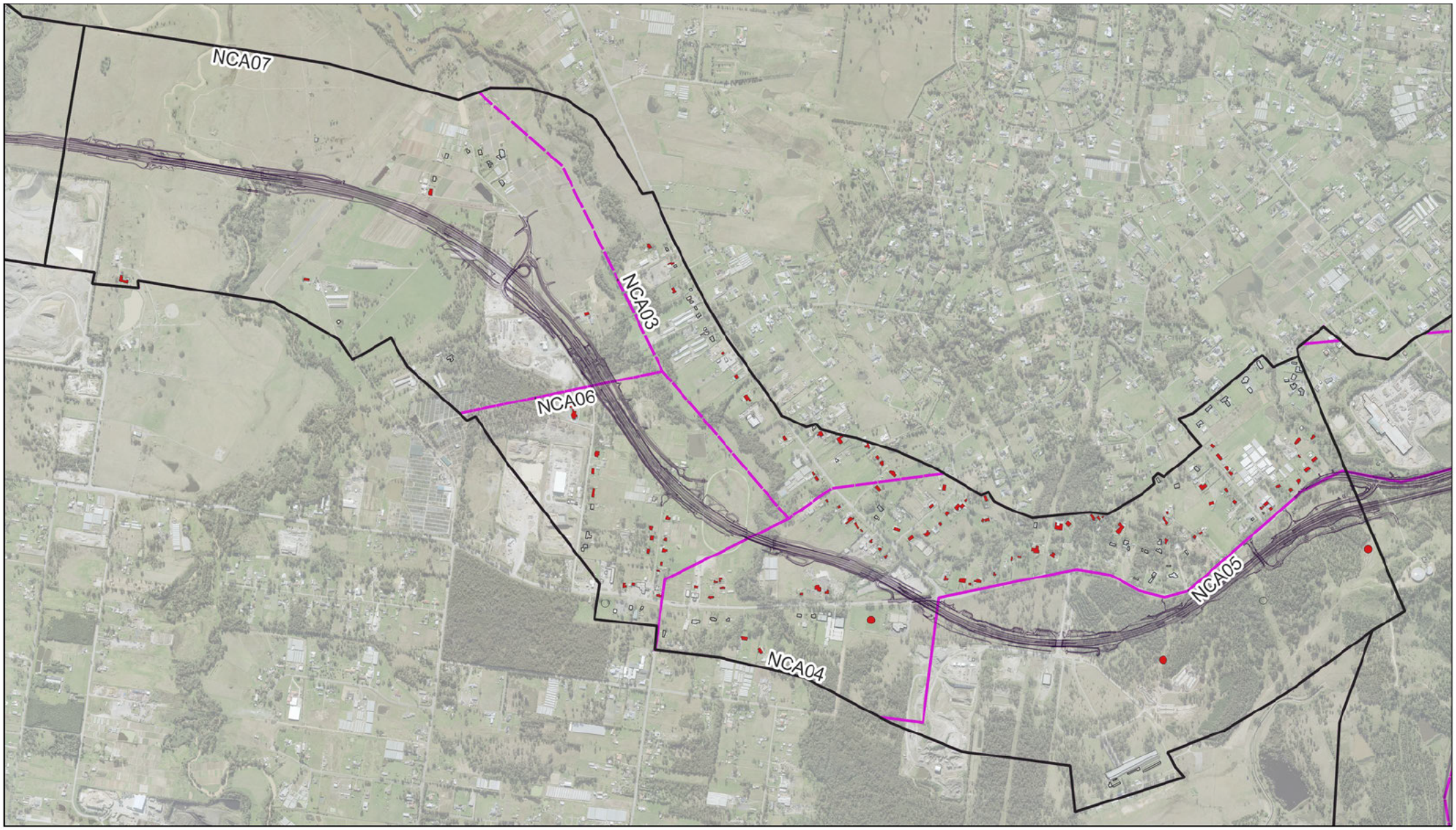

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N

Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

Legend

- M12 road design
- Study area
- Noise catchment area

Above cumulative limit

- Yes
- No

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 Central
Receivers with noise levels above the cumulative limit

Project No. **12520102**
Revision No. **A**
Date. **03/08/2022**

Figure 7.11

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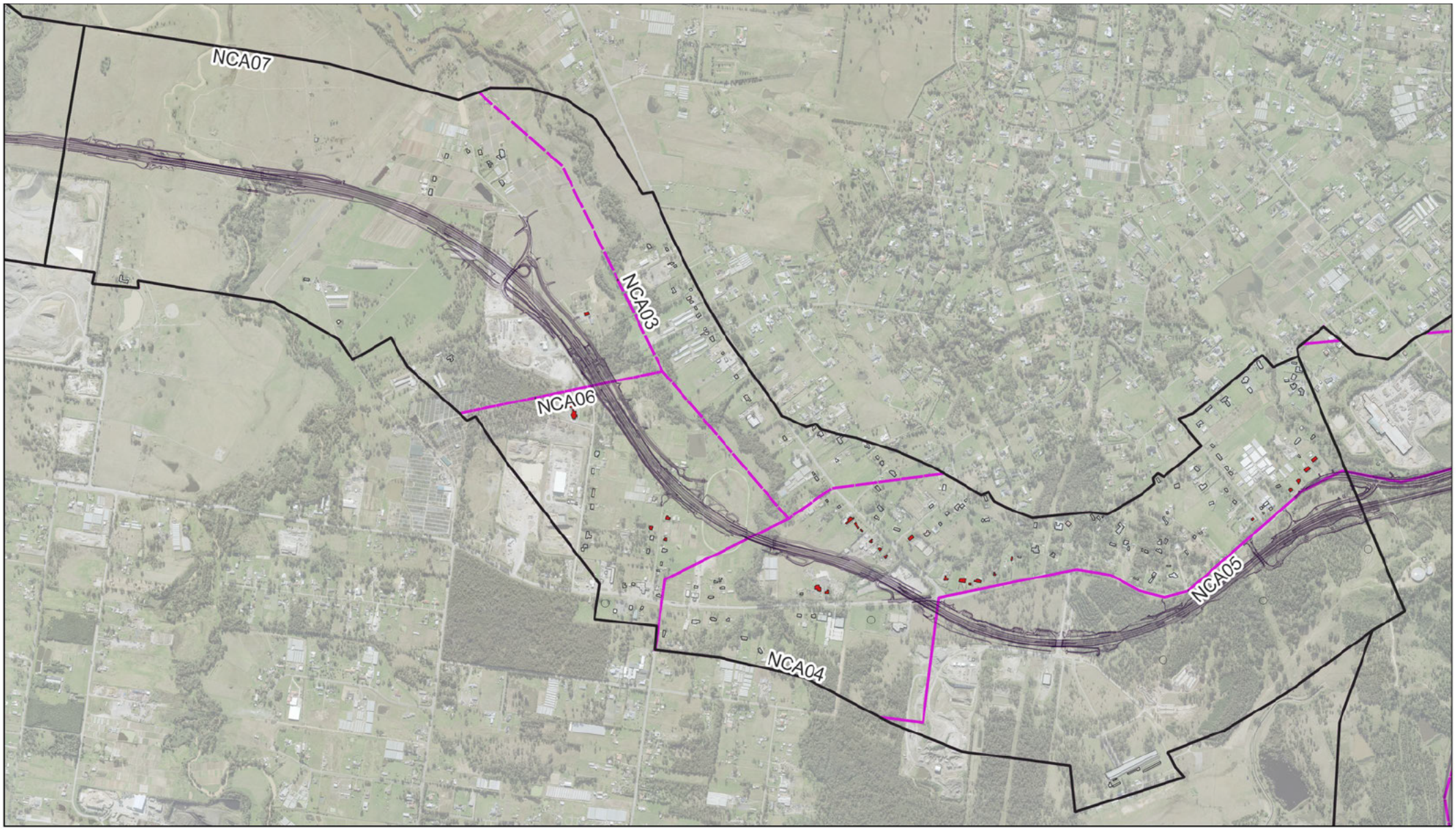

Paper Size ISO A4

0 200 400 600 800 m

N

Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

Legend

M12 road design
Study area
Noise catchment area

Above acute noise limit
Yes
No

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 Central
Receivers with acute noise levels

Project No. **12520102**
Revision No. **A**
Date. **03/08/2022**

Figure 7.12

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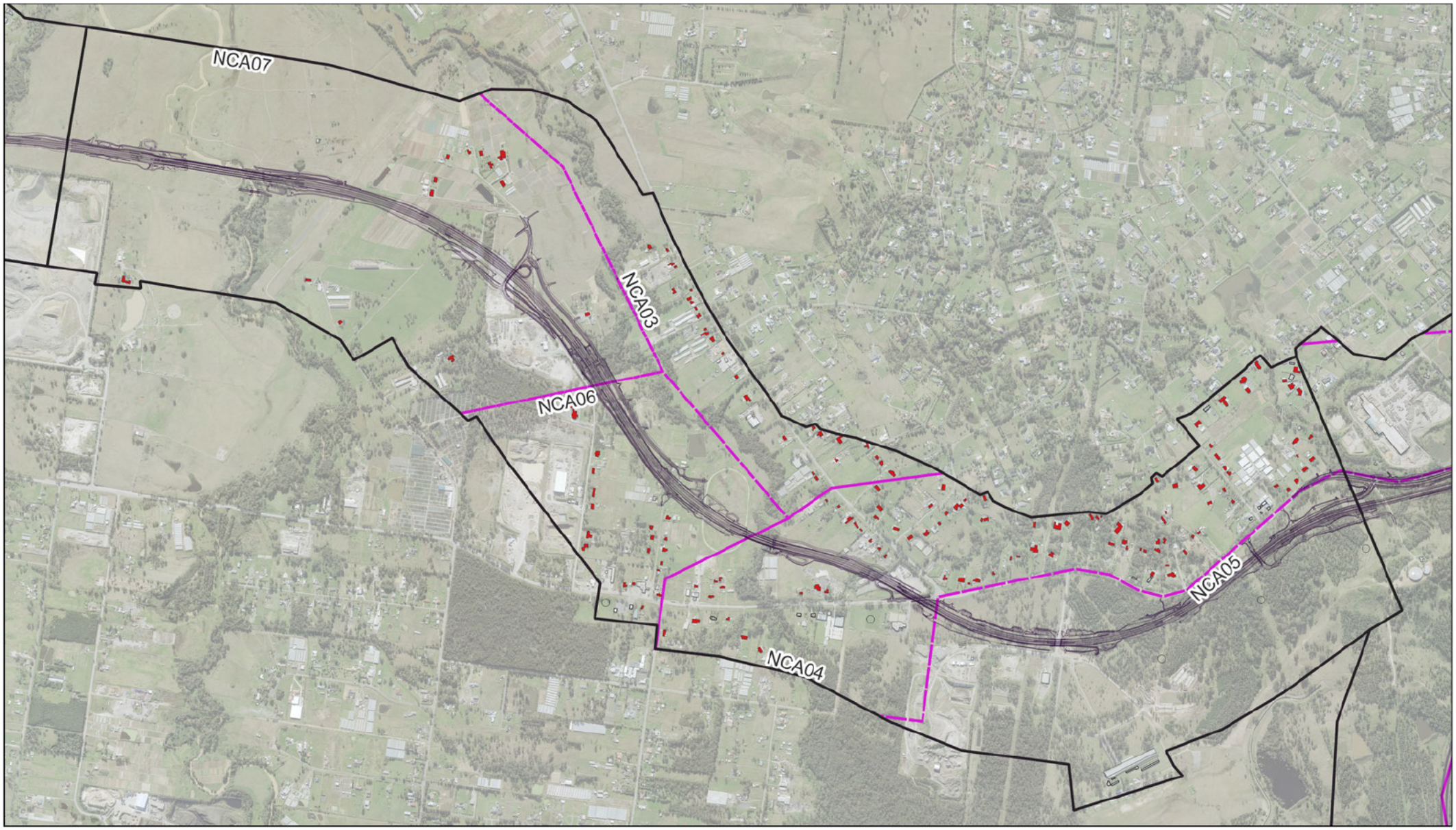

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- M12 road design
- Study area
- Noise catchment area

Increase by > 2 dBA

- Yes
- No

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 Central Receivers where noise levels are above the NCG criteria and increase by > 2 dBA

Project No. 12520102
Revision No. A
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Figure 7.13

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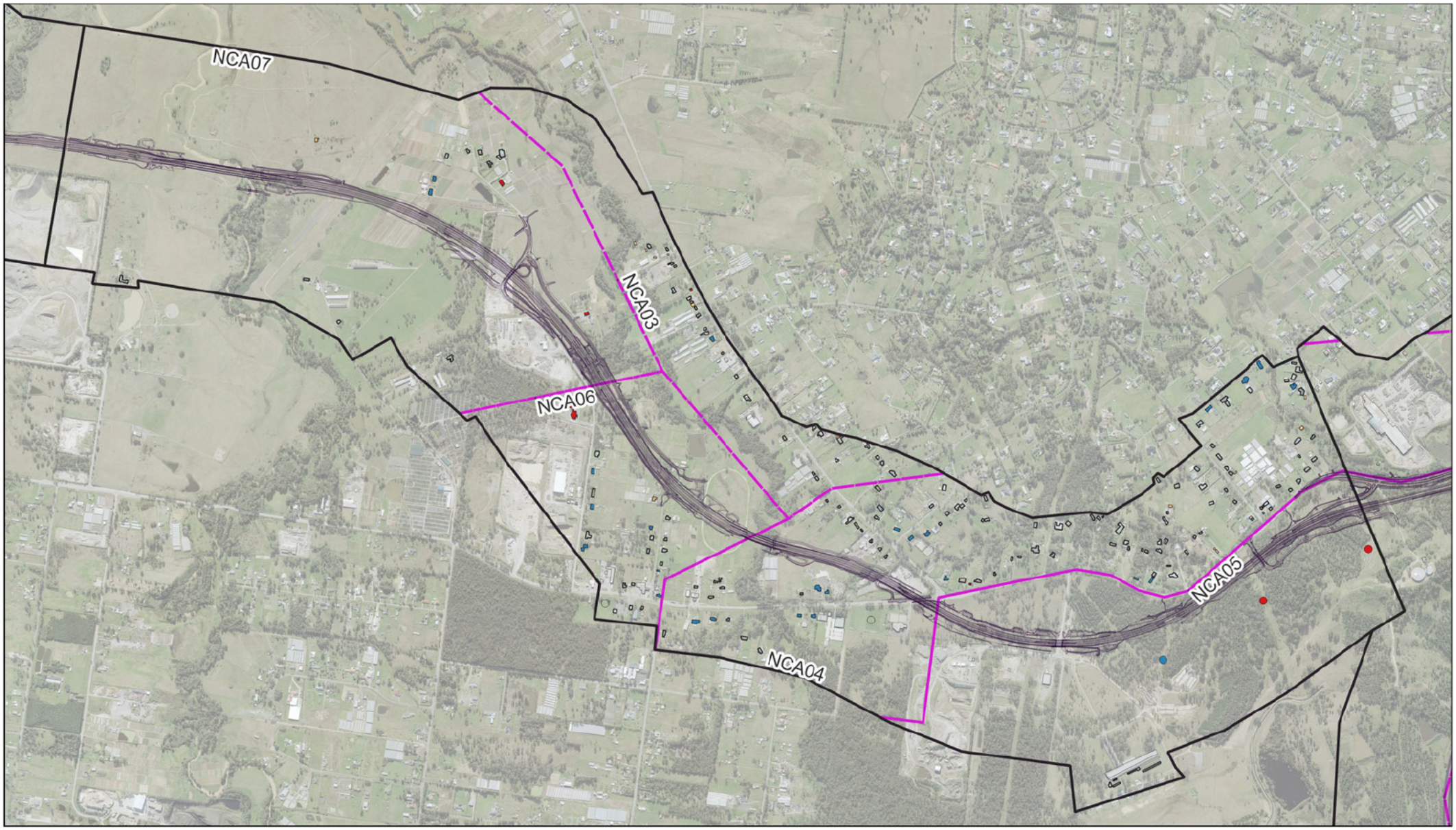

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- M12 road design
- Study area
- Noise catchment area
- Additional floors
- Removed floors
- No longer assessed (acquired/classification change)
- No change

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 Central
Changes to noise mitigation from EIS results

Project No. **12520102**
Revision No. **A**
Date. **03/08/2022**

Figure 7.14

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7.3 Maximum noise level assessment

7.3.1 Maximum noise level objectives

A review on sleep disturbance impacts is provided in Section 5.4 of the *Road Noise Policy* (DECCW, 2011). The RNP states that current literature concerning sleep disturbance due to noise indicates that the main noise characteristics that influence sleep disturbance are the number of noisy events heard distinctly above the background level, the emergence of these events and the highest noise level.

The RNP notes that the triggers for and effects of sleep disturbance have not yet been conclusively determined however provides the following conclusions based on current research:

- Maximum internal noise levels below 50-55 dBA are unlikely to awaken people
- One or two noise events per night, with maximum internal noise levels of 65-70 dB, are not likely to affect health and wellbeing significantly.

An external criteria of 65 dBA has been adopted based on a 10 dBA addition to an internal noise level of 55 dBA. This is based on a typical reduction of 10 dBA through an open window.

7.3.2 Methodology

Changes to maximum noise levels have been based on the following methodology:

- Model the existing maximum noise levels based on noise emission from the current road alignment
- Model the future maximum noise levels based on noise emission from the future road alignment
- Identify the number of buildings with predicted maximum noise levels above 65 dBA
- Identify the frequency of maximum noise level events based on measured road traffic noise levels.

The noise model inputs and assumptions for the maximum noise level assessment are presented in Table 7.12. The likely source of potential maximum noise levels is due to exhaust noise generated during heavy vehicle passbys and compression braking.

Table 7.11 Maximum noise level model inputs

Input / assumption	Description
Software	SoundPLAN Version 8.2
Prediction algorithm	ISO 9613:1996
Model inputs	
Model inputs	As detailed in Table 5.2
Input parameters	
Sound power level	130 dBA (compression braking) 114 dBA (heavy vehicle pass-by)
Source height	Truck exhaust 3.6 m

7.3.3 Impact summary

Potential maximum noise level events would occur during heavy vehicle passbys and compression braking. The locations where these events would occur would be on sections of the road where there are high road gradients such as interchange ramps. Away from these sections, the frequency of maximum noise level events would be lower as heavy vehicles would generally be travelling at constant speeds and potential events would be due to passbys.

The number of receivers where maximum noise levels exceed 65 dBA are presented in Table 7.12. The predicted maximum noise level increase for receivers that are predicted to experience potential maximum noise level impacts as a result of the future road alignment is provided for reference.

Table 7.12 Maximum noise level assessment summary

Package	Number of receivers where maximum noise levels exceed 65 dBA			Range of maximum noise level increase
	Existing	Future	Change	
Compression braking				
M12 West	11	12	1	16 dBA
M12 Central	153	168	15	4 to 19 dBA
Heavy vehicle pass-by				
M12 West	6	6	-	-
M12 Central	72	72	-	-

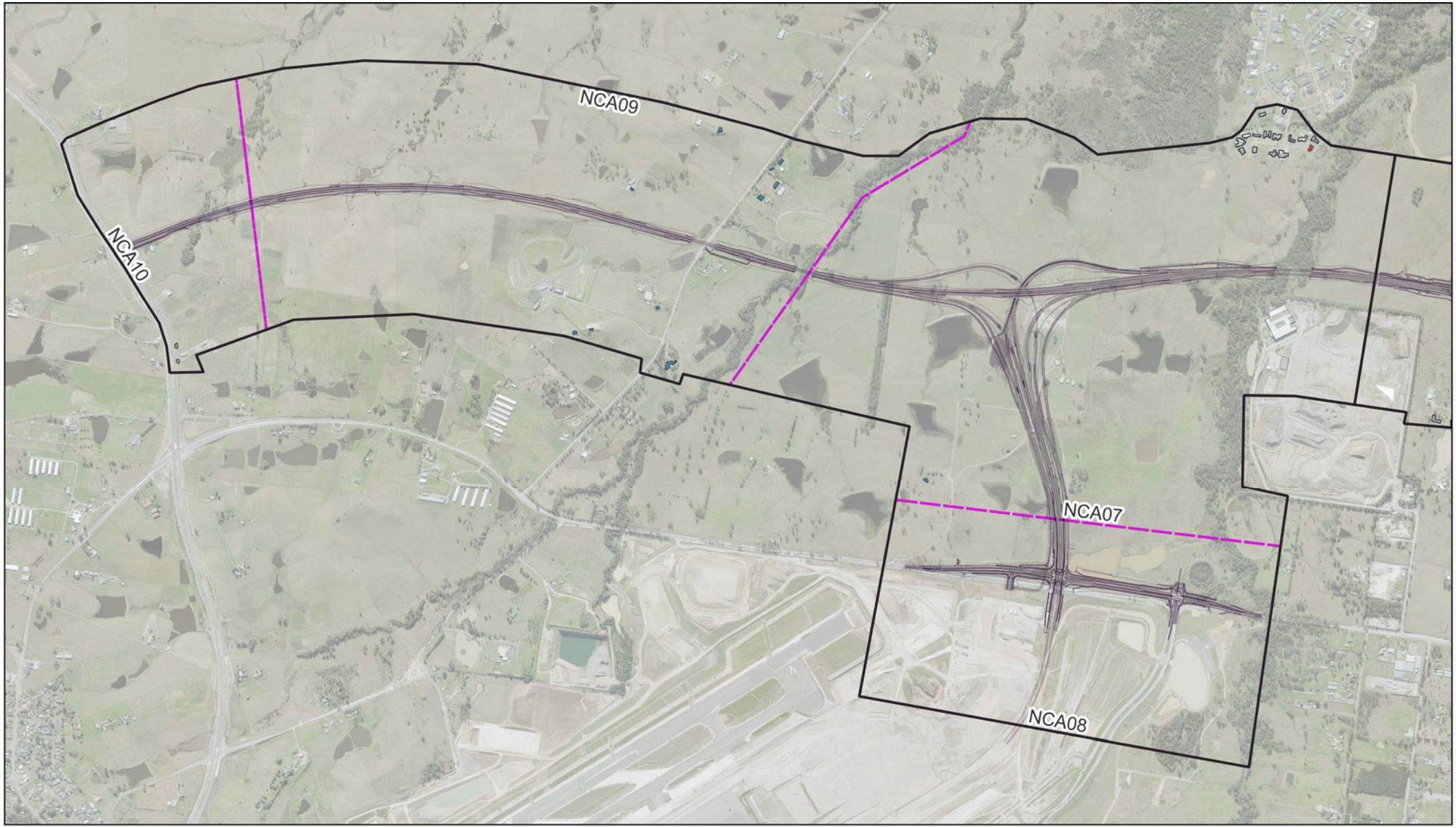
A total of 16 additional receivers are predicted to experience potential maximum noise level impacts with these additional receivers split across the two packages of work. The locations where maximum noise are shown in Figure 7.15 and Figure 7.16 and are based on the predicted impacts during compression braking.

The number of additional receivers in each package are:

– M12 West: one additional receiver
– M12 Central: fifteen additional receivers.

The range of maximum noise level increase is based on the existing and future predicted maximum noise levels. Locations located near the future road alignment with low existing maximum noise levels, such as areas away from existing roads, would experience a higher change in maximum noise levels. These areas are located near Farmingdale Court in the M12 West package and along Clifton Avenue in the M12 Central packages.

These receivers would qualify for consideration of at-property treatments as discussed in section 8.



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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- M12 road design
- Study area
- Noise catchment area
- Future impacts
- Existing and future impacts
- No exceedances

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 West
Maximum noise level impacts

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Figure 7.15

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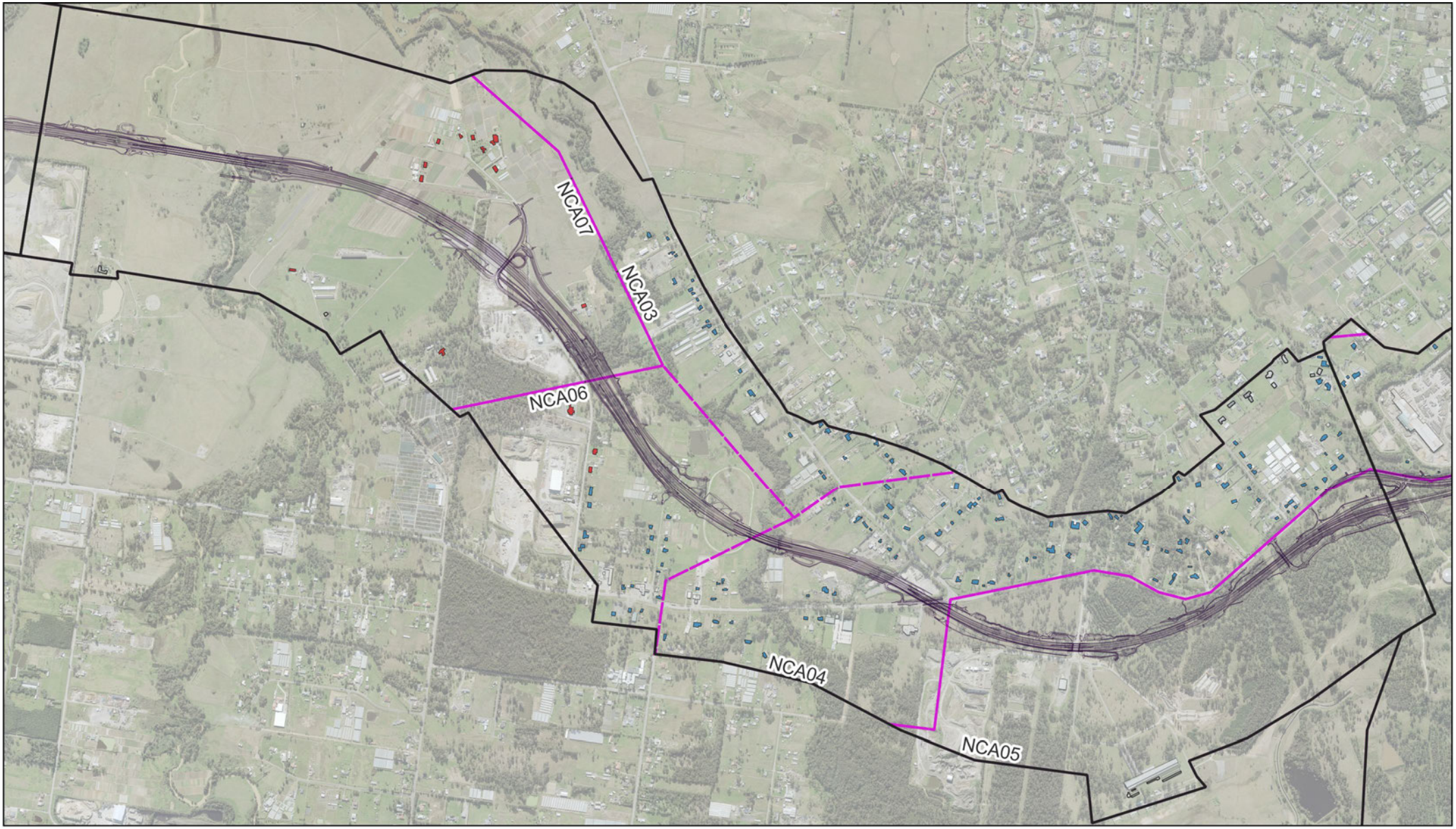

Paper Size ISO A4

0 200 400 600 m

Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- M12 road design
- Study area
- Noise catchment area
- Future impacts
- Existing and future impacts
- No exceedances

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 Central
Maximum noise level impacts

Project No. **12520102**
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Figure 7.16

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7.3.4 Frequency of maximum noise level events

Existing maximum noise levels

Existing maximum noise level events along Elizabeth Drive in the M12 Central package of works have been identified in accordance with Practice Note iii of the *Environmental Noise Management Manual* (RTA, 2001). A maximum noise level event is defined in this manual as a traffic pass-by where the maximum noise level (L_{max}) exceeds the $L_{eq(1\ hour)}$ by at least 15 dBA.

The number and distribution of maximum noise level events and events where the maximum noise level is greater than 65 dBA is provided in the following figures:

– Figure 7.17: monitoring location M4 maximum noise level events
– Figure 7.18: monitoring location M5 maximum noise level events.

At both monitoring locations, it can be observed that the number of maximum noise level events is greater during weekdays. This can be attributed to a higher degree of traffic movements that would occur during the weekday period.

In general, the number of maximum noise level events is greatest during the 12 am to 3 am period. The higher frequency during this time period can be attributed to lower traffic volumes which results in a lower road traffic noise level ($L_{eq(1\ hour)}$) during this time period. The frequency of maximum noise level events gradually decreases after 4 am which is due to traffic build-up leading into the peak hour.

Based on the two measurement locations, the frequency of events greater than 65 dBA directly correlates to the number of total maximum noise level events. The number of events greater than 65 dBA is greater at location M5 which is due to the monitoring location being located closer to Elizabeth Drive.

Future maximum noise levels

The number and frequency of maximum noise level events at receivers that are impacted along existing roads are expected to decrease following opening of the M12 Motorway. These existing roads include Elizabeth Drive, Mamre Road and Luddenham Road. The reduction in maximum noise level events is due to traffic moving from the existing roads onto the M12 Motorway.

Although the number of total events is expected to decrease, the magnitude of maximum noise level impact from Elizabeth Drive is not expected to change as the existing road traffic network would continue to be operational following opening of the M12 Motorway.

The frequency and magnitude of maximum noise level events would increase at those receivers that are located away from the existing public road network but close to the M12 Motorway alignment. These receivers were identified in section 7.3.3 and are generally located along Clifton Avenue and Farmingdale Court.

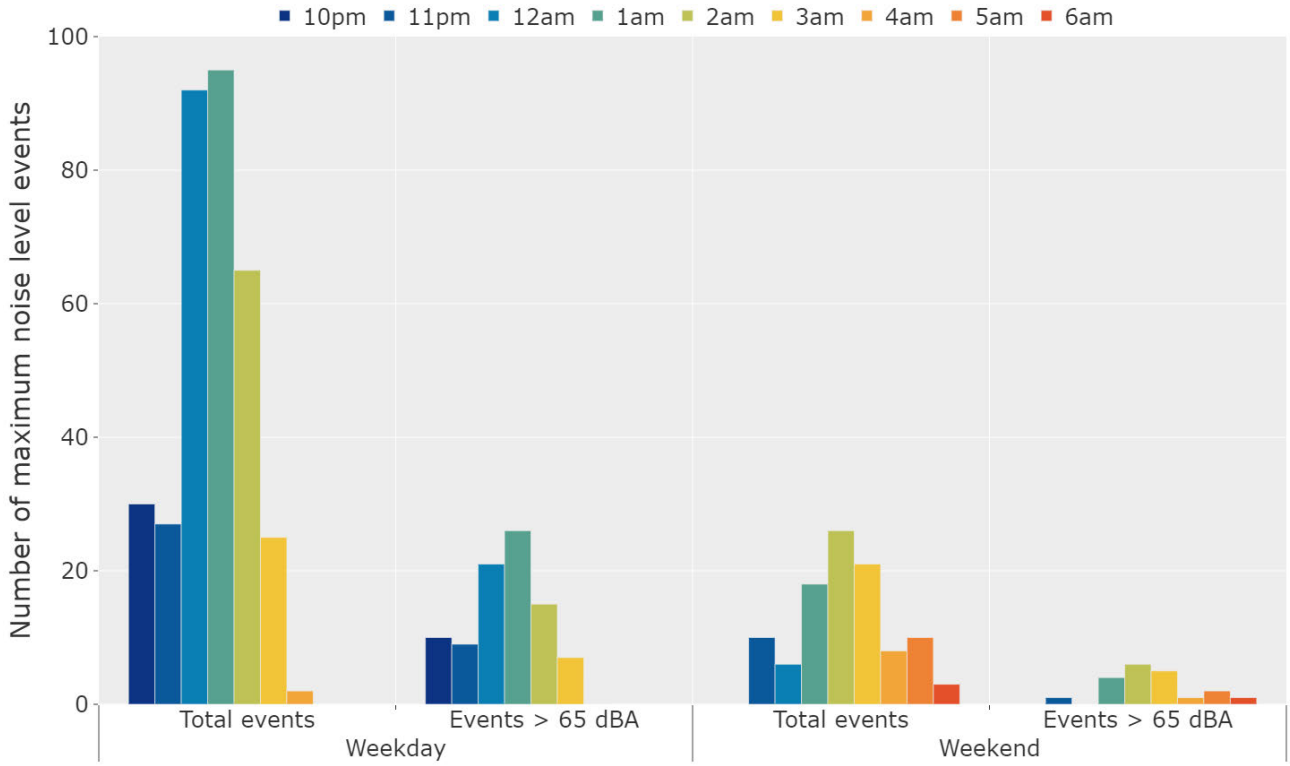


Figure 7.17 Monitoring location M4 maximum noise level events

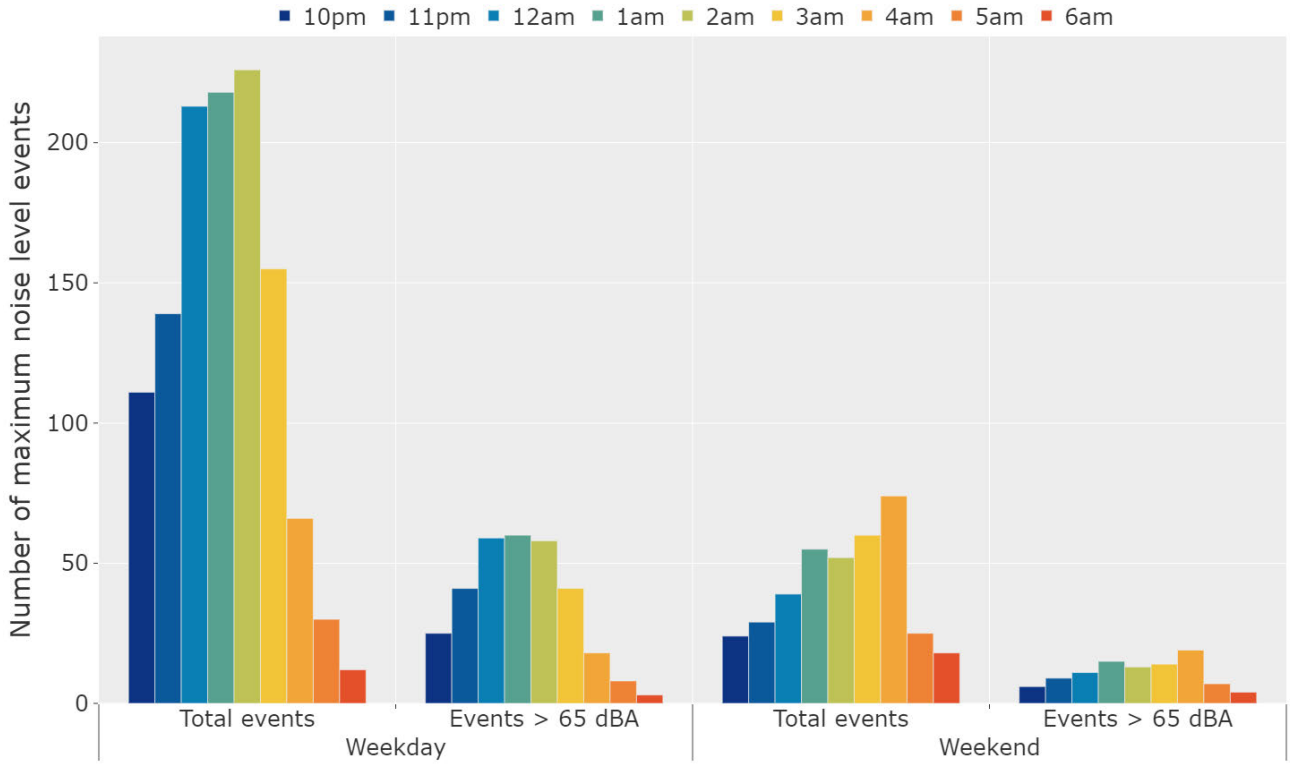


Figure 7.18 Monitoring location M5 maximum noise level events

8. Operational noise mitigation

8.1 Overview

The operational noise mitigation assessment procedure described in section 4.2.1 is based on the NMG.

The NMG recommends that mitigation measures should be implemented where they are considered reasonable. Noise barriers, noise mounds and quieter pavement surfaces would only be considered reasonable in locations where there are four or more closely spaced receivers that exceed the road traffic noise criteria. Receivers are considered closely spaced where the facades are separated by less than 20 metres.

At-property treatments should be considered where other noise mitigation measures are not reasonable or feasible. Residences are considered an isolated group of closely spaced residences where the façades are separated by between 20 and 100 metres.

Potential noise mitigation treatments have been assessed in the following order in accordance with the RNP: quieter pavement surfaces, noise barriers and architectural treatments.

8.1.1 Quieter pavement surfaces

Quieter pavement surfaces are the preferred form of noise mitigation as it reduces source noise levels and has a low visual impact. This provides noise benefits to outdoor recreational areas in addition to reducing internal road traffic noise levels.

In general, quieter pavements may provide noise benefits to receivers at greater distances than noise barriers. This may occur where receivers at greater distances already have shielding from rows of houses near road or topography.

8.1.2 Noise barriers

Noise barriers reduce noise levels by changing the transmission path of noise from the road. These have similar benefits to quieter pavement surfaces as they have the potential to reduce both external and internal noise levels.

The process to optimise the noise barrier height is described in the NMG and summarised as follows:

– Identify the most affected façade of a receiver based on results from the no-mitigation scenario. Noise levels are only calculated for the first two floors of a receiver
– Identify the maximum barrier height that results in the NCG criteria being met at all receivers. Where there are residual exceedances at a barrier height of 8.0 m, then the maximum barrier height is set at 8.0 m
– Determine the initial design height by identifying the barrier height where two-thirds of the receivers considered for treatment in the no-mitigation case no longer exceed the criteria
– Apply weightings to each 0.5 m incremental barrier height to determine the weighting curve. The weighting curve takes into consideration the size of the barrier, the number of residual at-property treatments that should be considered and the level of exceedances above the World Health Organisation (WHO) threshold levels
– Determine the optimised design height using the calculated weighting curve.

Once the optimised height has been identified, consideration to whether the noise barrier is considered feasible and reasonable should be taken into account. In general, the noise barrier would be considered a reasonable option if it is capable of providing an insertion loss of:

– 5 dBA at receivers for heights up to 5 m high
– 10 dBA at receivers for barrier heights above 5 m and up to 8 m in high.

In addition, a barrier can be designed to achieve an insertion loss of less than 5 dBA if the barrier is able to reduce the number of receivers that qualify for at-property treatments by at least two-thirds.

As a project specific consideration, the optimised height is reduced to 5.0 m to provide a consistent and equitable noise barrier height across the project study area. This is outlined in the Appendix G of the M12 Motorway EIS (Roads and Maritime, 2019) which outlines the urban design objectives of the project. These include consideration of the local context and setting of the project including providing a consistent design approach and maintaining views of the surrounding natural environment where possible. The optimised height of the barrier would be reduced under the following circumstances once the insertion loss is taken into consideration:

- The optimised design height from the barrier analysis is greater than 5.0 m, and
- The barrier height does not achieve an insertion loss of 10 dBA at the optimised height
- The barrier achieves an insertion loss of 5 dBA at a height of 5.0 m.

A feasible and reasonable assessment should be undertaken once the optimised height has been identified. Factors that are considered in a feasible and reasonable assessment are outlined in section 4.2.3.

8.1.3 Architectural treatments

At-receiver noise mitigation should be investigated for receivers that still qualify for consideration of additional noise mitigation following implementation of source and path controls. Where residual impacts are predicted, the *At-Receiver Road Noise Treatment Guideline* (ARRNTG) (Transport for NSW, 2022) specifies that type of treatment that may be offered based on the level of exceedance above the NCG criteria.

The treatment packages, outlined in Table 8.1, are specified in the ARNTG. The packages are based on the level of exceedance above the criteria following any noise reduction from quieter pavements and noise barriers. Details of the treatment packages are provided in the ARNTG and are dependent on the building construction material.

Table 8.1 Architectural treatment packages

Treatment package	Exceedance of criteria, dBA
Type 1	1-5
Type 2	6-8
Type 3	9-11
Type 4	12-14
Type 5	>14

Acoustic treatments provided by Transport for NSW are typically limited to:

- The sealing of eaves
- The sealing of wall vents
- Upgrading window and door seals and appropriately treatment sub-floor ventilation
- Fresh air ventilation systems that meeting Building Code of Australia requirements with the windows and doors shut
- The sealing of the underfloor below the bearers
- Upgraded windows and glazing and solid core doors on the exposed façades of substantial structures only
- The installation of courtyard screen walls.

In most instances, the aim of architectural treatments is to provide internal noise levels that are approximately 20 dBA less than the external noise criteria with windows closed. This would provide similar acoustic amenity and internal noise levels to those experienced at a receiver where the external noise criteria have been met.

Section 7.3 of the NMG states that at-receiver noise mitigation measures such as façade treatments may replace at-road mitigation (low noise pavements, noise mounds or noise barriers) only in the following circumstances:

- A residence is considered an isolated residence or within in isolated group of closely spaced residences
- Where the affected community expresses a preference for at-property treatments and the cost of treatments is less than a combination of barrier and at-property treatments
- Where the noise barriers cannot achieve the level of noise mitigation (insertion loss) required

– Where the only applicable noise criteria are internal (e.g. for non-residential receivers including places of worships, medical facilities, educational institutes and child care facilities)
– Where other noise mitigation measures have been shown not to be feasible or reasonable.

8.2 M12 West

8.2.1 Pavement treatments

Pavement treatments along the M12 Motorway carriageway have been investigated as they have the potential to reduce source noise levels and have the lowest potential impacts on visual amenity.

The number of treatments presented in section 7.1 are based on a plain concrete pavement (PCP) surface (+3 dBA surface correction) along the M12 Motorway. The predicted number of treatments using a PCP surface have been compared to the predicted number of treatments using low noise pavement surfaces to determine whether pavement treatments are an effective mitigation measure.

The following low noise pavement surfaces have been considered:

– Open graded asphalt (OGA) surface along the M12 Motorway, DGA on bridges and ramps.
– Low noise diamond grind concrete (LNDG concrete) surface along the M12 Motorway with a +0 dBA surface correction.

8.2.1.1 Open graded asphalt surface

An OGA surface was modelled along the M12 Motorway alignment with a -2 dBA surface correction. When compared to the PCP surface adopted for the no-mitigation case, the OGA surface would:

– reduce noise level contributions from the project carriageway by up to 5 dBA
– reduce the number of residential buildings that would be considered for noise mitigation by up to 11.

The receivers where noise mitigation would be considered with an OGA surface are shown in Figure 8.1.

The major benefits would be located in NCA07 near Farmingdale Court. The majority of these receivers exceed the criteria by less than 5 dBA in the no-mitigation case therefore introduction of the OGA surface would reduce noise levels below the criteria.

An OGA surface is not considered a reasonable mitigation option for a motorway as the functional properties of the surface that reduces source traffic noise deteriorates over time. In addition, use of OGA results in a higher costs over the motorway's lifecycle as it requires additional maintenance and re-sheeting in a high speed environment. This is not considered reasonable due to safety and cost considerations.

Table 8.2 M12 West – Change in mitigation due to OGA pavement treatments

NCA	Receiver type	PCP surface		OGA surface		Change	
		Floors	Buildings	Floors	Buildings	Floors	Buildings
NCA07	Residential	13	12	2	2	-11	-10
	Non-residential	0	0	0	0	0	0
NCA08	Residential	0	0	0	0	0	0
	Non-residential	0	0	0	0	0	0
NCA09	Residential	12	10	11	9	-1	-1
	Non-residential	0	0	0	0	0	0
NCA10	Residential	0	0	0	0	0	0
	Non-residential	0	0	0	0	0	0
Total	**Residential**	**25**	**22**	**13**	**11**	**-12**	**-11**
	Non-residential	**0**	**0**	**0**	**0**	**0**	**0**

8.2.1.2 Low noise diamond grind concrete surface

A LNDG concrete surface was modelled along the M12 Motorway alignment with a +0 dBA surface correction. When compared to the PCP surface adopted for the no-mitigation case, the LNDG concrete surface would:

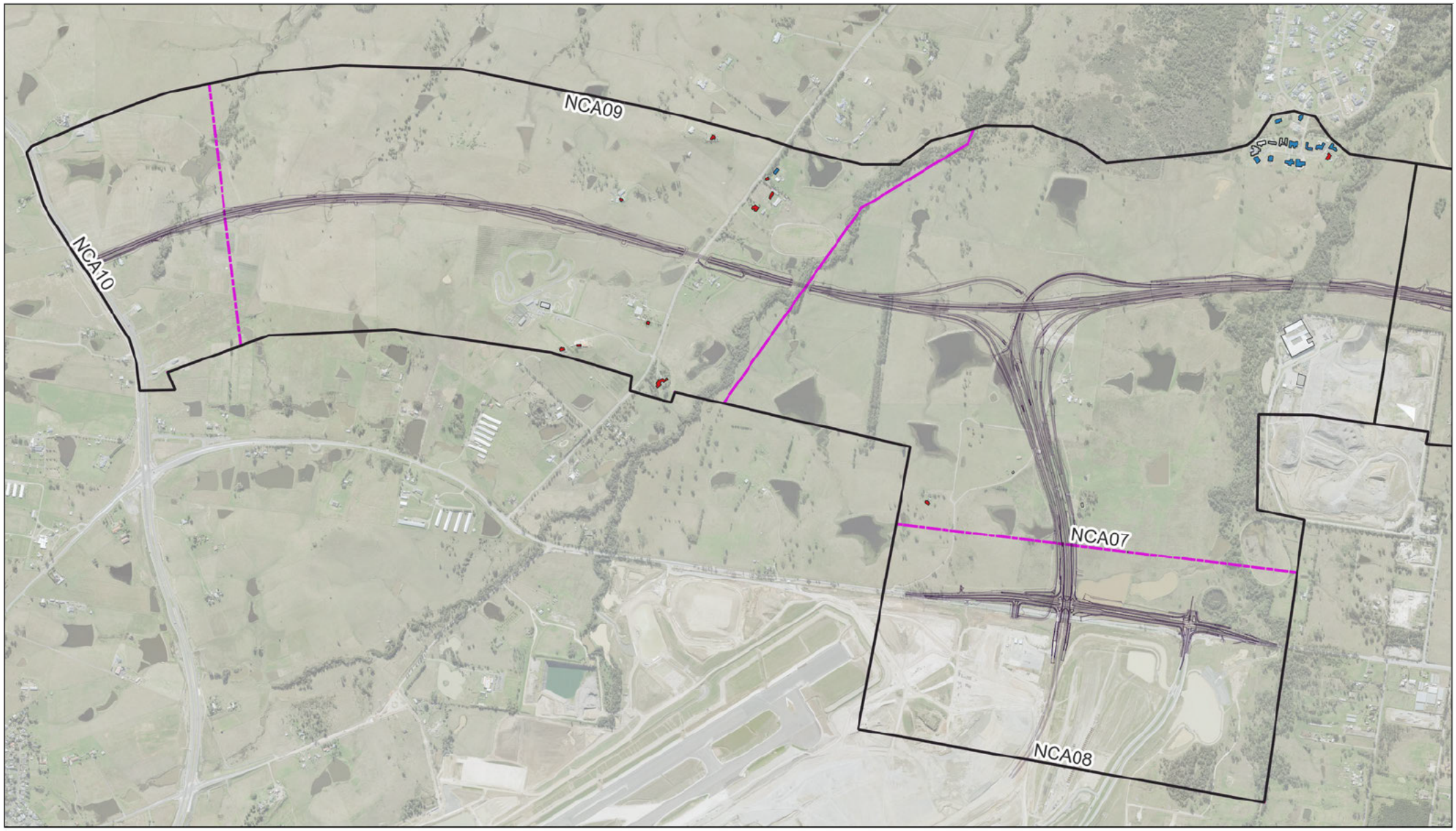
– reduce noise level contributions from the project carriageway by up to 3 dBA
– reduce the number of residential buildings that would be considered for noise mitigation by up to seven.

The receivers where noise mitigation would be considered with a LNDG concrete surface are shown in Figure 8.2.

A LNDG concrete surface has been proposed as part of detailed design of the M12 Motorway as it would reduce road traffic noise levels from the M12 Motorway by up to 3 dBA.

Table 8.3 M12 West – Change in mitigation due to LNDG concrete pavement treatments

NCA	Receiver type	PCP surface		LNDG concrete surface		Change	
		Floors	Buildings	Floors	Buildings	Floors	Buildings
NCA07	Residential	13	12	5	5	-8	-7
	Non-residential	0	0	0	0	0	0
NCA08	Residential	0	0	0	0	0	0
	Non-residential	0	0	0	0	0	0
NCA09	Residential	12	10	12	10	0	0
	Non-residential	0	0	0	0	0	0
NCA10	Residential	0	0	0	0	0	0
	Non-residential	0	0	0	0	0	0
Total	**Residential**	**25**	**22**	**17**	**15**	**-8**	**-7**
	Non-residential	**0**	**0**	**0**	**0**	**0**	**0**



Paper Size ISO A4

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

Legend

- M12 road design
- Study area
- Noise catchment area
- Qualifies
- No longer qualifies
- No

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 West
Qualifying receivers with an OGA pavement surface

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Date. **03/08/2022**

Figure 8.1

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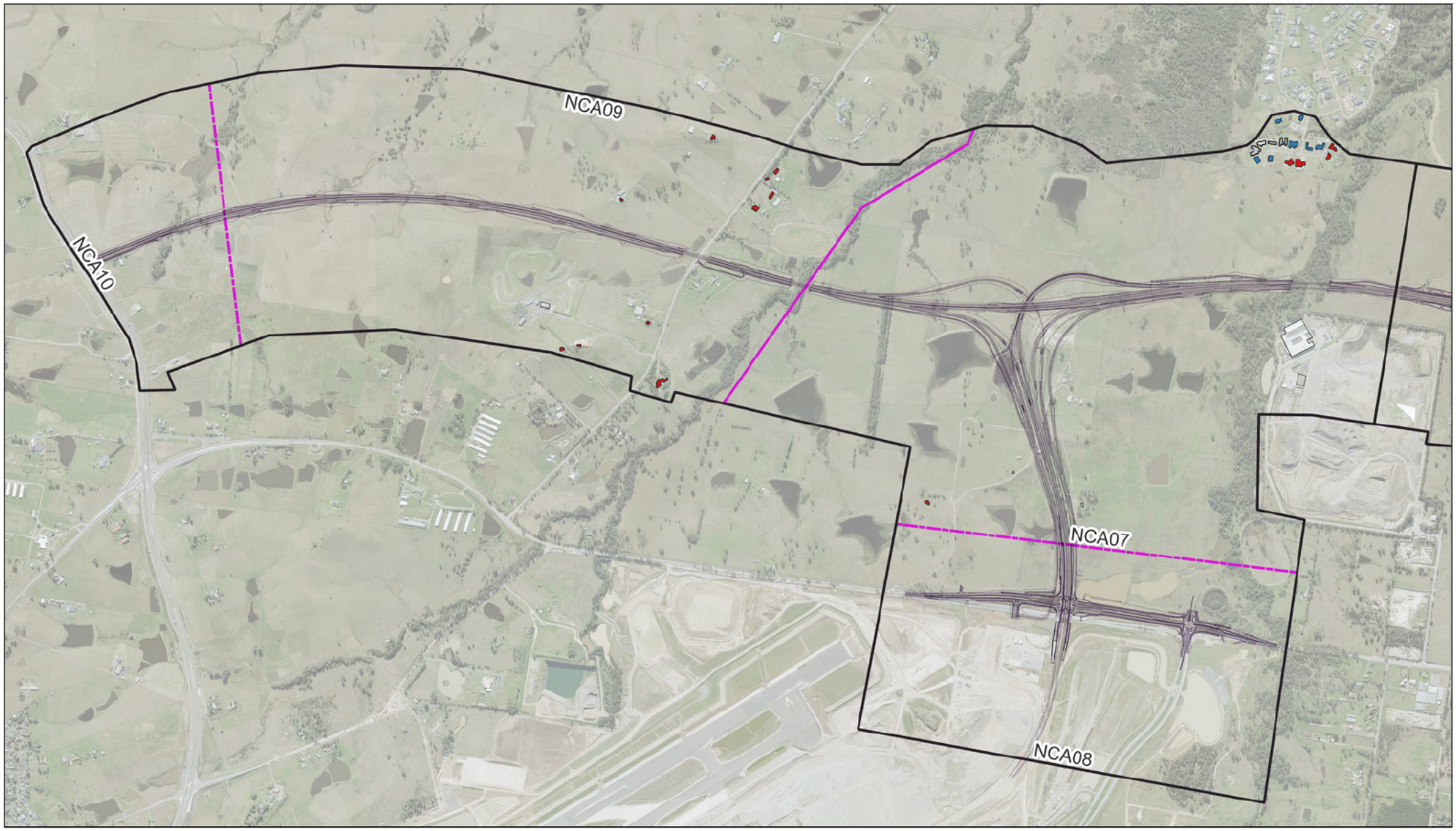

Paper Size ISO A4

0 200 400 600 800 m

Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

Legend

- M12 road design
- Study area
- Noise catchment area
- Qualifies
- No longer qualifies
- No

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 West
Qualifying receivers with a LNDG concrete surface

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Date. **03/08/2022**

Figure 8.2

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8.2.2 Noise barrier analysis

The noise barrier optimisation process described in section 8.1.2 has been used to determine the optimal heights of two noise barriers in the M12 West package of the project.

Noise levels have been predicted with a LNDG concrete surface along the M12 carriageway as specified by the final detailed design. Additional benefits may be achieved by using a lower noise surface, such as OGA, in conjunction with the assessed noise barrier. The combination of a lower noise surface and a noise barrier has not been considered as OGA was not considered a reasonable mitigation option.

A summary of the initial M12 West noise barrier assessment is provided in Table 8.4 and the number receivers that receive an insertion loss greater than 2 dBA is provided in Table 8.5. Barrier analysis charts are provided in Appendix E.

Table 8.4 M12 West – Initial noise wall assessment summary

Noise wall	Optimised height	Is there a 5 dBA or 10 dBA benefit at the optimised barrier height?	Do we get a 5 dBA benefit at 5.0 m height if the optimised height is above 5.0 m?	Design height subject to a feasible and reasonable assessment
NW.01	8.0 m	No	n/a	**Not reasonable** Does not reduce the number of at-property treatments.
NW.08	2.0 m	No	n/a	**2.0 m** Reduces number of at-property treatments by two-thirds The barrier does not provide an insertion loss of 2 dBA.

Table 8.5 M12 West – Number of benefitting receivers

Noise wall	At-property treatments			Number of receivers with an insertion loss greater than 2 dBA		
	No barrier	Optimised height	Design height	No barrier	Optimised height	Design height
NW.01	6	6	6	0	5	5
NW.08	4	0	0	0	0	0

Based on the outputs of the initial noise barrier analysis, NW.08 reduces the number of receivers requiring at-property treatments by more than two-thirds. The maximum insertion loss is 0.9 dBA for NW.08. Although the number of treatments reduces by two-thirds, the barriers are not considered reasonable options as the insertion loss is less than 5 dBA and the locations exceed the noise criteria by more than 5 dBA.

The predicted insertion loss contours provided in Figure 8.3 are based on a 2.0 m noise wall. No receivers are predicted to receive a 5 dBA benefit as the potentially benefiting receivers are located far from the M12 road alignment.

The outcome of the feasible and reasonable assessment for all noise barriers is provided in Table 8.6. As part of the feasible and reasonable assessment, the following have been considered:

- The number of receivers that require at-property treatment if no barrier is constructed
- The number of receivers that require at-property treatments at the optimised design height
- Review the benefitting receivers and identify whether at-property treatments should be considered in lieu of at-road treatments (Section 7.3 of the NMG).

Cost considerations, which would include an assessment of the treatment packages required with and without mitigation, have not been taken into account in this assessment.

The at-property treatments required are summarised in section 8.2.3.

Table 8.6 M12 West noise barrier analysis – Feasible and reasonable assessment

Noise wall	Length	Optimal design height from barrier analysis	Details	Outcome of feasible and reasonable assessment
NW.01	1,770 m	8.0 m	6 receivers would require at-property treatments without a noise wall With a design barrier height of 8.0 m: - 6 receivers would require at-property treatments. This noise barrier does not reduce the number of at-property treatments. - Four receivers would receive an insertion loss of at least 2 dBA - One receiver would receive an insertion loss of 5 dBA - No receivers would receive an insertion loss of 10 dBA - The maximum insertion loss is 6.4 dBA at Receiver 4918 at 765 Luddenham Road, Luddenham.	**Not reasonable** - The noise barrier does not reduce the number of at-property treatments - The noise barrier does not achieve the required insertion loss of 10 dBA at a height of 8.0 m.
NW.08	1,549 m	2.0 m	4 receivers would require at-property treatments without a noise wall With a design barrier height of 2.0 m: - No receivers would require at-property treatments - No receivers would receive an insertion loss of at least 2 dBA - No receivers would receive an insertion loss of 5 dBA - The maximum insertion loss is 0.8 to 0.9 dBA at the two receivers provided below • Receiver 6034 (11 Farmingdale Court, Luddenham) • Receiver 6035 (9 Farmingdale Court, Luddenham).	**Not reasonable** - The noise barrier does not achieve the required insertion loss of 5 dBA. - The barrier reduces the number of receivers requiring at-property treatments by over two-thirds - No receivers would receive 2 dBA insertion loss. - A barrier is not considered reasonable as the noise benefit of less than 2 dBA that it provides would be barely perceptible.

Paper Size ISO A4

0 150 300 450 600 m

Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

Insertion loss contour, dBA
- 2-5 dBA
- 5-10 dBA

M12 road design

Noise wall
- Existing
- New

GHD

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Operational Noise and Vibration Review

M12 West
2.0m noise barrier insertion loss

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Figure 8.3

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8.2.3 At-property treatments

The at-property treatment package types and the number of residential buildings in each category are provided in Table 8.7. These treatment packages are based on the predicted noise levels with a LNDG concrete pavement surface along the M12 carriageway. The majority of the receivers are predicted to exceed the NCG criteria by up to 5 dBA. These receivers would be offered treatment package type one.

At-property treatments are recommended as the noise barriers assessment demonstrates that this mitigation option would not be considered reasonable.

In accordance with CoA E57 all at-property treatments must be implemented prior to operation of the project.

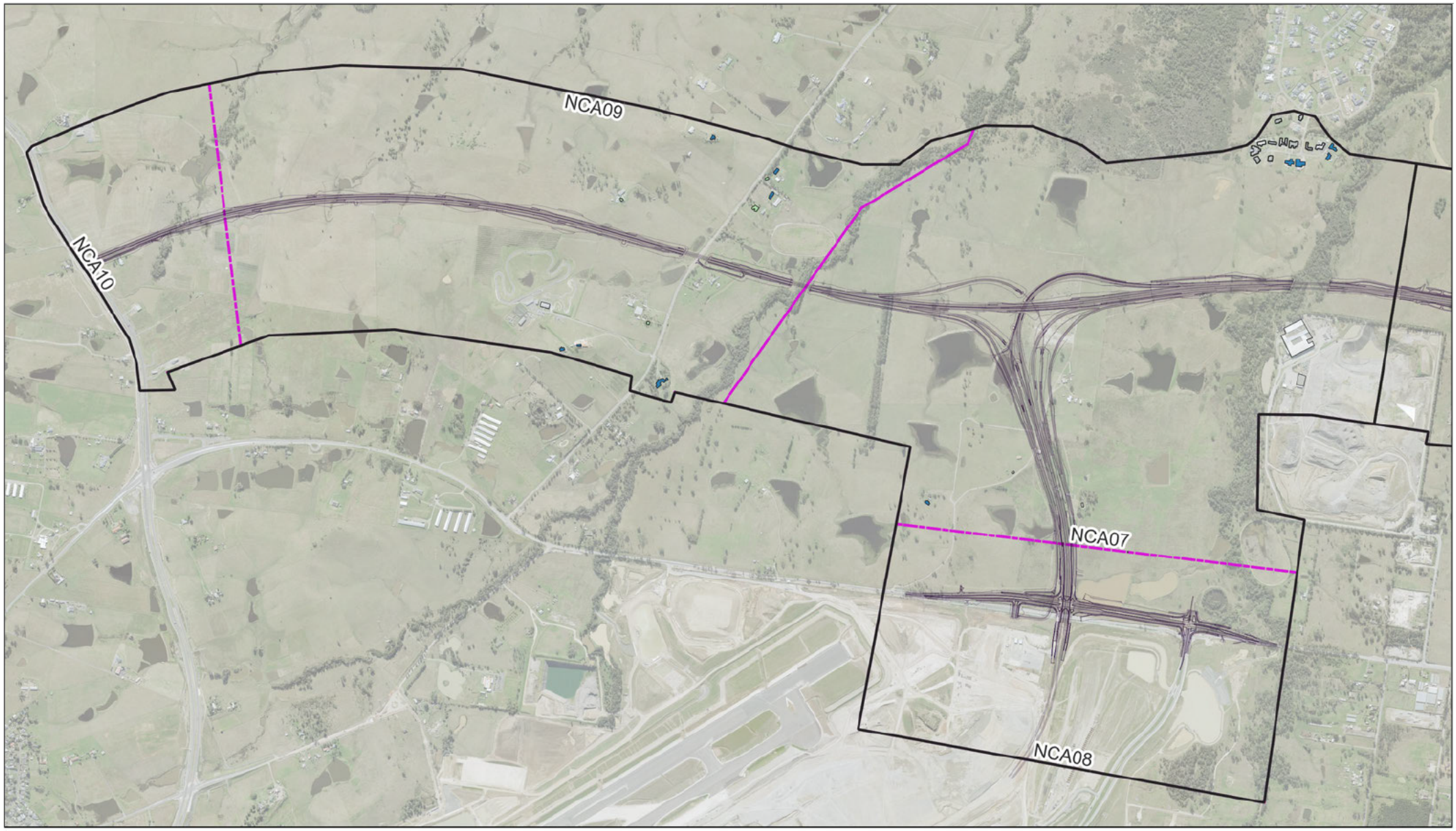
The locations of these receivers are shown in Figure 8.4 and listed in Table 8.8.

Table 8.7 M12 West – At-property treatments for each identified floor (LNDG concrete surface)

Treatment package type	Exceedance of NCG criteria, dBA	Number of treatments	
		Residential	Non-residential
1	1-5	13	0
2	6-8	4	0
3	9-11	0	0
4	12-14	0	0
5	>14	0	0
Total		**17**	**0**

Table 8.8 M12 West – Treatment packages for identified receivers (LNDG concrete surface)

Receiver ID	Address	NCA	Receiver type	Floor	Treatment package
4882	734 LUDDENHAM ROAD, LUDDENHAM	NCA09	Residential	GF	Type 2
4884	734 LUDDENHAM ROAD, LUDDENHAM	NCA09	Residential	GF	Type 1
4887	710 - 732 LUDDENHAM ROAD, LUDDENHAM	NCA09	Residential	GF	Type 2
4889	710 - 732 LUDDENHAM ROAD, LUDDENHAM	NCA09	Residential	GF	Type 1
4916	713 - 733 LUDDENHAM ROAD, LUDDENHAM	NCA09	Residential	GF	Type 1
4916	713 - 733 LUDDENHAM ROAD, LUDDENHAM	NCA09	Residential	F 1	Type 1
4918	765 LUDDENHAM ROAD, LUDDENHAM	NCA09	Residential	GF	Type 2
5128	851 LUDDENHAM ROAD, LUDDENHAM	NCA09	Residential	GF	Type 1
5129	845 LUDDENHAM ROAD, LUDDENHAM	NCA09	Residential	GF	Type 1
5129	845 LUDDENHAM ROAD, LUDDENHAM	NCA09	Residential	F 1	Type 1
5137	812 - 844 LUDDENHAM ROAD, LUDDENHAM	NCA09	Residential	GF	Type 1
5153	UNIT 15, 1953 ELIZABETH DRIVE, BADGERYS CREEK	NCA07	Residential	F 1	Type 1
5765	777 - 819 LUDDENHAM ROAD, LUDDENHAM	NCA09	Residential	GF	Type 2
6027	22 FARMINGDALE COURT, LUDDENHAM	NCA07	Residential	GF	Type 1
6034	11 FARMINGDALE COURT, LUDDENHAM	NCA07	Residential	GF	Type 1
6035	9 FARMINGDALE COURT, LUDDENHAM	NCA07	Residential	GF	Type 1
9007	17 FARMINGDALE COURT, LUDDENHAM	NCA07	Residential	GF	Type 1



Paper Size ISO A4

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N

Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

Legend

- M12 road design
- Study area
- Noise catchment area

Treatment package

- Type 1
- Type 2
- Type 3
- Type 4
- Type 5

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 West
LNDG concrete at-property treatments

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Figure 8.4

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8.3 M12 Central

8.3.1 Pavement treatments

Pavement treatments along the M12 Motorway carriageway have been investigated as they have the potential to reduce source noise levels and have the lowest potential impacts on visual amenity.

The no-mitigation noise levels presented in section 7.2 are based on a plain concrete pavement (PCP) surface (+3 dBA surface correction) along the M12 Motorway. The predicted number of treatments using a PCP surface have been compared to the predicted number of treatments using low noise pavement surfaces to determine whether pavement treatments are an effective mitigation measure.

The following low noise pavement surfaces have been considered:

– Open graded asphalt (OGA) surface along the M12 Motorway, DGA on bridges.
– Low noise diamond grind concrete (LNDG concrete) surface along the M12 Motorway with a +0 dBA surface correction.

8.3.1.1 Open graded asphalt surface

An OGA surface was modelled along the M12 Motorway alignment with a -2 dBA surface correction. When compared to the PCP surface adopted for the no-mitigation case, the OGA surface would:

– reduce noise level contributions from the project carriageway by up to 5 dBA
– reduce the number of residential buildings that would be considered for noise mitigation by up to 50.

The receivers where noise mitigation would be considered with an OGA surface are shown in Figure 8.5. The change in the number of qualifying receiver floors and buildings are provided in Table 8.9.

An OGA surface is not considered a reasonable mitigation option for a motorway as the functional properties of the surface that reduces source traffic noise deteriorates over time. In addition, use of OGA results in a higher costs over the motorway's lifecycle as it requires additional maintenance and re-sheeting in a high speed environment. This is not considered reasonable due to safety and cost considerations.

Table 8.9 M12 Central – Change in mitigation due to OGA pavement treatments

NCA	Receiver type	PCP surface		OGA surface		Change	
		Floors	Buildings	Floors	Buildings	Floors	Buildings
NCA03	Residential	38	27	28	21	-10	-6
	Non-residential	0	0	0	0	0	0
NCA04	Residential	136	98	88	64	-48	-34
	Non-residential	5	5	0	0	-5	-5
NCA05	Residential	0	0	0	0	0	0
	Non-residential	3	3	3	3	0	0
NCA06	Residential	21	18	18	16	-3	-2
	Non-residential	1	1	1	1	0	0
NCA07	Residential	19	14	10	6	-9	-8
	Non-residential	0	0	0	0	0	0
Total	**Residential**	**214**	**157**	**144**	**107**	**-70**	**-50**
	Non-residential	**9**	**9**	**4**	**4**	**-5**	**-5**

8.3.1.2 Low noise diamond grind concrete surface

A LNDG concrete surface was modelled along the M12 Motorway alignment with a +0 dBA surface correction. When compared to the PCP surface adopted for the no-mitigation case, the LNDG concrete surface would:

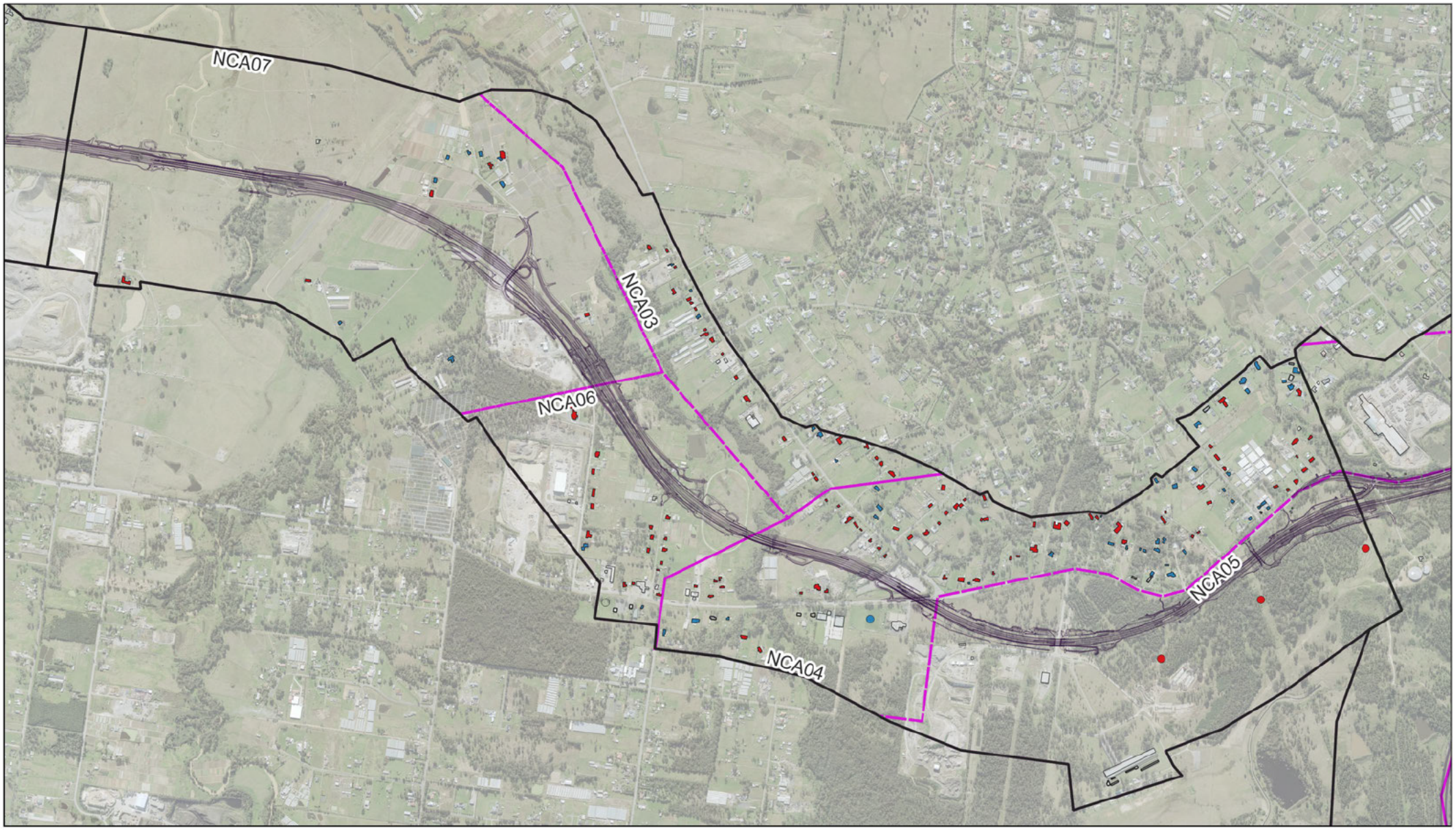
– reduce noise level contributions from the project carriageway by up to 3 dBA
– reduce the number of residential buildings that would be considered for noise mitigation by up to 24.

The receivers where noise mitigation would be considered with a LNDG concrete surface are shown in Figure 8.6. The change in the number of qualifying receiver floors and buildings are provided in Table 8.10.

A LNDG concrete surface has been proposed as part of detailed design of the M12 Motorway as it would reduce road traffic noise levels from the M12 Motorway by up to 3 dBA.

Table 8.10 M12 Central – Change in mitigation due to LNDG concrete pavement treatments

NCA	Receiver type	PCP surface		LNDG concrete surface		Change	
		Floors	Buildings	Floors	Buildings	Floors	Buildings
NCA03	Residential	38	27	35	25	-3	-2
	Non-residential	0	0	0	0	0	0
NCA04	Residential	136	98	111	82	-25	-16
	Non-residential	5	5	1	1	-4	-4
NCA05	Residential	0	0	0	0	0	0
	Non-residential	3	3	3	3	0	0
NCA06	Residential	21	18	20	17	-1	-1
	Non-residential	1	1	1	1	0	0
NCA07	Residential	19	14	14	9	-5	-5
	Non-residential	0	0	0	0	0	0
Total	**Residential**	**214**	**157**	**180**	**133**	**-34**	**-24**
	Non-residential	**9**	**9**	**5**	**5**	**-4**	**-4**



Paper Size ISO A4

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

Legend

- M12 road design
- Study area
- Noise catchment area
- Qualifies
- No longer qualifies
- No

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 Central
Qualifying receivers with an OGA pavement surface

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Date. **03/08/2022**

Figure 8.5

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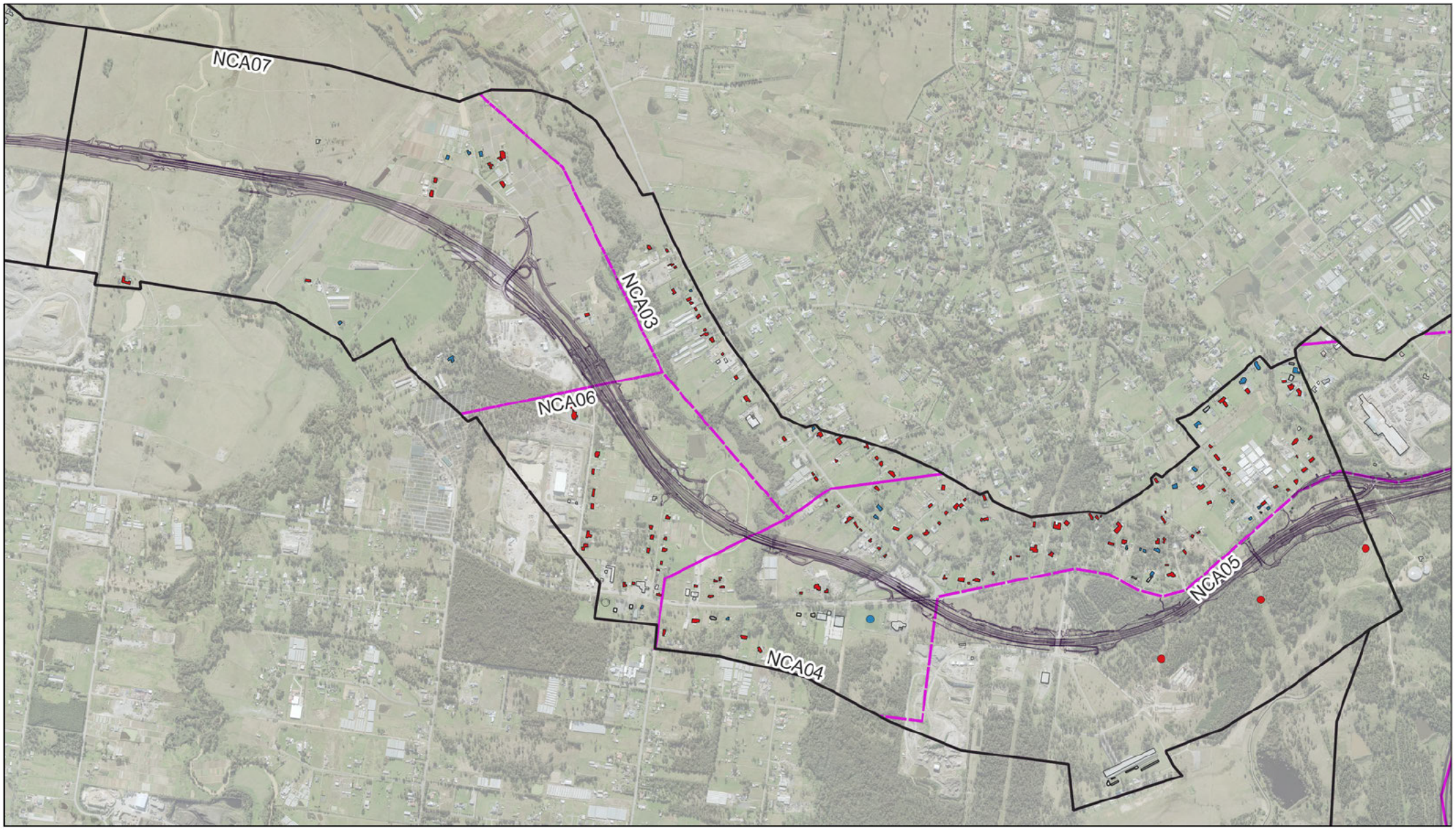

Paper Size ISO A4

0 200 400 600 800 m

N

Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

Legend

- M12 road design
- Study area
- Noise catchment area
- Qualifies
- No longer qualifies
- No

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 Central
Qualifying receivers with a LNDG concrete pavement surface

Project No. **12520102**
Revision No. **A**
Date. **03/08/2022**

Figure 8.6

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Data Source: MetroMap - Imagery (Date captured: 20/09/2021, Date extracted: 03/08/2022)

Created By: vlau

8.3.2 Noise barrier analysis

The noise barrier optimisation process described in section 8.1.2 has been used to determine the optimal heights of five noise barriers in the M12 Central package of the project.

Noise levels have been predicted with a LNDG concrete surface along the M12 carriageway as specified by the final detailed design. Additional benefits may be achieved by using a lower noise surface, such as OGA, in conjunction with the assessed noise barrier. The combination of a lower noise surface and a noise barrier has not been considered as OGA was not considered a reasonable mitigation option.

The results of the noise barrier analysis has changed from the results presented in the amendment report due to:

- Change in pavement surface along the M12 Motorway from concrete (+3 dB correction) to DGC (+0 dB correction). The change in road surface reduces the noise levels in the no mitigation scenario
- Vertical alignment changes between concept and detailed design
- Changes in traffic volumes due to the redirection of Salisbury Avenue volumes to Elizabeth Drive and Mamre Road.

A summary of the initial M12 Central noise barrier analysis is provided in Table 8.11 and the number of receivers that receive an insertion loss greater than 2 dBA is provided in Table 8.12. Barrier analysis charts are provided in Appendix F.

Table 8.11 M12 Central – Initial noise wall assessment summary

Noise wall	Optimised height	Is there a 5 dBA or 10 dBA benefit at the optimised barrier height?	Do we get a 5 dBA benefit at 5.0 m height if the optimised height is above 5.0 m?	Design height subject to a feasible and reasonable assessment
NW.02	3.5 m	No	-	**Not reasonable** Does not meet insertion loss requirements The noise criteria is exceeded by more than 5 dBA at one receiver therefore design of a barrier with an insertion loss less than 5 dBA is not reasonable.
NW.03	4.5 m	No	Yes, at one isolated receiver	**4.5 m** Review a noise barrier at 4.5 m as an insertion loss of 5 dBA is predicted
NW.04	7.0 m	No	Yes	**5.0 m** Review a noise barrier at 5.0 m as an insertion loss of 5 dBA is predicted. A design height of 5.0 m was assessed as the optimised height of 7.0 m did not provide an insertion loss of 10 dBA.
NW.05	3.5 m	No	-	**Not reasonable** There are no benefitting receivers Does not meet insertion loss requirements The noise criteria is exceeded by more than 5 dBA at 14 receivers therefore design of a barrier with an insertion loss less than 5 dBA is not reasonable.
NW.06	4.5 m	No	-	**Not reasonable** Does not meet insertion loss requirements The noise criteria is exceeded by more than 5 dBA at 24 receivers therefore design of a barrier with an insertion loss less than 5 dBA is not reasonable.

Table 8.12 M12 Central – Number of benefitting receivers

Noise wall	At-property treatments			Number of receivers with an insertion loss greater than 2 dBA		
	No barrier	Optimised height	Design height	No barrier	Optimised height	Design height
NW.02	7	3	3	0	2	2
NW.03	26	12	12	0	18	18
NW.04	40	39	40	0	11	11
NW.05	51	42	42	0	0	0
NW.06	33	31	31	0	14	14

Based on the outputs of the noise barrier analysis:

- Two noise barriers (NW.03 and NW.04) provide a 5 dBA insertion loss at the design height
- Three noise barriers (NW.02, NW.05 and NW.06) are not considered reasonable options as they do not achieve the required insertion loss. The noise criteria is exceeded by more than 5 dBA therefore design of a barrier with an insertion loss less than 5 dBA is not reasonable.

The predicted insertion loss contours provided in Figure 8.7 are based on a 5.0 m noise wall. In general the effectiveness of the barrier is higher for receivers located closer to the project road. The benefits of all noise barriers are reduced as most receivers are located at significant distances.

The outcome of the feasible and reasonable assessment for all noise barriers is provided in Table 8.13. As part of the feasible and reasonable assessment, the following have been considered:

- The number of receivers that require at-property treatment if no barrier is constructed
- The number of receivers that require at-property treatments at the optimised design height
- Determine whether a lower barrier height would provide a similar degree of noise benefits
- Review the benefitting receivers and identify whether at-property treatments should be considered in lieu of at-road treatments (Section 7.3 of the NMG)
- Review the changes in land use and future development in the area surrounding the M12 Motorway due to the Western Sydney Aerotropolis Plan.

Cost considerations, which would include an assessment of the treatment packages required with and without mitigation, have not been taken into account in this assessment.

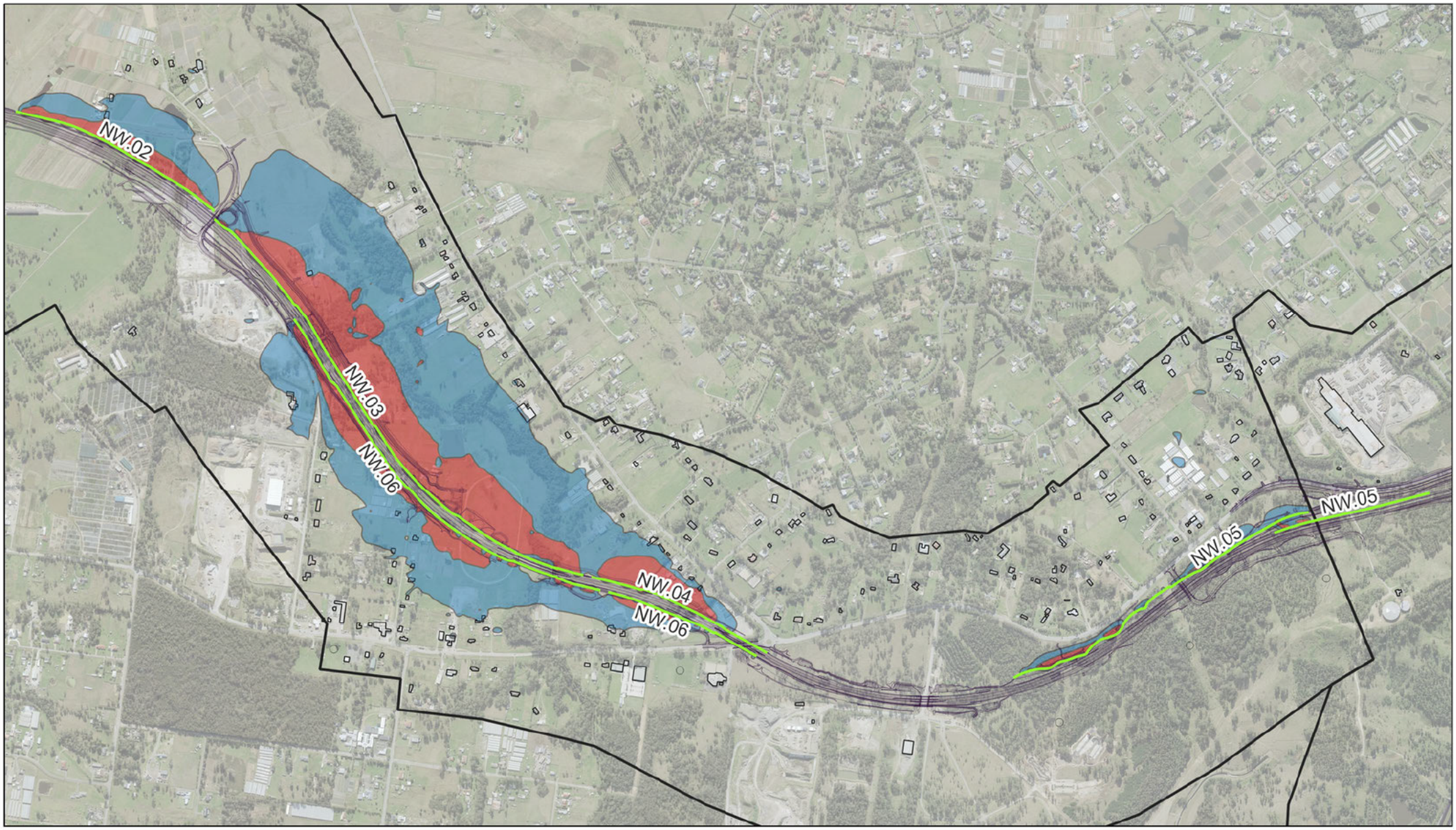
The at-property treatments required are summarised in section 8.3.3.

Table 8.13 M12 Central noise barrier analysis – Feasible and reasonable assessment

Noise wall	Length	Optimal design height from barrier analysis	Details	Outcome of feasible and reasonable assessment
NW.02	857 m	3.5 m	7 receivers would require at-property treatments without a noise wall With a design barrier height of 3.5 m: - 3 receivers would require at-property treatments - 2 receivers would receive an insertion loss of at least 2 dBA - No receivers would receive an insertion loss of 5 dBA - The maximum insertion loss is 3.7 dBA at Receiver 4833 (203-229 Clifton Avenue, Kemps Creek) A noise barrier can be designed to achieve an insertion loss of less than 5 dBA if all impacted receivers in the no-mitigation case exceeds the criteria by less than 5 dBA. One receiver exceeds the criteria by more than 5 dBA therefore design of a barrier with an insertion loss less than 5 dBA is not considered reasonable	**Not reasonable** - The noise barrier does not achieve the required insertion loss of 5 dBA. - The noise criteria is exceeded by more than 5 dBA at one receiver therefore design of a barrier with an insertion loss less than 5 dBA is not reasonable The barrier assessed in the DD model is less effective than the one assessed in the AR due to: - Change in the vertical alignment. No mitigation levels in the AR report were higher as the road elevation was higher. - Increased distance between the barrier and road due to the shared path and maintenance access track requirements.
NW.03	1,929 m	4.5 m	26 receivers would require at-property treatments without a noise wall With a design barrier height of 4.5 m: - 12 receivers would require at-property treatments - 18 receivers would receive an insertion loss of at least 2 dBA - One property is predicted to receive a 5 dBA insertion loss. The maximum insertion loss at this property (Receiver 4826 at 316 Clifton Avenue, Kemps Creek) is predicted to be 7.6 dBA - This receiver is an isolated single residence as it is separated from other residences by over 100 m (450 m from the nearest residence). - No other receiver would receive a 5 dBA insertion loss from the presence of this wall - As the receiver is an isolated residence, at-property treatments can replace at-road treatments. At-property treatments at this receiver is considered a reasonable option as no other receiver achieves the required insertion loss.	**Not reasonable** - The property that would receive a 5 dBA benefit from the noise wall is an isolated single residence where at-property treatments would be considered appropriate. - Augmentation of the noise wall would be required as part of the proposed future Mamre / Devonshire Road connection - Land between the Motorway and the receivers is subject to future development with changed land uses under the Western Sydney

Noise wall	Length	Optimal design height from barrier analysis	Details	Outcome of feasible and reasonable assessment
			- The proposed future Mamre / Devonshire Road connection would require augmentation of the barrier to allow for future construction which would reduce the effectiveness of the noise wall - NW.03 would be located directly under one of the future flight paths for the WSIA.	Aerotropolis Plan, including commercial and light industry, reducing the future effectiveness of the barrier - No future residential land uses would be allowed under the Western Sydney Aerotropolis Plan - NW.03 would be located directly under one of the future flight paths for the WSIA.
NW.04	836 m	5.0 m	40 receivers would require at-property treatments without a noise wall With a design barrier height of 5.0 m: - 40 receivers would require at-property treatments. This noise barrier does not reduce the number of at-property treatments. - 11 receivers would receive an insertion loss of at least 2 dBA - Two properties are predicted to receive an insertion loss of at least 5 dBA. Both properties are impacted from noise from Mamre Road and the M12 Motorway. The 5 dBA insertion loss is predicted on the façade facing the M12 Motorway. - Receiver 4596 (1285-1291 Mamre Road, Kemps Creek) with a predicted insertion loss of 6.7 dBA - Receiver 4598 (1293A Mamre Road, Kemps Creek) with a predicted insertion loss of 7.9 dBA. - The insertion loss at these receivers is due to the building shielding noise from Mamre Road. This introduces a pocket of lower noise behind the building. The barrier is not predicted to achieve a 5 dBA insertion loss on the other façades. - The noise barrier would require a gap to allow for the 500kV transmissions line. - The barrier would not provide a noise attenuation benefit to residences to the north-east of the project that is outside of the Western Sydney Aerotropolis Plan 2020. This land is currently impacted by noise from Mamre Road during the day and night, which would remain the case in 2036 if the M12 was not built.	**Not reasonable** - The noise barrier does not reduce the number of at-property treatments - The insertion loss requirement of 5 dBA or greater would only be achieved on a single façade at two properties. - The noise barrier would require a gap to allow for the 500kV transmissions line. - The barrier would not provide a noise attenuation benefit to residences to the north-east of the project that is outside of the Western Sydney Aerotropolis Plan 2020. This land is currently impacted by noise from Mamre Road during the day and night, which would remain the case in 2036 if the M12 was not built.
NW.05	1,951 m	3.5 m	51 receivers would require at-property treatments without a noise wall. With a design barrier height of 3.5 m: - 42 receivers would require at-property treatments - No receivers would achieve an insertion loss greater than 2 dBA	**Not reasonable** - The noise barrier does not achieve the required insertion loss of 5 dBA.

Noise wall	Length	Optimal design height from barrier analysis	Details	Outcome of feasible and reasonable assessment
			- The maximum insertion loss is 1.9 dBA at Receiver 4291 (49 Duff Road, Cecil Park) - The barrier is not considered effective as the receivers are impacted by noise from Elizabeth Drive and the M12 Motorway. The barrier would only shield noise from the M12 Motorway but would have no effect on noise from Elizabeth Drive. A noise barrier can be designed to achieve an insertion loss of less than 5 dBA if all impacted receivers in the no-mitigation case exceeds the criteria by less than 5 dBA. 14 receivers exceed the criteria by more than 5 dBA therefore design of a barrier with an insertion loss less than 5 dBA is not considered reasonable.	- No receivers would receive 2 dBA benefit. - The noise criteria is exceeded by more than 5 dBA at 14 receivers therefore design of a barrier with an insertion loss less than 5 dBA is not reasonable.
NW.06	2,259 m	4.5 m	33 receivers would require at-property treatments without a noise wall With a design barrier height of 4.5 m: - 31 receivers would require at-property treatments with a 4.5 m noise wall - 14 receivers would receive an insertion loss of at least 2 dBA - An insertion loss of 5 dBA is not achieved with the optimal barrier height of 4.5 m. - The maximum insertion loss is 3.8 dBA at Receiver 9002 (81 Clifton Avenue, Kemps Creek). - NW.06 would be partly located under one of the future flight paths for the WSIA - The noise barrier would require a gap to allow for the 500kV transmissions line. - The proposed future Mamre / Devonshire Road connection would require augmentation of the barrier to allow for future construction which would reduce the effectiveness of the noise wall. A noise barrier can be designed to achieve an insertion loss of less than 5 dBA if all impacted receivers in the no-mitigation case exceeds the criteria by less than 5 dBA. 24 receivers exceed the criteria by more than 5 dBA therefore design of a barrier with an insertion loss less than 5 dBA is not considered reasonable.	**Not reasonable** - The noise barrier does not achieve the required insertion loss of 5 dBA. - The noise criteria is exceeded by more than 5 dBA at 24 receivers therefore design of a barrier with an insertion loss less than 5 dBA is not reasonable - NW.06 would be partly located under one of the future flight paths for the WSIA - The noise barrier would require a gap to allow for the 500kV transmissions line. - Augmentation of the noise wall would be required as part of the proposed future Mamre / Devonshire Road connection.



Paper Size ISO A4

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

Insertion loss contour, dBA
- 2-5 dBA
- 5-10 dBA

M12 road design

Noise wall
- Existing
- New

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 Central
5.0m noise barrier insertion loss

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Date. **03/08/2022**

Figure 8.7

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8.3.3 At-property treatments

The at-property treatment package types and the number of residential buildings in each category are provided in Table 8.14. These treatment packages are based on the predicted noise levels with a LNDG concrete pavement surface along the M12 carriageway. The majority of the receivers are predicted to exceed the NCG criteria by up to 5 dBA. These receivers would be offered treatment package type one.

At-property treatments are recommended as the noise barriers assessment demonstrates that this mitigation option would not be considered reasonable.

In accordance with CoA E57 all at-property treatments must be implemented prior to operation of the project.

The locations of these receivers are shown in Figure 8.8 and listed in Table 8.15.

Table 8.14 M12 Central – At-property treatments for each identified floor (LNDG concrete surface)

Treatment package type	Exceedance of NCG criteria, dBA	Number of treatments	
		Residential	Non-residential
1	1-5	79	2 [1]
2	6-8	57	0
3	9-11	29	1 [1]
4	12-14	8	1
5	>14	7	1
Total		**180**	**2** [2]

Note 1: Passive recreation receivers are outdoor areas where at-property treatments do not apply. These receivers have been excluded.
Note 2: Excludes the passive recreation receivers that trigger Type 1 and Type 3 treatment packages.

Table 8.15 M12 Central – Treatment packages for identified receivers (LNDG concrete surface)

Receiver ID	Address	NCA	Receiver type	Floor	Treatment package
219	1383 - 1411 ELIZABETH DRIVE, KEMPS CREEK	NCA04	Residential	GF	Type 2
461	1183-1185 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	Type 1
813	1143 - 1147 MAMRE ROAD, KEMPS CREEK	NCA03	Residential	GF	Type 1
1272	1107 - 1115 MAMRE ROAD, KEMPS CREEK	NCA03	Residential	GF	Type 1
1484	1413 - 1415 ELIZABETH DRIVE, KEMPS CREEK	NCA04	Residential	GF	Type 3
4194	47 - 49 BROLEN WAY, CECIL PARK	NCA04	Residential	GF	Type 1
4194	47 - 49 BROLEN WAY, CECIL PARK	NCA04	Residential	F 1	Type 1
4195	51 - 53 BROLEN WAY, CECIL PARK	NCA04	Residential	GF	Type 1
4197	55 - 57 BROLEN WAY, CECIL PARK	NCA04	Residential	F 1	Type 1
4224	9 - 10 RIGNEY CLOSE, CECIL PARK	NCA04	Residential	GF	Type 1
4226	5 - 6 RIGNEY CLOSE, CECIL PARK	NCA04	Residential	GF	Type 1
4226	5 - 6 RIGNEY CLOSE, CECIL PARK	NCA04	Residential	F 1	Type 1
4227	5 - 6 RIGNEY CLOSE, CECIL PARK	NCA04	Residential	GF	Type 1
4264	2061 - 2063 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	Type 1
4265	2055 - 2059 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	Type 3
4265	2055 - 2059 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	F 1	Type 3
4266	2065 - 2071 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	Type 2

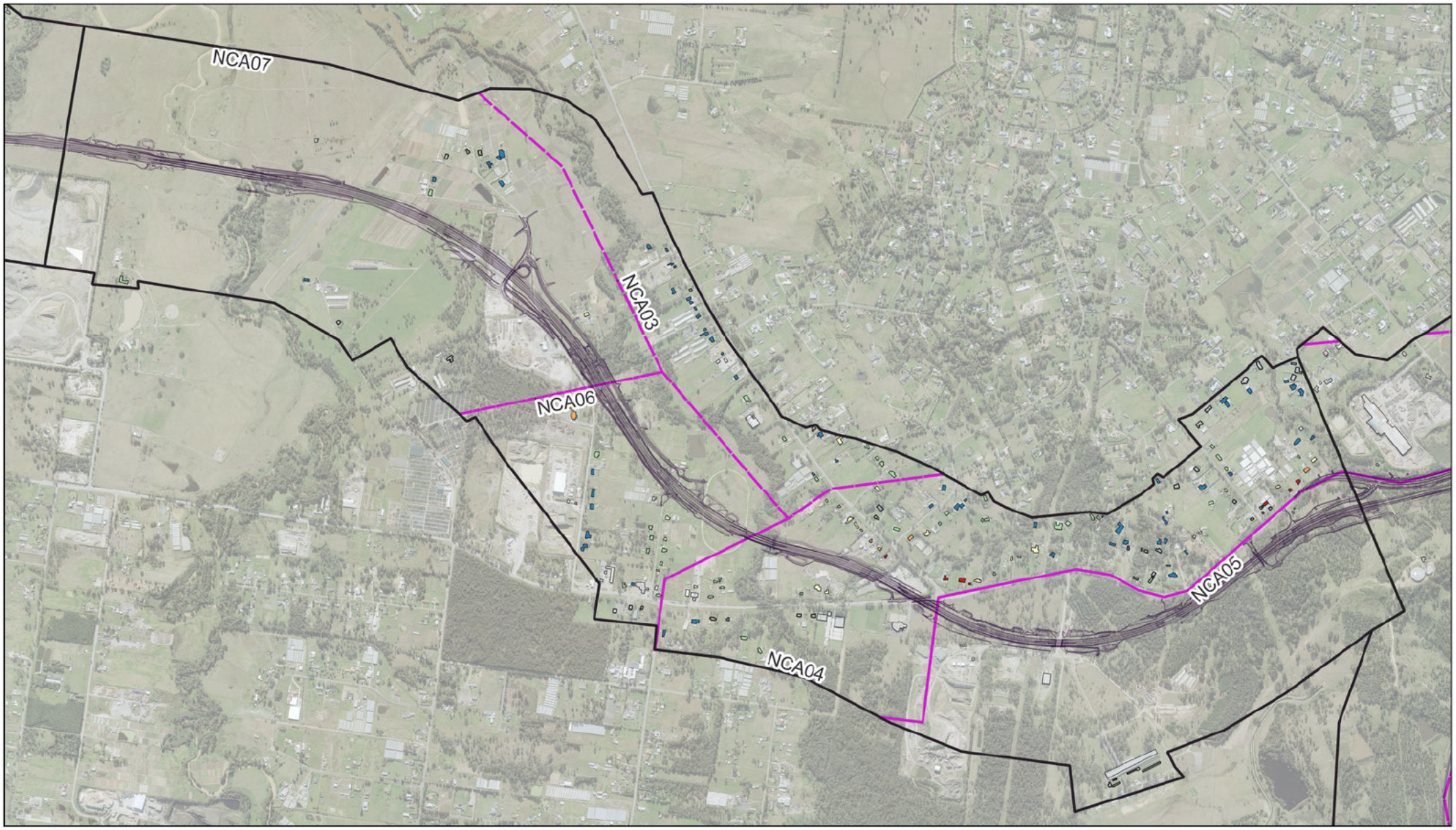
Receiver ID	Address	NCA	Receiver type	Floor	Treatment package
4267	2065 - 2071 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	Type 4
4267	2065 - 2071 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	F 1	Type 4
4268	2073 - 2081 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	Type 5
4269	2073 - 2081 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	Type 5
4269	2073 - 2081 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	F 1	Type 5
4270	2083 - 2087 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	Type 3
4272	2089 - 2109 ELIZABETH DRIVE, CECIL PARK	NCA04	Educational institute	GF	Type 5
4280	19 - 27 DUFF ROAD, CECIL PARK	NCA04	Residential	GF	Type 3
4280	19 - 27 DUFF ROAD, CECIL PARK	NCA04	Residential	F 1	Type 3
4281	29 - 35 DUFF ROAD, CECIL PARK	NCA04	Residential	GF	Type 2
4282	37 - 45 DUFF ROAD, CECIL PARK	NCA04	Residential	F 1	Type 1
4287	20 - 38 DUFF ROAD, CECIL PARK	NCA04	Residential	GF	Type 1
4289	40 DUFF ROAD, CECIL PARK	NCA04	Residential	GF	Type 1
4289	40 DUFF ROAD, CECIL PARK	NCA04	Residential	F 1	Type 2
4291	48 DUFF ROAD, CECIL PARK	NCA04	Residential	GF	Type 1
4291	48 DUFF ROAD, CECIL PARK	NCA04	Residential	F 1	Type 2
4292	58 - 76 DUFF ROAD, CECIL PARK	NCA04	Residential	GF	Type 1
4292	58 - 76 DUFF ROAD, CECIL PARK	NCA04	Residential	F 1	Type 2
4296	2131 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	Type 3
4299	2169 - 2177 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	Type 3
4299	2169 - 2177 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	F 1	Type 3
4302	2179 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	F 1	Type 1
4303	2197 - 2201 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	Type 1
4304	2203 - 2211 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	Type 1
4313	2219 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	Type 1
4314	2197 - 2201 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	Type 1
4316	2159 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	Type 1
4316	2159 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	F 1	Type 1
4318	2153 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	Type 1
4318	2153 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	F 1	Type 1
4321	25 - 27 WARANA ROAD, CECIL PARK	NCA04	Residential	GF	Type 1
4331	2235 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	F 1	Type 1
4332	2245 - 2249 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	Type 1
4335	2251 - 2253 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	Type 1
4335	2251 - 2253 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	F 1	Type 1
4337	2255 - 2263 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	Type 2
4337	2255 - 2263 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	F 1	Type 2
4338	2255 - 2263 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	Type 1
4339	2255 - 2263 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	Type 2

Receiver ID	Address	NCA	Receiver type	Floor	Treatment package
4417	1227 - 1229 ELIZABETH DRIVE, MOUNT VERNON	NCA04	Residential	GF	Type 1
4417	1227 - 1229 ELIZABETH DRIVE, MOUNT VERNON	NCA04	Residential	F 1	Type 2
4418	1231A ELIZABETH DRIVE, MOUNT VERNON	NCA04	Residential	GF	Type 1
4418	1231A ELIZABETH DRIVE, MOUNT VERNON	NCA04	Residential	F 1	Type 2
4419	1239 - 1245 ELIZABETH DRIVE, MOUNT VERNON	NCA04	Residential	GF	Type 1
4421	1231 - 1237 ELIZABETH DRIVE, MOUNT VERNON	NCA04	Residential	GF	Type 1
4422	1239 - 1245 ELIZABETH DRIVE, MOUNT VERNON	NCA04	Residential	GF	Type 3
4422	1239 - 1245 ELIZABETH DRIVE, MOUNT VERNON	NCA04	Residential	F 1	Type 3
4423	1247 - 1253 ELIZABETH DRIVE, MOUNT VERNON	NCA04	Residential	GF	Type 2
4423	1247 - 1253 ELIZABETH DRIVE, MOUNT VERNON	NCA04	Residential	F 1	Type 2
4424	1255 - 1261 ELIZABETH DRIVE, MOUNT VERNON	NCA04	Residential	GF	Type 3
4424	1255 - 1261 ELIZABETH DRIVE, MOUNT VERNON	NCA04	Residential	F 1	Type 3
4434	1263 - 1269 ELIZABETH DRIVE, MOUNT VERNON	NCA04	Residential	GF	Type 3
4435	1271 - 1277 ELIZABETH DRIVE, MOUNT VERNON	NCA04	Residential	GF	Type 3
4436	320 MOUNT VERNON ROAD, MOUNT VERNON	NCA04	Residential	GF	Type 2
4437	320 MOUNT VERNON ROAD, MOUNT VERNON	NCA04	Residential	GF	Type 2
4438	316 MOUNT VERNON ROAD, MOUNT VERNON	NCA04	Residential	GF	Type 2
4438	316 MOUNT VERNON ROAD, MOUNT VERNON	NCA04	Residential	F 1	Type 2
4575	309 - 319 MOUNT VERNON ROAD, MOUNT VERNON	NCA04	Residential	GF	Type 1
4577	316 MOUNT VERNON ROAD, MOUNT VERNON	NCA04	Residential	GF	Type 1
4578	324 MOUNT VERNON ROAD, MOUNT VERNON	NCA04	Residential	GF	Type 1
4579	326 - 332 MOUNT VERNON ROAD, MOUNT VERNON	NCA04	Residential	GF	Type 2
4579	326 - 332 MOUNT VERNON ROAD, MOUNT VERNON	NCA04	Residential	F 1	Type 2
4580	334 - 338 MOUNT VERNON ROAD, MOUNT VERNON	NCA04	Residential	GF	Type 2
4580	334 - 338 MOUNT VERNON ROAD, MOUNT VERNON	NCA04	Residential	F 1	Type 2

Receiver ID	Address	NCA	Receiver type	Floor	Treatment package
4582	340 - 344 MOUNT VERNON ROAD, MOUNT VERNON	NCA04	Residential	GF	Type 3
4583	346 - 356 MOUNT VERNON ROAD, MOUNT VERNON	NCA04	Residential	GF	Type 4
4584	1306 MAMRE ROAD, MOUNT VERNON	NCA04	Residential	GF	Type 5
4585	1279 ELIZABETH DRIVE, MOUNT VERNON	NCA04	Residential	GF	Type 4
4585	1279 ELIZABETH DRIVE, MOUNT VERNON	NCA04	Residential	F 1	Type 5
4588	343 MOUNT VERNON ROAD, MOUNT VERNON	NCA04	Residential	GF	Type 2
4594	321 - 333 MOUNT VERNON ROAD, MOUNT VERNON	NCA04	Residential	GF	Type 1
4596	1285 - 1291 MAMRE ROAD, KEMPS CREEK	NCA04	Residential	GF	Type 4
4596	1285 - 1291 MAMRE ROAD, KEMPS CREEK	NCA04	Residential	F 1	Type 4
4598	1293A MAMRE ROAD, KEMPS CREEK	NCA04	Residential	GF	Type 4
4598	1293A MAMRE ROAD, KEMPS CREEK	NCA04	Residential	F 1	Type 5
4599	1277 - 1283 MAMRE ROAD, KEMPS CREEK	NCA04	Residential	GF	Type 3
4599	1277 - 1283 MAMRE ROAD, KEMPS CREEK	NCA04	Residential	F 1	Type 4
4600	1269 - 1275 MAMRE ROAD, KEMPS CREEK	NCA04	Residential	GF	Type 3
4601	1269 - 1275 MAMRE ROAD, KEMPS CREEK	NCA04	Residential	GF	Type 3
4602	1261 - 1267 MAMRE ROAD, KEMPS CREEK	NCA04	Residential	GF	Type 3
4603	1257 MAMRE ROAD, KEMPS CREEK	NCA04	Residential	GF	Type 2
4608	1247 MAMRE ROAD, KEMPS CREEK	NCA04	Residential	GF	Type 3
4609	1239 - 1245 MAMRE ROAD, KEMPS CREEK	NCA03	Residential	GF	Type 1
4609	1239 - 1245 MAMRE ROAD, KEMPS CREEK	NCA03	Residential	F 1	Type 2
4610	1233 - 1237 MAMRE ROAD, KEMPS CREEK	NCA03	Residential	GF	Type 1
4613	1260 - 1264 MAMRE ROAD, MOUNT VERNON	NCA04	Residential	GF	Type 2
4613	1260 - 1264 MAMRE ROAD, MOUNT VERNON	NCA04	Residential	F 1	Type 3
4614	1258 MAMRE ROAD, MOUNT VERNON	NCA03	Residential	GF	Type 2
4614	1258 MAMRE ROAD, MOUNT VERNON	NCA03	Residential	F 1	Type 2
4615	1242 - 1256 MAMRE ROAD, MOUNT VERNON	NCA03	Residential	GF	Type 2
4615	1242 - 1256 MAMRE ROAD, MOUNT VERNON	NCA03	Residential	F 1	Type 2
4616	1242 - 1256 MAMRE ROAD, MOUNT VERNON	NCA03	Residential	GF	Type 2
4616	1242 - 1256 MAMRE ROAD, MOUNT VERNON	NCA03	Residential	F 1	Type 2
4619	1234 MAMRE ROAD, MOUNT VERNON	NCA03	Residential	GF	Type 2
4619	1234 MAMRE ROAD, MOUNT VERNON	NCA03	Residential	F 1	Type 2
4686	1218 MAMRE ROAD, MOUNT VERNON	NCA03	Residential	GF	Type 1
4686	1218 MAMRE ROAD, MOUNT VERNON	NCA03	Residential	F 1	Type 1
4689	1236 - 1240 MAMRE ROAD, MOUNT VERNON	NCA03	Residential	GF	Type 1
4691	1226 - 1232 MAMRE ROAD, MOUNT VERNON	NCA03	Residential	GF	Type 2
4691	1226 - 1232 MAMRE ROAD, MOUNT VERNON	NCA03	Residential	F 1	Type 3
4693	1205 - 1217 MAMRE ROAD, KEMPS CREEK	NCA03	Residential	GF	Type 2

Receiver ID	Address	NCA	Receiver type	Floor	Treatment package
4695	1341 - 1347 ELIZABETH DRIVE, KEMPS CREEK	NCA04	Residential	GF	Type 3
4696	1349 - 1355 ELIZABETH DRIVE, KEMPS CREEK	NCA04	Residential	GF	Type 3
4698	1357 - 1371 ELIZABETH DRIVE, KEMPS CREEK	NCA04	Residential	GF	Type 2
4706	1179 - 1189 MAMRE ROAD, KEMPS CREEK	NCA03	Residential	GF	Type 1
4706	1179 - 1189 MAMRE ROAD, KEMPS CREEK	NCA03	Residential	F 1	Type 2
4799	1097 - 1099 MAMRE ROAD, KEMPS CREEK	NCA03	Residential	GF	Type 1
4799	1097 - 1099 MAMRE ROAD, KEMPS CREEK	NCA03	Residential	F 1	Type 1
4803	1101 - 1105 MAMRE ROAD, KEMPS CREEK	NCA03	Residential	GF	Type 1
4803	1101 - 1105 MAMRE ROAD, KEMPS CREEK	NCA03	Residential	F 1	Type 1
4805	1107 - 1115 MAMRE ROAD, KEMPS CREEK	NCA03	Residential	GF	Type 1
4806	1117 MAMRE ROAD, KEMPS CREEK	NCA03	Residential	GF	Type 1
4807	1127 - 1133 MAMRE ROAD, KEMPS CREEK	NCA03	Residential	GF	Type 1
4808	1127 - 1133 MAMRE ROAD, KEMPS CREEK	NCA03	Residential	GF	Type 1
4810	1135 - 1141 MAMRE ROAD, KEMPS CREEK	NCA03	Residential	GF	Type 1
4811	1135 - 1141 MAMRE ROAD, KEMPS CREEK	NCA03	Residential	GF	Type 1
4812	1149 - 1155 MAMRE ROAD, KEMPS CREEK	NCA03	Residential	GF	Type 1
4813	1149 - 1155 MAMRE ROAD, KEMPS CREEK	NCA03	Residential	GF	Type 1
4814	1157 - 1161 MAMRE ROAD, KEMPS CREEK	NCA03	Residential	GF	Type 1
4815	1169 - 1177 MAMRE ROAD, KEMPS CREEK	NCA03	Residential	GF	Type 1
4826	316 CLIFTON AVENUE, KEMPS CREEK	NCA07	Residential	GF	Type 3
4826	316 CLIFTON AVENUE, KEMPS CREEK	NCA07	Residential	F 1	Type 3
4831	146 CLIFTON AVENUE, KEMPS CREEK	NCA07	Residential	GF	Type 1
4831	146 CLIFTON AVENUE, KEMPS CREEK	NCA07	Residential	F 1	Type 1
4833	203 - 229 CLIFTON AVENUE, KEMPS CREEK	NCA07	Residential	GF	Type 2
4834	203 - 229 CLIFTON AVENUE, KEMPS CREEK	NCA07	Residential	GF	Type 1
4841	235 - 245 CLIFTON AVENUE, KEMPS CREEK	NCA07	Residential	GF	Type 1
4841	235 - 245 CLIFTON AVENUE, KEMPS CREEK	NCA07	Residential	F 1	Type 1
4842	235 - 245 CLIFTON AVENUE, KEMPS CREEK	NCA07	Residential	GF	Type 1
4843	235 - 245 CLIFTON AVENUE, KEMPS CREEK	NCA07	Residential	GF	Type 1
4843	235 - 245 CLIFTON AVENUE, KEMPS CREEK	NCA07	Residential	F 1	Type 1
5170	1669 ELIZABETH DRIVE, BADGERYS CREEK 2555	NCA07	Residential	GF	Type 2
5170	1669 ELIZABETH DRIVE, BADGERYS CREEK 2555	NCA07	Residential	F 1	Type 1
5544	1431 - 1433 ELIZABETH DRIVE, KEMPS CREEK	NCA06	Residential	GF	Type 2
5546	51 SALISBURY AVENUE, KEMPS CREEK	NCA06	Residential	GF	Type 1
5546	51 SALISBURY AVENUE, KEMPS CREEK	NCA06	Residential	F 1	Type 1
5547	LOT 7A / DP2566	NCA06	Residential	GF	Type 2

Receiver ID	Address	NCA	Receiver type	Floor	Treatment package
5548	442 CLIFTON AVENUE, KEMPS CREEK	NCA06	Residential	GF	Type 1
5550	434 CLIFTON AVENUE, KEMPS CREEK	NCA06	Residential	GF	Type 1
5551	422 CLIFTON AVENUE, KEMPS CREEK	NCA06	Residential	GF	Type 1
5552	410 CLIFTON AVENUE, KEMPS CREEK	NCA06	Residential	GF	Type 1
5553	395 - 409 CLIFTON AVENUE, KEMPS CREEK	NCA06	Residential	GF	Type 1
5556	395 - 409 CLIFTON AVENUE, KEMPS CREEK	NCA06	Residential	GF	Type 2
5560	41 - 49 SALISBURY AVENUE, KEMPS CREEK	NCA06	Residential	GF	Type 2
5560	41 - 49 SALISBURY AVENUE, KEMPS CREEK	NCA06	Residential	F 1	Type 2
5561	41 - 49 SALISBURY AVENUE, KEMPS CREEK	NCA06	Residential	GF	Type 2
5563	33 - 39 SALISBURY AVENUE, KEMPS CREEK	NCA06	Residential	GF	Type 2
5564	26 - 32 SALISBURY AVENUE, KEMPS CREEK	NCA06	Residential	GF	Type 3
5566	36 SALISBURY AVENUE, KEMPS CREEK	NCA06	Residential	GF	Type 2
5566	36 SALISBURY AVENUE, KEMPS CREEK	NCA06	Residential	F 1	Type 3
5567	44 - 56 SALISBURY AVENUE, KEMPS CREEK	NCA06	Residential	GF	Type 2
5568	44 - 56 SALISBURY AVENUE, KEMPS CREEK	NCA06	Residential	GF	Type 2
5569	1431 - 1433 ELIZABETH DRIVE, KEMPS CREEK	NCA06	Residential	GF	Type 2
5570	1383 - 1411 ELIZABETH DRIVE, KEMPS CREEK	NCA04	Residential	GF	Type 2
5571	1383 - 1411 ELIZABETH DRIVE, KEMPS CREEK	NCA04	Residential	GF	Type 2
5572	1383 - 1411 ELIZABETH DRIVE, KEMPS CREEK	NCA04	Residential	GF	Type 2
5575	617 DEVONSHIRE ROAD, KEMPS CREEK	NCA04	Residential	GF	Type 1
5576	1630 ELIZABETH DRIVE, KEMPS CREEK	NCA04	Residential	GF	Type 1
5579	1590 ELIZABETH DRIVE, KEMPS CREEK	NCA04	Residential	GF	Type 2
5579	1590 ELIZABETH DRIVE, KEMPS CREEK	NCA04	Residential	F 1	Type 2
5586	1572 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	Type 2
5586	1572 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	F 1	Type 2
9001	1271 - 1277 ELIZABETH DRIVE, MOUNT VERNON	NCA04	Residential	GF	Type 5
9002	81 CLIFTON AVENUE, KEMPS CREEK	NCA06	Place of worship	GF	Type 4
9004	258 CLIFTON AVENUE, KEMPS CREEK	NCA07	Residential	GF	Type 1



Paper Size ISO A4

0 200 400 600 800 m

Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- M12 road design
- Study area
- Noise catchment area

Treatment package

- Type 1
- Type 2
- Type 3
- Type 4
- Type 5

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 Central
LNDG concrete at-property treatments

Project No. **12520102**
Revision No. **A**
Date. **03/08/2022**

Figure 8.8

Document Path: \\ghdnet\ghd\AU\Sydney\Projects\21\12520102\Tech\Noise\00_GIS\12520102_GIS.qgz

Data Source: MetroMap - Imagery (Date captured: 20/09/2021, Date extracted: 03/08/2022)

Created By: vlau

9. Operational vibration impacts

Operational vibration impacts can be due to ground-borne vibration or airborne noise resulting in vibration of lightweight elements. Ground-borne vibration is typically generated from road projects due to heavy vehicles travelling at high speeds over an uneven surface such as a degrading road surface or over bridge expansion joints.

Distances where there is the potential for operational vibration impacts are based on the following guidelines:

- The *Road Noise Policy* (DECCW, 2011) states that vehicles operating on a roadway are unlikely to cause a perceptible level of vibration if the receiver is more than 20 metres from the roadway
- The *Transit Noise and Vibration Impact Assessment Manual* (FTA, 2018) states that ground-borne vibration can be perceptible at distances up to 23 metres from irregular road surfaces.

The FTA recommended distance of 23 metres from the roadway has been adopted for a conservative assessment. The nearest structures located to the road are provided in Table 9.1. No impacts are anticipated as no structures are located within 23 metres of the road.

Table 9.1 Distance to nearest sensitive receiver

Package	Nearest sensitive receiver		Distance to road, m
	Receiver ID	Address	
M12 West	5167	1793 - 1951 Elizabeth Drive, Badgerys Creek	85
M12 Central	4598	1357 - 1371 Elizabeth Drive, Kemps Creek	87

Low frequency noise emissions from heavy vehicle pass-bys has the potential to cause windows and lightweight structures to rattle which may be perceptible to building occupants. Low frequency noise emissions would typically be generated during heavy vehicle acceleration or braking and would generally be considered negligible when travelling at constant speeds. Light vehicle pass-bys would not typically generate low frequency noise emissions which would cause lightweight structure elements to vibrate.

The following measures have been implemented on this project which will minimise the potential for operational vibration impacts:

- Design to locate the road at distance from sensitive receivers
- Maintain the road surface to reduce the amount of irregularities
- Selection of appropriate expansion joints to minimise vibration over bridges.

Operational vibration impacts are not expected as a result of the project as the nearest sensitive receivers are over 23 metres from the road and no further assessment would be required.

10. Community consultation strategy

10.1 Condition of approval

Condition E52(d) of the CoA specifies that a consultation strategy shall be developed to seek feedback from directly affected landowners on the noise and vibration mitigation measures.

10.2 Stakeholder consultation

This ONVR was provided by TfNSW to Penrith City Council and Liverpool City Council for comment and review. The consultation is provided in Appendix G. Penrith City Council and Liverpool City Council provided no comments on this ONVR.

This ONVR details the sensitive receivers that qualify for consideration of additional noise mitigation. TfNSW would contact the affected receivers to discuss their eligibility for at-property treatments and the scope of the treatment package.

All property owners eligible for at-property noise treatment will be sent a letter by TfNSW notifying them of their eligibility and the process for scoping and implementing the measures. TfNSW would contact residents to arrange a site inspection of their property and assess the suitability of treatment and determine the level of mitigation required in accordance with the At-Receiver Road Noise Treatment Guideline (TfNSW, 2022).

10.3 Consultation strategy

All consultation with landowners and stakeholders would be undertaken in accordance with the Overarching Community Communication Strategy approved by DPIE in July 2021. This strategy outlines the ways in which noise and vibration mitigation measures will be communicated and include protocols for the management of enquiries and complaints.

A communications register will be implemented to record all community and stakeholder contact. This register would include, at a minimum, the following details:

– Name and contact details of the stakeholder
– Time and date of the communications
– Nature, location and details of the enquiry, complaint or feedback.

Stakeholder communications protocol will be developed and managed by Transport for NSW to ensure enquiries consistent management of all community and stakeholder enquiries. These enquiries will be managed by Transport for NSW using Consultation Manager.

10.3.1 Enquiry and feedback management procedure

Community and stakeholder enquiries will be managed by:

– Recording the nature of the enquiry or feedback
– Investigating whether the enquiry or feedback requires further action
– Providing a response involving the required level of detail for resolution.

10.3.2 Complaints management process

The procedures for managing complaints should follow the Overarching Community Communication Strategy approved by DPIE in July 2021. This document can be found online at the DPIE major projects website.

Complaints from impacted stakeholders may arise due to the dissatisfaction from the implemented noise and vibration measures or due to perceived exceedances of noise and/or vibration levels.

The complaints management process will involve:

- Recording the nature of the complaint
- Reviewing the complaint to identify the likely cause
- For complaints relating to high noise or vibration levels, additional monitoring would be considered to determine operational noise and/or vibration levels at the complainant's property
- The measured levels will be reviewed against the road traffic noise criteria and the predicted levels in this ONVR to determine whether the implemented mitigation measure is sufficient
- Where there is a residual exceedance of the criteria, additional investigations will be undertaken to determine if alternative mitigation measures are reasonable and feasible
- A response will be provided to the complainant detailing the findings of any investigation and if applicable outcomes for resolution.

11. Operational noise compliance report

11.1 Condition of approval

Condition E58 of the CoA requires monitoring of operational noise within 12 months of the commencement of the CSSI to compare actual noise performance of the CSSI against the noise performance predicted in this ONVR.

Condition 60 of the CoA states that an Operational Noise Compliance Report (ONCR) be prepared in accordance with the *Model Validation Guideline* (Roads and Maritime, 2018) to document the findings of the monitoring undertaken to satisfy CoA E58.

11.2 Operational noise monitoring

Operational road traffic noise monitoring would be undertaken to determine compliance with the operational noise levels predicted in this ONVR.

Noise monitoring sites shall be selected based on the following:

– To cover a range of road traffic noise conditions encountered near the project
– To avoid locations with significant sources other than road traffic
– Consideration of topography and visibility to the road surrounding the site.

The selected monitoring locations would be representative of impacts on surrounding receivers. Where possible, noise monitoring should be completed in the same locations identified in the EIS, Amendment Report and this ONVR. If alternative locations are proposed, these would be selected such that they are representative of the most affected sensitive receivers in that area. Additional locations would be considered where a complaint relating to operational road traffic noise from the project has been received from the community.

At least seven consecutive days of noise monitoring would be undertaken. Noise monitoring would be undertaken in accordance with the *Road Noise Policy* (DECCW, 2011) and the *Noise Policy for Industry* (EPA, 2017). The NPfI states that traffic noise should be measured during periods with traffic flows representative of normal conditions (e.g. not during school holidays). In accordance with CoA E59, classified traffic counts would be undertaken simultaneously with the noise measurements to confirm traffic volumes, traffic speeds and traffic mix assumptions.

11.3 Operational compliance assessment

The ONCR would be prepared in accordance with the *Model Validation Guideline* (Roads and Maritime, 2018). This guideline states that compliance may be determined by:

– Compliance by noise measurement
– Compliance by measurement and modelling.

Compliance by measurement and modelling would be required in order to address CoA E60(e). This method is undertaken as it is not practicable to measure compliance at all receivers. The model is used to supplement the measured noise levels in order to assess compliance at all receivers assessed in the ONVR.

Assessment of operational noise compliance would involve:

– Measurement of operational traffic noise levels to address CoA E58
– Classified traffic counts must be undertaken simultaneously with the noise measurements to address CoA 59
– A compliance noise model would be prepared based on the detailed design model. This would include a:
    - Validation using the measured operational traffic noise levels using the classified traffic counts undertaken at the same time as the noise measurements
    - Review the ‘for construction’ and the ‘as-built’ drawings to identify any differences in the designs
    - Review the traffic count data to identify differences between the measured and detailed design modelled traffic volumes, traffic speeds and traffic mix. If the differences are not significantly different from the

opening traffic parameters, then the detailed design traffic parameters for the design year should be implemented into the compliance noise model

- Updating the model to include the 'as-built' design and traffic data.

– A validated compliance noise model would be used to predict opening year (2026) road traffic noise levels. These levels would be compared to the ONVR opening year (2026) predictions
– Where the validated noise model predicts a noise level at a receiver that is more than 2 dBA higher than the detailed design predicted noise level, mitigation should be re-evaluated for that receiver
– Where traffic parameters are significantly different from those used in detailed design and result in higher noise levels, then all NMG mitigation triggers identified in detailed design should be re-evaluated.

11.4 Reporting

The ONCR must be submitted to the Planning Secretary and the EPA for information within 60 days of completing the operational noise monitoring (required by Condition E58) and be made publicly available. The ONCR would be prepared in accordance with E60 which states:

– compliance with the operational noise levels predicted in the review of operational noise mitigation measures required under **Condition E52**;
– compliance with the operational noise levels in terms of criteria and noise goals established in the NSW Road Noise Policy (DECCW, 2011);
– methodology, location and frequency of noise monitoring undertaken, including grouping monitoring sites at which CSSI noise levels are ascertained with specific reference to locations indicative of impacts on receivers. Monitoring locations must be grouped by -
    i. pavement type,
    ii. topography;
– visibility of sensitive receivers, i.e. line of sight and shielded by mounds and/or noise walls;
– model light and heavy vehicles separately;
– pavement corrections for light and heavy vehicles;
– details on the acoustic performance of the different pavement types used for the CSSI ;
– effects of meteorological conditions on traffic noise consistent with the requirements of the NSW Road Noise Policy (DECCW, 2011);
– details of any complaints and enquiries received in relation to operational noise generated by the CSSI between the date of commencement of operation and the date the report was prepared;
– any required recalibrations of the noise model taking into consideration factors such as noise monitoring, and actual traffic numbers and proportions;
– an assessment of the performance and effectiveness of applied noise mitigation measures together with a review and if necessary, reassessment of mitigation measures; and
– identification of additional measures to those identified in the review of noise mitigation measures required by **Condition E52**, that are to be implemented with the objective of meeting the criteria outlined in the NSW Road Noise Policy (DECCW, 2011), when these measures are to be implemented and how their effectiveness is to be measured and reported to the Planning Secretary and the EPA.

11.5 Independent verification

In accordance with CoA E50, an independent and experienced noise specialist must be approved by the Planning Secretary to verify the validity of the Operational Noise Compliance Report. The review will be submitted to the Department of Planning and Environment inclusive of all relevant documentation within 30 days of the verification.

12. Conclusion

This Operational Noise and Vibration Review has been prepared to address the Conditions of Approval for the project. This ONVR has been prepared based on the following design packages:

– 100 percent detailed design M12 West package
– 100 percent detailed design M12 Central package.

12.1 M12 West

12.1.1 No mitigation summary

No-mitigation operational noise impacts were assessed using a Plain Concrete Pavement (PCP) road surface along the main M12 carriageway and Dense Graded Asphalt (DGA) along ramps and bridges. A summary of the predicted exceedances for the no-mitigation scenario follows and are based on predicted 'Build' noise impacts during the design year (2036):

– The NCG noise criteria is exceeded at 23 residential receiver floors during the day and 25 residential receiver floors during the night
– A total of 25 residential receiver floors would qualify for consideration of additional noise mitigation
– The primary noise mitigation trigger is due to the increase in noise level. This is due to facades being exposed to a new source of road traffic noise.
– Receivers located near the project road alignment are expected to experience levels above the cumulative limit.
– One receiver is expected to experience acute noise levels.

12.1.2 Mitigation summary

12.1.2.1 Pavement treatments

The following pavement surfaces were considered:

– Open graded asphalt (OGA) which reduces noise levels by 5 dBA when compared to the PCP pavement surface used for the no-mitigation assessment
– Low noise diamond grind (LNDG) concrete which reduces noise levels by 3 dBA when compared to the PCP pavement surface used for the no-mitigation assessment.

OGA road surfaces are not considered a reasonable mitigation option due to safety and cost considerations. An OGA surface would require routine maintenance and re-sheeting.

LNDG is proposed as the design surface as it would reduce the road traffic noise levels from the M12 Motorway by up to 3 dBA. This surface provides construction and maintenance benefits in addition to reducing road traffic noise levels.

12.1.2.2 Noise barriers

Two noise barriers were considered as part of this M12 West package. The assessed barriers are:

– NW.01: barrier along the eastbound M12 Motorway carriageway near Luddenham Road
– NW.08: barrier along the eastbound M12 Motorway carriageway near Farmingdale Court.

NW.01 and NW.08 are not considered are not considered reasonable mitigation options as they do not provide the required insertion loss.

12.1.2.3 At property treatments

At-property treatment packages have been considered based on the following road surfaces:

– LNDG road surface along the M12 Motorway alignment
– DGA road surface on the ramps and bridges associated with the M12 and M7 interchange.

The majority of at-property treatments are Type 1 or Type 2 treatments. Receivers located within close proximity to the project road (M12 Motorway) would require Type 3 treatments or above due to higher road traffic noise levels.

12.2 M12 Central

12.2.1 No mitigation summary

No-mitigation operational noise impacts were assessed using a Plain Concrete Pavement (PCP) road surface along the main M12 carriageway and Dense Graded Asphalt (DGA) along bridges. A summary of the predicted exceedances for the no-mitigation scenario follows and are based on predicted 'Build' noise impacts during the design year (2036):

– The NCG noise criteria is exceeded at 222 residential receiver floors during the day and 223 residential receiver floors during the night
– A total of 214 residential receiver floors would qualify for consideration of additional noise mitigation
– The primary noise mitigation trigger is due to the increase in noise level. This is due to facades being exposed to a new source of road traffic noise.
– The project road contribution is expected to be acute at residences located on Elizabeth Drive, Mamre Road, Clifton Avenue and Salisbury Avenue. These located are located close to the M12 Motorway

12.2.2 Mitigation summary

12.2.2.1 Pavement treatments

The following pavement surfaces were considered:

– Open graded asphalt (OGA) which reduces noise levels by 5 dBA when compared to the PCP pavement surface used for the no-mitigation assessment
– Low noise diamond grind (LNDG) concrete which reduces noise levels by 3 dBA when compared to the PCP pavement surface used for the no-mitigation assessment.

OGA road surfaces are not considered a reasonable mitigation option due to safety and cost considerations. An OGA surface would require routine maintenance and re-sheeting.

LNDG is proposed as the design surface as it would reduce the road traffic noise levels from the M12 Motorway by up to 3 dBA. This surface provides construction and maintenance benefits in addition to reducing road traffic noise levels.

12.2.2.2 Noise barriers

Five noise barriers were considered as part of the M12 Central package. The assessed barriers are:

– NW.02: barrier along the eastbound M12 Motorway carriageway east of the Clifton Avenue bridge
– NW.03: barrier along the eastbound M12 Motorway carriageway east of the Clifton Avenue bridge to Salisbury Avenue
– NW.04: barrier along the eastbound M12 Motorway carriageway from Salisbury Avenue to Elizabeth Drive
– NW.05: barrier along the eastbound M12 Motorway carriageway near the Elizabeth Drive Connection
– NW.06: barrier along the westbound M12 Motorway carriageway from Elizabeth Drive to Clifton Avenue.

The assessed noise barriers are not considered reasonable mitigation options as they do not provide the required level of insertion loss.

12.2.2.3 At property treatments

At-property treatment packages have been considered based on the following road surfaces:

– LNDG road surface along the M12 Motorway alignment

– DGA road surface on the ramps and bridges associated with the M12 and M7 interchange.

The majority of at-property treatments are Type 1 or Type 2 treatments. Receivers that require Type 3 treatments or above experience higher road traffic noise levels and are generally located within close proximity to the project roads (Elizabeth Drive and the M12 Motorway).

13. References

Department of Environment, Climate Change and Water (2011), *Road Noise Policy*

Environment Protection Authority (2017), *Noise Policy for Industry*

FTA (2018), *Transit Noise and Vibration Impact Assessment Manual*

Roads and Maritime Services (October 2019), *M12 Motorway Environmental Impact Statement: Appendix G Landscape character, visual impact assessment and urban design report*

Roads and Maritime Services (October 2019), *M12 Motorway Environmental Impact Statement: Appendix K Noise and Vibration Assessment Report*

Roads and Maritime Services (2015), *Noise Criteria Guideline*

Roads and Maritime Services (2015), *Noise Mitigation Guideline*

Roads and Maritime Services (2018), *Noise Model Validation Guideline*

Roads and Maritime Services (2016), *Preparing an Operational Traffic and Construction Noise and Vibration Assessment Report*

Roads and Traffic Authority (2001), *Environmental Noise Management Manual*

Transport for NSW (2022), *At-Receiver Road Noise Treatment Guideline*

Transport for NSW (May 2020), *M12 Motorway amendment report: Noise and vibration updated technical report*

Transport for NSW (December 2020), *M12 Motorway amendment report: Submissions report*

UK Department of Transport (1988), *Calculation of Road Traffic Noise*

Appendices

Appendix A

Independent verification

18 October 2022
TM441-01F02 M12 Motorway ONVR Verification (r0).docx

Transport for NSW
MS SUZETTE GRAHAM
suzette.graham@transport.nsw.gov.au

From: Michael Chung [Michael.Chung@renzotonin.com.au]

M12 Motorway - Operational Noise Modelling and Operational Noise & Vibration Review (ONVR) - Review / Verification

1 INTRODUCTION

In accordance with Condition E50 of the Minister's Condition of Approval (MCoA) (Application no. SS1 9364), verification by an independent and experienced noise specialist is required for the noise modelling and assessment of the M12 Motorway. More specifically, Condition E50 states the following:

> "***Operational Noise***
>
> ***E50*** *An independent and experienced noise specialist must be approved by the Planning Secretary to verify the validity (including being accurate and consistent with the requirements of this approval) of the:*
>
> *(a) operational noise modelling required under* ***Condition E51****;*
>
> *(b)* ***Operational Noise Review*** *required under* ***Condition E52****; and*
>
> *(c)* ***Operational Noise Compliance Report*** *required under* ***Condition E60****."*

Based on the requirements of Condition E50 and the completion of the operational noise modelling and the Operational Noise and Vibration Review (ONVR) report [ref. *12520102-REP_E-M12 ONVR.docx (Rev E)*, dated 14 October 2022] prior to its final issue for compliance with the requirements of the Ministers Conditions of Approval, the SWTC and relevant environmental documents, verification of Parts (a) and (b) of Condition E50 has been undertaken by a suitably qualified and experienced noise and vibration expert.

2 SCOPE OF WORKS

The following tasks describe the methodology used to review and verify the operational noise modelling and the ONVR:

1. The methodology used to identify reasonable and feasible noise and vibration mitigation measures was reviewed.
2. Confirmation that the appropriate operational noise and vibration objectives and levels for adjoining development, including sensitive receivers, were considered.
3. Overall and general review of the operational noise model was conducted to confirm appropriate assumptions, inputs and modelling methods were made in accordance with the SWTC and relevant policies and guidelines.
4. Confirmation that predicted noise levels are reasonable and consistent with the inputs of the noise model.
5. Confirmation that the proposed noise and vibration mitigation is in accordance with the commitments made in the EIS, Submissions Reports, Amendment Report and in the MCoA.
6. Consideration of assumptions made in the reasonable and feasible analysis of noise mitigations and verification that the proposed mitigation measures are justified based on the predicted noise levels and the projects' objectives.
7. The ONVR community consultation strategy was reviewed in terms of any consultation proposed with property owners directly impacted by mitigation measures proposed for the project.
8. A review of the procedures for operational noise and vibration complaints management, including investigation and monitoring (subject to complainant agreements) to ensure they are consistent with the relevant guidelines.
9. Preparation of this letter based on the final operational noise modelling and ONVR, summarising all verification activities to be submitted with the final ONVR.

3 INPUTS

The review relied on information to facilitate the above scope of works. This includes, but is not necessarily limited to, the following:

- noise and vibration baseline monitoring results
- development of operational noise model including assumptions, inputs and modelling methods
- noise modelling results
- proposed noise mitigation measures including reasonable and feasible analysis outcomes
- the ONVR consultation strategy

- draft and final ONVRs.

4 MEETINGS

Meetings were held on an as needs basis.

5 DELIVERABLES

A verification certificate for the final operational noise modelling and ONVR has been prepared accordingly (see Appendix A).

APPENDIX A Verification Certificate

I, Michael Chung, Director at Renzo Tonin & Associates have practiced as a consulting engineer in the specialist field of acoustics for 20 years. My expertise is with transport infrastructure projects, with a particular focus on road projects. I have a Doctorate and Bachelor of Engineering from the University of Technology Sydney. I am a Member with Engineers Australia and a Member of the Australian Acoustical Society.

I have read the requirements of Condition E50 of the Minister's Condition of Approval (Application no. SS1 9364) and in my professional opinion, I find the operational noise modelling and the Operational Noise and Vibration Review (ONVR) report [ref. *12520102-REP_E-M12 ONVR.docx (Rev E)*, dated 14 October 2022] to be thorough, technically sound, and satisfactorily meets the requirements of Conditions E51 and E52, respectively.

In conclusion, I verify and endorse the operational noise modelling and the use of the ONVR report.

Signed,

Michael Chung
18 October 2022

Appendix B

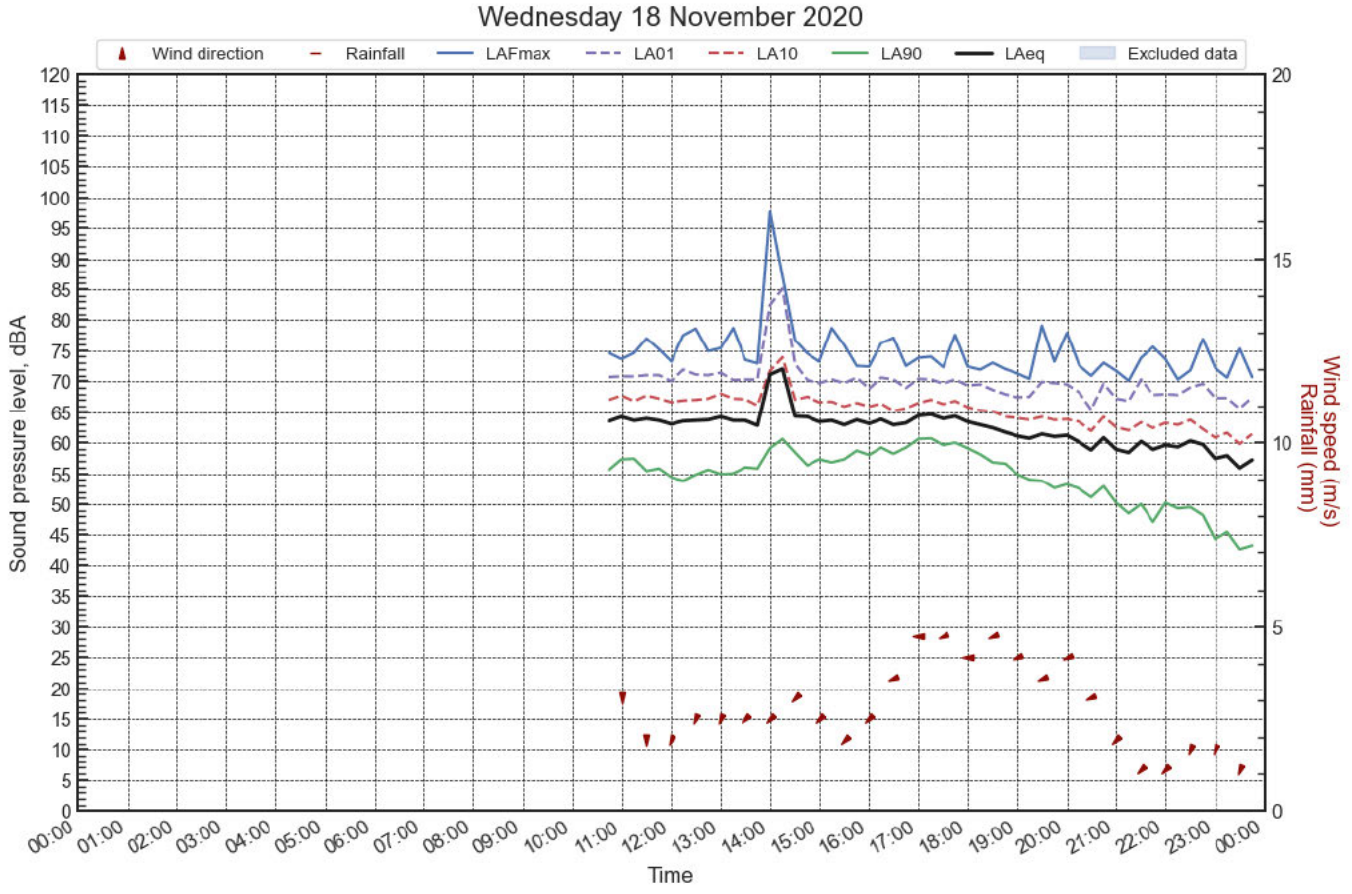
Noise monitoring charts

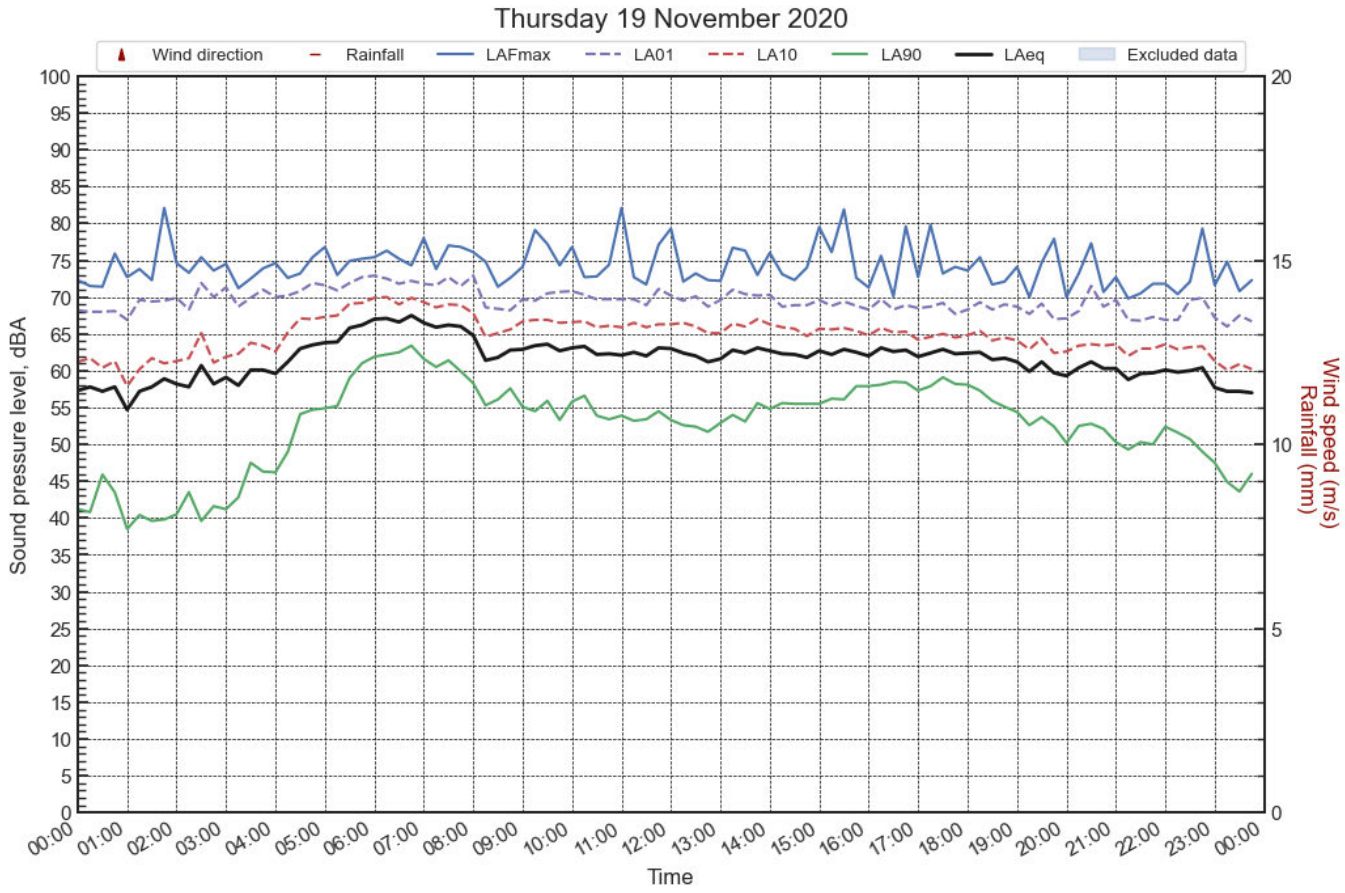
M4 2065-2071 Elizabeth Drive, Cecil Hills

Date	Background noise level (RBL)[1]			Road traffic levels (free-field)[2]	
	Day	Evening	Night	Day $L_{Aeq(15\ hr)}$	Night $L_{Aeq(9\ hr)}$
Wednesday-18-Nov-20	55	49	40	64	62
Thursday-19-Nov-20	53	50	40	62	62
Friday-20-Nov-20	53	50	38	62	59
Saturday-21-Nov-20	53	47	37	60	56
Sunday-22-Nov-20	49	47	39	58	61
Monday-23-Nov-20	55	48	44	63	58
Tuesday-24-Nov-20	56	48	39	63	62
Wednesday-25-Nov-20	54	49	40	63	61
Thursday-26-Nov-20	53	52	38	62	60
Friday-27-Nov-20	58			64	-
Total	**53**	**49**	**39**	**62**	**60**
Total (Weekday)				**63**	**61**

Note 1: Periods for background noise levels are based on the *Noise Policy for Industry* (NPfI) (EPA, 2017). Day: 7 am to 6 pm Monday to Saturday, 8 am to 6 pm Sunday. Evening: 6 pm to 10 pm. Night: 10 pm to 7 am Monday to Saturday, 10 pm to 8 am Monday to Sunday.

Note 2: Periods for road traffic noise levels are based on the *Road Noise Policy* (RNP) (DECCW, 2011). Day: 7 am to 10 pm. Night: 10 pm to 7 am.

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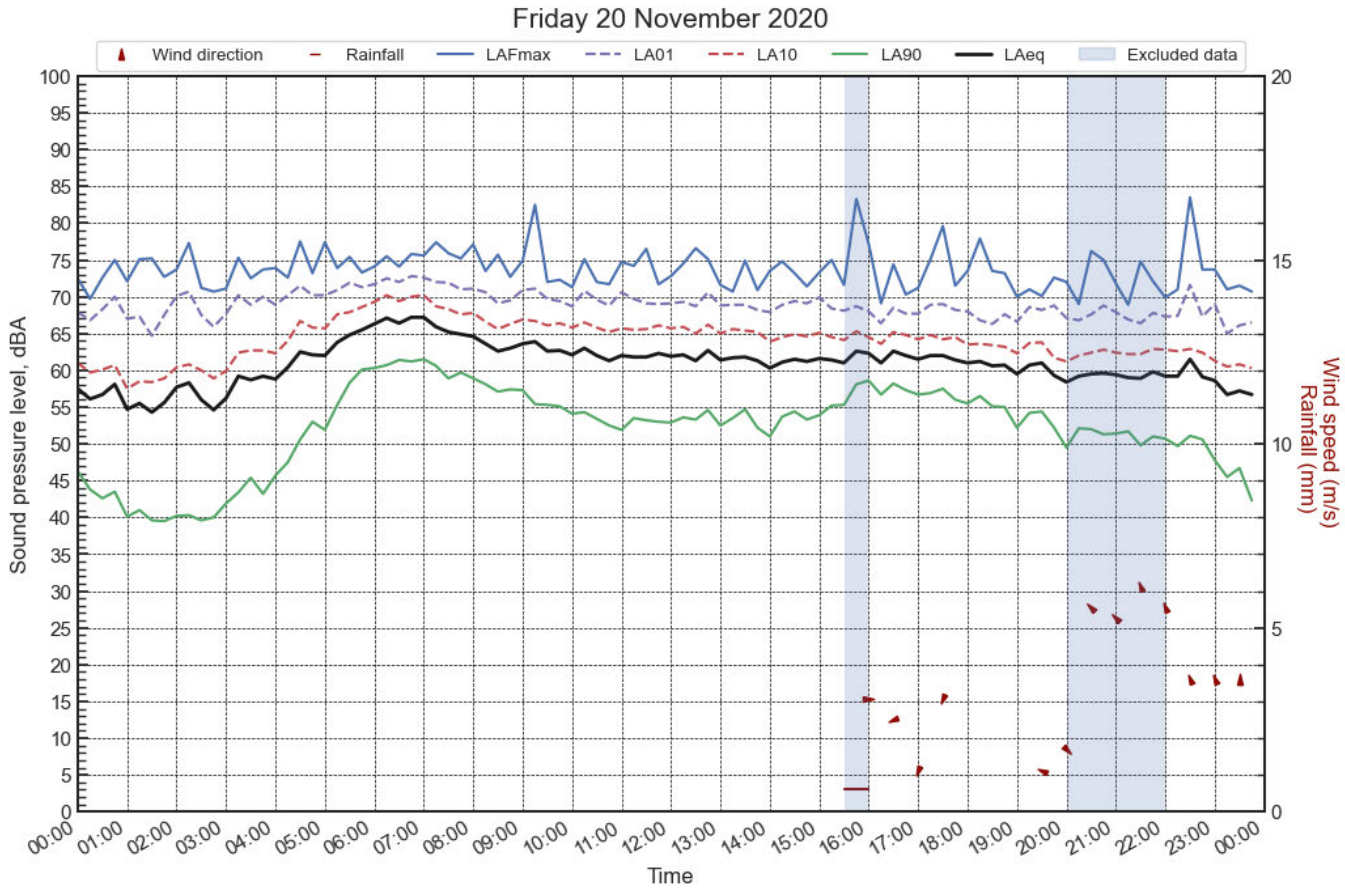
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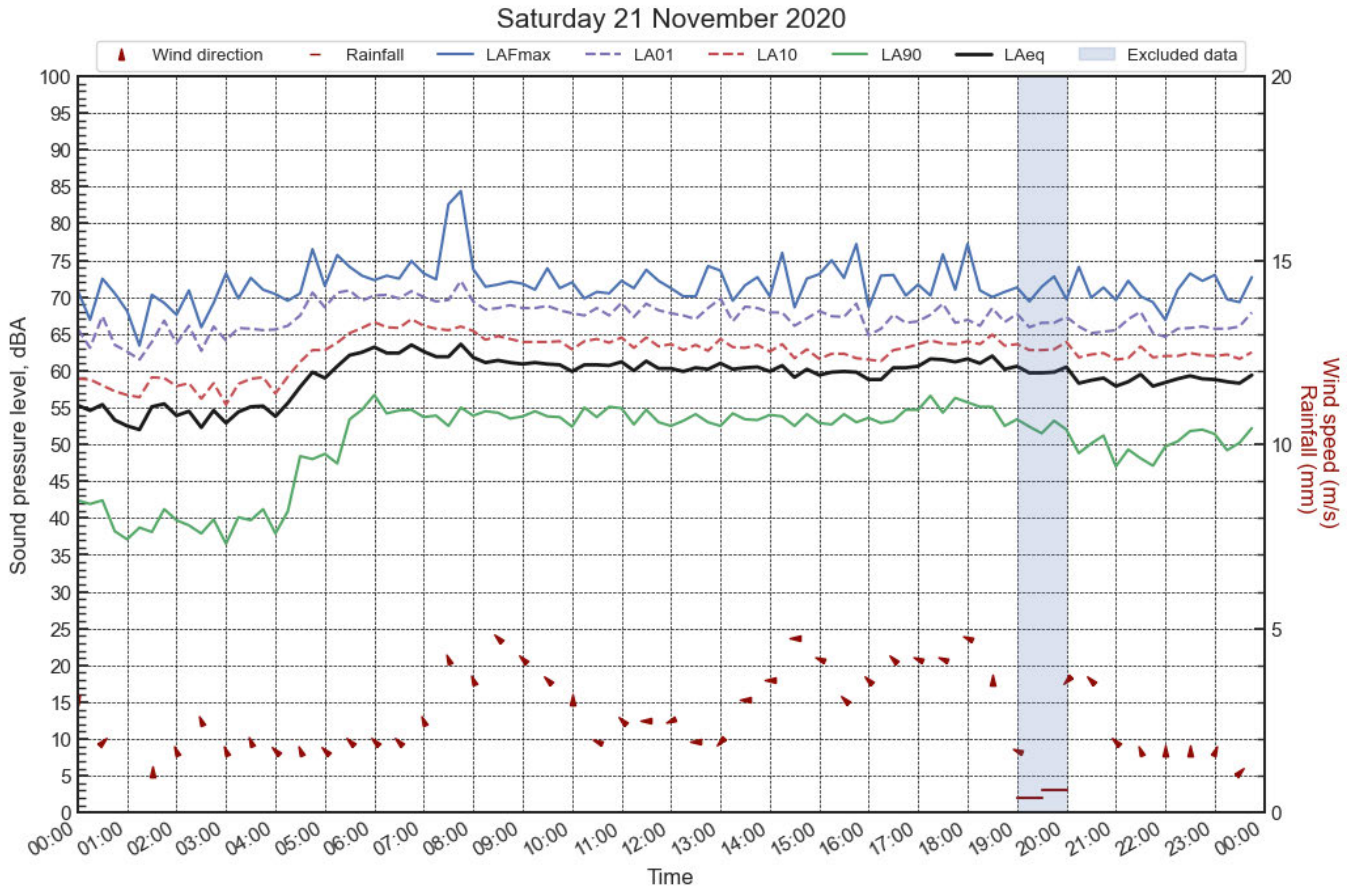
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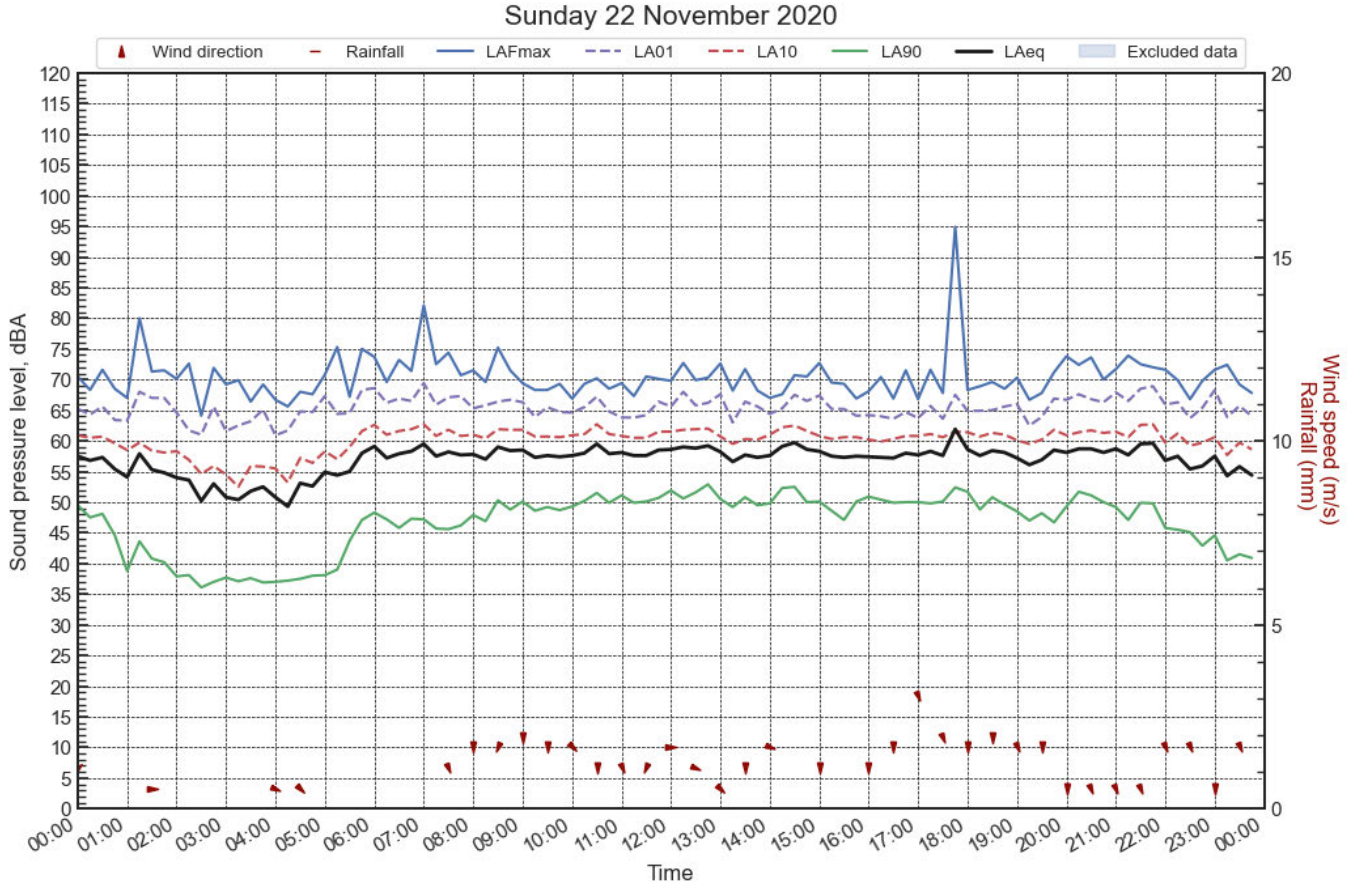
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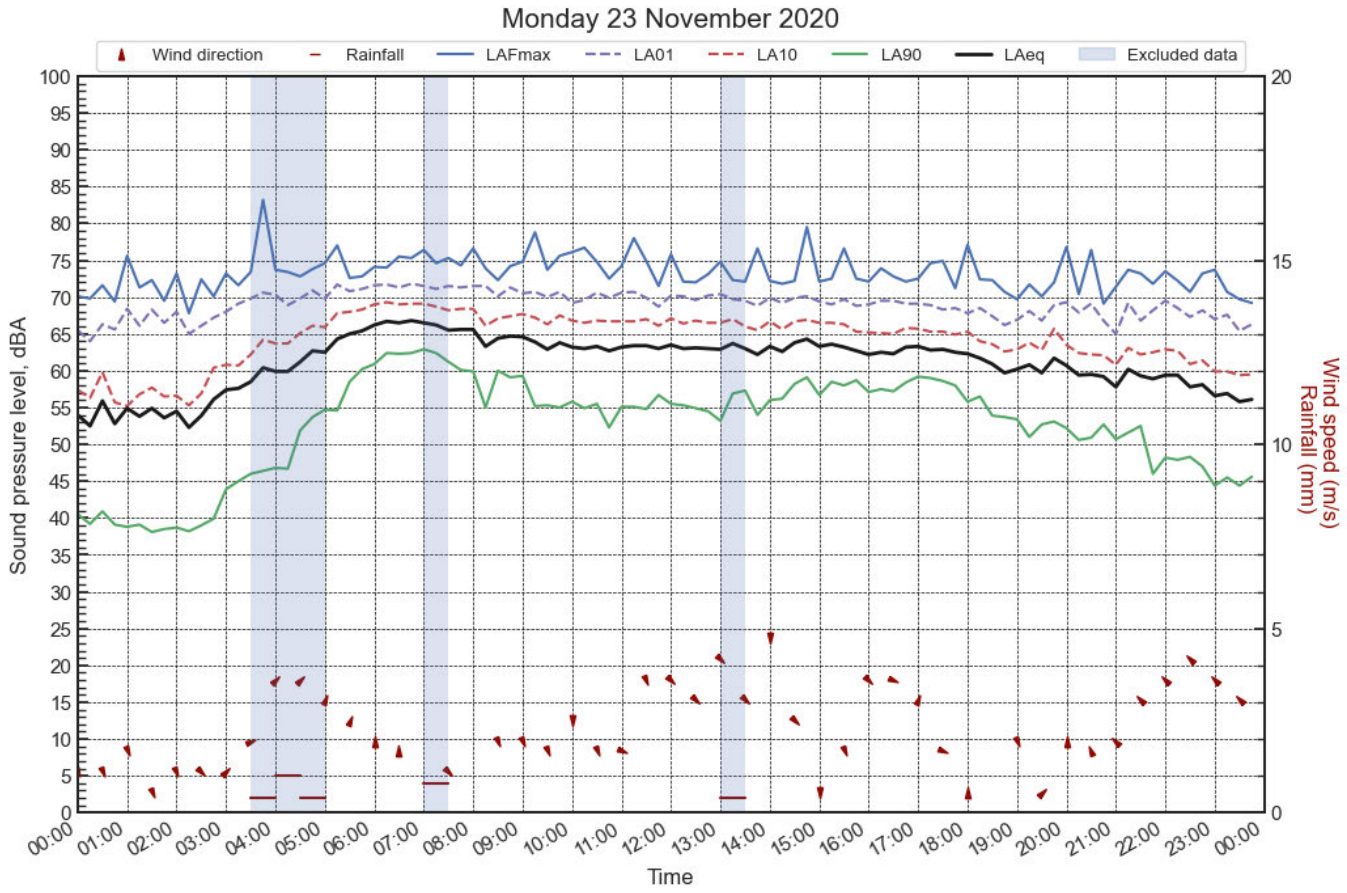
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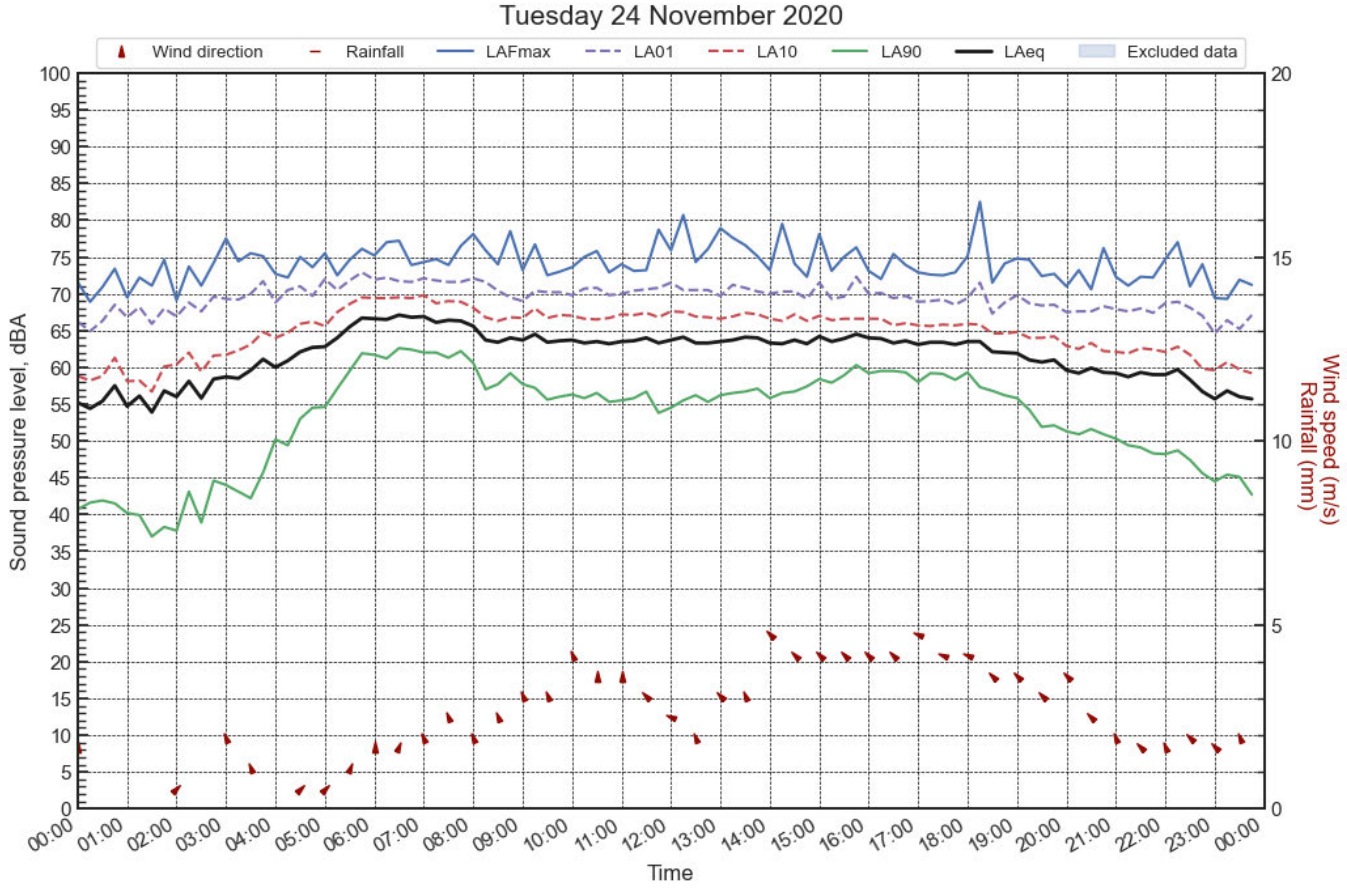
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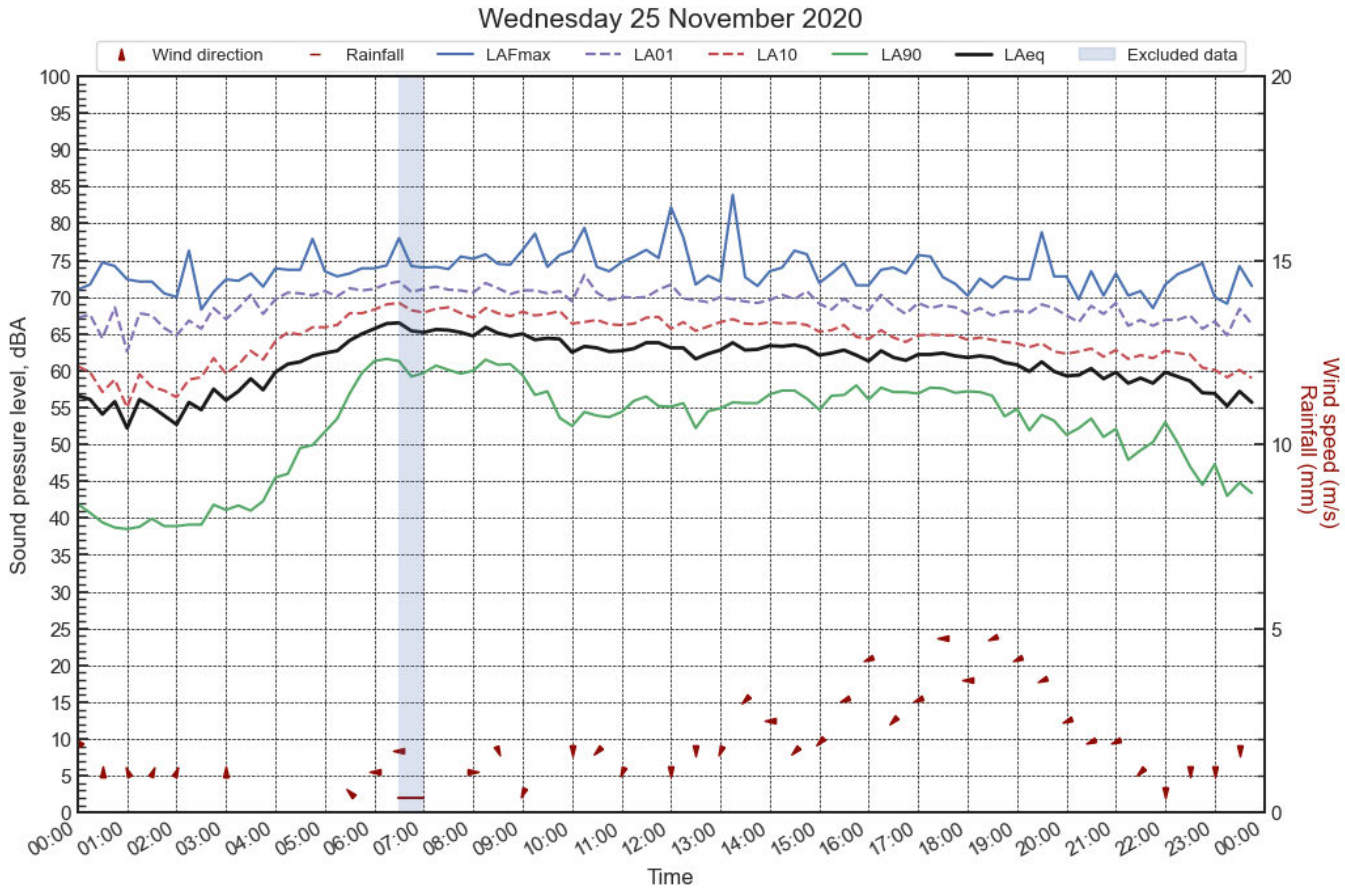
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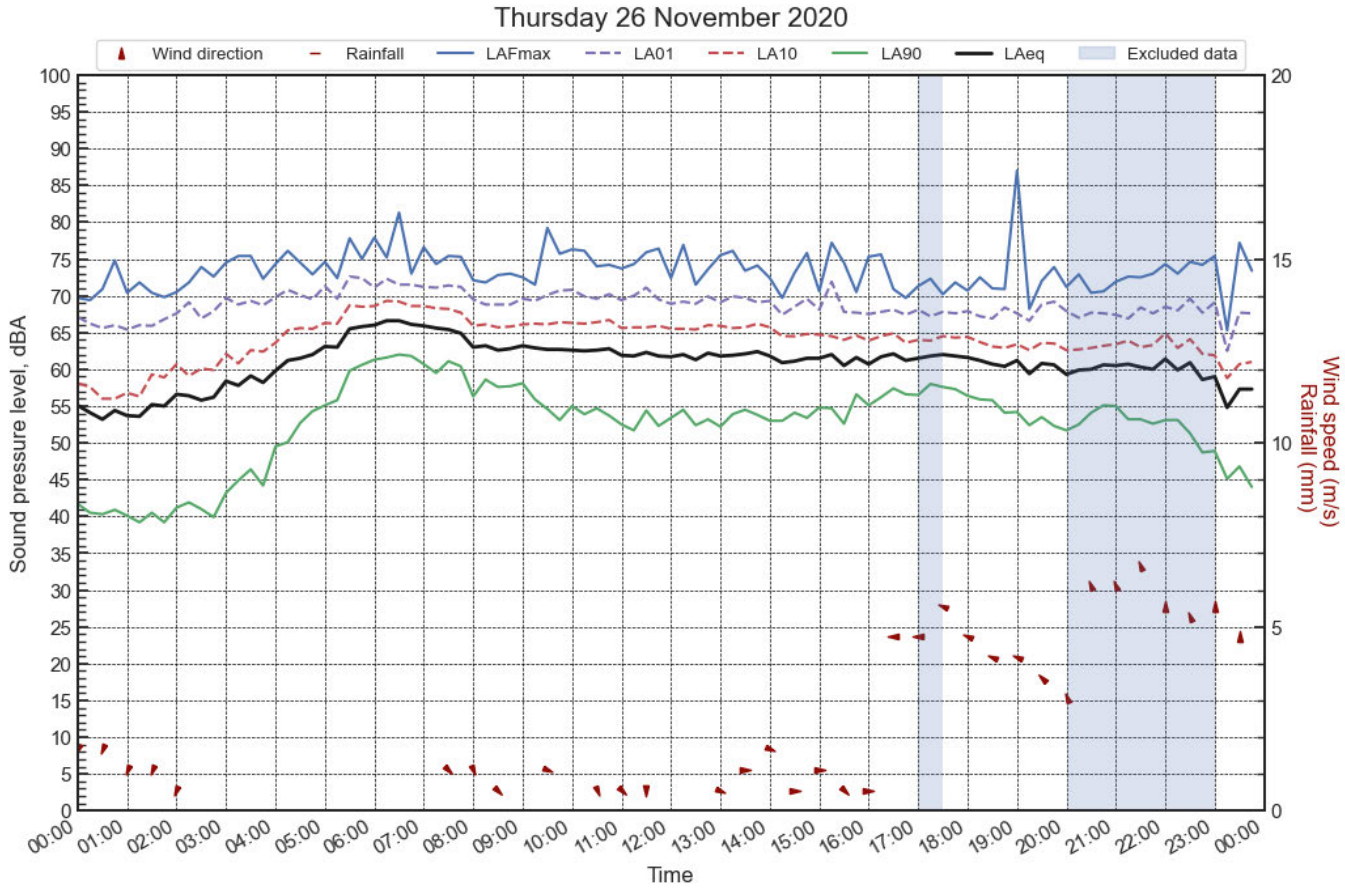
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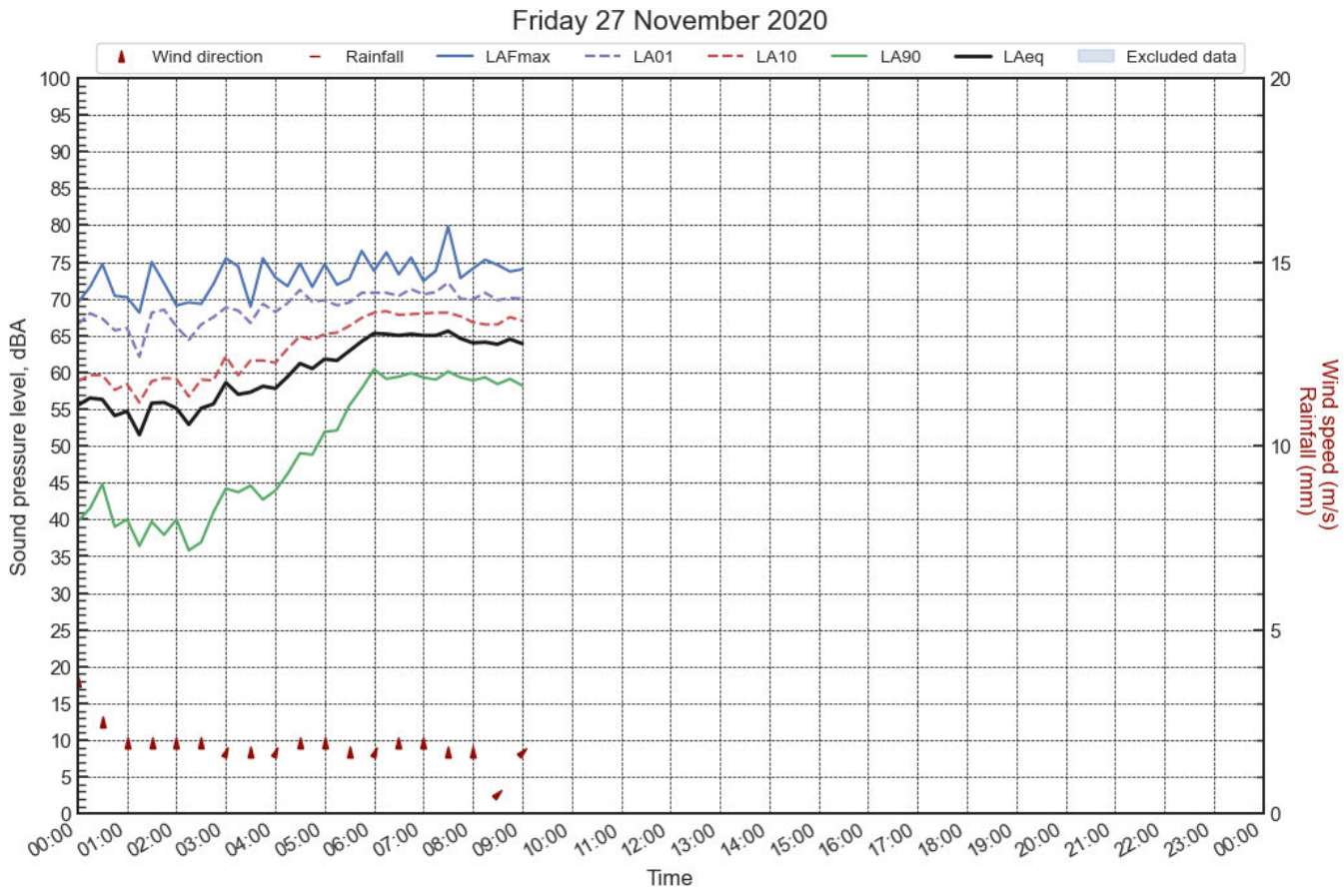
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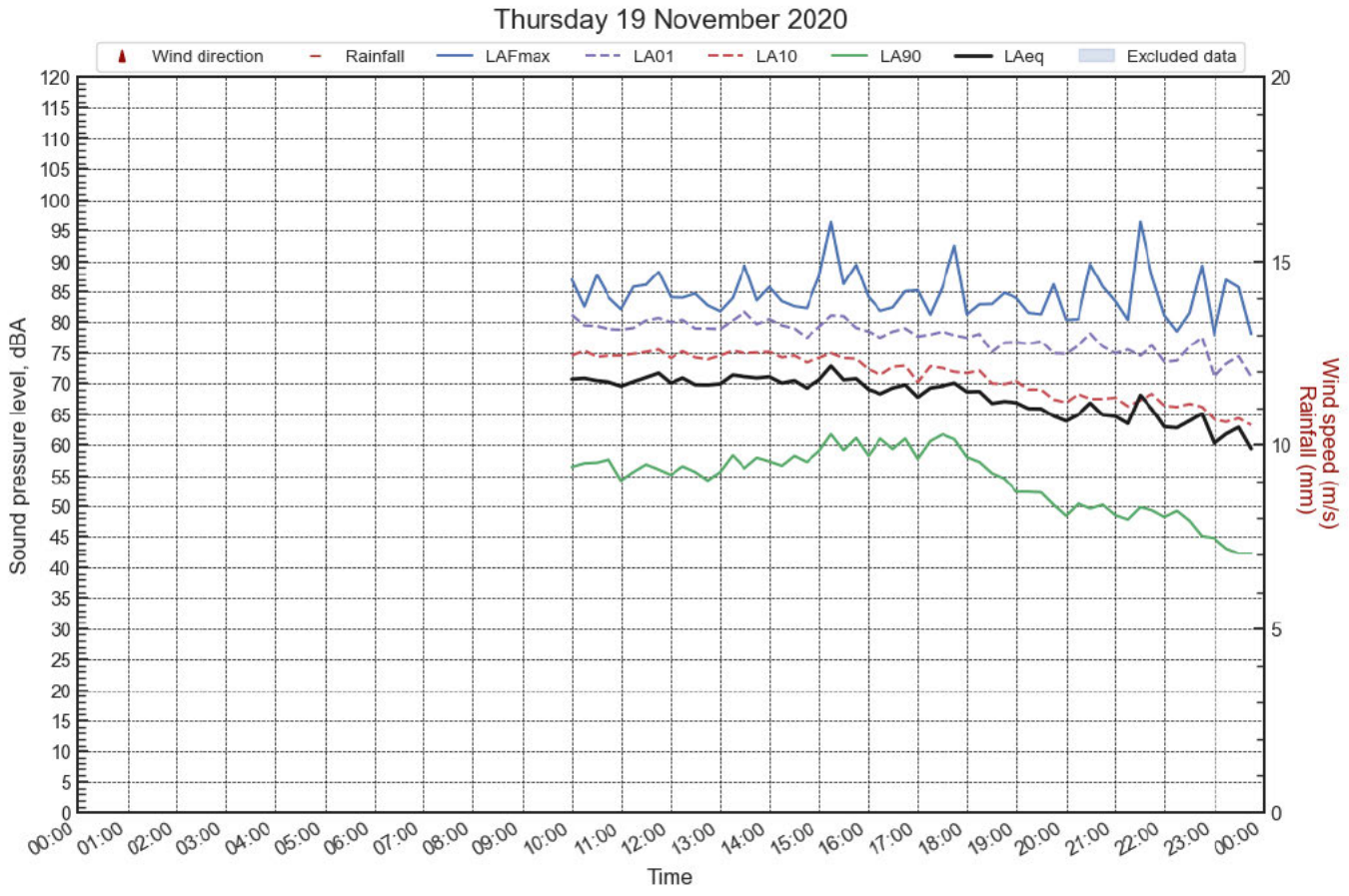
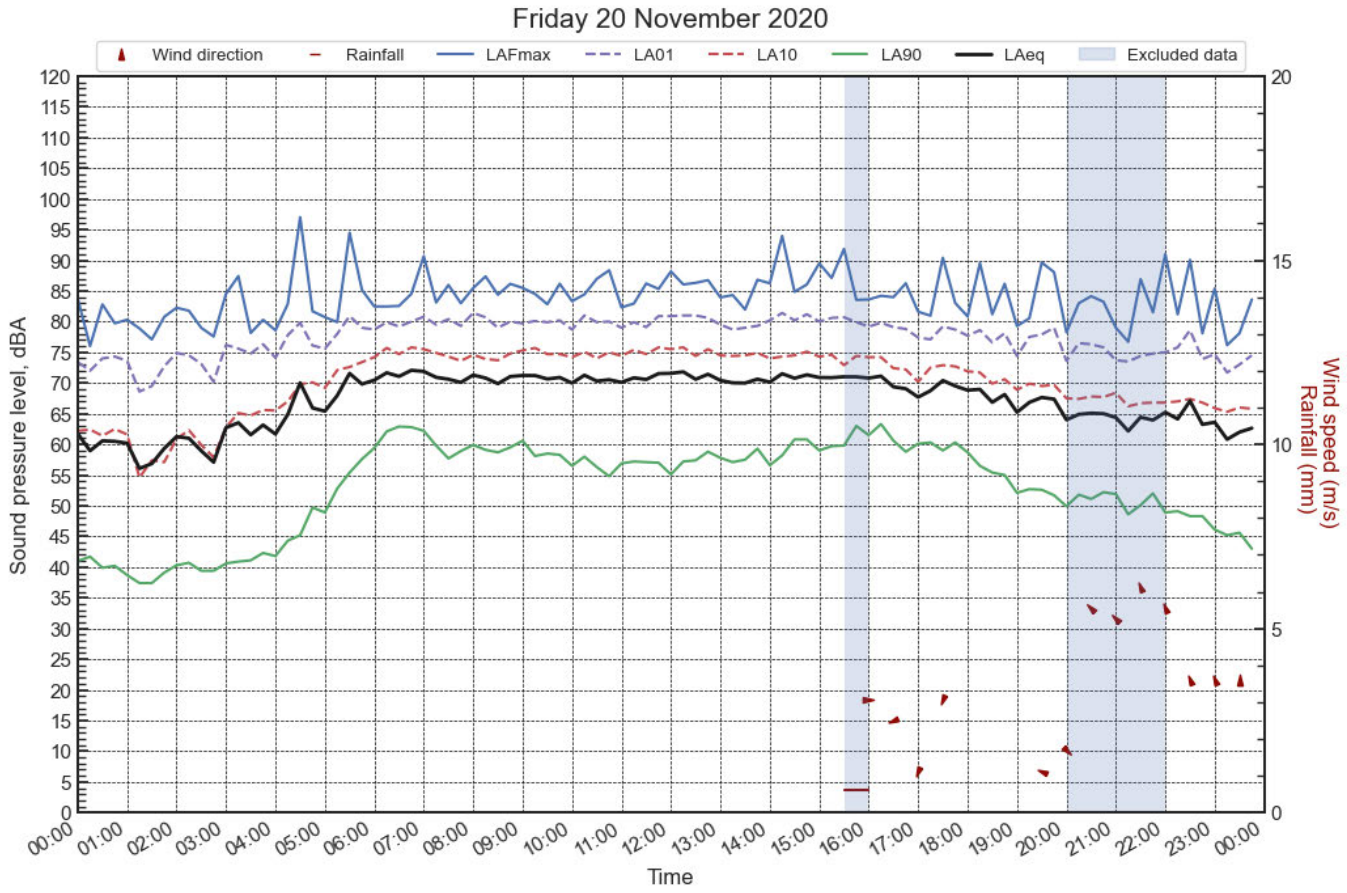
M5 1239-1245 Elizabeth Drive, Mount Vernon

Date	Background noise level (RBL)[1]			Road traffic levels (free-field)[2]	
	Day	Evening	Night	Day $L_{Aeq(15\ hr)}$	Night $L_{Aeq(9\ hr)}$
Thursday-19-Nov-20	56	48	39	69	66
Friday-20-Nov-20	57	50	40	70	64
Saturday-21-Nov-20	52	45	37	67	60
Sunday-22-Nov-20	49	46	39	65	68
Monday-23-Nov-20	57	45	42	70	63
Tuesday-24-Nov-20	56	46	38	70	67
Wednesday-25-Nov-20	57	47	39	70	66
Thursday-26-Nov-20	56	50	37	70	67
Friday-27-Nov-20	60			72	-
Total	**56**	**47**	**39**	**70**	**66**
Total (Weekday)				**70**	**66**

Note 1: Periods for background noise levels are based on the *Noise Policy for Industry* (NPfI) (EPA, 2017). Day: 7 am to 6 pm Monday to Saturday, 8 am to 6 pm Sunday. Evening: 6 pm to 10 pm. Night: 10 pm to 7 am Monday to Saturday, 10 pm to 8 am Monday to Sunday.

Note 2: Periods for road traffic noise levels are based on the *Road Noise Policy* (RNP) (DECCW, 2011). Day: 7 am to 10 pm. Night: 10 pm to 7 am.

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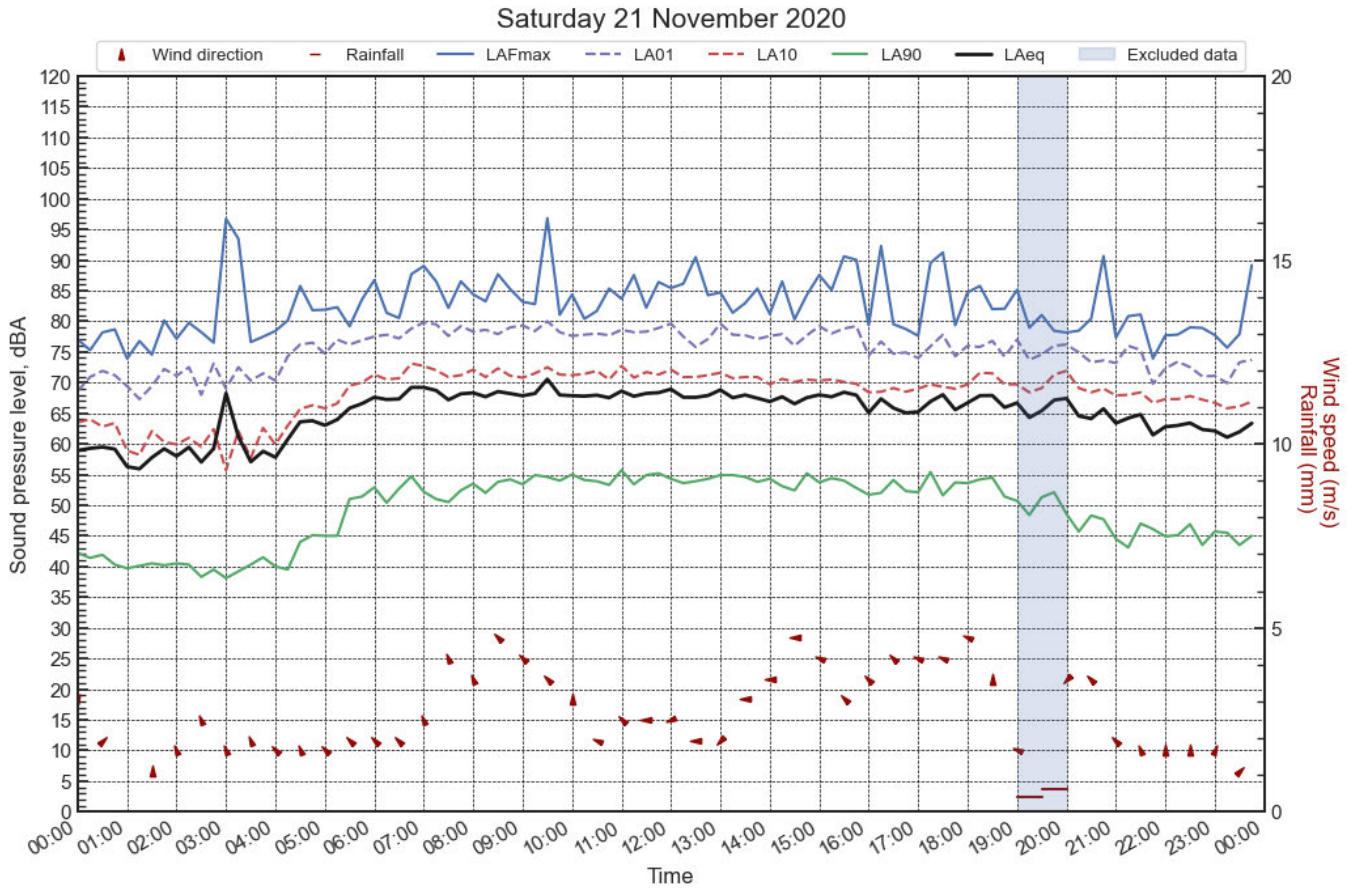
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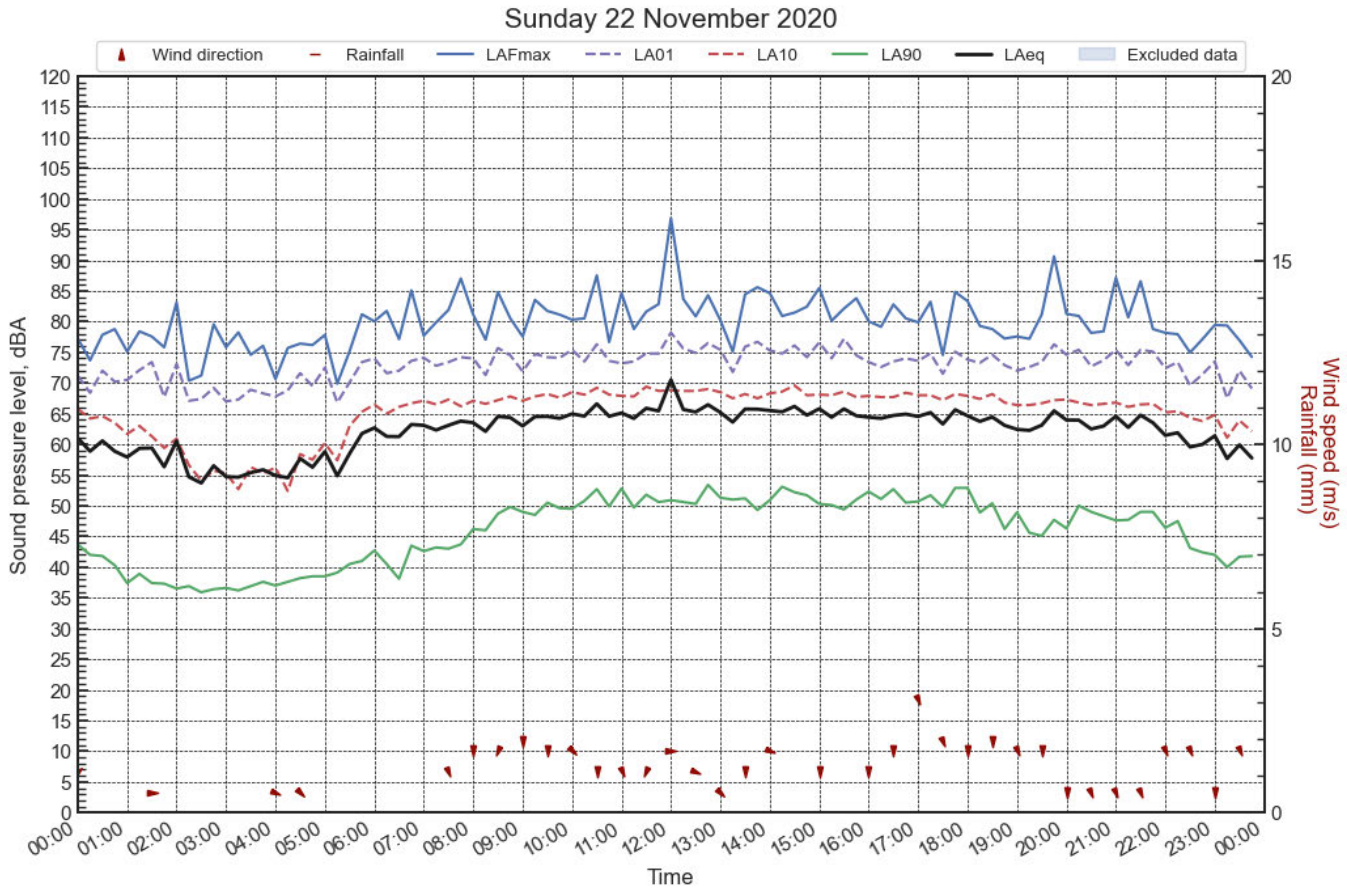
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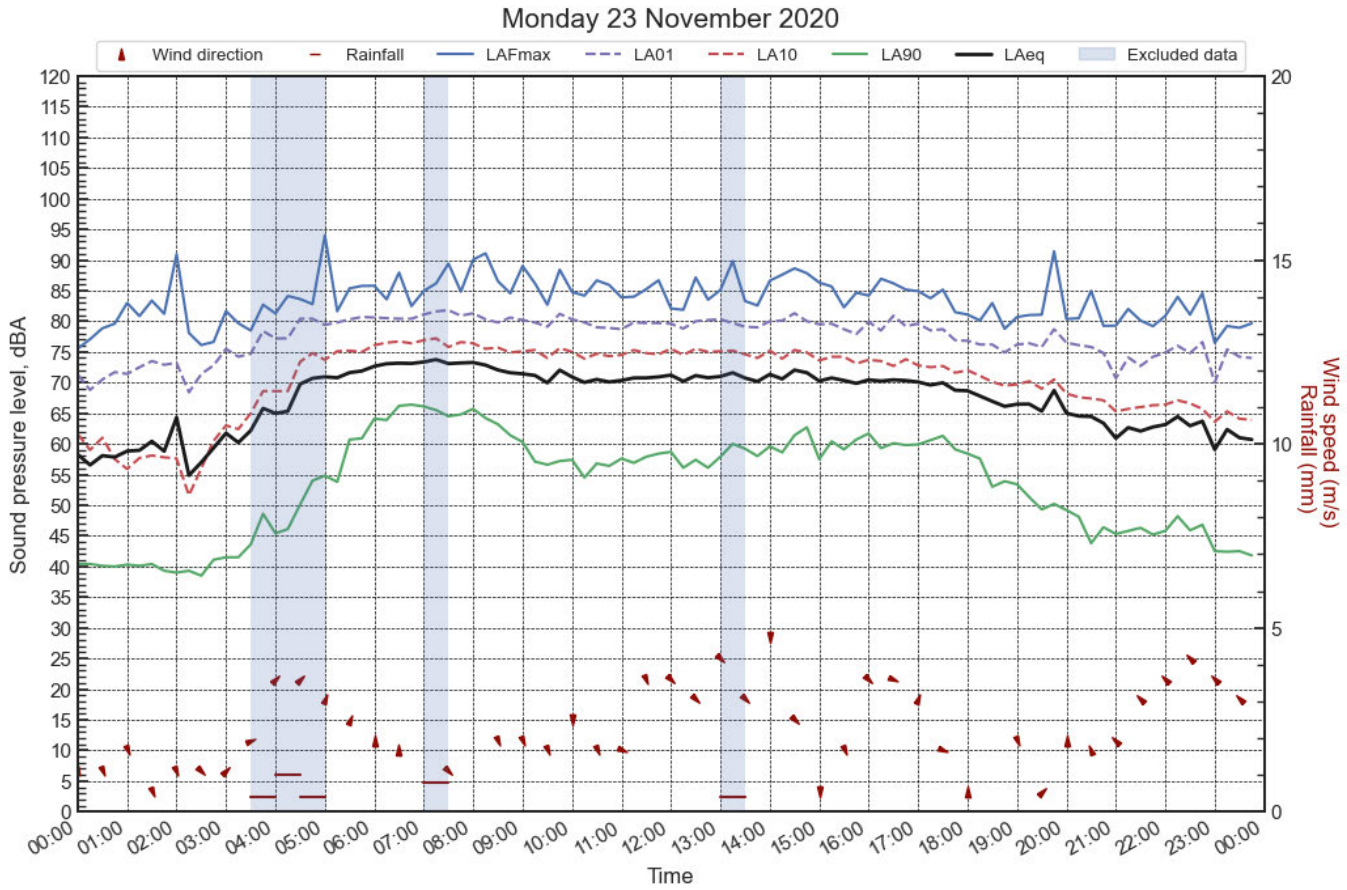
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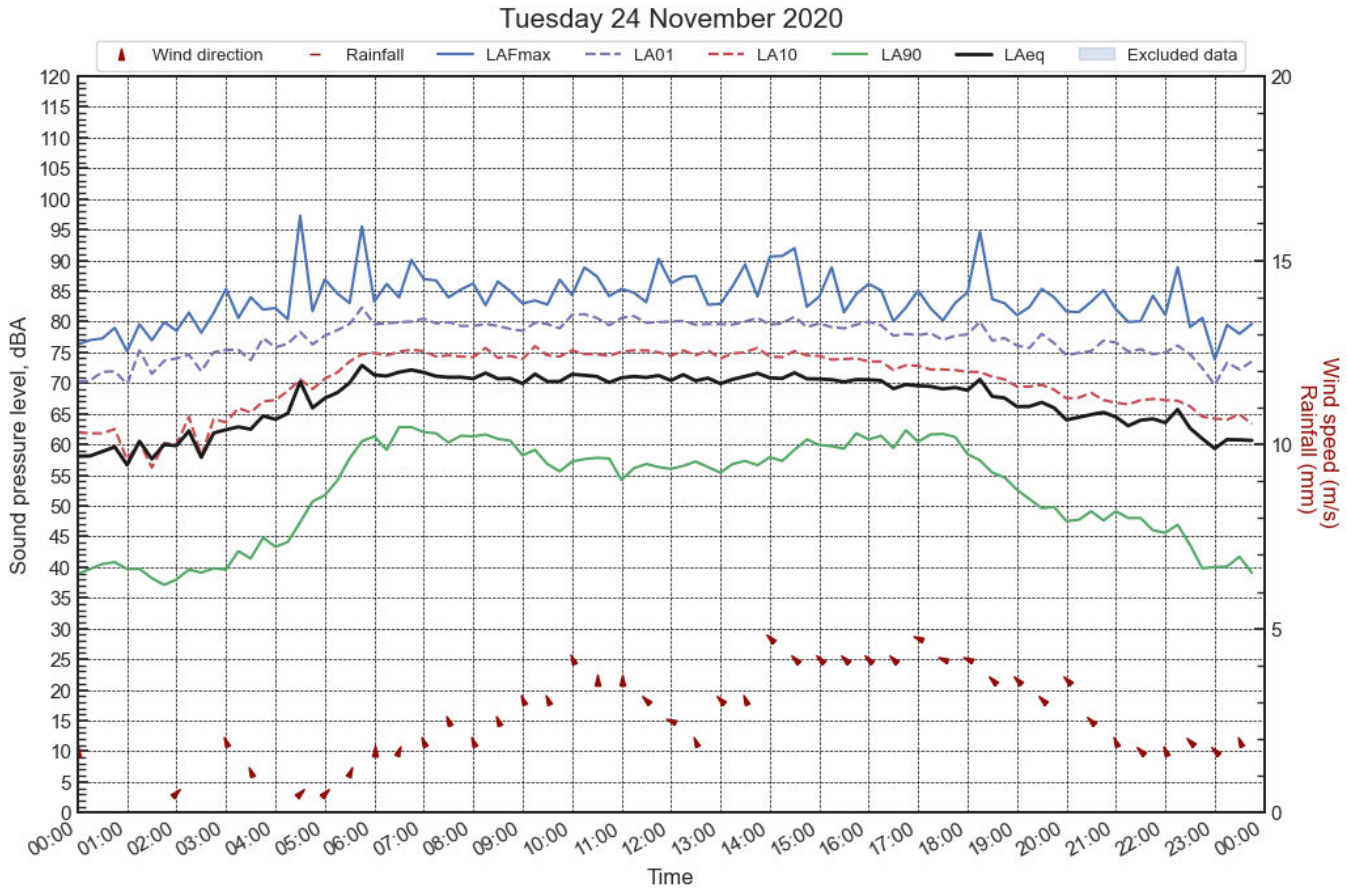
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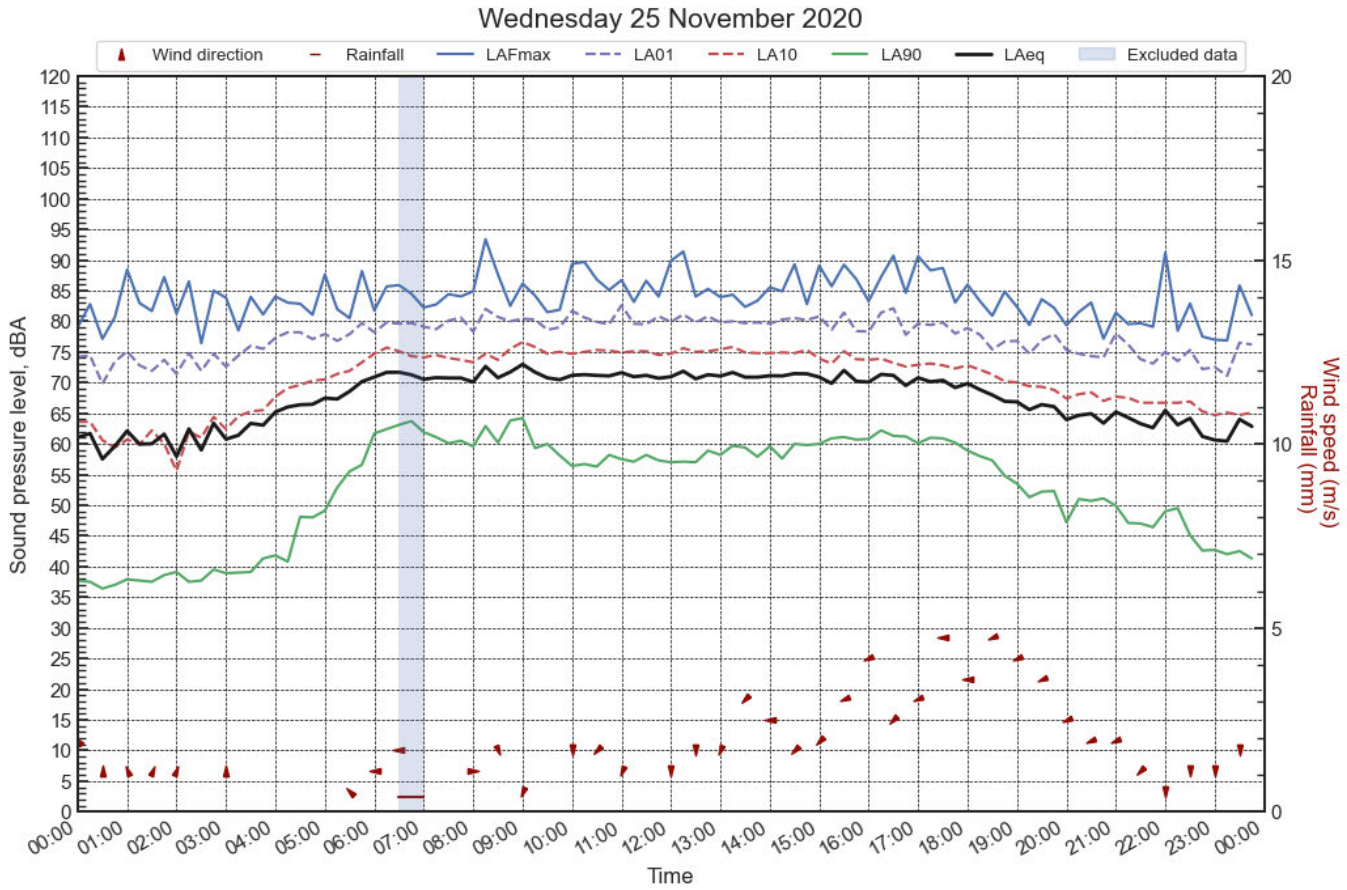
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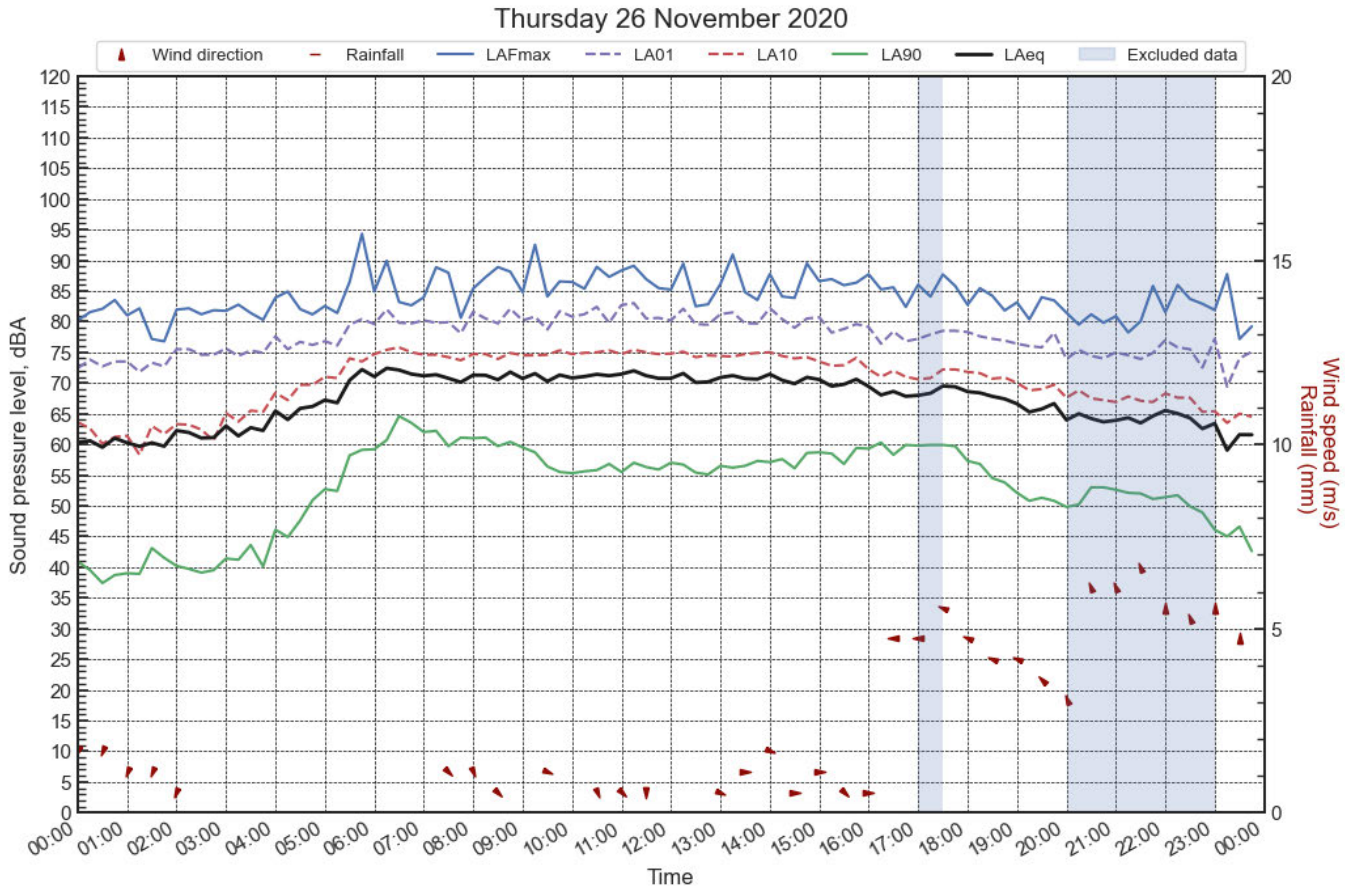
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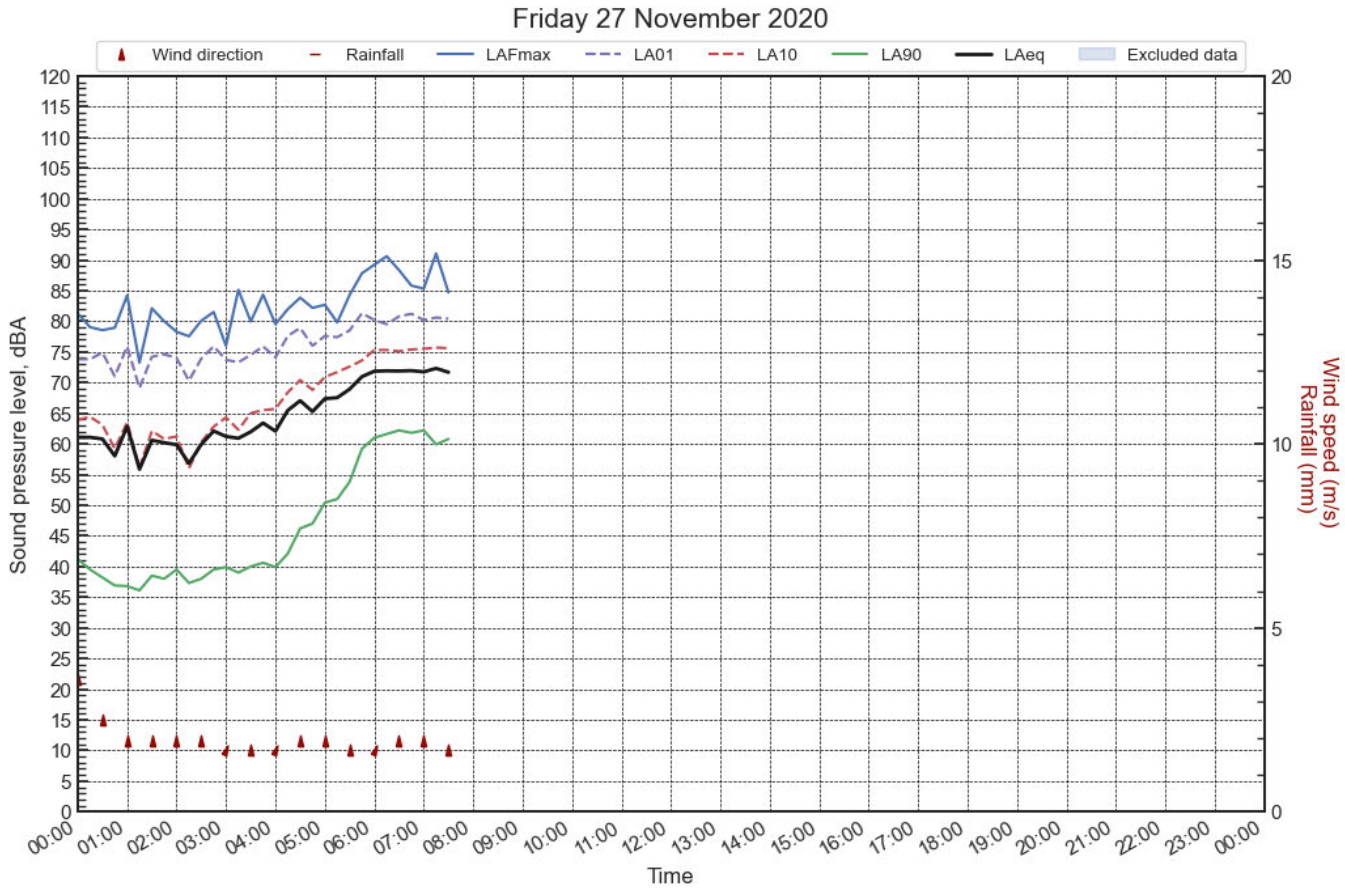
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Rainfall (mm)
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Appendix C

Operational information

Paper Size ISO A4

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- Pro ect roads
- Non pro ect roads
- Sensitive receiver
- Study area

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 West
Project and non-project roads

Project No 12520102
Revision No A
Date 03/08/2022

Figure C.1

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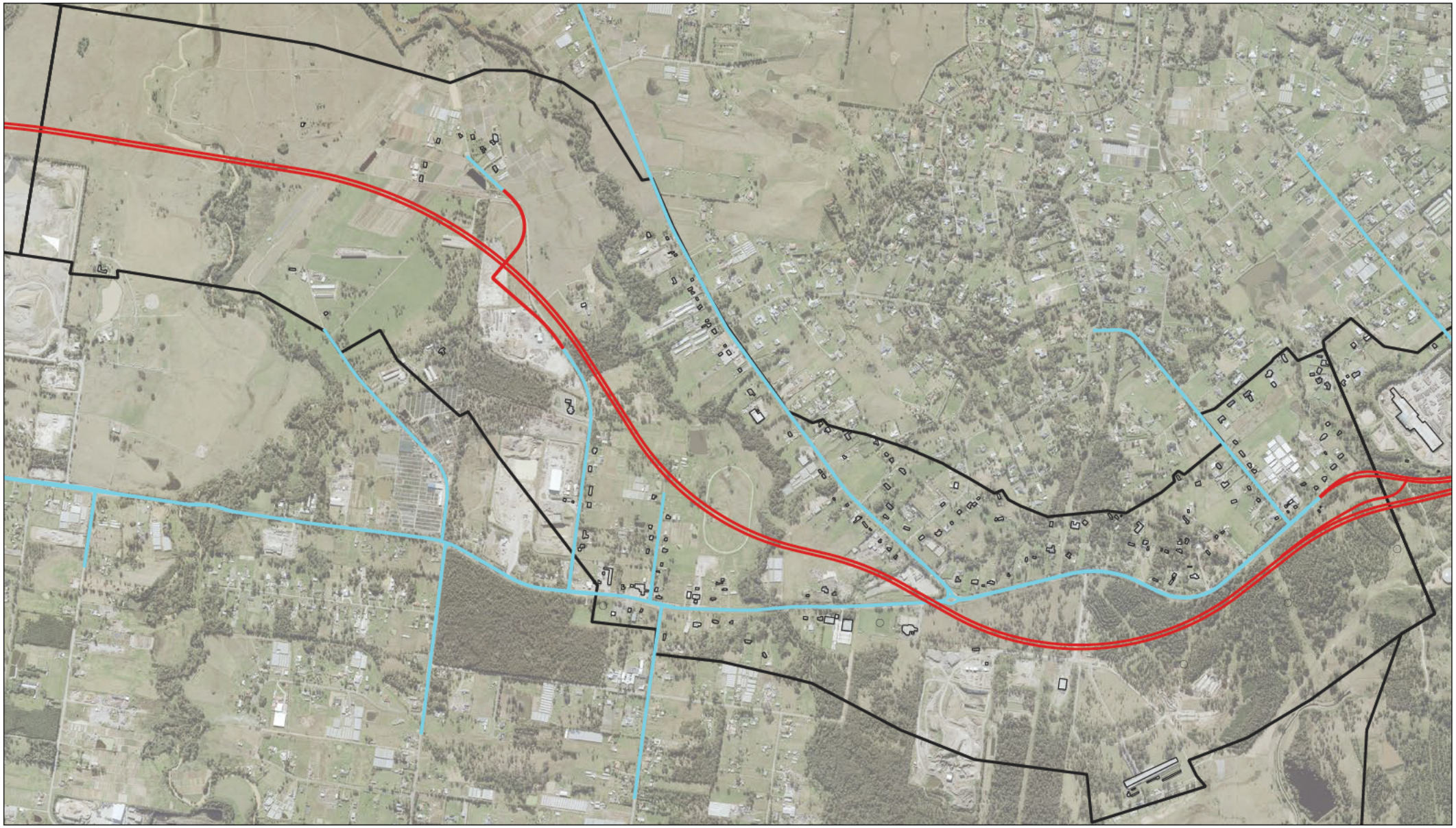

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- Sensitive receiver
- Study area

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 Central
Project and non-project roads

Project No **12520102**
Revision No **A**
Date **03/08/2022**

Figure C.2

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Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- Pro ect roads
- Non pro ect roads
- Sensitive receiver
- Study area

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 East
Project and non-project roads

Project No **12520102**
Revision No **A**
Date **03/08/2022**

Figure C.3

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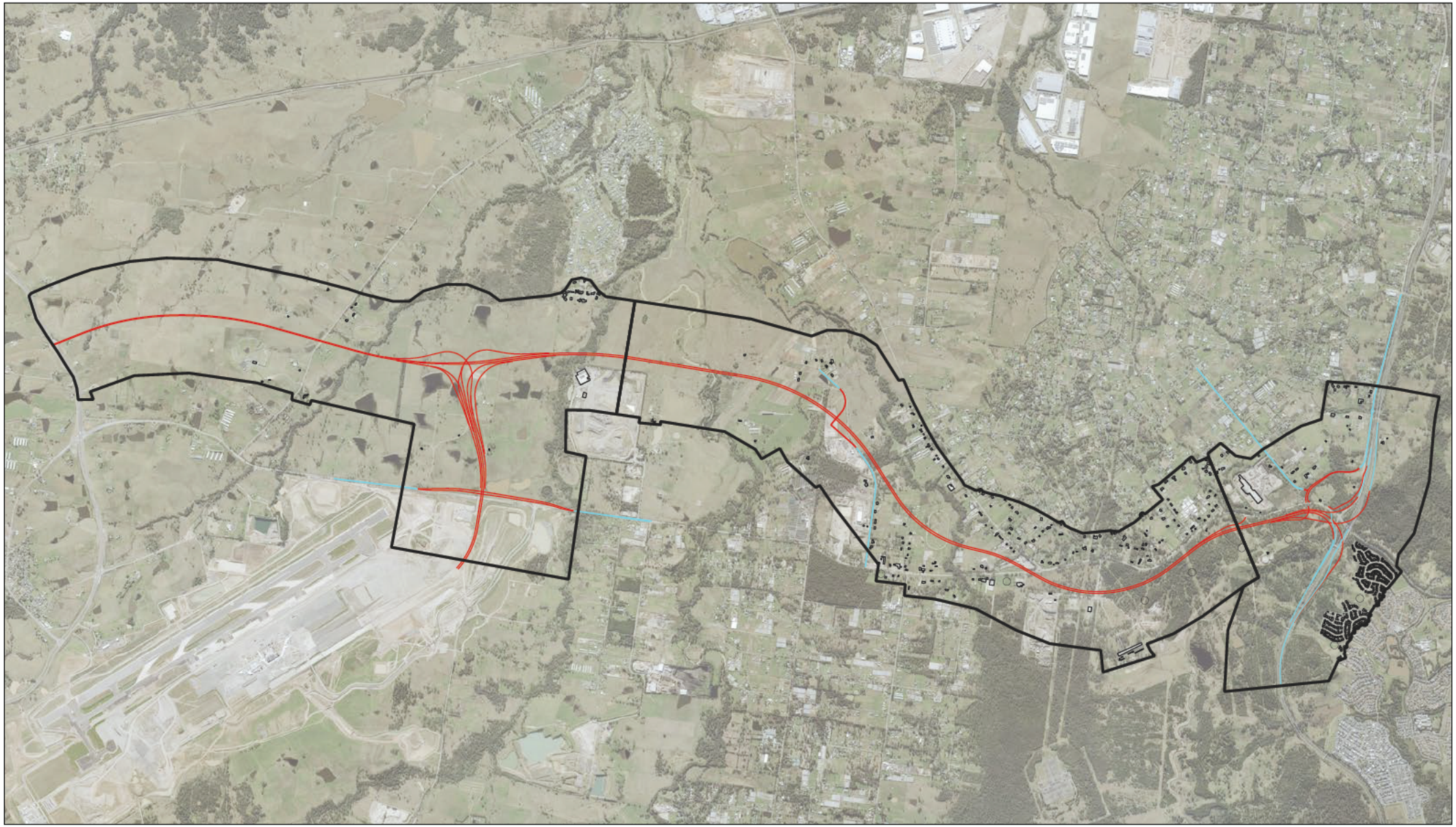

Paper Size ISO A4

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
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Legend

- M12 road design
- Sensitive receiver
- New
- Redeveloped

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

Project road classifications New and redeveloped roads

Project No **12520102**
Revision No **A**
Date **03/08/2022**

Figure C.3

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Appendix D

Operational traffic volumes

2026 Traffic Volumes

Road	Section	No Build				Build				
		Day		Night		Day		Night		Speed
		Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	km/h
M12 Eastbound	M12 EB Btwn The Northern Road & M12 Off Ramp to Airport Access Rd	-	-	-	-	5,292	560	1,911	196	100
M12 Eastbound	M12 EB Btwn M12 Off Ramp to Airport Access Rd & M12 On Ramp from Airport Access Rd	-	-	-	-	3,748	533	1,407	192	100
M12 Eastbound	M12 EB Btwn M12 On Ramp from Airport Access Rd & M12 Off Ramp to Elizabeth Dr	-	-	-	-	8,109	629	2,250	229	100
M12 Eastbound	M12 EB Btwn M12 Off Ramp to Elizabeth Dr & M12 EB Off Ramp	-	-	-	-	5,039	555	1,561	210	100
M12 Westbound	M12 WB Btwn M12 On Ramp from M7 / Elizabeth Dr & M12 Off Ramp to Airport Access Rd	-	-	-	-	13,882	1,837	1,954	182	100
M12 Westbound	M12 WB Btwn M12 Off Ramp to Airport Access Rd & M12 On Ramp from Airport Access Rd	-	-	-	-	9,211	1,305	819	143	100
M12 Westbound	M12 WB Btwn M12 On Ramp from Airport Access Rd & The Northern Road	-	-	-	-	11,205	1,310	1,080	140	100
M7 Northbound	M7 NB Btwn M7 South End & M7 Off Ramp to M12 / Elizabeth Dr	19,572	7,581	4,530	1,697	21,203	7,983	4,580	1,798	100
M7 Northbound	M7 NB Btwn M7 Off Ramp to M12 / Elizabeth Dr & M7 On Ramp from M12 / Elizabeth Dr	16,486	6,933	3,750	1,612	12,682	6,541	3,010	1,594	100
M7 Northbound	M7 NB Btwn M7 On Ramp from M12 / Elizabeth Dr & M7 North End	18,213	7,321	4,229	1,749	17,290	7,365	4,231	1,872	100
M7 Southbound	N7 SB Btwn M7 North End & M7 Off Ramp to M12 / Elizabeth Dr	20,602	6,638	3,875	1,202	22,786	6,849	3,946	1,185	100
M7 Southbound	M7 SB Btwn M7 Off Ramp to M12 / Elizabeth Dr & M7 On Ramp from M12 / Elizabeth Dr	15,280	6,050	2,878	1,096	12,578	5,790	2,429	1,030	100
M7 Southbound	M7 SB Btwn M7 On Ramp from M12 / Elizabeth Dr & M7 South End	18,451	6,364	3,462	1,143	18,408	6,309	3,864	1,236	100
M7 Interchange Ramps	M7 NB Off Ramp to M12 / Elizabeth Dr	3,088	657	781	94	8,521	1,442	1,570	204	80

Road	Section	No Build				Build				
		Day		Night		Day		Night		Speed
		Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	km/h
M7 Interchange Ramps	M7 NB Off Ramp to M12 WB On Ramp	-	-	-	-	6,138	1,002	872	124	80
M7 Interchange Ramps	M7 NB Off Ramp to Elizabeth Dr	3,088	657	781	94	2,379	431	697	76	80
M7 Interchange Ramps	M12 EB Off Ramp to M7 NB On Ramp	-	-	-	-	2,386	238	699	89	80
M7 Interchange Ramps	Elizabeth Dr to M7 NB On Ramp	1,701	395	476	138	2,236	560	532	194	80
M7 Interchange Ramps	M7 SB Off Ramp to M12 / Elizabeth Dr	5,271	574	985	108	10,208	1,059	1,517	155	80
M7 Interchange Ramps	Elizabeth Dr Connection to M12 WB	-	-	-	-	2,157	244	472	12	80
M7 Interchange Ramps	M7 SB Off Ramp to Elizabeth Dr	5,271	574	985	108	4,633	519	894	94	80
M7 Interchange Ramps	M12 EB Off Ramp to M7 SB On Ramp	-	-	-	-	2,653	317	862	121	80
M7 Interchange Ramps	Elizabeth Dr to M7 SB On Ramp	3,166	306	575	47	3,754	403	601	91	80
M7 Interchange Ramps	M12 EB Off Ramp Connection to Elizabeth Dr	-	-	-	-	3,066	60	679	13	80
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn The Northern Road & Luddenham Rd	5,494	451	1,726	102	3,524	452	903	101	80
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn Luddenham Rd & Adams Rd	6,284	421	1,901	101	3,386	443	882	109	80

Road	Section	No Build				Build				
		Day		Night		Day		Night		Speed
		Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	km/h
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn Adams Rd & Airport Business Park West Access	7,074	390	2,076	100	3,247	434	861	116	80
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn Airport Business Park West Access & Airport Business Park East Access	7,094	410	1,462	94	2,141	452	478	105	80
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn Airport Business Park East Access & Martin Rd	7,977	508	1,727	127	4,469	631	971	137	80
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn Martin Rd & Western Rd	8,530	531	1,849	135	5,011	692	1,116	162	80
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn Western Rd & Clifton Ave	7,936	588	1,866	171	4,655	713	1,210	205	80
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn Clifton Ave & Devonshire Rd	8,860	677	2,086	189	5,579	798	1,435	227	80
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn Devonshire Rd & Mamre Rd	10,371	757	2,542	231	7,830	973	2,102	300	80
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn Mamre Rd & Duff Rd	9,174	841	2,024	171	8,138	1,135	2,060	274	80
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn Duff Rd & Off Ramp from M12	9,892	988	2,330	249	9,052	1,404	2,461	377	80
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn Off Ramp from M12 & Cecil Rd	9,892	988	2,330	249	12,284	1,455	3,194	387	80
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn Cecil Rd & M7 NB On / Off Ramps	10,241	1,062	2,382	260	14,394	1,521	3,089	363	70
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn M7 NB On / Off Ramps & M7 SB On / Off Ramps	12,878	944	2,474	147	13,349	1,113	2,771	216	70
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn M7 SB On / Off Ramps & Elizabeth Dr East End	14,720	769	2,727	123	14,357	824	3,008	156	70
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn Elizabeth Dr East End & M7 SB On / Off Ramps	12,391	1,100	2,987	154	12,284	1,239	2,886	170	50-70
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn M7 SB On / Off Ramps & M7 NB On / Off Ramps	12,800	1,577	3,186	239	12,223	1,631	2,964	231	70
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn M7 NB On / Off Ramps & Cecil Rd	11,544	2,426	2,685	303	13,329	1,843	3,432	257	70

Road	Section	No Build				Build				
		Day		Night		Day		Night		Speed
		Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	km/h
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn Cecil Rd & Duff Rd	11,415	2,397	2,645	299	9,238	1,993	1,950	248	80
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn Duff Rd & Mamre Rd	10,456	2,073	2,452	250	8,222	1,736	1,773	213	80
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn Mamre Rd & Devonshire Rd	9,726	1,786	1,917	224	6,515	1,489	1,065	179	80
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn Devonshire Rd & Clifton Ave	7,671	1,299	1,497	110	4,070	912	697	75	80
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn Clifton Ave & Western Rd	6,974	1,230	1,321	101	4,041	908	697	75	80
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn Western Rd & Martin Rd	7,214	1,103	1,545	101	3,405	729	743	71	80
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn Martin Rd & Airport Business Park East Access	6,887	1,133	1,438	108	2,128	361	461	51	80
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn Airport Business Park East Access & Airport Business Park West Access	5,683	594	1,377	83	2,190	376	475	53	80
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn Airport Business Park West Access & Adams Rd	7,381	555	1,401	72	3,460	293	796	54	80
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn Adams Rd & Luddenham Rd	6,894	602	1,229	84	3,609	368	800	78	80
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn Luddenham Rd & The Northern Rd	6,406	648	1,056	96	3,757	443	804	102	80
Airport Access Road	Airport Access Road SB Btwn M12 & Elizabeth Dr	-	-	-	-	6,187	539	1,651	41	100
Airport Access Road	Airport Access Road NB Btwn Elizabeth Drive & M12	-	-	-	-	6,489	145	1,131	46	100
Airport Interchange Ramps	Airport Interchange SB M12 WB Off Ramp to Airport Access Rd SB	-	-	-	-	4,637	511	1,135	37	90
Airport Interchange Ramps	Airport Interchange SB M12 EB Off Ramp to Airport Access Rd SB	-	-	-	-	1,550	28	516	4	90

Road	Section	No Build				Build				
		Day		Night		Day		Night		Speed
		Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	km/h
Airport Interchange Ramps	Airport Interchange NB Airport Access Road NB to M12 WB On Ramp	-	-	-	-	2,109	33	264	4	90
Airport Interchange Ramps	Airport Interchange NB Airport Access Road to M12 EB On Ramp	-	-	-	-	4,380	112	867	42	90
Other Roads	Adams Road NB Btwn Elizabeth Dr & Adams Rd South End	629	119	210	23	754	91	275	15	70
Other Roads	Adams Road SB Btwn Adams Rd South End & Elizabeth Dr	1,234	158	243	41	1,931	103	337	28	70
Other Roads	Cecil Road NB Btwn Wallgrove Rd & Cecil Rd North End	2	-	-	-	87	39	44	10	60
Other Roads	Cecil Road SB Btwn Cecil Rd North End & Wallgrove Rd	381	66	70	8	259	65	20	8	60
Other Roads	Clifton Avenue NB Btwn Elizabeth Dr & Clifton Ave North End	677	67	169	8	677	67	169		60
Other Roads	Clifton Avenue SB Btwn Clifton Ave North End & Elizabeth Dr	954	86	229	17	924	91	226	22	60
Other Roads	Devonshire Road NB Btwn Southern End & Elizabeth Dr	2,951	265	819	54	3,091	311	863	65	70
Other Roads	Devonshire Road SB Btwn Elizabeth Dr & Southern End	3,408	578	695	104	3,491	673	664	110	70
Other Roads	Duff Road NB Btwn Elizabeth Dr & Duff Rd North End	1,694	377	331	64	1,670	342	311	51	60
Other Roads	Duff Road SB Btwn Duff Rd North End & Elizabeth Dr	1,510	217	451	95	1,631	377	537	119	60
Other Roads	Luddenham Road NB Btwn Elizabeth Dr & Luddenham Rd North End	3,602	83	1,056	7	3,500	84	1,035	9	80
Other Roads	Luddenham Road SB Btwn Luddenham Rd North End & Elizabeth Dr	5,087	161	1,087	34	4,811	225	991	62	80
Other Roads	Mamre Road NB Btwn Elizabeth Dr & Mamre Rd North End	7,135	452	1,856	58	7,596	495	1,968	56	80

Road	Section	No Build				Build				
		Day		Night		Day		Night		Speed
		Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	km/h
Other Roads	Mamre Road SB Btwn Mamre Rd North End & Elizabeth Dr	6,456	399	1,325	25	6,445	373	1,321	20	80
Other Roads	Martin Road NB Btwn Southern End & Elizabeth Dr	628	144	143	36	665	169	160	48	60
Other Roads	Martin Road SB Btwn Elizabeth Dr & Southern End	526	197	152	41	489	190	145	37	60
Other Roads	Old Northern Road NB Btwn The Northern Road South End & Elizabeth Dr	3,299	48	943	8	3,771	216	1,074	52	60
Other Roads	Old Northern Road SB Btwn Elizabeth Dr & The Northern Road South End	3,760	261	585	19	3,785	478	608	61	60
Other Roads	Salisbury Road NB Btwn Elizabeth Dr & Northern End	15	16	7	6	20	8	10	4	60
Other Roads	Salisbury Road SB Btwn Northern End & Elizabeth Dr	232	18	17	-	219	22	19	-	60
Other Roads	The Northern Road NB Btwn Elizabeth Dr & M12	11,917	1,962	2,495	451	9,556	2,202	2,755	583	90
Other Roads	The Northern Road NB Btwn M12 & The Northern Road North End	11,917	1,962	2,495	451	14,797	2,361	2,615	484	90
Other Roads	The Northern Road Realignment NB Btwn The Northern Road Realignment South End & Elizabeth Dr	5,644	1,572	1,412	377	4,268	1,656	1,218	424	90
Other Roads	The Northern Road Realignment SB Btwn Elizabeth Dr & The Northern Road Realignment South End	6,832	1,915	662	436	5,773	1,719	513	438	90
Other Roads	The Northern Road SB Btwn M12 & Elizabeth Dr	12,626	2,306	2,043	524	11,890	2,647	1,568	578	90
Other Roads	The Northern Road SB Btwn The Northern Road North End & M12	12,631	2,296	2,043	522	11,593	2,327	2,392	568	90
Other Roads	Wallgrove Road NB Btwn Elizabeth Dr / Cecil Rd & Existing M7 On Ramp	6,504	599	1,831	206	4,774	224	1,586	69	80
Other Roads	Wallgrove Road NB Btwn Existing M7 On Ramp & Wallgrove Rd North End	4,797	207	1,351	69	4,774	224	1,586	69	80
Other Roads	Wallgrove Road SB Btwn Wallgrove Rd North End Elizabeth Dr / Cecil Rd	4,700	706	640	61	4,956	671	578	54	80
Other Roads	Western Road NB Btwn Elizabeth Dr & Northern End	339	28	114	5	339	28	114	5	60

Road	Section	No Build				Build				
		Day		Night		Day		Night		Speed
		Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	km/h
Other Roads	Western Road NB Btwn Southern End & Elizabeth Dr	1,494	221	436	57	1,799	242	519	69	60
Other Roads	Western Road SB Btwn Elizabeth Dr & Southern End	1,763	286	127	20	2,075	327	137	28	60
Other Roads	Western Road SB Btwn Northern End & Elizabeth Dr	247	8	39	2	245	10	37	4	60

2036 Traffic Volumes

Road	Section	No Build				Build				
		Day		Night		Day		Night		Speed
		Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	km/h
M12 Eastbound	M12 EB Btwn The Northern Road & M12 Off Ramp to Airport Access Rd	-	-	-	-	9,299	975	3,165	381	100
M12 Eastbound	M12 EB Btwn M12 Off Ramp to Airport Access Rd & M12 On Ramp from Airport Access Rd	-	-	-	-	6,332	943	2,214	375	100
M12 Eastbound	M12 EB Btwn M12 On Ramp from Airport Access Rd & M12 Off Ramp to Elizabeth Dr	-	-	-	-	15,372	1,101	4,004	408	100
M12 Eastbound	M12 EB Btwn M12 Off Ramp to Elizabeth Dr & M12 EB Off Ramp	-	-	-	-	12,255	1,007	3,239	377	100
M12 Westbound	M12 WB Btwn M12 On Ramp from M7 / Elizabeth Dr & M12 Off Ramp to Airport Access Rd	-	-	-	-	19,741	2,321	3,463	236	100
M12 Westbound	M12 WB Btwn M12 Off Ramp to Airport Access Rd & M12 On Ramp from Airport Access Rd	-	-	-	-	11,450	1,893	1,068	197	100
M12 Westbound	M12 WB Btwn M12 On Ramp from Airport Access Rd & The Northern Road	-	-	-	-	14,383	1,854	1,608	193	100
M7 Northbound	M7 NB Btwn M7 South End & M7 Off Ramp to M12 / Elizabeth Dr	27,871	9,205	6,588	2,113	31,122	9,801	7,150	2,126	100
M7 Northbound	M7 NB Btwn M7 Off Ramp to M12 / Elizabeth Dr & M7 On Ramp from M12 / Elizabeth Dr	23,159	8,552	5,424	1,990	18,012	7,907	4,410	1,846	100
M7 Northbound	M7 NB Btwn M7 On Ramp from M12 / Elizabeth Dr & M7 North End	24,933	9,036	5,922	2,127	26,776	8,952	6,737	2,161	100
M7 Southbound	N7 SB Btwn M7 North End & M7 Off Ramp to M12 / Elizabeth Dr	30,088	8,526	5,519	1,624	34,645	8,495	6,053	1,574	100
M7 Southbound	M7 SB Btwn M7 Off Ramp to M12 / Elizabeth Dr & M7 On Ramp from M12 / Elizabeth Dr	23,168	7,800	4,131	1,484	18,970	7,001	3,294	1,335	100
M7 Southbound	M7 SB Btwn M7 On Ramp from M12 / Elizabeth Dr & M7 South End	28,827	8,382	4,996	1,604	30,510	8,272	5,531	1,704	100
M7 Interchange Ramps	M7 NB Off Ramp to M12 / Elizabeth Dr	4,712	653	1,164	123	13,110	1,894	2,740	280	80

Road	Section	No Build				Build				
		Day		Night		Day		Night		Speed
		Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	km/h
M7 Interchange Ramps	M7 NB Off Ramp to M12 WB On Ramp	-	-	-	-	8,636	1,288	1,472	145	80
M7 Interchange Ramps	M7 NB Off Ramp to Elizabeth Dr	4,712	653	1,164	123	4,488	608	1,260	128	80
M7 Interchange Ramps	M12 EB Off Ramp to M7 NB On Ramp	-	-	-	-	6,253	476	1,738	176	80
M7 Interchange Ramps	Elizabeth Dr to M7 NB On Ramp	1,774	484	498	137	2,593	598	636	147	80
M7 Interchange Ramps	M7 SB Off Ramp to M12 / Elizabeth Dr	6,620	724	1,377	147	15,675	1,494	2,759	239	80
M7 Interchange Ramps	Elizabeth Dr Connection to M12 WB	-	-	-	-	2,646	378	636	18	80
M7 Interchange Ramps	M7 SB Off Ramp to Elizabeth Dr	6,620	724	1,377	147	6,888	823	1,361	163	80
M7 Interchange Ramps	M12 EB Off Ramp to M7 SB On Ramp	-	-	-	-	6,002	531	1,501	201	80
M7 Interchange Ramps	Elizabeth Dr to M7 SB On Ramp	5,675	566	855	115	5,693	808	766	190	80
M7 Interchange Ramps	M12 EB Off Ramp Connection to Elizabeth Dr	-	-	-	-	2,873	50	706	11	80
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn The Northern Road & Luddenham Rd	7,049	305	2,457	73	4,403	340	1,185	75	80
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn Luddenham Rd & Adams Rd	7,557	298	2,574	77	4,583	509	1,311	166	80

Road	Section	No Build				Build				
		Day		Night		Day		Night		Speed
		Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	km/h
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn Adams Rd & Airport Business Park West Access	8,064	291	2,691	81	4,762	678	1,437	257	80
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn Airport Business Park West Access & Airport Business Park East Access	9,093	320	1,346	65	5,642	723	1,202	232	80
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn Airport Business Park East Access & Martin Rd	11,632	365	2,591	78	8,226	915	1,787	267	80
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn Martin Rd & Western Rd	12,127	394	2,678	91	8,736	988	1,912	290	80
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn Western Rd & Clifton Ave	11,531	465	2,682	111	8,852	1,121	2,140	330	80
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn Clifton Ave & Devonshire Rd	12,439	574	2,887	139	9,788	1,218	2,373	354	80
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn Devonshire Rd & Mamre Rd	17,312	1,066	4,177	212	16,248	1,754	4,153	524	80
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn Mamre Rd & Duff Rd	10,713	1,165	2,700	171	9,361	1,847	2,410	386	80
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn Duff Rd & Off Ramp from M12	11,007	1,307	2,886	227	9,984	2,061	2,698	450	80
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn Off Ramp from M12 & Cecil Rd	11,007	1,307	2,886	227	12,972	2,106	3,462	460	80
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn Cecil Rd & M7 NB On / Off Ramps	11,355	1,466	2,976	269	16,301	2,290	3,414	434	70
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn M7 NB On / Off Ramps & M7 SB On / Off Ramps	15,562	1,445	3,244	203	15,758	2,056	3,287	372	70
Elizabeth Dr Eastbound	Elizabeth Drive EB Btwn M7 SB On / Off Ramps & Elizabeth Dr East End	17,133	1,295	3,732	176	16,842	1,605	3,698	252	70
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn Elizabeth Dr East End & M7 SB On / Off Ramps	14,488	1,229	3,632	185	13,931	1,346	3,326	184	50-70
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn M7 SB On / Off Ramps & M7 NB On / Off Ramps	13,929	1,552	3,710	245	14,063	1,791	3,527	271	70
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn M7 NB On / Off Ramps & Cecil Rd	12,149	2,205	2,898	291	16,570	1,986	4,291	305	70

Road	Section	No Build				Build				
		Day		Night		Day		Night		Speed
		Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	km/h
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn Cecil Rd & Duff Rd	12,156	2,201	2,901	289	11,068	2,050	2,563	299	80
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn Duff Rd & Mamre Rd	11,342	1,970	2,767	243	10,059	1,778	2,401	261	80
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn Mamre Rd & Devonshire Rd	14,191	1,993	2,713	286	15,296	2,037	2,395	371	80
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn Devonshire Rd & Clifton Ave	8,480	898	1,561	75	9,851	1,033	1,659	104	80
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn Clifton Ave & Western Rd	8,007	855	1,436	68	9,883	1,030	1,658	103	80
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn Western Rd & Martin Rd	7,857	720	1,597	57	8,159	704	1,657	83	80
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn Martin Rd & Airport Business Park East Access	7,669	765	1,551	62	3,354	361	745	46	80
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn Airport Business Park East Access & Airport Business Park West Access	7,104	406	2,008	52	3,376	374	742	47	80
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn Airport Business Park West Access & Adams Rd	8,731	350	1,185	38	4,392	263	609	37	80
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn Adams Rd & Luddenham Rd	8,772	417	1,265	74	4,825	365	615	53	80
Elizabeth Dr Westbound	Elizabeth Drive WB Btwn Luddenham Rd & The Northern Rd	8,812	483	1,344	110	5,258	466	620	69	80
Airport Access Road	Airport Access Road SB Btwn M12 & Elizabeth Dr	-	-	-	-	11,236	454	3,324	42	100
Airport Access Road	Airport Access Road NB Btwn Elizabeth Drive & M12	-	-	-	-	12,173	206	2,366	35	100
Airport Interchange Ramps	Airport Interchange SB M12 WB Off Ramp to Airport Access Rd SB	-	-	-	-	8,312	419	2,393	37	90
Airport Interchange Ramps	Airport Interchange SB M12 EB Off Ramp to Airport Access Rd SB	-	-	-	-	2,924	35	931	5	90

Road	Section	No Build				Build				
		Day		Night		Day		Night		Speed
		Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	km/h
Airport Interchange Ramps	Airport Interchange NB Airport Access Road NB to M12 WB On Ramp	-	-	-	-	3,083	41	556	1	90
Airport Interchange Ramps	Airport Interchange NB Airport Access Road to M12 EB On Ramp	-	-	-	-	9,090	165	1,810	34	90
Other Roads	Adams Road NB Btwn Elizabeth Dr & Adams Rd South End	574	32	260	11	606	101	268	20	70
Other Roads	Adams Road SB Btwn Adams Rd South End & Elizabeth Dr	1,791	109	212	19	1,248	86	147	12	70
Other Roads	Cecil Road NB Btwn Wallgrove Rd & Cecil Rd North End	11	3	2	-	74	37	41	10	60
Other Roads	Cecil Road SB Btwn Cecil Rd North End & Wallgrove Rd	801	230	141	47	654	95	97	12	60
Other Roads	Clifton Avenue NB Btwn Elizabeth Dr & Clifton Ave North End	496	49	122	7	496	49	122	7	60
Other Roads	Clifton Avenue SB Btwn Clifton Ave North End & Elizabeth Dr	945	104	219	27	957	102	239	23	60
Other Roads	Devonshire Road NB Btwn Southern End & Elizabeth Dr	5,179	538	1,111	78	6,372	604	1,709	128	70
Other Roads	Devonshire Road SB Btwn Elizabeth Dr & Southern End	4,542	845	670	166	5,471	997	760	231	70
Other Roads	Duff Road NB Btwn Elizabeth Dr & Duff Rd North End	1,625	396	317	81	1,714	394	307	67	60
Other Roads	Duff Road SB Btwn Duff Rd North End & Elizabeth Dr	1,144	282	366	84	1,341	344	443	94	60
Other Roads	Luddenham Road NB Btwn Elizabeth Dr & Luddenham Rd North End	2,538	43	816	3	2,960	39	938	4	80
Other Roads	Luddenham Road SB Btwn Luddenham Rd North End & Elizabeth Dr	5,738	238	1,268	66	5,031	514	1,008	160	80
Other Roads	Mamre Road NB Btwn Elizabeth Dr & Mamre Rd North End	13,504	826	3,221	129	14,502	920	3,761	170	80
Other Roads	Mamre Road SB Btwn Mamre Rd North End & Elizabeth Dr	10,653	1,076	1,844	132	13,234	1,278	2,121	179	80

Road	Section	No Build				Build				
		Day		Night		Day		Night		Speed
		Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	km/h
Other Roads	Martin Road NB Btwn Southern End & Elizabeth Dr	635	162	146	46	654	198	157	54	60
Other Roads	Martin Road SB Btwn Elizabeth Dr & Southern End	360	205	88	46	584	225	167	48	60
Other Roads	Old Northern Road NB Btwn The Northern Road South End & Elizabeth Dr	3,241	46	891	3	4,003	246	1,139	65	60
Other Roads	Old Northern Road SB Btwn Elizabeth Dr & The Northern Road South End	2,739	139	518	7	4,454	841	663	93	60
Other Roads	Salisbury Road NB Btwn Elizabeth Dr & Northern End	15	16	7	6	20	8	10	4	60
Other Roads	Salisbury Road SB Btwn Northern End & Elizabeth Dr	232	18	17	0	219	22	19	0	60
Other Roads	The Northern Road NB Btwn Elizabeth Dr & M12	16,249	2,147	3,251	635	12,167	2,446	3,292	777	90
Other Roads	The Northern Road NB Btwn M12 & The Northern Road North End	16,249	2,147	3,251	635	17,482	2,187	3,034	488	90
Other Roads	The Northern Road Realignment NB Btwn The Northern Road Realignment South End & Elizabeth Dr	6,189	1,834	1,828	539	5,915	1,838	1,964	611	90
Other Roads	The Northern Road Realignment SB Btwn Elizabeth Dr & The Northern Road Realignment South End	7,833	1,938	784	412	8,120	2,138	708	459	90
Other Roads	The Northern Road SB Btwn M12 & Elizabeth Dr	15,709	2,180	2,949	480	15,135	3,245	1,958	612	90
Other Roads	The Northern Road SB Btwn The Northern Road North End & M12	15,746	2,183	2,958	481	14,985	2,122	3,394	540	90
Other Roads	Wallgrove Road NB Btwn Elizabeth Dr / Cecil Rd & Existing M7 On Ramp	6,639	596	2,084	166	4,553	148	1,493	54	80
Other Roads	Wallgrove Road NB Btwn Existing M7 On Ramp & Wallgrove Rd North End	4,871	114	1,577	29	4,553	148	1,493	54	80
Other Roads	Wallgrove Road SB Btwn Wallgrove Rd North End Elizabeth Dr / Cecil Rd	4,764	700	493	45	4,650	773	472	52	80
Other Roads	Western Road NB Btwn Elizabeth Dr & Northern End	345	18	111	4	345	18	111	4	60
Other Roads	Western Road NB Btwn Southern End & Elizabeth Dr	2,259	130	647	33	3,143	225	945	55	60
Other Roads	Western Road SB Btwn Elizabeth Dr & Southern End	2,749	156	309	11	3,970	293	471	24	60
Other Roads	Western Road SB Btwn Northern End & Elizabeth Dr	242	14	36	2	241	5	32	2	60

Appendix E

M12 West operations

M12 West LNDG concrete pavement surface noise levels

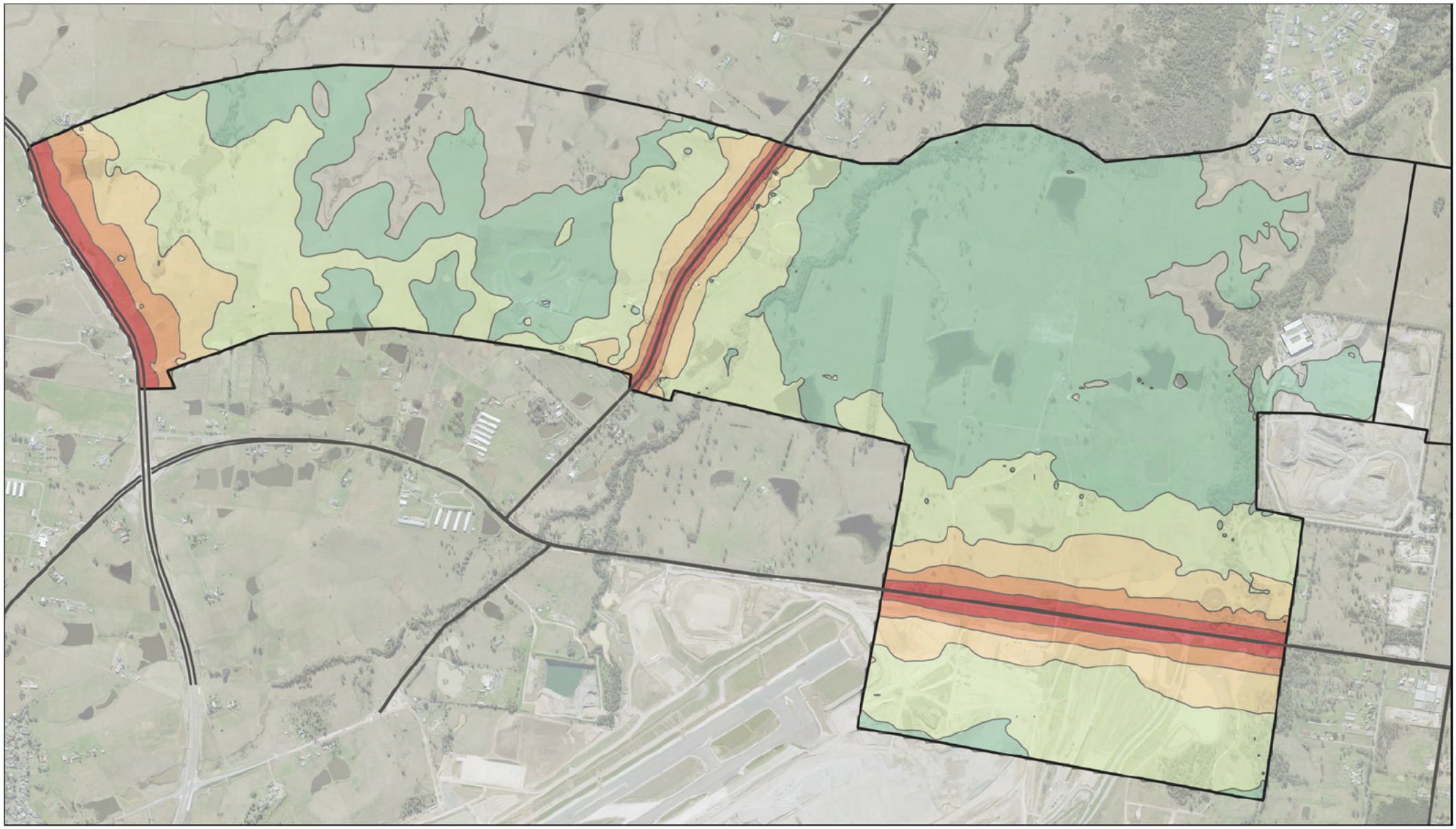
Receiver ID	Address	Noise catchment area	Receiver type	Façade				Predicted noise level Opening Year 2026				Predicted no se level Design Year 2036				Change in noise evel (Build - No Build)				NCG Project road noise criteria		NCG Project road noise criteria exceedance (dB)		Do noise levels equal or exceed the cumulative limit with project roads adding ≥2dB to the total noise levels?		Is the contribution from the road project Acute?		Is the property considered for further treatment?	Category of treatment
				Floor level	Direction	x	y	No Build		Bu ld		No Build		Build		Opening Year 2026		Design Year 2036												
								Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night		
4882	734 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	NE	289895.6	6251588.6	58	54	58	54	58	54	59	55	0.3	0.4	1	1.2	55	50	4	5	-	-	No	No	No	-
4882	734 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	NE	289912.2	6251588.4	56	52	57	53	56	52	58	54	0.9	0.9	1.8	1.9	55	50	3	4	-	-	No	No	No	-
4882	734 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	NW	289887.3	6251580.9	60	56	61	57	60	56	62	58	0.9	0.9	1.8	1.8	55	50	7	8	-	-	No	No	No	-
4882	734 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	NW	289890.1	6251586.7	60	56	61	57	60	56	62	58	0.9	0.9	1.7	1.8	55	50	7	8	-	-	No	No	No	-
4882	734 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	NW	289898.9	6251590.9	59	55	59	55	59	55	60	56	0.5	0.6	1.3	1.4	55	50	5	6	-	-	No	No	No	-
4882	734 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	NW	289899.3	6251572.4	55	51	57	53	55	51	59	55	2.5	2.2	3.7	3.5	55	50	4	5	No	Yes	No	No	Yes	Type 1
4882	734 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	SE	289896.0	6251574.0	51	47	56	51	51	47	57	53	4.8	4.4	6.3	6	55	50	2	3	No	No	No	No	Yes	Type 1
4882	734 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	SE	289914.9	6251572.0	48	43	56	51	48	44	57	53	7.8	7.3	9.5	9.1	55	50	2	3	No	No	No	No	Yes	Type 1
4882	734 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	SW	289889.1	6251574.2	58	54	61	56	58	54	62	58	2.3	2.2	3.5	3.4	55	50	7	8	Yes	Yes	No	No	Yes	Type 2
4882	734 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	SW	289897.5	6251576.0	49	45	55	50	49	45	56	52	5.7	5.2	7.2	6.8	55	50	1	2	No	No	No	No	Yes	Type 1
4882	734 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	SW	289900.0	6251565.8	57	53	60	56	57	53	61	57	3.1	2.9	4.5	4.2	55	50	6	7	Yes	Yes	No	No	Yes	Type 2
4882	734 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	SW	289900.5	6251575.6	53	48	56	51	53	49	57	53	2.9	2.6	4.2	3.8	55	50	2	3	No	No	No	No	Yes	Type 1
4882	734 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	SW	289905.3	6251564.5	55	51	59	55	55	52	61	57	3.9	3.5	5.3	5.1	55	50	6	7	Yes	Yes	No	No	Yes	Type 2
4884	734 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	NE	289988.0	6251654.9	54	49	54	50	54	50	55	51	0.7	0.8	1.5	1.6	55	50	-	1	-	-	-	No	No	-
4884	734 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	NE	289989.8	6251647.1	47	43	52	47	47	43	53	49	4.5	4.1	6	5.7	55	50	-	-	-	-	-	-	No	-
4884	734 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	NW	289965.5	6251632.0	57	53	58	54	57	53	59	55	1.3	1.3	2.3	2.3	55	50	4	5	-	-	No	No	Yes	Type 1
4884	734 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	NW	289967.0	6251634.5	56	52	58	53	56	52	59	55	1.4	1.3	2.4	2.3	55	50	4	5	-	-	No	No	Yes	Type 1
4884	734 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	NW	289967.7	6251639.3	57	53	58	54	57	53	59	55	1.2	1.1	2.2	2.1	55	50	4	5	-	-	No	No	Yes	Type 1
4884	734 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	NW	289971.6	6251646.3	57	53	58	54	57	53	59	55	1.1	1.1	2	2.1	55	50	4	5	-	-	No	No	Yes	Type 1
4884	734 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	NW	289979.0	6251653.1	57	53	58	53	57	53	58	55	0.9	0.9	1.8	1.8	55	50	3	5	-	-	No	No	No	-
4884	734 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	SE	289981.5	6251633.0	45	41	53	48	45	41	55	50	7.9	7.4	9.5	9.2	55	50	-	-	-	-	-	-	No	-
4884	734 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	SE	289990.6	6251648.8	48	43	53	48	48	44	54	50	5	4.6	6.6	6.2	55	50	-	-	-	-	-	-	No	-
4884	734 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	SW	289967.4	6251624.0	55	51	58	54	55	51	59	55	2.8	2.4	4	3.8	55	50	4	5	No	Yes	No	No	Yes	Type 1
4887	710 - 732 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	NE	289964.2	6251721.1	61	56	61	57	61	57	62	58	0.4	0.6	1.2	1.3	55	50	7	8	-	-	No	No	No	-
4887	710 - 732 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	NW	289953.5	6251722.6	65	61	65	61	65	61	66	62	0.1	0.3	0.8	1.1	55	50	11	12	-	-	No	No	No	-
4887	710 - 732 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	SE	289955.6	6251711.0	58	54	59	55	58	54	60	57	1.7	1.5	2.7	2.6	55	50	5	7	Yes	-	No	No	Yes	Type 2
4887	710 - 732 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	SE	289962.4	6251712.5	57	53	59	55	57	53	60	56	1.8	1.8	2.9	2.9	55	50	5	6	Yes	Yes	No	No	Yes	Type 2
4887	710 - 732 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	SW	289948.6	6251713.6	63	59	64	60	63	60	65	61	0.4	0.6	1.3	1.4	55	50	10	11	-	-	No	No	No	-
4889	710 - 732 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	E	290014.1	6251799.2	59	55	60	55	59	55	61	57	0.9	0.9	1.7	1.8	55	50	6	7	-	-	No	No	No	-
4889	710 - 732 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	NE	290008.8	6251763.9	61	57	61	57	61	57	62	58	0.3	0.3	1	1.1	55	50	7	8	-	-	No	No	No	-
4889	710 - 732 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	NW	289988.7	6251744.4	61	56	61	57	61	57	62	58	0.5	0.6	1.2	1.3	55	50	7	8	-	-	No	No	No	-
4889	710 - 732 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	NW	289995.1	6251756.5	63	59	63	59	63	59	64	60	0.2	0.4	1	1.1	55	50	9	10	-	-	No	No	No	-
4889	710 - 732 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	SE	290005.8	6251746.1	48	44	53	49	48	44	55	51	5.5	5.2	7	6.7	55	50	-	1	-	No	-	No	Yes	Type 1
4889	710 - 732 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	SW	289988.7	6251744.5	61	56	61	57	61	57	62	58	0.4	0.5	1.2	1.3	55	50	7	8	-	-	No	No	No	-
4889	710 - 732 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	SW	289992.6	6251738.8	59	54	60	55	59	55	60	57	0.9	0.9	1.8	1.8	55	50	5	7	-	-	No	No	No	-
4916	713 - 733 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	E	289703.8	6251897.5	53	49	57	52	53	49	58	54	3.2	3	4.7	4.5	55	50	3	4	No	No	No	No	Yes	Type 1
4916	713 - 733 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	F 1	E	289703.8	6251897.5	54	50	57	53	54	50	58	54	3.1	2.9	4.5	4.3	55	50	3	4	No	No	No	No	Yes	Type 1
4916	713 - 733 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	E	289714.8	6251912.5	52	48	54	49	52	48	55	51	1.8	1.7	3	3	55	50	-	1	-	No	-	No	Yes	Type 1
4916	713 - 733 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	F 1	E	289714.8	6251912.5	52	48	54	50	52	49	56	52	1.9	1.9	3.1	3	55	50	1	2	No	No	No	No	Yes	Type 1
4916	713 - 733 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	E	289714.9	6251900.4	55	51	57	53	55	51	59	54	2.5	2.4	3.9	3.7	55	50	4	4	No	No	No	No	Yes	Type 1
4916	713 - 733 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	F 1	E	289714.9	6251900.4	55	51	58	53	55	51	59	55	2.5	2.4	3.8	3.6	55	50	4	5	No	Yes	No	No	Yes	Type 1
4916	713 - 733 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	N	289709.5	6251919.3	50	46	51	47	50	46	52	48	1.1	1	2	1.9	55	50	-	-	-	-	-	-	No	-
4916	713 - 733 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	F 1	N	289709.5	6251919.3	51	47	52	48	51	47	53	49	1.3	1.2	2.1	2.1	55	50	-	-	-	-	-	-	No	-
4916	713 - 733 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	NE	289715.6	6251909.6	51	47	53	48	51	47	54	50	1.3	1.3	2.3	2.3	55	50	-	-	-	-	-	-	No	-
4916	713 - 733 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	F 1	NE	289715.6	6251909.6	52	48	53	49	52	48	54	50	1.4	1.4	2.5	2.4	55	50	-	-	-	-	-	-	No	-
4916	713 - 733 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	NW	289697.1	6251909.2	44	40	51	46	45	40	52	48	6.2	5.9	7.4	7.1	55	50	-	-	-	-	-	-	No	-
4916	713 - 733 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	F 1	NW	289697.1	6251909.2	46	41	51	47	46	42	53	48	5.7	5.4	6.9	6.6	55	50	-	-	-	-	-	-	No	-
4916	713 - 733 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	S	289697.1	6251894.7	54	49	57	53	53	50	58	54	3.5	3.3	5	4.7	55	50	3	4	No	No	No	No	Yes	Type 1
4916	713 - 733 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	F 1	S	289697.1	6251894.7	54	50	57	53	54	50	59	55	3.5	3.2	4.8	4.5	55	50	4	5	No	Yes	No	No	Yes	Type 1
4916	713 - 733 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	S	289708.3	6251898.5	53	49	57	52	53	49	58	54	3.4	3.2	4.9	4.6	55	50	3	4	No	No	No	No	Yes	Type 1
4916	713 - 733 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	F 1	S	289708.3	6251898.5	54	50	57	53	54	50	58	54	3.3	3.1	4.7	4.4	55	50	3	4	No	No	No	No	Yes	Type 1
4916	713 - 733 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	SE	289717.8	6251905.0	55	51	57	53	55	51	58	54	2.6	2.3	3.8	3.7	55	50	3	4	No	No	No	No	Yes	Type 1
4916	713 - 733 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	F 1	SE	289717.8	6251905.0	55	51	58	53	55	51	59	55	2.5	2.3	3.8	3.6	55	50	4	5	No	Yes	No	No	Yes	Type 1
4918	765 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	NE	289281.5	6251626.8	46	42	51	46	46	43	52	48	4.3	3.7	5.6	5.1	55	50	-	-	-	-	-	-	No	-
4918	765 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	NE	289289.7	6251622.9	51	46	59	54	50	47	61	56	8.6	8.1	10.3	9.8	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
4918	765 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	NW	289275.2	6251627.9	45	40	54	49	45	41	56	51	9.4	8.5	10.6	9.8	55	50	1	1	No	No	No	No	Yes	Type 1
4918	765 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	NW	289284.0	6251625.5	45	41	49	44	45	41	50	46	4.3	3.8	5.6	5	55	50	-	-	-	-	-	-	No	-
4918	765 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	SE	289286.4	6251614.6	52	48	61	56	52	48	63	58	9	8.3	10.6	10	55	50	8	8	Yes	Yes	No	No	Yes	Type 2
4918	765 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	SW	289275.6	6251618.0	48	43	56	51	48	44	58	53	8.6	7.6	10.1	9.3	55	50	3	3	No	No	No	No	Yes	Type 1
5128	851 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	E	289006.4	6250935.9	46	42	53	48	46	43	55	50	7	5.9	8.4	7.4	55	50	-	-	-	-	-	-	No	-
5128	851 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	E	289017.9	6250931.0	51	47	55	50	51	47	56	51	3.3	2.7	4.7	4.2	55	50	1	1	No	No	No	No	Yes	Type 1
5128	851 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	N	288996.7	6250930.0	47	43	50	45	48	43	51	47	3.1	2.7	3.8	3.4	55	50	-	-	-	-	-	-	No	-
5128	851 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	N	289001.0	6250937.9	49	45	54	49	50	46	56	51	4.9	4.2	6	5.3	55	50	1	1	No	No	No	No	Yes	Type 1
5128	851 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	N	289010.6	6250935.3	46	42	53	48	46	42	55	50	7.2	6.1	8.6	7.7	55	50	-	-	-	-	-	-	No	-
5128	851 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	S	289008.4	6250921.5	54	49	54	50	54	50	55	51	0.8	0.6	1.8	1.5	55	50	-	1	-	-	-	No	No	-
5128	851 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	W	288995.4	6250923.9	52	48	53	48	53	49	54	49	0.2	0.3	0.9	0.7	55	50	-	-	-	-	-	-	No	-
5128	851 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	W	288997.7	6250932.9	48	43	50	45	48	44	51	46	2	1.9	2.8	2.4	55	50	-	-	-	-	-	-	No	-
5129	845 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	E	289096.1	6250946.3	54	50	57	53	54	50	59	54	3.6	2.9	5	4.3	55	50	4	4	No	No	No	No	Yes	Type 1
5129	845 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	F 1	E	289096.1	6250946.3	54	50	58	53	54	50	59	55	3.4	2.7	4.6	4.1	55	50	4	5	No	Yes	No	No	Yes	Type 1
5129	845 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	N	289084.9	6250950.4	49	45	56	51	49	46	58	53	7.1	5.9	8.5	7.4	55	50	3	3	No	No	No	No	Yes	Type 1
5129	845 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	F 1	N	289084.9	6250950.4	51	47	57	52	51	47	58	53	6	5	7.4	6.5	55	50	3	3	No	No	No	No	Yes	Type 1
5129	845 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	S	289085.5	6250940.9	54	50	55	51	54	50	56	52	0.8	0.7	1.8	1.6	55	50	1	2	No	-	No	No	No	-
5129	845 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	F 1	S	289085.5	6250940.9	55	51	56	51	55	51	57	52	0.8	0.8	1.8	1.5	55	50	2	2	No	-	No	No	No	-
5129	845 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	W	289074.3	6250945.0	47	43	49	45	47	43	51	46	2.6	2.3	3.7	3.5	55	50	-	-	-	-	-	-	No	-
5129	845 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	F 1	W	289074.3	6250945.0	53	48	54	49	53	49	55	50	0.8	0.8	1.7	1.3	55	50	-	-	-	-	-	-	No	-
5137	812 - 844 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	NE	289454.7	6250788.4	57	53	58	54	57	53	59	55	1.1	0.9	1.9	1.9	55	50	4	5	-	-	No	No	No	-
5137	812 - 844 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	NE	289461.6	6250767.4	48	44	51	46	48	44	52	48	2.5	2.2	3.8	3.5	55	50	-	-	-	-	-	-	No	-
5137	812 - 844 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	NE	289467.7	6250792.3	56	52	58	53	56	52	58	54	1.3	1.1	2.2	2	55	50	3	4	-	-	No	No	Yes	Type 1
5137	812 - 844 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	NE	289480.2	6250789.7	55	51	56	52	55	51	57	53	1.6	1.4	2.6	2.4	55	50	2	3	No	-	No	No	Yes	Type 1
5137	812 - 844 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	NE	289495.6	6250794.3	55	51	57	52	55	51	58	54	2.1	1.8	3.1	2.8	55	50	3	4	No	-	No	No	Yes	Type 1
5137	812 - 844 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	NW	289441.0	6250770.1	60	55	60	56	60	56	61	57	0.3	0.5	1	1.2	55	50	6	7	-	-	No	No	No	-
5137	812 - 844 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	NW	289441.7	6250759.8	58	54	59	55	58	55	59	56	0.3	0.4	1	1.1	55	50	4	6	-	-	No	No	No	-
5137	812 - 844 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	NW	289445.9	6250777.9	60	55	60	56	60	56	61	57	0.3	0.5	1	1.2	55	50	6	7	-	-	No	No	No	-
5137	812 - 844 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	NW	289448.8	6250788.5	60	56	60	56	60	56	61	58	0.6	0.7	1.4	1.5	55	50	6	8	-	-	No	No	No	-
5137	812 - 844 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	NW	289460.1	6250790.2	58	54	59	54	58	54	60	56	0.8	0.8	1.7	1.6	55	50	5	6	-	-	No	No	No	-
5137	812 - 844 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	NW	289470.9	6250793.1	57	53	58	54	57	53	59	55	1.1	0.9	1.9	1.9	55	50	4	5	-	-	No	No	No	-
5137	812 - 844 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	NW	289484.5	6250784.9	54	50	55	50	54	50	55	51	0.7	0.7	1.5	1.5	55	50	-	1	-	-	-	No	No	-
5137	812 - 844 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	NW	289486.3	6250791.0	56	52	57	53	56	52	58	54	1	0.9	1.9	1.8	55	50	3	4	-	-	No	No	No	-
5137	812 - 844 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	NW	289489.4	6250796.2	57	53	58	54	57	53	59	55	1.4	1.1	2.3	2.1	55	50	4	5	-	-	No	No	Yes	Type 1
5137	812 - 844 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	SE	289455.8	6250754.9	50	45	52	47	50	46	53	48	1.8	1.4	3.1	2.8	55	50	-	-	-	-	-	-	No	-
5137	812 - 844 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	SE	289464.6	6250774.8	49	44	49	45	49	45	51	47	0.8	0.7	2.1	2.1	55	50	-	-	-	-	-	-	No	-
5137	812 - 844 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	SE	289489.0	6250780.6	49	45	52	47	49	45	53	49	2.5	1.9	3.8	3.4	55	50	-	-	-	-	-	-	No	-
5137	812 - 844 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	SW	289441.7	6250771.4	59	55	60	56	59	56	60	57	0.3	0.4	1	1.1	55	50	5	7	-	-	No	No	No	-
5137	812 - 844 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	SW	289441.8	6250764.0	58	54	58	54	58	54	59	55	0.2	0.4	0.9	1	55	50	4	5	-	-	No	No	No	-
5137	812 - 844 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	SW	289442.1	6250751.7	58	54	58	54	58	54	59	55	0.1	0.3	0.8	1	55	50	4	5	-	-	No	No	No	-
5137	812 - 844 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	SW	289448.4	6250782.7	58	54	59	54	58	55	59	56	0.2	0.3	0.9	1.1	55	50	4	6	-	-	No	No	No	-
5137	812 - 844 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	SW	289472.1	6250777.2	50	46	50	46	50	46	51	47	0	0.1	1	1.1	55	50	-	-	-	-	-	-	No	-
5137	812 - 844 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	SW	289476.7	6250773.2	51	47	51	47	51	47	52	48	0.1	0.1	0.9	1.2	55	50	-	-	-	-	-	-	No	-
5137	812 - 844 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	SW	289484.5	6250786.1	54	50	55	51	54	50	56	52	0.7	0.6	1.4	1.4	55	50	1	2	-	-	No	No	No	-
5153	UNIT 15, 1953 ELIZABETH DRIVE, BADGERYS	NCA07	Residential	GF	NE	290696.8	6250226.0	44	39	51	46	44	40	53	48	7.5	7.1	9.1	8.7	55	50	-	-	-	-	-	-	No	-

M12 West LNDG concrete pavement surface noise levels

Receiver ID	Address	Noise catchment area	Receiver type	Façade				Predicted noise level Opening Year 2026				Predicted no se level Design Year 2036				Change in noise evel (Build - No Build)				NCG Project road noise criteria		NCG Project road noise criteria exceedance (dB)		Do noise levels equal or exceed the cumulative limit with project roads adding ≥2dB to the total noise levels?		Is the contribution from the road project Acute?		Is the property considered for further treatment?	Category of treatment
				Floor level	Direction	x	y	No Build		Bu ld		No Build		Build		Opening Year 2026		Design Year 2036												
								Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night		
5153	UNIT 15 1953 ELIZABETH DRIVE BADGERYS	NCA07	Residential	F 1	NE	290696.8	6250226.0	47	42	53	48	47	42	55	50	5.9	6	7.7	7.5	55	50	-	-	-	-	-	-	-	No	-
5153	UNIT 15, 1953 ELIZABETH DRIVE, BADGERYS	NCA07	Residential	GF	NE	290704.3	6250225.8	47	41	52	47	46	42	54	49	5.6	6.1	7.8	7.5	55	50	-	-	-	-	-	-	-	No	-
5153	UNIT 15, 1953 ELIZABETH DRIVE, BADGERYS	NCA07	Residential	F 1	NE	290704.3	6250225.8	49	43	54	49	49	44	56	51	4.6	5.5	6.9	6.8	55	50	1	1	No	No	No	No	Yes	Type 1	
5153	UNIT 15, 1953 ELIZABETH DRIVE, BADGERYS	NCA07	Residential	GF	NE	290709.5	6250221.2	47	41	53	48	47	42	55	50	5.6	6.6	7.9	7.9	55	50	-	-	-	-	-	-	-	No	-
5153	UNIT 15, 1953 ELIZABETH DRIVE, BADGERYS	NCA07	Residential	F 1	NE	290709.5	6250221.2	50	44	54	49	49	45	56	51	4.3	5.5	6.8	6.8	55	50	1	1	No	No	No	No	Yes	Type 1	
5153	UNIT 15, 1953 ELIZABETH DRIVE, BADGERYS	NCA07	Residential	GF	NE	290710.4	6250215.8	46	39	51	46	45	40	53	49	5.5	6.8	8	8.1	55	50	-	-	-	-	-	-	No	-	
5153	UNIT 15, 1953 ELIZABETH DRIVE, BADGERYS	NCA07	Residential	F 1	NE	290710.4	6250215.8	49	43	53	48	49	44	55	50	3.8	5.2	6.4	6.4	55	50	-	-	-	-	-	-	No	-	
5153	UNIT 15, 1953 ELIZABETH DRIVE, BADGERYS	NCA07	Residential	GF	NW	290690.7	6250222.9	51	46	52	48	51	46	54	49	1.8	1.6	3.2	3	55	50	-	-	-	-	-	-	No	-	
5153	UNIT 15, 1953 ELIZABETH DRIVE, BADGERYS	NCA07	Residential	F 1	NW	290690.7	6250222.9	51	47	53	49	51	47	55	50	1.8	1.7	3.3	3.2	55	50	-	-	-	-	-	-	No	-	
5153	UNIT 15, 1953 ELIZABETH DRIVE, BADGERYS	NCA07	Residential	GF	NW	290698.7	6250226.2	46	41	51	46	46	42	53	48	5.8	5.4	7.2	6.7	55	50	-	-	-	-	-	-	No	-	
5153	UNIT 15, 1953 ELIZABETH DRIVE, BADGERYS	NCA07	Residential	F 1	NW	290698.7	6250226.2	48	43	53	48	48	44	55	50	4.7	4.8	6.5	6.2	55	50	-	-	-	-	-	-	No	-	
5153	UNIT 15, 1953 ELIZABETH DRIVE, BADGERYS	NCA07	Residential	GF	SE	290706.8	6250221.4	41	36	50	45	41	36	52	47	8.9	9.3	10.9	10.7	53	48	-	-	-	-	-	-	No	-	
5153	UNIT 15, 1953 ELIZABETH DRIVE, BADGERYS	NCA07	Residential	F 1	SE	290706.8	6250221.4	46	40	52	47	46	41	54	49	6.1	6.7	8.3	8.2	55	50	-	-	-	-	-	-	No	-	
5153	UNIT 15, 1953 ELIZABETH DRIVE, BADGERYS	NCA07	Residential	GF	SE	290709.4	6250217.7	46	40	51	46	45	41	53	48	4.9	6.4	7.6	7.6	55	50	-	-	-	-	-	-	No	-	
5153	UNIT 15, 1953 ELIZABETH DRIVE, BADGERYS	NCA07	Residential	F 1	SE	290709.4	6250217.7	49	43	53	48	49	44	55	50	3.3	4.8	6	6.1	55	50	-	-	-	-	-	-	No	-	
5153	UNIT 15, 1953 ELIZABETH DRIVE, BADGERYS	NCA07	Residential	GF	SE	290709.9	6250208.8	51	45	52	48	50	46	54	50	1.6	2.6	4	4.1	55	50	-	-	-	-	-	-	No	-	
5153	UNIT 15, 1953 ELIZABETH DRIVE, BADGERYS	NCA07	Residential	F 1	SE	290709.9	6250208.8	52	46	54	49	52	47	56	51	1.3	2.5	3.8	3.9	55	50	1	1	No	No	No	No	Yes	Type 1	
5153	UNIT 15, 1953 ELIZABETH DRIVE, BADGERYS	NCA07	Residential	GF	SW	290696.8	6250211.0	52	47	51	47	52	48	52	48	-1.2	-0.5	0.3	0.7	55	50	-	-	-	-	-	-	No	-	
5153	UNIT 15, 1953 ELIZABETH DRIVE, BADGERYS	NCA07	Residential	F 1	SW	290696.8	6250211.0	53	48	53	48	53	48	54	50	-0.6	0.2	1.2	1.5	55	50	-	-	-	-	-	-	No	-	
5765	777 - 819 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	E	289410.0	6251042.9	60	56	61	57	60	56	62	58	1.1	0.9	2.1	1.9	55	50	7	8	-	-	No	No	Yes	Type 2	
5765	777 - 819 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	E	289413.1	6251049.3	60	56	61	57	60	56	62	58	1.4	1.1	2.4	2.1	55	50	7	8	-	-	No	No	Yes	Type 2	
5765	777 - 819 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	N	289406.2	6251057.1	57	53	60	55	57	53	61	57	3	2.4	4.2	3.6	55	50	6	7	Yes	Yes	No	No	Yes	Type 2	
5765	777 - 819 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	N	289410.9	6251055.8	58	54	60	56	58	54	62	57	2.6	2.1	3.7	3.2	55	50	7	7	Yes	Yes	No	No	Yes	Type 2	
5765	777 - 819 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	NE	289402.3	6251057.4	57	52	60	55	56	53	61	56	3.2	2.6	4.5	3.8	55	50	6	6	Yes	Yes	No	No	Yes	Type 2	
5765	777 - 819 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	S	289400.5	6251042.0	56	52	57	52	56	52	57	54	0.2	0.3	1	1.1	55	50	2	4	-	-	No	No	No	-	
5765	777 - 819 LUDDENHAM ROAD, LUDDENHAM 2745	NCA09	Residential	GF	S	289406.0	6251041.0	57	53	58	54	57	54	59	55	0.5	0.6	1.4	1.4	55	50	4	5	-	-	No	No	No	-	
5765	777 - 819 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	W	289397.3	6251047.0	50	46	53	48	50	46	54	50	3.4	2.7	4.6	3.9	55	50	-	-	-	-	-	-	No	-	
5765	777 - 819 LUDDENHAM ROAD LUDDENHAM 2745	NCA09	Residential	GF	W	289397.8	6251053.9	48	43	55	49	48	44	56	51	6.9	5.9	8.3	7.3	55	50	1	1	No	No	No	No	Yes	Type 1	
6026	16 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	E	292239.1	6251794.9	43	37	52	47	43	38	54	50	9.8	10	10.8	11.1	55	50	-	-	-	-	-	-	No	-	
6026	16 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	NE	292237.5	6251810.3	41	36	50	45	43	38	52	47	8.7	8.6	9.2	9.5	55	50	-	-	-	-	-	-	No	-	
6026	16 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	NW	292218.9	6251817.8	39	35	46	41	40	35	47	43	6.5	6.2	7.8	7.5	52	47	-	-	-	-	-	-	No	-	
6026	16 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	S	292215.2	6251802.0	42	37	50	45	42	38	52	47	7.8	8.1	9.7	9.6	54	50	-	-	-	-	-	-	No	-	
6026	16 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	S	292236.3	6251791.0	44	38	53	48	44	39	55	50	9.3	9.6	10.5	10.7	55	50	-	-	-	-	-	-	No	-	
6026	16 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	S	292240.5	6251796.1	43	38	52	47	44	39	54	49	9.2	9.5	10.3	10.6	55	50	-	-	-	-	-	-	No	-	
6026	16 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	SE	292230.7	6251786.8	44	38	53	48	44	40	55	50	9.3	9.5	10.4	10.6	55	50	-	-	-	-	-	-	No	-	
6026	16 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	SW	292209.5	6251806.8	43	38	50	45	43	38	52	47	7.3	7.4	9.2	9	55	50	-	-	-	-	-	-	No	-	
6026	16 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	SW	292221.0	6251794.0	43	37	50	45	43	38	52	47	7.3	7.5	9.3	9.1	55	50	-	-	-	-	-	-	No	-	
6027	22 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	E	292384.4	6251779.3	43	38	54	49	44	39	56	51	10.5	10.9	11.5	11.8	55	50	1	1	No	No	No	No	Yes	Type 1	
6027	22 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	E	292390.6	6251801.5	41	36	51	46	43	38	53	49	9.9	10	10.3	10.6	55	50	-	-	-	-	-	-	No	-	
6027	22 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	E	292397.6	6251789.2	43	38	54	48	44	39	55	51	10.7	10.8	11.3	11.7	55	50	-	1	-	No	-	No	Yes	Type 1	
6027	22 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	N	292367.8	6251799.6	38	34	45	39	39	35	46	42	6.2	5.9	7.2	7	51	47	-	-	-	-	-	-	No	-	
6027	22 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	N	292384.9	6251808.5	40	35	45	40	42	37	47	43	5.1	4.8	5.5	5.7	54	49	-	-	-	-	-	-	No	-	
6027	22 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	N	292393.1	6251796.4	40	35	45	40	42	37	47	42	5.2	5.2	5.4	5.7	54	49	-	-	-	-	-	-	No	-	
6027	22 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	S	292362.9	6251785.2	43	38	52	47	43	38	54	49	8.8	9.1	10.6	10.7	55	50	-	-	-	-	-	-	No	-	
6027	22 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	S	292376.7	6251775.7	44	38	54	49	44	39	56	51	10.2	10.4	11.5	11.7	55	50	1	1	No	No	No	No	Yes	Type 1	
6027	22 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	S	292390.3	6251782.1	44	38	54	49	44	39	56	51	10.4	10.7	11.6	11.8	55	50	1	1	No	No	No	No	Yes	Type 1	
6027	22 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	W	292355.4	6251793.4	42	36	49	44	41	37	51	46	7.3	7.8	9.3	9.2	53	49	-	-	-	-	-	-	No	-	
6027	22 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	W	292369.6	6251781.3	42	36	50	45	42	37	52	47	8.1	8.6	10.1	10	54	49	-	-	-	-	-	-	No	-	
6027	22 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	W	292378.1	6251802.8	39	34	46	41	39	35	48	43	7.1	7	8.7	8.5	51	47	-	-	-	-	-	-	No	-	
6028	12 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	E	292250.9	6251870.5	41	36	48	43	42	37	50	46	7.2	7.2	7.8	8.1	54	49	-	-	-	-	-	-	No	-	
6028	12 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	E	292267.3	6251884.7	41	36	49	43	42	37	50	46	7.7	7.7	8.3	8.6	54	49	-	-	-	-	-	-	No	-	
6028	12 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	N	292245.8	6251889.0	39	34	45	40	40	35	46	42	5.8	5.5	6.7	6.6	52	47	-	-	-	-	-	-	No	-	
6028	12 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	S	292236.8	6251870.0	38	33	46	41	39	34	48	43	8.3	8.3	9.4	9.5	51	46	-	-	-	-	-	-	No	-	
6028	12 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	S	292247.6	6251865.9	41	36	48	43	42	37	50	45	7.1	7.1	7.6	7.9	54	49	-	-	-	-	-	-	No	-	
6028	12 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	S	292258.8	6251873.8	42	37	49	44	43	38	51	46	7.1	7.2	8	8.2	55	50	-	-	-	-	-	-	No	-	
6028	12 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	W	292228.1	6251876.5	38	33	45	40	38	34	46	42	6.7	6.5	8.2	8	50	46	-	-	-	-	-	-	No	-	
6028	12 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	W	292242.4	6251868.9	38	33	46	41	39	34	48	43	8	8	9.5	9.5	51	46	-	-	-	-	-	-	No	-	
6029	10 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	E	292318.4	6251878.7	40	34	48	42	40	35	49	45	7.8	8.1	9.1	9.3	52	47	-	-	-	-	-	-	No	-	
6029	10 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	N	292298.3	6251887.3	38	33	44	39	39	35	46	41	5.7	5.6	6.5	6.6	51	47	-	-	-	-	-	-	No	-	
6029	10 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	S	292297.2	6251875.2	41	36	50	44	42	37	51	47	8.8	8.9	9.9	10.1	54	49	-	-	-	-	-	-	No	-	
6029	10 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	W	292277.1	6251883.9	38	30	46	40	38	34	47	43	7.3	10.4	9.2	9.1	50	46	-	-	-	-	-	-	No	-	
6030	8 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	E	292338.6	6251872.0	41	35	50	45	42	37	52	47	9.4	9.7	10.4	10.8	54	49	-	-	-	-	-	-	No	-	
6030	8 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	E	292344.7	6251893.2	39	34	47	42	40	35	49	44	7.7	7.9	8.7	9	52	47	-	-	-	-	-	-	No	-	
6030	8 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	E	292367.3	6251885.2	39	34	47	42	40	35	49	44	8	8.2	9.2	9.4	52	47	-	-	-	-	-	-	No	-	
6030	8 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	N	292339.6	6251904.0	39	34	44	39	41	36	46	42	4.9	4.8	5.4	5.5	53	48	-	-	-	-	-	-	No	-	
6030	8 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	N	292349.3	6251884.2	37	30	44	39	38	33	45	41	6.9	8.5	7.8	7.9	50	45	-	-	-	-	-	-	No	-	
6030	8 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	N	292363.0	6251903.3	40	35	44	39	41	37	46	42	4.6	4.4	5	5.1	53	49	-	-	-	-	-	-	No	-	
6030	8 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	S	292333.0	6251867.5	42	36	50	45	42	37	52	48	8.7	8.9	10	10.1	54	49	-	-	-	-	-	-	No	-	
6030	8 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	S	292346.1	6251875.3	41	36	50	45	42	37	52	47	8.9	9.3	10.3	10.6	54	49	-	-	-	-	-	-	No	-	
6030	8 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	S	292356.6	6251876.6	40	34	47	42	40	35	49	45	7.6	8.1	9.4	9.4	52	47	-	-	-	-	-	-	No	-	
6030	8 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	S	292361.3	6251868.3	42	36	50	45	42	37	52	47	8.7	9	10.2	10.3	54	49	-	-	-	-	-	-	No	-	
6030	8 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	W	292331.0	6251886.5	40	34	46	41	40	35	48	43	6.9	7.1	8.6	8.4	52	47	-	-	-	-	-	-	No	-	
6030	8 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	W	292355.6	6251892.7	39	34	46	41	39	34	48	43	7.4	7.6	9.1	9	51	46	-	-	-	-	-	-	No	-	
6030	8 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	W	292357.4	6251873.8	40	34	47	42	40	35	49	44	7.4	7.9	9.3	9.2	52	47	-	-	-	-	-	-	No	-	
6032	5 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	E	292462.8	6251869.3	41	35	48	43	42	37	50	46	7.8	7.9	8	8.5	54	49	-	-	-	-	-	-	No	-	
6032	5 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	E	292465.3	6251879.9	42	37	50	45	43	38	52	48	8.3	8.4	9	9.3	55	50	-	-	-	-	-	-	No	-	
6032	5 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	E	292483.1	6251854.1	42	37	53	48	43	38	55	50	10.7	10.8	11.3	11.7	55	50	-	-	-	-	-	-	No	-	
6032	5 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	N	292459.8	6251884.5	40	35	45	39	41	37	47	42	4.8	4.7	5.1	5.3	53	49	-	-	-	-	-	-	No	-	
6032	5 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	N	292472.0	6251861.3	39	34	44	39	41	36	46	42	5.3	5.2	5.6	5.9	53	48	-	-	-	-	-	-	No	-	
6032	5 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	S	292456.1	6251853.9	41	36	51	46	42	37	53	48	9.9	10	11.5	11.6	54	49	-	-	-	-	-	-	No	-	
6032	5 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	S	292470.6	6251848.7	42	37	53	48	43	38	55	50	10.7	10.9	11.8	12.1	55	50	-	-	-	-	-	-	No	-	
6032	5 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	W	292452.2	6251869.8	39	34	47	42	39	35	49	44	7.7	8	9.4	9.3	51	47	-	-	-	-	-	-	No	-	
6032	5 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	W	292459.3	6251852.7	39	34	48	43	39	35	50	45	8.3	8.7	10.1	10	51	47	-	-	-	-	-	-	No	-	
6033	7 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	E	292506.2	6251854.5	42	36	52	47	42	37	54	49	10.5	10.7	11.5	11.8	54	49	-	-	-	-	-	-	No	-	
6033	7 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	E	292535.0	6251862.2	42	37	52	47	43	38	54	49	10.3	10.5	11	11.3	55	50	-	-	-	-	-	-	No	-	
6033	7 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	E	292542.7	6251874.8	42	37	52	47	43	38	54	49	9.4	9.6	10.2	10.6	55	50	-	-	-	-	-	-	No	-	
6033	7 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	N	292506.3	6251872.3	37	30	44	39	38	34	46	41	6.5	8.8	7.4	7.4	50	46	-	-	-	-	-	-	No	-	
6033	7 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	N	292520.6	6251872.9	37	30	44	39	39	34	46	41	6.5	8.8	7.2	7.4	51	46	-	-	-	-	-	-	No	-	
6033	7 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	N	292537.8	6251881.3	40	35	45	40	42	37	47	43	5.3	5.2	5.5	5.8	54	49	-	-	-	-	-	-	No	-	
6033	7 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	S	292499.7	6251852.2	42	37	52	47	43	38	54	50	10.3	10.6	11.5	11.8	55	50	-	-	-	-	-	-	No	-	
6033	7 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	S	292517.8	6251854.1	42	37	52	47	43	38	54	49	10	10.2	11.3	11.5	55	50	-	-	-	-	-	-	No	-	
6033	7 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	S	292539.0	6251871.2	42	37	52	47	43	38	54	49	9.8	10	10.6	10.9	55	50	-	-	-	-	-	-	No	-	
6033	7 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	W	292497.4	6251863.9	39	33	46	41	39	34	48	43	7.7	8.1	9.4	9.4	51	46	-	-	-	-	-	-	No	-	
6033	7 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	W	292510.7	6251872.3	37	30	44	39	37	33	46	41	7.2	9.1	8.7	8.5	49	45	-	-	-	-	-	-	No	-	
6033	7 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	W	292529.2	6251876.4	38	33	46	41	38	34	48	43	7.5	7.5	9.1	8.9	50	46	-	-	-	-	-	-	No	-	
6034	11 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	NE	292561.6	6251836.4	40	35	50	45	42	37	52	47	9.4	9.3	9.7	10	54	49	-	-	-	-	-	-	No	-	
6034	11 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	NE	292566.0	6251812.1	41	36	51	46	43	38	53	48	9.8	9.7	10	10.4	55	50	-	-	-	-	-	-	No	-	
6034	11 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	NE	292567.2	6251829.2	41	36	50	45	42	37	52	47	9.1	9.1	9.4	9.7	54	49	-	-	-	-	-	-	No	-	
6034	11 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	NW	292549.0	6251818.7	38	33	46	41	39	34	48	43	7.8	8	9.4	9.3	51	46	-	-	-	-	-	-	No	-	
6034	11 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	NW	292554.6	6251834.6	39	33	46	41	39	34	48	43	7.6	7.9	9.3	9.2	51	46	-	-	-	-	-	-	No	-	

M12 West LNDG concrete pavement surface noise levels

Receiver ID	Address	Noise catchment area	Receiver type	Façade				Predicted noise level Opening Year 2026				Predicted no se level Design Year 2036				Change in noise evel (Build - No Build)				NCG Project road noise criteria		NCG Project road noise criteria exceedance (dB)		Do noise levels equal or exceed the cumulative limit with project roads adding ≥2dB to the total noise levels?		Is the contribution from the road project Acute?		Is the property considered for further treatment?	Category of treatment
				Floor level	Direction	x	y	No Build		Bu ld		No Build		Build		Opening Year 2026		Design Year 2036												
								Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night		
6034	11 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	SE	292557.7	6251804.3	43	37	54	49	43	38	56	51	11.3	11.5	12.2	12.5	55	50	1	1	No	No	No	No	Yes	Type 1
6034	11 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	SE	292564.0	6251831.9	40	35	50	44	42	37	51	47	9.5	9.4	9.5	9.8	54	49	-	-	-	-	-	-	No	-
6034	11 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	SE	292566.6	6251807.2	43	38	54	49	44	39	56	51	10.9	11.2	11.8	12.1	55	50	1	1	No	No	No	No	Yes	Type 1
6034	11 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	SE	292567.9	6251818.6	42	37	53	48	43	38	55	50	10.8	10.9	11.4	11.8	55	50	-	-	-	-	-	-	No	-
6034	11 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	SW	292547.8	6251804.0	42	37	54	49	42	37	55	51	11.7	12	13.3	13.5	54	49	1	2	No	No	No	No	Yes	Type 1
6034	11 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	SW	292554.0	6251828.4	39	34	47	42	39	35	49	44	7.9	8.1	9.5	9.4	51	47	-	-	-	-	-	-	No	-
6034	11 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	SW	292561.8	6251806.5	42	37	54	49	42	38	56	51	11.7	12.1	13.2	13.4	54	50	2	1	No	No	No	No	Yes	Type 1
6035	9 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	E	292581.6	6251874.7	41	36	50	45	43	38	52	47	8.9	8.8	9.2	9.6	55	50	-	-	-	-	-	-	No	-
6035	9 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	NE	292578.1	6251879.5	40	35	49	44	42	37	51	46	8.8	8.7	8.8	9.1	54	49	-	-	-	-	-	-	No	-
6035	9 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	NE	292580.4	6251862.9	38	33	44	39	40	35	46	42	6.2	6.1	6.5	6.8	52	47	-	-	-	-	-	-	No	-
6035	9 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	NE	292581.9	6251873.4	41	36	50	45	43	38	52	47	8.8	8.7	9.1	9.4	55	50	-	-	-	-	-	-	No	-
6035	9 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	NE	292589.9	6251862.0	40	35	49	43	42	37	51	46	8.6	8.5	8.6	8.9	54	49	-	-	-	-	-	-	No	-
6035	9 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	NE	292594.1	6251853.6	41	36	50	45	42	37	52	47	9.1	8.9	9.2	9.5	54	49	-	-	-	-	-	-	No	-
6035	9 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	NW	292565.1	6251870.2	38	33	46	41	39	34	48	43	7.6	7.7	9.2	9.1	51	46	-	-	-	-	-	-	No	-
6035	9 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	NW	292583.2	6251862.7	36	30	44	39	37	30	46	41	7.6	8.8	8.8	11	49	42	-	-	-	-	-	-	No	-
6035	9 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	SE	292565.4	6251855.1	42	36	53	47	42	37	54	50	11	11.3	12.6	12.8	54	49	-	1	-	No	-	No	Yes	Type 1
6035	9 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	SE	292571.4	6251854.5	41	36	52	47	42	37	54	50	11	11.4	12.6	12.9	54	49	-	1	-	No	-	No	Yes	Type 1
6035	9 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	SE	292580.6	6251866.9	41	35	48	43	42	37	50	45	7.7	7.8	8	8.2	54	49	-	-	-	-	-	-	No	-
6035	9 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	SE	292593.0	6251856.1	41	36	51	46	43	38	53	48	9.3	9.2	9.7	9.9	55	50	-	-	-	-	-	-	No	-
6035	9 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	SE	292594.5	6251846.1	43	37	54	48	44	39	55	51	10.6	10.9	11.4	11.7	55	50	-	1	-	No	-	No	Yes	Type 1
6035	9 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	SW	292560.2	6251855.7	42	36	52	47	42	37	54	50	10.6	10.9	12.1	12.3	54	49	-	1	-	No	-	No	Yes	Type 1
6035	9 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	SW	292567.2	6251854.6	42	36	53	47	42	37	54	50	10.9	11.2	12.4	12.7	54	49	-	1	-	No	-	No	Yes	Type 1
6035	9 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	SW	292580.5	6251848.5	42	37	53	48	42	37	55	50	11.2	11.5	12.9	13	54	49	1	1	No	No	No	No	Yes	Type 1
6036	2 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	E	292439.4	6251994.6	43	37	52	47	44	39	54	49	9.3	9.5	10.2	10.5	55	50	-	-	-	-	-	-	No	-
6036	2 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	N	292427.5	6252008.9	37	30	43	38	37	33	45	40	6.4	7.9	7.5	7.5	49	45	-	-	-	-	-	-	No	-
6036	2 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	N	292437.0	6252010.9	40	35	44	39	41	36	46	41	4.3	4.3	4.6	4.9	53	48	-	-	-	-	-	-	No	-
6036	2 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	N	292438.9	6251999.8	41	36	50	45	43	37	52	47	8.9	8.8	9.2	9.5	55	49	-	-	-	-	-	-	No	-
6036	2 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	NW	292421.2	6251993.5	39	34	46	41	39	35	48	43	6.6	6.7	8.4	8.2	51	47	-	-	-	-	-	-	No	-
6036	2 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	NW	292421.8	6252004.7	39	34	46	41	39	35	48	43	6.6	6.7	8.3	8.1	51	47	-	-	-	-	-	-	No	-
6036	2 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	NW	292429.3	6252009.8	37	30	44	39	38	33	45	41	6.5	8.6	7.9	7.8	50	45	-	-	-	-	-	-	No	-
6036	2 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	S	292421.9	6251998.0	40	35	47	41	40	35	48	44	6.8	6.9	8.4	8.3	52	47	-	-	-	-	-	-	No	-
6036	2 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	S	292435.6	6251990.9	43	37	52	47	44	39	54	49	9.2	9.4	10.1	10.4	55	50	-	-	-	-	-	-	No	-
6036	2 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	SE	292433.1	6251987.1	43	37	52	47	44	39	54	49	9.3	9.5	10.2	10.5	55	50	-	-	-	-	-	-	No	-
6036	2 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	SE	292440.6	6252003.3	42	37	52	46	43	38	53	49	9.4	9.6	10.1	10.5	55	50	-	-	-	-	-	-	No	-
6036	2 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	SW	292424.4	6251984.6	42	37	52	47	43	38	54	49	9.6	9.7	11.1	11.2	55	50	-	-	-	-	-	-	No	-
6104	3 BRIDPORT PLACE LUDDENHAM 2745	NCA07	Residential	GF	E	292331.7	6251976.1	43	37	52	46	44	39	53	49	8.8	9.1	9.7	10	55	50	-	-	-	-	-	-	No	-
6104	3 BRIDPORT PLACE, LUDDENHAM 2745	NCA07	Residential	GF	E	292341.7	6251987.4	42	37	51	46	43	38	53	48	9.2	9.2	9.8	10.2	55	50	-	-	-	-	-	-	No	-
6104	3 BRIDPORT PLACE LUDDENHAM 2745	NCA07	Residential	GF	N	292310.6	6251986.3	38	33	44	39	38	34	46	41	6.2	5.9	7.5	7.2	50	46	-	-	-	-	-	-	No	-
6104	3 BRIDPORT PLACE, LUDDENHAM 2745	NCA07	Residential	GF	N	292326.3	6251991.4	39	34	44	39	40	35	46	41	5.2	5	6.1	6	52	47	-	-	-	-	-	-	No	-
6104	3 BRIDPORT PLACE LUDDENHAM 2745	NCA07	Residential	GF	S	292320.7	6251972.0	43	38	52	47	44	39	54	49	8.4	8.5	9.5	9.6	55	50	-	-	-	-	-	-	No	-
6104	3 BRIDPORT PLACE LUDDENHAM 2745	NCA07	Residential	GF	S	292336.5	6251978.6	43	38	52	47	44	39	54	49	8.6	8.8	9.5	9.8	55	50	-	-	-	-	-	-	No	-
6104	3 BRIDPORT PLACE, LUDDENHAM 2745	NCA07	Residential	GF	W	292308.5	6251978.4	41	36	48	43	41	37	50	45	6.7	6.9	8.5	8.4	53	49	-	-	-	-	-	-	No	-
6104	3 BRIDPORT PLACE LUDDENHAM 2745	NCA07	Residential	GF	W	292312.2	6251986.5	38	33	44	39	38	34	46	41	6.3	6	7.7	7.4	50	46	-	-	-	-	-	-	No	-
9005	14 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	E	292209.4	6251825.6	40	34	47	42	40	36	49	44	7	7.7	8.1	8.3	52	48	-	-	-	-	-	-	No	-
9005	14 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	E	292218.2	6251828.7	40	34	47	42	41	36	49	44	7	7.3	7.5	7.7	53	48	-	-	-	-	-	-	No	-
9005	14 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	E	292218.9	6251866.7	39	33	44	39	41	36	46	41	5.3	5.3	5.5	5.7	53	48	-	-	-	-	-	-	No	-
9005	14 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	E	292226.9	6251863.4	38	33	44	38	40	35	46	41	5.3	5.3	5.5	5.7	52	47	-	-	-	-	-	-	No	-
9005	14 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	E	292228.8	6251833.1	41	36	49	44	42	37	51	46	8.1	8.2	8.8	9	54	49	-	-	-	-	-	-	No	-
9005	14 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	E	292235.0	6251839.5	41	36	49	44	43	38	51	46	8	8	8.5	8.8	55	50	-	-	-	-	-	-	No	-
9005	14 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	E	292235.2	6251858.2	40	34	45	40	41	36	47	43	5.9	5.9	6	6.3	53	48	-	-	-	-	-	-	No	-
9005	14 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	E	292244.1	6251849.6	42	36	49	44	43	38	51	47	7.7	7.8	8.3	8.6	55	50	-	-	-	-	-	-	No	-
9005	14 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	N	292202.7	6251841.9	38	33	44	39	38	34	45	41	5.7	5.4	7	6.7	50	46	-	-	-	-	-	-	No	-
9005	14 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	N	292209.0	6251869.4	40	35	44	39	41	36	46	41	4.3	4.2	5	5	53	48	-	-	-	-	-	-	No	-
9005	14 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	N	292221.9	6251865.7	39	34	43	38	40	36	46	41	4.9	4.8	5.1	5.3	52	48	-	-	-	-	-	-	No	-
9005	14 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	N	292230.0	6251863.0	39	34	44	39	41	36	46	41	4.6	4.4	4.9	5	53	48	-	-	-	-	-	-	No	-
9005	14 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	N	292238.6	6251855.4	39	34	44	38	40	35	46	41	5	4.9	5.2	5.4	52	47	-	-	-	-	-	-	No	-
9005	14 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	S	292202.6	6251823.0	42	37	49	44	42	38	51	46	7.2	7.5	8.7	8.7	54	50	-	-	-	-	-	-	No	-
9005	14 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	S	292204.5	6251855.6	41	35	48	43	41	36	50	45	7.4	7.4	9.1	8.9	53	48	-	-	-	-	-	-	No	-
9005	14 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	S	292212.8	6251826.1	41	35	47	42	41	37	49	45	6.9	7.1	8.1	8.1	53	49	-	-	-	-	-	-	No	-
9005	14 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	S	292219.9	6251829.2	40	35	48	43	42	37	50	45	7.3	7.5	8	8.2	54	49	-	-	-	-	-	-	No	-
9005	14 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	S	292225.2	6251830.7	42	37	49	44	43	38	51	46	7.2	7.3	8.1	8.3	55	50	-	-	-	-	-	-	No	-
9005	14 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	S	292230.9	6251833.5	42	37	50	44	43	38	51	47	7.8	7.9	8.6	8.9	55	50	-	-	-	-	-	-	No	-
9005	14 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	S	292238.6	6251843.5	42	36	50	45	43	38	52	47	7.9	8.1	8.8	9.1	55	50	-	-	-	-	-	-	No	-
9005	14 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	W	292195.7	6251832.3	41	36	48	43	41	37	49	45	6.3	6.5	8.2	8	53	49	-	-	-	-	-	-	No	-
9005	14 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	W	292199.3	6251862.4	41	36	48	43	41	37	49	45	6.5	6.6	8.4	8.2	53	49	-	-	-	-	-	-	No	-
9005	14 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	W	292207.7	6251848.8	40	35	46	41	40	36	48	44	6.4	6.3	8.1	7.8	52	48	-	-	-	-	-	-	No	-
9006	18 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	E	292299.1	6251809.4	42	37	52	46	43	38	53	49	9.3	9.4	10.1	10.4	55	50	-	-	-	-	-	-	No	-
9006	18 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	N	292281.6	6251822.7	37	30	44	39	37	33	45	41	6.7	8.5	8.1	7.9	49	45	-	-	-	-	-	-	No	-
9006	18 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	N	292292.0	6251824.9	39	35	44	39	41	36	46	41	4.6	4.4	5	5.1	53	48	-	-	-	-	-	-	No	-
9006	18 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	S	292286.5	6251795.8	41	36	50	45	42	37	52	48	9.5	9.5	10.6	10.7	54	49	-	-	-	-	-	-	No	-
9006	18 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	W	292276.7	6251810.0	40	35	47	42	40	36	49	44	6.9	7.4	9	8.8	52	48	-	-	-	-	-	-	No	-
9006	18 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	W	292283.3	6251823.0	37	30	44	39	37	33	45	41	6.9	8.7	8.4	8.1	49	45	-	-	-	-	-	-	No	-
9007	17 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	E	292427.7	6251800.3	40	35	46	41	42	37	48	43	6.3	6.4	6.6	6.9	54	49	-	-	-	-	-	-	No	-
9007	17 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	E	292436.8	6251774.8	42	37	53	48	43	38	55	50	10.8	11.1	11.6	12.1	55	50	-	-	-	-	-	-	No	-
9007	17 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	E	292451.0	6251785.2	42	37	53	48	44	39	55	50	10.7	10.8	11.4	11.7	55	50	-	-	-	-	-	-	No	-
9007	17 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	N	292416.5	6251807.8	39	34	44	39	41	36	46	41	4.9	4.7	5.2	5.4	53	48	-	-	-	-	-	-	No	-
9007	17 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	N	292438.5	6251794.8	39	34	44	39	41	36	46	41	5.2	5.1	5.4	5.7	53	48	-	-	-	-	-	-	No	-
9007	17 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	S	292419.4	6251771.2	43	38	53	48	43	39	55	50	10.1	10.4	11.5	11.6	55	50	-	-	-	-	-	-	No	-
9007	17 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	S	292442.7	6251777.1	43	37	54	48	43	39	55	51	10.7	11.1	12	12.2	55	50	-	1	-	No	-	No	Yes	Type 1
9007	17 FARMINGDALE COURT LUDDENHAM 2745	NCA07	Residential	GF	W	292403.6	6251790.5	39	30	47	42	38	34	49	44	8.3	11.7	10.4	10.5	50	46	-	-	-	-	-	-	No	-
9008	6 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	E	292385.9	6251864.8	40	35	49	44	40	35	51	46	8.9	9	10.3	10.5	52	47	-	-	-	-	-	-	No	-
9008	6 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	E	292387.6	6251888.1	38	33	44	39	40	35	46	41	5.7	5.7	5.9	6.1	52	47	-	-	-	-	-	-	No	-
9008	6 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	E	292402.9	6251862.1	42	37	52	47	43	38	54	49	9.6	9.7	10.2	10.6	55	50	-	-	-	-	-	-	No	-
9008	6 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	E	292409.6	6251866.4	42	37	52	47	43	38	54	49	9.8	9.9	10.5	10.9	55	50	-	-	-	-	-	-	No	-
9008	6 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	E	292414.9	6251872.3	42	37	52	47	43	38	54	49	9.7	9.8	10.3	10.7	55	50	-	-	-	-	-	-	No	-
9008	6 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	E	292418.4	6251861.8	42	37	51	46	43	38	53	49	9.2	9.4	9.9	10.2	55	50	-	-	-	-	-	-	No	-
9008	6 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	N	292382.0	6251891.5	39	34	44	38	40	36	46	41	4.9	4.7	5.1	5.3	52	48	-	-	-	-	-	-	No	-
9008	6 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	N	292395.7	6251886.4	38	33	43	38	39	34	45	40	5.4	5.4	6	6.1	51	46	-	-	-	-	-	-	No	-
9008	6 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	N	292411.7	6251888.5	39	34	44	39	41	36	46	41	4.3	4.2	4.6	4.8	53	48	-	-	-	-	-	-	No	-
9008	6 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	S	292379.0	6251859.5	41	36	51	46	42	37	53	48	9.6	9.8	10.7	10.9	54	49	-	-	-	-	-	-	No	-
9008	6 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	S	292389.3	6251868.5	39	33	47	42	39	34	49	44	8.3	8.6	9.8	9.8	51	46	-	-	-	-	-	-	No	-
9008	6 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	S	292396.8	6251858.3	42	37	52	47	43	38	54	49	9.6	9.6	10.6	10.9	55	50	-	-	-	-	-	-	No	-
9008	6 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	S	292405.3	6251864.3	42	37	52	47	43	38	54	49	9.9	10	10.8	11.2	55	50	-	-	-	-	-	-	No	-
9008	6 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	S	292411.0	6251866.8	42	37	52	47	44	39	54	49	9.8	9.9	10.5	10.8	55	50	-	-	-	-	-	-	No	-
9008	6 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	S	292415.6	6251876.2	42	37	52	47	43	38	54	49	9.5	9.6	10.1	10.4	55	50	-	-	-	-	-	-	No	-
9008	6 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	W	292374.5	6251876.2	39	33	46	41	39	34	48	43	7.4	8.1	9.4	9.4	51	46	-	-	-	-	-	-	No	-
9008	6 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	W	292391.8	6251864.6	39	33	46	41	39	34	48	43	7.8	8.2	9.6	9.6	51	46	-	-	-	-	-	-	No	-
9008	6 FARMINGDALE COURT, LUDDENHAM 2745	NCA07	Residential	GF	W	292404.0	6251886.4	37	30	43	38	37	30	45	40	6.7	8.2	8.2	10.3	49	42	-	-	-	-	-	-	No	-



Paper Size ISO A4

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- Existing roads
- Sensitive receiver
- Study area

Noise contour, dBA

- < 45 dBA
- 45-50 dBA
- 50-55 dBA
- 55-60 dBA
- 60-65 dBA
- > 65 dBA

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 West
2026 No Build day-time contours LAeq(15 hour)

Project No. **12520102**
Revision No. **A**
Date. **03/08/2022**

Figure E.1

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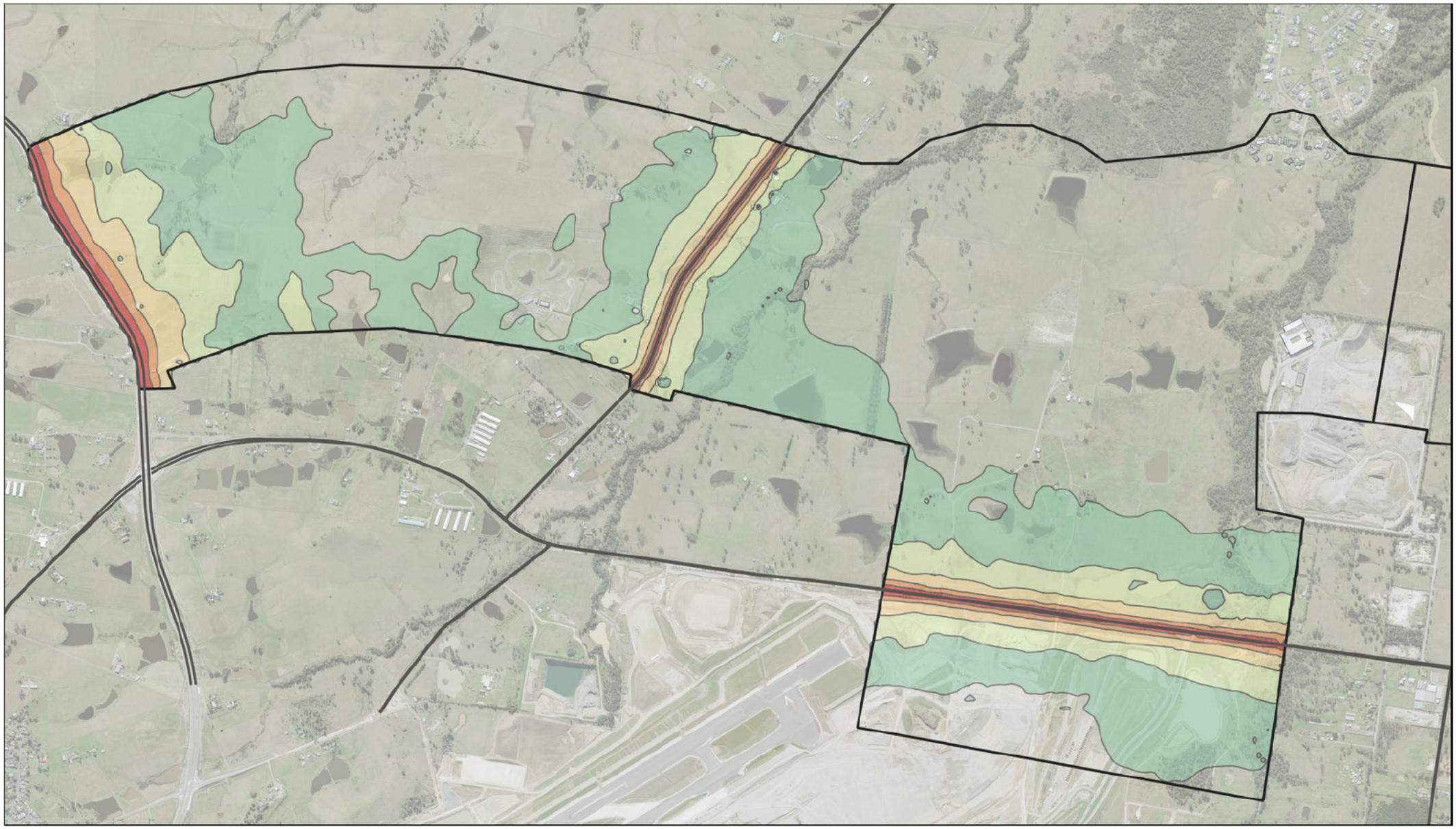

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- Existing roads
- Sensitive receiver
- Study area

Noise contour, dBA

- < 45 dBA
- 45-50 dBA
- 50-55 dBA
- 55-60 dBA
- 60-65 dBA
- > 65 dBA

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 West
2026 No Build night-time contours LAeq(9 hour)

Project No. **12520102**
Revision No. **A**
Date. **03/08/2022**

Figure E.2

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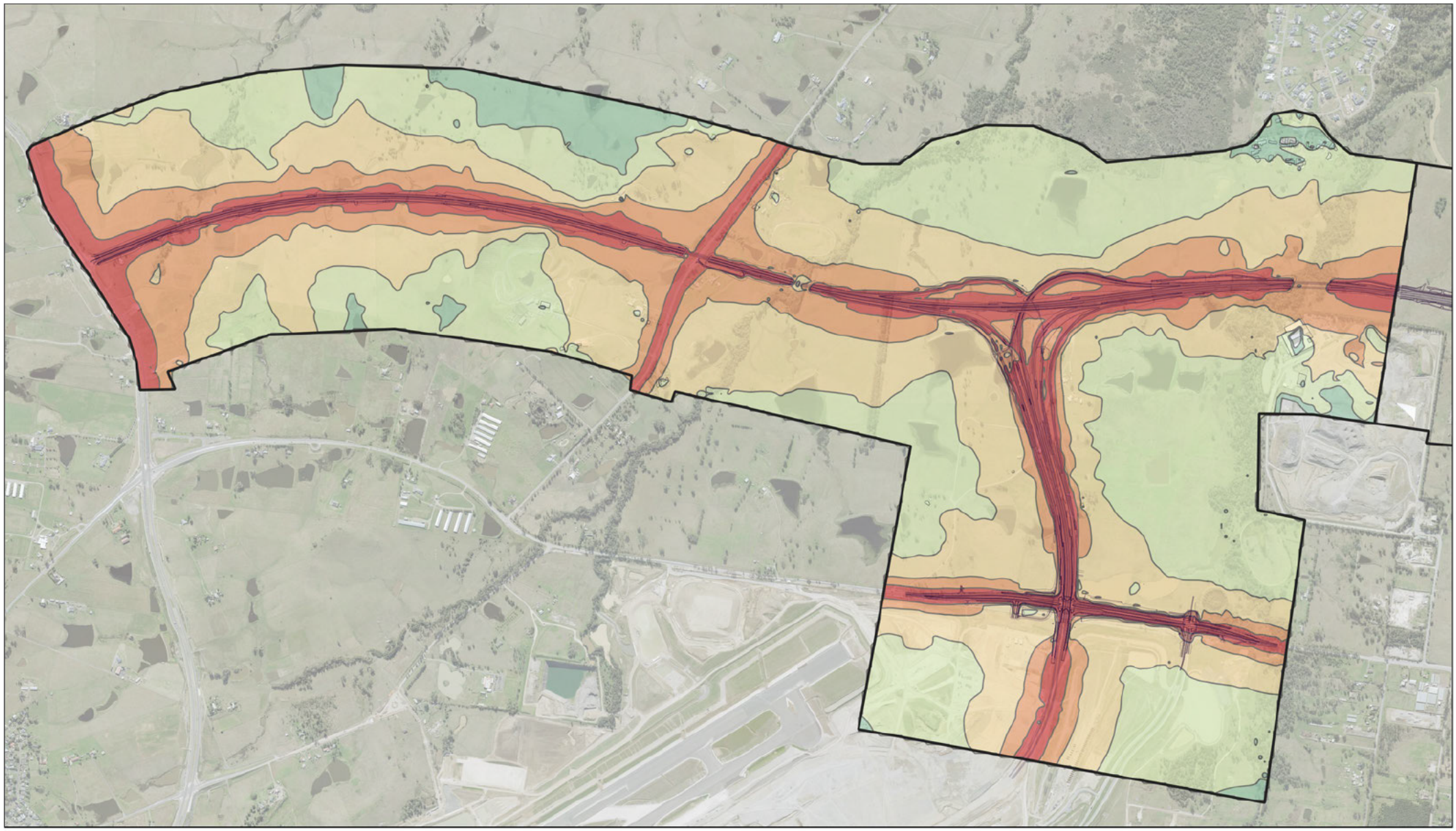

Paper Size ISO A4

0 200 400 600 800 m

Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- M12 road design
- Sensitive receiver
- Study area

Noise contour, dBA

- < 45 dBA
- 45-50 dBA
- 50-55 dBA
- 55-60 dBA
- 60-65 dBA
- > 65 dBA

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 West LNDG concrete 2026 Build day-time contours LAeq(15 hour)

Project No. 12520102
Revision No. A
Date. 03/08/2022

Figure E.3

Document Path: \\ghdnet\ghd\AU\Sydney\Projects\21\12520102\Tech\Noise\00_GIS\12520102_GIS.qgz

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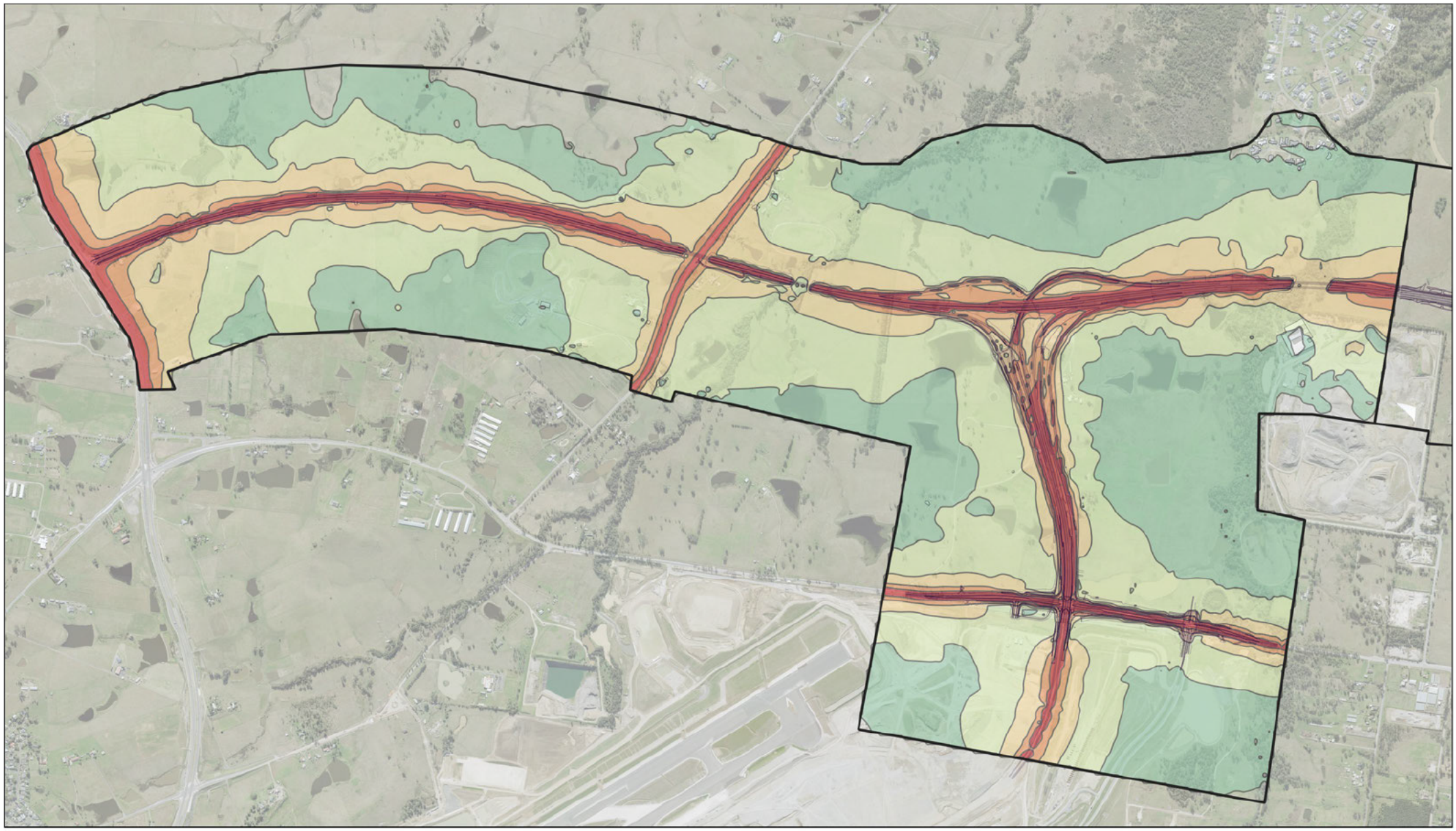

Paper Size ISO A4

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- M12 road design
- Sensitive receiver
- Study area

Noise contour, dBA

- < 45 dBA
- 45-50 dBA
- 50-55 dBA
- 55-60 dBA
- 60-65 dBA
- > 65 dBA

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 West LNDG concrete 2026 Build night-time contours LAeq(9 hour)

Project No. 12520102
Revision No. A
Date. 03/08/2022

Figure E.4

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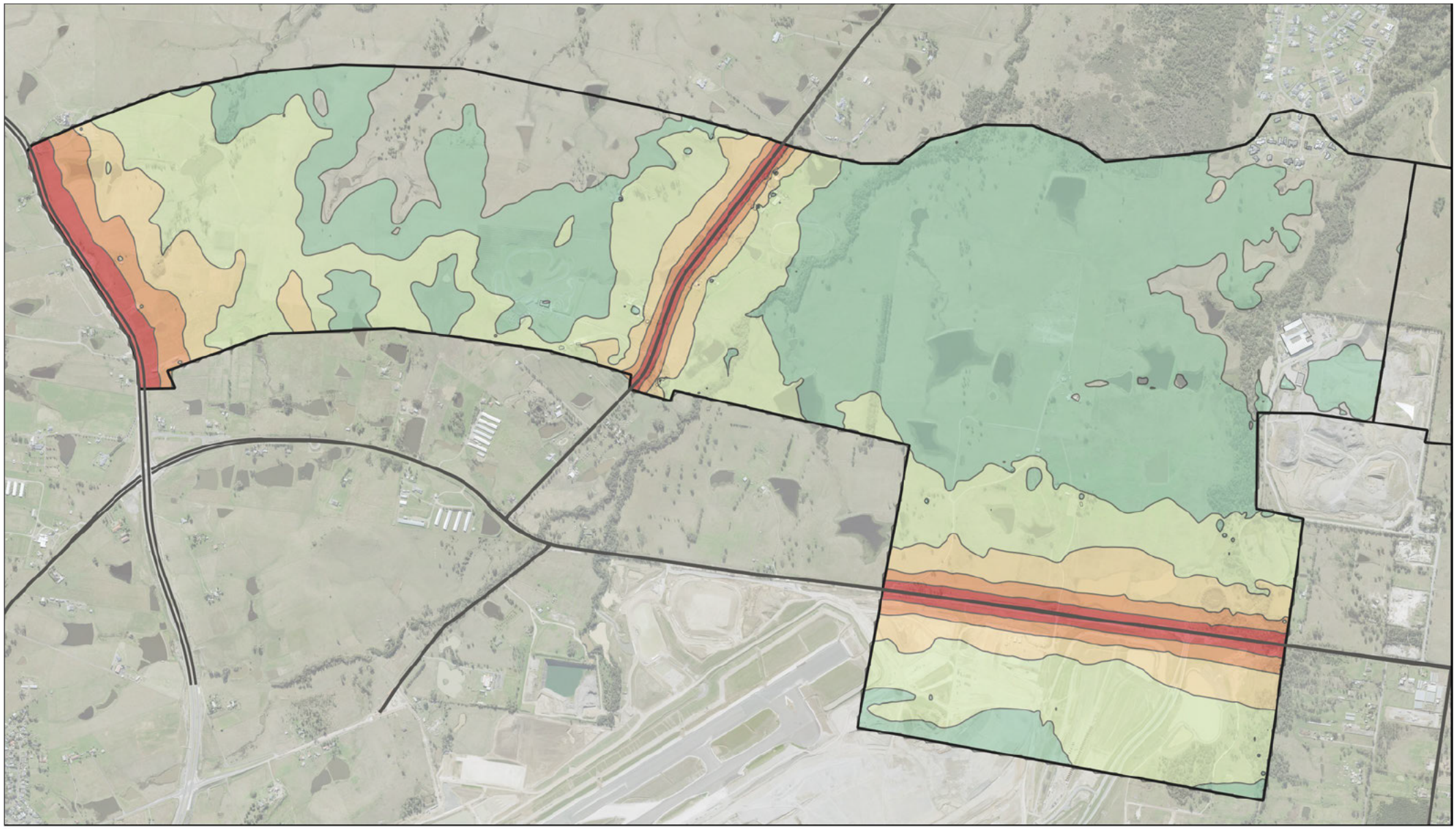

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- Existing roads
- Sensitive receiver
- Study area

Noise contour, dBA

- < 45 dBA
- 45-50 dBA
- 50-55 dBA
- 55-60 dBA
- 60-65 dBA
- > 65 dBA

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 West
2036 No Build day-time contours LAeq(15 hour)

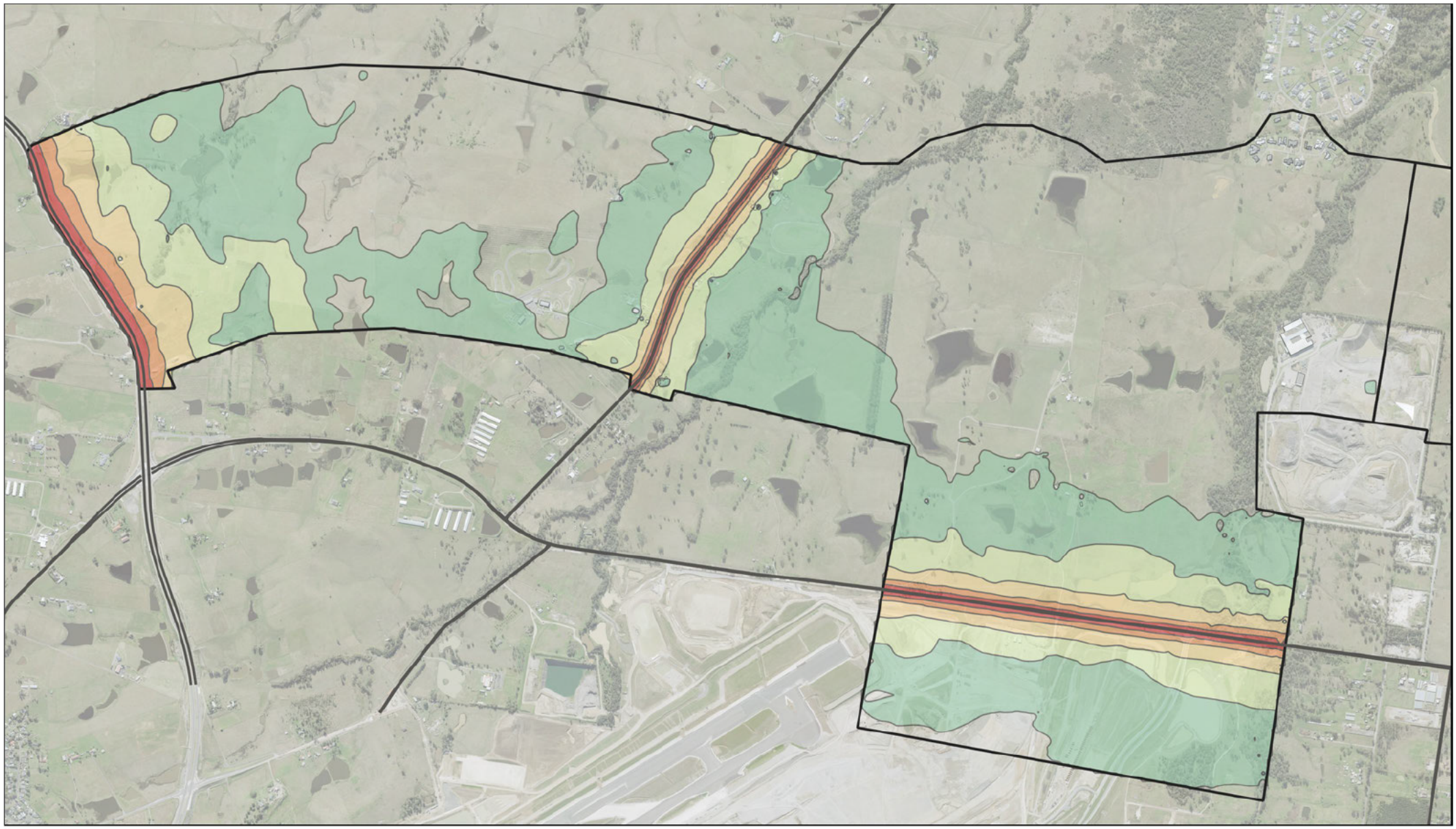
Project No. **12520102**
Revision No. **A**
Date. **03/08/2022**

Figure E.5

Document Path: \\ghdnet\ghd\AU\Sydney\Projects\21\12520102\Tech\Noise\00_GIS\12520102_GIS.qgz

Data Source: MetroMap - Imagery (Date captured: 20/09/2021, Date extracted: 03/08/2022)

Created By: viau



Paper Size ISO A4

0 200 400 600 800 m

Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

Legend

- Existing roads
- Sensitive receiver
- Study area

Noise contour, dBA

- < 45 dBA
- 45-50 dBA
- 50-55 dBA
- 55-60 dBA
- 60-65 dBA
- > 65 dBA

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 West
2036 No Build night-time contours LAeq(9 hour)

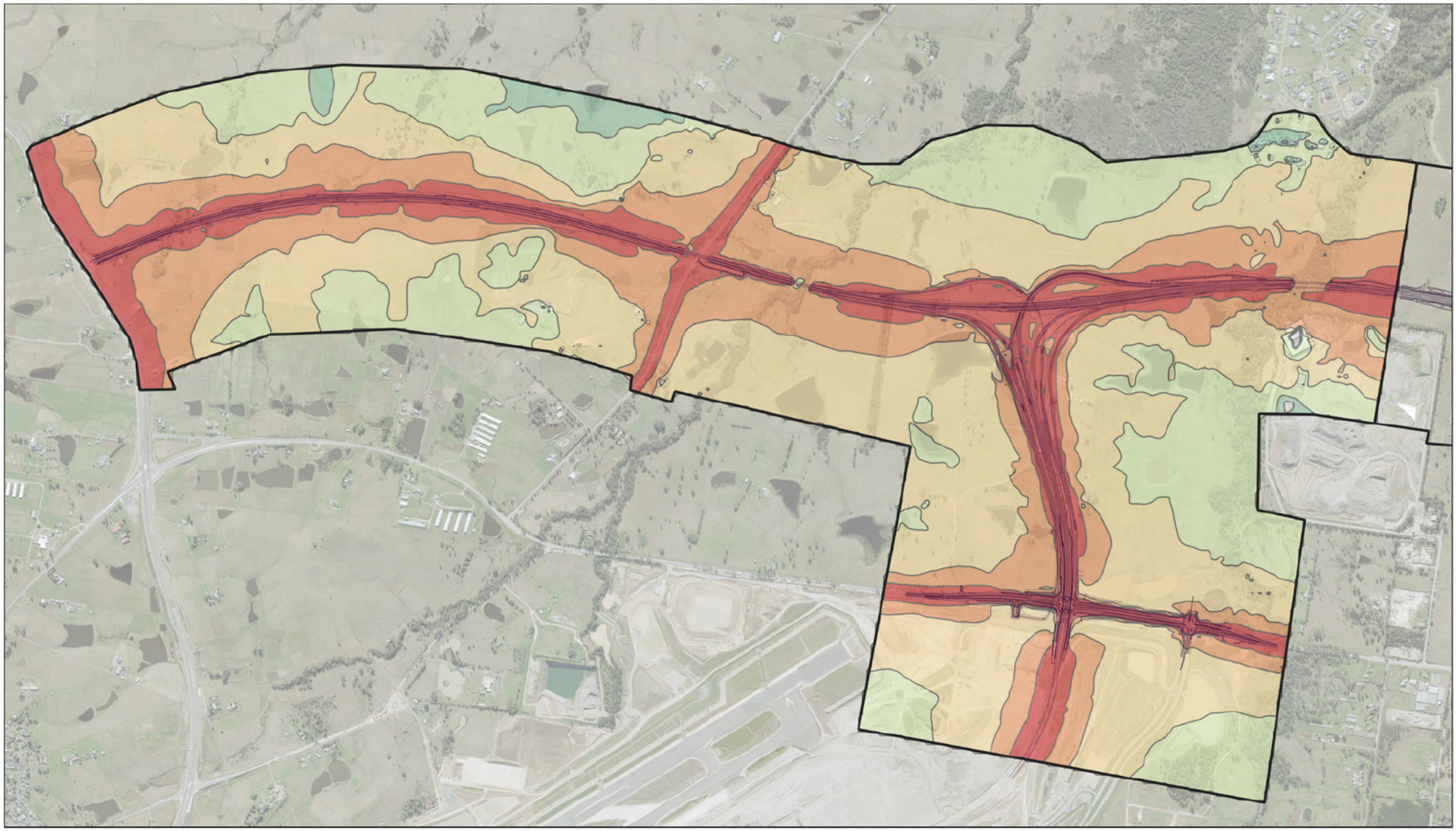
Project No. **12520102**
Revision No. **A**
Date. **03/08/2022**

Figure E.6

Document Path: \\ghdnet\ghd\AU\Sydney\Projects\21\12520102\Tech\Noise\00_GIS\12520102_GIS.aprx

Data Source: MetroMap - Imagery (Date captured: 20/09/2021, Date extracted: 03/08/2022)

Created By: vlau



Paper Size ISO A4

0 200 400 600 800 m

Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- M12 road design
- Sensitive receiver
- Study area

Noise contour, dBA

- < 45 dBA
- 45-50 dBA
- 50-55 dBA
- 55-60 dBA
- 60-65 dBA
- > 65 dBA

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 West LNDG concrete
2036 Build day-time contours
LAeq(15 hour)

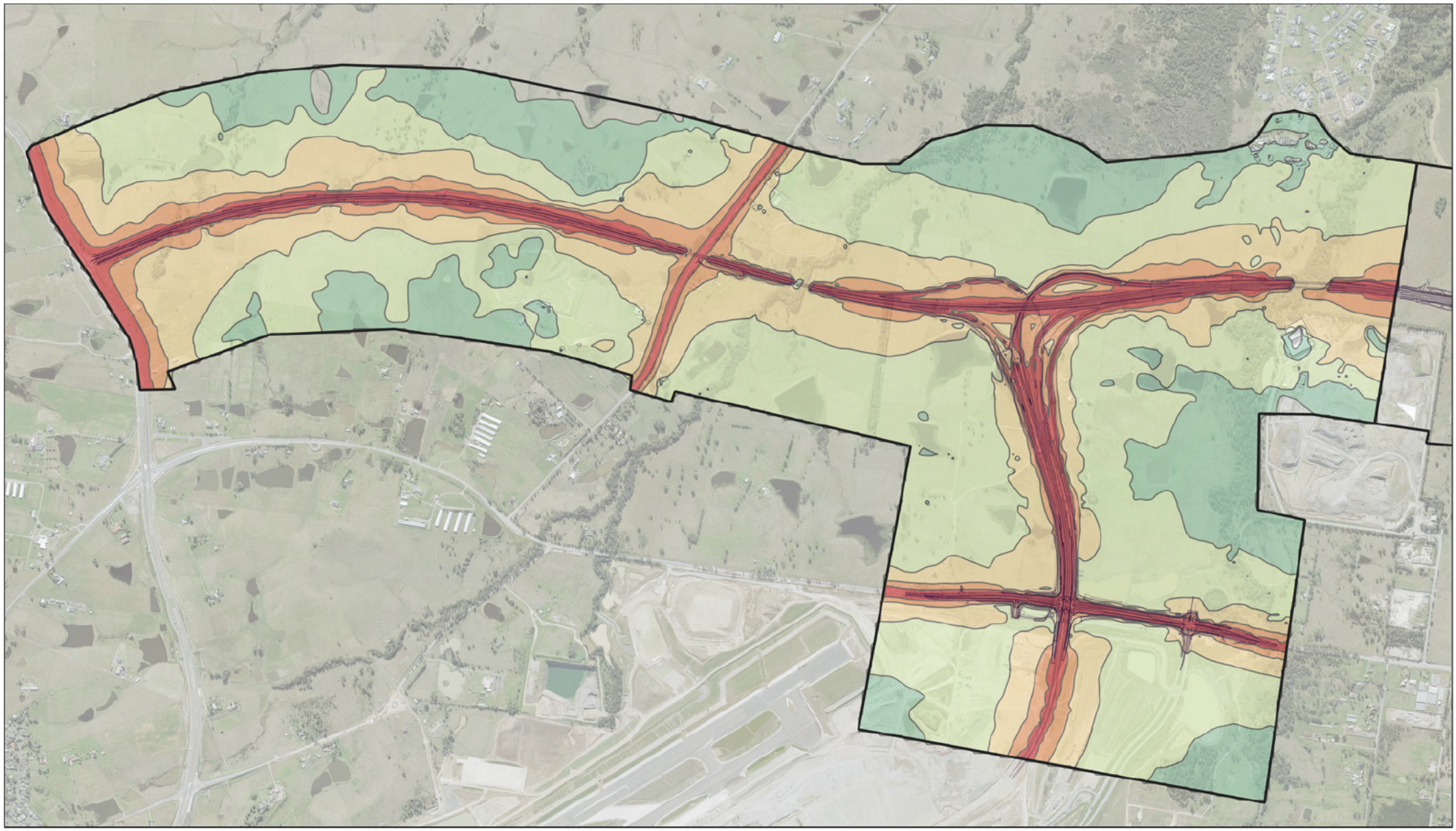
Project No. **12520102**
Revision No. **A**
Date. **03/08/2022**

Figure E.7

Document Path: \\ghdnet\ghd\AU\Sydney\Projects\21\12520102\Tech\Noise\00_GIS\12520102_GIS.qgz

Data Source: MetroMap - Imagery (Date captured: 20/09/2021, Date extracted: 03/08/2022)

Created By: viau



Paper Size ISO A4

0 200 400 600 800 m

Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- M12 road design
- Sensitive receiver
- Study area

Noise contour, dBA

- < 45 dBA
- 45-50 dBA
- 50-55 dBA
- 55-60 dBA
- 60-65 dBA
- > 65 dBA

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 West LNDG concrete 2036 Build night-time contours LAeq(9 hour)

Project No. 12520102
Revision No. A
Date. 03/08/2022

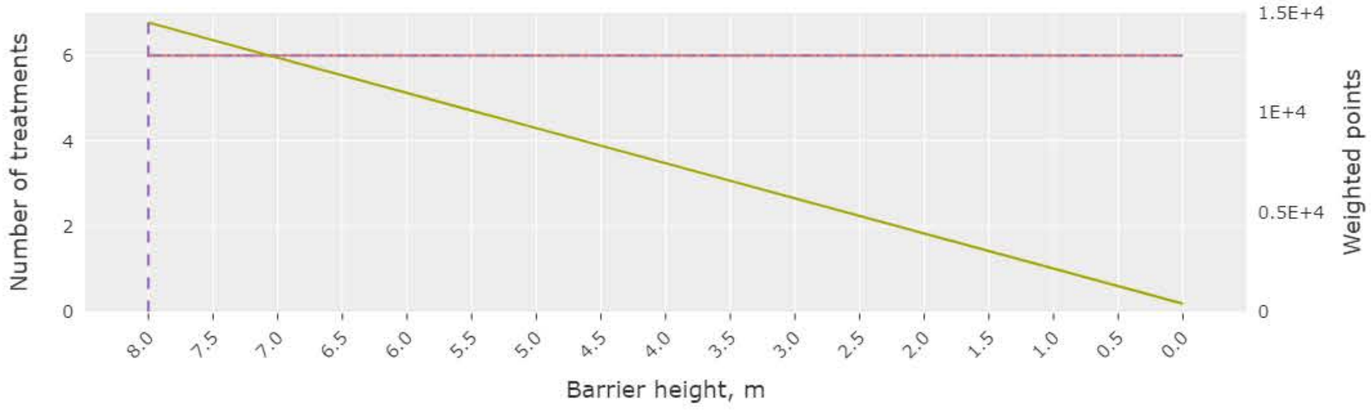
Figure E.8

Document Path: \\ghdnet\ghd\AU\Sydney\Projects\21\12520102\Tech\Noise\00_GIS\12520102_GIS.qgz

Data Source: MetroMap - Imagery (Date captured: 20/09/2021, Date extracted: 03/08/2022)

Created By: vlau

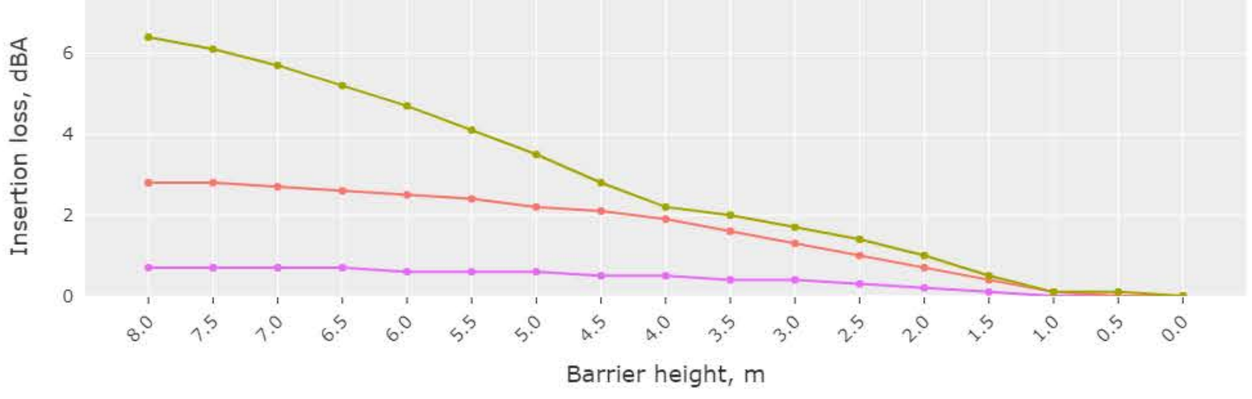
NW.01 - Night

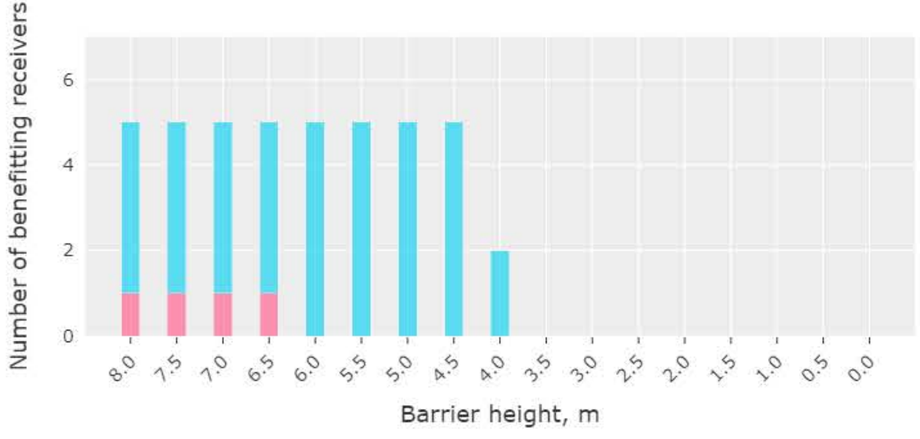


At-property treatments
Total points weighting
Two-thirds line
Initial / Optimised design height: 8.0 m
Minimum insertion loss
Median insertion loss
Maximum insertion loss
>10 dBA benefit
>5 dBA benefit
>2 dBA benefit

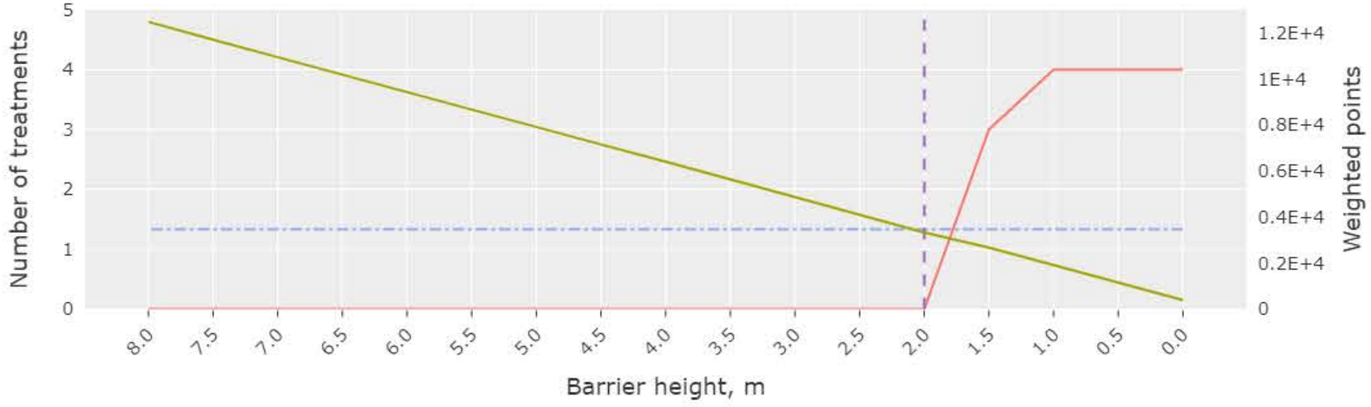
Number of at-property treatments:
- No barrier: 6
- Initial height: 6
- Optimised height: 6

Number that benefit:
- Maximum: 5
- Initial height: 5
- Optimised height: 5





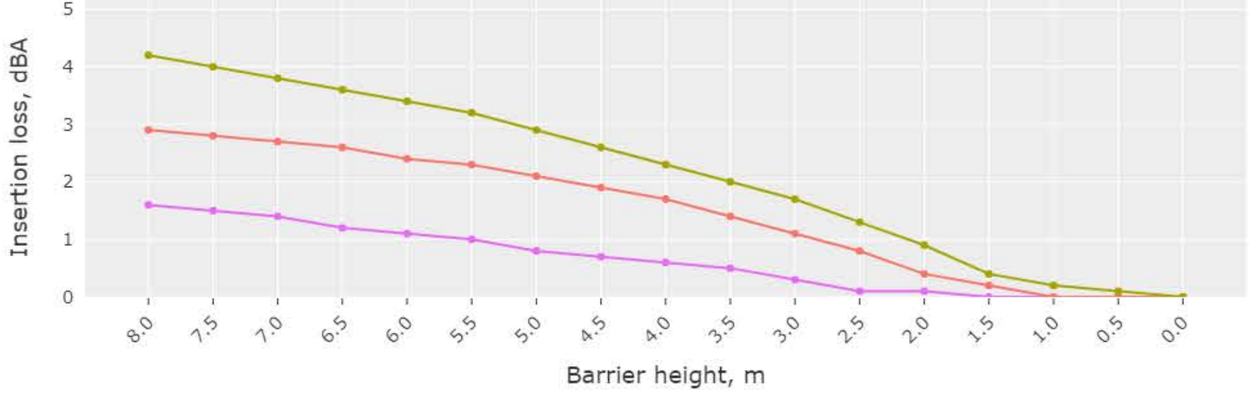
NW.08 - Night

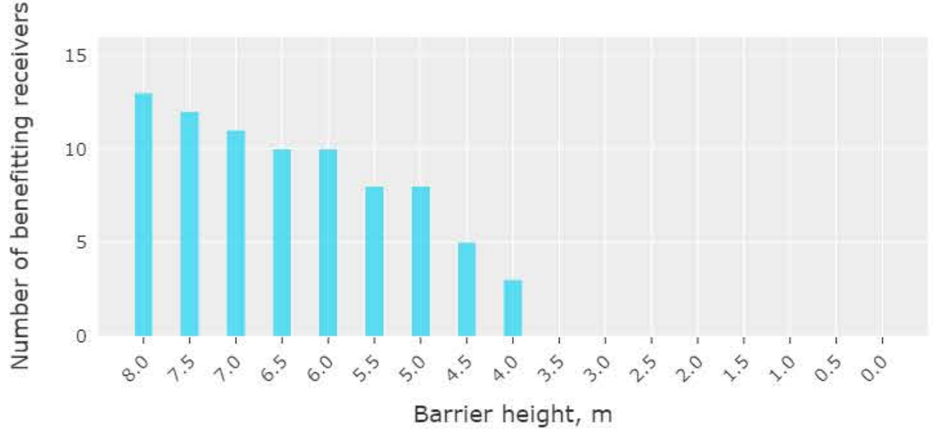


- At-property treatments
- Total points weighting
- Two-thirds line
- Initial / Optimised design height: 2.0 m
- Minimum insertion loss
- Median insertion loss
- Maximum insertion loss
- >10 dBA benefit
- >5 dBA benefit
- >2 dBA benefit

Number of at-property treatments:
- No barrier: 4
- Initial height: 0
- Optimised height: 0

Number that benefit:
- Maximum: 13
- Initial height: 0
- Optimised height: 0





Appendix F

M12 Central operations

M12 Central LNDG concrete pavement surface noise levels

Receiver ID	Address	Noise catchment area	Receiver type	Façade				Predicted noise level Opening Year 2026				Predicted no se level Design Year 2036				Change in noise evel (Build - No Build)				NCG Project road noise criteria		NCG Project road noise criteria exceedance (dB)		Do noise levels equal or exceed the cumulative limit w th project roads adding ≥2dB to the total noise levels?		Is the contribution from the road project Acute?		Is the property considered for further treatment?	Category of treatment
				Floor level	Direction	x	y	No Build		Build		No Build		Build		Opening Year 2026		Design Year 2036													
								Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night		
2	LOT 1 / DP875790	NCA05	Active recreation	GF	NE	298368.0	6248091.3	48	43	51	46	49	44	52	48	2.4	2.6	3.2	3.5	60	-	-	-	-	-	-	-	No	-
2	LOT 1 / DP875790	NCA05	Active recreation	GF	NW	298320.5	6248072.0	47	42	50	45	48	43	52	47	3.2	3.2	4	4.3	60	-	-	-	-	-	-	-	No	-
2	LOT 1 / DP875790	NCA05	Active recreation	GF	SE	298324.7	6248063.8	44	39	46	41	45	40	47	43	1.9	1.9	2.2	2.3	60	-	-	-	-	-	-	-	No	-
2	LOT 1 / DP875790	NCA05	Active recreation	GF	SW	298277.2	6248044.5	45	40	48	43	45	41	50	45	3.3	3.3	4.1	4.4	60	-	-	-	-	-	-	-	No	-
56	LOT 1 / DP875790	NCA05	Active recreation	GF	NE	298164.8	6247988.9	46	41	49	44	46	42	50	45	2.9	2.9	3.6	3.8	60	-	-	-	-	-	-	-	No	-
56	LOT 1 / DP875790	NCA05	Active recreation	F 1	NE	298164.8	6247988.9	48	43	51	46	49	44	52	48	3	3.1	3.8	4.1	60	-	-	-	-	-	-	-	No	-
56	LOT 1 / DP875790	NCA05	Active recreation	GF	NW	298143.7	6247983.2	46	41	49	44	47	42	50	46	2.9	2.9	3.6	3.9	60	-	-	-	-	-	-	-	No	-
56	LOT 1 / DP875790	NCA05	Ac ive recreation	F 1	NW	298143.7	6247983.2	48	43	51	46	49	44	53	48	2.9	3	3.7	4	60	-	-	-	-	-	-	-	No	-
56	LOT 1 / DP875790	NCA05	Ac ive recreation	GF	SE	298148.0	6247975.0	42	38	44	39	44	39	45	41	1.4	1.4	1.6	1.7	60	-	-	-	-	-	-	-	No	-
56	LOT 1 / DP875790	NCA05	Ac ive recreation	F 1	SE	298148.0	6247975.0	45	40	47	42	46	41	48	44	2.3	2.3	2.8	2.9	60	-	-	-	-	-	-	-	No	-
56	LOT 1 / DP875790	NCA05	Ac ive recreation	GF	SW	298126.9	6247969.3	45	40	48	43	46	41	50	46	3.6	3.4	4.1	4.5	60	-	-	-	-	-	-	-	No	-
56	LOT 1 / DP875790	NCA05	Ac ive recreation	F 1	SW	298126.9	6247969.3	48	43	51	46	49	44	53	48	3.1	3.1	3.6	3.8	60	-	-	-	-	-	-	-	No	-
72	LOT 1 / DP875790	NCA05	Active recreation	GF	NE	298263.3	6248062.3	46	41	49	44	47	42	51	46	2.9	2.8	3 6	3.8	60	-	-	-	-	-	-	-	No	-
72	LOT 1 / DP875790	NCA05	Active recreation	GF	NW	298230.3	6248053.3	45	40	48	44	46	41	50	45	3.2	3.1	3 9	4.2	60	-	-	-	-	-	-	-	No	-
72	LOT 1 / DP875790	NCA05	Active recreation	GF	SE	298226.8	6248042.7	44	39	46	41	45	40	47	43	2	1.9	2.4	2.5	60	-	-	-	-	-	-	-	No	-
72	LOT 1 / DP875790	NCA05	Active recreation	GF	SE	298258.2	6248052.8	44	39	46	41	45	40	47	43	1.9	1.9	2.4	2.5	60	-	-	-	-	-	-	-	No	-
72	LOT 1 / DP875790	NCA05	Active recreation	GF	SW	298201.8	6248035.0	44	39	47	42	45	40	49	44	3.1	3	3 8	4	60	-	-	-	-	-	-	-	No	-
72	LOT 1 / DP875790	NCA05	Active recreation	GF	SW	298248.9	6248052.0	43	38	46	41	44	39	47	43	2.7	2.7	3.3	3.6	60	-	-	-	-	-	-	-	No	-
219	1383 - 1411 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	E	296155.6	6248996.0	59	54	59	54	60	55	62	57	0.6	0.6	1.6	2.1	55	50	7	7	-	-	No	No	Yes	Type 2
219	1383 - 1411 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	E	296156.3	6249004.5	56	52	58	53	58	53	61	56	1.9	1.7	2.7	3.1	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
219	1383 - 1411 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	E	296159.6	6248999.0	58	53	60	55	60	55	62	58	1.8	1.6	2.6	3	55	50	7	8	Yes	Yes	No	No	Yes	Type 2
219	1383 - 1411 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	E	296165.0	6249013.8	58	53	61	56	59	54	63	58	2.9	2.6	3.5	3.8	55	50	8	8	Yes	Yes	No	No	Yes	Type 2
219	1383 - 1411 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	N	296156.8	6249019.5	52	47	60	55	54	49	62	57	8	7.5	8.1	8.2	55	50	7	7	Yes	Yes	No	No	Yes	Type 2
219	1383 - 1411 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	N	296156.9	6249002.1	56	51	59	53	57	52	61	56	2.7	2.4	3.3	3.6	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
219	1383 - 1411 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	S	296151.9	6248994.0	59	54	60	55	61	56	62	58	0.5	0.5	1.4	2	55	50	7	8	-	-	No	No	No	-
219	1383 - 1411 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	S	296156.6	6248996.0	59	54	60	55	60	55	62	58	0.7	0.7	1.7	2.1	55	50	7	8	-	-	No	No	Yes	Type 2
219	1383 - 1411 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	S	296158.5	6249006.8	57	52	58	53	59	54	61	56	1	1	1.9	2.4	55	50	6	6	-	-	No	No	Yes	Type 2
219	1383 - 1411 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	S	296162.8	6249008.3	58	53	60	55	60	55	62	57	1.4	1.2	2.1	2.6	55	50	7	7	-	-	No	No	Yes	Type 2
219	1383 - 1411 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	W	296148.4	6249006.8	55	50	58	53	56	51	60	55	2.9	2.6	3.6	3.9	55	50	5	5	Yes	Yes	No	No	Yes	Type 1
436	LOT 1 / DP875790	NCA05	Active recreation	GF	NE	298120.2	6247981.5	44	40	47	42	45	40	49	44	2.8	2.8	3.5	3.7	60	-	-	-	-	-	-	-	No	-
436	LOT 1 / DP875790	NCA05	Active recreation	GF	NW	298108.2	6247980.2	47	42	50	45	48	43	52	47	3.7	3.5	4.4	4.6	60	-	-	-	-	-	-	-	No	-
436	LOT 1 / DP875790	NCA05	Active recreation	GF	NW	298110.0	6247987.0	46	41	50	45	47	42	52	47	3.7	3.6	4.5	4.7	60	-	-	-	-	-	-	-	No	-
436	LOT 1 / DP875790	NCA05	Active recreation	GF	NW	298112.0	6247991.5	46	42	50	45	48	43	52	47	3.4	3.2	4	4.2	60	-	-	-	-	-	-	-	No	-
436	LOT 1 / DP875790	NCA05	Active recreation	GF	SE	298112.7	6247965.7	43	38	45	40	44	39	47	42	2.2	2.2	2.7	2.9	60	-	-	-	-	-	-	-	No	-
436	LOT 1 / DP875790	NCA05	Active recreation	GF	SE	298119.4	6247967.5	42	38	45	40	43	39	47	42	2.5	2.5	3.1	3.3	60	-	-	-	-	-	-	-	No	-
436	LOT 1 / DP875790	NCA05	Active recreation	GF	SW	298107.3	6247971.5	46	41	50	45	47	42	52	47	3.8	3.7	4.5	4.8	60	-	-	-	-	-	-	-	No	-
436	LOT 1 / DP875790	NCA05	Active recreation	GF	SW	298109.6	6247982.7	46	41	50	45	47	42	52	47	3.8	3.7	4.5	4.8	60	-	-	-	-	-	-	-	No	-
436	LOT 1 / DP875790	NCA05	Active recreation	GF	SW	298109.9	6247987.6	46	41	50	45	47	42	52	47	3.8	3.7	4.5	4.7	60	-	-	-	-	-	-	-	No	-
461	1183-1185 EL ZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	NE	299139.6	6249729.4	55	51	56	52	56	51	57	53	0.9	1.2	1.7	2.1	55	50	2	3	No	No	No	No	Yes	Type 1
461	1183-1185 ELIZABETH DRIVE CECIL PARK	NCA04	Residential	GF	NW	299122.9	6249720.4	48	44	50	45	49	44	51	46	1.4	1.4	2	2.1	55	50	-	-	-	-	-	-	No	-
461	1183-1185 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	NW	299127.2	6249728.7	49	44	50	45	49	45	51	47	1.2	1.2	1.8	1.9	55	50	-	-	-	-	-	-	No	-
461	1183-1185 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	NW	299130.3	6249733.4	49	44	50	46	50	45	51	47	1.2	1.2	1.7	1.8	55	50	-	-	-	-	-	-	No	-
461	1183-1185 ELIZABETH DRIVE CECIL PARK	NCA04	Residential	GF	SE	299134.5	6249715.7	58	53	59	54	58	53	60	55	1	1.3	1 8	2.2	55	50	5	5	Yes	Yes	No	No	Yes	Type 1
461	1183-1185 ELIZABETH DRIVE CECIL PARK	NCA04	Residential	GF	SW	299121.2	6249712.0	56	51	57	53	56	51	58	54	1.4	1.6	2 2	2.6	55	50	3	4	No	No	No	No	Yes	Type 1
461	1183-1185 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	SW	299125.9	6249724.0	48	44	50	45	49	44	51	47	1.6	1.5	2.2	2.4	55	50	-	-	-	-	-	-	No	-
478	146 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	NE	294242.7	6250307.3	42	37	51	46	43	38	53	48	9	8.9	9.4	9.7	55	50	-	-	-	-	-	-	No	-
478	146 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	NE	294251.0	6250304.5	44	39	51	46	46	40	53	48	6.8	6.7	7.4	7.8	55	50	-	-	-	-	-	-	No	-
478	146 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	NW	294235.1	6250295.4	46	41	50	45	46	41	52	47	4	4	5.7	5.9	55	50	-	-	-	-	-	-	No	-
478	146 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	NW	294235.7	6250305.0	44	39	51	46	45	40	53	48	6.9	7	8.1	8.4	55	50	-	-	-	-	-	-	No	-
478	146 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	NW	294244.2	6250307.4	42	37	51	46	43	38	53	48	9.1	9	9 6	9.9	55	50	-	-	-	-	-	-	No	-
478	146 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	SE	294248.0	6250292.9	49	44	50	45	49	44	52	47	1.2	1.2	2 5	2.8	55	50	-	-	-	-	-	-	No	-
478	146 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	SW	294233.6	6250297.2	48	43	51	46	48	43	53	48	2.9	2.8	4.4	4.7	55	50	-	-	-	-	-	-	No	-
478	146 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	SW	294237.0	6250290.1	49	44	51	46	49	44	53	48	2.2	2.2	3.7	4	55	50	-	-	-	-	-	-	No	-
647	LOT 1 / DP875790	NCA05	Active recreation	GF	NE	298140.6	6248004.4	44	39	47	42	45	40	48	44	2.5	2.5	3.2	3.3	60	-	-	-	-	-	-	-	No	-
647	LOT 1 / DP875790	NCA05	Active recreation	GF	NW	298132.7	6248004.6	44	40	47	42	45	41	48	44	2.3	2.2	2.8	3	60	-	-	-	-	-	-	-	No	-
647	LOT 1 / DP875790	NCA05	Active recreation	GF	SE	298136.1	6247997.9	45	40	47	42	46	41	49	44	2.6	2.6	3.1	3.2	60	-	-	-	-	-	-	-	No	-
647	LOT 1 / DP875790	NCA05	Active recreation	GF	SW	298128.3	6247998.1	45	40	47	42	46	41	49	44	2	2	2.7	3	60	-	-	-	-	-	-	-	No	-
813	1143 - 1147 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	NE	296088.6	6250268.3	64	58	64	59	66	61	67	62	0.2	0.1	0.7	0.9	55	50	12	12	-	-	No	No	No	-
813	1143 - 1147 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	NW	296073.1	6250262.1	52	47	55	49	54	49	57	52	2.8	2.7	2.7	3.1	55	50	2	2	No	No	No	No	Yes	Type 1
813	1143 - 1147 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	NW	296078.6	6250270.4	60	55	61	56	63	58	64	59	0.5	0.5	0.9	1.2	55	50	9	9	-	-	No	No	No	-
813	1143 - 1147 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	SE	296076.3	6250256.5	56	51	56	51	58	53	60	55	0.8	0.7	1.1	1.4	55	50	5	5	-	-	No	No	No	-
813	1143 - 1147 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	SE	296084.5	6250266.2	59	54	59	54	62	57	63	58	0.4	0.4	0.8	1.1	55	50	8	8	-	-	No	No	No	-
813	1143 - 1147 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	SW	296072.3	6250258.1	52	47	55	50	55	50	57	53	2.5	2.4	2.5	2.8	55	50	2	3	-	No	No	No	Yes	Type 1
813	1143 - 1147 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	SW	296072.9	6250263.7	52	47	55	50	55	50	58	53	2.9	2.8	2.9	3.2	55	50	3	3	No	No	No	No	Yes	Type 1
1019	LOT 1 / DP875790	NCA05	Active recreation	GF	NE	298148.7	6248008.1	45	40	47	43	46	41	49	44	2.5	2.5	3.1	3.3	60	-	-	-	-	-	-	-	No	-
1019	LOT 1 / DP875790	NCA05	Active recreation	GF	NW	298143.2	6248009.7	45	40	47	42	46	41	48	44	2.3	2.2	2.9	3	60	-	-	-	-	-	-	-	No	-
1019	LOT 1 / DP875790	NCA05	Active recreation	GF	SE	298146.8	6248002.7	45	40	47	42	46	41	49	44	2.5	2.5	3.1	3.3	60	-	-	-	-	-	-	-	No	-
1019	LOT 1 / DP875790	NCA05	Active recreation	GF	SW	298141.2	6248004.3	44	40	47	42	45	40	48	44	2.6	2.5	3.2	3.4	60	-	-	-	-	-	-	-	No	-
1272	1107 - 1115 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NE	295913.5	6250597.4	62	57	62	57	65	60	66	61	0.2	0.1	0.7	0.9	55	50	11	11	-	-	No	No	No	-
1272	1107 - 1115 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	NE	295924.4	6250596.5	65	60	65	60	68	63	68	63	0.1	0	0.5	0.8	55	50	13	13	-	-	No	No	No	-
1272	1107 - 1115 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	NW	295901.9	6250595.7	60	55	61	56	63	58	64	59	0.4	0.4	0.8	1.1	55	50	9	9	-	-	No	No	No	-
1272	1107 - 1115 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	NW	295917.6	6250597.6	62	57	63	57	65	60	66	61	0.2	0.1	0.6	0.9	55	50	11	11	-	-	No	No	No	-
1272	1107 - 1115 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	SE	295901.8	6250588.6	53	48	54	49	55	50	57	52	1.3	1.2	1.5	1.8	55	50	2	2	-	-	No	No	No	-
1272	1107 - 1115 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	SE	295918.4	6250588.5	58	53	59	54	61	56	62	57	0.6	0.6	1	1.3	55	50	7	7	-	-	No	No	No	-
1272	1107 - 1115 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	SW	295893.4	6250587.9	54	49	56	51	57	52	59	54	1.7	1.6	1.8	2.2	55	50	4	4	-	-	No	No	Yes	Type 1
1272	1107 - 1115 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	SW	295908.2	6250588.5	52	47	53	48	55	50	56	51	1.3	1.3	1.5	1.9	55	50	1	1	-	-	No	No	No	-
1484	1413 - 1415 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	E	296043.4	6248969.5	60	55	61	56	62	57	64	59	1.2	1	2.1	2.4	55	50	9	9	-	-	No	No	Yes	Type 3
1484	1413 - 1415 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	N	296034.9	6248976.8	54	50	59	54	56	51	61	56	4.6	4.3	5	5.3	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
1484	1413 - 1415 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	S	296032.9	6248964.8	59	54	59	54	61	56	61	57	-0.3	-0.2	0.8	1.4	55	50	6	7	-	-	No	No	No	-
1484	1413 - 1415 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	W	296024.4	6248972.0	54	49	55	50	55	50	57	52	0.8	0.8	1.9	2.4	55	50	2	2	-	-	No	No	Yes	Type 1
4194	47 - 49 BROLEN WAY, CECIL PARK 2178	NCA04	Residential	GF	E	299078.5	6249963.4	47	42	48	43	47	43	49	44	1.1	1.3	1.5	1.7	55	50	-	-	-	-	-	-	No	-
4194	47 - 49 BROLEN WAY, CECIL PARK 2178	NCA04	Residential	F 1	E	299078.5	6249963.4	48	43	49	45	49	44	51	46	1.4	1.4	1.8	2	55	50	-	-	-	-	-	-	No	-
4194	47 - 49 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	E	299087.3	6249942.0	50	45	52	47	50	46	53	49	2	2.2	2.8	3.1	55	50	-	-	-	-	-	-	No	-
4194	47 - 49 BROLEN WAY, CECIL PARK 2178	NCA04	Residential	F 1	E	299087.3	6249942.0	53	48	55	50	53	48	56	52	2.1	2.3	3	3.4	55	50	1	2	No	No	No	No	Yes	Type 1
4194	47 - 49 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	N	299062.8	6249963.4	41	37	43	38	42	38	44	39	1.4	1.4	1.6	1.8	54	50	-	-	-	-	-	-	No	-
4194	47 - 49 BROLEN WAY CECIL PARK 2178	NCA04	Residential	F 1	N	299062.8	6249963.4	44	40	46	41	45	41	47	42	1.4	1.4	1.7	1.8	55	50	-	-	-	-	-	-	No	-
4194	47 - 49 BROLEN WAY, CECIL PARK 2178	NCA04	Residential	GF	N	299066.9	6249963.9	40	36	42	37	41	37	43	39	1.7	1.7	2.1	2.2	53	49	-	-	-	-	-	-	No	-
4194	47 - 49 BROLEN WAY CECIL PARK 2178	NCA04	Residential	F 1	N	299066.9	6249963.9	44	39	45	40	44	40	46	42	1.6	1.5	2	2.1	55	50	-	-	-	-	-	-	No	-
4194	47 - 49 BROLEN WAY, CECIL PARK 2178	NCA04	Residential	GF	N	299074.4	6249968.5	46	41	46	42	47	42	48	43	0.7	0.7	0.8	1	55	50	-	-	-	-	-	-	No	-
4194	47 - 49 BROLEN WAY CECIL PARK 2178	NCA04	Residential	F 1	N	299074.4	6249968.5	47	42	48	43	48	43	49	45	0.9	0.9	1.1	1.2	55	50	-	-	-	-	-	-	No	-
4194	47 - 49 BROLEN WAY, CECIL PARK 2178	NCA04	Residential	GF	N	299079.3	6249961.0	46	41	46	42	47	42	48	43	0.7	0.8	0.9	1.1	55	50	-	-	-	-	-	-	No	-
4194	47 - 49 BROLEN WAY, CECIL PARK 2178	NCA04	Residential	F 1	N	299079.3	6249961.0	47	42	48	43	48	43	49	45	1	1	1.2	1.4	55	50	-	-	-	-	-	-	No	-
4194	47 - 49 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	NE	299083.2	6249959.6	47	42	48	43	48	43	49	45	1.4	1.5	1.7	2	55	50	-	-	-	-	-	-	No	-
4194	47 - 49 BROLEN WAY CECIL PARK 2178	NCA04	Residential	F 1	NE	299083.2	6249959.6	48	43	49	45	49	44	51	46	1.5	1.6	1.9	2.1	55	50	-	-	-	-	-	-	No	-
4194	47 - 49 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	NE	299087.3	6249956.1	49	44	51	46	50	45	52	48	2	2	2.6	2.8	55	50	-	-	-	-	-	-	No	-
4194	47 - 49 BROLEN WAY CECIL PARK 2178	NCA04	Residential	F 1	NE	299087.3	6249956.1	50	45	52	47	51	46	53	49	1.8	1.9	2.5	2.7	55	50	-	-	-	-	-	-	No	-
4194	47 - 49 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	S	299060.9	6249954.1	51	46	53	48	51	46	54	49	1.9	2	2.8	3.2	55	50	-	-	-	-	-	-	No	-
4194	47 - 49 BROLEN WAY CECIL PARK 2178	NCA04	Residential	F 1	S	299060.9	6249954.1	52	47	54	49	52	47	55	50	1.9	2	2.7	3.1	55	50	-	-	-	-	-	-	No	-
4194	47 - 49 BROLEN WAY, CECIL PARK 2178	NCA04	Residential	GF	S	299065.0	6249951.3	50	45	52	47	51	46	53	49	1.7	1.9	2.6	3	55	50	-	-	-	-	-	-	No	-
4194	47 - 49 BROLEN WAY, CECIL PARK 2178	NCA04	Residential	F 1	S	299065.0	6249951.3	51	46	53	48	52	47	54	50	1.8	2	2.7	3	55	50	-	-	-	-	-	-	No	-

M12 Central LNDG concrete pavement surface noise levels

Receiver ID	Address	Noise catchment area	Receiver type	Façade				Predicted noise level Opening Year 2026				Predicted no se level Design Year 2036				Change in noise evel (Build - No Build)				NCG Project road noise criteria		NCG Project road noise criteria exceedance (dB)		Do noise levels equal or exceed the cumulative limit w th project roads adding ≥2dB to the total noise levels?		Is the contribution from the road project Acute?		Is the property considered for further treatment?	Category of treatment
				Floor level	Direction	x	y	No Build		Build		No Build		Build		Opening Year 2026		Design Year 2036													
								Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night		
4194	47 - 49 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	S	299069.5	6249948.5	50	45	51	46	50	45	52	47	1.3	1.5	2.1	2.4	55	50	-	-	-	-	-	-	No	-
4194	47 - 49 BROLEN WAY CECIL PARK 2178	NCA04	Residential	F 1	S	299069.5	6249948.5	51	46	52	47	51	46	53	49	1.3	1.5	2.1	2.4	55	50	-	-	-	-	-	-	No	-
4194	47 - 49 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	S	299076.8	6249931.4	53	48	55	50	53	48	56	51	1.9	2.1	2.7	3.1	55	50	1	1	No	No	No	No	Yes	Type 1
4194	47 - 49 BROLEN WAY CECIL PARK 2178	NCA04	Residential	F 1	S	299076.8	6249931.4	54	49	56	51	54	49	57	52	1.9	2	2.7	3.1	55	50	2	2	No	No	No	No	Yes	Type 1
4194	47 - 49 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	W	299059.1	6249959.5	49	44	51	46	50	45	52	48	1.4	1.7	2.2	2.7	55	50	-	-	-	-	-	-	No	-
4194	47 - 49 BROLEN WAY CECIL PARK 2178	NCA04	Residential	F 1	W	299059.1	6249959.5	50	45	52	47	51	46	53	48	1.5	1.6	2.2	2.6	55	50	-	-	-	-	-	-	No	-
4194	47 - 49 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	W	299068.4	6249965.8	41	36	43	38	42	37	44	39	1.8	1.8	2.3	2.4	54	49	-	-	-	-	-	-	No	-
4194	47 - 49 BROLEN WAY CECIL PARK 2178	NCA04	Residential	F 1	W	299068.4	6249965.8	44	39	46	41	45	40	47	42	1.7	1.7	2.2	2.3	55	50	-	-	-	-	-	-	No	-
4194	47 - 49 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	W	299070.4	6249941.3	49	44	50	45	49	45	51	47	1.1	1.2	1.8	2.1	55	50	-	-	-	-	-	-	No	-
4194	47 - 49 BROLEN WAY CECIL PARK 2178	NCA04	Residential	F 1	W	299070.4	6249941.3	50	45	51	46	50	46	52	48	1.1	1.2	1.8	2.1	55	50	-	-	-	-	-	-	No	-
4195	51 - 53 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	E	299037.4	6249963.1	52	47	54	49	52	47	55	50	2.1	2.3	3	3.3	55	50	-	-	-	-	-	-	No	-
4195	51 - 53 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	E	299041.1	6249987.6	46	42	47	43	47	43	49	44	1	1.1	1.2	1.4	55	50	-	-	-	-	-	-	No	-
4195	51 - 53 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	E	299046.5	6249972.8	49	44	52	47	50	45	53	48	2.3	2.4	3.1	3.4	55	50	-	-	-	-	-	-	No	-
4195	51 - 53 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	E	299049.1	6249980.7	49	44	51	46	49	45	52	48	2.2	2.3	2.9	3.2	55	50	-	-	-	-	-	-	No	-
4195	51 - 53 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	N	299022.4	6249984.9	44	39	45	40	45	40	46	42	1.2	1.1	1.5	1.6	55	50	-	-	-	-	-	-	No	-
4195	51 - 53 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	N	299032.5	6249981.9	41	36	43	38	42	37	44	39	1.5	1.5	2	2.1	54	49	-	-	-	-	-	-	No	-
4195	51 - 53 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	N	299034.9	6249991.6	45	41	46	41	46	42	47	43	1	0.9	1.2	1.2	55	50	-	-	-	-	-	-	No	-
4195	51 - 53 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	N	299044.3	6249984.4	45	40	46	41	46	41	47	42	0.8	0.9	0.9	1.1	55	50	-	-	-	-	-	-	No	-
4195	51 - 53 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	NE	299031.1	6249983.7	42	37	44	39	43	38	45	40	1.5	1.6	2	2.2	55	50	-	-	-	-	-	-	No	-
4195	51 - 53 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	S	299023.0	6249968.5	50	46	52	48	51	46	54	49	2	2.2	2.9	3.2	55	50	-	-	-	-	-	-	No	-
4195	51 - 53 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	S	299032.7	6249959.4	52	47	54	49	53	48	55	51	1.9	2	2.7	3.1	55	50	-	1	-	No	-	No	Yes	Type 1
4195	51 - 53 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	S	299039.5	6249963.9	52	47	54	49	52	48	55	51	1.7	1.9	2.6	3	55	50	-	1	-	No	-	No	Yes	Type 1
4195	51 - 53 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	SE	299045.1	6249967.0	52	47	54	49	52	47	55	50	1.7	1.9	2.6	2.9	55	50	-	-	-	-	-	-	No	-
4195	51 - 53 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	SE	299047.1	6249975.2	50	45	52	47	50	45	53	49	2.3	2.4	3.1	3.4	55	50	-	-	-	-	-	-	No	-
4195	51 - 53 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	W	299016.6	6249977.9	50	46	52	48	51	46	54	49	2	2.2	2.9	3.3	55	50	-	-	-	-	-	-	No	-
4195	51 - 53 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	W	299020.0	6249971.5	51	46	53	48	51	46	54	50	2	2.2	2.9	3.3	55	50	-	-	-	-	-	-	No	-
4195	51 - 53 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	W	299025.2	6249964.1	51	46	53	48	51	46	54	49	2	2.2	2.9	3.3	55	50	-	-	-	-	-	-	No	-
4195	51 - 53 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	W	299031.9	6249985.1	42	37	44	39	43	38	45	41	1.7	1.7	2.2	2.5	55	50	-	-	-	-	-	-	No	-
4196	55 - 57 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	NE	299039.9	6250036.2	46	41	47	42	47	42	48	43	0.9	0.9	1.1	1.3	55	50	-	-	-	-	-	-	No	-
4196	55 - 57 BROLEN WAY CECIL PARK 2178	NCA04	Residential	F 1	NE	299039.9	6250036.2	48	43	49	44	49	44	50	46	1.3	1.3	1.6	1.8	55	50	-	-	-	-	-	-	No	-
4196	55 - 57 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	S	299031.9	6250005.7	47	42	49	44	47	42	50	45	2	2	2.7	2.8	55	50	-	-	-	-	-	-	No	-
4196	55 - 57 BROLEN WAY CECIL PARK 2178	NCA04	Residential	F 1	S	299031.9	6250005.7	49	44	51	46	49	45	52	47	2	1.9	2.7	2.8	55	50	-	-	-	-	-	-	No	-
4196	55 - 57 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	SE	299043.4	6250017.6	48	43	50	45	49	44	51	47	2	1.9	2.5	2.7	55	50	-	-	-	-	-	-	No	-
4196	55 - 57 BROLEN WAY CECIL PARK 2178	NCA04	Residential	F 1	SE	299043.4	6250017.6	50	45	52	47	50	46	53	48	2	2.1	2.6	2.9	55	50	-	-	-	-	-	-	No	-
4196	55 - 57 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	SW	299024.5	6250011.5	47	43	49	44	48	43	50	46	1.5	1.6	2.3	2.5	55	50	-	-	-	-	-	-	No	-
4196	55 - 57 BROLEN WAY CECIL PARK 2178	NCA04	Residential	F 1	SW	299024.5	6250011.5	50	45	51	46	50	45	52	48	1.7	1.7	2.3	2.6	55	50	-	-	-	-	-	-	No	-
4196	55 - 57 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	W	299024.6	6250027.3	46	41	47	42	46	41	48	43	1	1.1	1.6	1.9	55	50	-	-	-	-	-	-	No	-
4196	55 - 57 BROLEN WAY CECIL PARK 2178	NCA04	Residential	F 1	W	299024.6	6250027.3	48	43	49	44	49	44	50	46	1.3	1.3	1.8	2.1	55	50	-	-	-	-	-	-	No	-
4196	55 - 57 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	W	299027.7	6250009.6	45	41	47	42	46	41	48	44	1.8	1.8	2.4	2.6	55	50	-	-	-	-	-	-	No	-
4196	55 - 57 BROLEN WAY CECIL PARK 2178	NCA04	Residential	F 1	W	299027.7	6250009.6	48	43	50	45	48	44	51	46	1.8	1.8	2.5	2.6	55	50	-	-	-	-	-	-	No	-
4197	55 - 57 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	E	299011.8	6250005.6	47	42	49	44	48	43	50	46	2.2	2.2	2.8	3.1	55	50	-	-	-	-	-	-	No	-
4197	55 - 57 BROLEN WAY CECIL PARK 2178	NCA04	Residential	F 1	E	299011.8	6250005.6	49	45	51	47	50	45	53	48	2	2.1	2.7	3	55	50	-	-	-	-	-	-	No	-
4197	55 - 57 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	N	298999.4	6250011.8	44	39	45	41	45	40	47	42	1.2	1.2	1.6	1.7	55	50	-	-	-	-	-	-	No	-
4197	55 - 57 BROLEN WAY CECIL PARK 2178	NCA04	Residential	F 1	N	298999.4	6250011.8	48	43	50	45	49	44	51	46	1.5	1.5	2	2.2	55	50	-	-	-	-	-	-	No	-
4197	55 - 57 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	S	299001.4	6249996.8	51	46	53	48	51	46	54	49	2.1	2.1	2.9	3.2	55	50	-	-	-	-	-	-	No	-
4197	55 - 57 BROLEN WAY CECIL PARK 2178	NCA04	Residential	F 1	S	299001.4	6249996.8	52	47	54	49	53	48	55	51	1.9	2	2.6	2.9	55	50	-	1	-	No	-	No	Yes	Type 1
4197	55 - 57 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	W	298988.9	6250002.8	49	44	51	46	49	44	52	47	1.9	2.1	2.7	3.1	55	50	-	-	-	-	-	-	No	-
4197	55 - 57 BROLEN WAY CECIL PARK 2178	NCA04	Residential	F 1	W	298988.9	6250002.8	51	46	52	48	51	46	54	49	1.8	2	2.6	2.9	55	50	-	-	-	-	-	-	No	-
4198	59 - 61 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	E	299067.6	6250063.2	47	42	48	44	48	43	50	45	1.3	1.3	1.6	1.7	55	50	-	-	-	-	-	-	No	-
4198	59 - 61 BROLEN WAY CECIL PARK 2178	NCA04	Residential	F 1	E	299067.6	6250063.2	49	44	51	46	50	45	52	48	1.7	1.8	2.3	2.5	55	50	-	-	-	-	-	-	No	-
4198	59 - 61 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	E	299080.9	6250047.9	50	45	52	47	50	45	53	48	2	2.1	2.7	2.9	55	50	-	-	-	-	-	-	No	-
4198	59 - 61 BROLEN WAY CECIL PARK 2178	NCA04	Residential	F 1	E	299080.9	6250047.9	51	46	53	48	51	47	54	50	1.9	2.1	2.6	3	55	50	-	-	-	-	-	-	No	-
4198	59 - 61 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	N	299057.2	6250074.0	45	41	46	41	46	42	47	43	0.8	0.8	0.9	1	55	50	-	-	-	-	-	-	No	-
4198	59 - 61 BROLEN WAY CECIL PARK 2178	NCA04	Residential	F 1	N	299057.2	6250074.0	48	43	49	44	49	44	50	45	1.3	1.2	1.5	1.7	55	50	-	-	-	-	-	-	No	-
4198	59 - 61 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	N	299073.2	6250054.6	46	41	46	42	47	42	48	43	0.8	0.8	0.9	0.9	55	50	-	-	-	-	-	-	No	-
4198	59 - 61 BROLEN WAY CECIL PARK 2178	NCA04	Residential	F 1	N	299073.2	6250054.6	48	43	49	44	49	44	50	46	1.2	1.3	1.6	1.8	55	50	-	-	-	-	-	-	No	-
4198	59 - 61 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	S	299060.5	6250045.7	49	44	52	47	50	45	53	48	2.5	2.5	3.3	3.6	55	50	-	-	-	-	-	-	No	-
4198	59 - 61 BROLEN WAY CECIL PARK 2178	NCA04	Residential	F 1	S	299060.5	6250045.7	51	46	53	48	51	46	54	50	2.1	2.1	2.9	3.1	55	50	-	-	-	-	-	-	No	-
4198	59 - 61 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	W	299043.2	6250062.2	44	40	46	41	45	40	47	43	1.7	1.7	2.3	2.4	55	50	-	-	-	-	-	-	No	-
4198	59 - 61 BROLEN WAY CECIL PARK 2178	NCA04	Residential	F 1	W	299043.2	6250062.2	48	43	49	44	48	44	50	46	1.5	1.5	2.2	2.3	55	50	-	-	-	-	-	-	No	-
4199	59 - 61 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	E	299049.6	6250089.6	47	42	48	43	48	43	49	45	1.4	1.4	1.7	1.9	55	50	-	-	-	-	-	-	No	-
4199	59 - 61 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	N	299036.8	6250089.9	45	41	47	42	47	42	48	43	1.1	1.1	1.3	1.5	55	50	-	-	-	-	-	-	No	-
4199	59 - 61 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	S	299035.3	6250086.2	48	43	49	44	48	43	50	46	1.3	1.4	1.9	2.2	55	50	-	-	-	-	-	-	No	-
4199	59 - 61 BROLEN WAY CECIL PARK 2178	NCA04	Residential	GF	W	299022.5	6250093.4	46	42	48	43	47	42	49	45	1.7	1.7	2.3	2.6	55	50	-	-	-	-	-	-	No	-
4220	11 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	GF	E	298882.0	6250070.7	50	45	52	48	50	46	54	49	2.4	2.5	3.2	3.6	55	50	-	-	-	-	-	-	No	-
4220	11 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	NE	298866.1	6250102.0	48	43	50	45	49	44	52	47	2.1	2.2	2.8	3	55	50	-	-	-	-	-	-	No	-
4220	11 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	NE	NE	298874.0	6250084.7	48	43	50	45	49	44	51	47	1.9	2	2.5	2.7	55	50	-	-	-	-	-	-	No	-
4220	11 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	NW	298852.6	6250089.8	43	38	45	40	44	39	46	41	1.8	1.6	2.2	2.4	55	50	-	-	-	-	-	-	No	-
4220	11 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	NW	NW	298855.9	6250101.2	43	38	44	40	44	39	46	41	1.5	1.4	1.9	1.9	55	50	-	-	-	-	-	-	No	-
4220	11 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	SE	298867.2	6250098.0	48	44	50	46	49	44	52	47	2	2.1	2.6	2.9	55	50	-	-	-	-	-	-	No	-
4220	11 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	SE	298872.6	6250063.2	50	45	53	48	51	46	54	49	2.4	2.4	3.2	3.6	55	50	-	-	-	-	-	-	No	-
4220	11 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	GF	SE	298879.6	6250064.7	51	46	53	48	51	46	54	50	2.2	2.3	3	3.3	55	50	-	-	-	-	-	-	No	-
4220	11 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	SW	298851.5	6250092.3	46	41	47	42	46	41	48	44	1.6	1.5	2.2	2.4	55	50	-	-	-	-	-	-	No	-
4220	11 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	SW	298852.2	6250085.8	48	43	50	46	48	43	52	47	2.6	2.7	3.5	3.9	55	50	-	-	-	-	-	-	No	-
4220	11 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	SW	298859.1	6250074.2	48	44	51	46	49	44	52	48	2.6	2.7	3.6	3.9	55	50	-	-	-	-	-	-	No	-
4220	11 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	SW	298867.7	6250063.7	50	45	52	47	50	45	54	49	2.4	2.4	3.4	3.7	55	50	-	-	-	-	-	-	No	-
4220	11 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	GF	SW	298874.1	6250063.7	50	45	52	48	50	45	54	49	2.4	2.6	3.4	3.8	55	50	-	-	-	-	-	-	No	-
4223	9 - 10 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	N	298796.2	6250025.9	45	40	46	41	46	41	47	42	0.8	0.8	1	1	55	50	-	-	-	-	-	-	No	-
4223	9 - 10 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	NE	298804.6	6250000.8	51	46	53	48	51	46	54	50	2.1	2.2	2.8	3.2	55	50	-	-	-	-	-	-	No	-
4223	9 - 10 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	NE	298806.9	6250020.4	49	44	51	47	50	45	53	48	2.1	2.1	2.7	3	55	50	-	-	-	-	-	-	No	-
4223	9 - 10 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	NE	298808.2	6250009.5	51	46	53	48	51	46	54	50	2.3	2.4	3.2	3.4	55	50	-	-	-	-	-	-	No	-
4223	9 - 10 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	NW	298775.5	6249996.2	43	39	45	40	44	39	46	42	1.7	1.6	2.2	2.3	55	50	-	-	-	-	-	-	No	-
4223	9 - 10 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	NW	298779.5	6250006.5	42	38	44	39	43	38	45	41	1.7	1.5	2.2	2.2	55	50	-	-	-	-	-	-	No	-
4223	9 - 10 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	NW	298785.8	6250021.4	43	38	44	40	43	39	45	41	1.6	1.5	2	2	55	50	-	-	-	-	-	-	No	-
4223	9 - 10 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	SE	298783.6	6249991.0	50	45	52	47	50	45	53	49	2.5	2.5	3.3	3.6	55	50	-	-	-	-	-	-	No	-
4223	9 - 10 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	SE	298791.7	6249992.3	50	46	52	48	51	46	54	49	2	2.1	2.9	3.1	55	50	-	-	-	-	-	-	No	-
4223	9 - 10 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	SE	298801.3	6249994.0	51	47	53	49	52	47	55	50	2	2.1	2.8	3	55	50	-	-	-	-	-	-	No	-
4223	9 - 10 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	SE	298806.1	6250004.1	51	46	53	48	52	47	55	50	2.1	2.1	2.9	3.1	55	50	-	-	-	-	-	-	No	-
4223	9 - 10 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	SE	298809.3	6250011.5	51	46	53	48	51	47	55	50	2.3	2.3	3.1	3.3	55	50	-	-	-	-	-	-	No	-
4223	9 - 10 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	SW	298774.6	6249997.6	45	40	47	42	46	41	48	43	1.5	1.4	2.1	2.2	55	50	-	-	-	-	-	-	No	-
4223	9 - 10 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	SW	298776.7	6249991.3	49	44	52	47	50	45	53	48	2.5	2.6	3.5	3.7	55	50	-	-	-	-	-	-	No	-
4223	9 - 10 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	SW	298783.3	6250013.3	43	38	45	40	44	39	46	41	1.8	1.6	2.3	2.4	55	50	-	-	-	-	-	-	No	-
4223	9 - 10 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	SW	298786.8	6249992.1	50	45	52	47	50	45	53	48	2.2	2.3	3.2	3.4	55	50	-	-	-	-	-	-	No	-
4223	9 - 10 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	SW	298793.8	6249992.5	50	45	52	47	51	46	53	49	2	2	2.9	3.2	55	50	-	-	-	-	-	-	No	-
4224	9 - 10 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	NE	298822.1	6249962.1	50	46	52	48	51	46	54	49	1.9	2.1	2.8	3	55	50	-	-	-	-	-	-	No	-
4224	9 - 10 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	NW	298806.7	6249966.1	44	40	46	41	45	40	47	43	1.6	1.5	2	2.1	55	50	-	-	-	-	-	-	No	-
4224	9 - 10 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	SE	298823.1	6249945.8	52	47	54	49	53	48	55	51	2.1	2.2	2.9	3.3	55	50	-	1	-	No	-	No	Yes	Type 1
4224	9 - 10 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	SW	298807.8	6249949.8	49	45	52	47	50	45	53	49	2.6	2.7	3.6	4	55	50	-	-	-	-	-	-	No	-
4226	5 - 6 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	GF	N	298699.7	6249925.3	47	42	49	44	48	43	50	45	1.7	1.6	2	2.1	55	50	-	-	-	-	-	-	No	-
4226	5 - 6 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	F 1	N	298699.7	6249925.3	49	44	51	46	50	45	52	48	1.8	1.8	2.3	2.5	55	50	-	-	-	-	-	-	No	-

M12 Central LNDG concrete pavement surface noise levels

Receiver ID	Address	Noise catchment area	Receiver type	Façade				Predicted noise level Opening Year 2026				Predicted no se level Design Year 2036				Change in noise evel (Build - No Build)				NCG Project road noise criteria		NCG Project road noise criteria exceedance (dB)		Do noise levels equal or exceed the cumulative limit w th project roads adding ≥2dB to the total noise levels?		Is the contribution from the road project Acute?		Is the property considered for further treatment?	Category of treatment
				Floor level	Direction	x	y	No Build		Build		No Build		Build		Opening Year 2026		Design Year 2036											
								Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night		
4226	5 - 6 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	GF	NE	298685.5	6249920.0	45	40	46	41	45	41	46	42	1	0.9	1.3	1.2	55	50	-	-	-	-	-	-	No	-
4226	5 - 6 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	F 1	NE	298685.5	6249920.0	48	44	50	45	49	44	51	46	1.4	1.2	1.8	1.7	55	50	-	-	-	-	-	-	No	-
4226	5 - 6 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	NE	298697.2	6249926.8	49	44	50	46	50	45	52	47	1.3	1.3	1.7	1.9	55	50	-	-	-	-	-	-	No	-
4226	5 - 6 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	F 1	NE	298697.2	6249926.8	50	46	52	47	51	46	53	49	1.6	1.6	2.2	2.4	55	50	-	-	-	-	-	-	No	-
4226	5 - 6 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	NE	298699.1	6249910.5	51	46	53	48	51	46	54	49	2.2	2.1	2.9	3.1	55	50	-	-	-	-	-	-	No	-
4226	5 - 6 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	F 1	NE	298699.1	6249910.5	53	48	55	50	53	48	56	51	2.1	2.2	2.9	3.1	55	50	1	1	No	No	No	No	Yes	Type 1
4226	5 - 6 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	GF	NE	298704.1	6249922.9	52	47	54	49	52	47	55	51	2	2.1	2.8	3.1	55	50	-	1	-	No	-	No	Yes	Type 1
4226	5 - 6 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	F 1	NE	298704.1	6249922.9	53	48	55	50	53	48	56	51	2	2.1	2.8	3	55	50	1	1	No	No	No	No	Yes	Type 1
4226	5 - 6 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	GF	NW	298670.0	6249909.5	49	45	50	45	49	45	50	46	1.1	0.9	1.3	1.1	55	50	-	-	-	-	-	-	No	-
4226	5 - 6 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	F 1	NW	298670.0	6249909.5	51	46	52	47	51	47	53	48	1.2	1	1.5	1.4	55	50	-	-	-	-	-	-	No	-
4226	5 - 6 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	GF	NW	298677.8	6249913.5	48	44	49	44	48	44	49	45	1.1	0.8	1.3	1.1	55	50	-	-	-	-	-	-	No	-
4226	5 - 6 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	F 1	NW	298677.8	6249913.5	50	46	51	47	50	46	52	48	1.3	1	1.6	1.4	55	50	-	-	-	-	-	-	No	-
4226	5 - 6 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	NW	298681.3	6249920.0	48	44	49	45	49	44	50	45	1.1	0.9	1.4	1.2	55	50	-	-	-	-	-	-	No	-
4226	5 - 6 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	F 1	NW	298681.3	6249920.0	50	46	52	47	51	47	52	48	1.2	1	1.5	1.4	55	50	-	-	-	-	-	-	No	-
4226	5 - 6 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	GF	NW	298687.5	6249921.3	46	42	47	43	46	42	48	43	1.1	0.9	1.4	1.2	55	50	-	-	-	-	-	-	No	-
4226	5 - 6 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	F 1	NW	298687.5	6249921.3	49	45	50	46	50	45	51	47	1.3	1.2	1.8	1.7	55	50	-	-	-	-	-	-	No	-
4226	5 - 6 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	GF	NW	298691.5	6249927.0	48	44	49	44	48	44	50	45	1.1	0.8	1.3	1.1	55	50	-	-	-	-	-	-	No	-
4226	5 - 6 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	F 1	NW	298691.5	6249927.0	50	46	51	47	51	46	52	48	1.3	1	1.5	1.5	55	50	-	-	-	-	-	-	No	-
4226	5 - 6 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	GF	SE	298684.6	6249896.4	50	46	52	47	50	46	53	49	2	1.9	2.8	2.9	55	50	-	-	-	-	-	-	No	-
4226	5 - 6 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	F 1	SE	298684.6	6249896.4	53	48	55	50	53	48	56	51	2.1	2	2.8	2.9	55	50	1	1	No	No	No	No	Yes	Type 1
4226	5 - 6 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	SE	298696.3	6249903.3	46	42	48	43	47	42	49	44	1.3	1.2	1.6	1.6	55	50	-	-	-	-	-	-	No	-
4226	5 - 6 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	F 1	SE	298696.3	6249903.3	52	47	53	49	52	48	55	50	1.7	1.7	2.3	2.5	55	50	-	-	-	-	-	-	No	-
4226	5 - 6 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	GF	SE	298701.6	6249915.3	52	47	54	49	52	48	55	51	2	2.1	2.8	3.1	55	50	-	1	-	No	-	No	Yes	Type 1
4226	5 - 6 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	F 1	SE	298701.6	6249915.3	53	49	55	51	54	49	57	52	2.1	2.1	2.9	3.1	55	50	2	2	No	No	No	No	Yes	Type 1
4226	5 - 6 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	GF	SW	298672.0	6249898.7	51	47	53	48	52	47	54	49	1.8	1.5	2.4	2.3	55	50	-	-	-	-	-	-	No	-
4226	5 - 6 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	F 1	SW	298672.0	6249898.7	53	48	54	50	53	49	55	51	1.6	1.5	2.2	2.1	55	50	-	1	-	No	-	No	Yes	Type 1
4226	5 - 6 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	GF	SW	298680.3	6249916.0	48	44	49	44	48	44	50	45	1.1	0.9	1.4	1.2	55	50	-	-	-	-	-	-	No	-
4226	5 - 6 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	F 1	SW	298680.3	6249916.0	50	46	51	47	51	46	52	48	1.4	1.1	1.7	1.6	55	50	-	-	-	-	-	-	No	-
4227	5 - 6 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	NE	298706.5	6249901.3	50	45	53	48	51	46	54	49	2.4	2.4	3.1	3.4	55	50	-	-	-	-	-	-	No	-
4227	5 - 6 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	GF	NE	298712.0	6249888.0	52	47	54	49	53	48	55	51	1.9	1.9	2.6	2.9	55	50	-	1	-	No	-	No	Yes	Type 1
4227	5 - 6 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	NW	298694.7	6249901.3	45	41	47	42	46	42	48	43	1.4	1.3	1.9	1.8	55	50	-	-	-	-	-	-	No	-
4227	5 - 6 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	SE	298708.9	6249894.1	51	46	53	48	51	46	54	50	2.5	2.4	3.2	3.4	55	50	-	-	-	-	-	-	No	-
4227	5 - 6 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	GF	SE	298710.7	6249876.5	53	48	55	50	54	49	56	52	1.9	1.9	2.6	2.9	55	50	1	2	No	No	No	No	Yes	Type 1
4227	5 - 6 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	SW	298695.8	6249883.8	51	46	53	48	51	46	54	49	2	1.8	2.6	2.6	55	50	-	-	-	-	-	-	No	-
4228	92 - 106 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	NE	298624.7	6249876.6	48	43	50	46	49	44	52	47	2.3	2.3	3	3.2	55	50	-	-	-	-	-	-	No	-
4228	92 - 106 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	NW	298604.0	6249870.7	50	47	51	47	51	47	52	47	0.9	0.6	1	0.7	55	50	-	-	-	-	-	-	No	-
4228	92 - 106 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	GF	SE	298614.2	6249858.2	50	46	52	47	51	46	53	48	1.7	1.4	2.1	2.1	55	50	-	-	-	-	-	-	No	-
4228	92 - 106 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	SW	298593.6	6249852.2	54	50	55	51	54	50	55	51	1.2	0.8	1.3	1	55	50	-	1	-	-	-	No	No	-
4264	2061 - 2063 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	E	299072.8	6249711.2	56	51	57	53	56	51	58	54	1.2	1.5	2.1	2.6	55	50	3	4	No	No	No	No	Yes	Type 1
4264	2061 - 2063 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	N	299061.9	6249718.9	47	42	48	44	48	43	49	45	1.2	1.2	1.6	1.8	55	50	-	-	-	-	-	-	No	-
4264	2061 - 2063 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NE	299069.9	6249717.1	56	51	57	52	56	51	58	53	1	1.4	1.9	2.3	55	50	3	3	No	No	No	No	Yes	Type 1
4264	2061 - 2063 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	NW	299041.9	6249701.6	49	44	50	45	49	45	51	46	1	1.1	1.5	1.7	55	50	-	-	-	-	-	-	No	-
4264	2061 - 2063 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NW	299052.0	6249714.7	47	43	48	44	48	43	50	45	1.3	1.3	1.8	1.8	55	50	-	-	-	-	-	-	No	-
4264	2061 - 2063 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SE	299044.4	6249685.9	56	52	58	53	57	52	59	54	1.1	1.3	1.9	2.3	55	50	4	4	No	No	No	No	Yes	Type 1
4264	2061 - 2063 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	SE	299051.5	6249689.9	57	52	58	53	57	52	59	54	1.2	1.4	2	2.4	55	50	4	4	No	No	No	No	Yes	Type 1
4264	2061 - 2063 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SE	299060.6	6249693.9	57	52	58	54	57	52	59	55	1.3	1.5	2.1	2.5	55	50	4	5	No	Yes	No	No	Yes	Type 1
4264	2061 - 2063 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	SE	299068.3	6249702.0	57	52	58	54	57	52	59	55	1.3	1.6	2.1	2.6	55	50	4	5	No	Yes	No	No	Yes	Type 1
4264	2061 - 2063 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	299038.4	6249687.7	54	49	56	51	55	50	57	53	1.7	1.8	2.5	2.9	55	50	2	3	No	No	No	No	Yes	Type 1
4264	2061 - 2063 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	299055.2	6249692.3	57	52	58	53	57	52	59	55	1.4	1.7	2.3	2.7	55	50	4	5	No	Yes	No	No	Yes	Type 1
4265	2055 - 2059 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	NE	299148.9	6249619.7	60	56	60	56	61	56	61	57	0	0.4	0.7	1.2	55	50	6	7	Yes	Yes	No	No	Yes	Type 2
4265	2055 - 2059 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	NE	299148.9	6249619.7	61	57	61	57	62	57	62	58	0	0.4	0.7	1.2	55	50	7	8	Yes	Yes	No	No	Yes	Type 2
4265	2055 - 2059 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	NW	299132.4	6249616.7	47	43	48	44	48	43	49	45	1	1	1.5	1.6	55	50	-	-	-	-	-	-	No	-
4265	2055 - 2059 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	F 1	NW	299132.4	6249616.7	50	45	51	46	50	46	52	47	1.1	1.1	1.6	1.8	55	50	-	-	-	-	-	-	No	-
4265	2055 - 2059 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SE	299142.9	6249603.6	64	59	64	59	64	59	65	60	0	0.4	0.8	1.2	55	50	10	10	Yes	Yes	Yes	Yes	Yes	Type 3
4265	2055 - 2059 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	F 1	SE	299142.9	6249603.6	65	60	65	60	65	60	66	61	-0.1	0.3	0.7	1.1	55	50	11	11	Yes	Yes	Yes	Yes	Yes	Type 3
4265	2055 - 2059 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	299126.3	6249600.7	59	55	60	55	60	55	61	57	0.5	0.9	1.3	1.8	55	50	6	7	Yes	Yes	No	No	Yes	Type 2
4265	2055 - 2059 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SW	299126.3	6249600.7	61	56	61	57	61	56	62	58	0.4	0.8	1.2	1.6	55	50	7	8	Yes	Yes	No	No	Yes	Type 2
4266	2065 - 2071 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	NE	299068.0	6249628.1	54	50	56	51	55	50	57	53	1.6	1.9	2.5	2.9	55	50	2	3	No	No	No	No	Yes	Type 1
4266	2065 - 2071 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NW	299059.5	6249632.7	51	47	52	48	52	47	53	49	0.8	0.9	1.5	1.7	55	50	-	-	-	-	-	-	No	-
4266	2065 - 2071 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	SE	299070.3	6249618.4	58	53	59	55	58	53	60	56	1.2	1.6	2.1	2.6	55	50	5	6	Yes	Yes	No	No	Yes	Type 2
4266	2065 - 2071 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	299058.4	6249624.1	56	51	57	53	57	52	59	54	1.2	1.5	2.1	2.4	55	50	4	4	No	No	No	No	Yes	Type 1
4266	2065 - 2071 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	299063.4	6249619.0	57	52	59	54	58	53	60	55	1.2	1.4	2	2.4	55	50	5	5	Yes	Yes	No	No	Yes	Type 1
4266	2065 - 2071 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	W	299056.9	6249628.9	55	50	56	52	56	51	58	53	1.1	1.3	1.9	2.2	55	50	3	3	No	No	No	No	Yes	Type 1
4267	2065 - 2071 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NE	299114.9	6249569.0	61	57	61	57	62	57	63	58	0	0.5	0.8	1.3	55	50	8	8	Yes	Yes	No	No	Yes	Type 2
4267	2065 - 2071 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	NE	299114.9	6249569.0	63	58	63	59	64	59	64	60	0	0.4	0.7	1.1	55	50	9	10	Yes	Yes	No	Yes	Yes	Type 3
4267	2065 - 2071 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	NW	299097.2	6249566.0	48	44	49	45	49	44	50	46	1	1	1.6	1.5	55	50	-	-	-	-	-	-	No	-
4267	2065 - 2071 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	NW	299097.2	6249566.0	51	46	52	47	51	47	53	48	1	1	1.6	1.7	55	50	-	-	-	-	-	-	No	-
4267	2065 - 2071 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	SE	299108.9	6249552.1	66	61	65	61	66	61	66	62	-0.2	0.3	0.6	1	55	50	11	12	Yes	Yes	Yes	Yes	Yes	Type 4
4267	2065 - 2071 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SE	299108.9	6249552.1	67	62	67	63	67	63	68	63	-0.2	0.3	0.5	0.9	55	50	13	13	Yes	Yes	Yes	Yes	Yes	Type 4
4267	2065 - 2071 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	299091.3	6249549.0	62	58	63	58	63	58	64	59	0.4	0.8	1.1	1.7	55	50	9	9	Yes	Yes	No	No	Yes	Type 3
4267	2065 - 2071 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	F 1	SW	299091.3	6249549.0	64	59	64	60	64	59	65	61	0.3	0.7	1	1.4	55	50	10	11	Yes	Yes	Yes	Yes	Yes	Type 3
4268	2073 - 2081 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	E	299071.8	6249504.3	67	62	67	63	67	63	68	64	0.1	0.6	0.7	1.2	55	50	13	14	Yes	Yes	Yes	Yes	Yes	Type 4
4268	2073 - 2081 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	N	299056.0	6249511.0	53	49	54	50	54	49	55	51	0.4	0.7	1	1.3	55	50	-	1	-	No	-	No	No	-
4268	2073 - 2081 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	N	299063.6	6249512.1	62	57	61	57	62	57	62	58	-0.5	0.1	0.2	0.6	55	50	7	8	Yes	Yes	No	No	Yes	Type 2
4268	2073 - 2081 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NE	299065.5	6249492.8	67	62	67	63	67	62	68	64	0.1	0.5	0.7	1.2	55	50	13	14	Yes	Yes	Yes	Yes	Yes	Type 4
4268	2073 - 2081 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	NE	299069.9	6249510.7	65	60	65	61	65	61	66	62	0	0.5	0.6	1.1	55	50	11	12	Yes	Yes	Yes	Yes	Yes	Type 4
4268	2073 - 2081 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NW	299049.4	6249507.1	52	47	53	48	53	48	54	49	0.8	0.9	1.3	1.5	55	50	-	-	-	-	-	-	No	-
4268	2073 - 2081 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	NW	299057.8	6249511.5	60	55	59	55	60	55	60	56	-0.8	-0.3	-0.2	0.3	55	50	5	6	Yes	Yes	No	No	Yes	Type 2
4268	2073 - 2081 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	SE	299063.5	6249487.5	68	64	69	64	69	64	69	65	0.1	0.5	0.7	1.2	55	50	14	15	Yes	Yes	Yes	Yes	Yes	Type 5
4268	2073 - 2081 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SE	299066.7	6249495.1	68	63	68	63	68	63	69	64	0	0.5	0.7	1.2	55	50	14	14	Yes	Yes	Yes	Yes	Yes	Type 4
4268	2073 - 2081 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	SE	299070.1	6249498.1	68	63	68	64	68	63	69	65	0.2	0.6	0.9	1.3	55	50	14	15	Yes	Yes	Yes	Yes	Yes	Type 5
4268	2073 - 2081 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	SW	299052.1	6249493.5	63	58	64	59	64	59	65	60	0.4	0.7	1.1	1.5	55	50	10	10	Yes	Yes	No	No	Yes	Type 3
4269	2073 - 2081 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NE	299018.7	6249465.8	61	56	60	56	61	57	61	57	-0.8	-0.3	-0.2	0.1	55	50	6	7	Yes	Yes	No	No	Yes	Type 2
4269	2073 - 2081 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	F 1	NE	299018.7	6249465.8	62	57	62	57	63	58	63	58	-0.6	-0.2	0	0.3	55	50	8	8	Yes	Yes	No	No	Yes	Type 2
4269	2073 - 2081 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NE	299026.9	6249462.7	67	62	67	62	67	62	68	63	0.2	0.5	0.8	1.3	55	50	13	13	Yes	Yes	Yes	Yes	Yes	Type 4
4269	2073 - 2081 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	NE	299026.9	6249462.7	68	63	68	64	68	63	69	64	0.1	0.5	0.8	1.1	55	50	14	14	Yes	Yes	Yes	Yes	Yes	Type 4
4269	2073 - 2081 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	NW	299011.4	6249454.7	62	57	62	57	62	57	63	58	0.1	0.5	0.7	1.1	55	50	8	8	-	-	No	No	No	-
4269	2073 - 2081 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	F 1	NW	299011.4	6249454.7	63	58	63	59	63	58	64	59	0.2	0.4	0.7	1	55	50	9	9	-	-	No	No	No	-
4269	2073 - 2081 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	NW	299011.9	6249464.2	54	49	54	49	54	49	55	50	0.1	0.2	0.5	0.7	55	50	-	-	-	-	-	-	No	-
4269	2073 - 2081 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	F 1	NW	299011.9	6249464.2	56	51	56	52	56	52	57	53	0.3	0.4	0.9	1.1	55	50	2	3	-	-	No	No	No	-
4269	2073 - 2081 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	NW	299020.2	6249465.6	55	51	54	50	56	51	55	51	-1.3	-0.9	-0.8	-0.5	55	50	-	1	-	No	-	No	No	-
4269	2073 - 2081 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	F 1	NW	299020.2	6249465.6	57	52	56	52	57	53	57	53	-0.4	-0.1	0.2	0.4	55	50	2	3	No	No	No	No	No	-
4269	2073 - 2081 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SE	299024.1	6249451.3	69	64	69	65	69	64	70	66	0.2	0.5	0.8	1.2	55	50	15	16	Yes	Yes	Yes	Yes	Yes	Type 5
4269	2073 - 2081 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SE	299024.1	6249451.3	71	66	71	66	71	66	72	67	0.1	0.5	0.7	1.1	55	50	17	17	Yes	Yes	Yes	Yes	Yes	Type 5
4269	2073 - 2081 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	SW	299010.1	6249456.9	63	58	63	59	63	58	64	60	0.3	0.6	0.9	1.4	55	50	9	10	-	-	No	No	No	-
4269	2073 - 2081 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	F 1	SW	299010.1	6249456.9	65	60	65	60	65	60	66	61	0.2	0.6	0.9	1.3	55	50	11	11	-	-	No	No	No	-
4269	2073 - 2081 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	299013.3	6249449.0	65	60	66	61	66	60	67	62	0.4	0.7	1	1.5	55	50	12	12	-	-	No	No	No	-
4269	2073 - 2081 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SW	299013.3	6249449.0	67	62	67	63	67	62	68	64	0.4	0.6	1	1.4	55	50	13	14	-	-	No	No	No	-
4270	2083 - 2087 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	N	298956.6	6249481.6	53	49	54	50	54	49	55	51	1	1	1.6	1.7	55	50	-	1	-	No	-	No	No	-
4270	2083 - 2087 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	NE	298969.4	6249480.1	59	54	61	56	60	55	62	57	1.3	1.5	2.1	2.5	55	50	7	7	Yes	Yes	No	No	Yes	Type 2

M12 Central LNDG concrete pavement surface noise levels

Receiver ID	Address	Noise catchment area	Receiver type	Façade				Predicted noise level Opening Year 2026				Predicted no se level Design Year 2036				Change in noise evel (Build - No Build)				NCG Project road noise criteria		NCG Project road noise criteria exceedance (dB)		Do noise levels equal or exceed the cumulative limit w th project roads adding ≥2dB to the total noise levels?		Is the contribution from the road project Acute?		Is the property considered for further treatment?	Category of treatment
				Floor level	Direction	x	y	No Build		Build		No Build		Build		Opening Year 2026		Design Year 2036													
								Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night		
4270	2083 - 2087 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NW	298943.5	6249476.3	57	52	57	53	57	52	58	53	0.4	0.6	1	1.1	55	50	3	3	-	-	No	No	No	-
4270	2083 - 2087 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NW	298947.6	6249477.7	53	48	54	49	53	48	55	50	1.1	1.2	1.7	1.9	55	50	-	-	-	-	-	-	No	-
4270	2083 - 2087 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SE	298953.6	6249468.4	62	57	63	58	62	57	64	59	0.8	1.2	1.6	2.1	55	50	9	9	-	Yes	No	No	Yes	Type 3
4270	2083 - 2087 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SE	298962.5	6249468.6	63	58	64	59	63	58	65	60	1	1.2	1.7	2.1	55	50	10	10	Yes	Yes	No	No	Yes	Type 3
4270	2083 - 2087 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SE	298968.8	6249472.4	63	58	64	59	63	58	65	60	0.9	1.2	1.6	2	55	50	10	10	Yes	Yes	No	No	Yes	Type 3
4270	2083 - 2087 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	298946.1	6249469.4	61	57	62	58	62	57	63	59	0.8	1.1	1.5	1.9	55	50	8	9	-	-	No	No	No	-
4270	2083 - 2087 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	298956.3	6249468.6	62	57	62	58	62	57	63	59	0.8	1.1	1.5	2	55	50	8	9	-	-	No	No	No	-
4272	2089 - 2109 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Educational institute	GF	NE	298907.0	6249397.3	63	58	64	59	63	58	65	60	0.7	1	1.4	1.9	50	-	15	-	Yes	-	No	-	Yes	Type 5
4272	2089 - 2109 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Educational institute	GF	NW	298892.2	6249395.3	56	52	57	53	57	52	58	53	0.8	0.6	1.1	0.9	50	-	8	-	-	-	No	-	No	-
4272	2089 - 2109 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Educational institute	GF	SE	298901.2	6249383.2	64	60	65	60	65	60	66	62	0.6	0.9	1.3	1.7	50	-	16	-	-	-	No	-	No	-
4272	2089 - 2109 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Educational institute	GF	SW	298886.5	6249381.1	61	56	61	57	61	56	62	58	0.8	0.9	1.4	1.7	50	-	12	-	-	-	No	-	No	-
4273	2089 - 2109 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Educational institute	GF	NE	298885.0	6249378.6	59	55	60	56	60	55	61	57	1.1	1.3	1.9	2.2	50	-	11	-	-	-	No	-	No	-
4273	2089 - 2109 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Educational institute	GF	NW	298878.1	6249379.4	58	54	59	54	58	54	59	55	0.8	0.7	1	0.9	50	-	9	-	-	-	No	-	No	-
4273	2089 - 2109 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Educational institute	GF	SE	298885.5	6249371.3	64	59	65	60	65	60	66	61	0.7	0.9	1.4	1.8	50	-	16	-	-	-	No	-	No	-
4273	2089 - 2109 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Educational institute	GF	SW	298878.6	6249372.3	60	55	61	56	60	55	62	57	0.8	1	1.5	1.8	50	-	12	-	-	-	No	-	No	-
4274	2089 - 2109 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Educational institute	GF	NE	298877.3	6249371.2	60	55	61	57	61	56	62	58	0.9	1.1	1.7	2	50	-	12	-	-	-	No	-	No	-
4274	2089 - 2109 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Educational institute	GF	NW	298868.0	6249373.5	59	56	60	56	60	56	60	56	0.8	0.5	0.7	0.5	50	-	10	-	-	-	No	-	No	-
4274	2089 - 2109 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Educational institute	GF	SE	298877.7	6249361.9	65	60	65	61	65	60	66	62	0.6	0.9	1.2	1.6	50	-	16	-	-	-	No	-	No	-
4274	2089 - 2109 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Educational institute	GF	SW	298868.4	6249364.2	64	60	64	60	64	60	65	61	0.5	0.4	0.7	0.8	50	-	15	-	-	-	No	-	No	-
4275	2089 - 2109 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Educational institute	GF	NE	298925.4	6249370.0	66	61	66	62	66	61	67	63	0.4	0.7	1.1	1.4	50	-	17	-	-	-	No	-	No	-
4275	2089 - 2109 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Educational institute	GF	NW	298914.4	6249370.6	57	52	58	53	57	53	59	54	0.8	0.8	1.4	1.6	50	-	9	-	-	-	No	-	No	-
4275	2089 - 2109 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Educational institute	GF	SE	298924.1	6249359.1	70	65	70	65	70	65	71	66	0.1	0.5	0.7	1.1	50	-	21	-	-	-	No	-	No	-
4275	2089 - 2109 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Educational institute	GF	SW	298913.0	6249359.8	66	61	66	62	67	62	67	63	0.1	0.4	0.7	1.2	50	-	17	-	-	-	No	-	No	-
4276	2089 - 2109 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Educational institute	GF	NE	298886.8	6249345.0	66	61	66	61	66	61	67	62	0.5	0.7	1.1	1.5	50	-	17	-	-	-	No	-	No	-
4276	2089 - 2109 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Educational institute	GF	NW	298879.0	6249347.6	61	57	62	58	61	57	62	58	0.7	0.5	0.7	0.6	50	-	12	-	-	-	No	-	No	-
4276	2089 - 2109 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Educational institute	GF	SE	298887.8	6249336.7	69	64	69	65	69	65	70	66	0.2	0.6	0.8	1.2	50	-	20	-	-	-	No	-	No	-
4276	2089 - 2109 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Educational institute	GF	SW	298879.8	6249339.2	67	62	67	63	67	62	68	63	0.3	0.4	0.6	0.8	50	-	18	-	-	-	No	-	No	-
4278	1 - 7 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	NE	298836.7	6249315.8	68	63	68	64	68	64	69	64	0.6	0.6	0.9	0.9	55	50	14	14	-	-	No	No	No	-
4278	1 - 7 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	GF	NW	298824.2	6249315.6	54	49	55	50	54	50	55	51	1.1	1.1	1.4	1.4	55	50	-	1	-	No	-	No	No	-
4278	1 - 7 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	NW	298830.9	6249320.4	65	61	66	62	65	61	66	62	0.5	0.5	0.7	0.5	55	50	11	12	-	-	No	No	No	-
4278	1 - 7 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	GF	SE	298833.2	6249305.1	68	63	68	63	68	63	69	64	0.4	0.6	0.9	1.3	55	50	14	14	-	-	No	No	No	-
4278	1 - 7 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	GF	SW	298821.7	6249305.5	63	57	63	58	63	58	64	59	0.1	0.3	0.6	1.1	55	50	9	9	-	-	No	No	No	-
4279	9 - 17 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	NE	298743.3	6249405.7	63	59	64	59	63	59	64	60	0.9	0.7	1.2	1	55	50	9	10	-	-	No	No	No	-
4279	9 - 17 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	F 1	NE	298743.3	6249405.7	64	60	65	60	64	60	65	61	0.8	0.6	1.1	0.9	55	50	10	11	-	-	No	No	No	-
4279	9 - 17 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	NE	298750.7	6249400.5	64	60	65	61	64	60	66	61	0.8	0.7	1.2	1	55	50	11	11	-	-	No	No	No	-
4279	9 - 17 DUFF ROAD CECIL PARK 2178	NCA04	Residential	F 1	NE	298750.7	6249400.5	65	61	66	61	65	61	66	62	0.8	0.6	1.1	0.9	55	50	11	12	-	-	No	No	No	-
4279	9 - 17 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	NW	298734.0	6249392.8	57	53	57	53	57	53	58	53	0.5	0.2	0.5	0.1	55	50	3	3	-	-	No	No	No	-
4279	9 - 17 DUFF ROAD CECIL PARK 2178	NCA04	Residential	F 1	NW	298734.0	6249404.8	59	55	59	55	59	55	60	55	0.5	0.3	0.5	0.2	55	50	5	5	-	-	No	No	No	-
4279	9 - 17 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	GF	NW	298746.3	6249402.9	62	58	63	59	63	58	64	59	0.6	0.5	0.9	0.8	55	50	9	9	-	-	No	No	No	-
4279	9 - 17 DUFF ROAD CECIL PARK 2178	NCA04	Residential	F 1	NW	298746.3	6249402.9	64	59	64	60	64	59	65	60	0.6	0.4	0.8	0.7	55	50	10	10	-	-	No	No	No	-
4279	9 - 17 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	SE	298746.8	6249391.5	63	58	63	59	63	58	64	60	0.9	1	1.5	1.6	55	50	9	10	-	-	No	No	No	-
4279	9 - 17 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	F 1	SE	298746.8	6249391.5	63	59	64	60	64	59	65	61	1	0.9	1.5	1.5	55	50	10	11	-	-	No	No	No	-
4279	9 - 17 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	SW	298734.2	6249392.9	57	51	57	52	57	52	58	53	0.3	0.5	0.9	1.3	55	50	3	3	-	-	No	No	No	-
4279	9 - 17 DUFF ROAD CECIL PARK 2178	NCA04	Residential	F 1	SW	298734.2	6249392.9	58	53	58	53	59	53	59	55	0.2	0.5	0.9	1.3	55	50	4	5	-	-	No	No	No	-
4280	19 - 27 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	GF	NE	298702.7	6249459.3	64	60	65	60	64	60	65	61	1	0.8	1.3	1.1	55	50	10	11	-	-	No	No	No	-
4280	19 - 27 DUFF ROAD CECIL PARK 2178	NCA04	Residential	F 1	NE	298702.7	6249459.3	65	61	66	61	65	61	66	62	0.9	0.7	1.2	0.9	55	50	11	12	-	-	No	No	No	-
4280	19 - 27 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	GF	NW	298691.2	6249465.6	60	56	60	56	60	56	61	56	0.6	0.4	0.5	0.1	55	50	6	6	-	-	No	No	No	-
4280	19 - 27 DUFF ROAD CECIL PARK 2178	NCA04	Residential	F 1	NW	298691.2	6249465.6	61	57	62	58	61	57	62	58	0.6	0.4	0.6	0.2	55	50	7	8	-	-	No	No	No	-
4280	19 - 27 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	SE	298701.5	6249446.8	62	57	63	59	62	58	64	59	1.1	1.1	1.8	1.8	55	50	9	9	Yes	Yes	No	No	Yes	Type 3
4280	19 - 27 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	F 1	SE	298701.5	6249446.8	63	58	64	59	63	59	65	60	1.1	1.1	1.7	1.6	55	50	10	10	Yes	Yes	No	No	Yes	Type 3
4280	19 - 27 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	SW	298687.0	6249457.2	57	52	57	53	57	52	58	53	0.5	0.5	0.9	1	55	50	3	3	-	-	No	No	No	-
4280	19 - 27 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	F 1	SW	298687.0	6249457.2	58	53	58	54	58	54	59	55	0.6	0.6	1	1.1	55	50	4	5	-	-	No	No	No	-
4280	19 - 27 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	SW	298693.0	6249448.9	56	51	57	52	57	52	58	53	0.4	0.6	1	1.3	55	50	3	3	-	-	No	No	No	-
4280	19 - 27 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	F 1	SW	298693.0	6249448.9	57	52	58	53	58	53	59	54	0.5	0.6	1.1	1.4	55	50	4	4	-	-	No	No	No	-
4281	29 - 35 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	E	298636.3	6249396.0	59	55	61	56	60	55	62	57	1.5	1.6	2.3	2.5	55	50	7	7	Yes	Yes	No	No	Yes	Type 2
4281	29 - 35 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	N	298620.6	6249399.1	53	49	54	50	53	49	55	50	1.2	1	1.5	1.3	55	50	-	-	-	-	-	-	No	-
4281	29 - 35 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	S	298625.5	6249384.2	59	54	61	56	60	55	62	57	1.6	1.6	2.4	2.7	55	50	7	7	Yes	Yes	No	No	Yes	Type 2
4281	29 - 35 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	GF	W	298609.7	6249387.2	54	49	55	50	54	49	56	51	1.1	1.2	1.8	2.2	55	50	1	1	-	-	No	No	Yes	Type 1
4282	37 - 45 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	NE	298575.3	6249482.3	53	50	54	50	53	50	54	50	0.8	0.5	0.6	0.4	55	50	-	-	-	-	-	-	No	-
4282	37 - 45 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	F 1	NE	298575.3	6249482.3	54	51	55	51	55	51	55	51	0.9	0.6	0.8	0.6	55	50	-	1	-	-	-	No	No	-
4282	37 - 45 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	NE	298595.7	6249483.1	56	52	57	53	56	52	58	53	1.2	0.9	1.2	1.1	55	50	3	3	-	-	No	No	No	-
4282	37 - 45 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	F 1	NE	298595.7	6249483.1	58	54	59	55	58	54	60	55	1.3	1.1	1.7	1.6	55	50	5	5	Yes	Yes	No	No	Yes	Type 1
4282	37 - 45 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	NW	298564.6	6249481.3	53	49	54	50	53	49	54	50	1.1	0.8	1.3	1.1	55	50	-	-	-	-	-	-	No	-
4282	37 - 45 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	F 1	NW	298564.6	6249481.3	54	50	55	51	54	50	56	51	1.2	0.9	1.4	1.2	55	50	1	1	-	-	No	No	No	-
4282	37 - 45 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	NW	298583.2	6249483.9	53	49	54	50	53	49	54	50	0.9	0.6	0.7	0.5	55	50	-	-	-	-	-	-	No	-
4282	37 - 45 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	F 1	NW	298583.2	6249483.9	54	50	55	51	54	50	55	51	1	0.6	0.9	0.6	55	50	-	1	-	-	-	No	No	-
4282	37 - 45 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	SE	298587.8	6249465.5	53	49	54	50	54	49	55	51	1.3	1.3	1.8	2	55	50	-	1	-	No	-	No	No	-
4282	37 - 45 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	F 1	SE	298587.8	6249465.5	55	51	57	52	56	51	58	53	1.4	1.5	1.9	2.1	55	50	3	3	No	No	No	No	Yes	Type 1
4282	37 - 45 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	SW	298566.0	6249465.2	50	45	52	47	50	45	53	48	1.9	1.9	2.7	3	55	50	-	-	-	-	-	-	No	-
4282	37 - 45 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	F 1	SW	298566.0	6249465.2	52	47	53	48	52	47	55	50	1.6	1.7	2.4	2.7	55	50	-	-	-	-	-	-	No	-
4285	47 - 55 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	NE	298556.3	6249567.6	58	54	59	55	58	54	59	54	0.9	0.6	0.8	0.5	55	50	4	4	-	-	No	No	No	-
4285	47 - 55 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	F 1	NE	298556.3	6249567.6	59	55	59	56	59	55	60	55	0.9	0.6	0.8	0.6	55	50	5	5	-	-	No	No	No	-
4285	47 - 55 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	NW	298535.8	6249565.6	49	45	51	46	50	45	52	47	1.5	1.3	2	1.9	55	50	-	-	-	-	-	-	No	-
4285	47 - 55 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	F 1	NW	298535.8	6249565.6	51	47	53	48	52	47	54	49	1.4	1.2	1.8	1.7	55	50	-	-	-	-	-	-	No	-
4285	47 - 55 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	NW	298540.2	6249574.0	55	51	56	52	55	51	56	52	0.8	0.6	0.8	0.4	55	50	1	2	-	-	No	No	No	-
4285	47 - 55 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	F 1	NW	298540.2	6249574.0	56	52	57	53	56	52	57	53	0.9	0.6	0.8	0.6	55	50	2	3	-	-	No	No	No	-
4285	47 - 55 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	SE	298552.2	6249548.1	48	43	50	46	49	44	52	47	2.1	2.1	2.9	3.1	55	50	-	-	-	-	-	-	No	-
4285	47 - 55 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	F 1	SE	298552.2	6249548.1	50	45	52	47	51	46	53	49	2	1.9	2.7	3	55	50	-	-	-	-	-	-	No	-
4285	47 - 55 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	SE	298560.2	6249550.8	55	51	56	52	55	51	56	52	1.1	0.8	1.3	1.1	55	50	1	2	-	-	No	No	No	-
4285	47 - 55 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	F 1	SE	298560.2	6249550.8	56	52	57	53	56	52	57	53	1.2	1	1.4	1.2	55	50	2	3	-	-	No	No	No	-
4285	47 - 55 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	SW	298535.4	6249566.6	50	46	51	47	51	46	52	48	1.4	1.1	1.7	1.7	55	50	-	-	-	-	-	-	No	-
4285	47 - 55 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	F 1	SW	298535.4	6249566.6	52	48	53	49	52	48	54	50	1.4	1.1	1.7	1.7	55	50	-	-	-	-	-	-	No	-
4285	47 - 55 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	SW	298540.5	6249557.0	48	43	50	45	49	44	51	47	2	2	2.7	2.9	55	50	-	-	-	-	-	-	No	-
4285	47 - 55 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	F 1	SW	298540.5	6249557.0	50	45	52	47	51	46	53	48	1.8	1.8	2.5	2.7	55	50	-	-	-	-	-	-	No	-
4285	47 - 55 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	SW	298548.2	6249549.5	48	43	50	45	49	44	51	47	2.1	2.1	2.8	3.1	55	50	-	-	-	-	-	-	No	-
4285	47 - 55 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	F 1	SW	298548.2	6249549.5	50	45	52	47	50	46	53	48	2	1.9	2.6	2.8	55	50	-	-	-	-	-	-	No	-
4285	47 - 55 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	SW	298552.7	6249547.7	49	44	51	46	49	45	52	48	2.1	2.1	2.9	3.1	55	50	-	-	-	-	-	-	No	-
4285	47 - 55 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	F 1	SW	298552.7	6249547.7	50	46	53	48	51	46	54	49	2.1	2	2.8	3	55	50	-	-	-	-	-	-	No	-
4287	20 - 38 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	NE	298717.5	6249545.2	50	45	51	46	50	46	52	47	1.3	1.1	1.6	1.6	55	50	-	-	-	-	-	-	No	-
4287	20 - 38 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	NE	298729.9	6249542.2	54	50	56	51	55	50	57	52	1.7	1.7	2.4	2.6	55	50	2	2	No	No	No	No	Yes	Type 1
4287	20 - 38 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	NW	298709.8	6249545.4	60	57	61	57	60	56	61	57	0.9	0.6	0.6	0.4	55	50	6	7	-	-	No	No	No	-
4287	20 - 38 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	GF	NW	298721.6	6249544.8	49	45	50	46	50	45	51	47	1.2	1	1.4	1.5	55	50	-	-	-	-	-	-	No	-
4287	20 - 38 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	SE	298726.9	6249530.6	62	58	63	59	63	58	64	60	1.1	0.9	1.4	1.3	55	50	9	10	-	-	No	No	No	-
4287	20 - 38 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	GF	SW	298712.4	6249533.2	65	61	65	62	65	61	65	61	0.9	0.5	0.6	0.4	55	50	10	11	-	-	No	No	No	-
4289	40 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	GF	NE	298697.8	6249576.2	49	45	50	46	49	45	51	46	0.9	0.8	1.1	1	55	50	-	-	-	-	-	-	No	-
4289	40 DUFF ROAD CECIL PARK 2178	NCA04	Residential	F 1	NE	298697.8	6249576.2	55	51	56	52	55	51	56	52	1	0.7	1	0.9	55	50	1	2	-	-	No	No	No	-
4289	40 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	GF	NE	298705.9	6249573.5	55	50	57	53	56	51	59	54	2	2.2	3	3.2	55	50	4	4	No	No	No	No	Yes	Type 1
4289	40 DUFF ROAD CECIL PARK 2178	NCA04	Residential	F 1	NE	298705.9	6249573.5	57	52	59	54	57	52	60	56	2.1	2.1	2.9	3.2	55	50	5	6	Yes	Yes	No	No	Yes	Type 2
4289	40 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	NE	298707.2	6249562.0	55	50	57	52	55	50	58	54	2.2	2.3	2.9	3.2	55	50	3	4	No	No	No	No	Yes	Type 1
4289	40 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	F 1	NE	298707.2	6249562.0	57	52	59	54	57	52	60	56	2.4	2.4	3.2	3.5	55	50	5	6	Yes	Yes	No	No	Yes	Type 2

M12 Central LNDG concrete pavement surface noise levels

Receiver ID	Address	Noise catchment area	Receiver type	Façade				Predicted noise level Opening Year 2026				Predicted no se level Design Year 2036				Change in noise evel (Build - No Build)				NCG Project road noise criteria		NCG Project road noise criteria exceedance (dB)		Do noise levels equal or exceed the cumulative limit w th project roads adding ≥2dB to the total noise levels?		Is the contribution from the road project Acute?		Is the property considered for further treatment?	Category of treatment
				Floor level	Direction	x	y	No Build		Build		No Build		Build		Opening Year 2026		Design Year 2036													
								Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night		
4289	40 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	NW	298690.2	6249574.5	60	57	61	57	60	56	61	57	0.9	0.5	0.6	0.3	55	50	6	7	-	-	No	No	No	-
4289	40 DUFF ROAD CECIL PARK 2178	NCA04	Residential	F 1	NW	298690.2	6249574.5	62	58	62	59	62	58	62	58	0.9	0.5	0.6	0.4	55	50	7	8	-	-	No	No	No	-
4289	40 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	NW	298699.5	6249576.1	49	46	50	46	50	46	51	47	1	0.7	1	0.8	55	50	-	-	-	-	-	-	No	-
4289	40 DUFF ROAD CECIL PARK 2178	NCA04	Residential	F 1	NW	298699.5	6249576.1	55	52	56	52	56	52	57	52	1	0.6	0.9	0.7	55	50	2	2	-	-	No	No	No	-
4289	40 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	SE	298705.6	6249554.1	59	56	61	57	60	56	61	57	1.1	0.9	1.2	1	55	50	6	7	-	-	No	No	No	-
4289	40 DUFF ROAD CECIL PARK 2178	NCA04	Residential	F 1	SE	298705.6	6249554.1	61	58	63	59	62	58	63	59	1.3	1.1	1.5	1.3	55	50	8	9	-	-	No	No	No	-
4289	40 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	SE	298706.8	6249566.0	55	50	57	53	55	51	59	54	2.3	2.5	3.1	3.4	55	50	4	4	No	No	No	No	Yes	Type 1
4289	40 DUFF ROAD CECIL PARK 2178	NCA04	Residential	F 1	SE	298706.8	6249566.0	57	52	59	55	57	53	60	56	2.2	2.2	3	3.3	55	50	5	6	Yes	Yes	No	No	Yes	Type 2
4289	40 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	SW	298692.6	6249560.2	64	61	65	62	65	61	65	61	0.9	0.5	0.6	0.3	55	50	10	11	-	-	No	No	No	-
4289	40 DUFF ROAD CECIL PARK 2178	NCA04	Residential	F 1	SW	298692.6	6249560.2	66	62	67	63	66	62	67	63	0.8	0.6	0.6	0.4	55	50	12	13	-	-	No	No	No	-
4291	48 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	NE	298667.9	6249626.5	53	48	56	51	53	49	57	52	2.9	2.9	3.7	3.8	55	50	2	2	No	No	No	No	Yes	Type 1
4291	48 DUFF ROAD CECIL PARK 2178	NCA04	Residential	F 1	NE	298667.9	6249626.5	55	50	57	53	55	51	58	54	2.5	2.4	3.2	3.3	55	50	3	4	No	No	No	No	Yes	Type 1
4291	48 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	NW	298651.1	6249634.8	58	55	59	55	59	55	59	55	0.9	0.5	0.6	0.3	55	50	4	5	-	-	No	No	No	-
4291	48 DUFF ROAD CECIL PARK 2178	NCA04	Residential	F 1	NW	298651.1	6249634.8	60	56	61	57	60	56	61	57	1	0.6	0.7	0.4	55	50	6	7	-	-	No	No	No	-
4291	48 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	SE	298672.7	6249608.3	57	54	59	55	58	54	60	55	1.7	1.3	2	1.8	55	50	5	5	Yes	Yes	No	No	Yes	Type 1
4291	48 DUFF ROAD CECIL PARK 2178	NCA04	Residential	F 1	SE	298672.7	6249608.3	60	56	61	57	60	56	61	57	1.4	1.2	1.6	1.5	55	50	6	7	Yes	Yes	No	No	Yes	Type 2
4291	48 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	SW	298656.0	6249616.6	62	58	63	59	62	58	63	59	0.9	0.6	0.7	0.3	55	50	8	9	-	-	No	No	No	-
4291	48 DUFF ROAD CECIL PARK 2178	NCA04	Residential	F 1	SW	298656.0	6249616.6	63	60	64	61	64	60	64	60	0.9	0.6	0.6	0.4	55	50	9	10	-	-	No	No	No	-
4292	58 - 76 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	NE	298631.7	6249685.9	54	49	55	51	54	50	56	52	1.5	1.5	2.1	2.2	55	50	1	2	No	No	No	No	Yes	Type 1
4292	58 - 76 DUFF ROAD CECIL PARK 2178	NCA04	Residential	F 1	NE	298631.7	6249685.9	54	50	56	52	55	50	57	53	1.6	1.5	2.2	2.3	55	50	2	3	No	No	No	No	Yes	Type 1
4292	58 - 76 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	NE	298640.2	6249679.3	53	49	56	51	54	49	57	52	2.6	2.5	3.3	3.5	55	50	2	2	No	No	No	No	Yes	Type 1
4292	58 - 76 DUFF ROAD CECIL PARK 2178	NCA04	Residential	F 1	NE	298640.2	6249679.3	54	50	57	52	55	50	58	53	2.5	2.5	3.3	3.5	55	50	3	3	No	No	No	No	Yes	Type 1
4292	58 - 76 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	NW	298621.7	6249685.6	58	54	59	55	58	54	59	55	0.9	0.5	0.6	0.4	55	50	4	5	-	-	No	No	No	-
4292	58 - 76 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	F 1	NW	298621.7	6249685.6	59	55	60	56	59	55	60	56	0.9	0.5	0.7	0.4	55	50	5	6	-	-	No	No	No	-
4292	58 - 76 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	NW	298634.4	6249683.0	48	44	49	45	49	44	50	45	0.9	0.7	0.9	0.7	55	50	-	-	-	-	-	-	No	-
4292	58 - 76 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	F 1	NW	298634.4	6249683.0	50	46	51	46	50	46	51	47	1	0.8	1.1	1.1	55	50	-	-	-	-	-	-	No	-
4292	58 - 76 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	SE	298637.6	6249669.0	57	53	59	54	57	53	59	55	1.6	1.3	2	1.8	55	50	4	5	No	Yes	No	No	Yes	Type 1
4292	58 - 76 DUFF ROAD CECIL PARK 2178	NCA04	Residential	F 1	SE	298637.6	6249669.0	58	55	60	56	59	55	61	56	1.5	1.2	1.9	1.7	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
4292	58 - 76 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	SW	298619.1	6249676.1	61	58	62	58	61	58	62	58	0.9	0.5	0.6	0.3	55	50	7	8	-	-	No	No	No	-
4292	58 - 76 DUFF ROAD CECIL PARK 2178	NCA04	Residential	F 1	SW	298619.1	6249676.1	62	59	63	59	62	59	63	59	0.9	0.5	0.7	0.3	55	50	8	9	-	-	No	No	No	-
4292	58 - 76 DUFF ROAD CECIL PARK 2178	NCA04	Residential	GF	SW	298627.1	6249668.5	61	57	61	58	61	57	61	57	0.9	0.6	0.7	0.3	55	50	6	7	-	-	No	No	No	-
4292	58 - 76 DUFF ROAD, CECIL PARK 2178	NCA04	Residential	F 1	SW	298627.1	6249668.5	62	58	63	59	62	58	63	59	0.9	0.6	0.7	0.4	55	50	8	9	-	-	No	No	No	-
4295	2 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	GF	NE	298564.4	6249777.0	50	46	52	47	51	46	52	48	1.4	1.2	1.7	1.7	55	50	-	-	-	-	-	-	No	-
4295	2 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	NE	298577.2	6249799.4	50	46	52	48	51	46	53	49	1.9	1.7	2.5	2.5	55	50	-	-	-	-	-	-	No	-
4295	2 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	GF	NW	298556.8	6249797.5	56	53	57	53	56	52	57	53	0.9	0.5	0.8	0.5	55	50	2	3	-	-	No	No	No	-
4295	2 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	GF	SE	298563.6	6249769.4	56	52	57	53	56	52	57	53	1	0.7	0.9	0.6	55	50	2	3	-	-	No	No	No	-
4295	2 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	GF	SE	298563.9	6249780.9	51	47	53	48	52	47	53	49	1.4	1.2	1.8	1.7	55	50	-	-	-	-	-	-	No	-
4295	2 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	GF	SE	298570.7	6249783.9	53	49	54	50	53	49	55	50	1.4	1.1	1.7	1.5	55	50	-	-	-	-	-	-	No	-
4295	2 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	SE	298580.1	6249786.6	52	48	54	50	53	49	55	50	1.5	1.3	1.8	1.7	55	50	-	-	-	-	-	-	No	-
4295	2 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	GF	SW	298551.6	6249776.4	59	56	60	57	60	56	60	56	0.9	0.5	0.6	0.3	55	50	5	6	-	-	No	No	No	-
4295	2 RIGNEY CLOSE CECIL PARK 2178	NCA04	Residential	GF	SW	298565.6	6249782.1	52	48	53	49	52	48	54	50	1.4	1.2	1.7	1.6	55	50	-	-	-	-	-	-	No	-
4295	2 RIGNEY CLOSE, CECIL PARK 2178	NCA04	Residential	GF	SW	298573.6	6249784.9	52	48	54	49	53	48	54	50	1.4	1.1	1.5	1.4	55	50	-	-	-	-	-	-	No	-
4296	2131 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NE	298563.0	6249245.1	50	45	52	47	50	46	53	48	1.9	1.8	2.5	2.6	55	50	-	-	-	-	-	-	No	-
4296	2131 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NE	298576.0	6249250.0	60	55	61	56	60	55	62	58	1.4	1.5	2.2	2.5	55	50	7	8	Yes	Yes	No	No	Yes	Type 2
4296	2131 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NW	298559.1	6249244.3	55	50	56	51	55	51	57	53	1.2	1.3	1.9	2.2	55	50	2	3	-	-	No	No	Yes	Type 1
4296	2131 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NW	298567.5	6249248.6	53	48	55	50	54	49	56	52	1.5	1.6	2.3	2.5	55	50	1	2	No	No	No	No	Yes	Type 1
4296	2131 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	SE	298572.5	6249239.8	62	57	63	58	62	57	64	59	0.9	1.2	1.7	2.1	55	50	9	9	Yes	Yes	No	No	Yes	Type 3
4296	2131 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	SW	298561.3	6249237.5	60	55	60	55	60	55	61	57	0.4	0.5	0.9	1.3	55	50	6	7	-	-	No	No	No	-
4299	2169 - 2177 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NE	298543.4	6249228.0	58	52	60	55	58	53	61	56	2	2.1	2.9	3.2	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
4299	2169 - 2177 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	NE	298543.4	6249228.0	59	54	61	56	59	54	62	57	1.7	1.9	2.6	2.9	55	50	7	7	Yes	Yes	No	No	Yes	Type 2
4299	2169 - 2177 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NW	298533.6	6249225.7	56	51	57	52	57	52	59	54	1	1.2	1.8	2.1	55	50	4	4	-	-	No	No	Yes	Type 1
4299	2169 - 2177 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	NW	298533.6	6249225.7	57	52	58	53	58	53	59	55	1.2	1.3	1.9	2.3	55	50	4	5	-	-	No	No	Yes	Type 1
4299	2169 - 2177 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SE	298543.2	6249214.4	62	57	63	58	62	57	64	59	1	1.2	1.7	2	55	50	9	9	Yes	-	No	No	Yes	Type 3
4299	2169 - 2177 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SE	298543.2	6249214.4	63	57	63	59	63	58	65	60	0.9	1.2	1.6	2	55	50	10	10	-	-	No	No	No	-
4299	2169 - 2177 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SE	298546.0	6249221.0	61	56	62	58	62	57	64	59	1	1.3	1.8	2.2	55	50	9	9	Yes	Yes	No	No	Yes	Type 3
4299	2169 - 2177 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SE	298546.0	6249221.0	62	57	63	58	62	57	64	59	1	1.3	1.7	2.1	55	50	9	9	Yes	Yes	No	No	Yes	Type 3
4299	2169 - 2177 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	298534.6	6249214.9	61	56	61	56	61	56	62	58	0.6	0.7	1.1	1.5	55	50	7	8	-	-	No	No	No	-
4299	2169 - 2177 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SW	298534.6	6249214.9	61	56	62	57	62	57	63	58	0.6	0.8	1.2	1.6	55	50	8	8	-	-	No	No	No	-
4302	2179 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NE	298502.8	6249148.8	58	53	58	53	58	53	59	54	0.1	0.4	0.7	1.1	55	50	4	4	-	-	No	No	No	-
4302	2179 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	NE	298502.8	6249148.8	59	54	59	54	59	54	60	56	0.2	0.5	0.8	1.2	55	50	5	6	-	-	No	No	No	-
4302	2179 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NW	298489.7	6249154.9	55	50	55	51	55	51	57	52	0.6	0.8	1.4	1.7	55	50	2	2	-	-	No	No	No	-
4302	2179 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	NW	298489.7	6249154.9	55	50	56	52	56	51	58	53	0.9	1.1	1.6	2.1	55	50	3	3	-	-	No	No	Yes	Type 1
4302	2179 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SE	298506.2	6249134.5	63	58	63	58	63	58	64	59	-0.1	0.3	0.5	0.9	55	50	9	9	-	-	No	No	No	-
4302	2179 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SE	298506.2	6249134.5	63	58	63	59	64	59	64	60	0	0.3	0.6	1	55	50	9	10	-	-	No	No	No	-
4302	2179 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	298493.1	6249140.6	61	56	61	57	62	57	63	58	0.1	0.4	0.7	1.1	55	50	8	8	-	-	No	No	No	-
4302	2179 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SW	298493.1	6249140.6	62	57	62	57	62	57	63	58	0.2	0.5	0.8	1.2	55	50	8	8	-	-	No	No	No	-
4303	2197 - 2201 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	E	298420.7	6249077.1	57	52	57	53	57	52	58	54	0.4	0.7	1	1.5	55	50	3	4	-	-	No	No	No	-
4303	2197 - 2201 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	N	298409.8	6249081.0	53	48	54	49	53	48	55	51	1.1	1.4	1.8	2.3	55	50	-	1	-	-	-	No	Yes	Type 1
4303	2197 - 2201 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	S	298409.5	6249073.4	60	54	60	55	60	55	61	56	0.1	0.5	0.7	1.2	55	50	6	6	-	-	No	No	No	-
4303	2197 - 2201 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	W	298398.6	6249077.3	59	53	59	54	59	54	60	55	0.1	0.6	0.7	1.2	55	50	5	5	-	-	No	No	No	-
4304	2203 - 2211 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	E	298453.2	6249026.8	59	54	60	55	60	54	61	56	0.4	0.8	0.9	1.5	55	50	6	6	-	-	No	No	No	-
4304	2203 - 2211 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	N	298420.0	6249036.6	54	49	55	50	54	49	56	51	0.9	1.2	1.6	2.1	55	50	1	1	-	-	No	No	Yes	Type 1
4304	2203 - 2211 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	N	298447.1	6249032.8	57	52	58	53	58	52	59	54	0.4	0.8	1	1.6	55	50	4	4	-	-	No	No	No	-
4304	2203 - 2211 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NE	298439.7	6249042.2	58	52	58	53	58	53	59	54	0.4	0.7	1	1.6	55	50	4	4	-	-	No	No	No	-
4304	2203 - 2211 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NW	298430.4	6249042.0	54	49	55	50	55	50	56	52	0.9	1.2	1.5	2	55	50	1	2	-	-	No	No	No	-
4304	2203 - 2211 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	S	298416.0	6249022.4	63	58	63	59	64	59	65	60	0.1	0.5	0.7	1.2	55	50	10	10	-	-	No	No	No	-
4304	2203 - 2211 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	S	298423.7	6249022.5	63	58	63	59	64	59	65	60	0.1	0.6	0.7	1.3	55	50	10	10	-	-	No	No	No	-
4304	2203 - 2211 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	S	298447.8	6249019.0	63	58	63	59	64	58	64	60	0.1	0.6	0.7	1.3	55	50	9	10	-	-	No	No	No	-
4304	2203 - 2211 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SE	298445.1	6249034.9	58	53	58	53	58	53	59	55	0.4	0.8	1	1.6	55	50	4	5	-	-	No	No	No	-
4304	2203 - 2211 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	298434.2	6249020.5	63	58	63	58	63	58	64	60	0.2	0.5	0.8	1.2	55	50	9	10	-	-	No	No	No	-
4304	2203 - 2211 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	W	298411.2	6249027.4	62	56	62	57	62	57	63	58	0.2	0.5	0.8	1.3	55	50	8	8	-	-	No	No	No	-
4304	2203 - 2211 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	W	298417.3	6249022.8	63	58	63	58	64	58	64	60	0.1	0.6	0.7	1.3	55	50	9	10	-	-	No	No	No	-
4306	2213 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NW	298315.0	6249005.9	61	56	61	56	61	56	62	57	0.3	0.7	0.9	1.4	55	50	7	7	-	-	No	No	No	-
4306	2213 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	NW	298315.0	6249005.9	67	62	67	62	67	62	68	63	0.1	0.5	0.7	1.2	55	50	13	13	-	-	No	No	No	-
4306	2213 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SE	298324.9	6248999.0	65	60	65	60	65	60	66	61	0.2	0.7	0.8	1.3	55	50	11	11	-	-	No	No	No	-
4306	2213 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SE	298324.9	6248999.0	67	62	67	62	68	62	68	64	0.1	0.5	0.6	1.2	55	50	13	14	-	-	No	No	No	-
4306	2213 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	298311.7	6248990.9	66	61	66	62	67	61	67	63	0.1	0.7	0.7	1.4	55	50	12	13	-	-	No	No	No	-
4306	2213 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SW	298311.7	6248990.9	68	63	68	64	69	63	69	65	0.1	0.6	0.7	1.2	55	50	14	15	-	-	No	No	No	-
4307	2213 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SE	298335.7	6249014.9	62	57	63	58	63	58	64	59	0.1	0.6	0.7	1.3	55	50	9	9	-	-	No	No	No	-
4308	2213 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NE	298340.9	6249044.1	54	49	55	50	55	50	56	51	0.4	0.9	1.1	1.6	55	50	1	1	-	-	No	No	No	-
4308	2213 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	NE	298340.9	6249044.1	56	51	57	52	57	52	58	53	0.4	0.8	1	1.5	55	50	3	3	-	-	No	No	No	-
4308	2213 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NW	298325.1	6249026.0	57	52	57	52	57	52	58	54	0.3	0.8	1	1.5	55	50	3	4	-	-	No	No	No	-
4308	2213 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	NW	298325.1	6249026.0	59	53	59	54	59	54	60	55	0.3	0.7	0.9	1.5	55	50	5	5	-	-	No	No	No	-
4308	2213 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NW	298327.9	6249040.2	56	51	56	51	57	51	57	53	0.2	0.6	0.8	1.4	55	50	2	3	-	-	No	No	No	-
4308	2213 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	NW	298327.9	6249040.2	58	52	58	53	59	54	60	55	0.4	0.7	1	1.5	55	50	4	4	-	-	No	No	No	-
4308	2213 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SE	298341.9	6249030.7	61	56	61	56	61	56	62	57	0.1	0.6	0.7	1.3	55	50	7	7	-	-	No	No	No	-
4308	2213 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SE	298341.9	6249030.7	62	57	62	58	63	57	63	59	0.2	0.6	0.7	1.4	55	50	8	9	-	-	No	No	No	-
4308	2213 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	298325.1	6249029.5	57	52	57	53	58	52	59	54	0.3	0.8	0.9	1.5	55	50	4	4	-	-	No	No	No	-
4308	2213 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SW	298325.1	6249029.5	59	54	59	54	59	54	60	56	0.3	0.7	0.9	1.5	55	50	5	6	-	-	No	No	No	-
4308	2213 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	298325.3	6249020.0	57	51	57	52	57	52	58	54	0.4	0.9	1.1	1.6	55	50	3	4	-	-	No	No	No	-

M12 Central LNDG concrete pavement surface noise levels

Receiver ID	Address	Noise catchment area	Receiver type	Façade				Predicted noise level Opening Year 2026				Predicted no se level Design Year 2036				Change in noise evel (Build - No Build)				NCG Project road noise criteria		NCG Project road noise criteria exceedance (dB)		Do noise levels equal or exceed the cumulative limit w th project roads adding ≥2dB to the total noise levels?		Is the contribution from the road project Acute?		Is the property considered for further treatment?	Category of treatment
				Floor level	Direction	x	y	No Build		Build		No Build		Build		Opening Year 2026		Design Year 2036												
								Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night		
4308	2213 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SW	298325.3	6249020.0	60	55	61	56	61	56	62	57	0.2	0.5	0.7	1.3	55	50	7	7	-	-	No	No	No	-
4309	2229 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NE	298246.5	6249017.5	59	54	59	54	59	54	60	55	0.1	0.4	0.7	1.1	55	50	5	5	-	-	No	No	No	-
4309	2229 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	NE	298246.5	6249017.5	60	55	60	55	60	55	61	56	0.2	0.5	0.8	1.2	55	50	6	6	-	-	No	No	No	-
4309	2229 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NW	298231.3	6249018.7	65	60	65	61	66	61	66	62	0	0.4	0.5	1.1	55	50	11	12	-	-	No	No	No	-
4309	2229 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	NW	298231.3	6249018.7	67	62	67	63	68	63	69	64	0.1	0.4	0.6	1.1	55	50	14	14	-	-	No	No	No	-
4309	2229 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SE	298256.1	6249006.1	67	62	67	62	67	62	68	63	-0.2	0.2	0.5	0.9	55	50	13	13	-	-	No	No	No	-
4309	2229 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SE	298256.1	6249006.1	68	63	68	63	69	64	69	64	-0.1	0.3	0.4	0.9	55	50	14	14	-	-	No	No	No	-
4309	2229 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	298233.3	6249010.9	69	64	69	64	69	64	70	65	-0.1	0.3	0.5	1	55	50	15	15	-	-	No	No	No	-
4309	2229 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SW	298233.3	6249010.9	71	66	71	66	71	66	72	67	0	0.3	0.5	1	55	50	17	17	-	-	No	No	No	-
4309	2229 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	298245.1	6249006.0	69	63	68	64	69	64	70	65	-0.1	0.3	0.5	1	55	50	15	15	-	-	No	No	No	-
4309	2229 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SW	298245.1	6249006.0	70	65	70	66	71	66	71	67	-0.1	0.3	0.5	0.9	55	50	16	17	-	-	No	No	No	-
4310	2229 - 2233 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	E	298306.2	6249150.1	56	51	56	52	57	52	57	53	0.1	0.4	0.6	1.1	55	50	2	3	-	-	No	No	No	-
4310	2229 - 2233 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	E	298306.2	6249150.1	58	53	58	53	58	53	59	54	0.1	0.5	0.7	1.2	55	50	4	4	-	-	No	No	No	-
4310	2229 - 2233 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	E	298306.5	6249142.5	59	54	59	54	59	54	60	55	0	0.4	0.6	1.1	55	50	5	5	-	-	No	No	No	-
4310	2229 - 2233 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	E	298306.5	6249142.5	59	54	60	55	60	55	61	56	0.1	0.4	0.6	1.1	55	50	6	6	-	-	No	No	No	-
4310	2229 - 2233 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	N	298299.1	6249157.4	48	43	49	44	49	44	51	46	1.1	1.3	1.8	2.2	55	50	-	-	-	-	-	-	No	-
4310	2229 - 2233 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	N	298299.1	6249157.4	51	46	52	48	52	47	54	49	1	1.2	1.7	2.1	55	50	-	-	-	-	-	-	No	-
4310	2229 - 2233 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	N	298305.7	6249147.1	54	49	54	49	54	49	55	51	0.3	0.6	0.9	1.3	55	50	-	1	-	-	-	No	No	-
4310	2229 - 2233 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	N	298305.7	6249147.1	55	50	56	51	56	51	57	52	0.3	0.6	0.9	1.3	55	50	2	2	-	-	No	No	No	-
4310	2229 - 2233 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	S	298291.6	6249145.5	59	54	59	54	59	54	60	56	0.2	0.6	0.8	1.3	55	50	5	6	-	-	No	No	No	-
4310	2229 - 2233 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	S	298291.6	6249145.5	60	55	60	55	60	55	61	57	0.2	0.6	0.8	1.3	55	50	6	7	-	-	No	No	No	-
4310	2229 - 2233 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	S	298300.0	6249140.6	60	54	60	55	60	55	61	56	0.2	0.6	0.9	1.3	55	50	6	6	-	-	No	No	No	-
4310	2229 - 2233 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	S	298300.0	6249140.6	60	55	61	56	61	56	62	57	0.2	0.6	0.8	1.3	55	50	7	7	-	-	No	No	No	-
4310	2229 - 2233 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	W	298288.3	6249153.9	55	50	55	50	55	50	56	52	0.4	0.7	1.2	1.7	55	50	1	2	-	-	No	No	No	-
4310	2229 - 2233 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	W	298288.3	6249153.9	56	51	56	51	57	51	58	53	0.4	0.7	1.1	1.7	55	50	3	3	-	-	No	No	No	-
4311	2229 - 2233 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	E	298278.8	6249156.0	56	51	56	52	57	52	57	53	0.3	0.6	0.8	1.3	55	50	2	3	-	-	No	No	No	-
4311	2229 - 2233 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	N	298276.4	6249164.3	50	45	52	47	51	46	53	48	1.4	1.6	2.1	2.4	55	50	-	-	-	-	-	-	No	-
4311	2229 - 2233 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	S	298272.3	6249150.7	58	53	58	54	59	54	60	55	-0.1	0.2	0.6	1	55	50	5	5	-	-	No	No	No	-
4311	2229 - 2233 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	W	298269.8	6249159.0	55	50	55	51	55	50	57	52	0.7	1	1.3	1.8	55	50	2	2	-	-	No	No	No	-
4312	2219 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	E	298373.8	6249149.1	59	54	59	54	59	54	60	56	0.1	0.5	0.7	1.1	55	50	5	6	-	-	No	No	No	-
4312	2219 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	E	298373.8	6249143.7	61	56	61	56	61	56	62	57	0	0.4	0.5	1.1	55	50	7	7	-	-	No	No	No	-
4312	2219 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NE	298352.9	6249161.6	48	43	50	45	49	44	51	47	1.7	1.8	2.4	2.7	55	50	-	-	-	-	-	-	No	-
4312	2219 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NE	298363.4	6249163.6	54	49	55	50	55	50	56	51	0.4	0.7	1	1.4	55	50	1	1	-	-	No	No	No	-
4312	2219 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NE	298370.6	6249157.4	56	51	56	51	56	51	57	52	0.3	0.6	0.9	1.3	55	50	2	2	-	-	No	No	No	-
4312	2219 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NW	298344.5	6249159.2	57	52	58	53	58	53	59	55	0.4	0.8	1.1	1.6	55	50	4	5	-	-	No	No	No	-
4312	2219 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NW	298357.9	6249161.7	48	43	50	45	48	43	51	47	2.1	2.2	2.7	3.2	55	50	-	-	-	-	-	-	No	-
4312	2219 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	298356.8	6249164.7	61	56	61	56	62	58	63	59	0.3	0.5	0.8	1.3	55	50	7	8	-	-	No	No	No	-
4313	2219 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	E	298370.9	6249196.5	53	48	54	49	54	49	55	50	0.6	0.8	1.2	1.7	55	50	-	-	-	-	-	-	No	-
4313	2219 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	N	298356.2	6249200.0	50	45	52	47	51	46	54	49	1.6	1.6	2.3	2.7	55	50	-	-	-	-	-	-	No	-
4313	2219 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	N	298365.8	6249210.5	48	43	50	46	49	44	52	47	2.1	2.1	2.9	3.2	55	50	-	-	-	-	-	-	No	-
4313	2219 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	S	298360.6	6249183.0	58	53	58	54	59	54	60	55	0.5	0.8	1.1	1.5	55	50	5	5	-	-	No	No	No	-
4313	2219 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	W	298350.6	6249191.5	57	52	57	53	57	52	59	54	0.7	0.9	1.3	1.8	55	50	4	4	-	-	No	No	No	-
4313	2219 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	W	298360.0	6249204.5	52	47	54	49	53	48	55	51	1.5	1.7	2.3	2.7	55	50	-	1	-	No	-	No	Yes	Type 1
4314	2197 - 2201 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NE	298399.2	6249211.7	52	47	53	48	53	48	55	50	1.3	1.5	2	2.4	55	50	-	-	-	-	-	-	No	-
4314	2197 - 2201 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NW	298387.8	6249210.8	57	52	58	53	57	52	59	54	0.9	1.2	1.6	2.1	55	50	4	4	-	-	No	No	Yes	Type 1
4314	2197 - 2201 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NW	298388.4	6249196.6	57	52	58	53	58	53	59	55	0.9	1.1	1.6	2	55	50	4	5	-	-	No	No	No	-
4314	2197 - 2201 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SE	298402.2	6249195.2	59	54	59	54	59	54	60	56	0.2	0.5	0.8	1.2	55	50	5	6	-	-	No	No	No	-
4314	2197 - 2201 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	298388.9	6249203.4	57	52	58	53	58	53	60	55	0.8	1.1	1.5	2	55	50	5	5	-	-	No	No	No	-
4314	2197 - 2201 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	298390.7	6249186.3	61	56	61	56	61	56	62	57	0.2	0.5	0.9	1.3	55	50	7	7	-	-	No	No	No	-
4316	2159 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	E	298386.7	6249318.0	51	46	53	48	52	47	54	49	1.8	1.8	2.5	2.8	55	50	-	-	-	-	-	-	No	-
4316	2159 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	E	298386.7	6249318.0	53	48	56	51	54	49	57	52	2.3	2.3	3.1	3.3	55	50	2	2	No	No	No	No	Yes	Type 1
4316	2159 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	N	298380.8	6249323.0	53	48	55	50	54	49	56	52	1.7	1.8	2.4	2.8	55	50	1	2	No	No	No	No	Yes	Type 1
4316	2159 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	N	298380.8	6249323.0	55	50	57	52	56	51	59	54	2	2	2.7	3.1	55	50	4	4	No	No	No	No	Yes	Type 1
4316	2159 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NE	298389.8	6249312.2	51	46	53	48	51	47	54	49	1.8	1.8	2.4	2.6	55	50	-	-	-	-	-	-	No	-
4316	2159 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	NE	298389.8	6249312.2	53	48	55	50	53	49	57	52	2.3	2.3	3.1	3.3	55	50	2	2	No	No	No	No	Yes	Type 1
4316	2159 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NE	298399.9	6249302.6	51	47	53	48	52	47	54	49	1.6	1.6	2.3	2.4	55	50	-	-	-	-	-	-	No	-
4316	2159 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	NE	298399.9	6249302.6	53	49	56	51	54	49	57	52	2.2	2.2	2.8	3.2	55	50	2	2	No	No	No	No	Yes	Type 1
4316	2159 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NW	298390.7	6249293.2	56	51	57	52	56	51	58	54	1.1	1.3	1.8	2.3	55	50	3	4	-	-	No	No	Yes	Type 1
4316	2159 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	NW	298390.7	6249293.2	56	51	58	53	57	52	59	54	1.3	1.4	2	2.4	55	50	4	4	-	-	No	No	Yes	Type 1
4316	2159 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SE	298403.8	6249287.7	58	53	58	53	58	53	59	55	0.5	0.7	1.1	1.5	55	50	4	5	-	-	No	No	No	-
4316	2159 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SE	298403.8	6249287.7	58	53	59	54	59	54	60	56	0.7	1	1.5	1.8	55	50	5	6	-	-	No	No	No	-
4316	2159 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	298379.0	6249308.9	58	53	58	54	58	53	60	56	0.8	1	1.4	1.8	55	50	5	5	-	-	No	No	No	-
4316	2159 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SW	298379.0	6249308.9	58	53	59	54	59	54	60	56	0.9	1.1	1.6	2	55	50	5	6	-	-	No	No	No	-
4316	2159 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	298387.4	6249298.4	57	52	58	53	58	53	59	55	0.8	1.1	1.5	1.9	55	50	4	5	-	-	No	No	No	-
4316	2159 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SW	298387.4	6249298.4	58	53	59	54	59	54	60	56	1	1.2	1.6	2	55	50	5	6	-	-	No	No	No	-
4316	2159 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	298393.5	6249285.9	59	54	59	54	59	54	61	56	0.6	0.8	1.3	1.7	55	50	6	6	-	-	No	No	No	-
4316	2159 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SW	298393.5	6249285.9	59	54	60	55	60	55	61	57	0.7	0.9	1.4	1.8	55	50	6	7	-	-	No	No	No	-
4316	2159 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	W	298376.7	6249318.4	56	51	57	53	57	52	59	54	0.9	1.2	1.7	2.1	55	50	4	4	-	-	No	No	Yes	Type 1
4316	2159 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	W	298376.7	6249318.4	57	52	58	53	58	53	60	55	1	1.2	1.8	2.2	55	50	5	5	-	-	No	No	Yes	Type 1
4318	2153 ELIZABETH DRIVE CECIL PARK	NCA04	Residential	GF	E	298408.4	6249344.5	53	49	55	50	54	49	56	51	1.3	1.4	2	2.2	55	50	1	1	No	No	No	No	Yes	Type 1
4318	2153 ELIZABETH DRIVE CECIL PARK	NCA04	Residential	F 1	E	298408.4	6249344.5	55	50	57	52	55	51	58	53	1.7	1.7	2.4	2.7	55	50	3	3	No	No	No	No	Yes	Type 1
4318	2153 ELIZABETH DRIVE CECIL PARK	NCA04	Residential	GF	N	298402.9	6249352.6	50	46	53	48	51	47	54	50	2.4	2.2	3.1	3.2	55	50	-	-	-	-	-	-	No	-
4318	2153 ELIZABETH DRIVE CECIL PARK	NCA04	Residential	F 1	N	298402.9	6249352.6	52	48	55	50	53	48	57	52	3.1	2.8	3.8	3.9	55	50	2	2	No	No	No	No	Yes	Type 1
4318	2153 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	S	298403.1	6249336.4	53	48	55	50	53	48	56	51	1.8	1.9	2.5	2.9	55	50	1	1	No	No	No	No	Yes	Type 1
4318	2153 ELIZABETH DRIVE CECIL PARK	NCA04	Residential	F 1	S	298403.1	6249336.4	55	50	57	53	56	51	59	54	2	2.2	2.9	3.2	55	50	4	4	No	No	No	No	Yes	Type 1
4318	2153 ELIZABETH DRIVE, CECIL PARK	NCA04	Residential	GF	W	298397.6	6249344.6	51	46	53	48	52	47	55	50	2	2	2.8	3.2	55	50	-	-	-	-	-	-	No	-
4318	2153 ELIZABETH DRIVE CECIL PARK	NCA04	Residential	F 1	W	298397.6	6249344.6	54	49	56	51	54	49	57	53	1.9	1.9	2.6	3.1	55	50	2	3	No	No	No	No	Yes	Type 1
4320	15 - 20 WARANA ROAD CECIL PARK 2178	NCA04	Residential	GF	E	298462.4	6249480.5	51	47	52	48	51	47	53	48	1.2	1	1.4	1.4	55	50	-	-	-	-	-	-	No	-
4320	15 - 20 WARANA ROAD CECIL PARK 2178	NCA04	Residential	F 1	E	298462.4	6249480.5	52	48	53	49	53	48	54	50	1.2	1	1.4	1.4	55	50	-	-	-	-	-	-	No	-
4320	15 - 20 WARANA ROAD CECIL PARK 2178	NCA04	Residential	GF	N	298442.7	6249485.0	48	44	49	45	49	44	50	46	1.2	0.9	1.5	1.4	55	50	-	-	-	-	-	-	No	-
4320	15 - 20 WARANA ROAD, CECIL PARK 2178	NCA04	Residential	F 1	N	298442.7	6249485.0	51	47	52	48	51	47	53	48	1.2	1	1.4	1.4	55	50	-	-	-	-	-	-	No	-
4320	15 - 20 WARANA ROAD, CECIL PARK 2178	NCA04	Residential	GF	N	298454.4	6249489.9	48	44	49	45	49	44	50	46	1.2	1	1.5	1.5	55	50	-	-	-	-	-	-	No	-
4320	15 - 20 WARANA ROAD, CECIL PARK 2178	NCA04	Residential	F 1	N	298454.4	6249489.9	51	48	53	48	52	48	53	49	1.2	0.8	1.4	1.3	55	50	-	-	-	-	-	-	No	-
4320	15 - 20 WARANA ROAD, CECIL PARK 2178	NCA04	Residential	GF	S	298451.5	6249467.0	50	45	52	47	51	46	53	49	1.8	1.9	2.6	2.9	55	50	-	-	-	-	-	-	No	-
4320	15 - 20 WARANA ROAD, CECIL PARK 2178	NCA04	Residential	F 1	S	298451.5	6249467.0	51	47	53	48	52	47	55	50	1.8	1.8	2.6	2.9	55	50	-	-	-	-	-	-	No	-
4320	15 - 20 WARANA ROAD, CECIL PARK 2178	NCA04	Residential	GF	W	298436.7	6249474.0	49	44	51	46	49	44	52	47	2	2.1	2.8	3.1	55	50	-	-	-	-	-	-	No	-
4320	15 - 20 WARANA ROAD, CECIL PARK 2178	NCA04	Residential	F 1	W	298436.7	6249474.0	51	46	52	48	51	46	54	49	1.8	1.9	2.6	2.9	55	50	-	-	-	-	-	-	No	-
4320	15 - 20 WARANA ROAD, CECIL PARK 2178	NCA04	Residential	GF	W	298448.7	6249486.6	46	41	47	43	46	42	48	44	1.7	1.4	2.1	2.1	55	50	-	-	-	-	-	-	No	-
4320	15 - 20 WARANA ROAD, CECIL PARK 2178	NCA04	Residential	F 1	W	298448.7	6249486.6	49	45	51	47	50	46	52	47	1.4	1.1	1.8	1.6	55	50	-	-	-	-	-	-	No	-
4321	25 - 27 WARANA ROAD CECIL PARK 2178	NCA04	Residential	GF	NE	298359.1	6249511.4	51	47	52	48	52	47	53	49	1.2	1.1	1.5	1.5	55	50	-	-	-	-	-	-	No	-
4321	25 - 27 WARANA ROAD CECIL PARK 2178	NCA04	Residential	GF	NE	298366.5	6249501.6	51	47	52	48	52	47	53	49	1.2	1.1	1.6	1.5	55	50	-	-	-	-	-	-	No	-
4321	25 - 27 WARANA ROAD, CECIL PARK 2178	NCA04	Residential	GF	NW	298348.1	6249516.8	49	45	51	47	50	46	52	47	1.4	1.2	1.7	1.6	55	50	-	-	-	-	-	-	No	-
4321	25 - 27 WARANA ROAD CECIL PARK 2178	NCA04	Residential	GF	SE	298362.2	6249494.7	53	48	54	49	53	48	55	51	1.4	1.5	2	2.3	55	50	-	1	-	No	-	No	Yes	Type 1
4321	25 - 27 WARANA ROAD CECIL PARK 2178	NCA04	Residential	GF	SW	298349.2	6249502.5	52	47	53	48	52	47	54	50	1.5	1.6	2.2	2.6	55	50	-	-	-	-	-	-	No	-
4331	2235 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	E	298200.6	6249185.0	57	52	57	53	58	53	59	54	0.1	0.5	0.7	1.2	55	50	4	4	-	-	No	No	No	-
4331	2235 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	E	298200.6	6249185.0	58	53	58	53	59	53	59	55	0.1	0.5	0.7	1.2	55	50	4	5	-	-	No	No	No	-
4331	2235 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	E	298209.2	6249193.2	57	52	57	52	57	52	58	53	0	0.5	0.6	1.1	55	50	3	3	-	-	No	No	No	-
4331	2235 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	E	298209.2	6249193.2	58	53	58	53	58	53	59	54	0.1	0.4	0.7	1.1	55	50	4	4	-	-	No	No	No	-
4331	2235 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	N	298199.3	6249203.5	45	41	47	42	46	41	48	44	1.5	1.6	2.1	2.4	55	50	-	-	-	-	-	-	No	-
4331	2235 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	N	298199.3	6249203.5	48	43	50	45	49	44	51	47	1.5	1.6	2.1	2.5	55	50	-	-	-	-	-	-	No	-

M12 Central LNDG concrete pavement surface noise levels

Receiver ID	Address	Noise catchment area	Receiver type	Façade				Predicted noise level Opening Year 2026				Predicted no se level Design Year 2036				Change in noise evel (Build - No Build)				NCG Project road noise criteria		NCG Project road noise criteria exceedance (dB)		Do noise levels equal or exceed the cumulative limit w th project roads adding ≥2dB to the total noise levels?		Is the contribution from the road project Acute?		Is the property considered for further treatment?	Category of treatment
				Floor level	Direction	x	y	No Build		Build		No Build		Build		Opening Year 2026		Design Year 2036												
								Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night		
4331	2235 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	S	298189.7	6249183.4	58	53	58	53	59	53	59	55	0.2	0.6	0.8	1.4	55	50	4	5	-	-	No	No	No	-
4331	2235 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	S	298189.7	6249183.4	59	54	59	54	59	54	60	56	0.2	0.6	0.9	1.4	55	50	5	6	-	-	No	No	No	-
4331	2235 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	S	298203.3	6249187.0	57	52	58	53	58	53	59	54	0.2	0.6	0.8	1.3	55	50	4	4	-	-	No	No	No	-
4331	2235 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	S	298203.3	6249187.0	58	53	58	54	59	54	59	55	0.2	0.6	0.8	1.2	55	50	4	5	-	-	No	No	No	-
4331	2235 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	W	298183.8	6249196.5	52	47	53	49	53	47	55	50	1.4	1.8	2	2.6	55	50	-	-	-	-	-	-	No	-
4331	2235 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	W	298183.8	6249196.5	53	48	55	50	54	49	56	52	1.5	1.9	2.1	2.8	55	50	1	2	-	-	No	No	Yes	Type 1
4332	2245 - 2249 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	E	298142.9	6249181.2	58	53	58	53	58	53	59	55	0.2	0.6	0.8	1.4	55	50	4	5	-	-	No	No	No	-
4332	2245 - 2249 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	N	298129.4	6249191.1	51	46	52	47	52	47	54	49	1.1	1.3	1.8	2.1	55	50	-	-	-	-	-	-	No	-
4332	2245 - 2249 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	S	298126.1	6249178.6	59	54	59	55	60	54	61	56	0.4	0.7	1.1	1.6	55	50	6	6	-	-	No	No	No	-
4332	2245 - 2249 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	W	298112.5	6249188.5	55	50	57	52	56	51	58	53	1.2	1.4	1.9	2.3	55	50	3	3	-	-	No	No	Yes	Type 1
4333	2235 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	E	298212.1	6249169.1	55	50	56	51	56	51	57	52	0.3	0.6	0.9	1.4	55	50	2	2	-	-	No	No	No	-
4333	2235 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	E	298213.4	6249159.0	57	52	57	53	58	52	58	54	0.2	0.6	0.8	1.3	55	50	3	4	-	-	No	No	No	-
4333	2235 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	N	298209.4	6249176.1	50	45	51	46	51	46	52	48	0.9	1.3	1.6	2	55	50	-	-	-	-	-	-	No	-
4333	2235 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NE	298212.0	6249164.5	53	48	53	48	53	48	54	50	0.4	0.7	1.1	1.5	55	50	-	-	-	-	-	-	No	-
4333	2235 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	S	298205.8	6249156.5	57	52	58	53	58	53	59	54	0.3	0.8	1	1.6	55	50	4	4	-	-	No	No	No	-
4333	2235 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	W	298202.4	6249167.7	53	48	54	49	54	49	55	51	0.7	1.1	1.4	2	55	50	-	1	-	-	-	No	No	-
4335	2251 - 2253 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NE	298175.1	6249284.7	51	46	51	47	51	46	52	48	0.5	0.7	1	1.4	55	50	-	-	-	-	-	-	No	-
4335	2251 - 2253 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	NE	298175.1	6249284.7	52	47	53	48	53	48	54	49	0.6	0.8	1.2	1.5	55	50	-	-	-	-	-	-	No	-
4335	2251 - 2253 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NW	298151.8	6249264.0	55	50	57	52	56	51	58	54	1.4	1.6	2.1	2.5	55	50	3	4	-	-	No	No	Yes	Type 1
4335	2251 - 2253 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	NW	298151.8	6249264.0	57	52	58	53	57	52	59	55	1.2	1.3	1.9	2.3	55	50	4	5	-	-	No	No	Yes	Type 1
4335	2251 - 2253 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NW	298156.5	6249290.5	55	50	56	52	56	51	58	53	1.4	1.6	2.2	2.7	55	50	3	3	-	No	No	No	Yes	Type 1
4335	2251 - 2253 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	NW	298156.5	6249290.5	56	51	57	53	57	52	59	54	1.2	1.4	2	2.5	55	50	4	4	-	-	No	No	Yes	Type 1
4335	2251 - 2253 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SE	298172.3	6249253.9	58	53	58	53	58	53	59	55	0.3	0.7	0.9	1.3	55	50	4	5	-	-	No	No	No	-
4335	2251 - 2253 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SE	298172.3	6249253.9	58	53	59	54	59	54	60	55	0.4	0.8	1	1.5	55	50	5	5	-	-	No	No	No	-
4335	2251 - 2253 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	298148.1	6249243.6	60	55	61	56	60	55	62	57	0.8	1.1	1.5	2	55	50	7	7	-	-	No	No	No	-
4335	2251 - 2253 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SW	298148.1	6249243.6	60	55	61	56	61	56	62	58	0.8	1	1.5	1.9	55	50	7	8	-	-	No	No	No	-
4335	2251 - 2253 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	298157.4	6249278.6	55	50	57	52	56	51	58	54	1.5	1.7	2.2	2.7	55	50	3	4	No	No	No	No	Yes	Type 1
4335	2251 - 2253 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SW	298157.4	6249278.6	57	52	58	54	58	53	60	55	1.2	1.5	1.9	2.4	55	50	5	5	-	-	No	No	Yes	Type 1
4337	2255 - 2263 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NE	298057.1	6249325.5	49	44	50	46	50	45	52	47	1.1	1.1	1.6	1.8	55	50	-	-	-	-	-	-	No	-
4337	2255 - 2263 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	NE	298057.1	6249325.5	52	47	53	48	53	48	55	50	1.2	1.4	1.9	2.2	55	50	-	-	-	-	-	-	No	-
4337	2255 - 2263 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NE	298063.9	6249316.9	49	44	50	45	50	45	51	47	0.9	1.1	1.5	1.7	55	50	-	-	-	-	-	-	No	-
4337	2255 - 2263 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	NE	298063.9	6249316.9	52	47	53	48	53	48	54	50	1.2	1.3	1.8	2.1	55	50	-	-	-	-	-	-	No	-
4337	2255 - 2263 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NW	298048.6	6249322.2	52	47	54	49	53	48	55	51	1.9	2	2.6	3.1	55	50	-	1	-	No	-	No	Yes	Type 1
4337	2255 - 2263 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	NW	298048.6	6249322.2	57	52	58	53	57	52	60	55	1.6	1.8	2.3	2.7	55	50	5	5	Yes	Yes	No	No	Yes	Type 1
4337	2255 - 2263 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SE	298060.0	6249320.4	49	44	50	45	50	45	51	47	1	1.2	1.6	1.8	55	50	-	-	-	-	-	-	No	-
4337	2255 - 2263 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SE	298060.0	6249320.4	52	47	53	49	53	48	55	50	1.2	1.3	1.7	2.2	55	50	-	-	-	-	-	-	No	-
4337	2255 - 2263 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SE	298066.5	6249307.9	58	53	59	54	59	54	60	56	0.8	1	1.5	1.9	55	50	5	6	No	No	No	No	No	-
4337	2255 - 2263 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SE	298066.5	6249307.9	59	54	60	55	60	55	61	56	0.8	1.1	1.4	1.9	55	50	6	6	-	-	No	No	No	-
4337	2255 - 2263 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	298053.7	6249309.6	59	54	60	55	60	55	61	57	1	1.2	1.7	2.1	55	50	6	7	-	-	No	No	Yes	Type 2
4337	2255 - 2263 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SW	298053.7	6249309.6	60	55	61	56	61	56	62	58	1.1	1.3	1.7	2.2	55	50	7	8	-	-	No	No	Yes	Type 2
4338	2255 - 2263 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NE	298082.9	6249326.7	52	47	53	48	52	48	54	49	1	1.1	1.5	1.9	55	50	-	-	-	-	-	-	No	-
4338	2255 - 2263 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NW	298076.4	6249324.5	50	45	52	47	51	46	53	49	1.8	2	2.5	2.9	55	50	-	-	-	-	-	-	No	-
4338	2255 - 2263 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SE	298082.1	6249319.4	57	52	58	53	58	53	59	55	1	1.2	1.6	2.1	55	50	4	5	-	-	No	No	Yes	Type 1
4338	2255 - 2263 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	298075.4	6249317.2	57	52	58	53	58	53	59	55	0.8	1.1	1.5	1.9	55	50	4	5	-	-	No	No	No	-
4339	2255 - 2263 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	E	298036.8	6249307.9	56	51	56	52	57	52	58	53	0.3	0.6	0.9	1.3	55	50	3	3	-	-	No	No	No	-
4339	2255 - 2263 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NE	298030.8	6249326.0	53	48	54	49	54	49	55	51	0.6	0.9	1.3	1.6	55	50	-	1	-	-	-	-	No	-
4339	2255 - 2263 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NW	298017.6	6249335.1	54	49	56	51	55	50	58	53	1.9	1.9	2.6	3	55	50	3	3	No	No	No	No	Yes	Type 1
4339	2255 - 2263 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	S	298032.0	6249303.5	60	55	61	56	60	55	62	58	1	1.3	1.8	2.2	55	50	7	8	-	-	No	No	Yes	Type 2
4339	2255 - 2263 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SE	298036.8	6249311.7	56	51	57	52	57	52	58	53	0.4	0.7	1	1.4	55	50	3	3	-	-	No	No	No	-
4339	2255 - 2263 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	298019.2	6249320.8	58	53	60	55	59	54	61	57	1.4	1.6	2.1	2.6	55	50	6	7	-	Yes	No	No	Yes	Type 2
4339	2255 - 2263 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	298024.8	6249307.2	60	55	61	56	60	55	62	57	1.1	1.3	1.8	2.2	55	50	7	7	-	-	No	No	Yes	Type 2
4417	1227 - 1229 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	NE	297911.7	6249296.9	50	45	51	46	51	46	52	47	0.3	0.7	1	1.4	55	50	-	-	-	-	-	-	No	-
4417	1227 - 1229 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	F 1	NE	297911.7	6249296.9	52	47	52	48	52	47	54	49	0.6	0.8	1.2	1.6	55	50	-	-	-	-	-	-	No	-
4417	1227 - 1229 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	NW	297895.6	6249296.9	47	43	50	45	49	44	52	47	2.6	2.6	3.3	3.7	55	50	-	-	-	-	-	-	No	-
4417	1227 - 1229 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	F 1	NW	297895.6	6249296.9	51	46	54	49	52	47	55	51	2.4	2.4	3.1	3.5	55	50	-	1	-	No	-	No	Yes	Type 1
4417	1227 - 1229 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	SE	297913.2	6249281.2	57	52	58	53	58	53	59	55	1	1.3	1.6	2.1	55	50	4	5	-	-	No	No	Yes	Type 1
4417	1227 - 1229 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	F 1	SE	297913.2	6249281.2	58	53	59	54	59	54	61	56	1.1	1.4	1.9	2.4	55	50	6	6	-	-	No	No	Yes	Type 2
4417	1227 - 1229 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	SW	297897.2	6249281.2	57	52	58	53	57	52	59	55	1.4	1.6	2	2.6	55	50	4	5	-	-	No	No	Yes	Type 1
4417	1227 - 1229 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	F 1	SW	297897.2	6249281.2	58	53	59	55	59	54	61	56	1.3	1.7	2.2	2.6	55	50	6	6	-	-	No	No	Yes	Type 2
4418	1231A ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	E	297849.5	6249287.2	45	40	47	42	46	41	48	44	1.4	1.6	2.1	2.3	55	50	-	-	-	-	-	-	No	-
4418	1231A ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	F 1	E	297849.5	6249287.2	49	44	50	46	50	45	52	47	1.5	1.6	2.1	2.5	55	50	-	-	-	-	-	-	No	-
4418	1231A ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	E	297877.2	6249272.1	56	51	57	52	57	52	58	53	0.5	0.9	1.1	1.6	55	50	3	3	-	-	No	No	No	-
4418	1231A ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	F 1	E	297877.2	6249272.1	57	52	58	53	58	53	59	54	0.7	1	1.3	1.8	55	50	4	4	-	-	No	No	No	-
4418	1231A ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	N	297844.8	6249296.3	44	39	46	42	45	40	48	43	2	2.1	2.6	2.9	55	50	-	-	-	-	-	-	No	-
4418	1231A ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	F 1	N	297844.8	6249296.3	47	42	49	44	48	43	50	46	1.9	1.9	2.6	2.8	55	50	-	-	-	-	-	-	No	-
4418	1231A ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	N	297854.7	6249280.2	43	38	44	40	44	39	46	41	1.5	1.6	2.1	2.4	55	50	-	-	-	-	-	-	No	-
4418	1231A ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	F 1	N	297854.7	6249280.2	46	41	48	43	47	42	49	45	1.6	1.7	2.3	2.5	55	50	-	-	-	-	-	-	No	-
4418	1231A ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	N	297870.7	6249289.3	43	38	45	40	44	39	46	42	1.7	1.8	2.2	2.5	55	50	-	-	-	-	-	-	No	-
4418	1231A ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	F 1	N	297870.7	6249289.3	46	41	48	43	47	42	50	45	1.7	1.8	2.4	2.7	55	50	-	-	-	-	-	-	No	-
4418	1231A ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	S	297854.3	6249259.7	57	52	58	53	58	53	60	55	1.1	1.4	1.8	2.3	55	50	5	5	-	-	No	No	Yes	Type 1
4418	1231A ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	F 1	S	297854.3	6249259.7	58	53	59	54	59	54	61	56	1.2	1.5	2	2.5	55	50	6	6	-	-	No	No	Yes	Type 2
4418	1231A ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	W	297836.2	6249280.2	51	46	54	49	53	48	56	51	2.6	2.6	3.3	3.7	55	50	1	1	No	No	No	No	Yes	Type 1
4418	1231A ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	F 1	W	297836.2	6249280.2	53	48	55	50	54	49	57	52	2.5	2.6	3.3	3.7	55	50	2	2	No	No	No	No	Yes	Type 1
4418	1231A ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	W	297861.5	6249284.1	43	38	45	40	44	39	47	42	1.8	2	2.5	3	55	50	-	-	-	-	-	-	No	-
4418	1231A ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	F 1	W	297861.5	6249284.1	47	42	49	44	48	43	51	46	1.9	2.1	2.6	3	55	50	-	-	-	-	-	-	No	-
4419	1239 - 1245 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	E	297749.5	6249282.0	53	48	54	49	54	49	55	51	0.7	1.1	1.4	1.9	55	50	-	1	-	-	-	No	No	-
4419	1239 - 1245 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	N	297743.1	6249295.6	46	41	48	43	47	42	50	45	1.8	1.9	2.5	2.9	55	50	-	-	-	-	-	-	No	-
4419	1239 - 1245 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	S	297739.6	6249269.1	55	50	56	51	56	51	58	53	1.5	1.7	2.1	2.6	55	50	3	3	-	No	No	No	Yes	Type 1
4419	1239 - 1245 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	W	297733.4	6249282.7	51	46	54	49	52	47	55	51	2.6	2.6	3.2	3.7	55	50	-	1	-	No	-	No	Yes	Type 1
4421	1231 - 1237 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	NE	297818.9	6249137.1	52	47	53	49	53	48	55	50	0.9	1.2	1.6	2	55	50	-	-	-	-	-	-	No	-
4421	1231 - 1237 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	NE	297832.4	6249124.5	60	55	60	56	61	55	61	57	0.1	0.6	0.8	1.3	55	50	6	7	-	-	No	No	No	-
4421	1231 - 1237 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	NE	297832.5	6249143.1	55	50	55	51	55	50	56	52	0.5	0.8	1.1	1.5	55	50	1	2	-	-	No	No	No	-
4421	1231 - 1237 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	NW	297812.5	6249135.1	59	54	60	55	60	55	62	57	0.8	1.1	1.5	1.9	55	50	7	7	-	-	No	No	No	-
4421	1231 - 1237 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	NW	297821.6	6249137.7	52	47	53	49	53	48	55	50	1.1	1.2	1.7	2.1	55	50	-	-	-	-	-	-	No	-
4421	1231 - 1237 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	NW	297822.7	6249145.1	57	52	58	53	58	53	60	55	1	1.2	1.7	2.2	55	50	5	5	-	-	No	No	Yes	Type 1
4421	1231 - 1237 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	SE	297833.0	6249117.7	64	59	64	60	64	59	65	61	0.4	0.8	1	1.5	55	50	10	11	-	-	No	No	No	-
4421	1231 - 1237 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	SE	297834.4	6249130.9	61	56	61	56	61	56	62	58	0.3	0.7	0.8	1.4	55	50	7	8	-	-	No	No	No	-
4421	1231 - 1237 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	SW	297819.3	6249122.2	64	59	65	60	65	60	66	62	0.5	0.8	1.1	1.6	55	50	11	12	-	-	No	No	No	-
4421	1231 - 1237 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	SW	297822.3	6249139.8	53	48	55	50	54	49	56	51	1.3	1.5	2	2.4	55	50	1	1	-	-	No	No	Yes	Type 1
4422	1239 - 1245 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	E	297756.7	6249160.2	57	52	57	52	57	52	58	53	0.2	0.6	0.8	1.2	55	50	3	3	-	-	No	No	No	-
4422	1239 - 1245 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	F 1	E	297756.7	6249160.2	59	54	59	54	60	54	60	56	0.2	0.5	0.8	1.3	55	50	5	6	-	-	No	No	No	-
4422	1239 - 1245 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	E	297757.0	6249170.6	59	54	59	55	59	54	60	56	0.6	1	1.2	1.8	55	50	5	6	-	-	No	No	No	-
4422	1239 - 1245 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	F 1	E	297757.0	6249170.6	60	55	61	56	61	56	62	57	0.5	0.9	1.1	1.6	55	50	7	7	-	-	No	No	No	-
4422	1239 - 1245 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	E	297760.5	6249149.4	61	56	62	57	62	57	63	59	0.6	1	1.3	1.8	55	50	8	9	-	-	No	No	No	-
4422	1239 - 1245 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	F 1	E	297760.5	6249149.4	63	58	63	58	63	58	64	60	0.5	0.8	1.2	1.6	55	50	9	10	-	-	No	No	No	-
4422	1239 - 1245 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	N	297732.2	6249167.9	47	42	49	44	48	43	51	47	2.5	2.5	3.2	3.5	55	50	-	-	-	-	-	-	No	-
4422	1239 - 1245 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	F 1	N	297732.2	6249167.9	50	45	52	48	51	46	54	49	2.1	2.2	2.8	3.2	55	50	-	-	-	-	-	-	No	-
4422	1239 - 1245 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	N	297751.1	6249178.9	49	44	51	46	50	45	53	48	2.2	2.3	2.9	3.2	55	50	-	-	-	-	-	-	No	-
4422	1239 - 1245 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	F 1	N	297751.1	6249178.9	51	46	53	48	52	47	55	50	2.1	2.2	2.8	3.1	55	50	-	-	-	-	-	-	No	-
4422	1239 - 1245 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	N	297757.7	6249157.6	54	49	54	50	55	49	55	51	0.2	0.7	0.8	1.3	55	50	-	1	-	-	No	No	No	-

M12 Central LNDG concrete pavement surface noise levels

Receiver ID	Address	Noise catchment area	Receiver type	Façade				Predicted noise level Opening Year 2026				Predicted no se level Design Year 2036				Change in noise evel (Build - No Build)				NCG Project road noise criteria		NCG Project road noise criteria exceedance (dB)		Do noise levels equal or exceed the cumulative limit w th project roads adding ≥2dB to the total noise levels?		Is the contribution from the road project Acute?		Is the property considered for further treatment?	Category of treatment
				Floor level	Direction	x	y	No Build		Build		No Build		Build		Opening Year 2026		Design Year 2036											
								Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night		
4422	1239 - 1245 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	F 1	N	297757.7	6249157.6	57	52	57	52	57	52	58	54	0.3	0.7	0.9	1.3	55	50	3	4	-	-	No	No	No	-
4422	1239 - 1245 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	S	297724.9	6249151.5	61	56	62	57	61	56	64	59	1.4	1.6	2.2	2.6	55	50	9	9	Yes	-	No	No	Yes	Type 3
4422	1239 - 1245 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	F 1	S	297724.9	6249151.5	62	57	63	58	63	58	64	60	1.2	1.4	1.9	2.4	55	50	9	10	-	-	No	No	Yes	Type 3
4422	1239 - 1245 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	GF	S	297745.3	6249142.3	64	59	64	60	64	59	66	61	0.7	1.1	1.4	1.9	55	50	11	11	-	-	No	No	No	-
4422	1239 - 1245 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	F 1	S	297745.3	6249142.3	65	60	65	61	65	60	66	62	0.7	1	1.3	1.8	55	50	11	12	-	-	No	No	No	-
4422	1239 - 1245 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	GF	W	297717.7	6249160.7	57	52	59	54	58	53	60	56	2.1	2.2	2.8	3.3	55	50	5	6	Yes	Yes	No	No	Yes	Type 2
4422	1239 - 1245 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	F 1	W	297717.7	6249160.7	59	54	60	55	59	54	62	57	1.6	1.7	2.3	2.8	55	50	7	7	Yes	Yes	No	No	Yes	Type 2
4422	1239 - 1245 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	W	297730.8	6249148.1	59	54	61	56	60	55	62	58	1.4	1.7	2.2	2.8	55	50	7	8	Yes	Yes	No	No	Yes	Type 2
4422	1239 - 1245 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	F 1	W	297730.8	6249148.1	61	55	62	57	61	56	63	59	1.3	1.5	2	2.5	55	50	8	9	-	-	No	No	Yes	Type 3
4422	1239 - 1245 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	W	297744.1	6249172.1	48	43	51	46	50	44	53	49	3	3.1	3.6	4.1	55	50	-	-	-	-	-	-	No	-
4422	1239 - 1245 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	F 1	W	297744.1	6249172.1	51	46	54	49	52	47	56	51	2.6	2.6	3.3	3.7	55	50	1	1	No	No	No	No	Yes	Type 1
4423	1247 - 1253 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	GF	E	297669.8	6249120.8	62	57	63	58	63	58	64	60	0.7	1	1.4	1.9	55	50	9	10	-	-	No	No	No	-
4423	1247 - 1253 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	F 1	E	297669.8	6249120.8	63	58	64	59	64	59	65	61	0.7	1.1	1.3	1.8	55	50	10	11	-	-	No	No	No	-
4423	1247 - 1253 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	GF	N	297660.8	6249127.4	51	46	53	48	52	47	54	50	2.1	2.2	2.7	3	55	50	-	-	-	-	-	-	No	-
4423	1247 - 1253 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	F 1	N	297660.8	6249127.4	53	48	55	50	54	49	57	52	1.7	1.8	2.4	2.7	55	50	2	2	No	No	No	No	Yes	Type 1
4423	1247 - 1253 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	GF	S	297659.3	6249116.5	64	58	64	60	64	59	66	61	0.9	1.2	1.6	2	55	50	11	11	-	-	No	No	No	-
4423	1247 - 1253 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	F 1	S	297659.3	6249116.5	65	60	65	61	65	60	67	62	0.8	1.1	1.5	1.9	55	50	12	12	-	-	No	No	No	-
4423	1247 - 1253 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	W	297650.4	6249123.1	58	53	60	55	58	53	61	57	1.9	2.1	2.7	3.2	55	50	6	7	Yes	Yes	No	No	Yes	Type 2
4423	1247 - 1253 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	F 1	W	297650.4	6249123.1	60	55	61	57	61	56	63	58	1.5	1.7	2.3	2.7	55	50	8	8	Yes	Yes	No	No	Yes	Type 2
4424	1255 - 1261 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	GF	E	297626.3	6249105.7	61	56	62	58	62	57	63	59	1	1.4	1.7	2.3	55	50	8	9	-	-	No	No	Yes	Type 3
4424	1255 - 1261 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	F 1	E	297626.3	6249105.7	63	58	64	59	64	59	65	61	0.7	1.1	1.4	1.9	55	50	10	11	-	-	No	No	No	-
4424	1255 - 1261 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	GF	E	297627.5	6249119.5	59	54	60	56	60	55	62	57	0.9	1.2	1.5	2.1	55	50	7	7	-	-	No	No	Yes	Type 2
4424	1255 - 1261 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	F 1	E	297627.5	6249119.5	61	56	62	57	61	56	63	58	0.7	1.1	1.4	1.9	55	50	8	8	-	-	No	No	No	-
4424	1255 - 1261 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	E	297628.7	6249113.7	61	56	62	57	61	56	63	59	1.1	1.4	1.8	2.2	55	50	8	9	-	-	No	No	Yes	Type 3
4424	1255 - 1261 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	F 1	E	297628.7	6249113.7	63	57	63	59	63	58	65	60	0.8	1.2	1.5	2	55	50	10	10	-	-	No	No	No	-
4424	1255 - 1261 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	N	297622.7	6249122.3	56	51	57	53	57	52	59	54	1.3	1.7	2	2.4	55	50	4	4	-	-	No	No	Yes	Type 1
4424	1255 - 1261 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	F 1	N	297622.7	6249122.3	57	52	58	54	58	53	60	55	1.3	1.5	1.9	2.4	55	50	5	5	-	-	No	No	Yes	Type 1
4424	1255 - 1261 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	GF	S	297619.9	6249101.0	63	58	64	59	64	59	66	61	1.1	1.4	1.9	2.3	55	50	11	11	-	-	No	No	Yes	Type 3
4424	1255 - 1261 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	F 1	S	297619.9	6249101.0	65	60	66	61	66	61	67	63	0.8	1.1	1.5	2	55	50	12	13	-	-	No	No	No	-
4424	1255 - 1261 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	GF	W	297614.8	6249108.8	59	54	61	56	60	55	62	58	1.9	2	2.6	3.1	55	50	7	8	Yes	Yes	No	No	Yes	Type 2
4424	1255 - 1261 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	F 1	W	297614.8	6249108.8	60	55	62	57	61	56	64	59	1.7	1.8	2.4	2.8	55	50	9	9	Yes	Yes	No	No	Yes	Type 3
4424	1255 - 1261 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	W	297617.2	6249118.2	57	52	59	54	58	53	61	56	2.3	2.3	2.9	3.4	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
4424	1255 - 1261 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	F 1	W	297617.2	6249118.2	59	54	61	56	60	55	62	58	2	2.1	2.8	3.2	55	50	7	8	Yes	Yes	No	No	Yes	Type 2
4434	1263 - 1269 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	E	297538.8	6249041.7	54	49	55	50	54	49	56	51	0.9	1.2	1.7	2	55	50	1	1	-	-	No	No	No	-
4434	1263 - 1269 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	GF	E	297543.2	6249033.5	65	60	65	61	65	60	66	62	0.6	1	1.3	1.8	55	50	11	12	-	-	No	No	No	-
4434	1263 - 1269 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	GF	N	297535.6	6249046.7	54	49	56	51	55	50	58	53	1.9	2	2.6	3	55	50	3	3	No	No	No	No	Yes	Type 1
4434	1263 - 1269 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	N	297540.3	6249039.0	52	47	53	48	53	48	54	50	0.9	1.1	1.6	2	55	50	-	-	-	-	-	-	No	-
4434	1263 - 1269 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	GF	S	297536.2	6249029.2	67	61	67	62	67	62	68	64	0.7	1	1.4	1.9	55	50	13	14	-	-	No	No	No	-
4434	1263 - 1269 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	W	297530.7	6249038.5	62	57	63	58	62	57	64	60	1.3	1.5	2.1	2.6	55	50	9	10	-	-	No	No	Yes	Type 3
4435	1271 - 1277 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	GF	E	297460.4	6249004.9	58	53	58	54	59	54	60	55	0.1	0.5	0.7	1.2	55	50	5	5	-	-	No	No	No	-
4435	1271 - 1277 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	GF	E	297468.1	6248997.7	67	61	67	62	67	62	68	64	0.4	0.8	1.1	1.6	55	50	13	14	-	-	No	No	No	-
4435	1271 - 1277 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	N	297439.0	6249004.1	53	48	55	50	55	50	57	52	1.9	2.1	2.4	2.8	55	50	2	2	No	No	No	No	Yes	Type 1
4435	1271 - 1277 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	GF	N	297452.4	6249009.0	59	54	60	55	60	55	61	56	0.6	0.9	1.2	1.6	55	50	6	6	-	-	No	No	No	-
4435	1271 - 1277 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	GF	N	297463.3	6249004.5	59	53	59	54	59	54	60	55	0.2	0.5	0.8	1.3	55	50	5	5	-	-	No	No	No	-
4435	1271 - 1277 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	S	297449.2	6248992.9	68	63	69	64	69	64	70	65	0.5	0.9	1.3	1.7	55	50	15	15	-	-	No	No	No	-
4435	1271 - 1277 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	GF	W	297432.2	6249000.1	62	57	63	59	63	58	65	61	1.1	1.4	1.8	2.3	55	50	10	11	-	-	No	No	Yes	Type 3
4435	1271 - 1277 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	W	297443.2	6249005.9	53	48	56	51	55	50	58	53	2.3	2.5	2.8	3.3	55	50	3	3	No	No	No	No	Yes	Type 1
4436	320 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	E	297511.7	6249311.2	52	47	54	49	53	48	56	51	2.1	2.2	2.9	3.3	55	50	1	1	No	No	No	No	Yes	Type 1
4436	320 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	N	297495.5	6249315.0	46	41	48	44	47	42	50	46	2.4	2.4	2.9	3.3	55	50	-	-	-	-	-	-	No	-
4436	320 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	S	297495.0	6249300.8	56	51	59	54	57	52	60	56	2.8	2.9	3.5	4	55	50	5	6	Yes	Yes	No	No	Yes	Type 2
4436	320 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	S	297508.8	6249301.4	56	51	59	54	57	52	60	56	2.8	2.8	3.5	3.9	55	50	5	6	Yes	Yes	No	No	Yes	Type 2
4436	320 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	W	297483.8	6249304.4	53	48	56	52	54	49	58	54	3.4	3.5	4.2	4.7	55	50	3	4	No	No	No	No	Yes	Type 1
4436	320 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	W	297502.6	6249302.2	55	50	58	53	56	51	60	55	3.2	3.2	3.9	4.4	55	50	5	5	Yes	Yes	No	No	Yes	Type 1
4437	320 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	NE	297478.7	6249312.5	46	41	48	43	47	42	49	45	1.9	1.9	2.4	2.7	55	50	-	-	-	-	-	-	No	-
4437	320 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	NW	297469.8	6249308.3	53	48	56	51	55	50	58	53	2.6	2.5	3.1	3.6	55	50	3	3	No	No	No	No	Yes	Type 1
4437	320 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	SE	297480.6	6249302.7	53	48	57	52	54	49	58	54	3.5	3.6	4.5	4.8	55	50	3	4	No	No	No	No	Yes	Type 1
4437	320 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	SW	297471.7	6249298.4	56	51	59	54	57	52	61	56	2.8	2.9	3.5	4	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
4438	316 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	N	297483.7	6249428.6	50	45	54	49	52	47	56	51	3.5	3.4	3.9	4.3	55	50	1	1	No	No	No	No	Yes	Type 1
4438	316 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	F 1	N	297483.7	6249428.6	51	47	55	50	53	48	57	52	3.2	3.1	3.5	3.9	55	50	2	2	No	No	No	No	Yes	Type 1
4438	316 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	NE	297495.5	6249417.9	53	48	55	50	54	49	56	51	1.3	1.5	2	2.4	55	50	1	1	-	-	No	No	Yes	Type 1
4438	316 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	F 1	NE	297495.5	6249417.9	54	49	55	51	55	50	57	52	1.3	1.5	2	2.5	55	50	2	2	-	-	No	No	Yes	Type 1
4438	316 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	S	297494.9	6249402.1	57	52	59	55	58	53	61	57	2.1	2.2	2.8	3.2	55	50	6	7	Yes	Yes	No	No	Yes	Type 2
4438	316 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	F 1	S	297494.9	6249402.1	58	53	60	55	59	54	62	57	2.1	2.2	2.8	3.2	55	50	7	7	Yes	Yes	No	No	Yes	Type 2
4438	316 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	W	297483.0	6249412.9	56	51	59	54	57	52	61	56	3.1	3.1	3.7	4.1	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
4438	316 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	F 1	W	297483.0	6249412.9	56	51	59	54	58	53	61	56	3	3	3.6	3.9	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
4575	309 - 319 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	E	297293.2	6249466.8	50	45	52	47	51	46	54	49	2.8	2.7	3.4	3.8	55	50	-	-	-	-	-	-	No	-
4575	309 - 319 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	N	297285.1	6249483.5	46	41	50	45	48	43	52	47	4.1	3.9	4.1	4.5	55	50	-	-	-	-	-	-	No	-
4575	309 - 319 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	S	297280.3	6249454.2	55	50	58	53	57	51	60	55	2.9	2.8	3.2	3.7	55	50	5	5	Yes	Yes	No	No	Yes	Type 1
4575	309 - 319 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	W	297272.3	6249470.9	51	46	54	49	53	48	56	52	3.5	3.4	3.7	4.1	55	50	1	2	No	No	No	No	Yes	Type 1
4577	316 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	NE	297396.7	6249411.9	50	45	53	48	51	46	54	50	2.3	2.5	3	3.4	55	50	-	-	-	-	-	-	No	-
4577	316 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	NW	297385.4	6249410.1	52	47	55	50	53	48	57	52	3	3	3.4	3.8	55	50	2	2	No	No	No	No	Yes	Type 1
4577	316 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	NW	297391.2	6249414.9	52	47	55	50	53	48	57	52	3	2.9	3.4	3.7	55	50	2	2	No	No	No	No	Yes	Type 1
4577	316 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	SE	297394.5	6249402.1	55	50	57	52	56	51	59	54	2.6	2.7	3.3	3.7	55	50	4	4	No	No	No	No	Yes	Type 1
4577	316 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	SW	297384.2	6249400.9	53	48	57	52	54	49	59	54	3.7	3.8	4.4	4.8	55	50	4	4	No	No	No	No	Yes	Type 1
4578	324 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	NE	297353.9	6249365.8	52	47	55	50	53	48	56	51	2.1	2.3	2.9	3.4	55	50	1	1	No	No	No	No	Yes	Type 1
4578	324 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	NE	297357.5	6249385.4	45	40	46	42	46	41	48	44	1.8	1.9	2.4	2.6	55	50	-	-	-	-	-	-	No	-
4578	324 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	NE	297379.4	6249385.3	51	46	52	47	52	47	53	49	1.1	1.2	1.7	2.2	55	50	-	-	-	-	-	-	No	-
4578	324 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	NW	297341.5	6249380.5	52	47	55	50	54	49	58	53	3.2	3	3.4	3.7	55	50	3	3	No	No	No	No	Yes	Type 1
4578	324 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	NW	297367.0	6249385.7	46	41	50	44	48	43	52	47	3.8	3.6	3.8	4.2	55	50	-	-	-	-	-	-	No	-
4578	324 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	SE	297352.1	6249358.8	55	50	58	53	56	51	59	55	2.7	2.7	3.3	3.8	55	50	4	5	No	Yes	No	No	Yes	Type 1
4578	324 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	SE	297356.2	6249371.2	53	48	56	51	54	49	58	53	2.9	3.1	3.8	4.3	55	50	3	3	No	No	No	No	Yes	Type 1
4578	324 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	SE	297377.8	6249372.1	55	50	58	53	56	51	60	55	2.6	2.7	3.4	3.8	55	50	5	5	Yes	Yes	No	No	Yes	Type 1
4578	324 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	SW	297339.7	6249362.5	53	48	57	52	55	50	59	54	3.7	3.7	4	4.4	55	50	4	4	No	No	No	No	Yes	Type 1
4578	324 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	SW	297364.2	6249370.6	54	49	57	52	55	50	59	54	3.5	3.5	4.2	4.6	55	50	4	4	No	No	No	No	Yes	Type 1
4579	326 - 332 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	NE	297300.4	6249352.1	51	46	54	49	53	48	55	51	2.3	2.4	2.7	3.2	55	50	-	1	-	No	-	No	Yes	Type 1
4579	326 - 332 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	F 1	NE	297300.4	6249352.1	53	48	55	50	54	49	57	52	1.9	2.1	2.5	2.9	55	50	2	2	No	No	No	No	Yes	Type 1
4579	326 - 332 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	NE	297306.3	6249346.7	51	46	52	48	52	47	54	49	1.3	1.6	2.1	2.6	55	50	-	-	-	-	-	-	No	-
4579	326 - 332 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	F 1	NE	297306.3	6249346.7	52	47	53	49	53	48	55	50	1.3	1.6	2	2.5	55	50	-	-	-	-	-	-	No	-
4579	326 - 332 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	NW	297291.8	6249347.2	53	48	56	51	56	50	59	54	3	2.9	3.2	3.6	55	50	4	4	No	No	No	No	Yes	Type 1
4579	326 - 332 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	F 1	NW	297291.8	6249347.2	54	49	57	52	56	51	60	55	2.9	2.8	3.1	3.4	55	50	5	5	Yes	Yes	No	No	Yes	Type 1
4579	326 - 332 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	SE	297304.7	6249333.7	56	51	59	54	57	52	60	56	2.8	2.9	3.5	3.9	55	50	5	6	Yes	Yes	No	No	Yes	Type 2
4579	326 - 332 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	F 1	SE	297304.7	6249333.7	56	52	59	54	58	53	61	56	2.7	2.7	3.3	3.7	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
4579	326 - 332 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	SW	297291.0	6249333.5	56	51	60	55	58	53	62	57	3.3	3.3	3.6	4.1	55	50	7	7	Yes	Yes	No	No	Yes	Type 2
4579	326 - 332 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	F 1	SW	297291.0	6249333.5	57	52	60	55	59	54	63	58	3.2	3.1	3.5	3.9	55	50	8	8	Yes	Yes	No	No	Yes	Type 2
4580	334 - 338 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	NE	297266.1	6249292.7	52	47	54	49	53	48	55	50	1.7	1.9	2.4	2.8	55	50	-	-	-	-	-	-	No	-
4580	334 - 338 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	F 1	NE	297266.1	6249292.7	53	48	55	50	54	49	56	52	1.7	1.9	2.4	2.8	55	50	1	2	No	No	No	No	Yes	Type 1
4580	334 - 338 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	NW	297255.2	6249292.5	53	48	56	51	56	50	59	54	2.8	2.7	3	3.3	55	50	4	4	No	No	No	No	Yes	Type 1
4580	334 - 338 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	F 1	NW	297255.2	6249292.5	55	50	57	52	57	52	60	55	2.6	2.6	2.8	3.2	55	50	5	5	Yes	Yes	No	No	Yes	Type 1
4580	334 - 338 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	NW	297258.9	6249296.5	53	48	56	51	55	50	58	54	2.8	2.6	2.9	3.3	55	50	3	4	No	No	No	No	Yes	Type 1
4580	334 - 338 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	F 1	NW	297258.9	6249296.5	54	49	57	52	57	52	60	55	2.6	2.6	2.9	3.2	55	50	5	5	Yes	Yes	No	No	Yes	Type 1

M12 Central LNDG concrete pavement surface noise levels

Receiver ID	Address	Noise catchment area	Receiver type	Façade				Predicted noise level Opening Year 2026				Predicted no se level Design Year 2036				Change in noise evel (Build - No Build)				NCG Project road noise criteria		NCG Project road noise criteria exceedance (dB)		Do noise levels equal or exceed the cumulative limit w th project roads adding ≥2dB to the total noise levels?		Is the contribution from the road project Acute?		Is the property considered for further treatment?	Category of treatment
				Floor level	Direction	x	y	No Build		Build		No Build		Build		Opening Year 2026		Design Year 2036											
								Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night		
4580	334 - 338 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	SE	297267.1	6249282.2	56	51	59	54	57	52	61	56	3	3	3.5	4	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
4580	334 - 338 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	F 1	SE	297267.1	6249282.2	57	52	59	55	58	53	61	57	2.7	2.8	3.3	3.8	55	50	6	7	Yes	Yes	No	No	Yes	Type 2
4580	334 - 338 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	SW	297257.0	6249283.0	55	50	59	54	57	52	61	56	3.5	3.6	3.9	4.3	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
4580	334 - 338 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	F 1	SW	297257.0	6249283.0	57	52	60	55	58	53	62	57	3.3	3.3	3.7	4.1	55	50	7	7	Yes	Yes	No	No	Yes	Type 2
4582	340 - 344 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	E	297205.5	6249251.3	47	42	50	45	48	43	51	47	2.4	2.5	3.1	3.5	55	50	-	-	-	-	-	-	No	-
4582	340 - 344 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	E	297211.7	6249236.8	56	51	59	54	57	52	61	56	3.4	3.3	3.9	4.4	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
4582	340 - 344 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	E	297212.6	6249243.2	55	50	58	54	56	51	60	56	3.2	3.3	3.9	4.4	55	50	5	6	Yes	Yes	No	No	Yes	Type 2
4582	340 - 344 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	N	297184.2	6249241.8	53	48	55	50	56	50	58	53	2.5	2.5	2.5	2.9	55	50	3	3	-	No	No	No	Yes	Type 1
4582	340 - 344 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	N	297201.1	6249257.2	52	47	55	50	55	49	57	53	2.8	2.7	2.7	3.2	55	50	2	3	No	No	No	No	Yes	Type 1
4582	340 - 344 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	N	297208.1	6249247.7	44	39	45	41	45	40	47	43	1.8	1.9	2.4	2.6	55	50	-	-	-	-	-	-	No	-
4582	340 - 344 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	NW	297191.8	6249244.7	53	48	56	50	56	50	58	53	2.6	2.5	2.6	2.9	55	50	3	3	No	No	No	No	Yes	Type 1
4582	340 - 344 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	S	297183.3	6249232.2	58	53	61	56	60	55	63	58	3.2	3.2	3.5	3.9	55	50	8	8	Yes	Yes	No	No	Yes	Type 2
4582	340 - 344 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	S	297193.0	6249224.7	58	54	62	57	60	55	64	59	3.1	3.1	3.5	3.9	55	50	9	9	Yes	Yes	No	No	Yes	Type 3
4582	340 - 344 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	SE	297205.4	6249228.8	57	52	60	55	58	53	62	58	3.4	3.5	3.9	4.4	55	50	7	8	Yes	Yes	No	No	Yes	Type 2
4582	340 - 344 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	W	297178.6	6249237.2	57	53	60	55	60	55	63	58	2.9	2.8	3.1	3.5	55	50	8	8	Yes	Yes	No	No	Yes	Type 2
4582	340 - 344 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	W	297186.2	6249229.8	57	52	60	55	60	54	63	58	2.9	2.8	3.1	3.5	55	50	8	8	Yes	Yes	No	No	Yes	Type 2
4582	340 - 344 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	W	297196.0	6249252.0	54	49	56	51	56	51	59	54	2.5	2.5	2.6	3	55	50	4	4	No	No	No	No	Yes	Type 1
4583	346 - 356 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	NE	297126.7	6249225.7	50	45	52	48	51	46	54	50	2.1	2.3	2.8	3.2	55	50	-	-	-	-	-	-	No	-
4583	346 - 356 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	NW	297110.4	6249222.7	58	53	60	55	61	56	63	58	1.3	1.3	1.6	1.9	55	50	8	8	-	-	No	No	No	-
4583	346 - 356 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	SE	297121.2	6249209.8	59	54	62	57	62	57	64	60	2.3	2.4	2.5	3	55	50	9	10	Yes	Yes	No	No	Yes	Type 3
4583	346 - 356 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	SW	297104.9	6249206.8	63	58	65	60	65	60	67	63	1.7	1.8	1.9	2.3	55	50	12	13	-	-	No	No	Yes	Type 4
4584	1306 MAMRE ROAD MOUNT VERNON 2178	NCA04	Residential	GF	E	297294.3	6249022.6	56	51	58	53	57	52	59	55	1.5	1.8	2.3	2.8	55	50	4	5	No	Yes	No	No	Yes	Type 1
4584	1306 MAMRE ROAD MOUNT VERNON 2178	NCA04	Residential	GF	E	297305.0	6249007.8	62	57	64	59	62	57	66	61	2.3	2.5	3.2	3.6	55	50	11	11	Yes	Yes	No	No	Yes	Type 3
4584	1306 MAMRE ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	N	297290.8	6249029.9	57	52	59	54	59	54	61	57	1.7	1.7	1.9	2.3	55	50	6	7	-	-	No	No	Yes	Type 2
4584	1306 MAMRE ROAD MOUNT VERNON 2178	NCA04	Residential	GF	NE	297298.9	6249016.0	55	50	56	51	56	51	58	53	1	1.3	1.7	2.2	55	50	3	3	-	-	No	No	Yes	Type 1
4584	1306 MAMRE ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	S	297281.1	6249002.7	67	62	68	63	68	63	70	66	1.4	1.5	1.8	2.3	55	50	15	16	-	-	Yes	Yes	Yes	Type 5
4584	1306 MAMRE ROAD MOUNT VERNON 2178	NCA04	Residential	GF	S	297294.3	6249004.1	65	60	66	62	66	61	69	64	1.4	1.6	2.1	2.7	55	50	14	14	-	Yes	No	Yes	Yes	Type 4
4584	1306 MAMRE ROAD MOUNT VERNON 2178	NCA04	Residential	GF	SE	297286.0	6249004.2	64	59	66	61	65	60	68	63	1.6	1.8	2.3	2.8	55	50	13	13	-	Yes	No	No	Yes	Type 4
4584	1306 MAMRE ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	W	297281.4	6249017.6	64	59	65	60	66	61	68	63	1.1	1.2	1.6	2	55	50	13	13	-	-	No	No	No	-
4585	1279 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	GF	E	297388.5	6249001.4	62	57	64	59	63	58	65	60	1.3	1.7	2.2	2.7	55	50	10	10	Yes	Yes	No	No	Yes	Type 3
4585	1279 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	F 1	E	297388.5	6249001.4	64	59	65	60	65	59	66	62	1.1	1.4	1.9	2.4	55	50	11	12	-	-	No	No	Yes	Type 4
4585	1279 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	N	297370.3	6249013.8	56	51	57	52	57	52	59	54	1.1	1.4	1.6	2	55	50	4	4	-	-	No	No	No	-
4585	1279 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	F 1	N	297370.3	6249013.8	58	53	59	54	59	54	61	57	1.5	1.6	2	2.5	55	50	6	7	-	-	No	No	Yes	Type 2
4585	1279 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	N	297385.6	6249013.5	57	52	58	53	58	53	59	55	1.1	1.3	1.6	2.1	55	50	4	5	-	-	No	No	Yes	Type 1
4585	1279 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	F 1	N	297385.6	6249013.5	59	53	60	55	60	55	62	57	1.3	1.6	1.8	2.3	55	50	7	7	-	-	No	No	Yes	Type 2
4585	1279 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	GF	S	297370.4	6248992.7	66	61	67	62	67	62	69	64	1.3	1.5	2	2.6	55	50	14	14	-	-	No	Yes	Yes	Type 4
4585	1279 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	F 1	S	297370.4	6248992.7	67	62	68	64	68	63	70	65	1.1	1.3	1.8	2.3	55	50	15	15	-	-	Yes	Yes	Yes	Type 5
4585	1279 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	GF	W	297356.3	6249004.5	62	57	64	59	64	59	66	61	1.3	1.4	2	2.4	55	50	11	11	-	-	No	No	Yes	Type 3
4585	1279 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	F 1	W	297356.3	6249004.5	64	59	65	60	65	60	67	62	1.1	1.3	1.8	2.3	55	50	12	12	-	-	No	No	Yes	Type 4
4588	343 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	E	297059.0	6249256.4	56	51	59	54	58	53	61	56	2.6	2.7	2.7	3.2	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
4588	343 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	N	297032.6	6249272.0	61	55	61	56	63	58	65	60	0.7	0.8	1.1	1.4	55	50	10	10	-	-	No	No	No	-
4588	343 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	N	297047.7	6249268.1	54	49	55	50	57	51	58	53	1.2	1.2	1.5	1.7	55	50	3	3	-	-	No	No	No	-
4588	343 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	S	297041.7	6249254.6	62	57	63	58	65	59	66	61	1.4	1.4	1.7	2	55	50	11	11	-	-	No	No	No	-
4588	343 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	W	297028.7	6249265.7	62	57	63	58	65	60	66	61	0.8	0.8	1.2	1.5	55	50	11	11	-	-	No	No	No	-
4594	321 - 333 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	NE	297227.6	6249384.9	47	42	49	45	48	43	51	47	2.6	2.7	3.2	3.5	55	50	-	-	-	-	-	-	No	-
4594	321 - 333 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	NW	297214.5	6249382.5	51	46	53	48	53	48	56	51	2.6	2.6	2.9	3.2	55	50	1	1	No	No	No	No	Yes	Type 1
4594	321 - 333 MOUNT VERNON ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	SE	297222.7	6249372.1	52	47	55	50	54	49	57	53	3.2	3.1	3.5	3.9	55	50	2	3	No	No	No	No	Yes	Type 1
4594	321 - 333 MOUNT VERNON ROAD MOUNT VERNON 2178	NCA04	Residential	GF	SW	297209.5	6249369.7	54	49	57	52	56	51	60	55	3	3	3.2	3.6	55	50	5	5	Yes	Yes	No	No	Yes	Type 1
4596	1285 - 1291 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	GF	N	296960.0	6249169.1	62	57	63	58	65	60	66	61	0.3	0.2	0.8	1	55	50	11	11	-	-	No	No	No	-
4596	1285 - 1291 MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	F 1	N	296960.0	6249169.1	65	60	65	60	67	62	68	63	0.4	0.3	0.8	1.1	55	50	13	13	-	-	No	No	No	-
4596	1285 - 1291 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	GF	NE	296969.5	6249165.8	64	59	65	60	67	62	68	63	0.7	0.7	1	1.3	55	50	13	13	-	-	No	No	No	-
4596	1285 - 1291 MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	F 1	NE	296969.5	6249165.8	66	61	67	62	69	64	70	65	0.7	0.6	1	1.3	55	50	15	15	-	-	No	No	No	-
4596	1285 - 1291 MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	GF	NW	296949.8	6249166.4	59	54	60	55	62	57	63	58	1	1	1.3	1.6	55	50	8	8	-	-	No	No	No	-
4596	1285 - 1291 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	F 1	NW	296949.8	6249166.4	62	57	63	58	65	59	66	61	1.3	1.4	1.6	1.9	55	50	11	11	-	-	No	No	No	-
4596	1285 - 1291 MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	GF	SE	296966.4	6249156.4	62	57	65	60	65	60	68	63	2.7	2.7	2.8	3.3	55	50	13	13	Yes	Yes	No	No	Yes	Type 4
4596	1285 - 1291 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	F 1	SE	296966.4	6249156.4	64	59	66	62	66	61	69	64	2.8	2.8	2.8	3.3	55	50	14	14	Yes	Yes	Yes	Yes	Yes	Type 4
4596	1285 - 1291 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	GF	SW	296953.5	6249156.5	55	50	63	58	57	52	65	61	8.2	8.1	8.7	9.2	55	50	10	11	Yes	Yes	Yes	Yes	Yes	Type 3
4596	1285 - 1291 MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	F 1	SW	296953.5	6249156.5	57	53	65	60	59	54	67	63	7.5	7.5	8	8.5	55	50	12	13	Yes	Yes	Yes	Yes	Yes	Type 4
4598	1293A MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	GF	NE	296994.1	6249119.7	61	56	63	58	63	58	66	61	2.2	2.3	2.2	2.7	55	50	11	11	-	-	No	No	Yes	Type 3
4598	1293A MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	F 1	NE	296994.1	6249119.7	63	58	65	60	65	60	68	63	2.1	2.2	2.2	2.7	55	50	13	13	-	-	No	No	Yes	Type 4
4598	1293A MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	GF	NE	296998.4	6249132.2	64	58	64	59	66	61	67	63	0.8	0.9	1.1	1.4	55	50	12	13	-	-	No	No	No	-
4598	1293A MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	F 1	NE	296998.4	6249132.2	65	60	66	61	68	63	69	65	0.9	0.9	1.2	1.5	55	50	14	15	-	-	No	No	No	-
4598	1293A MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	GF	NW	296987.2	6249128.6	60	55	63	58	62	57	65	61	3	3.1	2.9	3.5	55	50	10	11	Yes	Yes	No	No	Yes	Type 3
4598	1293A MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	F 1	NW	296987.2	6249128.6	62	57	65	60	64	59	67	63	3	3.1	3	3.5	55	50	12	13	Yes	Yes	No	No	Yes	Type 4
4598	1293A MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	GF	SE	296992.2	6249114.1	61	56	66	61	63	58	68	64	4.8	5	4.8	5.4	55	50	13	14	Yes	Yes	Yes	Yes	Yes	Type 4
4598	1293A MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	F 1	SE	296992.2	6249114.1	63	58	67	62	65	60	70	65	4.2	4.3	4.3	4.8	55	50	15	15	Yes	Yes	Yes	Yes	Yes	Type 5
4598	1293A MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	GF	SE	296996.9	6249124.0	62	57	64	60	64	59	67	62	2.8	2.9	2.7	3.3	55	50	12	12	Yes	Yes	No	No	Yes	Type 4
4598	1293A MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	F 1	SE	296996.9	6249124.0	63	58	66	61	66	61	69	64	2.7	2.7	2.7	3.2	55	50	14	14	Yes	Yes	Yes	Yes	Yes	Type 4
4598	1293A MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	GF	SW	296983.9	6249116.3	57	52	65	61	58	53	68	63	8.8	9.1	9.4	10.2	55	50	13	13	Yes	Yes	Yes	Yes	Yes	Type 4
4598	1293A MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	F 1	SW	296983.9	6249116.3	58	54	67	62	60	55	69	65	8.5	8.5	8.8	9.4	55	50	14	15	Yes	Yes	Yes	Yes	Yes	Type 5
4599	1277 - 1283 MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	GF	NE	296920.7	6249198.8	61	56	62	57	64	58	65	60	0.9	0.9	1.2	1.5	55	50	10	10	-	-	No	No	No	-
4599	1277 - 1283 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	F 1	NE	296920.7	6249198.8	63	58	64	59	66	61	67	62	0.9	0.8	1.2	1.5	55	50	12	12	-	-	No	No	No	-
4599	1277 - 1283 MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	GF	NE	296921.8	6249209.1	64	59	64	59	67	61	67	62	0.5	0.5	0.9	1.2	55	50	12	12	-	-	No	No	No	-
4599	1277 - 1283 MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	F 1	NE	296921.8	6249209.1	66	61	66	61	69	63	70	65	0.5	0.5	0.9	1.2	55	50	15	15	-	-	No	No	No	-
4599	1277 - 1283 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	GF	NW	296911.6	6249205.6	60	55	61	56	63	57	64	59	1.5	1.5	1.7	2	55	50	9	9	-	-	No	No	No	-
4599	1277 - 1283 MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	F 1	NW	296911.6	6249205.6	63	58	64	59	66	61	67	62	1.1	1.1	1.5	1.7	55	50	12	12	-	-	No	No	No	-
4599	1277 - 1283 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	GF	SE	296911.6	6249194.4	53	48	59	54	55	50	61	57	6	6	6.4	6.9	55	50	6	7	Yes	Yes	No	No	Yes	Type 2
4599	1277 - 1283 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	F 1	SE	296911.6	6249194.4	57	52	62	57	58	53	64	59	5.3	5.2	5.6	6	55	50	9	9	Yes	Yes	No	No	Yes	Type 3
4599	1277 - 1283 MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	GF	SE	296920.3	6249192.8	60	55	62	57	63	58	65	60	2.1	2.1	2.2	2.7	55	50	10	10	-	-	No	No	Yes	Type 3
4599	1277 - 1283 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	F 1	SE	296920.3	6249192.8	62	57	65	60	65	60	67	62	2.2	2.1	2.3	2.6	55	50	12	12	-	-	No	No	Yes	Type 4
4599	1277 - 1283 MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	GF	SE	296921.2	6249202.7	61	56	62	57	64	58	65	60	1	1.1	1.3	1.7	55	50	10	10	-	-	No	No	No	-
4599	1277 - 1283 MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	F 1	SE	296921.2	6249202.7	63	58	64	59	66	61	67	62	1.2	1.1	1.4	1.7	55	50	12	12	-	-	No	No	No	-
4599	1277 - 1283 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	GF	SW	296906.7	6249195.9	53	48	60	55	55	50	62	57	6.6	6.6	6.9	7.4	55	50	7	7	Yes	Yes	No	No	Yes	Type 2
4599	1277 - 1283 MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	F 1	SW	296906.7	6249195.9	57	52	63	58	59	54	65	60	5.2	5.1	5.3	5.7	55	50	10	10	Yes	Yes	No	No	Yes	Type 3
4599	1277 - 1283 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	GF	SW	296914.1	6249193.2	53	48	59	54	55	50	61	57	6.1	6.1	6.6	7	55	50	6	7	Yes	Yes	No	No	Yes	Type 2
4599	1277 - 1283 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	F 1	SW	296914.1	6249193.2	56	52	62	57	58	53	64	60	5.5	5.5	5.8	6.3	55	50	9	10	Yes	Yes	No	No	Yes	Type 3
4600	1269 - 1275 MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	GF	NE	296872.0	6249259.2	65	59	65	60	67	62	68	63	0.2	0.2	0.8	1	55	50	13	13	-	-	No	No	No	-
4600	1269 - 1275 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	GF	NW	296863.1	6249261.7	63	57	64	59	65	60	67	62	1.4	1.3	1.6	1.9	55	50	12	12	-	-	No	No	No	-
4600	1269 - 1275 MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	GF	SE	296875.3	6249250.5	62	56	63	58	64	59	66	61	1.5	1.5	1.7	2.1	55	50	11	11	-	-	No	No	Yes	Type 3
4600	1269 - 1275 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	GF	SW	296866.4	6249252.9	54	50	61	56	56	51	63	59	7	6.8	7.3	7.8	55	50	8	9	Yes	Yes	No	No	Yes	Type 3
4601	1269 - 1275 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	GF	NE	296848.2	6249282.5	64	59	64	59	67	62	68	63	0.2	0.2	0.8	0.9	55	50	13	13	-	-	No	No	No	-
4601	1269 - 1275 MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	GF	NW	296832.9	6249293.3	62	57	63	58	65	59	66	61	0.9	0.8	1.2	1.5	55	50	11	11	-	-	No	No	No	-
4601	1269 - 1275 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	GF	SE	296854.0	6249265.1	60	54	62	57	62	57	65	60	2.2	2.3	2.3	2.8	55	50	10	10	-	-	No	No	Yes	Type 3
4601	1269 - 1275 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	GF	SW	296838.5	6249275.9	54	49	61	56	55	50	63	58	7.2	7.1	7.6	8.1	55	50	8	8	Yes	Yes	No	No	Yes	Type 2
4602	1261 - 1267 MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	GF	NE	296814.1	6249320.6	64	59	64	59	67	62	68	63	0.2	0	0.6	0.8	55	50	13	13	-	-	No	No	No	-
4602	1261 - 1267 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	GF	NE	296819.9	6249317.3	64	59	64	59	66	61	67	62	0.2	0.1	0.6	0.9	55	50	12	12	-	-	No	No	No	-
4602	1261 - 1267 MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	GF	NE	296828.6	6249316.6	66	61	66	61	69	64	69	64	0.3	0.2	0.7	0.9	55	50	14	14	-	-	No	No	No	-
4602	1261 - 1267 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	GF	NW	296793.4	6249298.1	53	48	58	53	56	50	60	56	4.9	4.8	4.8	5.2	55	50	5	6	Yes	Yes	No	No	Yes	Type 2
4602	1261 - 1267 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	GF	NW	296799.1	6249306.9	52	47	57	52	54	49	59	55	5.3	5.1	5.5	5.9	55	50	4	5	No	Yes	No	No	Yes	Type 1
4602	1261 - 1267 MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	GF	NW	296804.2	6249317.2	59	53	60	55	61	56	63	58	1.2	1.1	1.5	1.8	55	50	8	8	-	-	No	No	No	-

M12 Central LNDG concrete pavement surface noise levels

Receiver ID	Address	Noise catchment area	Receiver type	Façade				Predicted noise level Opening Year 2026				Predicted no se level Design Year 2036				Change in noise evel (Build - No Build)				NCG Project road noise criteria		NCG Project road noise criteria exceedance (dB)		Do noise levels equal or exceed the cumulative limit w th project roads adding ≥2dB to the total noise levels?		Is the contribution from the road project Acute?		Is the property considered for further treatment?	Category of treatment
				Floor level	Direction	x	y	No Build		Build		No Build		Build		Opening Year 2026		Design Year 2036													
								Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night		
4602	1261 - 1267 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	GF	NW	296815.3	6249319.3	64	59	64	59	67	62	67	62	0.1	0.1	0.7	0.9	55	50	12	12	-	-	No	No	No	-
4602	1261 - 1267 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	GF	NW	296823.3	6249316.7	63	58	63	58	66	61	67	62	0.2	0.1	0.7	0.9	55	50	12	12	-	-	No	No	No	-
4602	1261 - 1267 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	GF	SE	296811.1	6249299.5	59	54	62	57	62	56	64	60	2.5	2.6	2.6	3.2	55	50	9	10	Yes	Yes	No	No	Yes	Type 3
4602	1261 - 1267 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	GF	SW	296788.4	6249288.6	54	50	62	57	56	51	64	60	7.8	7.6	8.3	8.6	55	50	9	10	Yes	Yes	No	No	Yes	Type 3
4602	1261 - 1267 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	GF	SW	296798.4	6249308.2	53	48	58	52	55	49	60	55	5	4.8	5.1	5.6	55	50	5	5	Yes	Yes	No	No	Yes	Type 1
4602	1261 - 1267 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	GF	SW	296799.2	6249303.2	52	47	57	52	54	49	59	55	5.4	5.3	5.4	5.8	55	50	4	5	No	Yes	No	No	Yes	Type 1
4603	1257 MAMRE ROAD KEMPS CREEK 2178	NCA04	Residential	GF	NE	296762.4	6249378.3	66	61	66	61	69	64	70	65	0.1	0.1	0.7	0.9	55	50	15	15	-	-	No	No	No	-
4603	1257 MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	GF	NW	296752.7	6249378.9	64	59	64	59	66	61	67	63	0.7	0.5	1	1.3	55	50	12	13	-	-	No	No	No	-
4603	1257 MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	GF	SE	296761.1	6249368.9	62	56	63	58	64	59	66	61	1.1	1.1	1.3	1.6	55	50	11	11	-	-	No	No	No	-
4603	1257 MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	GF	SW	296751.4	6249369.6	56	51	60	55	58	53	62	57	4	3.9	4.1	4.5	55	50	7	7	Yes	Yes	No	No	Yes	Type 2
4608	1247 MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	GF	NE	296698.0	6249406.3	62	57	63	57	65	60	66	61	0.4	0.3	0.8	1.1	55	50	11	11	-	-	No	No	No	-
4608	1247 MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	GF	NW	296689.1	6249409.4	60	55	61	56	63	58	64	60	1.3	1.2	1.5	1.8	55	50	9	10	-	-	No	No	No	-
4608	1247 MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	GF	SE	296698.1	6249397.2	59	54	61	56	62	56	64	59	2	2	2.2	2.6	55	50	9	9	-	-	No	No	Yes	Type 3
4608	1247 MAMRE ROAD, KEMPS CREEK 2178	NCA04	Residential	GF	SW	296689.3	6249400.3	51	46	58	53	53	48	60	56	7.4	7.2	7.7	8.1	55	50	5	6	Yes	Yes	No	No	Yes	Type 2
4609	1239 - 1245 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NE	296650.4	6249517.8	66	61	67	61	69	64	70	65	0.3	0.2	0.7	1	55	50	15	15	-	-	No	No	No	-
4609	1239 - 1245 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	F 1	NE	296650.4	6249517.8	68	63	68	63	71	66	71	66	0.2	0.2	0.7	0.9	55	50	16	16	-	-	No	No	No	-
4609	1239 - 1245 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	NW	296637.8	6249522.6	61	56	62	57	64	59	65	60	0.7	0.6	1	1.2	55	50	10	10	-	-	No	No	No	-
4609	1239 - 1245 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	F 1	NW	296637.8	6249522.6	63	58	64	58	66	60	67	62	0.8	0.6	1.1	1.3	55	50	12	12	-	-	No	No	No	-
4609	1239 - 1245 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	SE	296650.9	6249504.4	63	58	64	59	66	61	67	62	0.7	0.7	1.1	1.3	55	50	12	12	-	-	No	No	No	-
4609	1239 - 1245 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	F 1	SE	296650.9	6249504.4	64	59	65	60	67	62	68	63	0.7	0.6	1	1.3	55	50	13	13	-	-	No	No	No	-
4609	1239 - 1245 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	SW	296638.3	6249509.1	51	46	57	52	53	48	59	55	6.3	6.1	6.7	7	55	50	4	5	No	Yes	No	No	Yes	Type 1
4609	1239 - 1245 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	F 1	SW	296638.3	6249509.1	53	48	59	54	55	50	61	56	5.8	5.6	6	6.3	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
4610	1233 - 1237 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	NE	296630.1	6249542.7	66	61	66	61	69	64	70	65	0.2	0.1	0.7	0.9	55	50	15	15	-	-	No	No	No	-
4610	1233 - 1237 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	NE	296637.3	6249536.8	66	61	67	62	69	64	70	65	0.2	0.2	0.7	0.9	55	50	15	15	-	-	No	No	No	-
4610	1233 - 1237 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	NW	296620.4	6249545.4	63	58	63	58	66	61	67	62	0.3	0.3	0.8	1	55	50	12	12	-	-	No	No	No	-
4610	1233 - 1237 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	NW	296633.6	6249538.2	65	60	65	60	68	62	68	63	0.2	0.1	0.6	0.9	55	50	13	13	-	-	No	No	No	-
4610	1233 - 1237 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	SE	296633.1	6249529.7	61	56	62	57	64	59	65	60	0.7	0.6	1	1.3	55	50	10	10	-	-	No	No	No	-
4610	1233 - 1237 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	SW	296621.1	6249533.7	51	46	56	51	53	48	58	53	4.5	4.3	4.6	5	55	50	3	3	No	No	No	No	Yes	Type 1
4611	1266A MAMRE ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	NE	296949.1	6249321.3	53	48	54	49	56	51	57	52	1.2	1.2	1.5	1.8	55	50	2	2	-	-	No	No	No	-
4611	1266A MAMRE ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	NW	296933.4	6249325.3	64	59	65	59	67	62	68	63	0.4	0.3	0.9	1.1	55	50	13	13	-	-	No	No	No	-
4611	1266A MAMRE ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	SE	296943.2	6249311.6	64	59	64	59	67	61	68	62	0.5	0.4	1	1.2	55	50	13	12	-	-	No	No	No	-
4611	1266A MAMRE ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	SE	296956.3	6249307.5	62	57	63	57	65	59	66	61	0.6	0.5	1	1.3	55	50	11	11	-	-	No	No	No	-
4611	1266A MAMRE ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	SW	296934.6	6249314.1	67	62	67	62	70	64	71	65	0.3	0.3	0.8	1	55	50	16	15	-	-	No	No	No	-
4611	1266A MAMRE ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	SW	296947.9	6249308.9	65	59	65	60	68	62	69	63	0.4	0.4	0.9	1.1	55	50	14	13	-	-	No	No	No	-
4612	1266A MAMRE ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	NE	296968.4	6249374.1	47	42	49	44	49	44	51	46	1.8	1.8	2.1	2.4	55	50	-	-	-	-	-	-	No	-
4612	1266A MAMRE ROAD, MOUNT VERNON 2178	NCA04	Residential	F 1	NE	296968.4	6249374.1	49	44	51	46	51	46	53	49	1.9	1.9	2.2	2.6	55	50	-	-	-	-	-	-	No	-
4612	1266A MAMRE ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	NW	296949.2	6249379.0	59	54	60	55	62	57	63	58	1	1	1.3	1.6	55	50	8	8	-	-	No	No	No	-
4612	1266A MAMRE ROAD, MOUNT VERNON 2178	NCA04	Residential	F 1	NW	296949.2	6249379.0	60	55	61	56	63	58	64	59	1	1	1.4	1.6	55	50	9	9	-	-	No	No	No	-
4612	1266A MAMRE ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	SE	296974.3	6249355.2	57	51	58	53	59	54	61	56	1.2	1.2	1.5	1.8	55	50	6	6	-	-	No	No	No	-
4612	1266A MAMRE ROAD, MOUNT VERNON 2178	NCA04	Residential	F 1	SE	296974.3	6249355.2	58	53	60	55	61	56	63	58	1.3	1.3	1.6	1.9	55	50	8	8	-	-	No	No	No	-
4612	1266A MAMRE ROAD, MOUNT VERNON 2178	NCA04	Residential	GF	SW	296955.1	6249360.2	61	56	62	57	64	59	65	60	1	0.9	1.3	1.6	55	50	10	10	-	-	No	No	No	-
4612	1266A MAMRE ROAD, MOUNT VERNON 2178	NCA04	Residential	F 1	SW	296955.1	6249360.2	63	58	64	59	65	60	67	62	1	1	1.3	1.6	55	50	12	12	-	-	No	No	No	-
4613	1260 - 1264 MAMRE ROAD MOUNT VERNON 2178	NCA04	Residential	GF	NE	296956.6	6249469.7	45	40	47	42	47	42	49	45	1.9	2	2.4	2.7	55	50	-	-	-	-	-	-	No	-
4613	1260 - 1264 MAMRE ROAD MOUNT VERNON 2178	NCA04	Residential	F 1	NE	296956.6	6249469.7	48	43	50	45	50	45	52	47	2.1	2.1	2.5	2.7	55	50	-	-	-	-	-	-	No	-
4613	1260 - 1264 MAMRE ROAD MOUNT VERNON 2178	NCA04	Residential	GF	NW	296938.0	6249476.6	56	51	58	53	58	53	60	56	2	1.9	2.1	2.4	55	50	6	6	-	-	No	No	Yes	Type 2
4613	1260 - 1264 MAMRE ROAD MOUNT VERNON 2178	NCA04	Residential	F 1	NW	296938.0	6249476.6	57	52	59	53	59	54	61	56	1.9	1.8	2	2.3	55	50	6	6	-	-	No	No	Yes	Type 2
4613	1260 - 1264 MAMRE ROAD MOUNT VERNON 2178	NCA04	Residential	GF	SE	296961.8	6249452.0	55	50	57	52	58	53	60	55	1.7	1.6	1.8	2.2	55	50	5	5	-	-	No	No	Yes	Type 1
4613	1260 - 1264 MAMRE ROAD MOUNT VERNON 2178	NCA04	Residential	F 1	SE	296961.8	6249452.0	57	51	58	53	59	54	61	56	1.7	1.8	2	2.3	55	50	6	6	-	-	No	No	Yes	Type 2
4613	1260 - 1264 MAMRE ROAD MOUNT VERNON 2178	NCA04	Residential	GF	SW	296943.0	6249458.9	58	53	60	55	61	56	63	58	1.7	1.6	1.9	2.2	55	50	8	8	-	-	No	No	Yes	Type 2
4613	1260 - 1264 MAMRE ROAD MOUNT VERNON 2178	NCA04	Residential	F 1	SW	296943.0	6249458.9	59	54	61	56	62	57	64	59	1.6	1.6	1.9	2.2	55	50	9	9	-	-	No	No	Yes	Type 3
4614	1258 MAMRE ROAD MOUNT VERNON 2178	NCA03	Residential	GF	NE	297014.1	6249551.8	46	41	49	44	48	43	52	47	3.7	3.6	3.6	3.9	55	50	-	-	-	-	-	-	No	-
4614	1258 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	NE	297014.1	6249551.8	49	44	52	47	51	46	54	49	2.9	2.9	3	3.3	55	50	-	-	-	-	-	-	No	-
4614	1258 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	NE	297020.9	6249551.2	43	38	45	40	45	40	47	42	1.9	1.9	2.3	2.6	55	50	-	-	-	-	-	-	No	-
4614	1258 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	NE	297020.9	6249551.2	47	42	49	44	49	44	52	47	2.2	2.2	2.6	3	55	50	-	-	-	-	-	-	No	-
4614	1258 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	NE	297031.8	6249547.2	45	40	47	42	46	41	49	44	2.1	2.1	2.6	2.9	55	50	-	-	-	-	-	-	No	-
4614	1258 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	NE	297031.8	6249547.2	48	43	50	45	50	45	52	48	2.4	2.3	2.7	3.1	55	50	-	-	-	-	-	-	No	-
4614	1258 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	NE	297038.0	6249535.0	45	40	47	42	46	41	49	44	2.3	2.3	2.8	3.1	55	50	-	-	-	-	-	-	No	-
4614	1258 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	NE	297038.0	6249535.0	48	43	50	45	49	44	52	48	2.5	2.4	2.9	3.2	55	50	-	-	-	-	-	-	No	-
4614	1258 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	NW	297007.8	6249549.3	53	48	56	51	56	51	59	54	2.9	2.8	2.9	3.3	55	50	4	4	No	No	No	No	Yes	Type 1
4614	1258 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	NW	297007.8	6249549.3	55	50	57	52	57	52	60	55	2.7	2.6	2.8	3.2	55	50	5	5	Yes	Yes	No	No	Yes	Type 1
4614	1258 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	NW	297015.5	6249552.1	47	42	51	45	50	45	53	48	3.4	3.3	3.3	3.7	55	50	-	-	-	-	-	-	No	-
4614	1258 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	NW	297015.5	6249552.1	50	45	53	48	52	47	55	50	2.8	2.7	2.9	3.2	55	50	-	-	-	-	-	-	No	-
4614	1258 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	NW	297023.6	6249550.3	43	38	45	40	45	40	47	42	2.1	2.1	2.5	2.8	55	50	-	-	-	-	-	-	No	-
4614	1258 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	NW	297023.6	6249550.3	47	42	50	45	49	44	52	47	2.3	2.3	2.6	3	55	50	-	-	-	-	-	-	No	-
4614	1258 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	SE	297035.5	6249539.3	45	40	48	43	47	42	49	45	2.4	2.4	2.9	3.2	55	50	-	-	-	-	-	-	No	-
4614	1258 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	SE	297035.5	6249539.3	48	44	51	46	50	45	53	49	2.6	2.6	3	3.4	55	50	-	-	-	-	-	-	No	-
4614	1258 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	SE	297037.7	6249524.6	53	48	56	51	56	50	58	53	2.3	2.3	2.5	3	55	50	3	3	No	No	No	No	Yes	Type 1
4614	1258 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	SE	297037.7	6249524.6	54	49	57	52	57	51	59	55	2.6	2.4	2.7	3.2	55	50	4	5	No	Yes	No	No	Yes	Type 1
4614	1258 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	SW	297018.0	6249532.0	56	51	58	53	58	53	61	56	2.8	2.7	2.9	3.3	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
4614	1258 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	SW	297018.0	6249532.0	57	52	59	54	59	54	62	57	2.7	2.7	2.8	3.3	55	50	7	7	Yes	Yes	No	No	Yes	Type 2
4615	1242 - 1256 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	E	296980.6	6249592.4	45	40	47	43	47	42	49	45	2.1	2.1	2.6	2.9	55	50	-	-	-	-	-	-	No	-
4615	1242 - 1256 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	E	296980.6	6249592.4	49	44	51	46	50	45	53	49	2.6	2.6	3.1	3.4	55	50	-	-	-	-	-	-	No	-
4615	1242 - 1256 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	NE	296977.3	6249602.3	45	40	47	42	47	42	49	44	2.1	2.1	2.5	2.9	55	50	-	-	-	-	-	-	No	-
4615	1242 - 1256 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	NE	296977.3	6249602.3	48	43	50	45	49	44	52	47	2.4	2.5	2.9	3.2	55	50	-	-	-	-	-	-	No	-
4615	1242 - 1256 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	NW	296966.7	6249599.1	52	47	55	50	55	50	58	53	3	2.8	3	3.3	55	50	3	3	No	No	No	No	Yes	Type 1
4615	1242 - 1256 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	NW	296966.7	6249599.1	53	48	56	51	56	51	59	54	2.7	2.6	2.8	3.1	55	50	4	4	No	No	No	No	Yes	Type 1
4615	1242 - 1256 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	SE	296976.9	6249580.4	54	50	57	52	57	52	59	55	2.4	2.2	2.5	2.9	55	50	4	5	No	Yes	No	No	Yes	Type 1
4615	1242 - 1256 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	SE	296976.9	6249580.4	55	50	58	53	58	53	60	56	2.3	2.3	2.6	2.9	55	50	5	6	Yes	Yes	No	No	Yes	Type 2
4615	1242 - 1256 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	SW	296965.1	6249584.7	56	51	59	54	59	54	62	57	2.6	2.6	2.7	3.1	55	50	7	7	Yes	Yes	No	No	Yes	Type 2
4615	1242 - 1256 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	SW	296965.1	6249584.7	57	52	60	55	60	55	62	58	2.5	2.4	2.6	3	55	50	7	8	Yes	Yes	No	No	Yes	Type 2
4616	1242 - 1256 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	NE	296952.7	6249623.6	45	40	47	42	46	41	48	44	2	2	2.4	2.8	55	50	-	-	-	-	-	-	No	-
4616	1242 - 1256 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	NE	296952.7	6249623.6	47	42	49	44	49	44	51	47	2.2	2.2	2.6	3	55	50	-	-	-	-	-	-	No	-
4616	1242 - 1256 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	NW	296940.6	6249626.0	53	48	56	51	55	50	58	53	2.8	2.7	2.7	3.1	55	50	3	3	No	No	No	No	Yes	Type 1
4616	1242 - 1256 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	NW	296940.6	6249626.0	54	49	56	51	56	51	59	54	2.6	2.5	2.7	2.9	55	50	4	4	No	No	No	No	Yes	Type 1
4616	1242 - 1256 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	SE	296952.7	6249611.8	55	50	57	52	57	52	60	55	2.2	2.1	2.4	2.8	55	50	5	5	-	Yes	No	No	Yes	Type 1
4616	1242 - 1256 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	SE	296952.7	6249611.8	56	51	58	53	58	53	60	56	2.1	2.1	2.4	2.7	55	50	5	6	-	-	No	No	Yes	Type 2
4616	1242 - 1256 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	SW	296940.6	6249614.1	57	52	59	54	59	54	62	57	2.5	2.4	2.6	3	55	50	7	7	Yes	Yes	No	No	Yes	Type 2
4616	1242 - 1256 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	SW	296940.6	6249614.1	57	52	60	55	60	55	62	58	2.4	2.3	2.5	2.8	55	50	7	8	-	Yes	No	No	Yes	Type 2
4619	1234 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	E	296906.5	6249679.1	47	42	49	44	48	43	52	47	2.9	2.8	3.2	3.6	55	50	-	-	-	-	-	-	No	-
4619	1234 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	E	296906.5	6249679.1	49	44	52	47	51	46	54	50	2.7	2.7	3	3.4	55	50	-	-	-	-	-	-	No	-
4619	1234 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	N	296886.5	6249678.3	50	45	53	48	52	47	55	51	3.2	3.1	3.2	3.6	55	50	-	1	-	No	-	No	Yes	Type 1
4619	1234 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	N	296886.5	6249678.3	52	47	54	49	54	49	57	52	2.7	2.6	2.8	3.1	55	50	2	2	No	No	No	No	Yes	Type 1
4619	1234 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	N	296893.3	6249680.8	49	44	52	47	51	46	54	50	3.3	3.2	3.3	3.6	55	50	-	-	-	-	-	-	No	-
4619	1234 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	N	296893.3	6249680.8	51	46	54	49	54	48	56	52	2.7	2.7	2.8	3.2	55	50	1	2	No	No	No	No	Yes	Type 1
4619	1234 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	N	296897.8	6249693.5	48	43	52	47	51	45	54	50	3.8	3.7	3.8	4.2	55	50	-	-	-	-	-	-	No	-
4619	1234 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	N	296897.8	6249693.5	51	46	54	49	53	48	56	51	3.2	3	3.2	3.5	55	50	1	1	No	No	No	No	Yes	Type 1
4619	1234 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	S	296889.0	6249668.0	56	51	58	53	58	53	61	56	2.5	2.4	2.6	3	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
4619	1234 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	S	296889.0	6249668.0	57	52	59	54	59	54	62	57	2.4	2.3	2.5	2.9	55	50	7	7	Yes	Yes	No	No	Yes	Type 2
4619	1234 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	S	296896.2	6249668.8	55	50	58	53	58	53	60	56	2.5	2.4	2.6	3	55	50	5	6	Yes	Yes	No	No	Yes	Type 2
4619	1234 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	S	296896.2	6249668.8	56	51	59	54	59	54	61	56	2.4	2.3	2.5	2.9	55	50	6	6	Yes	Yes	No	No	Yes	Type 2

M12 Central LNDG concrete pavement surface noise levels

Receiver ID	Address	Noise catchment area	Receiver type	Façade				Predicted noise level Opening Year 2026				Predicted no se level Design Year 2036				Change in noise evel (Build - No Build)				NCG Project road noise criteria		NCG Project road noise criteria exceedance (dB)		Do noise levels equal or exceed the cumulative limit w th project roads adding ≥2dB to the total noise levels?		Is the contribution from the road project Acute?		Is the property considered for further treatment?	Category of treatment
				Floor level	Direction	x	y	No Build		Build		No Build		Build		Opening Year 2026		Design Year 2036													
								Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night		
4619	1234 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	S	296905.8	6249662.4	55	50	58	53	58	53	60	56	2.6	2.4	2.6	3	55	50	5	6	Yes	Yes	No	No	Yes	Type 2
4619	1234 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	S	296905.8	6249662.4	56	51	59	54	59	53	61	56	2.4	2.4	2.5	2.9	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
4619	1234 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	W	296883.6	6249672.2	56	51	58	53	58	53	61	56	2.4	2.3	2.4	2.8	55	50	6	6	-	Yes	No	No	Yes	Type 2
4619	1234 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	W	296883.6	6249672.2	57	52	59	54	59	54	62	57	2.3	2.2	2.4	2.7	55	50	7	7	-	-	No	No	Yes	Type 2
4619	1234 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	W	296894.7	6249686.0	50	45	54	49	53	48	56	51	3.4	3.3	3.4	3.8	55	50	1	1	No	No	No	No	Yes	Type 1
4619	1234 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	W	296894.7	6249686.0	53	48	56	50	55	50	58	53	2.9	2.8	3	3.4	55	50	3	3	No	No	No	No	Yes	Type 1
4619	1234 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	W	296899.7	6249666.2	55	51	58	53	58	53	61	56	2.5	2.3	2.6	2.9	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
4619	1234 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	W	296899.7	6249666.2	56	51	59	54	59	54	61	57	2.3	2.2	2.4	2.8	55	50	6	7	-	Yes	No	No	Yes	Type 2
4685	1210A MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	E	296629.7	6249755.9	55	50	56	51	58	53	59	54	1.1	1	1.4	1.7	55	50	4	4	-	-	No	No	No	-
4685	1210A MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	E	296629.7	6249755.9	57	52	58	53	59	54	61	56	1.1	1	1.4	1.6	55	50	6	6	-	-	No	No	No	-
4685	1210A MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	NE	296637.5	6249772.7	45	40	47	42	48	43	49	44	1.4	1.4	1.7	1.9	55	50	-	-	-	-	-	-	No	-
4685	1210A MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	NE	296637.5	6249772.7	49	44	51	46	51	46	53	48	1.5	1.4	1.8	2.1	55	50	-	-	-	-	-	-	No	-
4685	1210A MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	NW	296620.9	6249759.8	59	54	60	55	62	57	63	58	1	1	1.3	1.5	55	50	8	8	-	-	No	No	No	-
4685	1210A MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	NW	296620.9	6249759.8	61	56	62	56	63	58	65	60	0.9	0.9	1.2	1.4	55	50	10	10	-	-	No	No	No	-
4685	1210A MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	NW	296625.0	6249774.9	58	52	59	54	60	55	62	57	1.2	1.1	1.4	1.7	55	50	7	7	-	-	No	No	No	-
4685	1210A MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	NW	296625.0	6249774.9	59	54	60	55	62	56	63	58	1.1	0.9	1.3	1.6	55	50	8	8	-	-	No	No	No	-
4685	1210A MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	SE	296627.4	6249751.0	59	54	60	55	61	56	63	58	1.3	1.3	1.6	1.9	55	50	8	8	-	-	No	No	No	-
4685	1210A MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	SE	296627.4	6249751.0	61	56	62	57	63	58	65	60	1	1	1.3	1.6	55	50	10	10	-	-	No	No	No	-
4685	1210A MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	SE	296635.1	6249760.8	56	51	58	52	59	54	60	56	1.3	1.2	1.5	1.8	55	50	5	6	-	-	No	No	No	-
4685	1210A MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	SE	296635.1	6249760.8	58	53	59	54	61	56	62	57	1.1	1	1.4	1.7	55	50	7	7	-	-	No	No	No	-
4685	1210A MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	SW	296620.4	6249764.7	60	55	61	56	63	57	64	59	1.1	1.1	1.4	1.7	55	50	9	9	-	-	No	No	No	-
4685	1210A MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	SW	296620.4	6249764.7	61	56	62	57	64	59	65	61	1	0.8	1.2	1.5	55	50	10	11	-	-	No	No	No	-
4685	1210A MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	SW	296620.6	6249752.9	62	57	63	58	65	59	66	61	1.1	1	1.3	1.6	55	50	11	11	-	-	No	No	No	-
4685	1210A MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	SW	296620.6	6249752.9	63	58	64	59	66	61	67	62	0.8	0.8	1.1	1.4	55	50	12	12	-	-	No	No	No	-
4686	1218 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	N	296664.0	6249750.4	52	46	53	48	54	49	56	51	1.7	1.6	1.8	2.1	55	50	1	1	-	-	No	No	Yes	Type 1
4686	1218 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	N	296664.0	6249750.4	54	49	56	51	57	52	59	54	1.8	1.7	2	2.3	55	50	4	4	-	-	No	No	Yes	Type 1
4686	1218 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	NE	296673.8	6249741.2	50	44	52	47	52	47	54	49	2	2.1	2.3	2.6	55	50	-	-	-	-	-	-	No	-
4686	1218 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	NE	296673.8	6249741.2	51	46	53	48	54	48	56	51	2	2	2.1	2.5	55	50	1	1	-	-	No	No	Yes	Type 1
4686	1218 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	NW	296649.5	6249735.4	58	53	60	55	61	56	63	58	1.2	1.2	1.5	1.7	55	50	8	8	-	-	No	No	No	-
4686	1218 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	NW	296649.5	6249735.4	60	55	61	56	63	58	64	59	1.1	0.9	1.3	1.6	55	50	9	9	-	-	No	No	No	-
4686	1218 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	NW	296654.8	6249746.5	56	51	57	52	58	53	60	55	1.5	1.5	1.8	2	55	50	5	5	-	-	No	No	No	-
4686	1218 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	NW	296654.8	6249746.5	58	53	59	54	60	55	62	57	1.4	1.3	1.6	1.9	55	50	7	7	-	-	No	No	No	-
4686	1218 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	SE	296654.5	6249728.4	60	55	61	56	63	57	64	59	1.2	1.2	1.4	1.7	55	50	9	9	-	-	No	No	No	-
4686	1218 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	SE	296654.5	6249728.4	61	56	62	57	63	58	65	60	1.1	1.1	1.4	1.7	55	50	10	10	-	-	No	No	No	-
4686	1218 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	SE	296671.7	6249726.4	59	54	60	55	61	56	63	58	1.5	1.4	1.7	2	55	50	8	8	-	-	No	No	No	-
4686	1218 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	SE	296671.7	6249726.4	60	55	61	56	62	57	64	59	1.3	1.3	1.6	1.9	55	50	9	9	-	-	No	No	No	-
4686	1218 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	SW	296647.5	6249728.6	62	57	63	58	65	60	66	61	1.1	1	1.3	1.6	55	50	11	11	-	-	No	No	No	-
4686	1218 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	SW	296647.5	6249728.6	63	58	64	59	66	61	67	62	0.9	0.9	1.2	1.5	55	50	12	12	-	-	No	No	No	-
4686	1218 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	SW	296651.4	6249739.3	58	53	59	54	61	56	62	57	1.3	1.3	1.5	1.8	55	50	7	7	-	-	No	No	No	-
4686	1218 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	SW	296651.4	6249739.3	60	55	61	56	62	57	64	59	1.2	1.1	1.4	1.7	55	50	9	9	-	-	No	No	No	-
4686	1218 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	SW	296660.4	6249726.8	60	55	61	56	63	58	64	60	1.2	1.2	1.5	1.8	55	50	9	10	-	-	No	No	No	-
4686	1218 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	SW	296660.4	6249726.8	61	56	62	57	64	59	65	60	1.2	1.1	1.5	1.7	55	50	10	10	-	-	No	No	No	-
4689	1236 - 1240 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	NE	296744.1	6249611.9	50	45	51	46	52	47	54	49	1.7	1.6	1.9	2.2	55	50	-	-	-	-	-	-	No	-
4689	1236 - 1240 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	NE	296753.9	6249608.2	51	46	53	48	53	48	55	51	2	2	2.3	2.6	55	50	-	1	-	-	-	No	Yes	Type 1
4689	1236 - 1240 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	NW	296736.7	6249613.5	58	53	59	54	61	55	62	57	1.4	1.3	1.6	1.9	55	50	7	7	-	-	No	No	No	-
4689	1236 - 1240 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	NW	296747.8	6249609.9	50	45	52	47	53	48	55	50	1.4	1.4	1.7	2	55	50	-	-	-	-	-	-	No	-
4689	1236 - 1240 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	SE	296749.8	6249599.2	59	54	60	55	62	57	63	59	1.1	1	1.4	1.7	55	50	8	9	-	-	No	No	No	-
4689	1236 - 1240 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	SW	296737.6	6249602.3	62	57	63	58	64	59	66	61	1.1	1	1.4	1.7	55	50	11	11	-	-	No	No	No	-
4691	1226 - 1232 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	NE	296770.0	6249706.1	46	41	49	44	47	42	51	47	3.8	3.8	4.3	4.6	55	50	-	-	-	-	-	-	No	-
4691	1226 - 1232 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	NE	296770.0	6249706.1	47	42	51	46	49	44	53	48	3.4	3.4	3.7	4.2	55	50	-	-	-	-	-	-	No	-
4691	1226 - 1232 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	NE	296775.1	6249727.5	48	43	51	46	50	45	54	49	2.9	2.9	3.1	3.4	55	50	-	-	-	-	-	-	No	-
4691	1226 - 1232 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	NE	296775.1	6249727.5	50	45	52	47	52	47	55	50	2.5	2.5	2.7	3.2	55	50	-	-	-	-	-	-	No	-
4691	1226 - 1232 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	SE	296769.1	6249690.8	57	52	59	54	60	54	62	57	2	1.9	2.1	2.5	55	50	7	7	-	-	No	No	Yes	Type 2
4691	1226 - 1232 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	SE	296769.1	6249690.8	58	53	60	55	60	55	62	58	1.9	1.7	2	2.4	55	50	7	8	-	-	No	No	Yes	Type 2
4691	1226 - 1232 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	SE	296770.4	6249718.2	51	46	53	48	53	48	55	51	2.4	2.3	2.5	3	55	50	-	1	-	No	-	No	Yes	Type 1
4691	1226 - 1232 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	SE	296770.4	6249718.2	52	47	54	49	54	49	57	52	2.4	2.4	2.6	2.9	55	50	2	2	No	No	No	No	Yes	Type 1
4691	1226 - 1232 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	GF	SW	296752.1	6249698.9	59	54	61	55	61	56	63	58	1.9	1.8	2	2.3	55	50	8	8	-	-	No	No	Yes	Type 2
4691	1226 - 1232 MAMRE ROAD, MOUNT VERNON 2178	NCA03	Residential	F 1	SW	296752.1	6249698.9	60	55	61	56	62	57	64	59	1.7	1.6	1.8	2.2	55	50	9	9	-	-	No	No	Yes	Type 3
4693	1205 - 1217 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	NE	296487.4	6249720.6	65	60	65	60	67	62	68	63	0.2	0.2	0.7	0.9	55	50	13	13	-	-	No	No	No	-
4693	1205 - 1217 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	NW	296472.8	6249716.7	54	49	57	52	56	51	60	55	3.6	3.4	3.4	3.8	55	50	5	5	Yes	Yes	No	No	Yes	Type 1
4693	1205 - 1217 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	NW	296474.6	6249726.6	62	57	62	57	65	59	66	61	0.6	0.5	0.9	1.2	55	50	11	11	-	-	No	No	No	-
4693	1205 - 1217 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	SE	296487.7	6249706.4	61	56	62	57	64	59	65	60	0.8	0.7	1.1	1.3	55	50	10	10	-	-	No	No	No	-
4693	1205 - 1217 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	SW	296471.6	6249719.0	55	49	58	53	57	52	60	56	3.4	3.4	3.4	3.8	55	50	5	6	Yes	Yes	No	No	Yes	Type 2
4693	1205 - 1217 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	SW	296475.9	6249708.7	52	47	57	52	55	49	60	55	5	4.9	5	5.4	55	50	5	5	Yes	Yes	No	No	Yes	Type 1
4695	1341 - 1347 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	E	296703.5	6248947.5	63	59	64	59	65	60	66	62	0.5	0.5	1.4	2	55	50	11	12	-	-	No	No	No	-
4695	1341 - 1347 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	N	296689.0	6248949.2	56	51	60	55	57	52	62	58	4.6	4.3	5	5.4	55	50	7	8	Yes	Yes	No	No	Yes	Type 2
4695	1341 - 1347 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	N	296697.7	6248957.3	53	48	62	57	55	50	64	59	8.8	8.5	8.8	9.1	55	50	9	9	Yes	Yes	No	No	Yes	Type 3
4695	1341 - 1347 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	S	296693.7	6248937.5	67	63	67	62	69	64	69	65	-0.5	-0.4	0.6	1.2	55	50	14	15	-	-	No	No	No	-
4695	1341 - 1347 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	W	296683.3	6248943.2	65	60	65	60	66	61	67	63	-0.1	0	1	1.5	55	50	12	13	-	-	No	No	No	-
4695	1341 - 1347 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	W	296692.7	6248952.3	58	54	61	56	60	55	63	58	2.6	2.3	3.2	3.6	55	50	8	8	Yes	Yes	No	No	Yes	Type 2
4696	1349 - 1355 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	E	296658.0	6248974.9	53	48	61	56	54	49	63	58	8.2	8	8.4	8.8	55	50	8	8	Yes	Yes	No	No	Yes	Type 2
4696	1349 - 1355 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	E	296666.1	6248959.6	60	55	62	57	61	56	64	60	2.4	2.3	3.1	3.6	55	50	9	10	Yes	Yes	No	No	Yes	Type 3
4696	1349 - 1355 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	N	296636.5	6248975.3	57	52	62	57	58	53	64	59	5.2	4.8	5.7	5.9	55	50	9	9	Yes	Yes	No	No	Yes	Type 3
4696	1349 - 1355 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	N	296646.5	6248980.6	53	48	63	58	55	50	65	60	9.8	9.6	9.9	10.2	55	50	10	10	Yes	Yes	No	Yes	Yes	Type 3
4696	1349 - 1355 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	N	296655.7	6248981.1	54	49	63	58	55	50	65	60	9.5	9.2	9.7	9.9	55	50	10	10	Yes	Yes	Yes	Yes	Yes	Type 3
4696	1349 - 1355 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	N	296661.0	6248970.5	52	47	61	56	54	48	63	58	9.4	9.3	9.3	9.8	55	50	8	8	Yes	Yes	No	No	Yes	Type 2
4696	1349 - 1355 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	S	296640.5	6248958.3	64	59	64	59	66	61	66	62	-0.6	-0.5	0.5	1.1	55	50	11	12	-	-	No	No	No	-
4696	1349 - 1355 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	S	296651.5	6248950.8	66	61	65	60	67	62	67	63	-0.7	-0.5	0.4	1.1	55	50	12	13	-	-	No	No	No	-
4696	1349 - 1355 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	S	296660.8	6248948.5	66	61	65	61	67	62	68	63	-0.6	-0.5	0.6	1.1	55	50	13	13	-	-	No	No	No	-
4696	1349 - 1355 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	W	296633.8	6248966.3	62	57	63	59	64	59	66	61	1.4	1.2	2.1	2.6	55	50	11	11	-	-	No	No	Yes	Type 3
4696	1349 - 1355 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	W	296637.8	6248976.9	57	52	62	57	59	54	64	59	4.5	4.2	5	5.3	55	50	9	9	Yes	Yes	No	No	Yes	Type 3
4696	1349 - 1355 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	W	296646.1	6248955.8	63	59	63	58	65	60	65	61	-0.6	-0.5	0.6	1.1	55	50	10	11	-	-	No	No	No	-
4696	1349 - 1355 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	W	296655.0	6248950.2	65	60	64	60	66	61	67	63	-0.6	-0.5	0.5	1.1	55	50	12	13	-	-	No	No	No	-
4698	1357 - 1371 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	E	296574.8	6248937.5	65	60	65	61	67	62	68	63	0.1	0.2	1.1	1.7	55	50	13	13	-	-	No	No	No	-
4698	1357 - 1371 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	N	296566.8	6248942.7	57	52	60	55	58	54	62	57	2.9	2.7	3.5	3.9	55	50	7	7	Yes	Yes	No	No	Yes	Type 2
4698	1357 - 1371 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	S	296566.8	6248931.7	68	64	68	63	70	65	70	66	-0.6	-0.5	0.6	1.1	55	50	15	16	-	-	No	No	No	-
4698	1357 - 1371 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	W	296559.0	6248936.8	66	61	65	61	67	62	68	64	-0.2	-0.2	0.9	1.4	55	50	13	14	-	-	No	No	No	-
4701	1560 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	E	296640.0	6248826.7	62	57	61	57	63	58	64	59	-0.2	-0.1	0.9	1.4	55	50	9	9	-	-	No	No	No	-
4701	1560 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	N	296621.9	6248834.0	67	63	67	62	69	64	70	65	-0.2	-0.2	0.9	1.4	55	50	15	15	-	-	No	No	No	-
4701	1560 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	N	296634.2	6248836.7	68	63	68	63	69	64	70	66	-0.3	-0.2	0.8	1.4	55	50	15	16	-	-	No	No	No	-
4701	1560 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	S	296616.9	6248819.5	50	46	51	46	52	47	53	49	0.4	0.4	1.3	1.8	55	50	-	-	-	-	-	-	No	-
4701	1560 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	S	296629.6	6248816.5	49	44	50	45	51	46	52	48	0.8	0.7	1.6	2	55	50	-	-	-	-	-	-	No	-
4701	1560 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	W	296613.2	6248826.6	64	59	64	59	65	60	66	62	-0.1	0	1	1.5	55	50	11	12	-	-	No	No	No	-
4701	1560 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	W	296618.6	6248819.0	51	46	51	46	52	47	53	49	0.3	0.3	1.3	1.7	55	50	-	-	-	-	-	-	No	-
4701	1560 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	W	296628.6	6248834.4	66	62	66	61	68	63	69	64	-0.3	-0.3	0.8	1.4	55	50	14	14	-	-	No	No	No	-
4702	1562 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	E	296567.4	6248827.5	64	59	64	59	65	60	66	62	-0.1	-0.1	0.9	1.5	55	50	11	12	-	-	No	No	No	-
4702	1562 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	N	296557.1	6248836.2	68	63	68	63	69	65	70	66	-0.3	-0.3	0.8	1.3	55	50	15	16	-	-	No	No	No	-
4702	1562 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	S	296555.6	6248821.1	57	52	57	52	59	54	59	55	-0.5	-0.4	0.7	1.1	55	50	4	5	-	-	No	No	No	-
4702	1562 ELIZABETH DRIVE, CECIL PARK 2178	NCA04	Residential	GF	W	296545.3	6248829.9	65	61	65	60	67	62	68	63	-0.2	-0.2	0.9	1.3	55	50	13	13	-	-	No	No	No	-
4706	1179 - 1189 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	N	296288.5	6249934.6	60	55	61	55	63	58	64	59	0.7	0.5	1	1.2	55	50	9	9	-	-	No	No	No	-

M12 Central LNDG concrete pavement surface noise levels

Receiver ID	Address	Noise catchment area	Receiver type	Façade				Predicted noise level Opening Year 2026				Predicted no se level Design Year 2036				Change in noise evel (Build - No Build)				NCG Project road noise criteria		NCG Project road noise criteria exceedance (dB)		Do noise levels equal or exceed the cumulative limit w th project roads adding ≥2dB to the total noise levels?		Is the contribution from the road project Acute?		Is the property considered for further treatment?	Category of treatment
				Floor level	Direction	x	y	No Build		Build		No Build		Build		Opening Year 2026		Design Year 2036												
								Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night		
4706	1179 - 1189 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	F 1	N	296288.5	6249934.6	61	56	62	57	64	59	65	60	0.6	0.5	1	1.2	55	50	10	10	-	-	No	No	No	-
4706	1179 - 1189 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NE	296304.5	6249920.8	62	57	62	57	65	60	65	61	0.2	0.1	0.6	0.9	55	50	10	11	-	-	No	No	No	-
4706	1179 - 1189 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	F 1	NE	296304.5	6249920.8	63	58	64	58	66	61	67	62	0.2	0.1	0.7	1	55	50	12	12	-	-	No	No	No	-
4706	1179 - 1189 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NW	296278.8	6249930.3	58	53	59	54	61	55	62	57	1.3	1.3	1.5	1.8	55	50	7	7	-	-	No	No	No	-
4706	1179 - 1189 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	F 1	NW	296278.8	6249930.3	59	54	60	55	62	57	63	59	1.1	1.1	1.4	1.7	55	50	8	9	-	-	No	No	No	-
4706	1179 - 1189 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SE	296296.2	6249905.6	54	49	57	52	57	52	59	55	2.6	2.6	2.7	3	55	50	4	5	No	Yes	No	No	Yes	Type 1
4706	1179 - 1189 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	F 1	SE	296296.2	6249905.6	56	51	58	53	58	53	61	56	2.5	2.4	2.5	2.9	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
4706	1179 - 1189 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SE	296311.7	6249902.6	60	55	61	56	63	57	64	59	0.9	0.8	1.2	1.5	55	50	9	9	-	-	No	No	No	-
4706	1179 - 1189 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	F 1	SE	296311.7	6249902.6	61	56	62	57	64	59	65	60	0.9	0.8	1.2	1.5	55	50	10	10	-	-	No	No	No	-
4706	1179 - 1189 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SW	296281.7	6249913.7	48	43	56	51	50	45	58	54	8.1	7.9	8.6	8.9	55	50	3	4	No	No	No	No	Yes	Type 1
4706	1179 - 1189 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	F 1	SW	296281.7	6249913.7	50	45	57	52	52	47	59	55	7.3	7.1	7.5	7.9	55	50	4	5	No	Yes	No	No	Yes	Type 1
4706	1179 - 1189 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SW	296303.3	6249904.8	49	44	55	50	51	46	57	52	6.3	6.1	6.5	6.9	55	50	2	2	No	No	No	No	Yes	Type 1
4706	1179 - 1189 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	F 1	SW	296303.3	6249904.8	51	46	57	51	53	48	59	54	5.4	5.3	5.4	5.8	55	50	4	4	No	No	No	No	Yes	Type 1
4799	1097 - 1099 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	E	295809.1	6250678.8	59	54	59	54	62	57	63	58	0.3	0.2	0.7	0.9	55	50	8	8	-	-	No	No	No	-
4799	1097 - 1099 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	F 1	E	295809.1	6250678.8	61	56	61	56	63	58	64	59	0.2	0.2	0.7	1	55	50	9	9	-	-	No	No	No	-
4799	1097 - 1099 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	N	295790.4	6250680.0	49	44	52	47	52	46	54	50	2.9	2.8	2.8	3.2	55	50	-	-	-	-	-	-	No	-
4799	1097 - 1099 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	F 1	N	295790.4	6250680.0	51	46	53	48	54	49	56	51	2.3	2.2	2.4	2.7	55	50	1	1	-	No	No	No	Yes	Type 1
4799	1097 - 1099 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NE	295801.3	6250690.5	59	54	59	54	62	57	63	58	0.2	0.1	0.6	0.9	55	50	8	8	-	-	No	No	No	-
4799	1097 - 1099 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	F 1	NE	295801.3	6250690.5	60	55	61	55	63	58	64	59	0.2	0.2	0.7	0.9	55	50	9	9	-	-	No	No	No	-
4799	1097 - 1099 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NW	295792.6	6250691.5	57	52	58	53	60	55	61	56	0.5	0.5	0.9	1.1	55	50	6	6	-	-	No	No	No	-
4799	1097 - 1099 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	F 1	NW	295792.6	6250691.5	59	54	59	54	61	56	62	57	0.5	0.4	0.8	1.1	55	50	7	7	-	-	No	No	No	-
4799	1097 - 1099 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	S	295805.5	6250666.1	55	50	56	51	58	53	59	54	1.4	1.3	1.6	1.8	55	50	4	4	-	-	No	No	No	-
4799	1097 - 1099 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	F 1	S	295805.5	6250666.1	57	52	58	53	60	54	61	56	1.6	1.5	1.7	2	55	50	6	6	-	-	No	No	No	-
4799	1097 - 1099 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SE	295794.6	6250668.8	46	41	51	46	47	42	53	48	5	4.9	5.3	5.6	55	50	-	-	-	-	-	-	No	-
4799	1097 - 1099 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	F 1	SE	295794.6	6250668.8	49	44	55	49	52	47	57	52	5.2	5	5.1	5.5	55	50	2	2	No	No	No	No	Yes	Type 1
4799	1097 - 1099 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	W	295789.6	6250673.4	49	44	53	48	52	46	55	51	3.8	3.7	3.7	4.1	55	50	-	1	-	No	-	No	Yes	Type 1
4799	1097 - 1099 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	F 1	W	295789.6	6250673.4	51	46	55	50	54	48	58	53	4.1	3.9	4	4.3	55	50	3	3	No	No	No	No	Yes	Type 1
4799	1097 - 1099 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	W	295789.8	6250683.9	49	44	53	48	52	47	56	51	3.8	3.8	3.8	4.1	55	50	1	1	No	No	No	No	Yes	Type 1
4799	1097 - 1099 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	F 1	W	295789.8	6250683.9	51	46	55	50	54	49	57	52	3.5	3.3	3.4	3.7	55	50	2	2	No	No	No	No	Yes	Type 1
4799	1097 - 1099 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	W	295796.4	6250667.1	45	40	51	46	47	42	53	48	5.7	5.6	6.1	6.4	55	50	-	-	-	-	-	-	No	-
4799	1097 - 1099 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	F 1	W	295796.4	6250667.1	48	43	54	49	50	45	56	52	6	5.8	6.1	6.4	55	50	1	2	No	No	No	No	Yes	Type 1
4803	1101 - 1105 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NE	295891.0	6250669.1	65	60	65	60	68	63	69	64	-0.1	-0.1	0.4	0.6	55	50	14	14	-	-	No	No	No	-
4803	1101 - 1105 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	F 1	NE	295891.0	6250669.1	67	62	67	62	70	65	70	65	0.1	0	0.5	0.8	55	50	15	15	-	-	No	No	No	-
4803	1101 - 1105 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NE	295896.7	6250662.9	66	61	66	61	69	64	69	65	-0.1	-0.2	0.4	0.6	55	50	14	15	-	-	No	No	No	-
4803	1101 - 1105 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	F 1	NE	295896.7	6250662.9	68	63	68	63	71	66	71	66	0.1	0.1	0.6	0.8	55	50	16	16	-	-	No	No	No	-
4803	1101 - 1105 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NW	295884.4	6250670.0	63	58	63	58	66	61	66	61	0.2	0.1	0.6	0.9	55	50	11	11	-	-	No	No	No	-
4803	1101 - 1105 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	F 1	NW	295884.4	6250670.0	64	59	65	60	67	62	68	63	0.2	0.2	0.7	0.9	55	50	13	13	-	-	No	No	No	-
4803	1101 - 1105 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NW	295891.8	6250667.5	65	60	65	59	67	62	68	63	-0.1	-0.1	0.4	0.6	55	50	13	13	-	-	No	No	No	-
4803	1101 - 1105 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	F 1	NW	295891.8	6250667.5	66	61	66	61	69	64	70	65	0.1	0	0.5	0.8	55	50	15	15	-	-	No	No	No	-
4803	1101 - 1105 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SE	295893.9	6250654.3	63	58	63	58	66	61	66	62	0.3	0.3	0.7	1	55	50	11	12	-	-	No	No	No	-
4803	1101 - 1105 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	F 1	SE	295893.9	6250654.3	64	59	65	60	67	62	68	63	0.4	0.3	0.8	1	55	50	13	13	-	-	No	No	No	-
4803	1101 - 1105 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SW	295883.9	6250659.4	48	43	53	48	50	45	56	51	5.6	5.4	5.6	5.9	55	50	1	1	No	No	No	No	Yes	Type 1
4803	1101 - 1105 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	F 1	SW	295883.9	6250659.4	51	46	55	50	53	48	57	53	4.5	4.4	4.4	4.8	55	50	2	3	No	No	No	No	Yes	Type 1
4805	1107 - 1115 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NE	295936.2	6250584.5	66	61	66	61	69	64	69	64	0.1	0	0.5	0.8	55	50	14	14	-	-	No	No	No	-
4805	1107 - 1115 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NW	295926.6	6250585.8	62	57	62	57	65	59	65	60	0.2	0.2	0.7	1	55	50	10	10	-	-	No	No	No	-
4805	1107 - 1115 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SE	295932.4	6250575.6	62	57	63	58	65	60	66	61	0.5	0.4	0.9	1.1	55	50	11	11	-	-	No	No	No	-
4805	1107 - 1115 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SW	295922.9	6250576.9	51	46	54	49	53	48	57	52	3.3	3.2	3.3	3.6	55	50	2	2	No	No	No	No	Yes	Type 1
4806	1117 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NE	295929.2	6250461.3	59	54	59	54	62	56	62	57	0.3	0.2	0.7	0.9	55	50	7	7	-	-	No	No	No	-
4806	1117 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NW	295915.8	6250471.5	57	52	58	53	59	54	61	56	1.1	1.1	1.3	1.6	55	50	6	6	-	-	No	No	No	-
4806	1117 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	NW	295917.8	6250448.6	48	43	53	48	50	45	55	51	5.1	5	4.9	5.3	55	50	-	1	-	No	-	No	Yes	Type 1
4806	1117 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	SE	295927.4	6250443.0	55	50	57	52	57	52	59	55	2.1	2	2.1	2.5	55	50	4	5	-	-	No	No	Yes	Type 1
4806	1117 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	SW	295915.0	6250457.9	48	43	55	49	50	45	57	52	6.6	6.4	6.6	7	55	50	2	2	No	No	No	No	Yes	Type 1
4806	1117 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	SW	295916.5	6250442.6	50	45	55	50	52	47	57	53	5.4	5.2	5.3	5.6	55	50	2	3	No	No	No	No	Yes	Type 1
4807	1127 - 1133 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NE	296010.7	6250425.3	64	59	64	59	67	62	68	63	0.2	0.1	0.6	0.8	55	50	13	13	-	-	No	No	No	-
4807	1127 - 1133 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NE	296011.6	6250418.2	63	58	64	58	66	61	67	62	0.2	0.1	0.7	0.9	55	50	12	12	-	-	No	No	No	-
4807	1127 - 1133 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NW	295997.1	6250423.4	60	55	61	56	63	58	64	59	0.6	0.5	0.9	1.1	55	50	9	9	-	-	No	No	No	-
4807	1127 - 1133 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SE	296003.3	6250409.4	58	53	59	54	61	56	62	57	0.7	0.6	1.1	1.3	55	50	7	7	-	-	No	No	No	-
4807	1127 - 1133 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SE	296011.0	6250420.4	63	58	63	58	66	61	67	62	0.2	0.2	0.7	0.9	55	50	12	12	-	-	No	No	No	-
4807	1127 - 1133 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SW	295989.5	6250410.9	50	45	55	49	52	47	57	52	4.6	4.5	4.6	4.9	55	50	2	2	No	No	No	No	Yes	Type 1
4808	1127 - 1133 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NE	296012.5	6250404.7	61	56	61	56	64	59	64	60	0.2	0.1	0.6	0.9	55	50	9	10	-	-	No	No	No	-
4808	1127 - 1133 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NE	296019.0	6250403.6	64	59	64	59	67	62	67	62	0.1	0.1	0.7	0.9	55	50	12	12	-	-	No	No	No	-
4808	1127 - 1133 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NE	296022.3	6250401.3	64	59	64	59	67	62	68	63	0.2	0.1	0.7	0.8	55	50	13	13	-	-	No	No	No	-
4808	1127 - 1133 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NW	296006.7	6250405.5	58	53	59	54	61	56	62	57	0.9	0.7	1.1	1.4	55	50	7	7	-	-	No	No	No	-
4808	1127 - 1133 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NW	296014.8	6250404.0	61	56	61	56	64	58	64	59	0.2	0.1	0.6	0.9	55	50	9	9	-	-	No	No	No	-
4808	1127 - 1133 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SE	296016.2	6250393.1	55	50	56	51	58	53	59	54	0.9	0.8	1.2	1.4	55	50	4	4	-	-	No	No	No	-
4808	1127 - 1133 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SW	296005.5	6250394.4	50	45	54	49	52	47	57	52	4.3	4.2	4.2	4.5	55	50	2	2	No	No	No	No	Yes	Type 1
4808	1127 - 1133 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	W	296003.6	6250401.3	51	46	54	49	53	48	57	52	3.8	3.7	3.7	4.1	55	50	2	2	No	No	No	No	Yes	Type 1
4810	1135 - 1141 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NE	296038.5	6250372.1	64	59	64	59	67	62	68	63	0.2	0.2	0.6	0.9	55	50	13	13	-	-	No	No	No	-
4810	1135 - 1141 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NW	296029.0	6250377.1	59	54	60	55	62	57	63	58	0.5	0.5	0.9	1.2	55	50	8	8	-	-	No	No	No	-
4810	1135 - 1141 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SE	296037.5	6250361.5	61	56	62	57	64	59	65	60	0.4	0.4	0.8	1.1	55	50	10	10	-	-	No	No	No	-
4810	1135 - 1141 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SW	296028.1	6250366.6	51	46	54	49	54	49	57	52	2.9	2.8	2.9	3.2	55	50	2	2	No	No	No	No	Yes	Type 1
4811	1135 - 1141 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NE	296048.1	6250323.0	60	55	60	55	63	58	64	59	0.3	0.2	0.7	1	55	50	9	9	-	-	No	No	No	-
4811	1135 - 1141 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NE	296055.8	6250336.5	64	59	64	59	67	62	68	63	0.2	0.1	0.6	0.9	55	50	13	13	-	-	No	No	No	-
4811	1135 - 1141 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NW	296039.5	6250333.5	57	52	57	52	59	54	60	55	0.5	0.4	0.9	1.1	55	50	5	5	-	-	No	No	No	-
4811	1135 - 1141 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NW	296046.9	6250342.3	61	56	62	57	64	59	65	60	0.2	0.2	0.7	1	55	50	10	10	-	-	No	No	No	-
4811	1135 - 1141 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	S	296047.2	6250325.3	57	52	57	52	60	54	60	55	0.5	0.3	0.9	1.1	55	50	5	5	-	-	No	No	No	-
4811	1135 - 1141 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SE	296046.1	6250316.9	60	55	61	56	63	58	64	59	0.8	0.8	1.1	1.4	55	50	9	9	-	-	No	No	No	-
4811	1135 - 1141 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SE	296054.5	6250325.8	61	56	62	56	64	59	65	60	0.6	0.4	0.9	1.1	55	50	10	10	-	-	No	No	No	-
4811	1135 - 1141 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SW	296037.7	6250322.6	49	44	54	49	52	47	56	52	4.6	4.5	4.6	5	55	50	1	2	No	No	No	No	Yes	Type 1
4811	1135 - 1141 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SW	296043.5	6250337.1	52	47	53	48	55	49	56	51	1.4	1.3	1.6	1.9	55	50	1	1	-	-	No	No	No	-
4811	1135 - 1141 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SW	296047.8	6250325.0	57	52	57	52	60	54	61	56	0.5	0.4	0.9	1.2	55	50	6	6	-	-	No	No	No	-
4812	1149 - 1155 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	E	296100.2	6250246.5	63	58	63	58	66	61	67	62	0.2	0.1	0.6	0.9	55	50	12	12	-	-	No	No	No	-
4812	1149 - 1155 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NE	296088.4	6250250.3	59	54	59	54	62	57	63	58	0.2	0.2	0.7	1	55	50	8	8	-	-	No	No	No	-
4812	1149 - 1155 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NW	296070.0	6250244.3	54	49	56	50	57	51	58	54	1.7	1.7	1.8	2.2	55	50	3	4	-	-	No	No	Yes	Type 1
4812	1149 - 1155 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NW	296093.0	6250250.8	60	55	61	55	63	58	64	59	0.3	0.2	0.7	0.9	55	50	9	9	-	-	No	No	No	-
4812	1149 - 1155 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SE	296069.6	6250233.9	51	46	54	49	53	48	56	52	3	2.9	3.1	3.4	55	50	1	2	No	No	No	No	Yes	Type 1
4812	1149 - 1155 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SE	296093.7	6250234.7	58	53	59	54	61	56	62	57	0.9	0.7	1.1	1.4	55	50	7	7	-	-	No	No	No	-
4812	1149 - 1155 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SW	296055.1	6250231.5	49	44	54	49	51	46	56	52	5.5	5.4	5.5	5.9	55	50	1	2	No	No	No	No	Yes	Type 1
4812	1149 - 1155 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SW	296082.5	6250235.3	49	44	54	49	51	46	56	51	4.9	4.7	4.9	5.3	55	50	1	1	No	No	No	No	Yes	Type 1
4813	1149 - 1155 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NE	296122.3	6250222.5	65	59	65	60	67	62	68	63	0.1	0.1	0.7	0.9	55	50	13	13	-	-	No	No	No	-
4813	1149 - 1155 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NE	296126.7	6250211.4	64	59	64	59	67	62	68	63	0.2	0.1	0.7	0.8	55	50	13	13	-	-	No	No	No	-
4813	1149 - 1155 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NW	296110.1	6250222.5	61	56	61	56	63	58	64	59	0.4	0.4	0.9	1.1	55	50	9	9	-	-	No	No	No	-
4813	1149 - 1155 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SE	296109.4	6250207.6	49	44	55	50	51	46	57	52	5.8	5.7	5.9	6.4	55	50	2	2	No	No	No	No	Yes	Type 1
4813	1149 - 1155 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SE	296123.2	6250200.9	60	55	61	56	63	58	64	59	0.8	0.8	1.1	1.4	55	50	9	9	-	-	No	No	No	-
4813	1149 - 1155 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SW	296104.1	6250211.7	49	44	55	50	51	46	57	52	6.1	5.9	6.1	6.5	55	50	2	2	No	No	No	No	Yes	Type 1
4813	1149 - 1155 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SW	296112.5	6250203.3	49	44	55	50	51	46	57	52	6.2	6	6.4	6.7	55	50	2	2	No	No	No	No	Yes	Type 1
4814	1157 - 1161 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NE	296173.4	6250147.4	64	59	64	59	67	62	68	63	0.2	0.1	0.6	0.9	55	50	13	13	-	-	No	No	No	-
4814	1157 - 1161 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NW	296164.3	6250148.1	62	57	62	57	64	59	65	60	0.6	0.5	1	1.2	55	50	10	10	-	-	No	No	No	-
4814	1157 - 1161 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SE	296171.4	6250138.3	60	55	61	56	63	58	64	59	0.6	0.5	1	1.3	55	50	9	9	-	-	No	No	No	-
4814	1157 - 1161 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SW	296162.2	6250139.0	50	45	55	50	52	47	58	53	5.8	5.6	5.8	6.1	55	50	3	3	No	No	No	No	Yes	Type 1

M12 Central LNDG concrete pavement surface noise levels

Receiver ID	Address	Noise catchment area	Receiver type	Façade				Predicted noise level Opening Year 2026				Predicted no se level Design Year 2036				Change in noise evel (Build - No Build)				NCG Project road noise criteria		NCG Project road noise criteria exceedance (dB)		Do noise levels equal or exceed the cumulative limit w th project roads adding ≥2dB to the total noise levels?		Is the contribution from the road project Acute?		Is the property considered for further treatment?	Category of treatment
				Floor level	Direction	x	y	No Build		Build		No Build		Build		Opening Year 2026		Design Year 2036													
								Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night		
4815	1169 - 1177 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	NE	296246.8	6250030.4	63	58	63	58	66	61	67	62	0.2	0.1	0.6	0.9	55	50	12	12	-	-	No	No	No	-
4815	1169 - 1177 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	NW	296234.8	6250033.4	59	54	60	55	62	57	63	58	0.9	0.8	1.2	1.4	55	50	8	8	-	-	No	No	No	-
4815	1169 - 1177 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	SE	296245.3	6250017.3	61	56	62	56	64	58	65	60	0.8	0.8	1.1	1.4	55	50	10	10	-	-	No	No	No	-
4815	1169 - 1177 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SW	296233.4	6250020.1	51	46	57	52	53	48	59	54	5.7	5.5	5.6	6	55	50	4	4	No	No	No	No	Yes	Type 1
4826	316 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	E	295497.9	6250343.3	51	46	56	51	53	48	59	54	5.6	5.7	5.3	5.8	55	50	4	4	No	No	No	No	Yes	Type 1
4826	316 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	F 1	E	295497.9	6250343.3	52	47	58	53	54	49	60	56	6.4	6.4	6.2	6.6	55	50	5	6	Yes	Yes	No	No	Yes	Type 2
4826	316 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	N	295483.7	6250348.2	50	45	57	52	52	47	59	55	7.7	7.6	7.3	7.9	55	50	4	5	No	Yes	No	No	Yes	Type 1
4826	316 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	F 1	N	295483.7	6250348.2	51	46	59	54	53	48	61	57	8.2	8.1	8	8.5	55	50	6	7	Yes	Yes	No	No	Yes	Type 2
4826	316 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	S	295488.8	6250331.1	50	45	61	56	51	46	63	59	11.6	11.5	11.9	12.4	55	50	8	9	Yes	Yes	No	No	Yes	Type 3
4826	316 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	F 1	S	295488.8	6250331.1	51	46	63	58	53	48	65	60	11.8	11.8	12	12.5	55	50	10	10	Yes	Yes	No	Yes	Yes	Type 3
4826	316 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	W	295474.5	6250335.9	48	43	62	57	48	44	64	59	14.4	14.3	15.8	15.9	55	50	9	9	Yes	Yes	No	No	Yes	Type 3
4826	316 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	F 1	W	295474.5	6250335.9	50	45	64	59	50	46	66	61	13.9	13.8	15.1	15.2	55	50	11	11	Yes	Yes	Yes	Yes	Yes	Type 3
4831	146 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	E	294097.3	6250506.9	47	42	53	47	47	42	54	50	6	5.9	7	7.3	55	50	-	-	-	-	-	-	No	-
4831	146 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	F 1	E	294097.3	6250506.9	48	43	54	49	49	44	56	51	5.8	5.7	6.9	7.2	55	50	1	1	No	No	No	No	Yes	Type 1
4831	146 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	E	294098.2	6250511.3	46	41	54	49	47	42	56	51	7.9	7.7	8.6	9	55	50	1	1	No	No	No	No	Yes	Type 1
4831	146 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	F 1	E	294098.2	6250511.3	47	42	55	49	48	43	57	52	7.3	7.1	8.3	8.6	55	50	2	2	No	No	No	No	Yes	Type 1
4831	146 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	N	294082.3	6250518.3	41	36	55	50	43	38	57	52	14.3	13.9	13.9	14.1	55	50	2	2	No	No	No	No	Yes	Type 1
4831	146 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	F 1	N	294082.3	6250518.3	43	38	56	51	45	40	58	53	12.9	12.6	13	13.2	55	50	3	3	No	No	No	No	Yes	Type 1
4831	146 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	S	294080.8	6250505.6	48	42	48	43	48	43	50	45	0.6	0.9	2.3	2.7	55	50	-	-	-	-	-	-	No	-
4831	146 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	F 1	S	294080.8	6250505.6	48	43	50	45	49	44	52	47	1.8	1.9	3.3	3.7	55	50	-	-	-	-	-	-	No	-
4831	146 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	W	294065.2	6250512.9	45	40	54	49	45	40	56	51	9.3	9.3	11.1	11.3	55	50	1	1	No	No	No	No	Yes	Type 1
4831	146 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	F 1	W	294065.2	6250512.9	46	41	55	50	46	41	57	52	9.1	9	10.7	10.9	55	50	2	2	No	No	No	No	Yes	Type 1
4833	203 - 229 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	E	294711.8	6250949.2	48	43	56	51	51	45	58	53	7.7	7.4	7.4	7.7	55	50	3	3	No	No	No	No	Yes	Type 1
4833	203 - 229 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	N	294695.5	6250955.3	40	35	48	43	42	37	50	46	8.3	8.5	8.1	8.8	54	49	-	-	-	-	-	-	No	-
4833	203 - 229 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	N	294705.8	6250966.5	46	41	49	44	49	44	51	47	2.6	2.6	2.7	3	55	50	-	-	-	-	-	-	No	-
4833	203 - 229 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	S	294701.7	6250934.0	47	42	59	54	48	43	61	56	11.8	11.6	12.4	12.6	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
4833	203 - 229 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	SW	294692.5	6250937.0	46	41	59	53	47	42	60	55	12.6	12.4	13.5	13.8	55	50	5	5	Yes	Yes	No	No	Yes	Type 1
4833	203 - 229 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	W	294692.1	6250946.9	44	39	54	49	45	40	56	51	10.5	10.4	11.4	11.7	55	50	1	1	No	No	No	No	Yes	Type 1
4833	203 - 229 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	W	294696.9	6250960.5	42	37	51	46	43	38	53	48	9.3	9.2	9.6	10	55	50	-	-	-	-	-	-	No	-
4834	203 - 229 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	E	294729.9	6251015.3	49	44	54	49	51	46	56	51	5.3	5	5.1	5.4	55	50	1	1	No	No	No	No	Yes	Type 1
4834	203 - 229 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	N	294723.6	6251030.8	47	42	50	45	49	44	52	48	3	3	3	3.3	55	50	-	-	-	-	-	-	No	-
4834	203 - 229 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	S	294719.5	6251002.6	46	41	55	49	48	43	56	52	8.3	8.1	8.5	8.9	55	50	1	2	No	No	No	No	Yes	Type 1
4834	203 - 229 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	W	294713.1	6251018.0	41	36	51	46	43	38	53	49	10.2	10.3	10.6	11.1	55	50	-	-	-	-	-	-	No	-
4835	1541A ELIZABETH DRIVE, KEMPS CREEK 2178	NCA07	Residential	GF	NE	294799.6	6250129.3	42	38	52	47	45	39	54	49	9.2	9	9	9.5	55	50	-	-	-	-	-	-	No	-
4835	1541A ELIZABETH DRIVE KEMPS CREEK 2178	NCA07	Residential	GF	NE	294812.8	6250118.9	46	41	51	46	48	43	53	48	4.9	4.9	5.2	5.6	55	50	-	-	-	-	-	-	No	-
4835	1541A ELIZABETH DRIVE KEMPS CREEK 2178	NCA07	Residential	GF	NE	294814.2	6250133.5	46	41	53	48	48	43	55	50	6.8	6.8	7	7.3	55	50	-	-	-	-	-	-	No	-
4835	1541A ELIZABETH DRIVE, KEMPS CREEK 2178	NCA07	Residential	GF	NE	294816.4	6250111.1	46	41	51	46	48	43	53	49	4.8	4.8	5.1	5.4	55	50	-	-	-	-	-	-	No	-
4835	1541A ELIZABETH DRIVE KEMPS CREEK 2178	NCA07	Residential	GF	NW	294786.1	6250117.1	47	42	52	47	48	43	54	49	5.1	5.2	6.4	6.7	55	50	-	-	-	-	-	-	No	-
4835	1541A ELIZABETH DRIVE, KEMPS CREEK 2178	NCA07	Residential	GF	NW	294792.6	6250125.6	47	42	52	47	48	43	54	50	5.2	5.2	6.3	6.7	55	50	-	-	-	-	-	-	No	-
4835	1541A ELIZABETH DRIVE KEMPS CREEK 2178	NCA07	Residential	GF	NW	294802.6	6250106.7	46	41	47	42	46	41	49	44	1.1	1.4	2.8	3.3	55	50	-	-	-	-	-	-	No	-
4835	1541A ELIZABETH DRIVE, KEMPS CREEK 2178	NCA07	Residential	GF	NW	294803.9	6250132.9	46	41	52	47	47	42	54	49	6.3	6.5	7.2	7.6	55	50	-	-	-	-	-	-	No	-
4835	1541A ELIZABETH DRIVE, KEMPS CREEK 2178	NCA07	Residential	GF	SE	294793.5	6250107.9	48	43	49	44	48	43	51	46	0.7	0.8	2.2	2.6	55	50	-	-	-	-	-	-	No	-
4835	1541A ELIZABETH DRIVE KEMPS CREEK 2178	NCA07	Residential	GF	SE	294800.8	6250109.9	46	41	47	42	46	41	49	44	0.9	0.8	2.4	2.9	55	50	-	-	-	-	-	-	No	-
4835	1541A ELIZABETH DRIVE KEMPS CREEK 2178	NCA07	Residential	GF	SE	294813.0	6250101.3	49	44	51	46	50	45	53	49	2.6	2.6	3.6	4.1	55	50	-	-	-	-	-	-	No	-
4835	1541A ELIZABETH DRIVE, KEMPS CREEK 2178	NCA07	Residential	GF	SE	294814.1	6250124.3	47	42	51	46	48	43	53	48	3.8	3.8	4.6	4.9	55	50	-	-	-	-	-	-	No	-
4835	1541A ELIZABETH DRIVE KEMPS CREEK 2178	NCA07	Residential	GF	SE	294814.8	6250113.4	46	41	51	46	48	43	53	48	4.7	4.6	5	5.3	55	50	-	-	-	-	-	-	No	-
4835	1541A ELIZABETH DRIVE, KEMPS CREEK 2178	NCA07	Residential	GF	SW	294786.1	6250109.0	49	44	52	47	49	44	54	49	2.8	2.9	4.5	4.8	55	50	-	-	-	-	-	-	No	-
4835	1541A ELIZABETH DRIVE KEMPS CREEK 2178	NCA07	Residential	GF	SW	294796.3	6250109.3	48	43	48	43	48	43	50	45	0.2	0.3	1.9	2.3	55	50	-	-	-	-	-	-	No	-
4835	1541A ELIZABETH DRIVE KEMPS CREEK 2178	NCA07	Residential	GF	SW	294802.7	6250099.1	49	44	49	44	49	44	51	47	0.5	0.7	2.2	2.6	55	50	-	-	-	-	-	-	No	-
4835	1541A ELIZABETH DRIVE, KEMPS CREEK 2178	NCA07	Residential	GF	SW	294803.0	6250109.6	46	41	47	41	46	41	48	44	0.7	0.7	2.3	2.8	55	50	-	-	-	-	-	-	No	-
4837	230 - 234 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	E	294792.4	6251129.7	49	44	53	48	51	46	55	50	3.4	3.1	3.5	3.7	55	50	-	-	-	-	-	-	No	-
4837	230 - 234 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	N	294788.4	6251144.1	47	42	49	44	50	45	52	47	1.7	1.7	1.9	2.1	55	50	-	-	-	-	-	-	No	-
4837	230 - 234 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	S	294781.0	6251119.9	47	42	53	48	48	43	55	50	6.2	6	6.8	7	55	50	-	-	-	-	-	-	No	-
4837	230 - 234 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	W	294776.9	6251134.5	43	38	51	46	45	40	53	48	7.7	7.6	7.7	8.1	55	50	-	-	-	-	-	-	No	-
4838	230 - 234 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	NE	294892.8	6251164.4	48	43	50	45	50	45	53	48	2.3	2.2	2.4	2.6	55	50	-	-	-	-	-	-	No	-
4838	230 - 234 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	NE	294897.5	6251149.3	49	44	52	47	50	45	54	49	3.2	2.9	3.6	3.7	55	50	-	-	-	-	-	-	No	-
4838	230 - 234 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	NE	294901.4	6251157.8	50	45	52	47	52	47	54	49	2.3	2.1	2.6	2.9	55	50	-	-	-	-	-	-	No	-
4838	230 - 234 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	NW	294885.6	6251167.4	46	41	51	46	49	44	53	48	4.2	4.1	4	4.4	55	50	-	-	-	-	-	-	No	-
4838	230 - 234 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	NW	294895.8	6251161.7	47	42	49	44	50	44	52	47	2.4	2.3	2.5	2.8	55	50	-	-	-	-	-	-	No	-
4838	230 - 234 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	SE	294894.3	6251145.5	49	44	53	48	50	46	55	50	3.8	3.6	4.4	4.5	55	50	-	-	-	-	-	-	No	-
4838	230 - 234 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	SE	294899.6	6251150.7	49	44	53	48	50	46	54	50	3.6	3.4	4.1	4.2	55	50	-	-	-	-	-	-	No	-
4838	230 - 234 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	SW	294885.5	6251154.4	45	40	51	46	46	41	53	48	6.4	6.1	7.3	7.5	55	50	-	-	-	-	-	-	No	-
4840	235 - 245 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	E	294952.9	6251139.7	45	41	49	44	46	41	51	46	3.9	3.7	4.9	4.8	55	50	-	-	-	-	-	-	No	-
4840	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	E	294957.7	6251153.3	47	42	49	44	50	45	52	47	2.2	2.1	2.3	2.6	55	50	-	-	-	-	-	-	No	-
4840	235 - 245 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	E	294958.1	6251151.5	48	43	50	44	50	45	52	47	1.9	1.8	2	2.3	55	50	-	-	-	-	-	-	No	-
4840	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	E	294958.9	6251158.7	49	44	51	46	51	46	54	49	2.2	2	2.3	2.6	55	50	-	-	-	-	-	-	No	-
4840	235 - 245 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	E	294961.8	6251145.0	50	45	52	47	52	47	54	49	2.1	2	2.3	2.5	55	50	-	-	-	-	-	-	No	-
4840	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	N	294946.7	6251162.9	47	42	50	45	50	45	52	48	2.6	2.5	2.6	2.9	55	50	-	-	-	-	-	-	No	-
4840	235 - 245 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	N	294955.1	6251163.3	47	42	49	44	50	45	52	47	1.8	1.7	1.9	2.1	55	50	-	-	-	-	-	-	No	-
4840	235 - 245 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	N	294958.5	6251150.0	47	42	49	43	49	44	51	47	1.7	1.6	1.9	2.2	55	50	-	-	-	-	-	-	No	-
4840	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	S	294949.6	6251137.3	49	44	53	48	50	45	54	50	4	3.7	4.7	4.7	55	50	-	-	-	-	-	-	No	-
4840	235 - 245 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	S	294958.3	6251138.1	49	44	53	48	50	46	55	50	3.7	3.5	4.3	4.4	55	50	-	-	-	-	-	-	No	-
4840	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	W	294942.2	6251148.7	46	41	51	46	46	41	53	48	5.4	5.1	6.5	6.4	55	50	-	-	-	-	-	-	No	-
4841	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	E	295064.0	6251163.3	49	44	50	45	52	47	53	48	0.6	0.5	0.9	1.2	55	50	-	-	-	-	-	-	No	-
4841	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	F 1	E	295064.0	6251163.3	50	45	51	46	53	48	54	49	1.1	1	1.4	1.6	55	50	-	-	-	-	-	-	No	-
4841	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	E	295064.2	6251162.5	49	44	49	44	52	47	53	48	0.5	0.5	0.9	1.2	55	50	-	-	-	-	-	-	No	-
4841	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	F 1	E	295064.2	6251162.5	50	45	51	46	52	47	54	49	1	0.9	1.3	1.6	55	50	-	-	-	-	-	-	No	-
4841	235 - 245 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	E	295066.7	6251160.9	49	44	49	44	52	46	52	48	0.6	0.5	0.9	1.2	55	50	-	-	-	-	-	-	No	-
4841	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	F 1	E	295066.7	6251160.9	50	45	51	46	52	47	54	49	1	1	1.3	1.6	55	50	-	-	-	-	-	-	No	-
4841	235 - 245 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	E	295073.8	6251144.6	51	46	53	48	53	48	55	51	2.4	2.3	2.5	2.8	55	50	-	1	-	No	-	No	Yes	Type 1
4841	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	F 1	E	295073.8	6251144.6	51	46	54	49	54	49	56	52	2.8	2.7	2.8	3.1	55	50	1	2	No	No	No	No	Yes	Type 1
4841	235 - 245 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	N	295054.7	6251164.9	48	43	50	45	51	45	52	48	1.7	1.7	1.8	2.1	55	50	-	-	-	-	-	-	No	-
4841	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	F 1	N	295054.7	6251164.9	49	44	52	47	51	46	54	49	2.9	2.9	2.8	3.2	55	50	-	-	-	-	-	-	No	-
4841	235 - 245 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	N	295068.3	6251160.6	49	44	49	44	52	47	53	48	0.5	0.5	0.9	1.2	55	50	-	-	-	-	-	-	No	-
4841	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	F 1	N	295068.3	6251160.6	50	45	51	46	52	47	54	49	1.1	1.1	1.3	1.6	55	50	-	-	-	-	-	-	No	-
4841	235 - 245 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	S	295063.4	6251126.8	48	44	53	47	50	45	55	50	4.1	3.9	4.4	4.7	55	50	-	-	-	-	-	-	No	-
4841	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	F 1	S	295063.4	6251126.8	50	45	54	49	52	47	56	52	4.4	4.2	4.7	4.9	55	50	1	2	No	No	No	No	Yes	Type 1
4841	235 - 245 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	W	295048.3	6251144.4	42	37	49	43	43	38	50	46	6.6	6.4	7	7.4	55	50	-	-	-	-	-	-	No	-
4841	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	F 1	W	295048.3	6251144.4	46	41	51	46	47	42	53	48	5.7	5.5	6.4	6.5	55	50	-	-	-	-	-	-	No	-
4842	235 - 245 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	NW	295040.6	6251134.7	44	39	49	44	46	41	51	46	4.6	4.5	4.5	4.8	55	50	-	-	-	-	-	-	No	-
4842	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	SE	295040.3	6251122.6	47	42	52	47	48	43	54	49	5.4	5.1	6.3	6.3	55	50	-	-	-	-	-	-	No	-
4842	235 - 245 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	SE	295055.3	6251114.4	50	45	54	49	52	47	56	51	3.6	3.5	3.9	4.1	55	50	1	1	No	No	No	No	Yes	Type 1
4842	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	SW	295034.1	6251125.4	46	42	52	47	47	42	54	49	6	5.6	7	6.9	55	50	-	-	-	-	-	-	No	-
4842	235 - 245 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	SW	295045.0	6251118.2	47	42	53	47	47	43	54	49	5.8	5.5	7	6.8	55	50	-	-	-	-	-	-	No	-
4843	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	E	295003.1	6251100.5	47	42	48	43	50	45	51	46	1	0.9	1.3	1.5	55	50	-	-	-	-	-	-	No	-
4843	235 - 245 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	F 1	E	295003.1	6251100.5	49	44	50	45	51	46	53	48	1.7	1.6	1.9	2.2	55	50	-	-	-	-	-	-	No	-
4843	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	E	295007.1	6251084.4	49	44	51	46	51	46	53	49	2.5	2.3	2.8	3	55	50	-	-	-	-	-	-	No	-
4843	235 - 245 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	F 1	E	295007.1	6251084.4	50	45	53	48	52	47	55	50	3.3	3.1	3.5	3.7	55	50	-	-	-	-	-	-	No	-
4843	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	N	294993.0	6251103.7	45	40	49	44	48	43	51	46	3.4	3.3	3.2	3.6	55	50	-	-	-	-	-	-	No	-
4843	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	F 1	N	294993.0	6251103.7	47	42	51	46	49	44	53	48	3.9	3.8	3.7	4.1	55	50	-	-	-	-	-	-	No	-

M12 Central LNDG concrete pavement surface noise levels

Receiver ID	Address	Noise catchment area	Receiver type	Façade				Predicted noise level Opening Year 2026				Predicted no se level Design Year 2036				Change in noise evel (Build - No Build)				NCG Project road noise criteria		NCG Project road noise criteria exceedance (dB)		Do noise levels equal or exceed the cumulative limit w th project roads adding ≥2dB to the total noise levels?		Is the contribution from the road project Acute?		Is the property considered for further treatment?	Category of treatment
				Floor level	Direction	x	y	No Build		Build		No Build		Build		Opening Year 2026		Design Year 2036													
								Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night		
4843	235 - 245 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	N	295007.5	6251097.0	46	41	47	42	49	43	50	45	1.3	1.2	1.5	1.7	55	50	-	-	-	-	-	-	No	-
4843	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	F 1	N	295007.5	6251097.0	47	42	50	44	50	45	52	47	2.1	2	2.2	2.4	55	50	-	-	-	-	-	-	No	-
4843	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	NE	295007.6	6251079.9	49	44	51	46	51	46	53	49	2.4	2.2	2.5	2.7	55	50	-	-	-	-	-	-	No	-
4843	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	F 1	NE	295007.6	6251079.9	50	45	53	48	52	47	55	50	3.1	2.9	3.2	3.5	55	50	-	-	-	-	-	-	No	-
4843	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	NE	295014.2	6251094.0	49	44	51	46	52	46	54	49	2.2	2.1	2.3	2.6	55	50	-	-	-	-	-	-	No	-
4843	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	F 1	NE	295014.2	6251094.0	50	45	53	48	53	47	56	51	3	2.8	3	3.3	55	50	1	1	No	No	No	No	Yes	Type 1
4843	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	NW	294997.5	6251085.4	45	40	49	44	45	41	51	46	4.5	4.2	5.7	5.6	55	50	-	-	-	-	-	-	No	-
4843	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	F 1	NW	294997.5	6251085.4	47	42	51	46	48	43	53	48	4.2	3.9	5.3	5.2	55	50	-	-	-	-	-	-	No	-
4843	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	S	295011.4	6251087.7	49	45	52	47	51	46	54	49	2.6	2.4	2.9	3.1	55	50	-	-	-	-	-	-	No	-
4843	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	F 1	S	295011.4	6251087.7	51	46	54	49	52	47	56	51	3.3	3	3.5	3.7	55	50	1	1	No	No	No	No	Yes	Type 1
4843	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	SE	294994.9	6251089.5	49	44	52	47	49	44	53	48	2.9	2.6	4.1	3.8	55	50	-	-	-	-	-	-	No	-
4843	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	F 1	SE	294994.9	6251089.5	51	46	53	48	51	46	54	50	2.6	2.3	3.6	3.4	55	50	-	-	-	-	-	-	No	-
4843	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	SE	295004.7	6251073.9	52	47	55	49	53	48	56	51	2.5	2.2	3.1	3	55	50	1	1	No	No	No	No	Yes	Type 1
4843	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	F 1	SE	295004.7	6251073.9	53	49	56	51	54	50	57	53	2.5	2.2	3.1	3.1	55	50	2	3	No	No	No	No	Yes	Type 1
4843	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	SW	294987.9	6251094.0	50	45	53	48	50	45	54	50	3.7	3.3	4.9	4.6	55	50	-	-	-	-	-	-	No	-
4843	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	F 1	SW	294987.9	6251094.0	51	46	55	50	51	47	56	51	3.5	3.2	4.7	4.5	55	50	1	1	No	No	No	No	Yes	Type 1
4843	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	W	294997.2	6251078.0	51	46	54	49	50	46	55	50	3.3	2.9	4.4	4.2	55	50	-	-	-	-	-	-	No	-
4843	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	F 1	W	294997.2	6251078.0	52	47	55	50	52	48	56	52	3.2	2.8	4.2	4	55	50	1	2	No	No	No	No	Yes	Type 1
4843	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	W	294997.8	6251088.3	47	42	51	46	47	42	52	47	4.1	3.8	5.4	5.2	55	50	-	-	-	-	-	-	No	-
4843	235 - 245 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	F 1	W	294997.8	6251088.3	49	44	52	47	49	44	54	49	3.9	3.6	5.1	4.9	55	50	-	-	-	-	-	-	No	-
5170	1669 ELIZABETH DRIVE, BADGERYS CREEK 2555	NCA07	Residential	GF	E	293157.5	6250527.6	42	37	53	48	44	39	55	50	11.4	11.1	11.2	11.5	55	50	-	-	-	-	-	-	No	-
5170	1669 ELIZABETH DRIVE BADGERYS CREEK 2555	NCA07	Residential	F 1	E	293157.5	6250527.6	43	38	54	48	45	40	56	51	10.6	10.4	10.8	11.1	55	50	1	1	No	No	No	No	Yes	Type 1
5170	1669 ELIZABETH DRIVE, BADGERYS CREEK 2555	NCA07	Residential	GF	E	293159.1	6250516.5	41	36	53	48	43	38	55	50	12.2	12	11.9	12.2	55	50	-	-	-	-	-	-	No	-
5170	1669 ELIZABETH DRIVE, BADGERYS CREEK 2555	NCA07	Residential	F 1	E	293159.1	6250516.5	42	37	53	48	44	39	55	50	10.9	10.8	11.1	11.4	55	50	-	-	-	-	-	-	No	-
5170	1669 ELIZABETH DRIVE BADGERYS CREEK 2555	NCA07	Residential	GF	E	293185.5	6250500.2	47	42	53	48	48	43	55	51	6.3	6.2	7.5	7.8	55	50	-	1	-	No	-	No	Yes	Type 1
5170	1669 ELIZABETH DRIVE, BADGERYS CREEK 2555	NCA07	Residential	F 1	E	293185.5	6250500.2	48	43	54	49	48	43	56	51	6.2	6	7.3	7.7	55	50	1	1	No	No	No	No	Yes	Type 1
5170	1669 ELIZABETH DRIVE BADGERYS CREEK 2555	NCA07	Residential	GF	N	293152.5	6250532.9	41	36	54	49	43	38	56	51	13	12.6	12.6	13	55	50	1	1	No	No	No	No	Yes	Type 1
5170	1669 ELIZABETH DRIVE BADGERYS CREEK 2555	NCA07	Residential	F 1	N	293152.5	6250532.9	42	37	55	49	44	39	56	52	12.6	12.3	12.5	12.7	55	50	1	2	No	No	No	No	Yes	Type 1
5170	1669 ELIZABETH DRIVE, BADGERYS CREEK 2555	NCA07	Residential	GF	N	293157.9	6250525.0	41	36	53	48	43	38	55	50	11.9	11.6	11.6	12	55	50	-	-	-	-	-	-	No	-
5170	1669 ELIZABETH DRIVE BADGERYS CREEK 2555	NCA07	Residential	F 1	N	293157.9	6250525.0	42	37	54	48	44	39	55	51	11.4	11.2	11.3	11.7	55	50	-	1	-	No	-	No	Yes	Type 1
5170	1669 ELIZABETH DRIVE, BADGERYS CREEK 2555	NCA07	Residential	GF	N	293166.7	6250508.7	39	34	53	48	41	36	55	50	14.1	13.9	13.7	14	53	48	2	2	No	No	No	No	Yes	Type 1
5170	1669 ELIZABETH DRIVE, BADGERYS CREEK 2555	NCA07	Residential	F 1	N	293166.7	6250508.7	41	35	54	48	42	37	56	51	13.1	13	13.1	13.3	54	49	2	2	No	No	No	No	Yes	Type 1
5170	1669 ELIZABETH DRIVE BADGERYS CREEK 2555	NCA07	Residential	GF	N	293182.0	6250510.3	41	36	54	49	43	38	56	51	13	12.7	12.7	12.9	55	50	1	1	No	No	No	No	Yes	Type 1
5170	1669 ELIZABETH DRIVE, BADGERYS CREEK 2555	NCA07	Residential	F 1	N	293182.0	6250510.3	42	37	55	49	44	39	56	52	12.6	12.3	12.4	12.7	55	50	1	2	No	No	No	No	Yes	Type 1
5170	1669 ELIZABETH DRIVE BADGERYS CREEK 2555	NCA07	Residential	GF	S	293161.8	6250497.1	47	42	47	42	47	42	49	45	-0.1	0.3	1.7	2.2	55	50	-	-	-	-	-	-	No	-
5170	1669 ELIZABETH DRIVE, BADGERYS CREEK 2555	NCA07	Residential	F 1	S	293161.8	6250497.1	48	43	48	43	48	43	50	46	0.4	0.8	2.2	2.7	55	50	-	-	-	-	-	-	No	-
5170	1669 ELIZABETH DRIVE BADGERYS CREEK 2555	NCA07	Residential	GF	W	293143.6	6250518.4	42	37	49	44	42	37	51	47	7.3	7.7	9.2	9.4	54	49	-	-	-	-	-	-	No	-
5170	1669 ELIZABETH DRIVE BADGERYS CREEK 2555	NCA07	Residential	F 1	W	293143.6	6250518.4	43	38	51	45	43	38	52	48	7.4	7.8	9.3	9.5	55	50	-	-	-	-	-	-	No	-
5170	1669 ELIZABETH DRIVE BADGERYS CREEK 2555	NCA07	Residential	GF	W	293175.7	6250508.3	34	30	51	46	34	30	53	48	17.2	15.7	18.7	17.9	46	42	7	6	Yes	Yes	No	No	Yes	Type 2
5170	1669 ELIZABETH DRIVE BADGERYS CREEK 2555	NCA07	Residential	F 1	W	293175.7	6250508.3	38	30	52	46	38	33	54	49	14.2	16.4	15.6	15.7	50	45	4	4	No	No	No	No	Yes	Type 1
5541	1640 ELIZABETH DRIVE KEMPS CREEK 2178	NCA06	Residential	GF	E	295766.1	6248857.8	63	58	63	58	65	59	65	61	-0.3	-0.3	0.7	1.3	55	50	10	11	-	-	No	No	No	-
5541	1640 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA06	Residential	GF	E	295771.8	6248865.6	66	61	66	61	67	62	68	63	-0.7	-0.6	0.7	1.2	55	50	13	13	-	-	No	No	No	-
5541	1640 ELIZABETH DRIVE KEMPS CREEK 2178	NCA06	Residential	GF	N	295763.6	6248873.7	68	63	67	62	69	64	70	65	-1	-0.9	0.7	1.1	55	50	15	15	-	-	No	No	No	-
5541	1640 ELIZABETH DRIVE KEMPS CREEK 2178	NCA06	Residential	GF	N	295769.2	6248873.6	69	64	68	63	69	64	70	65	-1.1	-1	0.6	1.1	55	50	15	15	-	-	No	No	No	-
5541	1640 ELIZABETH DRIVE KEMPS CREEK 2178	NCA06	Residential	GF	S	295760.2	6248855.6	55	51	56	51	57	52	58	54	0.5	0.4	1.2	1.9	55	50	3	4	-	-	No	No	No	-
5541	1640 ELIZABETH DRIVE KEMPS CREEK 2178	NCA06	Residential	GF	S	295767.4	6248859.1	62	57	62	57	64	59	64	60	-0.3	-0.3	0.7	1.3	55	50	9	10	-	-	No	No	No	-
5541	1640 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA06	Residential	GF	W	295756.1	6248860.5	63	57	61	56	63	58	63	59	-1.3	-1.1	0.7	1.1	55	50	8	9	-	-	No	No	No	-
5541	1640 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA06	Residential	GF	W	295759.7	6248867.6	64	59	63	58	64	59	65	60	-1.4	-1.2	0.7	1	55	50	10	10	-	-	No	No	No	-
5542	1650 ELIZABETH DRIVE KEMPS CREEK 2178	NCA06	Passive recreation	GF	E	295715.3	6248865.7	62	57	61	56	63	57	64	59	-0.8	-0.7	1	1.4	55	-	9	-	-	-	No	-	No	-
5542	1650 ELIZABETH DRIVE KEMPS CREEK 2178	NCA06	Passive recreation	GF	N	295709.1	6248877.6	67	62	66	61	67	62	68	63	-1.1	-0.9	0.7	1.1	55	-	13	-	-	-	No	-	No	-
5542	1650 ELIZABETH DRIVE KEMPS CREEK 2178	NCA06	Passive recreation	GF	S	295705.7	6248856.7	51	45	50	45	51	46	52	47	-0.8	-0.6	0.9	1.4	55	-	-	-	-	-	-	-	No	-
5542	1650 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA06	Passive recreation	GF	W	295699.5	6248868.6	62	57	60	55	62	57	62	58	-1.3	-1.1	0.7	1.1	55	-	7	-	-	-	No	-	No	-
5543	1650 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA06	Active recreation	GF	E	295639.0	6248848.6	59	54	58	53	59	54	60	55	-0.7	-0.5	1.2	1.6	60	-	-	-	-	-	-	-	No	-
5543	1650 ELIZABETH DRIVE KEMPS CREEK 2178	NCA06	Active recreation	GF	N	295629.7	6248859.9	63	57	62	57	63	58	64	59	-1	-0.8	1	1.3	60	-	4	-	-	-	No	-	No	-
5543	1650 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA06	Active recreation	GF	S	295627.0	6248840.0	51	46	51	46	52	47	53	49	0.2	0.2	1.3	1.8	60	-	-	-	-	-	-	-	No	-
5543	1650 ELIZABETH DRIVE KEMPS CREEK 2178	NCA06	Active recreation	GF	W	295617.7	6248851.3	60	54	58	54	60	55	60	56	-1.1	-0.8	0.9	1.3	60	-	-	-	-	-	-	-	No	-
5544	1431 - 1433 ELIZABETH DRIVE KEMPS CREEK 2178	NCA06	Residential	GF	E	295853.4	6248935.1	58	53	59	54	59	54	62	57	1.4	1.4	2.3	2.7	55	50	7	7	-	-	No	No	Yes	Type 2
5544	1431 - 1433 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA06	Residential	GF	N	295841.3	6248936.2	52	47	55	50	53	48	57	52	3	3	3.8	4.3	55	50	2	2	No	No	No	No	Yes	Type 1
5544	1431 - 1433 ELIZABETH DRIVE KEMPS CREEK 2178	NCA06	Residential	GF	N	295850.0	6248938.8	60	55	61	56	61	56	63	58	0.5	0.6	1.8	2.2	55	50	8	8	-	-	No	No	Yes	Type 2
5544	1431 - 1433 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA06	Residential	GF	N	295858.7	6248932.4	58	53	59	54	59	54	62	57	1.6	1.4	2.4	2.9	55	50	7	7	Yes	-	No	No	Yes	Type 2
5544	1431 - 1433 ELIZABETH DRIVE KEMPS CREEK 2178	NCA06	Residential	GF	S	295846.8	6248922.7	71	67	71	66	73	68	73	69	-0.8	-0.7	0.5	1.1	55	50	18	19	-	-	No	No	No	-
5544	1431 - 1433 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA06	Residential	GF	SE	295863.2	6248924.8	69	65	69	64	71	66	72	67	-0.4	-0.3	0.7	1.3	55	50	17	17	-	-	No	No	No	-
5544	1431 - 1433 ELIZABETH DRIVE KEMPS CREEK 2178	NCA06	Residential	GF	W	295833.9	6248931.8	67	62	66	61	67	62	68	63	-1.2	-1.1	0.6	1	55	50	13	13	-	-	No	No	No	-
5544	1431 - 1433 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA06	Residential	GF	W	295845.7	6248936.3	53	48	54	49	54	49	56	51	1.1	1.1	2.4	2.8	55	50	1	1	-	-	No	No	Yes	Type 1
5546	51 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	E	295726.8	6248982.9	60	55	59	54	60	55	61	57	-0.9	-0.8	1.1	1.5	55	50	6	7	-	-	No	No	No	-
5546	51 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	F 1	E	295726.8	6248982.9	62	57	61	56	62	57	63	59	-0.8	-0.6	1.1	1.4	55	50	8	9	-	-	No	No	No	-
5546	51 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	N	295719.9	6248991.4	49	44	54	49	51	46	56	52	5.2	5.1	5.8	6.1	55	50	1	2	No	No	No	No	Yes	Type 1
5546	51 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	F 1	N	295719.9	6248991.4	52	47	56	51	54	49	58	54	3.9	3.8	4.7	5.1	55	50	3	4	No	No	No	No	Yes	Type 1
5546	51 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	S	295717.7	6248977.2	65	60	64	59	65	60	66	61	-1.3	-1.1	0.6	1	55	50	11	11	-	-	No	No	No	-
5546	51 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	F 1	S	295717.7	6248977.2	67	62	65	60	67	62	67	63	-1.4	-1.1	0.6	1	55	50	12	13	-	-	No	No	No	-
5546	51 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	W	295710.8	6248985.6	57	51	56	51	57	52	58	53	-0.6	-0.4	1.3	1.7	55	50	3	3	-	-	No	No	No	-
5546	51 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	F 1	W	295710.8	6248985.6	59	54	58	53	59	54	60	55	-0.8	-0.6	1.2	1.5	55	50	5	5	-	-	No	No	No	-
5547	LOT 7A / DP2566	NCA06	Residential	GF	E	295677.6	6248981.2	51	46	52	47	52	47	54	50	1.2	1.3	2.7	3	55	50	-	-	-	-	-	-	No	-
5547	LOT 7A / DP2566	NCA06	Residential	GF	E	295681.9	6248986.6	59	53	59	53	59	54	61	56	0	0	1.7	2.1	55	50	6	6	-	-	No	No	Yes	Type 2
5547	LOT 7A / DP2566	NCA06	Residential	GF	E	295686.9	6248973.7	65	60	64	59	65	60	66	61	-1.2	-1	0.7	1.1	55	50	11	11	-	-	No	No	No	-
5547	LOT 7A / DP2566	NCA06	Residential	GF	N	295675.1	6248990.8	51	46	55	50	52	47	57	52	3.6	3.5	4.6	4.9	55	50	2	2	No	No	No	No	Yes	Type 1
5547	LOT 7A / DP2566	NCA06	Residential	GF	N	295681.6	6248979.3	51	46	54	49	52	47	56	51	2.9	2.8	4.1	4.4	55	50	1	1	No	No	No	No	Yes	Type 1
5547	LOT 7A / DP2566	NCA06	Residential	GF	S	295672.7	6248966.1	69	64	67	63	69	64	69	65	-1.4	-1.1	0.6	1	55	50	14	15	-	-	No	No	No	-
5547	LOT 7A / DP2566	NCA06	Residential	GF	S	295678.5	6248982.8	55	50	54	49	55	50	56	51	-0.6	-0.6	0.9	1.3	55	50	1	1	-	-	No	No	No	-
5547	LOT 7A / DP2566	NCA06	Residential	GF	S	295681.8	6248967.5	68	63	67	62	68	63	69	64	-1.3	-1.1	0.6	1	55	50	14	14	-	-	No	No	No	-
5547	LOT 7A / DP2566	NCA06	Residential	GF	W	295667.3	6248978.5	64	59	63	58	64	59	65	60	-1.3	-1	0.7	1	55	50	10	10	-	-	No	No	No	-
5548	442 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	E	295474.9	6249159.1	53	48	54	49	53	48	56	51	1	1	2.5	2.9	56	52	-	-	-	-	-	-	No	-
5548	442 CLIFTON AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	E	295478.4	6249167.7	53	48	53	49	54	49	55	51	0.3	0.4	1.9	2.2	56	52	-	-	-	-	-	-	No	-
5548	442 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	E	295491.4	6249175.8	52	47	54	49	53	48	56	52	2.3	2.3	3.4	3.8	56	52	-	-	-	-	-	-	No	-
5548	442 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	N	295463.5	6249168.8	57	52	57	53	57	53	58	53	0.3	0.1	0.6	0.6	56	52	2	1	-	-	No	No	No	-
5548	442 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	N	295480.1	6249184.8	55	50	56	51	55	51	57	53	1.2	1	2	2.1	56	52	1	1	-	-	No	No	Yes	Type 1
5548	442 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	S	295466.9	6249151.2	59	54	59	54	59	54	60	55	-0.3	-0.3	1	1.1	56	52	4	3	-	-	No	No	No	-
5548	442 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	S	295476.0	6249165.5	53	48	53	48	53	48	55	51	0.7	0.7	2.1	2.5	56	52	-	-	-	-	-	-	No	-
5548	442 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	S	295484.3	6249168.0	55	50	55	50	55	50	56	52	0	0.1	1.5	1.8	56	52	-	-	-	-	-	-	No	-
5548	442 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	W	295458.1	6249160.2	61	57	61	56	61	57	62	57	-0.2	-0.2	0.4	0.5	56	52	6	5	-	-	No	No	No	-
5548	442 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	W	295468.5	6249176.1	58	53	58	53	58	54	59	54	-0.1	-0.2	0.6	0.6	56	52	3	2	-	-	No	No	No	-
5550	434 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	E	295491.2	6249214.3	51	46	52	48	52	47	54	50	1.4	1.5	2.7	3	55	51	-	-	-	-	-	-	No	-
5550	434 CLIFTON AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	E	295497.0	6249239.7	50	45	54	49	51	46	56	51	4.1	4	4.7	5.1	55	51	1	-	No	-	No	-	Yes	Type 1
5550	434 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	E	295497.7	6249244.3	51	46	54	49	52	47	56	52	3.5	3.4	4.3	4.6	55	51	1	1	No	No	No	No	Yes	Type 1
5550	434 CLIFTON AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	E	295498.6	6249234.4	50	45	54	49	52	47	56	51	3.8	3.6	4.5	4.8	55	51	1	-	No	-	No	-	Yes	Type 1
5550	434 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	E	295508.9	6249221.3	52	47	54	49	53	48	56	52	2.7	2.7	3.8	4.2	55	51	1	1	No	No	No	No	Yes	Type 1
5550	434 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	N	295492.2	6249251.9	54	50	57	51	55	50	58	53	2.1	1.7	2.9	2.7	55	51	3	2	No	No	No	No	Yes	Type 1
5550	434 CLIFTON AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	N	295503.3	6249230.1	51	46	54	49	52	47	56	51	3.7	3.5	4.4	4.6	55	51	1	-	No	-	No	-	Yes	Type 1
5550	434 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	S	295484.6	6249211.7	57	52	57	52	57	52	58	53	0.1	0	1.2	1.5	55	51	3	2	-	-	No	No	No	-
5550	434 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	S	295498.7	6249214.9	54	49	54	49	54	49	56	51	0.4	0.4	1.8	2.1	55	51	1	-	-	-	No	-	No	-

M12 Central LNDG concrete pavement surface noise levels

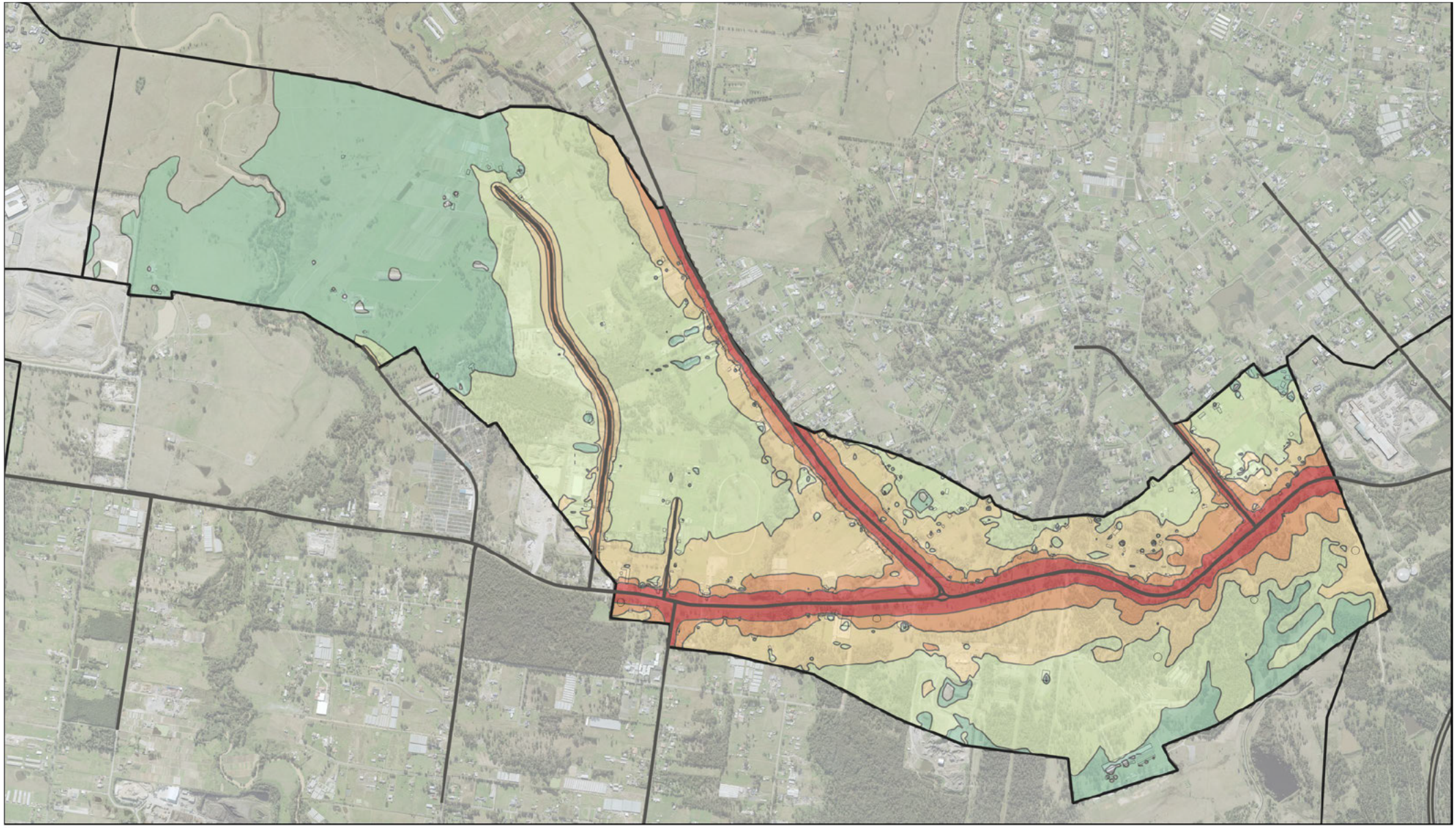
Receiver ID	Address	Noise catchment area	Receiver type	Façade				Predicted noise level Opening Year 2026				Predicted no se level Design Year 2036				Change in noise evel (Build - No Build)				NCG Project road noise criteria		NCG Project road noise criteria exceedance (dB)		Do noise levels equal or exceed the cumulative limit w th project roads adding ≥2dB to the total noise levels?		Is the contribution from the road project Acute?		Is the property considered for further treatment?	Category of treatment
				Floor level	Direction	x	y	No Build		Build		No Build		Build		Opening Year 2026		Design Year 2036											
								Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night		
5550	434 CLIFTON AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	W	295482.2	6249232.7	58	53	58	53	58	54	59	54	0	-0.1	0.7	0.7	55	51	4	3	-	-	No	No	No	-
5551	422 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	E	295522.6	6249373.5	51	46	55	50	52	47	57	52	4.4	4.2	5.1	5.3	55	51	2	1	No	No	No	No	Yes	Type 1
5551	422 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	N	295514.6	6249387.6	53	48	56	51	53	49	57	52	3.1	2.8	4	3.8	55	51	2	1	No	No	No	No	Yes	Type 1
5551	422 CLIFTON AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	S	295511.4	6249361.6	55	50	56	51	55	51	57	53	0.8	0.7	1.9	1.9	55	51	2	2	-	-	No	No	No	-
5551	422 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	W	295503.4	6249375.8	57	53	57	53	57	53	58	53	0.2	0	0.7	0.6	55	51	3	2	-	-	No	No	No	-
5552	410 CLIFTON AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	E	295527.7	6249442.3	51	46	57	51	53	48	59	54	5.2	5.1	5.8	6	55	50	4	4	No	No	No	No	Yes	Type 1
5552	410 CLIFTON AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	N	295523.1	6249465.9	53	48	56	51	54	49	58	53	3.3	2.9	4	4	55	50	3	3	No	No	No	No	Yes	Type 1
5552	410 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	S	295516.0	6249421.0	56	51	57	52	56	51	58	54	1.4	1.3	2.4	2.5	55	50	3	4	No	No	No	No	Yes	Type 1
5552	410 CLIFTON AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	W	295511.5	6249444.6	57	53	58	53	57	53	58	54	0.3	0.1	0.8	0.8	55	50	3	4	-	-	No	No	No	-
5553	395 - 409 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	E	295526.0	6249547.5	51	46	56	51	52	47	58	54	5.7	5.6	6.3	6.6	55	50	3	4	No	No	No	No	Yes	Type 1
5553	395 - 409 CLIFTON AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	N	295518.9	6249563.1	55	51	58	53	56	51	59	54	2.3	1.9	3	2.8	55	50	4	4	No	No	No	No	Yes	Type 1
5553	395 - 409 CLIFTON AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	S	295515.4	6249534.6	57	52	58	53	57	52	59	54	1.1	0.9	1.9	1.9	55	50	4	4	-	-	No	No	No	-
5553	395 - 409 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	W	295508.3	6249550.1	61	56	61	56	60	56	61	57	0.3	0.1	0.6	0.4	55	50	6	7	-	-	No	No	No	-
5556	395 - 409 CLIFTON AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	E	295545.2	6249625.5	49	44	56	51	51	46	58	53	6.8	6.7	7.1	7.5	55	50	3	3	No	No	No	No	Yes	Type 1
5556	395 - 409 CLIFTON AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	E	295551.1	6249639.1	51	46	59	54	53	47	61	57	8.7	8.5	8.8	9.1	55	50	6	7	Yes	Yes	No	No	Yes	Type 2
5556	395 - 409 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	N	295542.5	6249650.4	54	50	60	55	55	51	61	57	5.2	4.9	6.1	6	55	50	6	7	Yes	Yes	No	No	Yes	Type 2
5556	395 - 409 CLIFTON AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	NW	295530.0	6249645.5	58	53	60	55	58	54	61	56	2	1.7	2.7	2.4	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
5556	395 - 409 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	S	295536.4	6249621.4	54	49	55	50	54	49	56	51	1.2	0.9	2	1.9	55	50	1	1	No	-	No	No	No	-
5556	395 - 409 CLIFTON AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	S	295546.8	6249629.1	49	44	56	51	50	45	58	53	7.1	7	7.7	8	55	50	3	3	No	No	No	No	Yes	Type 1
5556	395 - 409 CLIFTON AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	W	295526.9	6249638.0	58	54	60	55	59	54	61	56	1.5	1.2	2.1	1.9	55	50	6	6	Yes	-	No	No	Yes	Type 2
5556	395 - 409 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	W	295527.5	6249629.8	58	53	59	54	58	54	59	55	0.9	0.6	1.4	1.2	55	50	4	5	-	-	No	No	No	-
5560	41 - 49 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	E	295800.9	6249145.8	56	51	59	54	57	52	61	56	2.9	2.9	3.7	4.1	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
5560	41 - 49 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	F 1	E	295800.9	6249145.8	57	52	60	55	58	53	62	57	3.1	2.9	3.9	4.3	55	50	7	7	Yes	Yes	No	No	Yes	Type 2
5560	41 - 49 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	E	295803.7	6249156.9	56	51	59	54	57	52	61	56	3	2.9	3.7	4.1	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
5560	41 - 49 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	F 1	E	295803.7	6249156.9	57	52	60	55	58	53	62	58	3.3	3.2	4.1	4.5	55	50	7	8	Yes	Yes	No	No	Yes	Type 2
5560	41 - 49 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	N	295796.8	6249163.8	52	47	58	52	53	48	60	55	5.9	5.7	6.3	6.7	55	50	5	5	Yes	Yes	No	No	Yes	Type 1
5560	41 - 49 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	F 1	N	295796.8	6249163.8	54	48	59	54	55	50	61	56	5.8	5.7	6.4	6.7	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
5560	41 - 49 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	S	295792.7	6249139.8	56	51	56	51	56	51	58	54	0.6	0.5	1.7	2.2	55	50	3	4	-	-	No	No	Yes	Type 1
5560	41 - 49 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	F 1	S	295792.7	6249139.8	57	52	57	52	58	53	59	55	0.6	0.5	1.7	2.1	55	50	4	5	-	-	No	No	Yes	Type 1
5560	41 - 49 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	W	295787.5	6249153.1	50	45	52	47	50	45	54	49	2.1	2.2	3.5	3.8	55	50	-	-	-	-	-	-	No	-
5560	41 - 49 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	F 1	W	295787.5	6249153.1	52	47	54	49	53	48	56	52	2.1	2.2	3.4	3.8	55	50	1	2	No	No	No	No	Yes	Type 1
5561	41 - 49 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	E	295821.5	6249215.0	56	51	60	54	57	52	61	56	3.6	3.4	4.4	4.7	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
5561	41 - 49 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	N	295807.0	6249224.5	48	42	54	49	49	44	56	51	6.9	6.7	7.6	7.8	55	50	1	1	No	No	No	No	Yes	Type 1
5561	41 - 49 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	N	295815.9	6249227.4	52	46	59	54	53	48	61	56	7.7	7.6	8.1	8.6	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
5561	41 - 49 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	S	295810.9	6249205.2	55	50	57	51	56	51	58	54	1.7	1.6	2.7	3	55	50	3	4	No	No	No	No	Yes	Type 1
5561	41 - 49 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	W	295803.3	6249215.5	49	44	52	47	50	45	54	49	2.8	2.7	4	4.3	55	50	-	-	-	-	-	-	No	-
5561	41 - 49 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	W	295808.0	6249225.8	48	43	54	49	49	44	56	51	6.7	6.5	7.4	7.7	55	50	1	1	No	No	No	No	Yes	Type 1
5563	33 - 39 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	E	295815.2	6249263.9	54	49	60	55	55	50	62	57	6.3	6.1	6.8	7.3	55	50	7	7	Yes	Yes	No	No	Yes	Type 2
5563	33 - 39 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	E	295818.4	6249272.4	54	49	61	56	56	50	63	58	6.6	6.5	7.2	7.6	55	50	8	8	Yes	Yes	No	No	Yes	Type 2
5563	33 - 39 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	N	295809.6	6249277.9	51	46	60	55	52	47	62	57	9.6	9.5	9.8	10.2	55	50	7	7	Yes	Yes	No	No	Yes	Type 2
5563	33 - 39 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	S	295807.4	6249258.5	53	48	56	51	54	49	58	53	3	2.9	3.9	4.3	55	50	3	3	No	No	No	No	Yes	Type 1
5563	33 - 39 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	W	295799.3	6249272.6	49	44	53	48	50	45	55	51	4.2	4.1	5.4	5.6	55	50	-	1	-	No	-	No	Yes	Type 1
5563	33 - 39 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	W	295800.2	6249265.4	49	44	50	45	50	45	52	48	0.9	0.9	2.4	2.7	55	50	-	-	-	-	-	-	No	-
5563	33 - 39 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	W	295800.9	6249262.4	49	44	51	46	50	45	53	48	1.4	1.4	2.8	3.2	55	50	-	-	-	-	-	-	No	-
5564	26 - 32 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	E	295897.0	6249322.7	50	45	63	57	52	47	64	59	12.6	12	12.3	12.4	55	50	9	9	Yes	Yes	No	No	Yes	Type 3
5564	26 - 32 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	E	295904.2	6249310.2	53	48	59	53	55	50	61	56	5.7	5.3	6.1	6.3	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
5564	26 - 32 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	E	295907.2	6249315.5	53	48	62	57	54	49	64	59	9.5	8.9	9.5	9.6	55	50	9	9	Yes	Yes	No	No	Yes	Type 3
5564	26 - 32 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	N	295885.4	6249322.4	51	45	59	53	52	46	60	55	7.2	7.5	8.2	9	55	50	5	5	Yes	Yes	No	No	Yes	Type 1
5564	26 - 32 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	N	295892.0	6249327.7	52	46	64	58	53	48	65	60	11.9	11.6	12	12.4	55	50	10	10	Yes	Yes	Yes	Yes	Yes	Type 3
5564	26 - 32 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	N	295901.5	6249320.1	50	45	63	57	52	47	65	60	12.8	12.3	12.6	12.8	55	50	10	10	Yes	Yes	No	No	Yes	Type 3
5564	26 - 32 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	S	295892.5	6249307.6	54	49	59	53	55	50	60	55	4.6	4.3	5.4	5.6	55	50	5	5	Yes	Yes	No	No	Yes	Type 1
5564	26 - 32 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	S	295904.5	6249312.0	53	48	57	52	54	49	59	54	4.2	3.9	4.8	5.1	55	50	4	4	No	No	No	No	Yes	Type 1
5564	26 - 32 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	W	295882.2	6249315.8	53	47	59	53	53	48	60	55	5.5	5.7	6.6	7.3	55	50	5	5	Yes	Yes	No	No	Yes	Type 1
5564	26 - 32 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	W	295885.9	6249324.5	52	46	59	53	53	47	61	55	6.9	7.1	8	8.7	55	50	6	5	Yes	Yes	No	No	Yes	Type 2
5566	36 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	E	295890.0	6249209.0	54	49	61	55	56	51	63	58	6.6	6	6.9	7	55	50	8	8	Yes	Yes	No	No	Yes	Type 2
5566	36 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	F 1	E	295890.0	6249209.0	55	50	62	56	57	52	64	59	6.4	5.8	6.7	6.8	55	50	9	9	Yes	Yes	No	No	Yes	Type 3
5566	36 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	N	295876.3	6249212.1	50	44	54	49	51	45	56	51	4.2	4.3	5.2	5.8	55	50	1	1	No	No	No	No	Yes	Type 1
5566	36 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	F 1	N	295876.3	6249212.1	52	46	57	51	53	47	59	54	4.8	4.9	5.7	6.3	55	50	4	4	No	No	No	No	Yes	Type 1
5566	36 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	N	295884.5	6249217.8	51	46	60	55	52	47	62	57	9	8.8	9.4	9.6	55	50	7	7	Yes	Yes	No	No	Yes	Type 2
5566	36 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	F 1	N	295884.5	6249217.8	53	47	62	56	54	49	63	58	8.9	8.7	9.2	9.5	55	50	8	8	Yes	Yes	No	No	Yes	Type 2
5566	36 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	S	295880.8	6249201.8	54	49	57	52	55	50	59	54	2.3	2.1	3.2	3.5	55	50	4	4	No	No	No	No	Yes	Type 1
5566	36 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	F 1	S	295880.8	6249201.8	56	51	58	53	57	52	60	55	2.1	2	3	3.4	55	50	5	5	Yes	Yes	No	No	Yes	Type 1
5566	36 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	W	295873.1	6249207.5	52	47	55	49	53	47	57	52	2.8	2.7	3.8	4.3	55	50	2	2	No	No	No	No	Yes	Type 1
5566	36 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	F 1	W	295873.1	6249207.5	54	49	57	52	55	49	59	54	3.1	3.1	4	4.6	55	50	4	4	No	No	No	No	Yes	Type 1
5566	36 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	W	295877.5	6249214.5	51	45	54	48	51	45	55	50	3.3	3.4	4 3	4.9	55	50	-	-	-	-	-	-	No	-
5566	36 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	F 1	W	295877.5	6249214.5	53	47	57	51	53	48	59	54	4.1	4.2	5.1	5.7	55	50	4	4	No	No	No	No	Yes	Type 1
5567	44 - 56 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	E	295876.7	6249163.5	51	46	59	54	52	47	61	56	8.6	8.3	8 8	9.1	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
5567	44 - 56 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	E	295884.8	6249147.8	55	50	57	52	56	51	59	54	2.4	2.2	3.1	3.5	55	50	4	4	No	No	No	No	Yes	Type 1
5567	44 - 56 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	E	295891.5	6249154.2	55	50	60	55	57	52	62	57	5.1	4.7	5.5	5.7	55	50	7	7	Yes	Yes	No	No	Yes	Type 2
5567	44 - 56 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	N	295872.2	6249166.2	52	47	59	54	53	48	61	56	7.2	7.2	7.8	8.2	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
5567	44 - 56 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	N	295883.5	6249161.8	51	46	59	54	52	47	61	56	8.5	8.3	8.8	9.1	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
5567	44 - 56 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	S	295874.3	6249145.7	55	50	56	51	56	51	58	54	1.3	1.3	2.3	2.7	55	50	3	4	-	-	No	No	Yes	Type 1
5567	44 - 56 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	S	295886.7	6249148.5	55	50	57	52	56	51	59	54	2.1	1.9	3	3.3	55	50	4	4	No	No	No	No	Yes	Type 1
5567	44 - 56 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	W	295865.9	6249156.5	53	47	55	49	53	47	56	51	2	2	3	3.5	55	50	1	1	No	No	No	No	Yes	Type 1
5568	44 - 56 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	E	295868.7	6249086.7	56	51	59	54	57	52	61	57	3.5	3.3	4.2	4.5	55	50	6	7	Yes	Yes	No	No	Yes	Type 2
5568	44 - 56 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	N	295864.4	6249096.7	54	49	59	54	55	50	61	56	4.8	4.7	5.5	5.9	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
5568	44 - 56 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	S	295861.1	6249078.3	56	51	57	52	58	52	59	55	1	0.9	1.9	2.4	55	50	4	5	-	-	No	No	Yes	Type 1
5568	44 - 56 SALISBURY AVENUE KEMPS CREEK 2178	NCA06	Residential	GF	W	295855.3	6249082.4	54	49	55	50	55	50	57	52	1.2	1.2	2.2	2.6	55	50	2	2	-	No	No	No	Yes	Type 1
5568	44 - 56 SALISBURY AVENUE, KEMPS CREEK 2178	NCA06	Residential	GF	W	295857.1	6249091.0	53	48	55	49	54	48	57	52	1.7	1.7	2.8	3.2	55	50	2	2	No	No	No	No	Yes	Type 1
5569	1431 - 1433 ELIZABETH DRIVE KEMPS CREEK 2178	NCA06	Residential	GF	E	295853.8	6249052.0	58	53	60	54	59	54	62	57	2	1.8	2.8	3.2	55	50	7	7	Yes	Yes	No	No	Yes	Type 2
5569	1431 - 1433 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA06	Residential	GF	N	295845.1	6249057.7	54	49	58	53	55	50	60	55	3.6	3.6	4.4	4.9	55	50	5	5	Yes	Yes	No	No	Yes	Type 1
5569	1431 - 1433 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA06	Residential	GF	S	295843.9	6249049.0	57	52	57	52	58	53	59	55	-0.2	-0.2	0.9	1.4	55	50	4	5	-	-	No	No	No	-
5569	1431 - 1433 ELIZABETH DRIVE KEMPS CREEK 2178	NCA06	Residential	GF	W	295835.2	6249054.8	58	52	58	52	58	52	59	53	0.4	0.1	1	1.2	55	50	4	3	-	-	No	No	No	-
5570	1383 - 1411 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	E	296111.3	6248915.8	67	62	66	62	68	63	69	65	-0.6	-0.6	0.5	1.1	55	50	14	15	-	-	No	No	No	-
5570	1383 - 1411 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	E	296121.8	6248918.8	67	62	66	61	68	63	69	64	-0.5	-0.4	0.6	1.2	55	50	14	14	-	-	No	No	No	-
5570	1383 - 1411 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	E	296124.9	6248923.8	65	60	65	61	67	62	68	63	0.1	0.1	1.1	1.6	55	50	13	13	-	-	No	No	No	-
5570	1383 - 1411 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	N	296097.9	6248923.7	61	56	61	56	62	57	64	59	0.4	0.4	1.4	1.9	55	50	9	9	-	-	No	No	No	-
5570	1383 - 1411 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	N	296111.5	6248927.6	55	50	59	54	57	52	61	57	4	3.7	4.6	4.8	55	50	6	7	Yes	Yes	No	No	Yes	Type 2
5570	1383 - 1411 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	S	296100.9	6248915.8	67	62	67	62	69	64	69	65	-0.7	-0.6	0.5	1.1	55	50	14	15	-	-	No	No	No	-
5570	1383 - 1411 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	S	296107.4	6248913.4	68	64	68	63	70	65	70	66	-0.6	-0.5	0.5	1.1	55	50	15	16	-	-	No	No	No	-
5570	1383 - 1411 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	S	296115.6	6248916.2	68	63	67	63	69	64	70	66	-0.6	-0.6	0.5	1.1	55	50	15	16	-	-	No	No	No	-
5570	1383 - 1411 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	S	296122.7	6248919.3	67	62	66	62	68	63	69	64	-0.5	-0.4	0.6	1.1	55	50	14	14	-	-	No	No	No	-
5570	1383 - 1411 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	W	296096.0	6248919.4	65	60	65	60	66	61	67	63	-0.3	-0.3	0.8	1.4	55	50	12	13	-	-	No	No	No	-
5570	1383 - 1411 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	W	296098.5	6248924.9	61	56	61	56	62	57	64	59	0.4	0.3	1.4	1.8	55	50	9	9	-	-	No	No	No	-
5570	1383 - 1411 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	W	296103.5	6248915.7	66	61	66	61	68	63	68	64	-0.7	-0.6	0.5	1.1	55	50	13	14	-	-	No	No	No	-
5571	1383 - 1411 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	E	296175.6	6248970.4	56	51	58	53	57	52	60	56	2.3	2	2.9	3.3	55	50	5	6	Yes	Yes	No	No	Yes	Type 2
5571	1383 - 1411 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	E	296179.6	6248965.7	59	54	61	56	61	56	63	58	1.3	1.2	2.2	2.6	55	50	8	8	-	-	No	No	Yes	Type 2
5571	1383 - 1411 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	N	296157.8	6248969.9	54	49	58	53	55	50	60	55	4.3	3.9	4.7	4.9	55	50	5	5	Yes	Yes	No	No	Yes	Type 1
5571	1383 - 1411 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	N	296168.5	6248973.0	54	49	58	53	55	50	60	56	4.5	4.1	4.9	5.1	55	50	5	6	Yes	Yes	No	No	Yes	Type 2
5571	1383 - 1411 ELIZABETH DRIVE, KEMPS CREEK 2178	NCA04	Residential	GF	N	296176.7	6248969.9	56	51	57	52	57	52	59	55	1.4	1.2	2.3	2.7	55	50	4	5	-	-	No	No	Yes	Type 1

M12 Central LNDG concrete pavement surface noise levels

Receiver ID	Address	Noise catchment area	Receiver type	Façade				Predicted noise level Opening Year 2026				Predicted no se level Design Year 2036				Change in noise evel (Build - No Build)				NCG Project road noise criteria		NCG Project road noise criteria exceedance (dB)		Do noise levels equal or exceed the cumulative limit w th project roads adding ≥2dB to the total noise levels?		Is the contribution from the road project Acute?		Is the property considered for further treatment?	Category of treatment
				Floor level	Direction	x	y	No Build		Build		No Build		Build		Opening Year 2026		Design Year 2036													
								Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night		
5571	1383 - 1411 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	S	296166.2	6248961.5	61	56	61	56	62	57	63	59	-0.2	-0.2	0.8	1.3	55	50	8	9	-	-	No	No	No	-
5571	1383 - 1411 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	W	296152.7	6248965.5	59	55	60	55	61	56	62	58	0.4	0.3	1.4	1.8	55	50	7	8	-	-	No	No	No	-
5571	1383 - 1411 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	W	296161.0	6248970.7	54	49	57	52	55	50	59	54	3.4	3	3.9	4.2	55	50	4	4	No	No	No	No	Yes	Type 1
5572	1383 - 1411 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	E	296130.9	6249000.8	54	49	59	53	55	50	61	56	5	4.6	5.4	5.6	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
5572	1383 - 1411 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	E	296144.1	6248994.4	59	54	60	55	60	55	62	58	1.2	1.1	2.1	2.6	55	50	7	8	-	-	No	No	Yes	Type 2
5572	1383 - 1411 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	N	296127.5	6249003.9	53	49	59	54	55	50	61	56	5.7	5.2	6	6.2	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
5572	1383 - 1411 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	N	296136.6	6248999.3	53	48	59	53	55	50	61	56	5.7	5.3	6	6.2	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
5572	1383 - 1411 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	S	296133.7	6248990.0	60	55	60	55	61	56	62	58	0.2	0.1	1.2	1.6	55	50	7	8	-	-	No	No	No	-
5572	1383 - 1411 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	W	296123.8	6248997.0	57	52	59	54	58	53	61	56	2.2	2	3	3.3	55	50	6	6	Yes	Yes	No	No	Yes	Type 2
5575	617 DEVONSHIRE ROAD, KEMPS CREEK 2178	NCA04	Residential	GF	E	295877.9	6248724.1	58	53	58	53	59	54	60	56	0.6	0.5	1.3	1.9	55	50	5	6	-	-	No	No	No	-
5575	617 DEVONSHIRE ROAD, KEMPS CREEK 2178	NCA04	Residential	GF	E	295881.1	6248730.9	58	54	59	54	60	55	61	57	0.4	0.4	1.3	1.8	55	50	6	7	-	-	No	No	No	-
5575	617 DEVONSHIRE ROAD, KEMPS CREEK 2178	NCA04	Residential	GF	E	295883.7	6248743.2	59	54	59	54	60	55	61	57	0.4	0.4	1.4	1.9	55	50	6	7	-	-	No	No	No	-
5575	617 DEVONSHIRE ROAD, KEMPS CREEK 2178	NCA04	Residential	GF	N	295877.9	6248753.5	64	59	64	59	65	60	66	62	0.3	0.2	1	1.6	55	50	11	12	-	-	No	No	No	-
5575	617 DEVONSHIRE ROAD, KEMPS CREEK 2178	NCA04	Residential	GF	S	295872.1	6248720.0	62	57	62	57	64	58	64	60	0.5	0.3	0.9	1.6	55	50	9	10	-	-	No	No	No	-
5575	617 DEVONSHIRE ROAD, KEMPS CREEK 2178	NCA04	Residential	GF	S	295878.5	6248727.1	55	50	56	51	57	52	58	54	0.8	0.7	1.6	2.1	55	50	3	4	-	-	No	No	Yes	Type 1
5575	617 DEVONSHIRE ROAD, KEMPS CREEK 2178	NCA04	Residential	GF	W	295869.1	6248737.6	65	60	65	60	67	62	68	63	0.3	0.1	0.8	1.5	55	50	13	13	-	-	No	No	No	-
5576	1630 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	E	296038.5	6248787.9	54	49	54	50	55	50	56	52	0.7	0.8	1.6	2.1	55	50	1	2	-	-	No	No	Yes	Type 1
5576	1630 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	E	296052.6	6248798.1	62	57	62	57	64	59	65	60	0	0	1	1.5	55	50	10	10	-	-	No	No	No	-
5576	1630 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	N	296034.7	6248807.7	66	61	66	61	68	63	68	64	-0.5	-0.4	0.7	1.2	55	50	13	14	-	-	No	No	No	-
5576	1630 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	S	296025.0	6248785.6	49	45	50	45	51	46	52	48	0.3	0.2	1.1	1.6	55	50	-	-	-	-	-	-	No	-
5576	1630 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	S	296042.5	6248789.8	49	44	51	46	50	45	53	48	1.8	1.6	2.5	2.9	55	50	-	-	-	-	-	-	No	-
5576	1630 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	SE	296049.5	6248790.2	59	54	59	54	60	55	61	57	0.2	0.2	1.2	1.7	55	50	6	7	-	-	No	No	No	-
5576	1630 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	W	296014.1	6248798.9	63	58	62	57	64	59	65	60	-0.7	-0.6	0.6	1.1	55	50	10	10	-	-	No	No	No	-
5577	1610 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	E	296129.5	6248815.5	66	61	65	60	67	62	68	63	-0.3	-0.2	0.8	1.3	55	50	13	13	-	-	No	No	No	-
5577	1610 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	E	296137.6	6248808.3	65	60	64	60	66	61	67	62	-0.2	-0.1	0.9	1.4	55	50	12	12	-	-	No	No	No	-
5577	1610 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	N	296115.2	6248820.5	68	63	67	62	69	64	70	65	-0.5	-0.5	0.7	1.2	55	50	15	15	-	-	No	No	No	-
5577	1610 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	N	296126.3	6248818.9	68	63	67	63	69	64	70	65	-0.5	-0.4	0.7	1.2	55	50	15	15	-	-	No	No	No	-
5577	1610 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	N	296132.4	6248814.7	67	62	66	61	68	63	69	64	-0.3	-0.3	0.8	1.3	55	50	14	14	-	-	No	No	No	-
5577	1610 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	S	296108.4	6248808.9	57	52	56	51	58	53	59	54	-0.7	-0.6	0.6	1.2	55	50	4	4	-	-	No	No	No	-
5577	1610 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	S	296124.0	6248803.0	48	44	50	45	50	45	52	48	1.9	1.5	2.4	2.8	55	50	-	-	-	-	-	-	No	-
5577	1610 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	W	296105.3	6248815.1	65	60	64	59	66	61	67	62	-0.5	-0.4	0.6	1.2	55	50	12	12	-	-	No	No	No	-
5577	1610 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	W	296110.5	6248807.1	58	53	58	53	59	54	60	55	-0.7	-0.7	0.6	1.2	55	50	5	5	-	-	No	No	No	-
5578	1600 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	E	296207.0	6248808.8	64	59	64	59	66	61	66	62	-0.2	-0.3	0.8	1.3	55	50	11	12	-	-	No	No	No	-
5578	1600 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	N	296194.6	6248812.5	65	60	65	60	67	62	67	63	-0.4	-0.4	0.7	1.2	55	50	12	13	-	-	No	No	No	-
5578	1600 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	N	296203.3	6248817.9	68	63	67	62	69	64	70	65	-0.4	-0.4	0.6	1.2	55	50	15	15	-	-	No	No	No	-
5578	1600 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	S	296196.7	6248801.8	53	47	53	48	54	49	55	51	0.4	0.4	1.5	2	55	50	1	1	-	-	No	No	No	-
5578	1600 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	W	296188.6	6248808.2	64	59	64	59	66	61	66	62	-0.4	-0.3	0.7	1.3	55	50	11	12	-	-	No	No	No	-
5578	1600 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	W	296197.8	6248814.5	65	60	64	60	66	61	67	62	-0.5	-0.4	0.7	1.2	55	50	12	12	-	-	No	No	No	-
5579	1590 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	E	296291.8	6248708.5	54	49	55	51	55	51	58	53	1.5	1.4	2.3	2.7	55	50	3	3	-	-	No	No	Yes	Type 1
5579	1590 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	F 1	E	296291.8	6248708.5	55	51	57	52	57	52	59	54	1.3	1.3	2.2	2.6	55	50	4	4	-	-	No	No	Yes	Type 1
5579	1590 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	E	296296.9	6248715.9	59	54	60	55	60	55	62	58	0.9	0.8	1.8	2.2	55	50	7	8	-	-	No	No	Yes	Type 2
5579	1590 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	F 1	E	296296.9	6248715.9	60	55	60	56	61	56	63	58	0.8	0.7	1.6	2.2	55	50	8	8	-	-	No	No	Yes	Type 2
5579	1590 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	N	296279.4	6248723.1	61	56	62	57	63	58	64	59	0.4	0.4	1.4	1.9	55	50	9	9	-	-	No	No	No	-
5579	1590 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	F 1	N	296279.4	6248723.1	62	57	63	58	64	59	65	60	0.3	0.3	1.4	1.8	55	50	10	10	-	-	No	No	No	-
5579	1590 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	S	296263.0	6248715.7	52	47	51	47	53	48	54	49	-0.3	-0.3	0.7	1.3	55	50	-	-	-	-	-	-	No	-
5579	1590 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	F 1	S	296263.0	6248715.7	54	49	54	49	55	50	56	52	-0.1	-0.1	0.9	1.4	55	50	1	2	-	-	No	No	No	-
5579	1590 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	S	296277.0	6248706.0	47	42	47	42	48	43	50	45	0.7	0.5	1.2	1.8	55	50	-	-	-	-	-	-	No	-
5579	1590 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	F 1	S	296277.0	6248706.0	50	45	51	46	51	46	53	48	0.8	0.7	1.5	2.1	55	50	-	-	-	-	-	-	No	-
5579	1590 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	S	296293.7	6248711.3	50	45	53	48	51	46	55	50	2.7	2.5	3.4	3.7	55	50	-	-	-	-	-	-	No	-
5579	1590 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	F 1	S	296293.7	6248711.3	52	47	54	49	53	48	56	52	2.1	2	2.8	3.2	55	50	1	2	No	No	No	No	Yes	Type 1
5579	1590 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	W	296260.6	6248721.0	58	54	59	54	60	55	61	57	0.4	0.3	1.4	1.9	55	50	6	7	-	-	No	No	No	-
5579	1590 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	F 1	W	296260.6	6248721.0	60	55	60	55	61	56	63	58	0.2	0.2	1.2	1.7	55	50	8	8	-	-	No	No	No	-
5579	1590 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	GF	W	296263.9	6248712.6	54	49	54	49	55	50	56	52	-0.4	-0.3	0.7	1.3	55	50	1	2	-	-	No	No	No	-
5579	1590 ELIZABETH DRIVE KEMPS CREEK 2178	NCA04	Residential	F 1	W	296263.9	6248712.6	56	51	56	51	57	52	58	54	-0.2	-0.3	0.8	1.4	55	50	3	4	-	-	No	No	No	-
5586	1572 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	E	296370.0	6248644.0	56	51	57	52	57	52	59	55	1.1	1	2	2.5	55	50	4	5	No	Yes	No	No	Yes	Type 1
5586	1572 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	E	296370.0	6248644.0	58	53	59	54	60	55	62	57	1.1	1.1	2	2.4	55	50	7	7	Yes	-	No	No	Yes	Type 2
5586	1572 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NE	296359.4	6248662.4	58	53	59	54	60	55	62	57	1.3	1.2	2.1	2.6	55	50	7	7	-	-	No	No	Yes	Type 2
5586	1572 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	NE	296359.4	6248662.4	59	54	60	55	60	55	62	58	1.2	1.2	2.1	2.5	55	50	7	8	-	-	No	No	Yes	Type 2
5586	1572 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NE	296365.3	6248653.3	58	53	59	54	59	54	61	57	1.3	1.3	2.1	2.6	55	50	6	7	-	-	No	No	Yes	Type 2
5586	1572 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	NE	296365.3	6248653.3	58	53	60	55	60	55	62	57	1.3	1.3	2.2	2.6	55	50	7	7	-	-	No	No	Yes	Type 2
5586	1572 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NW	296350.0	6248649.8	53	48	54	49	54	49	56	51	0.7	0.7	1.7	2.1	55	50	1	1	-	-	No	No	Yes	Type 1
5586	1572 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	NW	296350.0	6248649.8	54	49	55	50	56	51	57	53	0.8	0.7	1.7	2.2	55	50	2	3	-	-	No	No	Yes	Type 1
5586	1572 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	NW	296351.3	6248662.4	58	54	59	54	60	55	62	57	0.7	0.6	1.7	2.1	55	50	7	7	-	-	No	No	Yes	Type 2
5586	1572 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	NW	296351.3	6248662.4	59	55	60	55	61	56	62	58	0.7	0.6	1.7	2.1	55	50	7	8	-	-	No	No	Yes	Type 2
5586	1572 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SE	296354.2	6248642.2	44	40	45	40	46	41	47	43	0.8	0.6	1.3	1.9	55	50	-	-	-	-	-	-	No	-
5586	1572 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SE	296354.2	6248642.2	47	42	48	43	48	43	50	46	0.9	0.8	1.6	2.1	55	50	-	-	-	-	-	-	No	-
5586	1572 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SE	296365.5	6248637.3	51	46	52	47	52	47	53	49	0.6	0.7	1.6	2.1	55	50	-	-	-	-	-	-	No	-
5586	1572 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SE	296365.5	6248637.3	52	47	53	48	53	48	55	50	0.9	1	1.9	2.3	55	50	-	-	-	-	-	-	No	-
5586	1572 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	296348.6	6248653.8	53	48	54	49	55	50	56	52	0.6	0.6	1.6	2	55	50	1	2	-	-	No	No	No	-
5586	1572 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SW	296348.6	6248653.8	55	50	55	50	56	51	58	53	0.7	0.7	1.7	2.1	55	50	3	3	-	-	No	No	Yes	Type 1
5586	1572 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	296350.0	6248644.8	53	48	54	49	55	50	56	52	0.9	0.9	1.8	2.3	55	50	1	2	-	-	No	No	Yes	Type 1
5586	1572 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SW	296350.0	6248644.8	55	50	55	51	56	51	58	53	0.9	0.9	1.8	2.3	55	50	3	3	-	-	No	No	Yes	Type 1
5586	1572 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	GF	SW	296356.7	6248639.0	49	45	49	44	51	46	52	47	-0.2	-0.2	0.9	1.4	55	50	-	-	-	-	-	-	No	-
5586	1572 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Residential	F 1	SW	296356.7	6248639.0	51	46	51	46	52	47	53	49	0.1	0	1	1.5	55	50	-	-	-	-	-	-	No	-
8010	LOT 3 / DP1087825	NCA05	Passive recreation	GF	N	299410.2	6249161.5	58	53	62	57	58	53	64	59	4.7	4.6	6.1	6.3	55	-	9	-	Yes	-	No	-	Yes	n/a
8011	LOT 3 / DP1087825	NCA05	Passive recreation	GF	N	298380.2	6248605.7	53	48	59	53	54	48	60	55	5.4	5.2	6.4	6.7	55	-	5	-	Yes	-	No	-	Yes	n/a
8012	1490 ELIZABETH DRIVE CECIL PARK 2178	NCA04	Active recreation	GF	N	296914.8	6248805.7	63	59	64	59	65	60	67	62	0.9	0.8	1.8	2.2	60	-	7	-	-	-	No	-	No	-
8014	1650 ELIZABETH DRIVE KEMPS CREEK 2178	NCA06	Active recreation	GF	N	295579.6	6248888.1	65	60	64	59	66	60	66	62	-1.1	-1	0.8	1.3	60	-	6	-	-	-	No	-	No	-
8024	LOT 3 / DP1087825	NCA05	Passive recreation	GF	N	298883.2	6248602.6	53	48	56	51	53	48	57	53	3.2	3.2	4	4.4	55	-	2	-	No	-	No	-	Yes	n/a
9001	1271 - 1277 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	GF	E	297419.2	6248985.0	66	61	67	62	67	62	68	63	0.4	0.9	1.2	1.7	55	50	13	13	-	-	No	No	No	-
9001	1271 - 1277 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	N	297412.6	6248990.6	59	53	59	54	59	54	60	56	0.3	0.6	1	1.4	55	50	5	6	-	-	No	No	No	-
9001	1271 - 1277 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	S	297410.0	6248980.4	69	64	69	65	69	64	71	66	0.7	1	1.4	1.9	55	50	16	16	-	-	No	Yes	Yes	Type 5
9001	1271 - 1277 ELIZABETH DRIVE MOUNT VERNON 2178	NCA04	Residential	GF	S	297415.5	6248979.1	69	64	70	65	70	65	71	67	0.5	0.9	1.2	1.7	55	50	16	17	-	-	No	Yes	Yes	Type 5
9001	1271 - 1277 ELIZABETH DRIVE, MOUNT VERNON 2178	NCA04	Residential	GF	W	297406.4	6248985.3	66	61	67	62	66	61	68	63	0.9	1.2	1.6	2.2	55	50	13	13	-	-	No	No	Yes	Type 4
9002	81 CLIFTON AVENUE KEMPS CREEK 2178	NCA06	Place of worship	GF	E	295424.6	6249866.1	53	49	62	57	55	50	64	59	8.6	8.2	9.2	9.2	50	50	14	9	Yes	Yes	No	No	Yes	Type 4
9002	81 CLIFTON AVENUE KEMPS CREEK 2178	NCA06	Place of worship	GF	E	295432.6	6249818.6	52	47	59	54	53	48	61	56	7.5	7.1	8.2	8.2	50	50	11	6	Yes	Yes	No	No	Yes	Type 3
9002	81 CLIFTON AVENUE KEMPS CREEK 2178	NCA06	Place of worship	GF	E	295435.4	6249841.7	54	49	62	57	55	50	64	59	8.2	7.8	8.8	8.8	50	50	14	9	Yes	Yes	No	No	Yes	Type 4
9002	81 CLIFTON AVENUE KEMPS CREEK 2178	NCA06	Place of worship	GF	E	295440.9	6249828.4	54	49	62	57	55	50	64	59	7.9	7.5	8.6	8.6	50	50	14	9	Yes	Yes	No	No	Yes	Type 4
9002	81 CLIFTON AVENUE KEMPS CREEK 2178	NCA06	Place of worship	GF	N	295412.1	6249883.7	52	47	61	56	53	49	63	58	9.2	8.7	9.6	9.7	50	50	13	8	Yes	Yes	No	No	Yes	Type 4
9002	81 CLIFTON AVENUE KEMPS CREEK 2178	NCA06	Place of worship	GF	N	295428.8	6249851.5	52	47	61	56	53	49	63	58	8.8	8.4	9.2	9.3	50	50	13	8	Yes	Yes	No	No	Yes	Type 4
9002	81 CLIFTON AVENUE KEMPS CREEK 2178	NCA06	Place of worship	GF	N	295437.0	6249834.8	53	48	61	56	54	49	63	58	8.3	8	8.9	8.9	50	50	13	8	Yes	Yes	No	No	Yes	Type 4
9002	81 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Place of worship	GF	NW	295410.1	6249840.5	46	41	52	47	47	42	54	49	6.1	6	7.1	7.3	50	50	4	-	No	-	No	-	Yes	Type 1
9002	81 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Place of worship	GF	S	295407.0	6249867.7	48	43	51	46	48	43	53	48	3.5	3.4	4.7	5	50	50	3	-	No	-	No	-	Yes	Type 1
9002	81 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Place of worship	GF	S	295412.3	6249822.2	46	41	50	45	47	42	52	47	3.7	3.6	5	5.3	50	50	2	-	No	-	No	-	Yes	Type 1
9002	81 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Place of worship	GF	S	295421.9	6249813.5	51	46	57	52	51	47	59	54	6.3	6	7.1	7.3	50	50	9	4	Yes	No	No	No	Yes	Type 3
9002	81 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Place of worship	GF	S	295435.8	6249823.0	51	46	58	53	52	47	60	55	7.1	6.7	7.9	7.9	50	50	10	5	Yes	Yes	No	No	Yes	Type 3
9002	81 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Place of worship	GF	SW	295407.8	6249826.0	47	42	51	46	47	43	53	48	3.8	3.7	5.1	5.3	50	50	3	-	No	-	No	-	Yes	Type 1
9002	81 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Place of worship	GF	W	295396.7	6249877.5	49	44	56	50	50	45	57	53	6.9	6.7	7.9	8	50	50	7	3	Yes	No	No	No	Yes	Type 2
9002	81 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Place of worship	GF	W	295405.6	6249833.3	47	42	52	47	48	43	54	49	4.8	4.7	6.1	6.3	50	50	4	-	No	-	No	-	Yes	Type 1
9002	81 CLIFTON AVENUE, KEMPS CREEK 2178	NCA06	Place of worship	GF	W	295412.5	6249819.6	46	41	51	45	47	42	52	48	4.3	4.1	5.6	5.8	50	50	2	-	No	-	No	-	Yes	Type 1

M12 Central LNDG concrete pavement surface noise levels

Receiver ID	Address	Noise catchment area	Receiver type	Façade				Predicted noise level Opening Year 2026				Predicted no se level Design Year 2036				Change in noise evel (Build - No Build)				NCG Project road noise criteria		NCG Project road noise criteria exceedance (dB)		Do noise levels equal or exceed the cumulative limit w th project roads adding ≥2dB to the total noise levels?		Is the contribution from the road project Acute?		Is the property considered for further treatment?	Category of treatment
				Floor level	Direction	x	y	No Build		Build		No Build		Build		Opening Year 2026		Design Year 2036													
								Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night		
9002	81 CLIFTON AVENUE KEMPS CREEK 2178	NCA06	Place of worship	GF	W	295414.9	6249855.1	46	41	51	46	47	42	53	48	4.8	4.7	6.1	6.4	50	50	3	-	No	-	No	-	Yes	Type 1
9003	1117 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	NE	296016.1	6250465.4	69	64	69	64	71	66	72	67	0.1	0	0.5	0.8	55	50	17	17	-	-	No	No	No	-
9003	1117 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	NW	296006.2	6250468.1	65	60	65	60	68	62	68	63	0.3	0.2	0.7	1	55	50	13	13	-	-	No	No	No	-
9003	1117 MAMRE ROAD KEMPS CREEK 2178	NCA03	Residential	GF	SE	296012.8	6250455.8	64	59	65	59	67	62	68	63	0.2	0.1	0.7	0.9	55	50	13	13	-	-	No	No	No	-
9003	1117 MAMRE ROAD, KEMPS CREEK 2178	NCA03	Residential	GF	SW	296002.9	6250458.6	57	52	58	53	60	54	61	56	1.4	1.3	1.5	1.9	55	50	6	6	-	-	No	No	No	-
9004	258 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	NE	295066.8	6251003.6	50	45	52	47	52	47	54	49	2	1.9	2.1	2.4	55	51	-	-	-	-	-	-	No	-
9004	258 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	NE	295067.6	6250983.4	52	47	54	49	53	49	56	51	2.3	2	2.7	2.7	55	51	1	-	No	-	No	-	Yes	Type 1
9004	258 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	NE	295071.5	6250989.2	52	47	54	49	53	48	56	51	2.5	2.3	2.9	3	55	51	1	-	No	-	No	-	Yes	Type 1
9004	258 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	NW	295051.2	6251009.8	51	46	53	48	52	47	54	50	1.8	1.5	2.3	2.3	55	51	-	-	-	-	-	-	No	-
9004	258 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	SE	295065.3	6250979.3	55	50	57	52	55	51	58	53	1.9	1.6	2.5	2.4	55	51	3	2	No	No	No	No	Yes	Type 1
9004	258 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	SE	295069.3	6250984.8	53	48	55	50	54	49	57	52	2.3	2	2.7	2.7	55	51	2	1	No	No	No	No	Yes	Type 1
9004	258 CLIFTON AVENUE KEMPS CREEK 2178	NCA07	Residential	GF	SE	295072.0	6250990.4	52	47	54	49	53	48	56	51	2.5	2.3	2.9	3	55	51	1	-	No	-	No	-	Yes	Type 1
9004	258 CLIFTON AVENUE, KEMPS CREEK 2178	NCA07	Residential	GF	SW	295052.7	6250990.8	55	50	57	52	55	51	57	53	1.7	1.4	2.4	2.2	55	51	2	2	No	No	No	No	Yes	Type 1



Paper Size ISO A4

0 200 400 600 800 m

Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- Existing roads
- Sensitive receiver
- Study area

Noise contour, dBA

- < 45 dBA
- 45-50 dBA
- 50-55 dBA
- 55-60 dBA
- 60-65 dBA
- > 65 dBA

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 Central
2026 No Build day-time contours LAeq(15 hour)

Project No. **12520102**
Revision No. **A**
Date. **03/08/2022**

Figure F.1

Document Path: \\ghdnet\ghd\AU\Sydney\Projects\21\12520102\Tech\Noise\00_GIS\12520102_GIS.qgz

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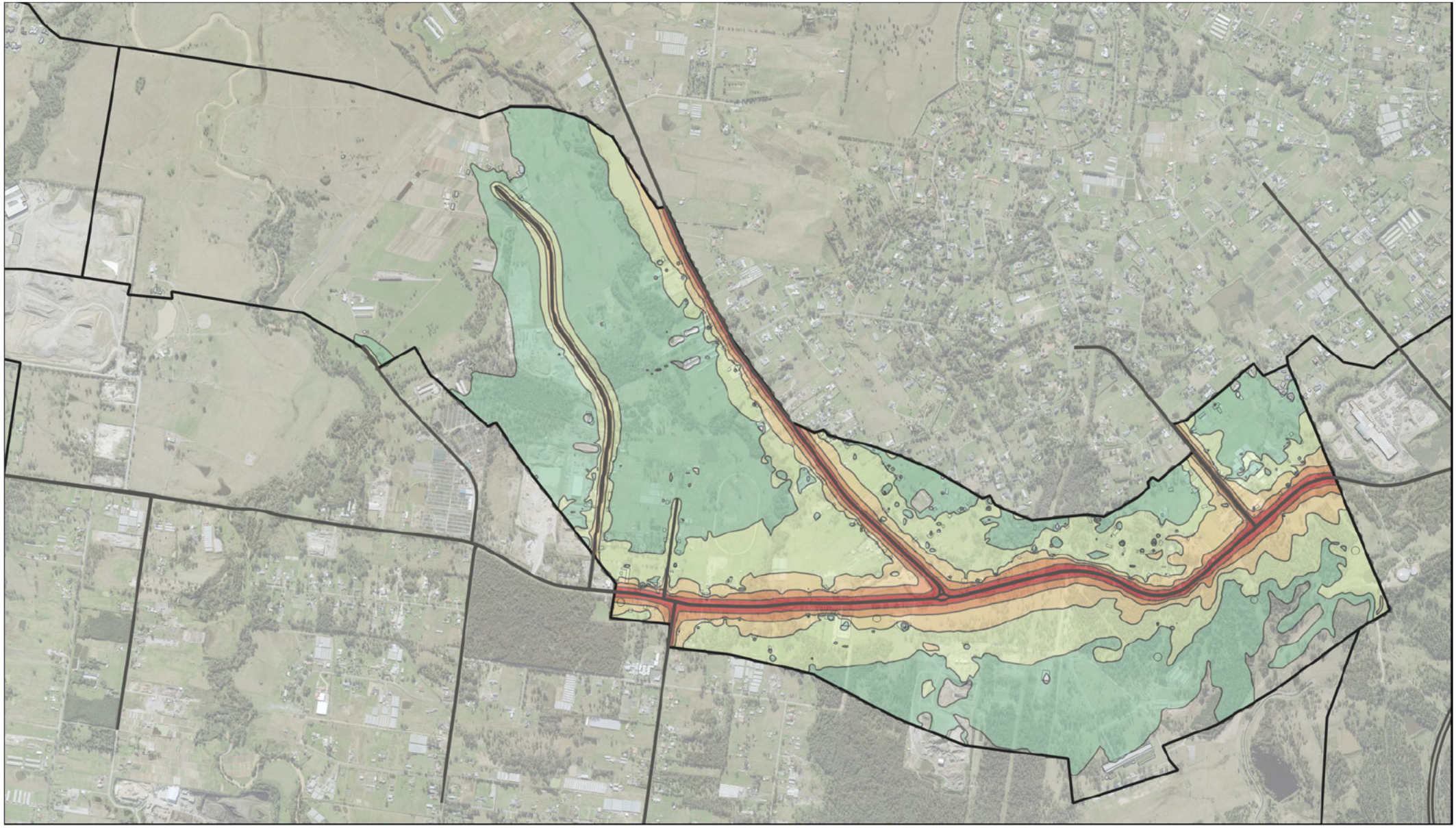
Created By: viau



Paper Size ISO A4

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- Existing roads
- Sensitive receiver
- Study area

Noise contour, dBA

- < 45 dBA
- 45-50 dBA
- 50-55 dBA
- 55-60 dBA
- 60-65 dBA
- > 65 dBA

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 Central
2026 No Build night-time contours LAeq(9 hour)

Project No. **12520102**
Revision No. **A**
Date. **03/08/2022**

Figure F.2

Document Path: \\ghdnet\ghd\AU\Sydney\Projects\21\12520102\Tech\Noise\00_GIS\12520102_GIS.qgz

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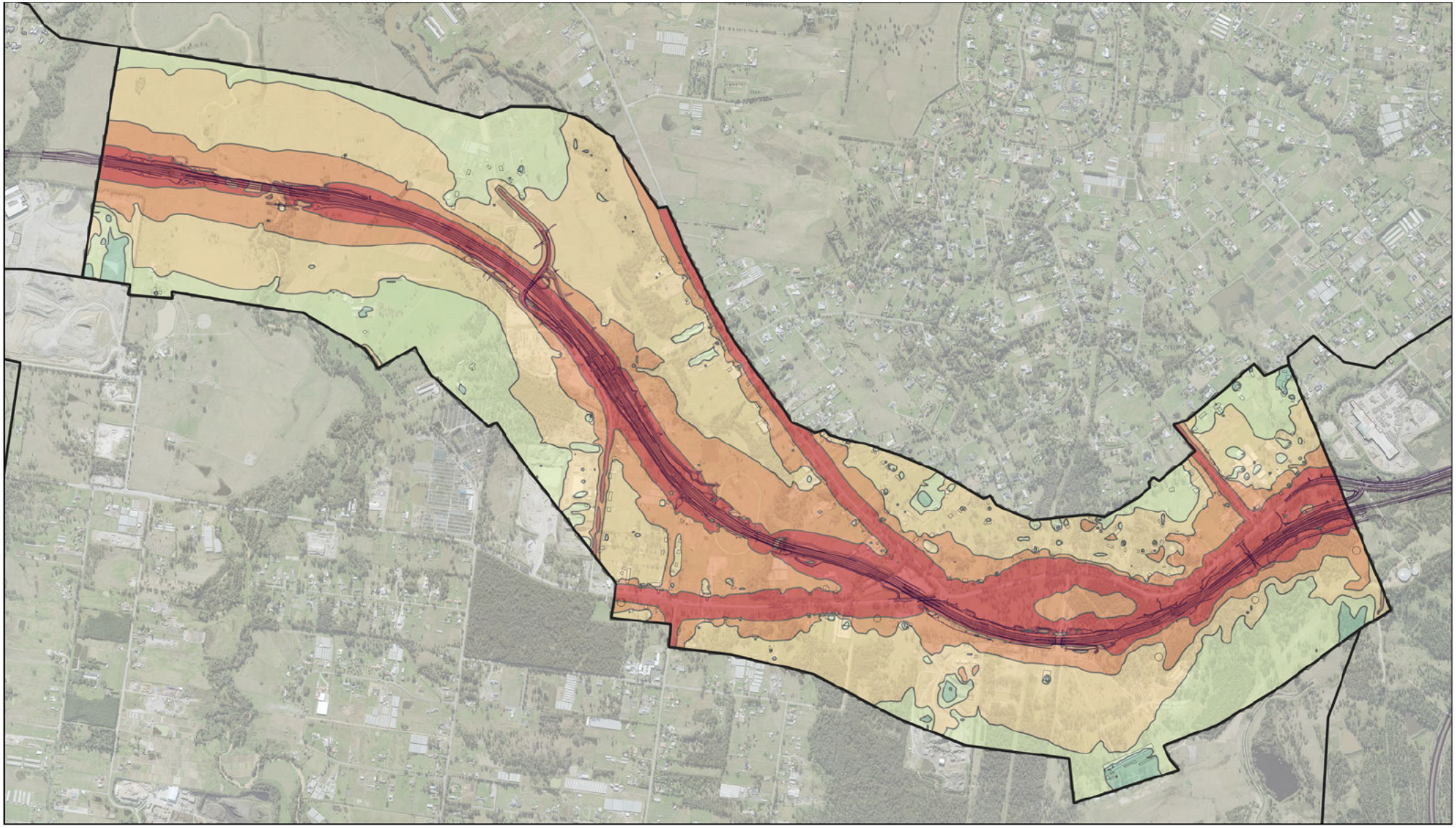
Created By: viau



Paper Size ISO A4

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- M12 road design
- Sensitive receiver
- Study area

Noise contour, dBA

- < 45 dBA
- 45-50 dBA
- 50-55 dBA
- 55-60 dBA
- 60-65 dBA
- > 65 dBA

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 Central LNDG concrete 2026 Build day-time contours LAeq(15 hour)

Project No. 12520102
Revision No. A
Date. 03/08/2022

Figure F.3

Document Path: \\ghdnet\ghd\AU\Sydney\Projects\21\12520102\Tech\Noise\00_GIS\12520102_GIS.qgz

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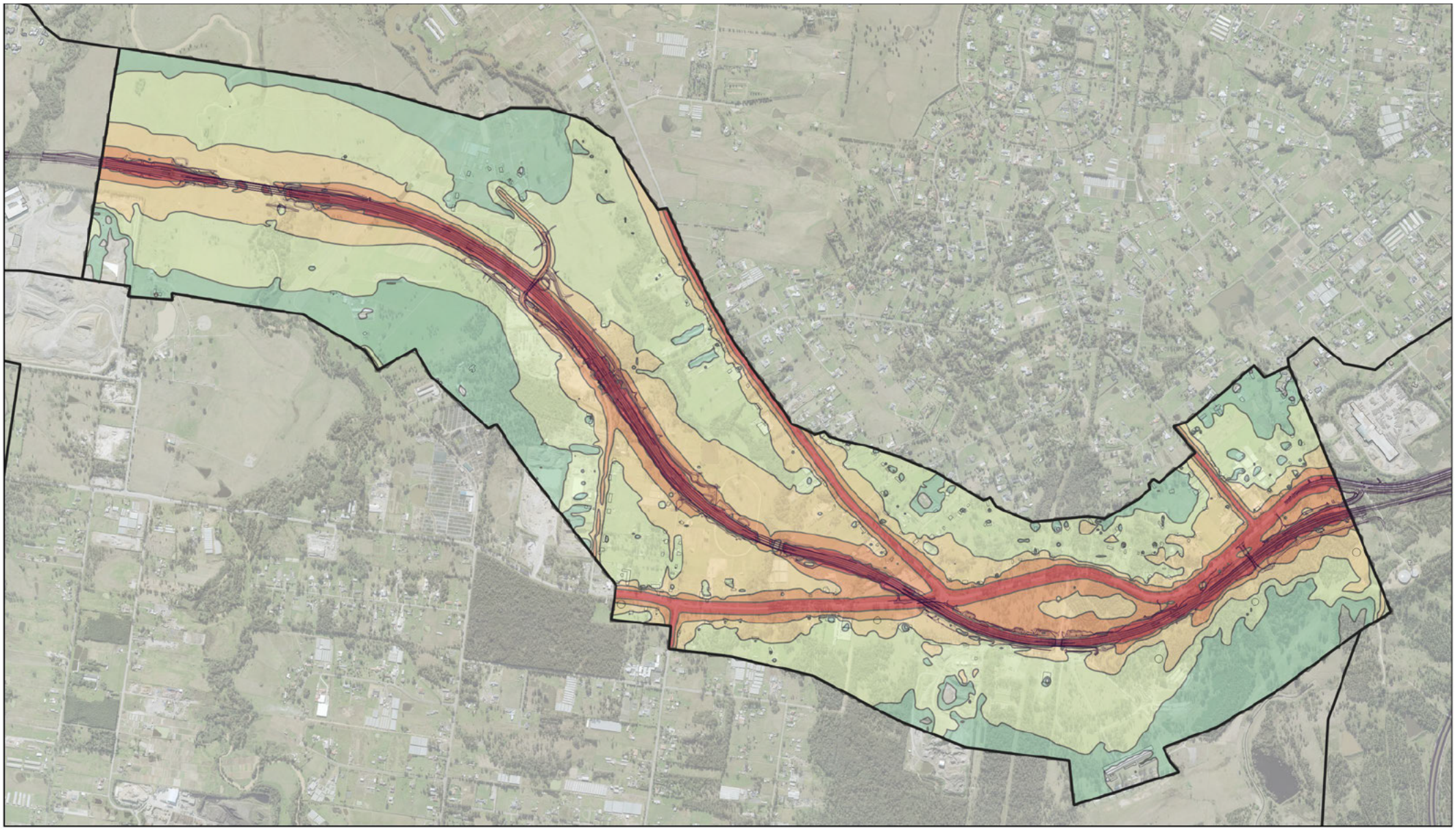
Created By: viau



Paper Size ISO A4

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- M12 road design
- Sensitive receiver
- Study area

Noise contour, dBA

- < 45 dBA
- 45-50 dBA
- 50-55 dBA
- 55-60 dBA
- 60-65 dBA
- > 65 dBA

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 Central LNDG concrete 2026 Build night-time contours LAeq(9 hour)

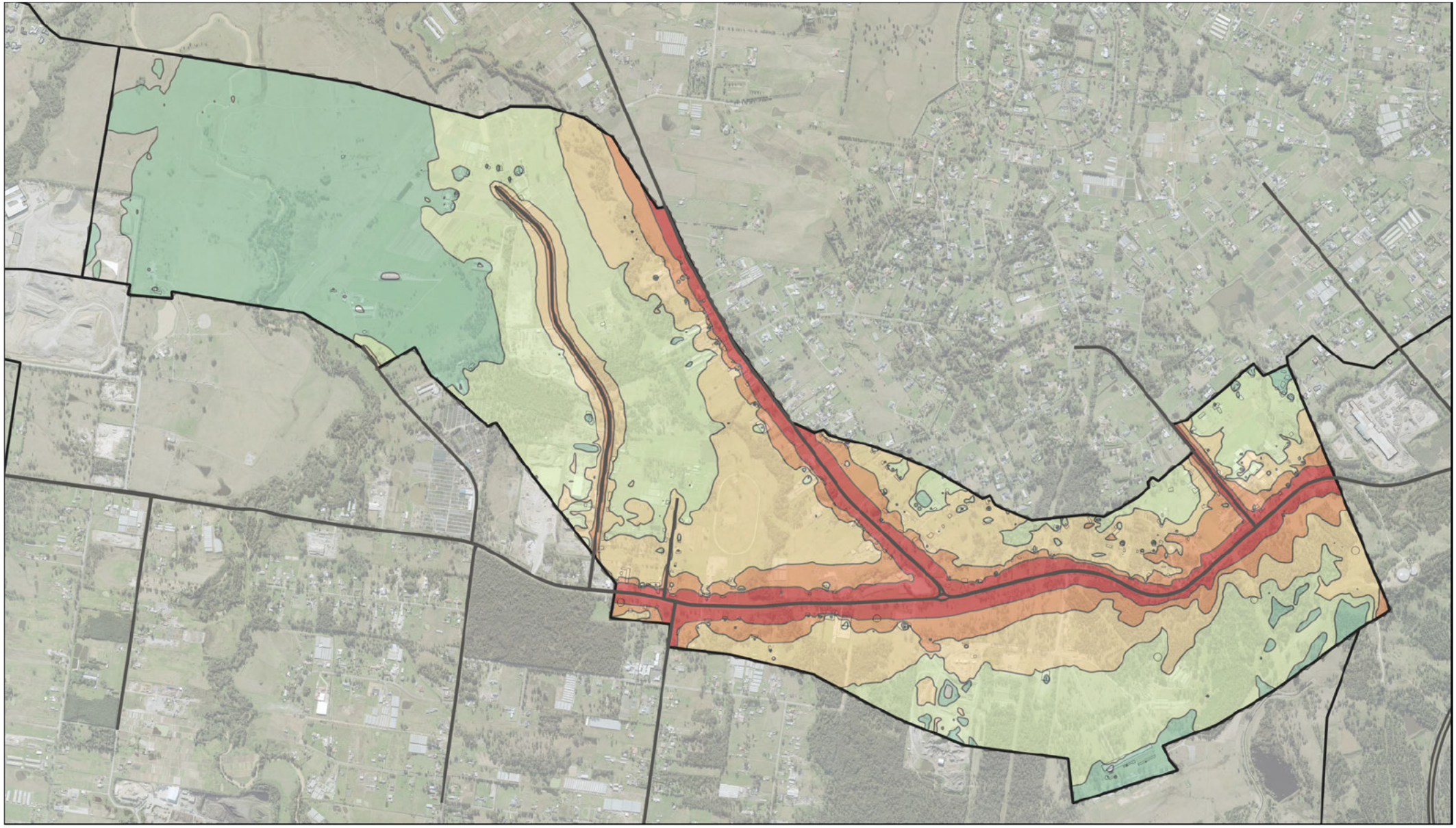
Project No. 12520102
Revision No. A
Date. 03/08/2022

Figure F.4

Document Path: \\ghdnet\ghd\AU\Sydney\Projects\21\12520102\Tech\Noise\00_GIS\12520102_GIS.aprx

Data Source: MetroMap - Imagery (Date captured: 20/09/2021, Date extracted: 03/08/2022)

Created By: vlau



Paper Size ISO A4

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- Existing roads
- Sensitive receiver
- Study area

Noise contour, dBA

- < 45 dBA
- 45-50 dBA
- 50-55 dBA
- 55-60 dBA
- 60-65 dBA
- > 65 dBA

GHD

Transport for NSW

Operational Noise and Vibration Review

M12 Central
2036 No Build day-time contours LAeq(15 hour)

Project No. **12520102**
Revision No. **A**
Date. **03/08/2022**

Figure F.5

Document Path: \\ghdnet\ghd\AU\Sydney\Projects\21\12520102\Tech\Noise\00_GIS\12520102_GIS.aprx

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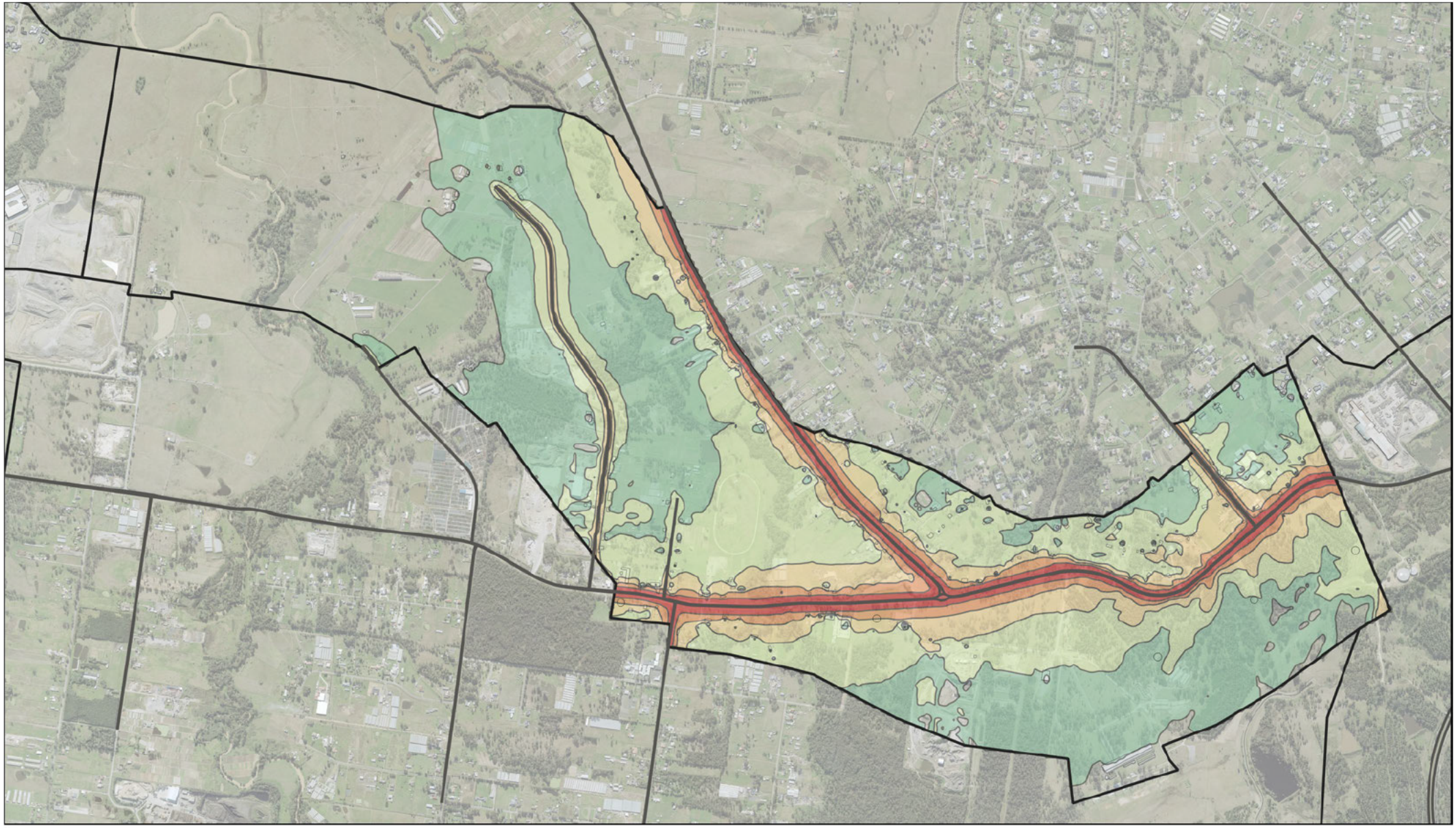

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- Existing roads
- Sensitive receiver
- Study area

Noise contour, dBA

- < 45 dBA
- 45-50 dBA
- 50-55 dBA
- 55-60 dBA
- 60-65 dBA
- > 65 dBA

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 Central
2036 No Build night-time contours LAeq(9 hour)

Project No. **12520102**
Revision No. **A**
Date. **03/08/2022**

Figure F.6

Document Path: \\ghdnet\ghd\AU\Sydney\Projects\21\12520102\Tech\Noise\00_GIS\12520102_GIS.qgz

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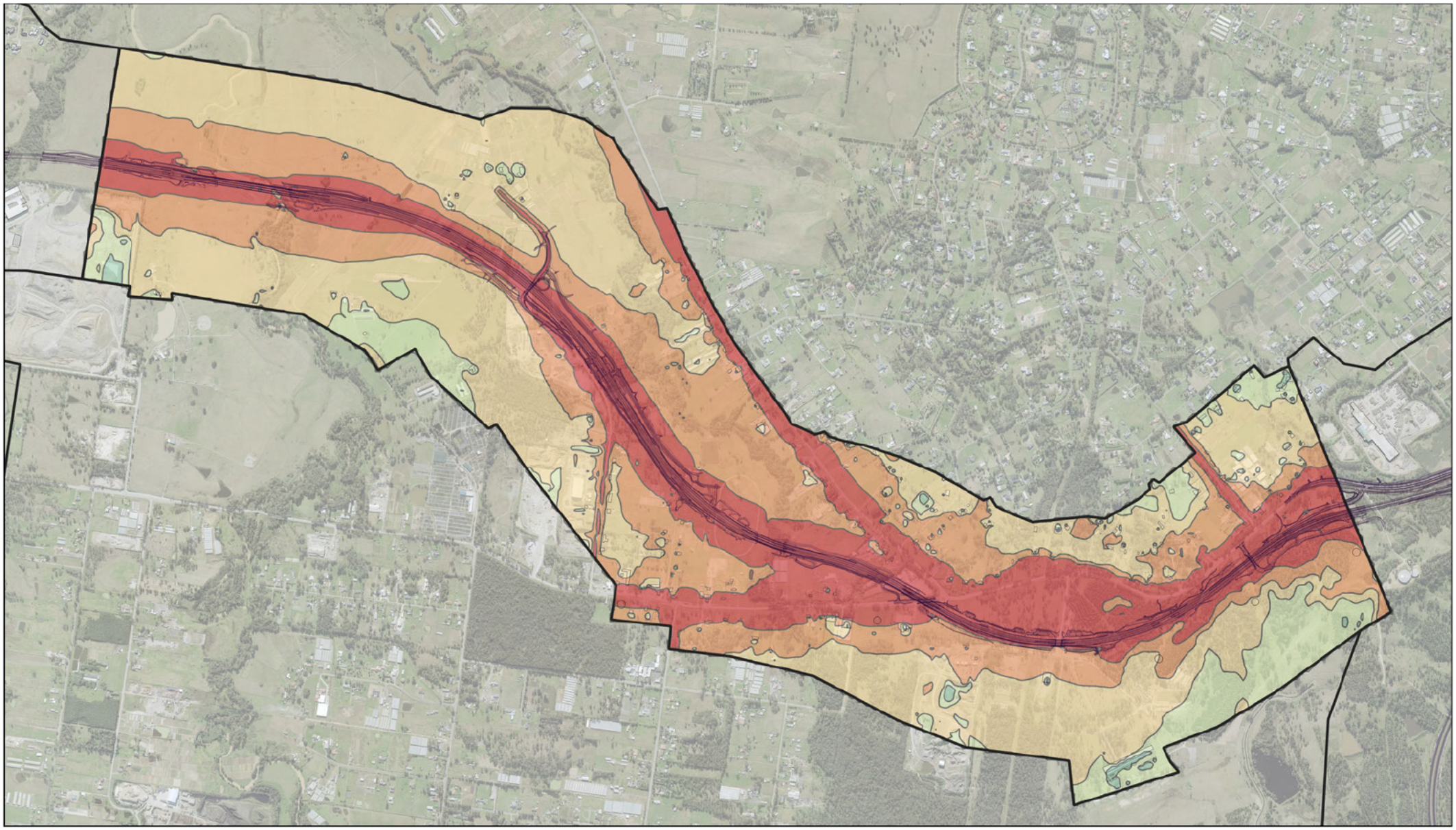

Paper Size ISO A4

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- M12 road design
- Sensitive receiver
- Study area

Noise contour, dBA

- < 45 dBA
- 45-50 dBA
- 50-55 dBA
- 55-60 dBA
- 60-65 dBA
- > 65 dBA

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 Central LNDG concrete 2036 Build day-time contours LAeq(15 hour)

Project No. 12520102
Revision No. A
Date. 03/08/2022

Figure F.7

Document Path: \\ghdnet\ghd\AU\Sydney\Projects\21\12520102\Tech\Noise\00_GIS\12520102_GIS.qgz

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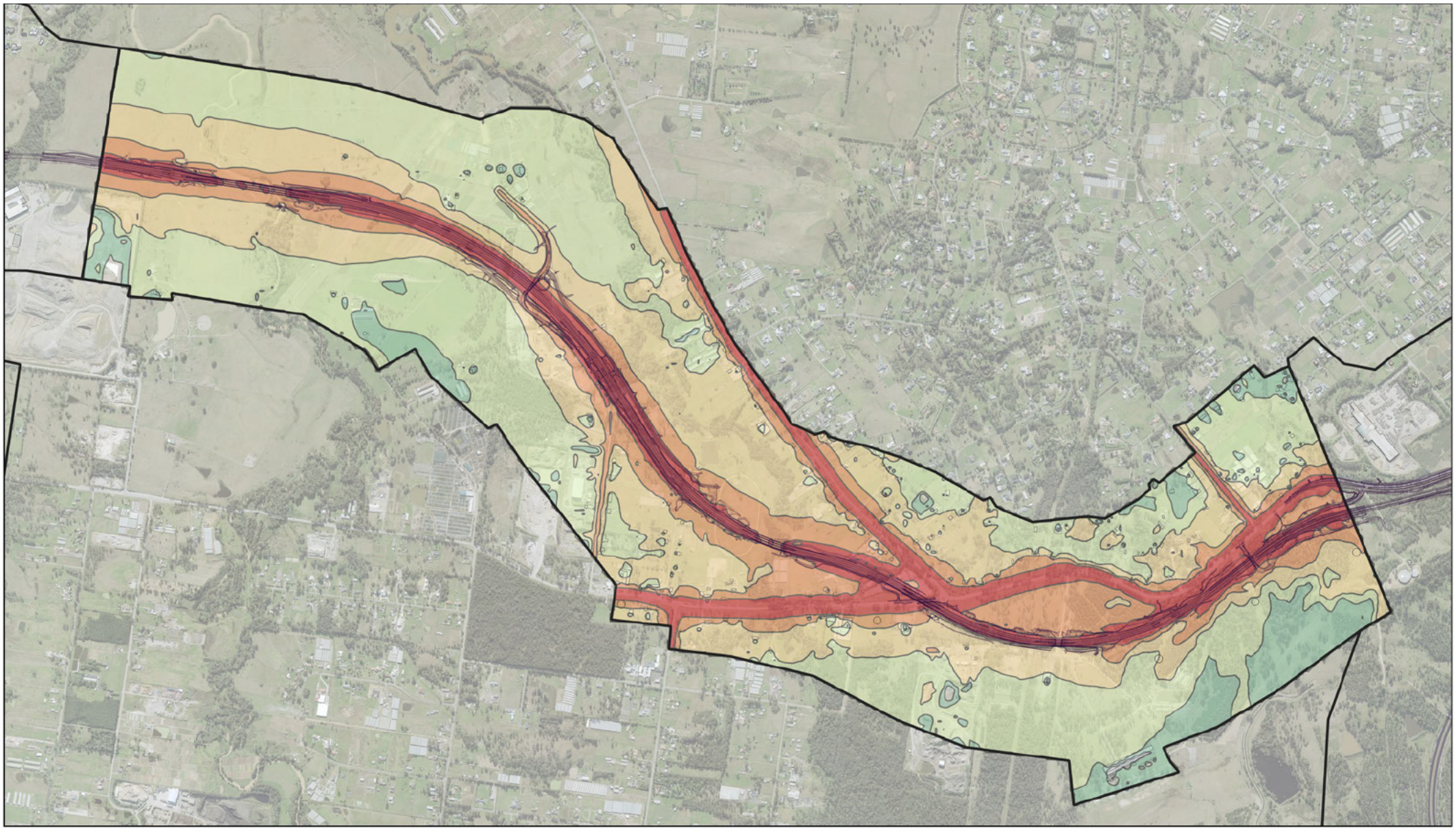

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Map Projection: Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 / MGA Zone 56

N

Legend

- M12 road design
- Sensitive receiver
- Study area

Noise contour, dBA

- < 45 dBA
- 45-50 dBA
- 50-55 dBA
- 55-60 dBA
- 60-65 dBA
- > 65 dBA

GHD

Transport for NSW
M12 Motorway
Operational Noise and Vibration Review

M12 Central LNDG concrete
2036 Build night-time contours
LAeq(9 hour)

Project No. **12520102**
Revision No. **A**
Date. **03/08/2022**

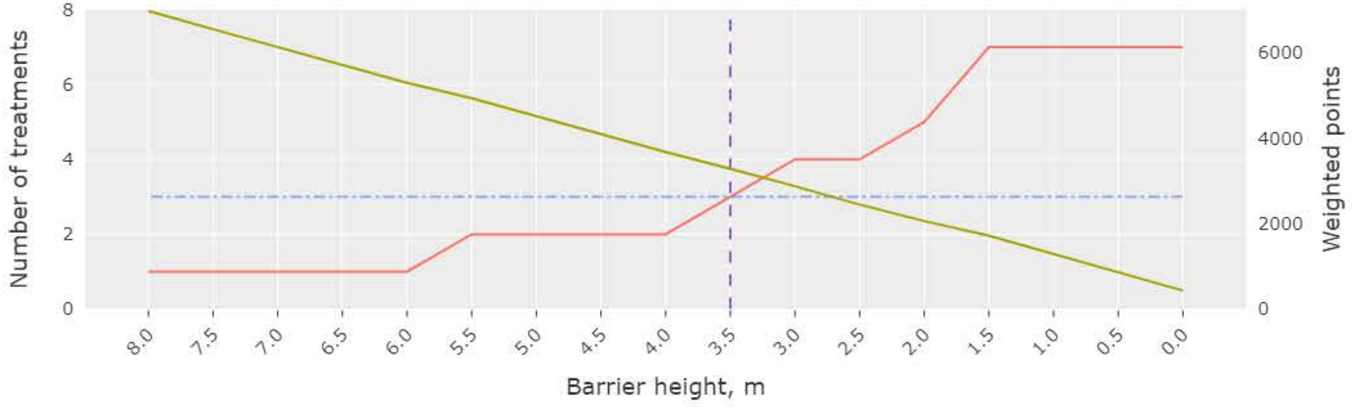
Figure F.8

Document Path: \\ghdnet\ghd\AU\Sydney\Projects\21\12520102\Tech\Noise\00_GIS\12520102_GIS.aggz

Data Source: MetroMap - Imagery (Date captured: 20/09/2021, Date extracted: 03/08/2022)

Created By: vlau

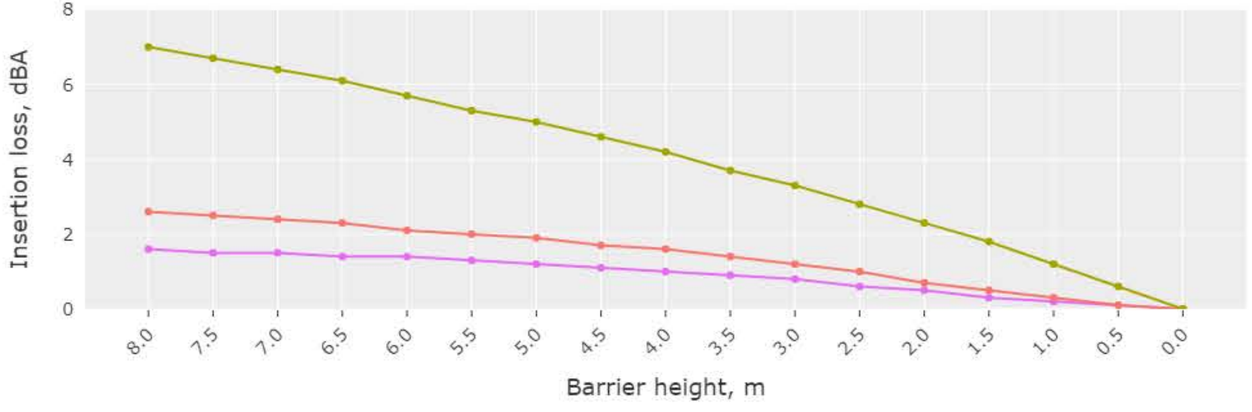
NW.02 - Night

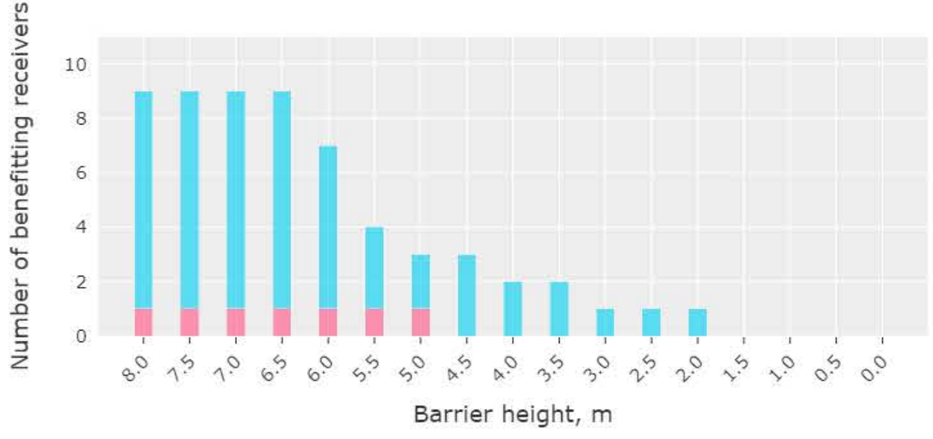


At-property treatments
Total points weighting
Two-thirds line
Initial / Optimised design height: 3.5 m
Minimum insertion loss
Median insertion loss
Maximum insertion loss
>10 dBA benefit
>5 dBA benefit
>2 dBA benefit

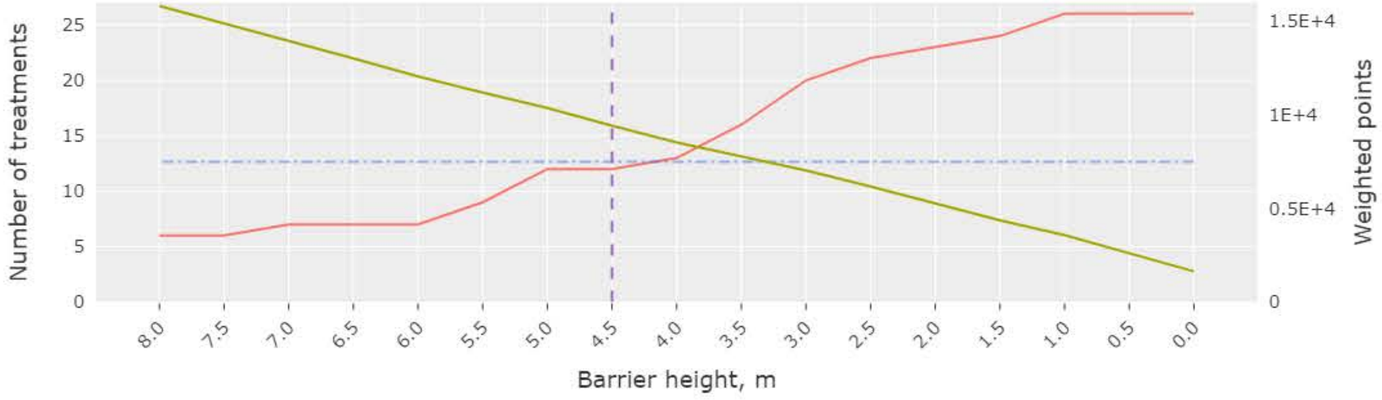
Number of at-property treatments:
- No barrier: 7
- Initial height: 3
- Optimised height: 3

Number that benefit:
- Maximum: 9
- Initial height: 2
- Optimised height: 2





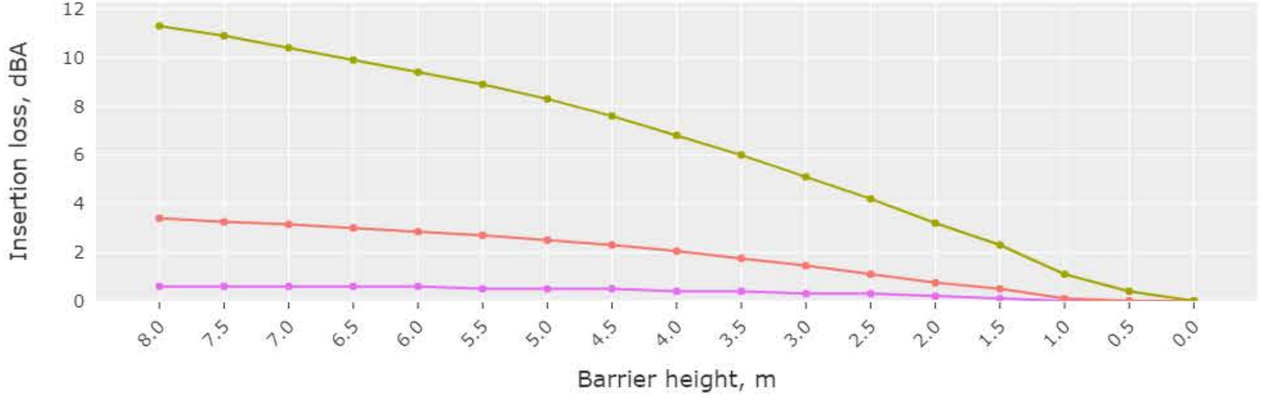
NW.03 - Night

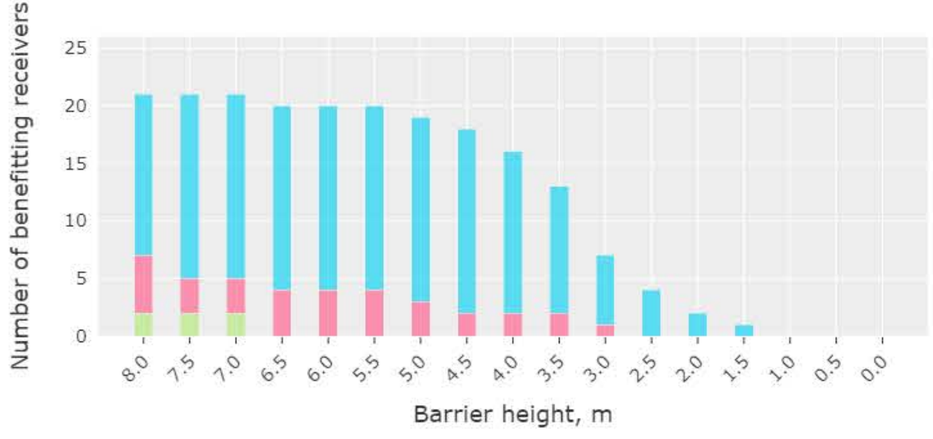


At-property treatments
Total points weighting
Two-thirds line
Initial / Optimised design height: 4.5 m
Minimum insertion loss
Median insertion loss
Maximum insertion loss
>10 dBA benefit
>5 dBA benefit
>2 dBA benefit

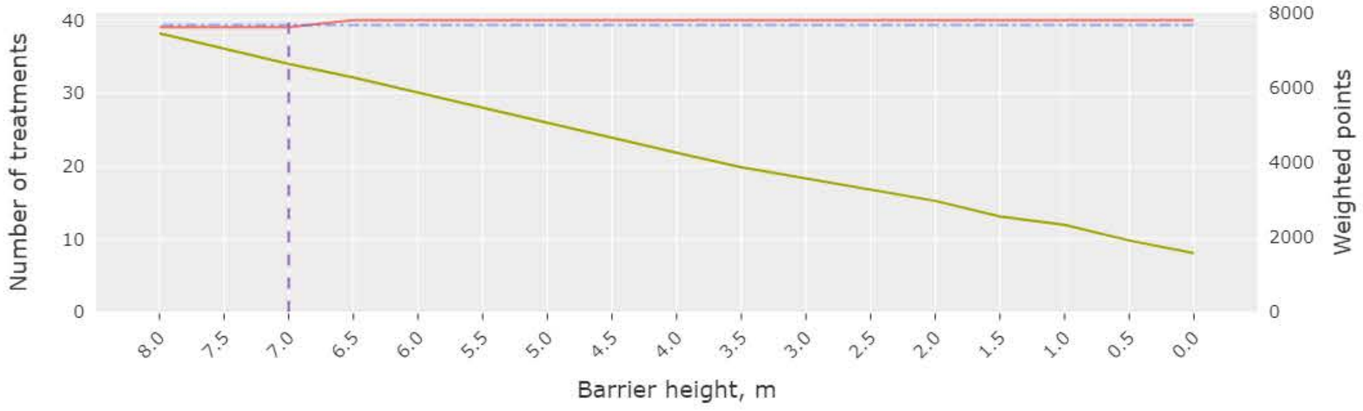
Number of at-property treatments:
- No barrier: 26
- Initial height: 12
- Optimised height: 12

Number that benefit:
- Maximum: 21
- Initial height: 18
- Optimised height: 18





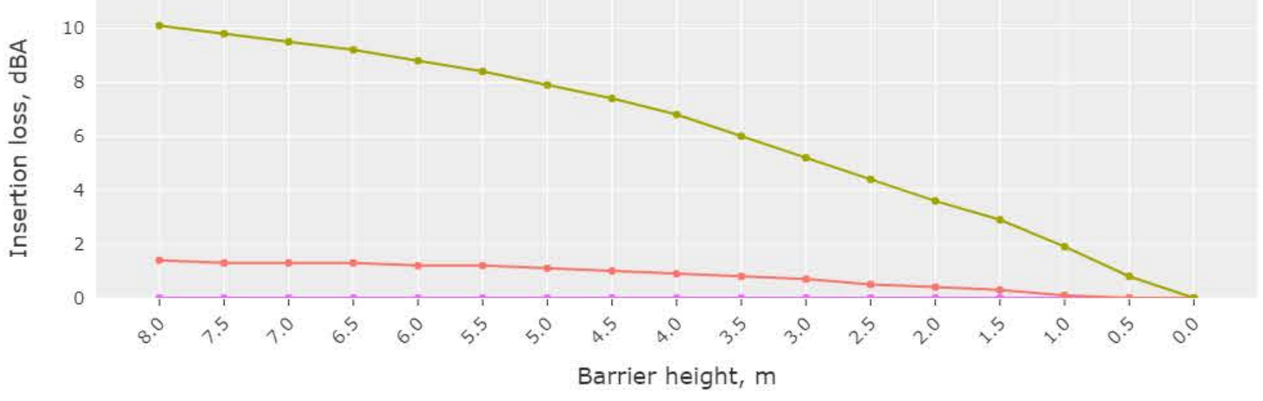
NW.04 - Night

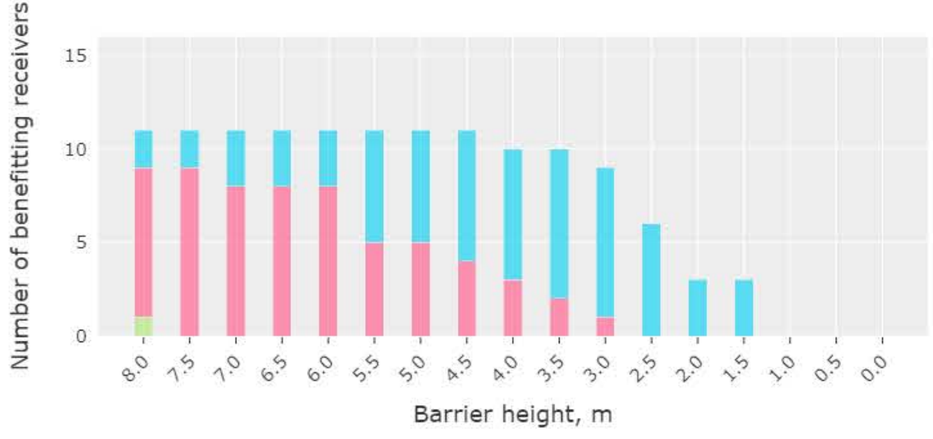


- At-property treatments
- Total points weighting
- Two-thirds line
- Initial / Optimised design height: 7.0 m
- Minimum insertion loss
- Median insertion loss
- Maximum insertion loss
- >10 dBA benefit
- >5 dBA benefit
- >2 dBA benefit

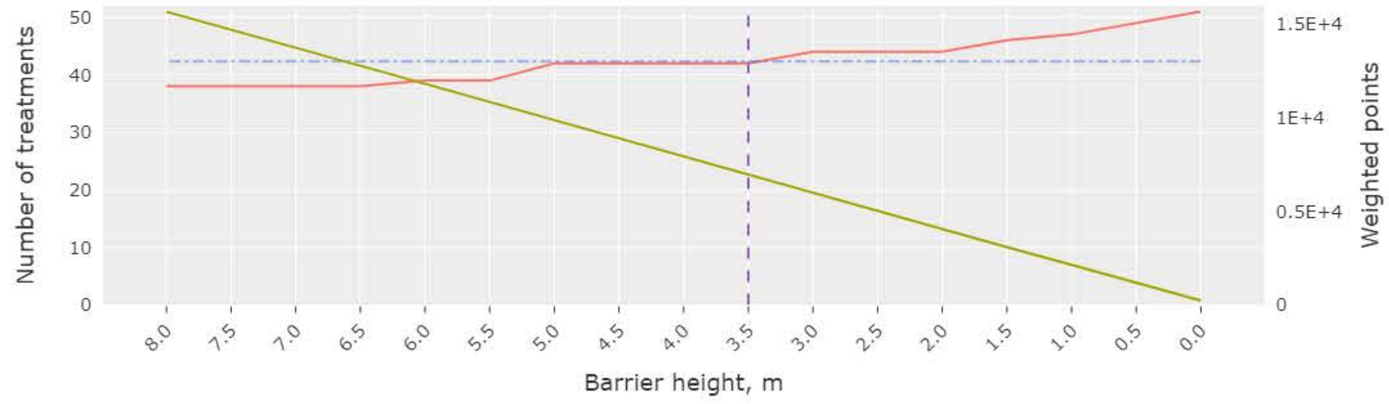
Number of at-property treatments:
- No barrier: 40
- Initial height: 39
- Optimised height: 39

Number that benefit:
- Maximum: 11
- Initial height: 11
- Optimised height: 11





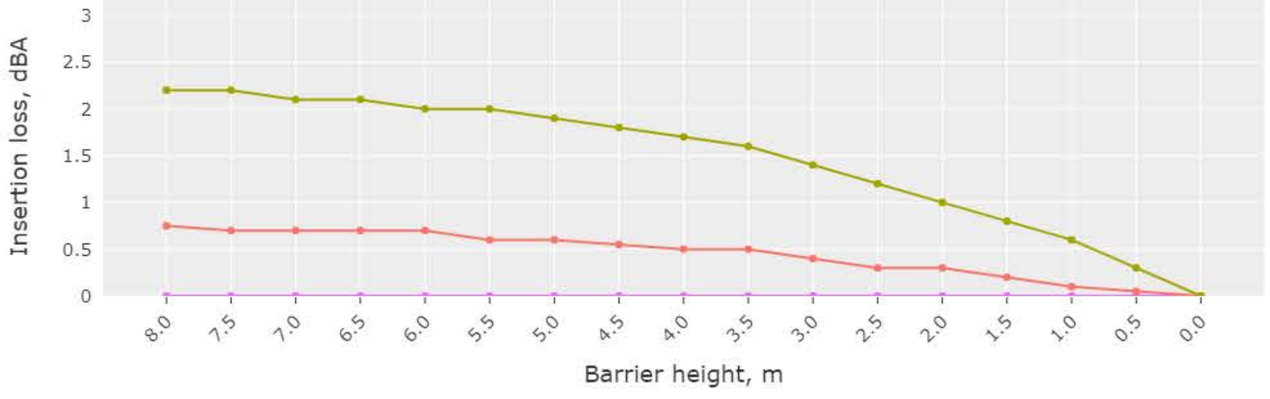
NW.05 - Night

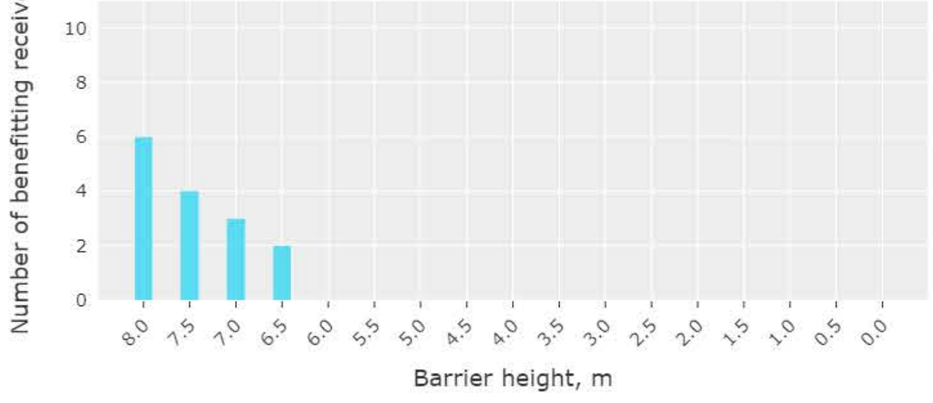


At-property treatments
Total points weighting
Two-thirds line
Initial / Optimised design height: 3.5 m
Minimum insertion loss
Median insertion loss
Maximum insertion loss
>10 dBA benefit
>5 dBA benefit
>2 dBA benefit

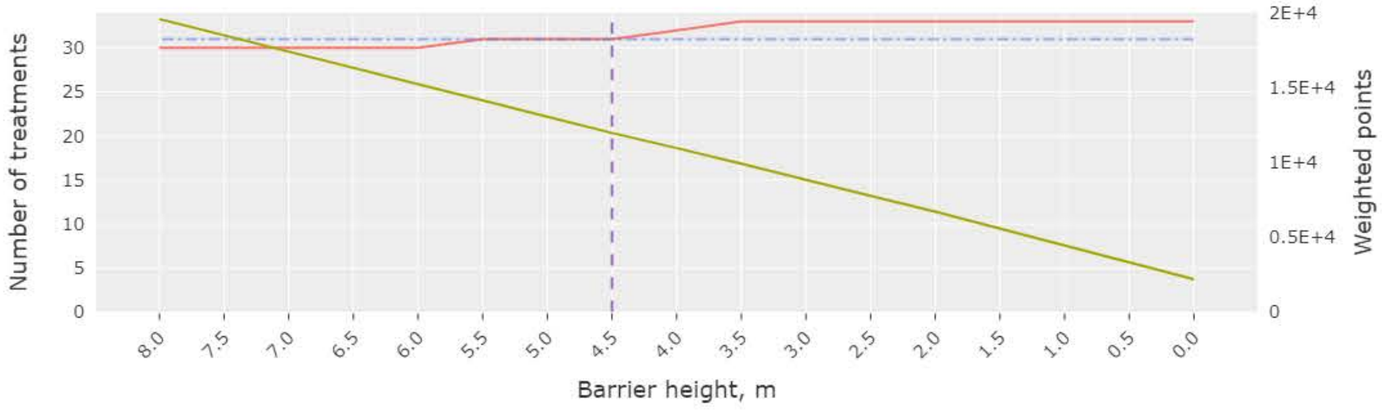
Number of at-property treatments:
- No barrier: 51
- Initial height: 42
- Optimised height: 42

Number that benefit:
- Maximum: 6
- Initial height: 0
- Optimised height: 0



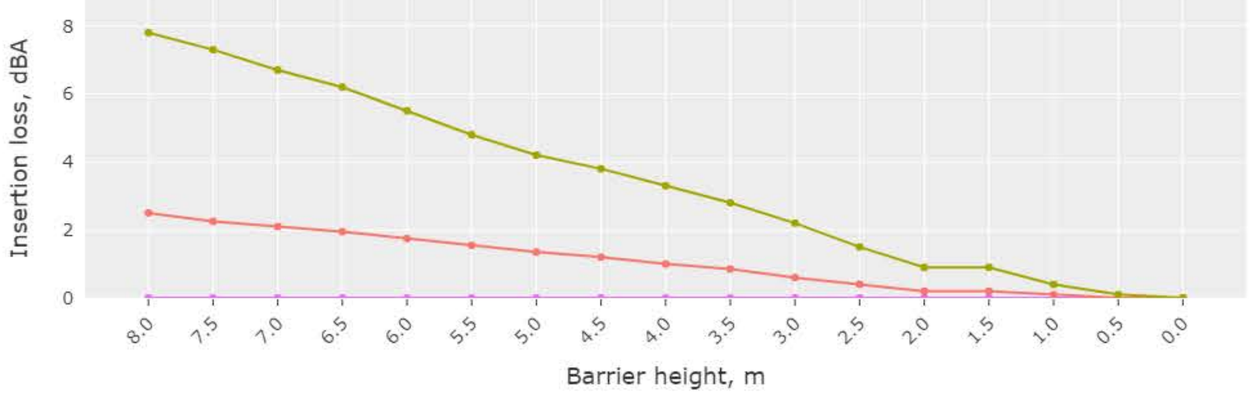


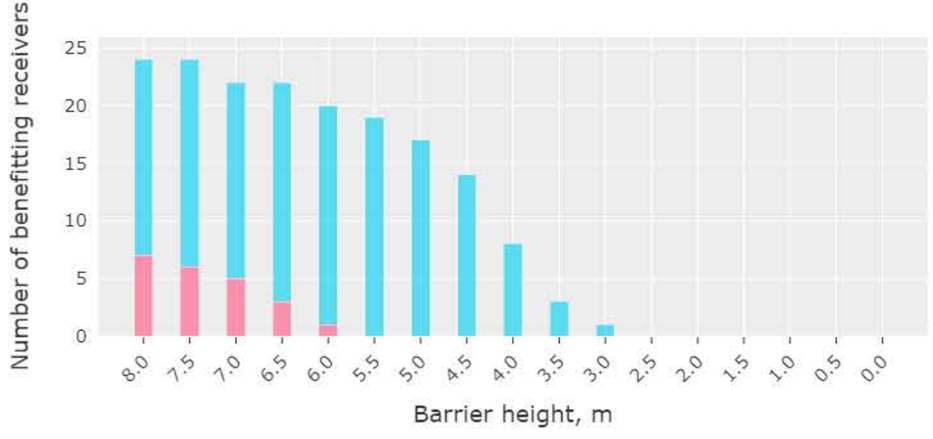
NW.06 - Night



Number of at-property treatments:
- No barrier: 33
- Initial height: 31
- Optimised height: 31

Number that benefit:
- Maximum: 24
- Initial height: 14
- Optimised height: 14





Appendix G

Stakeholder consultation

OFFICIAL

General Correspondence

Reference No.: **M12PPW-TFNSW-PRCC-CORR-000004**
Contract No: M12PPW - M12 - Project Wide

Date: 10 May 2022, 11:14
To: Ari Fernando, Penrith City Council
Cc: Suzette Graham, Transport for NSW
Sean Cubas, Transport for NSW
Shailja Dhar, Transport for NSW
From: Suzette Graham, Transport for NSW
Subject: **M12 Motorway - Operational Noise and Vibration Review - Consultation**

Hi Ari,

Under the M12 Motorway SSI Conditions of Approval (CoA E52), TfNSW must consult with Penrith City Council regarding the Project Operational Noise and Vibration Review (ONVR).
Please find attached the ONVR for the M12 West and Central Packages for Council's review.
Please provide comment by 24 May 2022.

Please feel free to give me a call to discuss.

Thank you,

Kind regards,
Suzette Graham *She/Her*
Environment and Sustainability Manager
Sydney Infrastructure Development | Safety, Environment and Regulation
Transport for NSW

M 0476 828 524 **E** suzette.graham@transport.nsw.gov.au

transport.nsw.gov.au

27 Argyle Street
Parramatta NSW 2150

Discipline: Environmental

Location: General

Attachments: 12520102-REV_B-M12 ONVR (West & Central).pdf

OFFICIAL

Attachments
12520102-REV_B-M12 ONVR (West & Central).pdf (196 MB)

From:	Suzette Graham
To:	Ari Fernando
Cc:	M12 Central Delivery; M12 West Delivery; Sean Cubas
Subject:	M12 Motorway - Operational Noise review West and Central
Date:	Thursday, 9 June 2022 1:52:00 PM
Attachments:	22_0510 Email (TfNSW to PCC) ONVR West and Central - Consultation.pdf image001.png image004.png image005.png

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Hi Ari,

I hope you are well. I am getting in touch regarding the M12 Operational Noise Review prepared for M12 West and M12 Central packages.
TfNSW is required to submit the document to Council for review under the conditions of approval.
The document was sent via Teambinder to you on 10 May 2022 (email attached).
I am following up to see if Council intend to provide feedback on this document?

Please feel free to give me a call to discuss.

Kind regards,

Suzette Graham *She/Her*
Environment and Sustainability Manager
Sydney Infrastructure Development | Safety, Environment and Regulation
Transport for NSW

[redacted]

transport.nsw.gov.au

27 Argyle Street
Parramatta NSW 2150

I recognise and acknowledge that modern New South Wales is an overlay on Aboriginal land and that many of the transport routes of today follow songlines Aboriginal people have followed for tens of thousands of years. I pay my respects to the Aboriginal people of NSW and Elders past and present.

Please consider the environment before printing this email.

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General Correspondence

Reference No.: **M12PPW-TFNSW-LPCC-CORR-000002**
Contract No: M12PPW - M12 - Project Wide

Date: 10 May 2022, 11:19
To: Charles Wiafe, Liverpool City Council
Cc: Suzette Graham, Transport for NSW
Shailja Dhar, Transport for NSW
Sean Cubas, Transport for NSW
From: Suzette Graham, Transport for NSW
Subject: **M12 Motorway - Operational Noise and Vibration Review - Consultation**

Hi Charles,

Under the M12 Motorway SSI Conditions of Approval (CoA E52), TfNSW must consult with Liverpool City Council regarding the Project Operational Noise and Vibration Review (ONVR).
Please find attached the ONVR for the M12 West and Central Packages for Council's review.
Please provide comment by 24 May 2022.

Please feel free to give me a call to discuss.

Thank you,

Kind regards,
Suzette Graham*She/Her*
Environment and Sustainability Manager
Sydney Infrastructure Development | Safety, Environment and Regulation
Transport for NSW

M 0476 828 524 **E**suzette.graham@transport.nsw.gov.au

transport.nsw.gov.au

27 Argyle Street
Parramatta NSW 2150

Discipline: Environmental

Location: General

Attachments: 12520102-REV_B-M12 ONVR (West & Central).pdf

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Attachments
12520102-REV_B-M12 ONVR (West & Central).pdf (196 MB)

From: Suzette Graham
To: [redacted]
Cc: M12 Central Delivery; M12 West Delivery; Sean Cubas
Subject: M12 Motorway - Operational Noise Review West and Central
Date: Thursday, 9 June 2022 1:54:00 PM
Attachments: 22_0510 Email (TfNSW to LCC) ONVR West and Central - Consultation.pdf
image001.png
image004.png
image005.png

Hi Charles,

I hope you are well. I am getting in touch regarding the M12 Operational Noise Review prepared for M12 West and M12 Central packages.
TfNSW is required to submit the document to Council for review under the conditions of approval. The document was sent via Teambinder to you on 10 May 2022 (email attached).

I am following up to see if Council intend to provide feedback on this document?

Please feel free to give me a call to discuss.

Kind regards,

Suzette Graham *She/Her*
Environment and Sustainability Manager
Sydney Infrastructure Development | Safety, Environment and Regulation
Transport for NSW

[redacted]

transport.nsw.gov.au

27 Argyle Street
Parramatta NSW 2150

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