



Transport
for NSW

Noise Insulation Program

Western Harbour Tunnel and Warringah Freeway Upgrade
January 2022

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	Name	Position	Date	Authorised
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Review	Nick Francesconi	Director Environment Motorways	2 October 2020	<i>Nick Francesconi</i>
Authorised	Doug Parris	Program Director - WHTBL	2 October 2020	<i>D. Parris</i>

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Glossary

Acute noise impact	A-weighted equivalent continuous traffic noise level of 65 dB(A) or higher for the daytime period (7am to 10pm), or 60 dB(A) or higher for the night-time period (10pm to 7am).
Architectural features	The term given to windows, doors, vents and any other architectural feature covered in the program that may convey noise from outside to inside.
At-property noise treatment (noise treatment)	Refers to architectural acoustic treatments which aim to improve the sound-resistance of properties.
Building	A building may be a sole-occupancy dwelling such as a house, or a multi-occupancy building such as a unit complex or an apartment block.
Class 2 buildings	Defined by the Building Code of Australia as a building containing two or more sole-occupancy units, each being a separate dwelling.
Construction Noise and Vibration Guideline (CNVG)	Construction Noise and Vibration Guideline (CNVG) published by Roads and Maritime Services (now Transport for NSW) in 2016.
Cumulative limit	A total noise level that is 5 dB(A) or more above Transport for NSW's Noise Criteria Guideline criteria in the build year.
dB(A)	A-weighted decibels, an expression of the relative loudness of sound as perceived by the human ear.
Direct line of sight	While not a direct correlation, line of sight can be used as an approximate rule of thumb to estimate a sound path from source to receiver.
Development Near Rail Corridors and Busy Roads – Interim Guideline	Development Near Rail Corridors and Busy Roads – Interim Guideline published by the NSW Department of Planning (now Department of Planning, Industry, and Environment) in 2008.
Environmental Noise Management Manual (ENMM)	Environmental Noise Management Manual (ENMM) published by Roads and Maritime Services (now Transport for NSW) in 2001.
EPA	NSW Environment Protection Authority
Feasible and reasonable	The feasible test relates to whether a solution can be engineered and is practical to build or install, considering issues such as safety, access and maintenance. The reasonable test relates to the overall noise reduction achieved when compared to the social, economic or environmental benefits. A measure may be feasible to install, but it's unreasonable due to the low noise benefit and high cost.
Habitable room	In accordance with the Building Code of Australia, this is defined as areas of the home where people spend most of their time. This may include bedrooms, living rooms, lounge rooms, music rooms, television rooms, dining rooms, studies, playrooms, family rooms and home theatres. Habitable rooms do not include spaces of a specialised nature occupied neither frequently nor for extended periods, such as bathrooms, laundries, water closets, pantries, walk-in wardrobes, corridors, hallways, lobbies, photographic darkrooms or clothes drying rooms. The status of kitchens as habitable rooms is assessed on a case by case basis.

High Activity Area	An area where construction activities are likely to occur for an extended duration or outside standard working hours. They are not defined by the intensity, frequency or duration of noise-generating activities.
L_{Aeq}(period)	Equivalent continuous sound pressure level, the single number sound level that is equivalent in energy to the actual fluctuating sound level of a specific period.
Noise Criteria Guideline (NCG)	Noise Criteria Guideline (NCG) published by Roads and Maritime Services (now Transport for NSW) in 2015
Noise Mitigation Guideline (NMG)	Noise Mitigation Guideline (NMG) published by Roads and Maritime Services (now Transport for NSW) in 2015
NSW Road Noise Policy (RNP)	NSW Road Noise Policy (RNP) published by the NSW Department of Environment, Climate Change and Water (now Environment Protection Authority) in 2011
Owners corporation	The owners corporation of a strata scheme is responsible for maintenance, repair and overall management of the common property.
Program	Noise Insulation Program for the Western Harbour Tunnel and Warringah Freeway Upgrade
Project	Western Harbour Tunnel and Warringah Freeway Upgrade
Property	A property is a sole-occupancy dwelling, such as a house, apartment or unit.
Reasonable exposure	Exposed to at least 45 degree angle of any High Activity Areas from inside a building.
Receiver	Occupant/s of a dwelling impacted by noise
Transport for NSW Complaints Review Panel	Comprised of project senior management and independent project appointments. Responsible for making decisions regarding the Program and acting as the final escalation point for customer issues and complaints.

1 Introduction

1.1 Purpose

This document describes the Noise Insulation Program (the program) for the Western Harbour Tunnel and Warringah Freeway Upgrade (the project). The program involves the delivery of at-property noise treatment (referred to as noise treatment) to mitigate the impact of operational and construction noise at eligible properties.

Due to the large number of properties potentially eligible for noise treatment, the project took a proactive approach in publishing the Noise Insulation Program in late 2020 before planning approval was received. The document was updated following approval of the project by the Minister for Planning and Public Spaces in January 2021.

Transport for NSW is the owner and user of this document which aims to ensure the delivery of noise treatment is equitable, transparent and focused on customer outcomes.

This document may be updated periodically for items such as updating the list of identified buildings as the project progresses. In the instance where changes are required, a copy will be sent to the Planning Secretary of the Department of Planning, Industry and Environment (the Planning Secretary) prior to publication.

1.2 Background

The project involves the creation of a third crossing of Sydney Harbour connecting to the M4-M5 Link at Rozelle and the Warringah Freeway at Cammeray, creating a western bypass of the Sydney CBD. The project is expected to reduce traffic noise for more than 60 per cent of properties near our surface roads once complete. Some parts of the community who live near our permanent facilities and surface road upgrades may notice more noise as a result of an increase in traffic going in and out of the tunnels. Some properties will also experience construction noise while the project is being built.

The project is taking a proactive approach to implement noise mitigation measures as early as possible, including the delivery of noise treatment. Noise treatment involves upgrading windows, doors and seals at existing properties with the aim of improving sound insulation. Transport for NSW is managing the delivery of the program from initial customer engagement through to installation so that the project maintains control over eligibility and treatment and so that customer outcomes are prioritised.

Construction and operational noise impacts are typically assessed separately, and different eligibility criteria are used when assessing properties for noise treatment for each type of noise. Due to the high number of identified properties and the overlap of construction and operational noise impacts, this document describes the approach for providing noise treatment for both types of noise.

1.3 Project area

The Warringah Freeway corridor is located in a densely populated area with a significant footprint of multi-dwelling residential buildings. As one of Sydney's busiest roads, traffic noise from the freeway is a long-standing concern for many local residents. Traffic noise exposure will still remain at an acute level for some properties close to the Warringah Freeway once the project is complete, even though overall traffic noise will reduce for many properties. While noise impacts from the project are

not limited to the Warringah Freeway corridor, this area is a key focus of the program due to the high density of receivers potentially affected by operational and construction noise.

Between early 2020 and mid-2021, the program focused on delivering noise treatment for eligible properties within the vicinity the Warringah Freeway corridor between Milsons Point and Naremburn. This area was prioritised due to the need to mitigate the impact of construction noise for local residents during main construction of the Warringah Freeway Upgrade. Engagement with eligible properties near the project area for the Western Harbour Tunnel in Annandale will be carried out from late 2021.

1.4 Guidelines

The project presents a number of unique challenges for the delivery of noise treatment. This includes the unprecedented number of eligible properties and the high proportion of properties located in multi-dwelling (Class 2) buildings, which present additional constraints for installation. A number of existing policies and guidelines have been considered to ensure the program delivers outcomes which are consistent and equitable across the project, while also meeting Transport for NSW's noise mitigation requirements and feasible and reasonable criteria.

Existing guidelines which have guided the development of the program include:

- Noise Mitigation Guideline, Roads and Maritime Services (2015)
- Noise Criteria Guideline, Roads and Maritime Services (2015)
- Construction Noise and Vibration Guideline, Roads and Maritime Services (2016)
- NSW Road Noise Policy, NSW Department of Environment, Climate Change and Water (2011)
- Development Near Rail Corridors and Busy Roads – Interim Guideline, NSW Department of Planning (2008)
- Environmental Noise Management Manual, Roads and Traffic Authority (2001).

1.5 Minister's Conditions of Approval

The project received planning approval from the Minister for Planning and Public Spaces in January 2021. The Minister's Conditions of Approval relevant to the program are listed below.

Table 1. Minister's Conditions of Approval

Number	Condition	Response
Administrative conditions		
A9	The implementation of the Noise Insulation Program (NIP) does not trigger the following Conditions A24, A30, B1 and B11 ¹ , until such time that construction commences.	In accordance with this condition, it is noted that the program does not trigger the need for independent appointments which are otherwise required to be appointed by the start of construction.

¹ The independent appointments include the project's Environmental Representative, Acoustic Advisor and Community Complaints Mediator (Conditions A24, A30 and B11).

Number	Condition	Response
Construction vibration mitigation – Heritage		
E81	Before conducting at-property treatment at any heritage item identified in the documents listed in Condition A1, the advice of a suitably qualified and experienced built heritage expert must be obtained and implemented to ensure any such work does not have an adverse impact on the heritage significance of the item.	Addressed in Section 5.4 of this document.
Warringah Freeway Upgrade – Noise mitigation measures		
E84	The proponent must implement the Noise Insulation Program (NIP) developed for the Warringah Freeway Upgrade works. Should the NIP be progressively updated, the updated version must be provided to the Planning Secretary for information. Note: the implementation of temporary or permanent noise mitigation measures in accordance with NIP is considered as low impact work as defined in the definitions table Low Impact Work (d).	Addressed in Section 1.1 of this document.
E85	Landowners whose residential properties are eligible to receive at-property treatment in accordance with the NIP must be advised of the range of options that can be installed at or in their property and given a choice as to which of these they agree to have installed. A copy of all guidelines and procedures that will be used to determine at-property treatment at their residence must be provided to the landowner.	Addressed in Section 1.4 of this document.
E86	The offer for at-property treatment for the application of other noise and vibration mitigation measures does not expire until the out-of-hours works affecting that property are completed, even if the landowner initially refuses the offer.	Addressed in Section 8.6 of this document.
E87	The implementation of at-property treatment does not preclude the application of other noise and vibration mitigation and management measures including temporary and long term accommodation.	Addressed in Section 3.2 of this document.
Operational noise mitigation measures		
E89	The Proponent must prepare an Operational Noise Review (ONR) to confirm noise control measures that would be implemented for the operation of the CSSI. The ONR must be prepared in consultation with the Planning Secretary, relevant council(s), and the EPA and must: (a) confirm the appropriate operational noise objectives and levels for surrounding development, including existing sensitive land user(s); (b) confirm the operational noise predictions based on the final design. Confirmation must be based on an appropriately calibrated noise model (which has incorporated noise monitoring, and concurrent traffic counting, where necessary for calibration purposes). The assessment must specifically include verification of noise levels at all fixed facilities, based on noise monitoring	Addressed in Section 2.3 of this document.

Number	Condition	Response
	<p>undertaken at appropriately identified noise catchment areas surrounding the facilities;</p> <p>(c) confirm the operational noise impacts at adjoining development based on the final design of the CSSI, including operational daytime LAeq, 15 hour and night-time LAeq, 9-hour traffic noise contours;</p> <p>(d) review the suitability of the operational noise mitigation measures identified in the documents listed in Condition A1² 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) and NSW Noise Policy for Industry (EPA, 2017) as relevant, including the timing of implementation;</p> <p>(e) include a consultation strategy to seek feedback from directly affected landowners on the noise and vibration mitigation measures; and</p> <p>(f) procedures for the management of operational noise and vibration complaints. The ONR must be verified by an independent acoustic expert. The ONR must be undertaken at the Proponent's expense and submitted to the Planning Secretary within 12 months of the commencement of construction unless otherwise agreed by the Planning Secretary. The Proponent must implement the identified noise and vibration control measures and make the ONR publicly available.</p> <p>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 E177.</p>	
E90	<p>Operational noise mitigation measures as identified in Condition E89 that will not be physically affected by work, must be implemented within six months of submitting the ONR, unless otherwise agreed by the Planning Secretary. Where implementation of operational noise mitigation measures are not proposed to be implemented in accordance with this requirement, the Proponent must submit to the Planning Secretary a report providing justification as to why, along with details of temporary measures that would be implemented to reduce construction noise impacts, until such time that the operational noise mitigation measures are implemented. The report must be endorsed by the AA and submitted to the Planning Secretary within six months of submitting the ONR.</p> <p>Note: Not having finalised detailed design is not sufficient justification for not implementing the proposed mitigation measures.</p>	Addressed in Section 2.3 of this document.
E91	In the absence of an ONR required under Condition E89, the following can be undertaken:	Addressed in Section 2.3 of this document.

² The documents listed in Condition A1 are the Western Harbour Tunnel and Warringah Freeway Upgrade Environmental Impact Statement (2020) and Response to Submissions Report (2020)

Number	Condition	Response
	(a) provision of at-property noise mitigation measures required in the NIP under Condition E84; and (b) construction of the Massey to Amherst Street, Cammeray noise barrier / wall as identified in Appendix C. Note: Notwithstanding the provision of this condition, should the ONR identify the need for further mitigation the Proponent may be required to amend the design of already installed noise mitigation measures.	
Operational noise validation		
E92	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 noise mitigation measures as required by Condition E89	Addressed in Section 2.3 of this document.
Operational noise compliance report		
E93	An Operational Noise Compliance Report (ONCR) must be prepared to document the findings of the operational noise monitoring carried out under Condition E92. 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 E89; (b) compliance with the operational noise levels in terms of criteria and noise goals established in the NSW Road Noise Policy (DECCW, 2011) and NSW Noise Policy for Industry (EPA, 2017); (c) methodology, location and frequency of noise monitoring undertaken, including monitoring sites at which CSSI noise levels are ascertained, with specific reference to locations indicative of impacts on receivers; (d) pavement corrections for light and heavy vehicles and an assessment of the acoustic performance of different pavement types over their design life; (e) 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; (f) any required recalibrations of the noise model taking into consideration factors such as noise monitoring and actual traffic numbers and proportions; (g) an assessment of the performance and effectiveness of applied noise mitigation measures together with a review and if necessary, reassessment of mitigation measures; and (h) identification of additional measures to those identified in the review of noise mitigation measures required by Condition E89, that are to be implemented with the objective of meeting the criteria outlined in the NSW Road Noise Policy (DECCW, 2011) and NSW Noise Policy for	Addressed in Section 2.3 of this document.

Number	Condition	Response
	<p>Industry (EPA, 2017), when these measures are to be implemented and how their effectiveness is to be measured and reported to the Planning Secretary and the EPA.</p> <p>The Operational Noise Compliance Report must be submitted to the Planning Secretary and the EPA within 60 days of completing the operational noise monitoring and made publicly available.</p>	
Revised environmental management measures (REMM)		
Non-Aboriginal heritage		
NAH4	<p>Phase: Pre-construction</p> <p>Impact: Ongoing non-Aboriginal heritage impacts</p> <p>Environmental management measures:</p> <p>Should at-property noise treatment be required at a premise that is heritage listed, this will be carried out in a manner to minimise heritage impact, and advice of a heritage conservation architect will be sought prior to undertaking the works. Any treatment will be sympathetic to the heritage values of the item, designed with heritage architect input and be reversible where feasible and reasonable.</p>	Addressed in Section 5.5 of this document.

2 Operational noise

2.1 Overview

Operational noise refers to noise from road traffic associated with the day-to-day operation of the road. The Western Harbour Tunnel and Warringah Freeway Upgrade Environmental Impact Statement (EIS) shows an overall reduction in operational noise impacts for more than 60 per cent of properties near our surface roads once the project is complete. While most properties will receive a reduction in traffic noise as a result of the project being built, noise levels at many properties will remain over the acceptable limits due to existing high levels of traffic noise within the project area.

To understand the expected operational noise impacts from the project, a noise model has been developed to predict the traffic noise levels at properties. The noise model is developed using the Calculation of Road Traffic Noise (CoRTN) method, which is a mathematical model that has been specifically validated under Australian conditions and is accepted as the industry standard by the NSW Government. The noise model takes into account various factors including the road design, pavement types, surrounding terrain, projected traffic volumes and allowances for noise absorption over different surfaces.

A range of measures will be used to reduce the impact of traffic noise for the local community. As a first priority we aim to mitigate operational noise through the road design process using at-source measures such as quieter pavement surfaces or noise barriers and mounds. Where at-source measures have been exhausted or are not feasible and reasonable, noise treatment is used as the final measure to reduce noise impacts for properties which remain over the acceptable noise limits as outlined in the NSW Road Noise Policy.

Detailed information about the noise modelling and assessment process is outlined in the EIS in [Chapter 11: Operational Noise and Vibration](#). The predicted operational traffic noise levels at receiver buildings once construction of the project is complete are provided in [Appendix G: Noise and Vibration Working Paper](#). This also outlines if the buildings have been identified for consideration of noise treatment to mitigate the impact of operational noise according to the noise modelling.

The operational noise impacts from the project will be subject to ongoing review and assessment as the project progresses and the detailed design is finalised.

2.2 Criteria for assessment

Eligibility of properties for operational noise treatment is considered in line with relevant noise assessment guidelines to ensure noise mitigation is applied consistently and equitably across NSW. To determine if a property is eligible, the following triggers are applied from Transport for NSW's Noise Mitigation Guideline in conjunction with the NSW Road Noise Policy:

- The predicted 'build' noise level exceeds the NSW Environment Protection Authority's (EPA) target criterion of $L_{Aeq(15hour)}$ 60 dB(A) for the daytime period (7am to 10pm) or $L_{Aeq(9hour)}$ 55 dB(A) for the night-time period (10pm to 7am) and the increase in traffic noise level attributed to the project is greater than 2 dB(A)
- The predicted cumulative traffic noise level is 5 dB(A) or more above the EPA's noise criteria and the receiver is significantly influenced by project road traffic noise, regardless of the change in noise between 'build' and 'no build' scenarios. The cumulative limit for a redeveloped road corridor is $L_{Aeq(15hour)}$ 65 dB(A) or higher for the daytime period, or $L_{Aeq(9hour)}$ 60 dB(A) or higher for the night-time period

- If the noise level contribution from the project is acute at a residential receiver, the receiver qualifies for consideration of noise mitigation even if noise levels are dominated by traffic noise from another road.

There will be an overlap in properties which meet the above criteria for consideration of operational noise treatment and those which qualify for noise treatment to mitigate construction noise as part of the program.

Potentially eligible buildings

Appendix A provides a list of buildings which have been identified as meeting the criteria for consideration of operational noise treatment as part of the program. They are eligible for further investigation only and as part of this process, Transport for NSW may find the building does not qualify for noise treatment.

The list of buildings in Appendix A has been developed using further detailed noise modelling carried out following the EIS phase of the project. The list is not exhaustive and may change as a result of further assessment of the expected operational noise impacts of the project.

For multi-dwelling buildings, not all properties at these addresses may be eligible for a noise treatment assessment depending on their position in the building and orientation to noise sources (the road). Further investigation including physical inspections may be required to establish where individual properties are situated within the building and whether they meet the criteria for treatment.

2.3 Further assessment

The project will continue to assess the impact of operational noise on the local community as part of its ongoing design development and environmental assessment process. This will be done in accordance with the project's obligations as outlined in the EIS, relevant NSW guidelines and the Minister's Conditions of Approval.

Operational Noise Review

The Minister's Conditions of Approval require the project to develop an Operational Noise Review (ONR). The objective of the ONR is to manage operational noise from the project and outline appropriate operational noise mitigation measures to minimise noise impacts to the community. The ONR will be developed as part of the detailed design phase and will include updated noise modelling based on the final design of the project.

In line with the Minister's Conditions of Approval, the ONR is required to be submitted to the Planning Secretary within 12 months after the start of construction unless otherwise agreed by the Planning Secretary.

Until the ONR is developed, the program is approved to be delivered as outlined in condition E91 of the Minister's Conditions of Approval to help reduce the impact of noise as early as possible for eligible properties.

Identified properties

The ONR will identify any buildings or properties within the project area that will be impacted by operational noise, including any properties that may have not been identified in the EIS due to changes during the detailed design phase. If the ONR identifies properties which have not been previously identified and engaged as part of the noise treatment process, the project will contact the property owner to provide noise treatment. Noise treatment is required to be delivered within six

months of the ONR being submitted to the Planning Secretary as per condition E90 of the Minister's Conditions of Approval.

Post-construction review

Noise monitoring will be carried out to measure the actual traffic noise impacts within 12 months of the project becoming operational. Noise monitoring will be carried out at representative locations within the project area to confirm the findings of the ONR. If traffic noise levels are found to be greater than acceptable tolerances, consultation would be carried out with affected receivers and additional noise mitigation measures may be applied where feasible and reasonable. This information will be made publicly available through a report known as the Operational Noise Compliance Report.

The project's requirements for operational noise validation monitoring and the Operational Noise Compliance Report are outlined in condition E92 and E93 of the Minister's Conditions of Approval.

2.4 Other Sensitive Receivers

A number of non-residential noise sensitive receivers, known as Other Sensitive Receivers (OSRs), have been identified for consideration of operational noise treatment as part of the EIS noise assessment. These include educational establishments, aged care facilities, childcare facilities, hospitals and places of worship. Transport for NSW will assess OSRs for noise treatment in line with specific criteria for non-residential land uses as outlined in the NSW Road Noise Policy.

Implementation of noise treatment for OSRs will be carried out as early as possible, however this work is subject to further review as part of the project's ongoing design refinement and assessment process. Engagement with eligible OSRs will be carried out progressively as this process continues. Transport for NSW will endeavour to deliver noise treatment within six months of the ONR being submitted to the Planning Secretary as per condition E90 of the Minister's Conditions of Approval.

A list of building addresses for Other Sensitive Receivers is provided in Appendix B.

3 Construction noise

3.1 Overview

Construction noise refers to temporary noise generated from activities associated with building the project, such as the operation of machinery and equipment. The program forms an important part of Transport for NSW's overall strategy to manage the impact of construction noise as part the project. Eligible properties will be prioritised for treatment so that residents benefit from reduced noise as early as possible in the construction program.

3.2 Assumptions

The EIS provides a conservative assessment of the predicted noise impacts during construction and further review and assessment of construction noise impacts will be carried out as the project progresses. Variables that contribute to the uncertainty of construction noise impacts in the early stages of the project include, but are not limited to:

- Detailed design of the road alignment not being finalised
- Detailed design of operational elements and structures not being finalised
- Work schedule, including the extent to which activities can be carried out during standard construction hours
- The plant and machinery to be used
- Traffic arrangements.

To enable the early implementation of the program before these details were confirmed, Transport for NSW made conservative assumptions about construction noise impacts to determine which properties may qualify for noise treatment to reduce the impact of construction noise. This provided the opportunity to start the process of delivering noise treatment as early as possible for eligible properties.

The implementation of noise treatment does not preclude the application of other noise and vibration mitigation and management measures for affected properties, such as temporary and long term alternative accommodation.

Information about the expected noise impacts to the local community during construction is outlined in [EIS Chapter 10: Construction Noise and Vibration](#).

3.3 Criteria for assessment

High Activity Areas

A number of High Activity Areas have been identified where properties have been prioritised for assessment. High Activity Areas are where construction activities will be carried out for an extended duration throughout the project and where extensive work will be required outside standard hours. This includes where surface work will be carried out for the Warringah Freeway Upgrade, as extended programs of out-of-hours work will be required for traffic and safety reasons.

Locations where out-of-hours work will be carried out for a limited duration, such as for temporary enabling activities and utility relocations, would not be considered High Activity Areas.

The High Activity Areas have been used to establish eligibility for assessments before details about the final design, work methodology or construction staging are confirmed. They are based on the reference design, reference construction methodology and concept program and are not defined by intensity, duration or frequency of noise-generating activities.

Screening criteria for noise treatment assessments

Transport for NSW has developed screening criteria to establish if a property is eligible for further investigation as part of the program. Consideration is given to proximity to High Activity Areas, the orientation of individual properties within the building, where affected facades of habitable rooms are located in relation to the work area and whether there is a direct line of sight and reasonable exposure to the High Activity Areas.

The screening criteria include:

- Is the building adjacent to a High Activity Area?
- Is the property within 100 metres of a High Activity Area?
- Is there direct line of sight between the property and a High Activity Area?
- Is the field of view of a High Activity Area (observed from within the property) greater than or equal to 45 degrees?

Physical inspection may be required to confirm if properties meet all of the above criteria and can be considered for treatment.

Transport for NSW has developed the screening criteria in consideration of existing guidelines which apply to the management of construction noise. A distance-based approach has been adopted in line with the Construction Noise and Vibration Guideline (RMS, 2016). For receivers that have a direct line-of-sight to a High Activity Area, the nominated distance of 100 metres corresponds to a noise level of 65 dB(A) ($L_{Aeq,15minute}$) during typical construction activities.

The impact of construction noise would be significantly reduced where the receiver has no direct line-of-sight to a High Activity Area. This is in line with Australian Standard *AS 2436-2010 Guide to noise and vibration control on construction, demolition and maintenance sites* which states noise levels at a receiver location with no line-of-sight to a work area can be 5 to 15 dB(A) less compared to a receiver with direct line-of-sight.

Given the nature of linear construction work, the duration of exposure to construction noise levels above 65 dB(A) ($L_{Aeq,15minute}$) would be significantly reduced at a receiver location that has a restricted angle of view of a High Activity Area compared to a viewpoint at an unobstructed angle.

Potentially eligible buildings

Appendix C provides a list of buildings which have been identified as meeting the criteria for consideration of noise treatment to reduce the impact of construction noise as part of the program. They are eligible for further investigation only and as part of this process they may not be found to qualify for noise treatment.

For multi-dwelling buildings, not all properties at these addresses may be eligible for a noise treatment assessment depending on their position in the building and orientation to High Activity Areas. Further investigation including physical inspections may be required to establish where individual properties are situated within the building and whether they meet the criteria for treatment.

Only properties that have a direct line of sight and reasonable exposure to High Activity Areas will be eligible for a noise treatment assessment, in line with the above criteria. The affected façade must have a habitable room facing the High Activity Area to be considered for noise treatment.

Following further investigation it may be determined a building or property is not eligible for an assessment or treatment. Similarly, the list is not exhaustive, and properties may be added to the list as the project progresses and further details are confirmed about the expected construction impacts.

3.4 Further assessment

The project will continue to assess the impact of noise on the local community as part of the ongoing design development and environmental assessment process. We will contact property owners if there are any changes to their property's eligibility for noise treatment as part of this process.

The construction contractor appointed to build the project will be required to produce environmental management plans including a Construction Noise and Vibration Management Plan, which will outline measures to reduce the impact of noise during their work. Verification and monitoring of construction noise mitigation will be ongoing, and the noise impacts and mitigation measures continually reviewed.

The program only includes the implementation of at-property noise treatment and does not apply to other mitigation measures which would be used to manage noise impacts during construction.

4 Roles and responsibilities

An overview of key roles and their responsibilities in the program is provided below.

Table 2. Overview of roles and responsibilities

Role	Responsibilities
Property owner	<ul style="list-style-type: none"> • Engage with Transport for NSW and its delivery partners (if they agree to be involved in the program) • Provide access for noise treatment assessments, inspections and installation, where required • Agree to the Scope of Work, Works Deed and Completion Certificate for their noise treatment package • Communicate with property managers or tenants if required to facilitate access • Ongoing maintenance of the treatments once installed (outside any applicable warranties).
Owners corporations	<ul style="list-style-type: none"> • Provide access for building inspections • Advise what treatments will be permitted for the building • Liaise with the project team and participate in meetings • Agree to the Scope of Work and Works Deed for properties that require owners corporation consent • Facilitate access to common property to allow treatments to be installed.
Transport for NSW Noise Insulation Program team	<ul style="list-style-type: none"> • Overall implementation of the program • Engaging delivery partners to implement the program including project managers and building contractors • Making sure customer outcomes are prioritised and decisions are fair and equitable • Liaising with property owners and owners corporations to resolve enquiries and complaints • Reviewing Scopes of Work reports • Escalation point for customer issues and complaints.
Transport for NSW Noise Insulation Program Complaint Review Panel	<ul style="list-style-type: none"> • Act as the final escalation point for customer complaints relating to noise treatment (refer to Appendix F for further details).
Acoustic Specialist Project Managers	<ul style="list-style-type: none"> • Point of contact for customers throughout the noise treatment process • Carrying out noise treatment assessments and preparing the Scope of Work for eligible properties • Management of specialist building contractor/s • Escalating issues and enquiries to the Transport for NSW project team when required.

Role	Responsibilities
Specialist building contractors engaged to install noise treatment	<ul style="list-style-type: none"> • Carrying out a check measurement inspection of properties to confirm dimensions and constructability • Installing treatments as per the Scope of Work • Liaising with property owners during the installation process • Signing the Works Deed and Completion Certificate.
Construction contractor/s engaged to build the project	<ul style="list-style-type: none"> • Provide information to Transport for NSW about expected noise impacts to the community as part of the project's ongoing environmental assessment and design development process.
Built heritage specialist	<ul style="list-style-type: none"> • Reviewing the noise treatment proposed for all heritage properties • Providing advice to ensure that any work carried out does not have an adverse impact on the heritage significance of a property and that all works meet the relevant statutory requirements.
Other technical specialists / subject matter experts	<ul style="list-style-type: none"> • Building Code of Australia specialists – Provide advice to Transport for NSW about specific constraints with delivering treatments to Class 2 buildings • Fire protection specialists – Provide advice to Transport for NSW on fire compliance for Class 2 buildings.
Local Councils	<ul style="list-style-type: none"> • Where required, agree to the proposed noise treatment for properties which are heritage-listed.

5 Treatment

5.1 Overview

Noise treatment involves installing architectural acoustic measures which aim to increase the sound insulation of properties. When assessing properties for noise treatment, every property is considered on a case by case basis. Properties are offered a bespoke treatment package depending on a number of factors, including:

- The predicted noise impacts from the project and the property's exposure and orientation to noise sources (i.e. the road)
- Existing condition and features of the property at the time of assessment
- If the eligible façades of the property have habitable rooms and how the rooms are configured
- Any potential constraints to installing treatment, such as safety, access or Building Code of Australia compliance.

This section provides an overview of the steps involved in the noise treatment process and outlines the types of treatments offered.

5.2 Noise treatment assessment

Noise treatment assessments will be carried out at eligible properties by the Acoustic Specialist Project Manager and building contractors to determine which treatments can be provided. The assessment involves a physical inspection to record details about the property, including:

- Taking photos and measurements of existing architectural features such as windows, doors and vents
- Recording details of existing construction materials, glazing/door thickness, depth of reveals, fixtures and furnishings
- Assessing building features such as access, building class and construction type
- Noting any potential constructability issues including the health and safety of workers and residents during installation and the presence of potentially hazardous materials.

The assessment is a physical inspection of the property only and does not involve any noise monitoring.

Following the noise treatment assessment, a Scope of Work report will be prepared outlining Transport for NSW's proposed treatment solutions for the property.

5.3 Treatment options

Eligible properties will receive a tailored package of treatments. Noise treatment may only be required for certain façades of the property, such as the side/s facing the road.

Treatments are only applied to the eligible façades of 'habitable' rooms, such as bedrooms and living areas. This is in line with the NSW Road Noise Policy which applies to all road infrastructure projects in NSW. Rooms that are not considered habitable include garages, storage areas, bathrooms, laundries, toilets, balconies or pantries. Kitchens will only be considered for treatment if

they open to a habitable room (with no dividing door) or if they are used as a dining room. The status of habitable rooms will be determined at the time of the noise treatment assessment.

All noise treatment selections will be discussed and agreed with each individual property owner and it is at their discretion if they wish to accept or decline any of the proposed noise treatments.

The below table provides a summary of the noise treatment types which may be offered to eligible properties to mitigate construction and operational noise. A table outlining further details of the treatments offered is provided in Appendix D.

Table 3. Overview of treatment types

Treatment type	Description
<p>Secondary treatment for windows and doors</p>	<p>Secondary treatment involves installing a secondary system within the reveal of an existing window or door to give a minimum 50 millimetre air gap. This is sometimes known as ‘wide air gap double glazing’.</p> <p>Secondary treatment provides the best noise reduction when compared to primary treatment. To ensure they are offered the highest level of treatment in terms of acoustic performance, eligible properties impacted by construction noise will be offered secondary treatment as a first priority.</p> <p>If property owners decline secondary treatment, they will be required to agree to a disclaimer acknowledging Transport for NSW recommended secondary treatment for the best acoustic performance and is indemnified from any noise impact resulting from declining it.</p>
<p>Primary treatment for windows and doors</p>	<p>Primary treatment involves removing the existing window or door and installing a new window or door. Transport for NSW would aim to provide a like-for-like replacement of the existing element to maintain a consistent look and feel where possible.</p> <p>Primary treatment provides less noise reduction compared to secondary treatment. However, it would still be expected to provide a noticeable noise reduction.</p> <p>Primary treatment may not be feasible for all properties due to constraints such as access, safety and Building Code of Australia compliance. This will be determined as part of the noise treatment assessment process. If primary treatment is not feasible, property owners may choose secondary treatment as an alternative which would also provide the best noise reduction.</p>
<p>Window and door seals</p>	<p>If existing window and door seals are unsatisfactory from an acoustic perspective, Transport for NSW would consider upgrading them to new acoustic rubber seals to improve the acoustic performance of existing windows and doors.</p>
<p>Sealing vents</p>	<p>Sealing existing wall vents is carried out to help reduce the transmission of noise into eligible habitable rooms.</p>

Treatment type	Description
Mechanical ventilation	<p>Mechanical ventilation is provided to maintain fresh air flow when doors and windows are closed. Mechanical ventilation can be offered for Class 1 buildings (i.e. single-dwelling detached houses).</p> <p>Transport for NSW is currently investigating if mechanical ventilation can be installed in Class 2 (multi-occupancy) buildings while meeting the requirements of the Building Code of Australia. Until this review is complete, mechanical ventilation will not be offered for properties in Class 2 buildings. If property owners accept mechanical ventilation as part of their treatment package, they would be responsible for ongoing maintenance costs such as electricity supply (outside any applicable warranties).</p> <p>Mechanical ventilation is the only solution considered to provide fresh air intake. Air-conditioning is not offered as part of the program.</p>

The noise treatments described above are indicative only as they are subject to Transport for NSW's feasible and reasonable criteria and other limitations as outlined in Section 6 of this document. Properties may not qualify for all noise treatments listed above. As part of the noise treatment assessment process, we may find there are no feasible and reasonable noise treatment options that can be provided for the property.

The level of noise reduction achieved differs for each property and depends on the treatments used and the existing construction and condition of the property. Transport for NSW does not carry out noise monitoring at properties to measure the effectiveness of treatments.

5.4 Cost and compensation

Property owners would not be required to provide any financial contribution as part of the program, other than being responsible for ongoing maintenance costs.

Noise treatment aims to mitigate the impact of noise for building occupants and is not intended to be a form of compensation against noise impacts. Therefore financial compensation would not be offered in lieu of noise treatment.

All noise treatment offers are reviewed by Transport for NSW to ensure they are consistent and equitable in line with our guidelines. Transport for NSW would not provide compensation to property owners if they choose to engage their own legal or other technical specialists to review their noise treatment offers.

5.5 Heritage-listed properties

The program has identified properties that qualify for a noise treatment assessment which are potentially heritage-listed. To ensure the program meets requirements for installing noise treatment at heritage properties in accordance with Condition E81 of the Minister's Condition of Approval, an independent heritage specialist will be engaged to:

- Assess the heritage status of the individual property
- Assess the proposed noise treatments
- Determine the program's regulatory requirements relating to the proposed treatments
- Advise if the program can install the proposed treatments, and if not, propose alternative treatments.

Once the program receives a detailed report from the heritage specialist addressing the above points, Transport for NSW will consult with relevant stakeholders including the local council to ensure the proposed noise treatments are in line with heritage requirements. The timing for the delivery of noise treatment to heritage properties may vary subject to the advice received from the heritage specialist.

Treatment for heritage properties will be carried out in a manner to minimise heritage impact. Any treatment will be sympathetic to the heritage values of the item, designed with heritage architect input and be reversible where feasible and reasonable.

A list of eligible properties identified as having heritage significance is provided in Appendix E.

6 Limitations

There are a number of potential constraints and limitations which may affect the noise treatments that can be offered. Some potential limitations to treating eligible properties may include access, health and safety for workers during installation, Building Code of Australia compliance and the age and condition of the property.

All treatment offers must meet Transport for NSW's feasible and reasonable assessment. Examples of why treatment may not be feasible include:

- Treatment is unable to be installed in compliance with current building standards and guidelines including the Building Code of Australia
- Treatment is unable to be installed due to the existing construction or condition of the property
- The property already has existing noise mitigation in place that meets Transport for NSW's requirements (i.e. if the property already has adequate window glazing)
- The property was previously provided with noise treatment on eligible façades as part of Transport for NSW's Noise Abatement Program or other projects
- There are limitations due to local planning controls
- The property has been built with noise mitigation to satisfy the requirements of the *State Environment Planning Policy (Infrastructure) 2007* (this will be assessed on a case by case basis)
- The property has commercial, tourism and visitor or non-conforming land uses.

Treatment may not be reasonable because:

- External or internal access to building elements is restricted
- Hazardous materials are present that could affect the installation, Transport for NSW or its subcontractors or the resident
- Treatment would not provide a noticeable noise reduction
- Treatment is not cost effective for the noise reduction it achieves.

The above limitations will be considered by the project in identifying suitable treatment options for eligible properties.

A large number of properties have been identified in the project area which are in multi-dwelling (Class 2) buildings. Installation of noise treatment for these buildings can be complex due to constraints such as building height, access limitations and more stringent requirements under the Building Code of Australia. Transport for NSW will work closely with owners corporations of strata buildings to determine which noise treatments can be provided to eligible properties while meeting our feasible and reasonable assessment.

Noise treatment would not be provided for any new developments that are proposed after the project receives planning approval.

7 Process

The table below provides a summary of the steps involved in providing noise treatment.

Consultation with property owners and owners corporations takes place throughout each stage of the noise treatment process. For properties that are not occupied by the owner (such as investment properties), engagement with tenants is expected to be facilitated by the owner or property manager where required.

Communication and engagement is outlined in more detail in Section 8 of this document.

Table 4. Noise treatment process overview

	Step	Action required			
		Project team	Property owner	Owners Corporation ³	Tenants
1.	Property identified as eligible for a noise treatment assessment	✓			Property owner responsible for facilitating engagement with tenants as required to enable property access.
2.	Inspection of common areas of strata buildings (if required)	✓		✓	
3.	Noise treatment assessment carried out at the property by acoustic specialist and building contractor	✓	✓		
4.	Proposed treatment package prepared by acoustic specialist	✓			
5.	Proposed treatment package reviewed by Transport for NSW	✓			
6.	Scope of Work signed by customer	✓	✓	✓	
7.	Works Deed signed for work to proceed	✓	✓	✓	
8.	Treatments installed by specialist builder	✓	✓		
9.	Completion Certificate signed confirming work is complete	✓	✓	✓	

³ If required for strata plan buildings

8 Communication and engagement approach

Communication and engagement with property owners plays an integral role in the delivery of noise treatment as part of the program. This section provides an overview of the communication activities that will be carried out.

8.1 Objectives

The communication objectives for the Program are to:

- Inform property owners who are eligible for a noise treatment assessment and explain the process, including what treatments can be implemented (if any), delivery timeframes and next steps
- Encourage uptake of assessments and treatment by property owners
- Provide a central point of contact with the project team
- Provide regular and targeted information to keep property owners informed during the process.

8.2 Key messages

The following key messages will be used during communication and engagement activities for the program:

- We will carry out noise treatment assessments at eligible properties to confirm if any of our treatments can reduce the impact of noise
- The assessment typically takes around one hour and includes examining and taking photos of existing features of the property such as windows, doors and access
- Eligible properties will be offered a specific treatment package depending on the age, construction and style of the property as well as the expected noise impact
- There will be no cost to property owners for noise treatment assessments or treatment
- The process for providing noise treatment involves a number of steps. It can take several months from the initial noise treatment assessment until installation is complete
- The Noise Insulation Program for the Western Harbour Tunnel and Warringah Freeway Upgrade is available to view at nswroads.work/whtportal-noise.

8.3 Stakeholders

Key stakeholders for the program include:

- Owners and residents of properties identified as potentially eligible for noise treatment
- Owners corporations of strata buildings
- Delivery partners engaged by Transport for NSW to implement the program
- Transport for NSW Project Team
- Transport for NSW Complaints Review Panel
- Local Councils.

8.4 Engagement process

Noise treatment is typically an extensive process which can take some time to negotiate and implement, particularly for multi-dwelling buildings with owners corporations. It can take several months from the noise treatment assessment until treatments are installed.

The below table outlines the communication mechanisms that will be used to contact the stakeholders involved in the program.

Table 5. Engagement process for owners corporations and strata managers

Stage	Tools	Purpose
Owners corporations and strata managers		
First contact (Letter 1)	Letter via mail	<ul style="list-style-type: none"> Introduce the project and provide an overview of the program Advise some units in complex have been identified for a noise treatment assessment Offer a building inspection of common areas to assess features such as access and storage Provide project contact details
Reminder letter (Letter 2) <i>Two weeks after Letter 1</i>	Letter via mail	<ul style="list-style-type: none"> Remind the owners corporation to book a building inspection Provide project contact details
Reminder letter (Letter 3) <i>One week after Letter 2</i>	Letter via mail	<ul style="list-style-type: none"> Remind the owners corporation to book a building inspection Advise the owners corporation they can contact the project at any point in the future if they would like to take up the inspection offer Provide project contact details
Building inspection	Direct contact via phone and email	<ul style="list-style-type: none"> Carry out an inspection of common areas at a time arranged with the owners corporation
Meeting with key representatives of the owners corporation	In person at Transport for NSW's office or via video conference	<ul style="list-style-type: none"> Facilitate a discussion between the project team and key decision-makers representing the owners corporation Explain the noise treatment process and answer any questions Advise what details are needed from the owners corporation to facilitate noise treatment Encourage the owners corporation to progress with noise treatment so eligible properties benefit from reduced noise as early as possible
Scope of Work	Scope of Work via email or mail	<ul style="list-style-type: none"> Seek agreement on the proposed Scope of Work for eligible properties (if owners corporation approval is required)

Stage	Tools	Purpose
Works Deed	Letter and Deed via email or mail	<ul style="list-style-type: none"> Seek signature on the Works Deed for eligible properties (if owners corporation approval is required)
Completion certificate	Letter and Deed via email or mail	<ul style="list-style-type: none"> Seek signature on the Completion Certificate for eligible properties (if owners corporation approval is required).

Table 6. Engagement process for property owners

Stage	Tools	Purpose
Property owners		
First contact (Letter 1)	<p>Door knock for owner occupied properties (subject to COVID-19 health and safety precautions outlined in Section 8.10)</p> <p>Or</p> <p>Letter via mail for investment properties</p>	<ul style="list-style-type: none"> Introduce the project and provide an overview of the program Advise property has been identified as potentially eligible and offer to carry out a noise treatment assessment Provide project contact details.
Reminder letter (Letter 2) <i>Two weeks after Letter 1</i>	Letter via mail	<ul style="list-style-type: none"> Remind property owners to book a noise treatment assessment Provide project contact details
Reminder letter (Letter 3) <i>One week after Letter 2</i>	<p>Door knock for owner occupied properties</p> <p>Or</p> <p>Letter via mail for investment properties</p>	<ul style="list-style-type: none"> Remind property owners to book a noise treatment assessment Advise the owner can contact the project at any point in the future if they would like to take up the noise treatment assessment offer Provide project contact details
Doorknock	Doorknock by project team representatives	<ul style="list-style-type: none"> Reach property owners who have not yet responded to letters offering a noise treatment assessment If the property is tenanted, the tenant will be asked to pass on details to their landlord and/or property manager
Noise treatment assessment	Direct contact via phone and email	<ul style="list-style-type: none"> Carry out a noise treatment assessment for the property at a time arranged with the owner

Stage	Tools	Purpose
Treatment package offer to eligible properties	Letter and Scope of Work via email or mail (customer's preference)	<ul style="list-style-type: none"> Confirm the project will proceed with noise treatment and seek agreement from the property owner on their Scope of Work
Works Deed	Letter and Deed via email or mail (customer's preference)	<ul style="list-style-type: none"> Confirm the project will proceed with noise treatment and seek signatures on the Deed to progress to installation Note: Signatures required from all owners listed on the title of the property as well as Owners Corporation if in a strata building
Installation	Direct contact via phone and email	<ul style="list-style-type: none"> Installation of noise treatment as per Scope of Work
Post-installation	Letter and Completion Certificate	<ul style="list-style-type: none"> Owner to sign a Completion Certificate confirming noise treatments have been installed by the builder
Post-installation rectification (if required)	Direct contact via phone and email	<ul style="list-style-type: none"> Where noise treatments are faulty or the workmanship is not satisfactory, rectification work will be carried out within six weeks, subject to property access
Post-installation	Survey	<ul style="list-style-type: none"> Seek feedback from property owners on the noise treatment process and effectiveness of noise treatment for future improvement.

8.5 Engagement with owners corporations

For properties in strata buildings, engagement will be required with the owners corporation to enable treatment to be installed. Noise treatment would require permission from the owners corporation where it affects common property and Transport for NSW will not be able to progress with noise treatment if their approval is not provided. Transport for NSW will offer to meet with owners corporations and their representatives to discuss which noise treatments will be provided, agree the next steps and answer any outstanding questions and concerns.

To facilitate the noise treatment process, the following would be required from owners corporations:

- A nominated point of contact to engage with the program on behalf of the owners corporation, such as the strata manager
- Completion of forms including a building inspection booking form and treatment consent form
- Confirmation of which noise treatments are permissible for the building
- Confirmation of the owners corporation's approval process for Scope of Work and Works Deed documents
- Participation in meetings as required to resolve any outstanding issues
- Specific details about the building and potential constraints to noise treatment. This may include hazardous material registers, details of development applications and information about access for builders including lifts and stairs.

If the owners corporation is not responsive to communication attempts from the program team, property owners will be notified and encouraged to follow up directly with their owners corporation representatives. All reasonable attempts will be made by the program team to facilitate engagement with owners corporations to ensure eligible properties receive their noise treatment in a timely manner.

8.6 Outstanding offers

The project team will work with stakeholders to ensure treatment offers are agreed to as early as possible. Multiple attempts will be made to encourage eligible property owners to engage in the process above, and all communication attempts will be recorded. If property owners do not respond to letters offering a noise treatment assessment, the property will be doorknocked. If contact can't be made with owners of investment properties, the project will ask tenants to provide landlord and/or property manager contact details. The project will make at least three attempts at contacting property owners or owners corporations.

If not accepted initially by the property owner, the offers of a noise treatment assessment, Scope of Work or Works Deed will remain open until the project is operational. The owner can contact the project at any time to accept their offer and resume the process. For properties being treated for construction noise only, the offer of treatment will remain valid until the completion of out-of-hours work that impacts the property.

A final contact attempt will be made at least six months before the project is complete.

8.7 Enquiries, complaints and escalation

Program-specific contact details will be publicised in all communication materials for community members to submit enquiries and complaints relating to noise treatment:

- **Phone:** 1800 312 772 (9am to 5pm, Monday to Friday)
- **Email:** nip@transport.nsw.gov.au
- **Mail:** Transport for NSW, Locked Bag 928, North Sydney NSW 2059

The below table identifies a series of escalation points should there be a dispute about eligibility for an assessment, eligibility for a treatment or the type of treatment being offered.

Table 7. Complaint escalation process

Step	Details
1. Customer complaint	The customer raises a complaint directly with the Transport for NSW project team or with one of the delivery partners engaged as part of the program (such as the project manager or building contractor).
2. Delivery partner	If the delivery partner is unable to resolve the issue directly with the customer, they will escalate the complaint to Transport for NSW's project team.
3. Transport for NSW project team	The Transport for NSW project team will review the complaint and provide a response. If the customer is unsatisfied with the response and requests further escalation, the project team will submit the complaint to the program's Complaint Review Panel for review.

Step	Details
4. Complaint Review Panel	The Complaint Review Panel will review the details of the complaint at a meeting and decide if it endorses the project team's response. If the panel does not endorse the project team's response, the panel may make an alternative recommendation to resolve the complaint. Further information about the panel is provided in Appendix F.
5. Final decision	Following review by the panel, a final decision will be determined and communicated to the customer. There will be no further avenues for the complaint to be escalated at the project level.

8.8 Evaluation

To help understand the effectiveness of noise treatment during the construction phase of the project, property owners will be invited to provide feedback via a survey. The survey results will help Transport for NSW and agencies in developing noise mitigation for future projects. Responses would be recorded in line with Transport for NSW's privacy policy. Data collected would be used for internal review and evaluation purposes only and would not be distributed publicly.

8.9 Privacy and records

All correspondence will be recorded in line with Transport for NSW's privacy policy. All personal information collected as part of the program will be retained by Transport for NSW and this information will be shared with our delivery partners for communication and engagement purposes only. We will not disclose personal details to third parties unless authorised by law.

Providing personal information is voluntary, but if property owners do not consent to providing their details this may impact Transport for NSW's ability to provide noise treatment. Members of the public may request to access their personal information held by Transport for NSW at any time.

Every effort will be made to contact eligible properties to encourage uptake, and a record of all communication attempts will be maintained.

8.10 Health and safety during COVID-19

The safety of the community and workforce is Transport for NSW's highest priority. Infrastructure construction projects are generally considered essential to the economy and continue as planned across the state. Delivery of the program will continue with health and safety precautions in place, however property work may be paused at times if required, in response to COVID-19 rules and restrictions.

Transport for NSW staff and delivery partners will use appropriate hygiene and physical distancing measures while implementing the program during COVID-19. Hot spots will be continually monitored and our procedures will be reassessed regularly in line with current health advice. Measures to minimise face-to-face interaction will be considered where appropriate, such as virtual assessments and inspections.

Property owners may choose to temporarily hold off on property work including assessments, inspections and installation, and can resume the process when they are comfortable to do so.

9 Next steps

Transport for NSW started implementing the program in early 2020 following the public exhibition of the EIS. Due to the volume of properties identified for noise treatment, the program is being delivered progressively and eligible property owners are being contacted in stages. The program is being delivered in line with the processes and procedures outlined in this document and in accordance with the project's requirements under the Minister's Conditions of Approval.

This document may be updated periodically as required, such as to update the list of identified buildings as part of the project's ongoing design and environmental assessment process.

Appendix A – Operational noise eligible buildings

The residential buildings listed below have been identified as eligible for consideration of noise treatment to mitigate the impact of operational traffic noise. This list has been updated from the EIS following additional modelling and assessment, and is subject to change as part of the project's ongoing design refinement and environmental assessment process.

Properties meeting the criteria within the buildings listed below are only eligible for a noise treatment assessment and possible treatments cannot be determined until the property is assessed.

For multi-dwelling buildings, only some properties may qualify for a noise treatment assessment depending on their position in the building. Only properties which meet the criteria outlined in Section 2.2 will be considered for treatment.

Properties with an asterisk (*) have also been identified for noise treatment as part of the Operational Noise and Vibration Review (ONVR) for the M4-M5 Link Rozelle Interchange project. These properties will be offered treatment in accordance with the Rozelle Interchange ONVR or the Western Harbour Tunnel and Warringah Freeway Upgrade Noise Insulation Program (whichever is the higher level of treatment).

Table 8. Building addresses eligible for further investigation to mitigate operational noise

1 BAYVIEW CRESCENT ANNANDALE*	7 JENKINS LANE CROWS NEST
3 BAYVIEW CRESCENT ANNANDALE*	9 JENKINS LANE CROWS NEST
5 BAYVIEW CRESCENT ANNANDALE*	1 MATTHEW LANE CROWS NEST
7 BAYVIEW CRESCENT ANNANDALE*	3 MATTHEW LANE CROWS NEST
9 BAYVIEW CRESCENT ANNANDALE*	35 FITZROY STREET KIRIBILLI
11 BAYVIEW CRESCENT ANNANDALE*	60 JEFFREYS STREET KIRIBILLI
29 BAYVIEW CRESCENT ANNANDALE*	1 MCDOUGALL STREET KIRIBILLI
31 BAYVIEW CRESCENT ANNANDALE*	2 MCDOUGALL STREET KIRIBILLI
33 BAYVIEW CRESCENT ANNANDALE*	4 MCDOUGALL STREET KIRIBILLI
191 JOHNSTON STREET ANNANDALE*	6 MCDOUGALL STREET KIRIBILLI
193 JOHNSTON STREET ANNANDALE*	3-11 MCDOUGALL STREET KIRIBILLI
195 JOHNSTON STREET ANNANDALE*	48 UPPER PITT STREET KIRIBILLI
197 JOHNSTON STREET ANNANDALE*	50 UPPER PITT STREET KIRIBILLI
201 JOHNSTON STREET ANNANDALE*	34 ARTHUR STREET LAVENDER BAY
203 JOHNSTON STREET ANNANDALE*	36 ARTHUR STREET LAVENDER BAY
205 JOHNSTON STREET ANNANDALE*	1 MIDDLEMISS STREET LAVENDER BAY
207 JOHNSTON STREET ANNANDALE*	38 ALFRED STREET SOUTH MILSONS POINT
209 JOHNSTON STREET ANNANDALE*	48-50 ALFRED STREET SOUTH MILSONS POINT
211 JOHNSTON STREET ANNANDALE*	70 ALFRED STREET SOUTH MILSONS POINT
213 JOHNSTON STREET ANNANDALE*	80 ALFRED STREET SOUTH MILSONS POINT
214 JOHNSTON STREET ANNANDALE*	102 ALFRED STREET SOUTH MILSONS POINT
215 JOHNSTON STREET ANNANDALE*	110 ALFRED STREET SOUTH MILSONS POINT
216 JOHNSTON STREET ANNANDALE*	118 ALFRED STREET SOUTH MILSONS POINT
218 JOHNSTON STREET ANNANDALE*	2 DIND STREET MILSONS POINT
219 JOHNSTON STREET ANNANDALE*	30 GLEN STREET MILSONS POINT
220 JOHNSTON STREET ANNANDALE*	55 LAVENDER STREET MILSONS POINT
221 JOHNSTON STREET ANNANDALE*	18 DODDS STREET NAREMBURN
222 JOHNSTON STREET ANNANDALE*	1 DONNELLY ROAD NAREMBURN
223 JOHNSTON STREET ANNANDALE*	3 DONNELLY ROAD NAREMBURN
224 JOHNSTON STREET ANNANDALE*	5 DONNELLY ROAD NAREMBURN

225 JOHNSTON STREET ANNANDALE*	1A DONNELLY ROAD NAREMBURN
226 JOHNSTON STREET ANNANDALE*	31-33 DONNELLY ROAD NAREMBURN
227 JOHNSTON STREET ANNANDALE*	2 MERRENBURN AVENUE NAREMBURN
228 JOHNSTON STREET ANNANDALE*	4 MERRENBURN AVENUE NAREMBURN
229 JOHNSTON STREET ANNANDALE*	6 MERRENBURN AVENUE NAREMBURN
230 JOHNSTON STREET ANNANDALE*	8 MERRENBURN AVENUE NAREMBURN
231 JOHNSTON STREET ANNANDALE*	8A MERRENBURN AVENUE NAREMBURN
232 JOHNSTON STREET ANNANDALE*	9 MERRENBURN AVENUE NAREMBURN
233 JOHNSTON STREET ANNANDALE*	10 MERRENBURN AVENUE NAREMBURN
233A JOHNSTON STREET ANNANDALE*	11 MERRENBURN AVENUE NAREMBURN
234 JOHNSTON STREET ANNANDALE*	12 MERRENBURN AVENUE NAREMBURN
235 JOHNSTON STREET ANNANDALE*	13 MERRENBURN AVENUE NAREMBURN
236 JOHNSTON STREET ANNANDALE*	14 MERRENBURN AVENUE NAREMBURN
237 JOHNSTON STREET ANNANDALE*	15 MERRENBURN AVENUE NAREMBURN
239 JOHNSTON STREET ANNANDALE*	17 MERRENBURN AVENUE NAREMBURN
241 JOHNSTON STREET ANNANDALE*	19 MERRENBURN AVENUE NAREMBURN
242 JOHNSTON STREET ANNANDALE*	32 MERRENBURN AVENUE NAREMBURN
243 JOHNSTON STREET ANNANDALE*	14A MERRENBURN AVENUE NAREMBURN
244 JOHNSTON STREET ANNANDALE*	207 WILLOUGHBY ROAD NAREMBURN
245 JOHNSTON STREET ANNANDALE*	317 ALFRED STREET NORTH NEUTRAL BAY
246 JOHNSTON STREET ANNANDALE*	319 ALFRED STREET NORTH NEUTRAL BAY
247 JOHNSTON STREET ANNANDALE*	323 ALFRED STREET NORTH NEUTRAL BAY
248 JOHNSTON STREET ANNANDALE*	325 ALFRED STREET NORTH NEUTRAL BAY
249 JOHNSTON STREET ANNANDALE*	339A ALFRED STREET NORTH NEUTRAL BAY
251A JOHNSTON STREET ANNANDALE*	341 ALFRED STREET NORTH NEUTRAL BAY
251B JOHNSTON STREET ANNANDALE*	373 ALFRED STREET NORTH NEUTRAL BAY
253 JOHNSTON STREET ANNANDALE*	387 ALFRED STREET NORTH NEUTRAL BAY
255 JOHNSTON STREET ANNANDALE*	393 ALFRED STREET NORTH NEUTRAL BAY
257 JOHNSTON STREET ANNANDALE*	433 ALFRED STREET NORTH NEUTRAL BAY
258 JOHNSTON STREET ANNANDALE*	437 ALFRED STREET NORTH NEUTRAL BAY
259 JOHNSTON STREET ANNANDALE*	439 ALFRED STREET NORTH NEUTRAL BAY
260 JOHNSTON STREET ANNANDALE*	441 ALFRED STREET NORTH NEUTRAL BAY
262 JOHNSTON STREET ANNANDALE*	88 BENT STREET NEUTRAL BAY
263 JOHNSTON STREET ANNANDALE*	2 EATON STREET NEUTRAL BAY
264 JOHNSTON STREET ANNANDALE*	291 ERNEST STREET NEUTRAL BAY
265 JOHNSTON STREET ANNANDALE*	293-295 ERNEST STREET NEUTRAL BAY
266 JOHNSTON STREET ANNANDALE*	297 ERNEST STREET NEUTRAL BAY
267 JOHNSTON STREET ANNANDALE*	185 FALCON STREET NEUTRAL BAY
268 JOHNSTON STREET ANNANDALE*	185A FALCON STREET NEUTRAL BAY
269 JOHNSTON STREET ANNANDALE*	1 KURRABA ROAD NEUTRAL BAY
270 JOHNSTON STREET ANNANDALE*	2 KURRABA ROAD NEUTRAL BAY
271 JOHNSTON STREET ANNANDALE*	4 KURRABA ROAD NEUTRAL BAY
272 JOHNSTON STREET ANNANDALE*	1 MCINTOSH LANE NEUTRAL BAY
273 JOHNSTON STREET ANNANDALE*	4 MERLIN STREET NEUTRAL BAY
274 JOHNSTON STREET ANNANDALE*	8A MERLIN STREET NEUTRAL BAY
275 JOHNSTON STREET ANNANDALE*	8B MERLIN STREET NEUTRAL BAY
276 JOHNSTON STREET ANNANDALE*	8C MERLIN STREET NEUTRAL BAY
277 JOHNSTON STREET ANNANDALE*	10A MERLIN STREET NEUTRAL BAY
278 JOHNSTON STREET ANNANDALE	10B MERLIN STREET NEUTRAL BAY
280 JOHNSTON STREET ANNANDALE	12-14 MERLIN STREET NEUTRAL BAY

282 JOHNSTON STREET ANNANDALE	21 MERLIN STREET NEUTRAL BAY
284 JOHNSTON STREET ANNANDALE	74 MERLIN STREET NEUTRAL BAY
284A JOHNSTON STREET ANNANDALE	76 MERLIN STREET NEUTRAL BAY
300 JOHNSTON STREET ANNANDALE*	2 MILITARY ROAD NEUTRAL BAY
2 KENTVILLE AVENUE ANNANDALE*	4 MILITARY ROAD NEUTRAL BAY
4 KENTVILLE AVENUE ANNANDALE	6 MILITARY ROAD NEUTRAL BAY
6 KENTVILLE AVENUE ANNANDALE	6 WYAGDON STREET NEUTRAL BAY
8 KENTVILLE AVENUE ANNANDALE*	7 WYAGDON STREET NEUTRAL BAY
10 KENTVILLE AVENUE ANNANDALE*	8 WYAGDON STREET NEUTRAL BAY
12 KENTVILLE AVENUE ANNANDALE*	9 WYAGDON STREET NEUTRAL BAY
4 PRITCHARD STREET ANNANDALE*	15 WYAGDON STREET NEUTRAL BAY
6 PRITCHARD STREET ANNANDALE*	263-269 ALFRED STREET NORTH NORTH SYDNEY
8 PRITCHARD STREET ANNANDALE*	1 BARDSLEY GARDENS NORTH SYDNEY
10 PRITCHARD STREET ANNANDALE*	7 BARDSLEY GARDENS NORTH SYDNEY
12 PRITCHARD STREET ANNANDALE*	1 BRAY STREET NORTH SYDNEY
10 RAILWAY PARADE ANNANDALE*	2 BRAY STREET NORTH SYDNEY
12 RAILWAY PARADE ANNANDALE*	3 BRAY STREET NORTH SYDNEY
14 RAILWAY PARADE ANNANDALE*	5 BRAY STREET NORTH SYDNEY
16 RAILWAY PARADE ANNANDALE*	7 BRAY STREET NORTH SYDNEY
1 AMHERST STREET CAMMERAY	9 BRAY STREET NORTH SYDNEY
11 AMHERST STREET CAMMERAY	11 BRAY STREET NORTH SYDNEY
45 AMHERST STREET CAMMERAY	15 BRAY STREET NORTH SYDNEY
33 ANZAC AVENUE CAMMERAY	11A BRAY STREET NORTH SYDNEY
6 ARMSTRONG STREET CAMMERAY	88 BERRY STREET NORTH SYDNEY
8 ARMSTRONG STREET CAMMERAY	79-81 BERRY STREET NORTH SYDNEY
10 ARMSTRONG STREET CAMMERAY	182 FALCON STREET NORTH SYDNEY
13-21 ARMSTRONG STREET CAMMERAY	184 FALCON STREET NORTH SYDNEY
14 ARMSTRONG STREET CAMMERAY	186 FALCON STREET NORTH SYDNEY
38 BELLEVUE STREET CAMMERAY	188 FALCON STREET NORTH SYDNEY
40 BELLEVUE STREET CAMMERAY	204 FALCON STREET NORTH SYDNEY
42 BELLEVUE STREET CAMMERAY	206 FALCON STREET NORTH SYDNEY
44 BELLEVUE STREET CAMMERAY	208 FALCON STREET NORTH SYDNEY
57 BELLEVUE STREET CAMMERAY	210 FALCON STREET NORTH SYDNEY
1 CAMMERAY AVENUE CAMMERAY	212 FALCON STREET NORTH SYDNEY
3 CAMMERAY AVENUE CAMMERAY	214 FALCON STREET NORTH SYDNEY
7 CAMMERAY AVENUE CAMMERAY	216 FALCON STREET NORTH SYDNEY
9 CAMMERAY AVENUE CAMMERAY	238-246 FALCON STREET NORTH SYDNEY
11 CAMMERAY AVENUE CAMMERAY	2 HAMPDEN STREET NORTH SYDNEY
13 CAMMERAY AVENUE CAMMERAY	4 HAMPDEN STREET NORTH SYDNEY
12 EDWIN STREET CAMMERAY	6 HAMPDEN STREET NORTH SYDNEY
14 EDWIN STREET CAMMERAY	8 HAMPDEN STREET NORTH SYDNEY
231 ERNEST STREET CAMMERAY	10 HAMPDEN STREET NORTH SYDNEY
233-237 ERNEST STREET CAMMERAY	11 HAMPDEN STREET NORTH SYDNEY
243-245 ERNEST STREET CAMMERAY	12 HAMPDEN STREET NORTH SYDNEY
247-249 ERNEST STREET CAMMERAY	14 HAMPDEN STREET NORTH SYDNEY
16 JENKINS STREET CAMMERAY	15 HAMPDEN STREET NORTH SYDNEY
43 JENKINS STREET CAMMERAY	16 HAMPDEN STREET NORTH SYDNEY
57 JENKINS STREET CAMMERAY	17 HAMPDEN STREET NORTH SYDNEY
22-26 JENKINS STREET CAMMERAY	28 HIGH STREET NORTH SYDNEY
14 MASSEY STREET CAMMERAY	30 HIGH STREET NORTH SYDNEY

15 MASSEY STREET CAMMERAY	32 HIGH STREET NORTH SYDNEY
1 METCALFE STREET CAMMERAY	36 HIGH STREET NORTH SYDNEY
3 METCALFE STREET CAMMERAY	38 HIGH STREET NORTH SYDNEY
7 METCALFE STREET CAMMERAY	40 HIGH STREET NORTH SYDNEY
11 METCALFE STREET CAMMERAY	42 HIGH STREET NORTH SYDNEY
365 MILLER STREET CAMMERAY	44 HIGH STREET NORTH SYDNEY
285 MILLER STREET CAMMERAY	46 HIGH STREET NORTH SYDNEY
4 MOODIE STREET CAMMERAY	48 HIGH STREET NORTH SYDNEY
16A MOODIE STREET CAMMERAY	50 HIGH STREET NORTH SYDNEY
20 MOODIE STREET CAMMERAY	52 HIGH STREET NORTH SYDNEY
2 MORDEN STREET CAMMERAY	54 HIGH STREET NORTH SYDNEY
4 MORDEN STREET CAMMERAY	26A HIGH STREET NORTH SYDNEY
6 MORDEN STREET CAMMERAY	26B HIGH STREET NORTH SYDNEY
15 MORDEN STREET CAMMERAY	49-51 HIGH STREET NORTH SYDNEY
1 PALMER STREET CAMMERAY	45 MCLAREN STREET NORTH SYDNEY
2A PALMER STREET NAREMBURN	282 MILLER STREET NORTH SYDNEY
3B PALMER STREET CAMMERAY	296 MILLER STREET NORTH SYDNEY
5 PALMER STREET CAMMERAY	298 MILLER STREET NORTH SYDNEY
229 WEST STREET CAMMERAY	300 MILLER STREET NORTH SYDNEY
231 WEST STREET CAMMERAY	302 MILLER STREET NORTH SYDNEY
233 WEST STREET CAMMERAY	304 MILLER STREET NORTH SYDNEY
235 WEST STREET CAMMERAY	306 MILLER STREET NORTH SYDNEY
237 WEST STREET CAMMERAY	308 MILLER STREET NORTH SYDNEY
274 WEST STREET CAMMERAY	312 MILLER STREET NORTH SYDNEY
39 ROSALIND STREET CAMMERAY	314 MILLER STREET NORTH SYDNEY
79 ROSALIND STREET CAMMERAY	316 MILLER STREET NORTH SYDNEY
81 ROSALIND STREET CAMMERAY	63 RIDGE STREET NORTH SYDNEY
36-38 ROSALIND STREET CAMMERAY	83 RIDGE STREET NORTH SYDNEY
40-44 ROSALIND STREET CAMMERAY	85 RIDGE STREET NORTH SYDNEY
204 SEXTON PLACE CAMMERAY	87 RIDGE STREET NORTH SYDNEY
208 SEXTON PLACE CAMMERAY	89 RIDGE STREET NORTH SYDNEY
8 TARELLA PLACE CAMMERAY	93 RIDGE STREET NORTH SYDNEY
2 BROOK STREET CROWS NEST	95 RIDGE STREET NORTH SYDNEY
4 BROOK STREET CROWS NEST	59-61 RIDGE STREET NORTH SYDNEY
6 BROOK STREET CROWS NEST	95A RIDGE STREET NORTH SYDNEY
7 BROOK STREET CROWS NEST	138 WALKER STREET NORTH SYDNEY
8 BROOK STREET CROWS NEST	144 WALKER STREET NORTH SYDNEY
9 BROOK STREET CROWS NEST	146 WALKER STREET NORTH SYDNEY
10 BROOK STREET CROWS NEST	148 WALKER STREET NORTH SYDNEY
11 BROOK STREET CROWS NEST	150 WALKER STREET NORTH SYDNEY
18 BROOK STREET CROWS NEST	152 WALKER STREET NORTH SYDNEY
146 CHANDOS STREET CROWS NEST	171 WALKER STREET NORTH SYDNEY
160 CHANDOS STREET CROWS NEST	173 WALKER STREET NORTH SYDNEY
162 CHANDOS STREET CROWS NEST	175 WALKER STREET NORTH SYDNEY
164 CHANDOS STREET CROWS NEST	177 WALKER STREET NORTH SYDNEY
166 CHANDOS STREET CROWS NEST	179 WALKER STREET NORTH SYDNEY
168 CHANDOS STREET CROWS NEST	185 WALKER STREET NORTH SYDNEY
170 CHANDOS STREET CROWS NEST	197 WALKER STREET NORTH SYDNEY
172 CHANDOS STREET CROWS NEST	199 WALKER STREET NORTH SYDNEY
174 CHANDOS STREET CROWS NEST	205 WALKER STREET NORTH SYDNEY

152 FALCON STREET CROWS NEST	207 WALKER STREET NORTH SYDNEY
168 FALCON STREET CROWS NEST	209 WALKER STREET NORTH SYDNEY
170 FALCON STREET CROWS NEST	191-195 WALKER STREET NORTH SYDNEY
22-24 DONNELLY ROAD CROWS NEST	1 WHALING ROAD NORTH SYDNEY
24A DONNELLY ROAD CROWS NEST	2 WHALING ROAD NORTH SYDNEY
24B DONNELLY ROAD CROWS NEST	3 WHALING ROAD NORTH SYDNEY
1 JENKINS LANE CROWS NEST	5 WHALING ROAD NORTH SYDNEY
3 JENKINS LANE CROWS NEST	7 WHALING ROAD NORTH SYDNEY
5 JENKINS LANE CROWS NEST	9 WHALING ROAD NORTH SYDNEY

Appendix B – Other Sensitive Receivers

The building addresses listed below have been identified as Other Sensitive Receivers (OSRs) which qualify for a noise treatment assessment to reduce the impact of operational traffic noise.

Table 9. OSR buildings

252 JOHNSTON STREET ANNANDALE	35-37 MERRENBURN AVENUE NAREMBURN
279 JOHNSTON STREET ANNANDALE	205 WILLOUGHBY ROAD NAREMBURN
196-212 JOHNSTON STREET ANNANDALE	15 ANGELO STREET NORTH SYDNEY
7 CHAPMAN ROAD ANNANDALE	132 ARTHUR STREET NORTH SYDNEY
2 ANZAC AVENUE CAMMERAY	4 CLARK ROAD NORTH SYDNEY
5 CARTER STREET CAMMERAY	127 FALCON STREET NORTH SYDNEY
6 MASSEY STREET CAMMERAY	180 FALCON STREET NORTH SYDNEY
68 PALMER STREET CAMMERAY	5 FIG TREE LANE NORTH SYDNEY
3 AMHERST STREET CROWS NEST	255 MILLER STREET NORTH SYDNEY
135 ERNEST STREET CROWS NEST	264 MILLER STREET NORTH SYDNEY
8 RODBOROUGH AVENUE CROWS NEST	270 MILLER STREET NORTH SYDNEY
5 BROUGHTON STREET KIRRIBILLI	141 WALKER STREET NORTH SYDNEY
7 BROUGHTON STREET KIRRIBILLI	176 WALKER STREET NORTH SYDNEY
29 BURTON STREET KIRRIBILLI	201-203 WALKER STREET NORTH SYDNEY
85-87 CARABELLA STREET KIRRIBILLI	207 WALKER STREET NORTH SYDNEY
46-48 WILLOUGHBY STREET KIRRIBILLI	40 RIDGE STREET NORTH SYDNEY
19 MACKENZIE STREET LAVENDER BAY	73 RIDGE STREET NORTH SYDNEY
100 ALFRED STREET SOUTH MILSONS POINT	75-77 RIDGE STREET NORTH SYDNEY
7 DONNELLY ROAD NAREMBURN	79 RIDGE STREET NORTH SYDNEY
43 DONNELLY ROAD NAREMBURN	81 RIDGE STREET NORTH SYDNEY

Appendix C – Construction noise eligible buildings

The buildings listed below have been identified as eligible for consideration of noise treatment to mitigate construction noise. This list is subject to change as part of the project's ongoing design refinement and environmental assessment process.

Properties meeting the criteria within the buildings listed below are only eligible for a noise treatment assessment and possible treatments cannot be determined until the property is assessed.

For multi-dwelling buildings, only some properties may qualify for a noise treatment assessment depending on their position in the building. Only properties which meet the criteria outlined in Section 3.3 will be considered for treatment.

Table 10. Building addresses eligible for further investigation to mitigate construction noise

317 ALFRED STREET NORTH NEUTRAL BAY	26B HIGH STREET NORTH SYDNEY
319 ALFRED STREET NORTH NEUTRAL BAY	49-51 HIGH STREET NORTH SYDNEY
323 ALFRED STREET NORTH NEUTRAL BAY	1 KURRABA ROAD NEUTRAL BAY
325 ALFRED STREET NORTH NEUTRAL BAY	2 KURRABA ROAD NEUTRAL BAY
337 ALFRED STREET NORTH NEUTRAL BAY	3 KURRABA ROAD NEUTRAL BAY
341 ALFRED STREET NORTH NEUTRAL BAY	4 KURRABA ROAD NEUTRAL BAY
343 ALFRED STREET NORTH NEUTRAL BAY	2 MCDOUGALL STREET KIRRIBILLI
345 ALFRED STREET NORTH NEUTRAL BAY	4 MCDOUGALL STREET KIRRIBILLI
357 ALFRED STREET NORTH NEUTRAL BAY	1 MCINTOSH LANE NEUTRAL BAY
359 ALFRED STREET NORTH NEUTRAL BAY	3 MERLIN STREET NEUTRAL BAY
361 ALFRED STREET NORTH NEUTRAL BAY	4 MERLIN STREET NEUTRAL BAY
369 ALFRED STREET NORTH NEUTRAL BAY	6 MERLIN STREET NEUTRAL BAY
373 ALFRED STREET NORTH NEUTRAL BAY	7 MERLIN STREET NEUTRAL BAY
387 ALFRED STREET NORTH NEUTRAL BAY	9 MERLIN STREET NEUTRAL BAY
389 ALFRED STREET NORTH NEUTRAL BAY	76 MERLIN STREET NEUTRAL BAY
393 ALFRED STREET NORTH NEUTRAL BAY	12-14 MERLIN STREET NEUTRAL BAY
433 ALFRED STREET NORTH NEUTRAL BAY	10A MERLIN STREET NEUTRAL BAY
437 ALFRED STREET NORTH NEUTRAL BAY	10B MERLIN STREET NEUTRAL BAY
439 ALFRED STREET NORTH NEUTRAL BAY	8A MERLIN STREET NEUTRAL BAY
441 ALFRED STREET NORTH NEUTRAL BAY	8B MERLIN STREET NEUTRAL BAY
263-269 ALFRED STREET NORTH NORTH SYDNEY	8C MERLIN STREET NEUTRAL BAY
339A ALFRED STREET NORTH NEUTRAL BAY	365 MILLER STREET CAMMERAY
11 AMHERST STREET CAMMERAY	16 MOODIE STREET CAMMERAY
45 AMHERST STREET CAMMERAY	20 MOODIE STREET CAMMERAY
33 ANZAC AVENUE CAMMERAY	16A MOODIE STREET CAMMERAY
36 BELLEVUE STREET CAMMERAY	5 MORDEN STREET CAMMERAY
38 BELLEVUE STREET CAMMERAY	7 MORDEN STREET CAMMERAY
55 BELLEVUE STREET CAMMERAY	9 MORDEN STREET CAMMERAY
2 BELLS AVENUE CAMMERAY	11 MORDEN STREET CAMMERAY
88 BERRY STREET NORTH SYDNEY	15 MORDEN STREET CAMMERAY
1 BRAY STREET NORTH SYDNEY	2A MORDEN STREET CAMMERAY
2 BRAY STREET NORTH SYDNEY	85 RIDGE STREET NORTH SYDNEY
3 BRAY STREET NORTH SYDNEY	87 RIDGE STREET NORTH SYDNEY
4 BRAY STREET NORTH SYDNEY	89 RIDGE STREET NORTH SYDNEY

5 BRAY STREET NORTH SYDNEY	91 RIDGE STREET NORTH SYDNEY
6 BRAY STREET NORTH SYDNEY	93 RIDGE STREET NORTH SYDNEY
7 BRAY STREET NORTH SYDNEY	95 RIDGE STREET NORTH SYDNEY
8 BRAY STREET NORTH SYDNEY	95A RIDGE STREET NORTH SYDNEY
9 BRAY STREET NORTH SYDNEY	77 ROSALIND STREET CAMMERAY
10 BRAY STREET NORTH SYDNEY	79 ROSALIND STREET CAMMERAY
1 CAMMERAY AVENUE CAMMERAY	81 ROSALIND STREET CAMMERAY
3 CAMMERAY AVENUE CAMMERAY	40-44 ROSALIND STREET CAMMERAY
7 CAMMERAY AVENUE CAMMERAY	73-75 ROSALIND STREET CAMMERAY
9 CAMMERAY AVENUE CAMMERAY	171 WALKER STREET NORTH SYDNEY
11 CAMMERAY AVENUE CAMMERAY	197 WALKER STREET NORTH SYDNEY
13 CAMMERAY AVENUE CAMMERAY	191-195 WALKER STREET NORTH SYDNEY
2 EATON STREET NEUTRAL BAY	6 WARRINGA ROAD CAMMERAY
297 ERNEST STREET NEUTRAL BAY	8 WARRINGA ROAD CAMMERAY
313 ERNEST STREET NEUTRAL BAY	10 WARRINGA ROAD CAMMERAY
317 ERNEST STREET NEUTRAL BAY	1 WHALING ROAD NORTH SYDNEY
319 ERNEST STREET NEUTRAL BAY	2 WHALING ROAD NORTH SYDNEY
321 ERNEST STREET NEUTRAL BAY	3 WHALING ROAD NORTH SYDNEY
323 ERNEST STREET NEUTRAL BAY	5 WHALING ROAD NORTH SYDNEY
325 ERNEST STREET NEUTRAL BAY	9 WHALING ROAD NORTH SYDNEY
233-237 ERNEST STREET CAMMERAY	4A WHALING ROAD NORTH SYDNEY
243-245 ERNEST STREET CAMMERAY	4G WHALING ROAD NORTH SYDNEY
247-249 ERNEST STREET CAMMERAY	2 WINTER AVENUE NEUTRAL BAY
293-295 ERNEST STREET NEUTRAL BAY	6 WYAGDON STREET NEUTRAL BAY
238-246 FALCON STREET NORTH SYDNEY	7 WYAGDON STREET NEUTRAL BAY
16 HAMPDEN STREET NORTH SYDNEY	8 WYAGDON STREET NEUTRAL BAY
17 HAMPDEN STREET NORTH SYDNEY	9 WYAGDON STREET NEUTRAL BAY
26A HIGH STREET NORTH SYDNEY	15 WYAGDON STREET NEUTRAL BAY

Appendix D – Noise treatment table

The below table outlines the noise treatments which will be offered to eligible properties as part of the program. The table does not relate to eligibility for noise treatment as this is determined according to the eligibility criteria outlined in this document. All noise treatments are subject to Transport for NSW's feasible and reasonable assessment and other limitations, such as Building Code of Australia compliance and restrictions for Class 2 buildings. Noise treatment will only be offered for the eligible façades of habitable rooms only. Treatment is only recommended if it can provide a noticeable improvement in noise reduction (3 dBA or more) than the existing element.

The noise treatments outlined below will be offered for eligible, brick veneer or double brick buildings. Noise treatment for other structures (i.e. lightweight) will be considered on a case by case basis and in accordance with the feasible and reasonable assessment.

Table 11. Noise treatment table (brick veneer or double brick buildings)

Treatment type	Operational noise ¹				Construction noise
	Category 1 1-5 dB(A) exceedance	Category 2 6-8 dB(A) exceedance	Category 3 9-11 dB(A) exceedance	Category 4 >12 dB(A) exceedance	
Windows and sliding doors	<p>If window area is less than 20 per cent of the floor area of the room:</p> <ul style="list-style-type: none"> Replace primary with 6.5mm laminated glass OR Install mechanical ventilation² <p>If window area is more than 20 per cent of the floor area of the room:</p> <ul style="list-style-type: none"> Replace primary with 6.5mm laminated glass AND Install mechanical ventilation² 	<ul style="list-style-type: none"> Install secondary system with 6.38mm laminated glass³ OR Replace primary with 8.5mm laminated glass (if secondary system is not feasible and reasonable) OR Install 10mm acrylic panel with gap maximised to suit existing (Class 1 buildings only⁴) 	<ul style="list-style-type: none"> Install secondary system with 6.38mm laminated glass³ OR Replace primary with 10.5mm laminated glass (if secondary system is not feasible and reasonable) OR Install 10mm acrylic panel with gap maximised to suit (Class 1 buildings only⁴) 	<ul style="list-style-type: none"> Install secondary system with 10.38mm laminated glass³ OR Replace primary with 10.5mm laminated glass⁵ (if secondary system is not feasible and reasonable) 	
External timber entry doors	<p>New doors not applicable. Install new seals as required.</p>	<p>Treat external entry timber doors:</p> <ul style="list-style-type: none"> If existing door is hollow, replace with 40mm solid core door and new seals. If existing door is solid and less than 35mm, replace with 40mm solid core door and install new seals. If existing door is solid and more than 35mm, install new seals. 			
Seals	<ul style="list-style-type: none"> Install new seals for eligible windows and doors where feasible Seal eligible existing vents (function of existing vents to be assessed and offset as required) 				
Mechanical ventilation	<p>As above depending on floor area and window treatment.</p>	<p>Install mechanical ventilation²</p>			
Acoustic curtains	<p>Not applicable</p>				<p>Provide acoustic curtains⁶</p>

¹ Categories 1-4 are based on exceedance of the project's target traffic noise criteria as outlined in the NSW Road Noise Policy.

² Fresh air mechanical ventilation (MV) is subject to Building Code of Australia compliance. Currently only offered for Class 1 buildings.

³ Thickness of secondary window glazing may be altered to maximise overall noise performance of the secondary window system.

⁴ Acrylic panels cannot be installed in Class 2 (multi-dwelling) buildings due to non-combustible requirements as per Building Code of Australia Part C1.9.

⁵ For properties eligible for construction impact or Category 4, secondary treatment would be prioritised as this provides the best acoustic outcome. However primary replacement of doors and windows will be considered by Transport for NSW if secondary treatment is declined. In these cases a disclaimer must be accepted by the property owner.

⁶ Acoustic curtains are only offered when no other noise treatment is deemed feasible and reasonable or owners declined any form of noise treatment to the windows or sliding doors which are eligible only under the construction impact category.

Appendix E – Heritage buildings

The following buildings have been identified as having potential heritage significance (conservation area or heritage item). Noise treatment for heritage properties will be delivered in accordance with the project's heritage requirements as outlined in Section 5.5. The list below is not exhaustive and may be updated as part of the ongoing heritage review process.

Table 12. Heritage buildings

1 BAYVIEW CRESCENT ANNANDALE	12 RAILWAY PARADE ANNANDALE
3 BAYVIEW CRESCENT ANNANDALE	14 RAILWAY PARADE ANNANDALE
5 BAYVIEW CRESCENT ANNANDALE	16 RAILWAY PARADE ANNANDALE
7 BAYVIEW CRESCENT ANNANDALE	38 BELLEVUE STREET CAMMERAY
9 BAYVIEW CRESCENT ANNANDALE	55 BELLEVUE STREET CAMMERAY
11 BAYVIEW CRESCENT ANNANDALE	5 CARTER STREET CAMMERAY
29 BAYVIEW CRESCENT ANNANDALE	2A MORDEN STREET CAMMERAY
31 BAYVIEW CRESCENT ANNANDALE	5 MORDEN STREET CAMMERAY
33 BAYVIEW CRESCENT ANNANDALE	7 MORDEN STREET CAMMERAY
191 JOHNSTON STREET ANNANDALE	11 MORDEN STREET CAMMERAY
193 JOHNSTON STREET ANNANDALE	15 MORDEN STREET CAMMERAY
195 JOHNSTON STREET ANNANDALE	68 PALMER STREET CAMMERAY
196-212 JOHNSTON STREET ANNANDALE	6 WARRINGA ROAD CAMMERAY
197 JOHNSTON STREET ANNANDALE	8 WARRINGA ROAD CAMMERAY
201 JOHNSTON STREET ANNANDALE	10 WARRINGA ROAD CAMMERAY
203 JOHNSTON STREET ANNANDALE	3 AMHERST STREET CROWS NEST
205 JOHNSTON STREET ANNANDALE	146 CHANDOS STREET CROWS NEST
207 JOHNSTON STREET ANNANDALE	166 CHANDOS STREET CROWS NEST
209 JOHNSTON STREET ANNANDALE	174 CHANDOS STREET CROWS NEST
213 JOHNSTON STREET ANNANDALE	3 MATTHEW LANE CROWS NEST
214 JOHNSTON STREET ANNANDALE	5 BROUGHTON STREET KIRRIBILLI
215 JOHNSTON STREET ANNANDALE	7 BROUGHTON STREET KIRRIBILLI
216 JOHNSTON STREET ANNANDALE	29 BURTON STREET KIRRIBILLI
218 JOHNSTON STREET ANNANDALE	85-87 CARABELLA STREET KIRRIBILLI
219 JOHNSTON STREET ANNANDALE	3-11 MCDUGALL STREET KIRRIBILLI
220 JOHNSTON STREET ANNANDALE	46-48 WILLOUGHBY STREET KIRRIBILLI
221 JOHNSTON STREET ANNANDALE	19 MACKENZIE STREET LAVENDER BAY
222 JOHNSTON STREET ANNANDALE	48-50 ALFRED STREET SOUTH MILSONS POINT
223 JOHNSTON STREET ANNANDALE	100 ALFRED STREET SOUTH MILSONS POINT
224 JOHNSTON STREET ANNANDALE	43 DONNELLY ROAD NAREMBURN
225 JOHNSTON STREET ANNANDALE	205 WILLOUGHBY ROAD NAREMBURN
226 JOHNSTON STREET ANNANDALE	439 ALFRED STREET NORTH NEUTRAL BAY
227 JOHNSTON STREET ANNANDALE	317 ERNEST STREET NEUTRAL BAY
228 JOHNSTON STREET ANNANDALE	319 ERNEST STREET NEUTRAL BAY
229 JOHNSTON STREET ANNANDALE	321 ERNEST STREET NEUTRAL BAY
230 JOHNSTON STREET ANNANDALE	323 ERNEST STREET NEUTRAL BAY
231 JOHNSTON STREET ANNANDALE	325 ERNEST STREET NEUTRAL BAY
232 JOHNSTON STREET ANNANDALE	1 KURRABA STREET NEUTRAL BAY
234 JOHNSTON STREET ANNANDALE	2 KURRABA ROAD NEUTRAL BAY

233 JOHNSTON STREET ANNANDALE	3 KURRABA ROAD NEUTRAL BAY
233A JOHNSTON STREET ANNANDALE	4 KURRABA ROAD NEUTRAL BAY
235 JOHNSTON STREET ANNANDALE	15 ANGELO STREET NORTH SYDNEY
236 JOHNSTON STREET ANNANDALE	1 BRAY STREET NORTH SYDNEY
237 JOHNSTON STREET ANNANDALE	2 BRAY STREET NORTH SYDNEY
239 JOHNSTON STREET ANNANDALE	3 BRAY STREET NORTH SYDNEY
241 JOHNSTON STREET ANNANDALE	4 BRAY STREET NORTH SYDNEY
242 JOHNSTON STREET ANNANDALE	5 BRAY STREET NORTH SYDNEY
243 JOHNSTON STREET ANNANDALE	7 BRAY STREET NORTH SYDNEY
244 JOHNSTON STREET ANNANDALE	8 BRAY STREET NORTH SYDNEY
245 JOHNSTON STREET ANNANDALE	9 BRAY STREET NORTH SYDNEY
246 JOHNSTON STREET ANNANDALE	10 BRAY STREET NORTH SYDNEY
247 JOHNSTON STREET ANNANDALE	11A BRAY STREET NORTH SYDNEY
248 JOHNSTON STREET ANNANDALE	11 BRAY STREET NORTH SYDNEY
249 JOHNSTON STREET ANNANDALE	15 BRAY STREET NORTH SYDNEY
251 JOHNSTON STREET ANNANDALE	127 FALCON STREET NORTH SYDNEY
251A JOHNSTON STREET ANNANDALE	182 FALCON STREET NORTH SYDNEY
251B JOHNSTON STREET ANNANDALE	184 FALCON STREET NORTH SYDNEY
252 JOHNSTON STREET ANNANDALE	186 FALCON STREET NORTH SYDNEY
253 JOHNSTON STREET ANNANDALE	188 FALCON STREET NORTH SYDNEY
255 JOHNSTON STREET ANNANDALE	216 FALCON STREET NORTH SYDNEY
257 JOHNSTON STREET ANNANDALE	5 FIG TREE LANE NORTH SYDNEY
258 JOHNSTON STREET ANNANDALE	2 HAMPDEN STREET NORTH SYDNEY
259 JOHNSTON STREET ANNANDALE	4 HAMPDEN STREET NORTH SYDNEY
260 JOHNSTON STREET ANNANDALE	6 HAMPDEN STREET NORTH SYDNEY
262 JOHNSTON STREET ANNANDALE	8 HAMPDEN STREET NORTH SYDNEY
263 JOHNSTON STREET ANNANDALE	10 HAMPDEN STREET NORTH SYDNEY
264 JOHNSTON STREET ANNANDALE	12 HAMPDEN STREET NORTH SYDNEY
265 JOHNSTON STREET ANNANDALE	14 HAMPDEN STREET NORTH SYDNEY
266 JOHNSTON STREET ANNANDALE	264 MILLER STREET NORTH SYDNEY
267 JOHNSTON STREET ANNANDALE	40 RIDGE STREET NORTH SYDNEY
268 JOHNSTON STREET ANNANDALE	63 RIDGE STREET NORTH SYDNEY
269 JOHNSTON STREET ANNANDALE	73 RIDGE STREET NORTH SYDNEY
271 JOHNSTON STREET ANNANDALE	75-77 RIDGE STREET NORTH SYDNEY
272 JOHNSTON STREET ANNANDALE	79 RIDGE STREET NORTH SYDNEY
273 JOHNSTON STREET ANNANDALE	81 RIDGE STREET NORTH SYDNEY
274 JOHNSTON STREET ANNANDALE	83 RIDGE STREET NORTH SYDNEY
275 JOHNSTON STREET ANNANDALE	85 RIDGE STREET NORTH SYDNEY
276 JOHNSTON STREET ANNANDALE	89 RIDGE STREET NORTH SYDNEY
277 JOHNSTON STREET ANNANDALE	91 RIDGE STREET NORTH SYDNEY
278 JOHNSTON STREET ANNANDALE	93 RIDGE STREET NORTH SYDNEY
279 JOHNSTON STREET ANNANDALE	95 RIDGE STREET NORTH SYDNEY
280 JOHNSTON STREET ANNANDALE	150 WALKER STREET NORTH SYDNEY
282 JOHNSTON STREET ANNANDALE	176 WALKER STREET NORTH SYDNEY
284 JOHNSTON STREET ANNANDALE	185 WALKER STREET NORTH SYDNEY
284A JOHNSTON STREET ANNANDALE	205 WALKER STREET NORTH SYDNEY
2 KENTVILLE AVENUE ANNANDALE	207 WALKER STREET NORTH SYDNEY
4 KENTVILLE AVENUE ANNANDALE	209 WALKER STREET NORTH SYDNEY
6 KENTVILLE AVENUE ANNANDALE	1 WHALING ROAD NORTH SYDNEY
8 KENTVILLE AVENUE ANNANDALE	2 WHALING ROAD NORTH SYDNEY

10 KENTVILLE AVENUE ANNANDALE	3 WHALING ROAD NORTH SYDNEY
12 KENTVILLE AVENUE ANNANDALE	4A WHALING ROAD NORTH SYDNEY
4 PRITCHARD STREET ANNANDALE	5 WHALING ROAD NORTH SYDNEY
6 PRITCHARD STREET ANNANDALE	7 WHALING ROAD NORTH SYDNEY
8 PRITCHARD STREET ANNANDALE	9 WHALING ROAD NORTH SYDNEY
10 PRITCHARD STREET ANNANDALE	11 WHALING ROAD NORTH SYDNEY
12 PRITCHARD STREET ANNANDALE	15 WHALING ROAD NORTH SYDNEY
10 RAILWAY PARADE ANNANDALE	

Appendix F – Complaint review panel

Overview

Transport for NSW has established a Complaint Review Panel (the panel) for the delivery of at-property noise treatment as part of the Western Harbour Tunnel and Warringah Freeway Upgrade Noise Insulation Program (the program).

The purpose of the panel is to review complaints and disputes from customers while ensuring outcomes are equitable, transparent and customer-focused. The panel is the final escalation point for customer complaints about noise treatment at the project level.

The program's complaint escalation process is outlined in Section 8.7 of this document.

Panel membership

Members of the panel will include Transport for NSW project team members, senior project leadership and independent advisors. As the panel will be responsible for reviewing complaints from both the Western Harbour Tunnel and Warringah Freeway Upgrade projects, the panel members will be appointed from the relevant projects depending on which project the complaint has originated from.

The panel members will include:

- Transport for NSW representatives
- Project-specific independent appointments:
 - Community Complaints Mediator
 - Independent Acoustic Advisor.
- Other subject matter experts or technical advisors, if required to provide specialist advice to the panel.

The panel will be responsible for making customer-focused decisions that are fair and equitable, taking into consideration all customers across the project.

Requests for escalation

Customers can contact the Transport for NSW project team for the Noise Insulation Program to request escalation of a complaint to the panel:

- **Phone:** 1800 312 772 (9am to 5pm, Monday to Friday)
- **Email:** nip@transport.nsw.gov.au
- **Mail:** Transport for NSW, Locked Bag 928, North Sydney NSW 2059

Liaison with customers in relation to the panel review process will be via the program's Communication and Stakeholder Engagement team and/or the Community Complaints Mediator. Customers will not directly engage with the panel as part of the review.

Meetings

The panel will meet to review customer complaints as required. Panel members may nominate delegates to attend in their place if they are unavailable to attend a meeting. During the meeting, panel members will review all the details of the complaint including any relevant technical details and prior engagement with the customer. Panel members will

review specialist technical advice on the matters raised, while taking into account the need for consistent customer outcomes across the project.

At the conclusion of the meeting, the panel will either endorse the project team's position or recommend an alternative solution to resolve the complaint. This will be the final decision on the complaint.

Post review

If the panel endorses the project team's previous position, there will be no further avenues for the complaint to be escalated at the project level.

The project's Community Complaints Mediator will be available to liaise with the customer on completion of the panel review process. The Community Complaints Mediator is independent of the design and construction personnel and their appointment has been approved by the Planning Secretary in accordance with the Minister's Conditions of Approval.

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