

CoA E83 Consultation Summary Report

**Western Harbour Tunnel and Warringah
Freeway Upgrade**

**Stage 1A Early and Enabling Works - Critical utility
installation, relocation and protection works**

Transport for New South Wales

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CoA E83 Consultation Summary – 31/05/2021 to 16/08/2021

Transport for NSW

Western Harbour Tunnel and Warringah
Freeway Upgrade

Stage 1A Early and Enabling Works -
Critical utility installation, relocation and
protection works

August 2021

Rev 1

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Document control

Title	Stage 1A Early and Enabling Works – Critical utility installation, relocation and protection works CoA E83 Consultation Summary Report
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Version control

Revision	Date	Description	Approval
0	04/08/21	For lodgment to DPIE, EPL, ER and AA	DL
1	24/03/22	Community information distributed included in Appendix A	RO

Glossary/Abbreviations

Abbreviation	Expanded text
CUT	Stage 1A Early and Enabling Works - Critical utility installation, relocation and protection works
CoA	NSW Minister for Planning Conditions of Approval
CSSI	Critical State Significant Infrastructure
DPIE	Department of Planning, Industry and Environment
EIS	Environmental Impact Statement
Minister, the	NSW Minister for Planning, Industry and Environment
NML	Noise Management Level
Planning Approval	The Planning Approval includes the Conditions of Approval, the EIS and the Submissions and Preferred Infrastructure Report (SSI-8863)
Proponent, the	Transport for NSW
Project, the	Western Harbour Tunnel and Warringah Freeway Upgrade
REMM	Revised Environmental Mitigation and Management Measure
RtS	Response to Submissions Report
SPA	Sydney Program Alliance
WHTBL	Western Harbour Tunnel and Beaches Link
WHTWFU	Western Harbour Tunnel and Warringah Freeway Upgrade
WFU	Warringah Freeway Upgrade

1 Introduction

1.1 Background

The Western Harbour Tunnel and Warringah Freeway Upgrade (WHTWUFU) (the project) forms a core component of the broader Western Harbour Tunnel and Beaches Link (WHTBL) program of works. The project comprises two main components:

- A new crossing of Sydney Harbour involving twin tolled motorway tunnels connecting the M4-M5 Link at Rozelle and the Warringah Freeway at North Sydney (the Western Harbour Tunnel)
- Upgrade and integration works along the existing Warringah Freeway, including infrastructure required for connections to the Beaches Link and Gore Hill Freeway Connection project. Reconfiguration works as part of the Warringah Freeway Upgrade would optimise the road corridor and improve the performance of the Sydney Harbour Tunnel, the Sydney Harbour Bridge and the Western Harbour Tunnel.

Due to its importance, the WHTWUFU project was declared to be Critical State Significant Infrastructure (CSSI) by the Minister for Planning and Public Space on 9 November 2020.

On 21 January 2021, the Department of Planning, Industry and Environment (DPIE) approved the construction and operation of the WHTWUFU project (SSI 8863).

A detailed description of the project is provided in Chapter 5 of the Western Harbour Tunnel and Warringah Freeway Upgrade Environmental Impact Statement (EIS).

The WHTWUFU project will be delivered in numerous stages:

- Stage 1 - Early and enabling works:
 - Stage 1A - Critical utility installation, relocation and protection (CUT) (the subject of this Construction Environmental Management Plan (CEMP))
 - Stage 1B - Cammeray Golf Course adjustment works (CGC)
- Stage 2 - Warringah Freeway Upgrade project:
 - Stage 2A - Warringah Freeway Upgrade early works (WFUEW)
- Stage 3 - Western Harbour Tunnel project (WHT).

Further detail on each stage is provided in the WHTWUFU project Staging Report.

This Condition of Approval (CoA) E83 Consultation Summary Report applies only to Stage 1A Early and Enabling Works - Critical utility installation, relocation and protection stage of the project (refer to herein as 'the critical utility works' or 'CUT'). The critical utility works will support the delivery program of the Main Works of the project by undertaking these works prior to the commencement of the Main Works. Sydney Program Alliance (SPA) has been appointed by Transport for New South Wales (TfNSW) to deliver the CUT works.

1.2 Purpose of this Consultation Summary Report

This Consultation Report has been prepared to meet the requirements of the CSSI approval, in particular CoA E83 for the period 31/05/2021 to 16/08/2021. CoA E83 outlines the requirements for undertaking and documenting consultation undertaken during the scheduling of respite periods for Out of Hours Work (OOHW) required to be undertaken as part of CUT construction.

This section discusses the compliance of this Consultation Report with the relevant CoA as applicable to consultation required to be undertaken during the development of the TTAMP.

Table 1-1 lists the applicable CoA, where and how they have been addressed in this Consultation Report.

Table 1-1 Compliance with applicable CoA

CoA ID	CoA Detail	Where Addressed	How Addressed
E83	In order to undertake out-of-hours work outside the hours specified under Condition E66, the Proponent must identify appropriate respite periods for the out-of-hours work in consultation with the community at each affected location on a regular basis. This consultation must include (but not be limited to) providing the community with:	This Report	This Report has been prepared to meet this condition and inform key Project stakeholders of OOHW consultation undertaken.
E83	(a) a progressive schedule for periods no less than three months, of likely out-of-hours work;	Section 2.2 Table 2-1	Section 2.2 and Table 2-1 provide a schedule of the likely OOHW for this three month period.
E83	(b) a description of the potential work, location and duration of the out-of-hours work;	Section 2.2 Section 2.3 Table 2-1	Section 2.2, Section 2.3 and Table 2-1 provide a description of the likely OOHW for this three month period.
E83	(c) the noise characteristics and likely noise levels of the work; and	Section 2.4 Table 2-2	Section 2.4 and Table 2-2 provide the likely noise characteristics and likely noise levels of the likely OOHW for this three month period.

E83	(d) likely mitigation and management measures which aim to achieve the relevant noise management levels under Condition E70 (including the circumstances of when respite or relocation offers will be available and details about how the affected community can access these offers).	Section 2.5	Likely mitigation measures have been described in Section 2.5.
E83	<p>The outcomes of the community consultation, the identified respite periods and the scheduling of the likely out-of-hour work must be provided to the AA, ER, EPA and the Planning Secretary.</p> <p>Note: Respite periods can be any combination of days or hours where out-of-hours work would not be more than 5 dB(A) above the rating background noise level at any residence.</p>	<p>Section 3</p> <p>This Report</p>	<p>Section 3 details the outcomes of consultation undertaken with affected community.</p> <p>This Report will be provided to the Acoustics Advisor (AA), Environmental Representative (ER), the NSW Environment Protection Authority (EPA) and TfNSW every three months.</p>

1.3 Consultation Process

Consultation with the effected community was undertaken using the following means:

- Formal correspondence (Letterbox distribution and email distribution of Out of Hours 3 Month Lookahead Notification).

2 Community Consultation

This Section of the Consultation Summary Report provides detail of consultation undertaken with the effected community. In particular it contains:

- A three-month lookahead schedule of likely OOHW
- A description of the potential work, location and duration of the OOHW
- The noise characteristics and likely noise levels of the OOHW
- Likely mitigation and management measures which aim to achieve relevant noise management measures.

2.1 Consultation activities


A May 2021 'Out of hours work 3 month notification' was approved for distribution in late May 2021 by Transport for NSW. The notification was delivered to 11,644 letterboxes within the suburbs of North Sydney, Lavender Bay, Cammeray, Neutral Bay to provide information about upcoming out of hours works including work activities near residential and other sensitive receivers.

The May 2021 'Out of hours work 3 month notification' was also distributed by email to the Warringah Freeway Upgrade and Western Harbour Tunnel email list of 3,316 stakeholders including local residents, schools, North Sydney Council and other registered stakeholders.

Since the notification distribution in late May 2021, there have been up to 10 out of hours works notifications distributed to affected receivers during

Both the notification and subsequent work notification slips included a QR scanner code to access an online form (or hard copy of the feedback form is made available by contacting Transport for NSW project team via phone or email) regarding upcoming work planned to commence out of hours. Feedback could also be provided directly to the Warringah Freeway Upgrade project team via email or 1800 phone line operating 24/7.

Figure 2-1 Example of the online feedback form

**Western Harbour Tunnel**
AND WARRINGAH FREEWAY UPGRADE

Out of hours work feedback form

Whilst we have a number of mitigation measures in place to manage noise, we are always open to feedback about how we can further reduce the impact on you during our out of hours work. Please complete the feedback form below.

First name *	<div>Feedback or suggestions to further reduce the impact of out of hours work *</div> <div>Enter questions or comments here...</div>
<input type="text"/>	
Last name *	
<input type="text"/>	
Email or phone number *	
<input type="text"/>	
Address *	
<input type="text" value="Enter a location"/>	
Work activity near you *	
<input type="text"/>	

☐ I understand (only check this if you have read and understand the text below)
Privacy Transport for NSW ("we") are collecting your personal information in connection with Western Harbour Tunnel and Warringah Freeway Upgrade ("the Program"). In addition to collecting your name and contact details, we may collect other information, such as your submissions and other communications with us.

We will retain and use this information for consultation purposes, including communications and analysis in connection with the Program.

We will not disclose your personal information to third parties unless authorised by law and if we include your submissions in any public report we will not identify you.

Figure 2-2 Example of the QR scanner code on the out of hours work notification slips



2.2 Three-month lookahead schedule (late-May to mid-August) including likely noise characteristics

The three month lookahead schedule is detailed in Table 2-1 below. The mapping references in the schedule is provided in Figure 2-3 and Figure 2-4.

Table 2-1 The 'Out of hours work 3 month notification' schedule

Map reference	Location	Activity	Equipment	Occurrence over the next 3 months*	Likely noise impact for closest residents**
1	Arthur Street, Pacific Highway, North Sydney	Services removal and relocations	Concrete saw cutting, excavator, jack hammer, compaction equipment, vacuum excavation truck, truck-mounted cranes, mobile cranes, mobile lighting tower, power and hand tools	Up to 10 night shifts per month	Moderately intrusive
2	Arthur Street, Pacific Highway North Sydney	Vegetation clearing	Chainsaw, elevated working platforms, mobile lighting towers, generator, mulcher, trucks, power and hand tools	Up to 5 nights total, if required	Highly intrusive

Map reference	Location	Activity	Equipment	Occurrence over the next 3 months*	Likely noise impact for closest residents**
3	Warringah Freeway, North Sydney	Services removal and relocations	Concrete saw cutting, excavator, jack hammer, compaction equipment, vacuum excavation truck, mobile lighting tower, power and hand tools	Up to 10 night shifts per month	Highly intrusive
4	Ernest Street (between Anzac Avenue and Ben Boyd Road) Cammeray	Services removal and relocations	Concrete saw cutting, excavator, jack hammer, compaction equipment, vacuum excavation truck, mobile lighting tower, power and hand tools	Up to 10 night shifts per month	Highly intrusive
5	Ernest Street (between Anzac Avenue and Ben Boyd Road) Cammeray	Vegetation clearing	Chainsaw, elevated working platforms, mobile lighting towers, generator, mulcher, trucks, power and hand tools	Up to 5 nights total, if required	Highly intrusive
6	Warringah Freeway, Cammeray Falcon Street, Cammeray	Services removal and relocations	Concrete saw cutting, excavator, jack hammer, compaction equipment, vacuum excavation truck, mobile lighting tower, power and hand tools	Up to 10 night shifts per month	Highly intrusive
7	Rosalind Street east and Miller St off-ramp, Cammeray	Vegetation clearing	Chainsaw, elevated working platforms, mobile lighting towers, generator, mulcher, trucks, power and hand tools	Up to 3 nights total, if required	Highly intrusive
8	Rosalind Street east and Miller St off-ramp, Cammeray	Services removal and relocations	Concrete saw cutting, excavator, jack hammer, compaction equipment, vacuum excavation truck, mobile lighting tower, power and hand tools	Up to 10 night shifts a month	Highly intrusive

* Please note, the number of nights shown are not cumulative for each area. We plan to carry out work in one area for no more than three nights per week, with only two consecutive nights per week and no more than ten nights per month.

** For more information on construction noise and how we manage noise impacts, please visit Transport for NSW's interactive portal nswroads.work/whportal to download the factsheet.

Figure 2-3 Mapping associated with the three month lookahead schedule (Map 1)



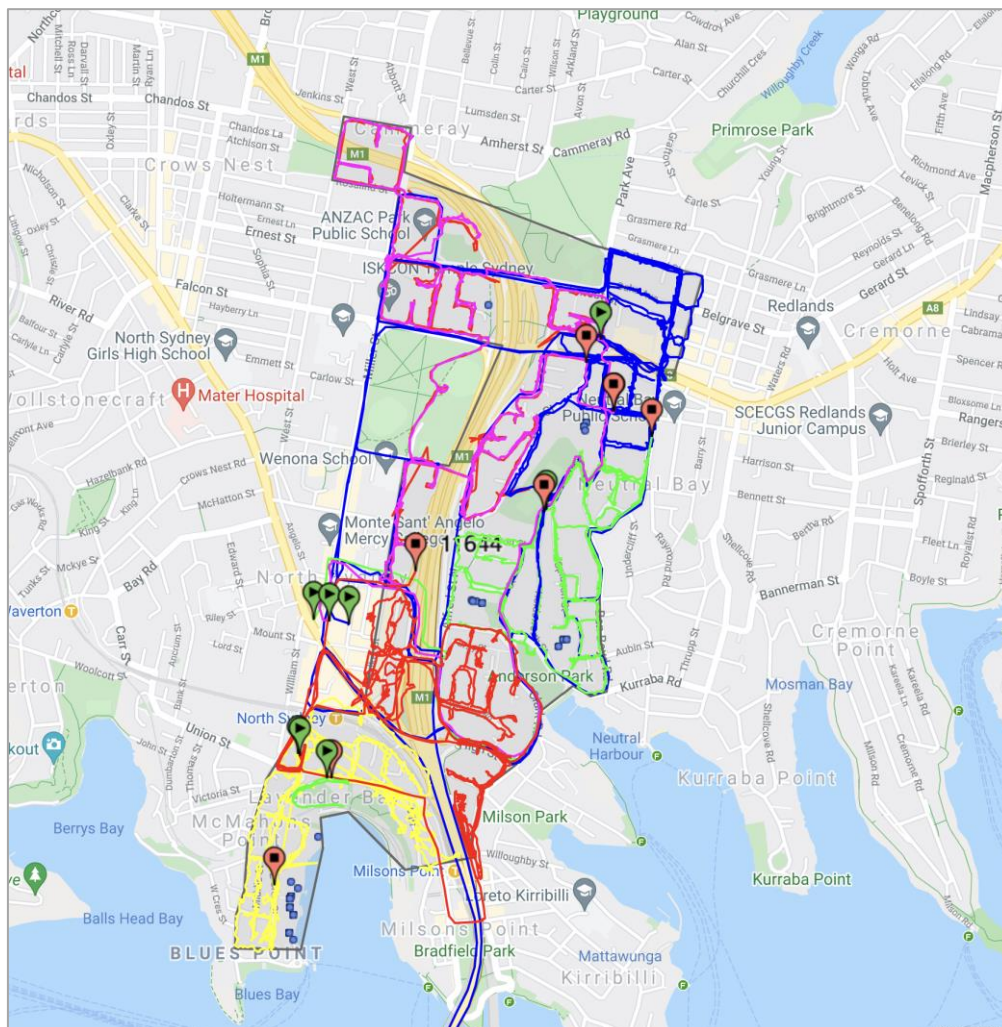
Figure 2-4 Mapping associated with the three month lookahead schedule (Map 2)



May 2021

The May 2021 'Out of hours work 3 month notification' was distributed to approximately 11,644 residential and commercial letterboxes as per the distribution mapping record shown in Figure 2-5 below.

Figure 2-5 Notification distribution map



2.3 Description of proposed OOHW

The likely OOHW descriptions are provided in Table 2-1. The May 2021 'Out of hours work 3 month notification' detailed the following activities:

- Out of hours work starting soon

To construct the Warringah Freeway Upgrade we need to carry out a large amount of surface work within a limited space. To maintain safety for road users and workers, and to keep people moving on the busy Warringah Freeway during peak travelling times, a lot of our work will need to be carried out at night. We will work closely with affected residents to minimise the impact of our work.

- Work hours

Our approved standard construction hours are 7:00am to 6:00pm Monday to Friday and 8:00am to 6:00pm on Saturdays.

- Work outside standard construction hours

We plan to carry out work which may impact nearby residents in one area for up to three nights per week, with only two consecutive nights per week and no more than ten nights per month.

There may be occasions where we look to minimise the overall duration of our work in a specific area by increasing the number of nights we work outside standard construction hours so we can complete the overall work sooner. We will consult with the community and seek approval from the NSW Environment Protection Authority (EPA) prior to making any changes to the out of hours work periods as outlined above.

2.4 Noise characteristics and levels

The noise characteristics and levels of each proposed OOHW activity are detailed in Table 2-2 below. Levels are described as decibels (dB(A)) above Noise Management Levels (NML).

Table 2-2 Noise characteristics and levels

Map reference	Location	Activity	Likely noise impact for closest residents**	Likely noise levels above NML dB(A)
1	Arthur Street, Pacific Highway, North Sydney	Services removal and relocations	Moderately intrusive	10 to 20
2	Arthur Street, Pacific Highway North Sydney	Vegetation clearing	Highly intrusive	> 30
3	Warringah Freeway, North Sydney	Services removal and relocations	Highly intrusive	> 30
4	Ernest Street (between Anzac Avenue and Ben Boyd Road) Cammeray	Services removal and relocations	Highly intrusive	> 30
5	Ernest Street (between Anzac Avenue and Ben Boyd Road) Cammeray	Vegetation clearing	Highly intrusive	> 30
6	Warringah Freeway, Cammeray Falcon Street, Cammeray	Services removal and relocations	Highly intrusive	> 30
7	Rosalind Street east and Miller St off-ramp, Cammeray	Vegetation clearing	Highly intrusive	> 30
8	Rosalind Street east and Miller St off-ramp, Cammeray	Services removal and relocations	Highly intrusive	> 30

2.5 Likely Mitigation and Management Measures

The notification detailed the following information about mitigations and management measures:

- How will the work affect you:

Our work can be noisy at times but we will do everything we can to reduce its impact. Potential impacts can include temporary traffic and access changes, light spill and noise. The noise from our work will range from noticeable to highly intrusive depending on how close you are to our work areas. For more information on how we measure noise, please see our online portal nswroads.work/whtportal
We aim to complete highly intrusive noise activities before midnight, where possible.

- How we manage our work:

Our work activities will require the use of machinery that generates noise, light and vibration. To minimise the impact of this work we will:

- Turn off machinery when not in use
- Install hoarding around our temporary construction sites
- Use acoustic blankets to minimise noise, where feasible
- Direct temporary lighting down and away from houses
- Plan activities close to residents during standard construction hours or early evening, where possible
- Fit equipment with devices to minimise noise, particularly non-tonal reversing beepers
- Monitor noise periodically so we can manage any potential impacts and adjust our work as required.

All work will be carried out in line with the project's environmental approvals.

The notification also provided a coloured text box to draw attention to the additional information available on the Transport for NSW website about construction noise. The text box detailed:

- More information on noise:

For more information on noise please visit our online portal at **nswroads.work/whtportal** and view our Managing Construction Noise fact sheet. This fact sheet details the typical noise levels from the type of work we will be carrying out and how we manage it.

3 Outcomes of Community Consultation

This Section of the Consultation Summary Report provides detail of outcomes of consultation undertaken with the effected community. In particular it contains:

- Any issues identified by the effected community
- Any identified respite periods
- Updated scheduling of OOHW following consultation.

3.1 Community identified issues

Three community members provided feedback to Transport for NSW as a result of consultation and are detailed in Table 3-1 below.

Table 3-1 Feedback received from the community

Stakeholder	Feedback received date/time	Location	Feedback	Closed out
One	Via online feedback form	Ernest Street, Neutral Bay, NSW	About area 5 - Vegetation clearing Is this really necessary. I hope you are not removing the trees on the north side of Ernest Street between Merlin Street and Park Avenue. Your notice doesn't advise us when the works are being carried out. It could allow us to plan to stay elsewhere. Also when are you installing the noise abatement in our property.	Yes, provided an email response about Noise Insulation Program and vegetation removal activities upcoming including offer for phone call or planned doorknock meeting. Ensured the stakeholder is registered for email updates of future work notifications with actual dates of work, once programmed including any changes.
Two	Via online feedback form	Miller Street, Cammeray NSW	I am concerned about the need to do any night time vegetation clearing in Rosalind St East. I understand night time work might be necessary closer to the freeway but Rosalind St east isn't exactly a major day time thorough fare except maybe at school drop off and pick up times.	Yes, provided an email response about need for night work to remove vegetation near to live traffic and minimise use of trucks near Anzac Park school (in line with Transport for NSW commitment to the school community) including an offer for phone call or planned doorknock meeting.

Stakeholder	Feedback received date/time	Location	Feedback	Closed out
Three	Via online feedback form Email and 1800 call to project team	Berry Street, North Sydney NSW	Stop the mulching on site. The noise will be intolerable. Take the trees to another area and mulch during daylight hours Mulching on site after hours is a disgrace. Everyone knows the high pitch of trees being fed into a mulched. Take the trees away in another truck or get another company.	Yes, provided a phone call and email response about the need for night work to remove vegetation near to live traffic (including constrained work area near to the High Street bridge, Mount Street bridge and Sydney Harbour Tunnel portal).

3.2 Identified respite periods

No respite periods were identified as a result of the OOHW respite consultation process.

3.3 Scheduling of OOHW in response to feedback

There have not been any changes to the scheduling of OOHW in response to feedback received during June 2021. Note that night time on-site mulching was required for one night (opposed to 10 night shifts in a calendar month as outlined in the 'Out of hours work 3 month notification') and has not been continued after the largest overhanging tree limbs were successfully removed from the Warringah Freeway (near Arthur Street), North Sydney.

During the recent NSW Government stay-at-home orders there has been a considerable drop in traffic volumes to encourage Sydney Program Alliance to attempt to reschedule work planned for nights to be completed during the daytime should approvals be provided and potential impact to community be reduced.

Appendix A1 Out of hours work three month notification



Transport for NSW

Warringah Freeway Upgrade

Out of hours work 3 month notification

Notification | May 2021

About the Warringah Freeway Upgrade

The NSW Government's vision for Sydney is one of an integrated road and public transport network that gives you the freedom to choose how and when you get around, no matter where you live and work.

The Western Harbour Tunnel and Warringah Freeway Upgrade is a major transport infrastructure project that will make it easier, faster and safer to get around Sydney. By creating a western bypass of the Sydney CBD, the Western Harbour Tunnel will take pressure off the Sydney Harbour Bridge, Sydney Harbour Tunnel, ANZAC Bridge and Western Distributor corridors to improve transport capacity in and around Sydney Harbour.

The Western Harbour Tunnel and Warringah Freeway Upgrade project along with Beaches Link, is expected to support around 15,000 full-time equivalent jobs during construction.

Out of hours work starting soon

To construct the Warringah Freeway Upgrade we need to carry out a large amount of surface work within a limited space. To maintain safety for road users and workers, and to keep people moving on the busy Warringah Freeway during peak travelling times, a lot of our work will need to be carried out at night. We will work closely with affected residents to minimise the impact of our work.







Work hours

Our approved standard construction hours are **7:00am to 6:00pm Monday to Friday** and **8:00am to 6:00pm on Saturdays**.

Work outside standard construction hours

We plan to carry out work which may impact nearby residents in one area for up to **three nights per week**, with only **two consecutive nights per week** and no more than **ten nights per month**.

There may be occasions where we look to minimise the overall duration of our work in a specific area by increasing the number of nights we work outside standard construction hours so we can complete the overall work sooner. We will consult with the community and seek approval from the NSW Environmental Protection Authority (EPA) prior to making any changes to the out of hours work periods as outlined above.

Map reference	Location	Activity	Equipment	Occurrence over the next three months*	Likely noise impact for closest residents**
1 	Arthur Street, Pacific Highway, North Sydney	Services removal and relocations	Concrete saw cutting, excavator, jack hammer, compaction equipment, vacuum excavation truck, truck-mounted cranes, mobile cranes, mobile lighting tower, power and hand tools	Up to 10 night shifts per month	Moderately intrusive
2 	Arthur Street, Pacific Highway North Sydney	Vegetation clearing	Chainsaw, elevated working platforms, mobile lighting towers, generator, mulcher, trucks, power and hand tools	Up to 5 nights total, if required	Highly intrusive
3 	Warringah Freeway, North Sydney	Services removal and relocations	Concrete saw cutting, excavator, jack hammer, compaction equipment, vacuum excavation truck, mobile lighting tower, power and hand tools	Up to 10 night shifts per month	Highly intrusive
4 	Ernest Street (between Anzac Avenue and Ben Boyd Road) Cammeray	Services removal and relocations	Concrete saw cutting, excavator, jack hammer, compaction equipment, vacuum excavation truck, mobile lighting tower, power and hand tools	Up to 10 night shifts per month	Highly intrusive
5 	Ernest Street (between Anzac Avenue and Ben Boyd Road) Cammeray	Vegetation clearing	Chainsaw, elevated working platforms, mobile lighting towers, generator, mulcher, trucks, power and hand tools	Up to 5 nights total, if required	Highly intrusive
6 	Warringah Freeway, Cammeray Falcon Street, Cammeray	Services removal and relocations	Concrete saw cutting, excavator, jack hammer, compaction equipment, vacuum excavation truck, mobile lighting tower, power and hand tools	Up to 10 night shifts per month	Highly intrusive

Map reference	Location	Activity	Equipment	Occurrence over the next three months*	Likely noise impact for closest residents**
7	Rosalind Street east and Miller St off-ramp, Cammeray	Vegetation clearing	Chainsaw, elevated working platforms, mobile lighting towers, generator, mulcher, trucks, power and hand tools	Up to 3 nights total, if required	Highly intrusive
8	Rosalind Street east and Miller St off-ramp, Cammeray	Services removal and relocations	Concrete saw cutting, excavator, jack hammer, compaction equipment, vacuum excavation truck, mobile lighting tower, power and hand tools	Up to 10 night shifts per month	Highly intrusive

* Please note, the number of nights shown are not cumulative for each area. We plan to carry out work in one area for no more than three nights per week, with only two consecutive nights per week and no more than ten nights per month.

** For more information on construction noise and how we manage noise impacts, please visit our interactive portal nswroads.work/whtportal to download our factsheet.

North Sydney



Cammeray



Why we work outside standard construction hours

There are several reasons why we need to carry out work outside standard construction hours including:

- **Safety** – for motorists, pedestrians and workers when we are building over and next to roads and live traffic to reduce interactions between these groups
- **Service and utility disruptions** – to minimise disruption to essential services and utilities for local communities
- **Oversize deliveries** – to allow delivery of oversized plant or structures that police or other authorities determine require special arrangements to transport along public roads
- **Managing traffic** – working next to, over and on existing roads means traffic may be stopped, detoured or reduced to one lane while work is carried out. Where possible we will carry out work during the day, however, there will be times when we will need to carry out this work at night to minimise delays and journey times for motorists are less affected.

How will the work affect you

Our work can be noisy at times but we will do everything we can to reduce its impact.

Potential impacts can include temporary traffic and access changes, light spill and noise. The noise from our work will range from noticeable to highly intrusive depending on how close you are to our work areas. For more information on how we measure noise, please see our online portal nswroads.work/whportal

We aim to complete highly intrusive noise activities before midnight, where possible.

More information on noise

For more information on noise please visit our online portal at nswroads.work/whportal and view our Managing Construction Noise fact sheet. This fact sheet details the typical noise levels from the type of work we will be carrying out and how we manage it.

How we manage our work

Our work activities will require the use of machinery that generates noise, light and vibration. To minimise the impact of this work we will:

- turn off machinery when not in use
- install hoarding around our temporary construction sites
- use acoustic blankets to minimise noise, where feasible
- direct temporary lighting down and away from houses
- plan activities close to residents during standard construction hours or early evening, where possible
- fit equipment with devices to minimise noise, particularly non-tonal reversing beepers
- monitor noise periodically so we can manage any potential impacts and adjust our work as required.

All work will be carried out in line with the project's environmental approvals.

Traffic changes

To manage traffic queuing and safety, there will be some temporary traffic changes and lane closures that may affect travel times. Please keep to speed limits and follow the direction of traffic controllers and signs.

For work located on the Warringah Freeway or near to the Sydney Harbour Tunnel, we aim to coordinate our works with pre-determined weekend closures.



For the latest traffic updates:
Call 132 701
Visit www.livetraffic.com
Download the app
Live Traffic NSW

Keeping you informed

Work outside of approved construction hours will be carried out as outlined in the table provided. We will notify you again before works start specifically in your area.

We are required to keep you up to date with this work. If you have any feedback on the type or method of communication provided, please let us know.

We apologise for any inconvenience and thank you for your patience during this important work.

Out of hours work survey

We welcome any queries or feedback you may have regarding our out of hours work plans. Use the QR code below to complete our survey. Please include the work location (as outlined in the table provided).

Please contact us if you wish to complete a hard copy of the survey.



Stay in touch with us



nswroads.work/whtportal



1800 931 189



whtbl@transport.nsw.gov.au



Customer feedback
Transport for NSW, Locked Bag 928
North Sydney NSW 2059



If you need help understanding this information, please contact the Translating and Interpreting Service on 131 450 and ask them to call us on 1800 931 189.

Making a complaint about our work

To make an enquiry or a complaint about the project, you can call our community information line, which is available 24 hours a day and is attended during project operation hours. Enquiries and complaints may also be received by the project email and by post.

Privacy Statement: Transport for NSW ("we") are collecting your personal information in connection with public consultation on the Western Harbour Tunnel, Warringah Freeway Upgrade and Beaches Link projects ("the Program"). We will retain and use this information for consultation purposes, including communications and analysis in connection with the Program. We may share your submission or complaint with another NSW government agency where relevant having regard to the nature of the submission or complaint. Otherwise, except for anonymous information which does not identify you, we will not publish or disclose your personal information to any third parties without your consent unless authorised by law. Providing your personal information is voluntary but if you do not provide it we may not include you on our stakeholder database and you might miss further consultation opportunities. Your personal information will be held and managed by Transport for NSW in accordance with the Privacy and Personal Information Protection Act 1998 and you can contact us to access or correct it. Please email us at whtbl@transport.nsw.gov.au, write to us at Transport for NSW, Locked Bag 928, North Sydney NSW 2059, or call us on 1800 931 189.

Appendix A2 Managing construction noise fact sheet



Transport for NSW

Warringah Freeway Upgrade Service and utility work - managing construction noise

Fact sheet | May 2021

About the Warringah Freeway Upgrade

The NSW Government's vision for Sydney is one of an integrated road and public transport network that gives you the freedom to choose how and when you get around, no matter where you live and work.

The Western Harbour Tunnel and Warringah Freeway Upgrade is a major transport infrastructure project that will make it easier, faster and safer to get around Sydney. By creating a western bypass of the Sydney CBD, the Western Harbour Tunnel will take pressure off the Sydney Harbour Bridge, Sydney Harbour Tunnel, ANZAC Bridge and Western Distributor corridors to improve transport capacity in and around Sydney Harbour.

The Western Harbour Tunnel and Warringah Freeway Upgrade project along with Beaches Link, is expected to support around 15,000 full-time equivalent jobs during construction.

We know our work can be noisy at times which is why we will use a range of measures to reduce the impact of our work when we are close to communities.

What is noise?

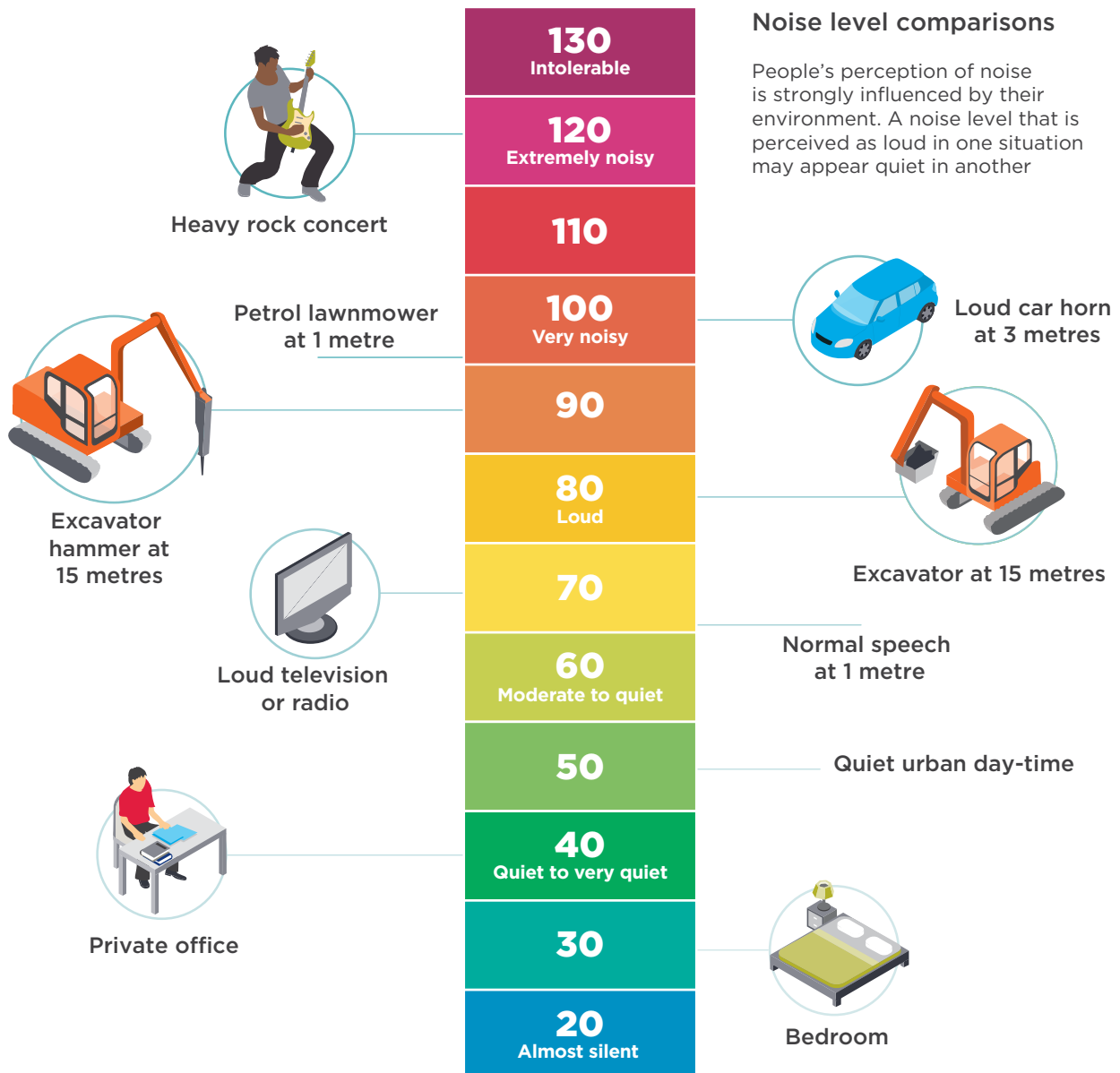
The human ear detects fluctuations in air pressure (i.e. sound) over a considerable range of intensity and frequency. When sound is loud, unpleasant or causes disturbance, it is considered as noise.

We measure noise in decibels (dBA). Our ears generally do not notice changes of one to two decibels. We also do not hear changes in noise incrementally. Many of us can hear a change of 10 decibels as about half or double the previous noise. For example a lawnmower is about 90 decibels and a motorcycle is about 100 decibels however to the ear a motorcycle can be heard as almost twice as loud as a lawnmower.

To build the project we need to use machinery and equipment that will create noise. The table below outlines some of our activities and the machinery and equipment used.

Construction activity	Construction equipment we can use
Utilities investigation (confirming locations of existing underground utilities)	Vacuum truck, light vehicles, hand tools, excavators, road saws
Clearing trees and vegetation	Chainsaw, excavator, truck, elevated work platform
Utilities relocations and removal – trenching to open the road surface	Road saw, excavator, excavator mounted hammer, truck-mounted crane, light vehicles, vacuum truck, road compaction equipment

**dBA levels and
subjective evaluation**



Noise level comparisons

People's perception of noise is strongly influenced by their environment. A noise level that is perceived as loud in one situation may appear quiet in another

Note:

- A change of 1 dBA or 2 dBA in the level of a sound is difficult for most people to detect.
- A 3–5 dBA change corresponds to a small but noticeable change in loudness.
- A 10 dBA change corresponds to an approximate doubling or halving in loudness.

Construction noise

Construction noise is measured, predicted and assessed in accordance with the relevant legislative guidelines. This includes the Interim Construction Noise Guideline (ICNG), Transport for New South Wales Construction Noise and Vibration Guideline (CNVG) and various Australian Standards. Predicted and measured construction noise levels are compared against noise management levels (NMLs) to determine the level of impact from the noise and confirm appropriate mitigation measures to reduce the impact.

Day and night Noise Management Levels (NMLs)

We use NMLs to assess whether you may be impacted by noise from our work. The NML is the current background noise level (RBL) plus 10 decibels during the day or five decibels for both the evening and night. RBLs were developed for individual noise catchment areas (NCAs) as part of the Environmental Impact Statement (EIS). You are considered to be likely affected by noise if our work is predicted to be above the NML.

Any properties that are identified as impacted by noise are referred to as 'sensitive receivers'.

There are different NMLs for non-residential properties which may be more sensitive to changes in noise levels. These other properties include hospitals, schools, places of worship, childcare centres and recreational areas.

We will work closely with sensitive receivers to manage the potential impact of our work.

The table below outlines the likely noise impact for residents based on the noise level of our work above the NML for work outside of standard construction hours (OOH).

Noise level	Likely noise impact for closest residents for OOH work
<5 dBA above NML	Noticeable
5-15 dBA above NML	Clearly audible
15-25 dBA above NML	Moderately intrusive
>25 dBA above NML	Highly intrusive

Assessment of construction noise

Before we start our work, we apply mitigation and management measures to minimise any potential impacts. This includes measures to help reduce noise at the source. We then assess the noise levels to determine the overall impact to receivers. Where we predict that you may experience noise levels over the NMLs, we will put additional mitigation measures in place and monitor our noise levels to determine their effectiveness.

Our assessments of noise levels are conservative and always assess the worst-case scenario. For example, when we assess construction noise, we assume all machinery and equipment is used at the same time and in the location on site where it would have the highest impact on residents. This scenario is unlikely to regularly occur as we will stage work to reduce the overlap of noisy work activities where possible. We often find when we are working the noise generated is less than we predicted.

A Construction Noise and Vibration Impact Statement (CNVIS) will be developed to address the various stages of our work and will be used to assess the potential impacts of our work and document measures to reduce these impacts.

To predict the potential noise levels from our work the CNVIS considers:

Ground features

hills, slopes and depressions



Existing buildings

houses, apartments and structures such as walls

Time of day

when work is taking place



Distance from noise source to you

Types of noise

generated from machinery



The CNVIS includes:

- identification of potentially impacted sensitive receivers
- an outline of all construction noise conditions and requirements
- details of all mitigation measures that will be implemented in areas where the construction noise and vibration impact may exceed guidelines
- procedures for managing noise and providing respite periods when works at night and early in the morning are required.

The CNVIS will be developed by the Sydney Program Alliance who is delivering the service and utility relocation work for Warringah Freeway Upgrade on behalf of Transport for NSW.

Reducing the impact of our work

Our work can be noisy at times but we will do everything we can to reduce its impact. To minimise the impact of this work we will:

- turn off machinery when not in use
- plan traffic flow, parking and loading/unloading areas to minimise reversing movements within the site
- use quieter and less vibration-emitting construction methods where feasible and reasonable
- use equipment which is well maintained and that does not result in unnecessary noise emissions

- lay out our sites so noisy equipment is shielded by other buildings and/or stockpiles, where possible
- install hoarding around our temporary construction sites, where feasible
- use acoustic blankets to minimise noise, where feasible
- direct temporary lighting down and away from houses
- plan activities close to residents to occur during standard construction hours or early evening, where possible
- fit equipment with devices to minimise noise, particularly non-tonal reversing beepers
- monitor noise periodically so we can manage any potential impacts and adjust our work as required.

A Noise and Vibration Management Sub-plan (NVMP) has been developed in consultation with the Department of Planning, Industry and Environment (DPIE). The NVMP provides an overview of how noise impacts will be managed across the project. The NVMP is available on our portal: nswroads.work/whportal under the 'Project approval documents' tab.



Temporary noise hoarding during construction of NorthConnex

Monitoring noise

Throughout construction we regularly monitor noise from our work at different times of the day and night to ensure noise is within our predicted noise levels.

This monitoring lets us know if we need to change our construction methods, adjust our mitigation measures or adjust our predictions.

Our monitoring and any adjustments are reviewed and audited by the site environmental staff, independent appointees, and can be requested by the EPA and DPIE.

Work outside standard construction hours

To construct the Warringah Freeway Upgrade we need to carry out a large amount of surface work within a limited space. To maintain safety for road users and workers, and to keep people moving on the busy Warringah Freeway during peak travelling times, a lot of our work will need to be carried out at night. We will work closely with affected residents to minimise the impact of our work. Where possible work is always carried out during standard construction hours (**from 7am to 6pm Monday to Friday and from 8am to 6pm on Saturdays**).

Out of hours work survey

We welcome any queries or feedback you may have regarding our out of hours work plans. Use the QR code below to complete our survey. Please include the work location. Please contact us if you wish to complete a hard copy of the survey.



There are several reasons why we would need to carry out work outside standard construction hours, including:



Safety

For motorists, pedestrians and workers when we are building over and next to roads and live traffic to reduce interactions between these groups.



Emergency

There may be times when we are directed by NSW emergency services or by utility providers for safety reasons to undertake road work at night (including injury or loss of life, to avoid damage or loss of property, or to prevent environmental harm).



Service and utility disruptions

To minimise disruption to essential services and utilities for local communities.



Oversized deliveries

To allow delivery of oversized plant or structures that police or other authorities determine require special arrangements to transport along public roads.



Managing traffic

Working next to, over or on existing roads means traffic may be stopped, detoured or reduced to one lane while work is carried out. Where possible we will carry out work during the day, however, there will be times when we will need to carry out this work at night to minimise delays and journey times so motorists are less impacted.

The project's Environmental Protection Licence (EPL) and approvals permit us to do work at night **up to three nights per week**, with **only two consecutive nights per week** and **no more than 10 nights per month** when predicted noise levels exceed the NMLs.

Generally night work takes place between **8pm and 5am**. We aim to complete high noise activities before midnight, where possible.

We will notify you of these nights in our construction notifications and email updates.

There may be occasions where we look to minimise the overall duration of our work in a specific area by increasing the number of nights we work outside standard construction hours so we can complete the overall work sooner. We will consult with the community and seek approval from the EPA before making any changes to the out of hours work periods as outlined above.

Keeping you informed

We will notify you via a letterbox notification, which includes a three month look ahead regarding our night work, and weekly website updates about our day and night work in your area. We will also let you know which nights in the month we are working so you can be prepared.

We are required to keep you up to date with this work. If you have any feedback on the type or method of communication provided, please let us know by completing the out of hours work survey.

We apologise for any inconvenience and thank you for your patience during this important work.

How to make a complaint

To make an enquiry or a complaint about the project, you can call our community information line, which is available 24 hours a day and is attended during project operation hours. Enquiries and complaints may also be received by the project email and by post.

Learn more

You can learn more about construction and noise in the Interim Construction Noise Guideline. This has been developed by a number of government agencies and provides comprehensive information about noise: www.environment.nsw.gov.au/resources/noise/09265cng.pdf

You can also learn more about noise on our project via our online portal: nswroads.work/whportal

Stay in touch with us



nswroads.work/whportal



1800 931 189



whtbl@transport.nsw.gov.au



Customer feedback
Transport for NSW, Locked Bag 928
North Sydney NSW 2059



131 450

If you need help understanding this information, please contact the Translating and Interpreting Service on 131 450 and ask them to call us on 1800 931 189.

Making a complaint about our work

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Privacy Statement: Transport for NSW ("we") are collecting your personal information in connection with public consultation on the Western Harbour Tunnel, Warringah Freeway Upgrade and Beaches Link projects ("the Program"). We will retain and use this information for consultation purposes, including communications and analysis in connection with the Program. We may share your submission or complaint with another NSW government agency where relevant having regard to the nature of the submission or complaint. Otherwise, except for anonymous information which does not identify you, we will not publish or disclose your personal information to any third parties without your consent unless authorised by law. Providing your personal information is voluntary but if you do not provide it we may not include you on our stakeholder database and you might miss further consultation opportunities. Your personal information will be held and managed by Transport for NSW in accordance with the Privacy and Personal Information Protection Act 1998 and you can contact us to access or correct it. Please email us at whtbl@transport.nsw.gov.au, write to us at Transport for NSW, Locked Bag 928, North Sydney NSW 2059, or call us on 1800 931 189.

Appendix A3 Example OOHW work slip



29 July 2021

Warringah Freeway Upgrade Service and utility work

Upcoming out of hours work near you

We will be continuing out of hours work near you throughout **August 2021**. Our night work activities will include:

- approved vegetation and tree removal along the Warringah Freeway and at the corner of Arthur Street and Pacific Highway, North Sydney
- under road power services installation on Arthur Street and Pacific Highway off ramp, North Sydney
- utilities installation within the Warringah Freeway corridor (Mount Street ramp rock wall).

Work will be carried out between **8pm and 5am** across a **maximum of 10 shifts** during **August**. We will work on **Tuesday 3, Wednesday 4 and Friday 6 August**. During the rest of the month, we will work on **Monday, Tuesday and Thursday nights**, weather permitting. Our contingency shifts will be during the night, on Wednesdays and Fridays.

For more information and updates on this work please see our three month look ahead notification, noise fact sheet and 'Upcoming work' page on our portal: nswroads.work/whportal. You can also subscribe for email updates.

The potential impacts from this work include temporary traffic changes, construction noise and light spill. Every effort will be made to minimise noise and reduce the impact on you.

Traffic control and temporary lane closures will be in place to maintain the safety of all road users and access to properties will be maintained at all times.

Under normal circumstances, we would door knock local residents and businesses to discuss upcoming works. Due to current COVID-19 physical distancing measures, we welcome you to email or call us should you have any questions.

Tell us what you think

We have a number of mitigation measures in place to manage noise, but are always open to feedback about how we can further reduce the impact on you.

To tell us what you think about our out of hours work plans, please complete the survey via the QR code. Please contact us if you wish to complete a hard copy of the survey.

Out of hours work survey

To complete
the survey, please
scan the QR code.



Stay in touch with us

- 📍 nswroads.work/whportal
- ☎ 1800 931 189
- @ whtbl@transport.nsw.gov.au
- ✉ Customer feedback
Transport for NSW, Locked Bag 928
North Sydney NSW 2059

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