

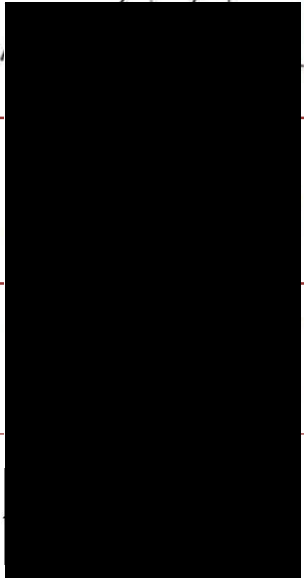


Windsor Bridge Replacement Project

Out-of-Hours Works Noise Assessment

Median Construction, Traffic Light Installation and Wearing Course

If the following assessment of the OOHW activity is calculated to be over the NML (+5dBA of the RBL) then signoff required by the following:

Position	Name	Signoff
Georgiou Project Manager		
RMS Environmental Representative Review		
RMS Project Manager Review		
Independent Environmental Representative (ER)		

Glossary/Abbreviations

GLOSSARY/ABBREVIATIONS	
OOHW	Out of Hours Work
SPL	The sound pressure level is the noise at a given distance from plant or equipment, and the sound pressure level can change depending on the distance from the equipment and also the orientation of the equipment.
SWL	The sound power level is the intrinsic noise output of plant or equipment, and does not depend on distance or orientation of the machine
TCS	Traffic Control System
ITS	Intelligent Control System
TMC	Transport Management Centre
ROL	Road Occupancy Licence
NML	Noise Management Level
Noticeable	5 to 10 dBA above rating background level (RBL)
Clearly audible	10 to 20 dBA above RBL
Moderately intrusive	20 to 30 dBA above RBL
Highly intrusive	>30 dBA above RBL
Sleep disturbance	Sleep disturbance is L _{Amax} of 65 dBA (at the façade of a property)
RBL	Rating Background Level
CNVMP	Construction Noise and Vibration Management Plan
NCA	Noise Catchment Area
DECCW	Department of Environment Climate Change and Water
RNP	Road Noise Policy

PART 1 – Initial OOHW Request Details

Location of OOHW:	Week 1 – George Street – Bridge Street intersection and onto new bridge Week 2 – Entirety of project road Wilberforce to Macquarie Street
Proposed OOHW times:	8pm – 6am 10 shifts (Monday – Friday (no works Saturday/Sunday nights))
Date of proposed OOHW:	5 night shifts commencing 2/11/2020 no OOHW Saturday/Sunday followed by 5 night shifts commencing 9/11/2020 Contingency: 5 night shifts commencing 16/11/2020 no OOHW Saturday/Sunday followed by 5 night shifts commencing 23/11/2020
Name of OOHW requestor	██████████
Name of Assessor	██████████
Nearest sensitive receiver:	10 Bridge Street
Supervisor	██████████

Description and justification of OOHW (include plant/equipment used):

This OOHW request is for two blocks of 5 nights (10 night shifts total) which will be conducted Monday to Friday of the week commencing 2nd November 2020 and separated by the weekend in between. This work will involve the following activities:

- Week 1
 - Construction of the median on Bridge Street
 - Installation of traffic light infrastructure and standing of the traffic lights
- Week 2
 - Asphaltting of the entirety of the project to install the final wearing course

It is necessary that these works are completed outside standard construction hours as the Transport Management Centre (TMC) will not issue an ROL for these works during standard construction hours due to the high traffic volumes and concerns for safety of road users and workers.

These works are the second block of three to be completed prior to the end of the year. Completing these works in this manner will ensure that the George St/Bridge St intersection is operating in its final design prior to the Christmas break. This will greatly improve traffic flows while also providing safe pedestrian access with designated signalised pedestrian crossings in the final traffic configuration.

It is necessary that these works are conducted in two consecutive 5 night blocks as there will be temporary line marking in place during standard construction hours. It is not safe to leave a heavily trafficked intersection with temporary line marking for extended periods and to change it many times causing confusion to road users. This issue will be negated by completing these works in the two consecutive weeks and community consultation has demonstrated support.

The majority of the works throughout the 10 shifts are not considered 'impulsive noisy' works and for the most part there works can be completed prior to 11pm. However, there are two nights where noisy works may go past 11pm due to time constraints. These are as follows:

The first night:

- Where the asphalt in the footprint of the new median will need to be hammered out

One night during the second week:

- Where the loops for the traffic lights at Macquarie St will need to be saw cut, this can only be done after the road milled.

There has been extensive community consultation conducted to demonstrate support of all these works being done under Duration Respite in order to open the intersection prior to Christmas. This is discussed further in Section 2.10 and Appendix A – Community Consultation Strategy. The table below outlines the blocks of works.

Table 1.1 Schedule of Works to Open Bridge Street Intersection for Christmas*

Block	Total Nights	Respite to Next Block	OOHW Assessment	Risk Category	Outline of works
W/C 26/10/20	3	4	OOHW Assessment 041	Medium	Barrier removal, asphaltting line marking
W/C 2/11/20 & 9/11/20	10	No works Saturday Sunday night. 1 week respite until block 3	This assessment	High	Installation of median, finalisation of the traffic lights. Wearing course (asphaltting)

Block	Total Nights	Respite to Next Block	OOHW Assessment	Risk Category	Outline of works
W/C 23/11/20	5	Final works	OOHW Assessment – 043	Medium	Final line marking of entire works.

*Note: If works are required to be completed in the contingency periods then the dates listed above for the other blocks of work will shift accordingly to avoid concurrent work fronts

The *RMS Construction Noise Estimator* default scenario *Resurfacing Works* is representative of the works to be conducted and will be used in this assessment. The plant used in this scenario is detailed below in Section 2.1.

1.1 Additional Requirements for the works (tick all that apply)

Traffic control <input checked="" type="checkbox"/>	Traffic control supervisor <input checked="" type="checkbox"/>	Lighting (if required direct away from receivers) <input checked="" type="checkbox"/>	Other (list) <input type="checkbox"/>
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1.2 Emergency Planning

Who in the work team is currently senior first aid qualified?	
Where will the first aid kit be located?	Site offices and site vehicles
Communication to contact assistance in an emergency?	Mobile phones available, supervisor to have mobile phone if staff do not, 2 way radio

PART 2 – Assessment

2.1 Noise Assessment Method

The *RMS Construction Noise Estimator – Estimator (Scenario)* was used to determine the most impacted residential receivers as a result of the noise levels from the works. The default scenario *Resurfacing Works* was used as a representative scenario for this OOHW. While not all works conducted during this block align with this scenario, this assessment models a worst case scenario for the works.

The plant used in the *Resurfacing Works* scenario and their relative SWL and SPL is detailed below

NOTE: While all these plant have been modelled as part of this noise assessment, the actual impact to receivers is expected to be less, as not all plant listed will be used, nor will they be used at the same time. Additionally, all noisy works will be completed prior to midnight where possible.

Plant/ Equipment	LAeq SWL (dBA)	LAeq at 7m (dBA)
Daymakers	98	73
Pavement profiler	117	92
Dump truck	110	85
Front end loader	112	87
Pavement laying machine	114	89
Asphalt truck & sprayer	106	81
Smooth drum roller	107	82
Concrete saw	118	93

2.2 Noise Impact Statement

Table 2.2 below details the following aspects:

Noise Management Levels: LAeq(15minute) noise management levels [dB(A)] for the relevant noise catchment/receiver is summarised in the table below. This information has been sourced from the CNVMP. The noise management level (NML) for OOHW is equal to the back ground noise level (RBL) +5dBA.

The residential receivers listed below are those nearest to the works and therefore subject to the greatest impacts. Noise impacts reduce as distance from noise source increases. Therefore the receivers assessed are considered worst case scenarios.

Note: As per NVMP the NML for R3 is used for receivers R16, U4 –U8, and U20. NML for R4 is used for U9 – U19, R11 – R12, and U1 – U3.

Noise Impacts on Receivers: The table below also details the predicted total SPL (LAeq 15 minute (dBA)) as determined by the *RMS Construction Noise Estimator – Estimator (Scenario)* and the relative predicted levels above the different NML's. The default scenario *Resurfacing Works* was used as a representative scenario for this OOHW, to predict the most impacted residential receivers as a result of the noise levels from the works.

Note: The impacts discussed Table 2.2 (dBA above NML) are in relation to the OOHW Period 2 to ensure a worst-case, conservative approach is taken in this assessment.


Table 2.2 Noise Management Levels and Predicted Noise Levels.


ID	Receiver Location	Noise Management Levels			RBL*	Predicted Noise Impacts Assessment			
		Daytime (7am–6pm)	OOHW Period 1 (6pm–10pm)	OOHW Period 2 (10pm–7am)		Distance to Works	Total SPL LAeq (15 minute) (dBA)	dBA above RBL	dBA above NML
R3	10 Bridge St	72	61	46	41	10	82	41	36
U5	20 Bridge St	72	61	46	41	40	72	31	26
U20	5 Freemans Reach	72	61	46	41	40	72	31	26
R1	27 Wilberforce R	68	55	44	39	30m	76	37	32
U7	26 Bridge St	72	61	46	41	15	80	39	34
U8	28 Bridge St	72	61	46	41	15	80	39	34
U4	3/52 George St	72	61	46	41	20	78	37	32
R16	3 Thompson Sq	72	61	46	41	45m	73	32	27
R4	53 George St*	55	47	32	27	70	58	31	26
U6*	2/52 George St*	72	61	46	41	50	60	19	14
U1*	51 George St*	55	47	32	27	40	62	35	30
U2	48 George St	55	47	32	27	90	66	39	34
U3	50 George St	55	47	32	27	100	65	38	33
R11	45 George St	55	47	32	27	100	65	38	33
R12	43 George St	55	47	32	27	125	62	35	30
U12*	16 Arndell Cl*	55	47	32	27	125	52	25	20
U13*	49 Court St *	55	47	32	27	90	56	29	24
U14*	47 Court St *	55	47	32	27	95	55	28	23
U15*	45 Court St*	55	47	32	27	110	54	27	22
U9*	10 Arndell Cl*	55	47	32	27	120	53	26	21
U10*	12 Arndell Cl*	55	47	32	27	110	54	27	22
U11d	14 Arndell Cl *	55	47	32	27	130	52	25	20
U11c	14a Arndell Cl*	55	47	32	27	110	54	27	22
U11b	14b Arndell Cl*	55	47	32	27	90	56	29	24
U11a	14c Arndell Cl*	55	47	32	27	65	58	31	26
U16	43 Court St*	55	47	32	27	130	52	25	20
U17	41 Court St*	55	47	32	27	150	50	23	18
U18	46 Court St	72	61	46	27	90	66	39	20
U19	44 Court St	72	61	46	27	95	65	38	19

*RBL – Rating Background Level (dBA)

*R – Receivers as identified in the NVMP

*U – Receivers which have not been identified in the NVMP

 - dBA which is greater than 30dBA > RBL ('Highly Intrusive' NCA1) (see Figures 1 & 2)

 - dBA which is between 20 – 30dBA > RBL ('Moderately Intrusive' NCA2) (see Figures 1 & 2)

2.3 Risk assessment

Acoustic assessment completed by the ESR to determine if works are above the Noise Management Level (RBL +5dBA) at closest receiver

- ☐ below NML (RBL +5dBA)
☒ Above NML (RBL +5dBA)

If above NML identify the out of hours works period:

	Standard Hours	OOHW Period 1	OOHW Period 2
Weekdays	No OOHW application required	1800 - 2200 <input checked="" type="checkbox"/>	2200 - 0700 <input checked="" type="checkbox"/>
Saturdays		0700 - 0800 <input checked="" type="checkbox"/> 1300 - 2200 <input checked="" type="checkbox"/>	2200 - 0800 <input checked="" type="checkbox"/>
Sundays and public holidays		0800 - 1800 <input checked="" type="checkbox"/>	1800 - 0700 <input checked="" type="checkbox"/>

If above NML identify the out of hours works category:

Low Risk Category <input type="checkbox"/> <ul style="list-style-type: none"> No sleep disturbance 1800 – 2200 weekdays 1300 – 2200 Saturdays 0800 – 1800 Sunday & Public Holiday 1 or 2 occurrences No impulsive or tonal noise vibration 	Medium Risk <input type="checkbox"/> <ul style="list-style-type: none"> Sleep disturbance risk 2200 -0700 weekday nights 2200 – 0800 Saturday nights 1800 – 0700 Sunday & Public Holidays nights 	High Risk <input checked="" type="checkbox"/> <ul style="list-style-type: none"> Prolonged work (ie > 1 week) Sleep disturbance possible Impulsive noise or vibration after 11pm (eg vibratory rolling or rock breaking)
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Out of hours works category comment:

The 'high risk' category has been selected for the works, as there is potential for 2 nights of noisy works to continue past 11pm.

2.4 Affected Receivers

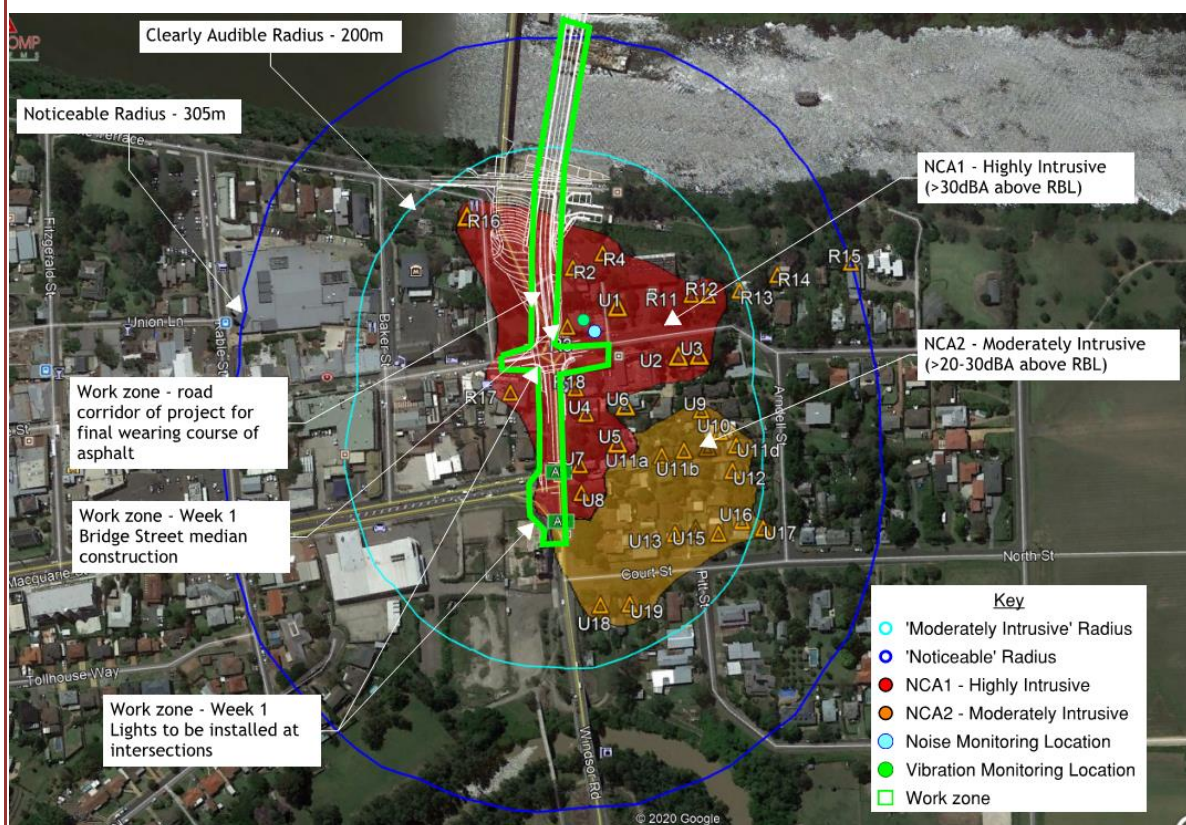


Figure 1.1 Affected receivers, notification area (south bank)

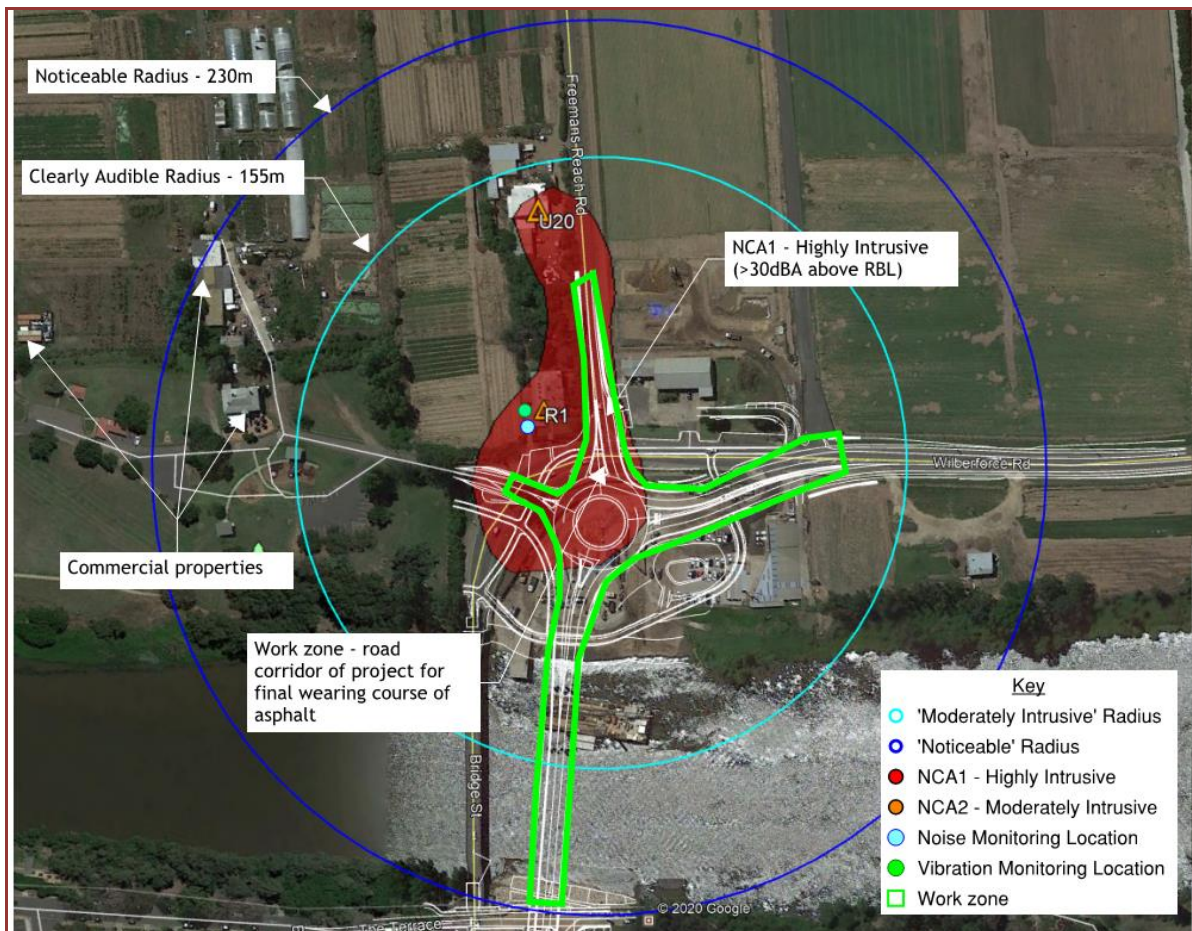


Figure 1.2 Affected receivers, notification area (north bank)

Figures 1.1 and 1.2 show the noise impact radii, and noise catchment areas and the receivers which fall within the various noise impact categories as per the *RMS Construction Noise Estimator*. The outer radius of 230m and 305m on the north and south bank respectively, shows the area in which the noise from the OOHW has the potential to be 'noticeable' (5 to 10dBA above RBL). All properties within these radii will be notified.

The inner radii on the north and south bank of 155m and 200m respectively, highlights the receivers in which the noise levels from the OOHW have the potential to be 'clearly audible' (10 to 20dBA above RBL).

The noise catchment areas (NCA's) for the southern bank works will be further highlighted in discussed in the following Figure 2.

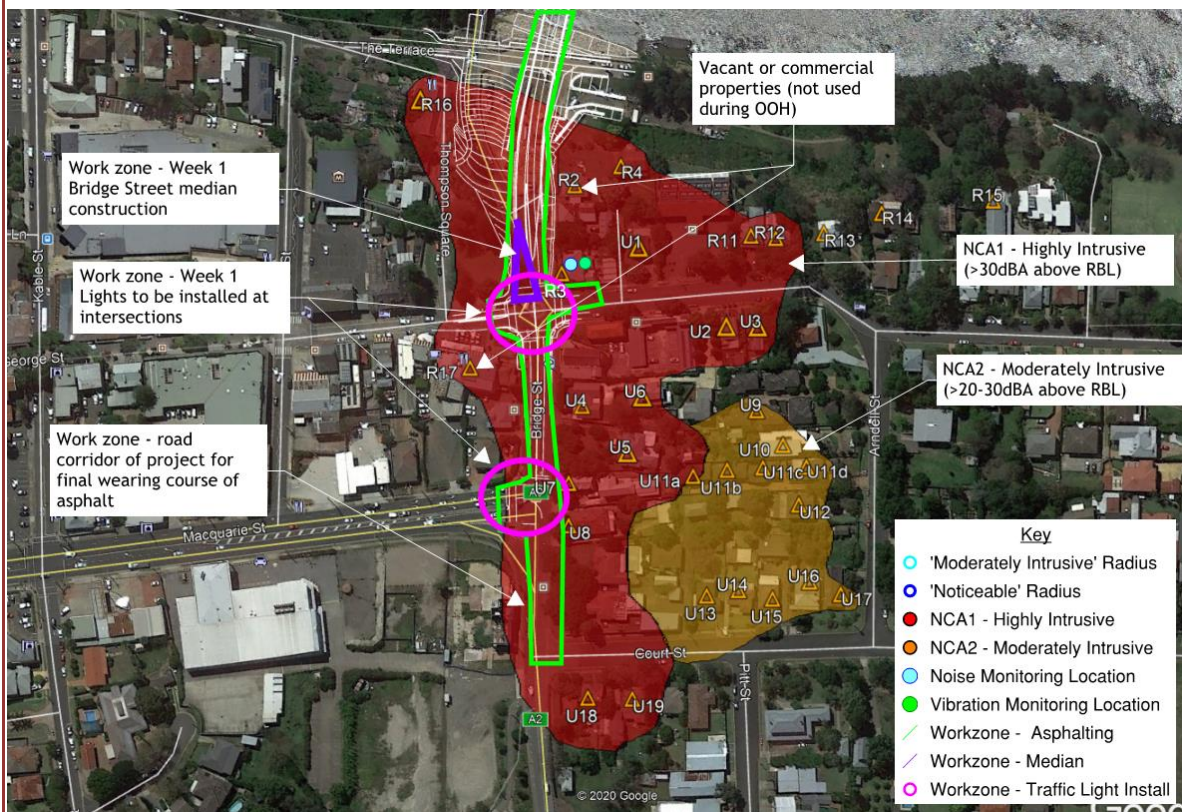


Figure 2 Work areas and details of works (south bank)

Figure 2 provides closer detail of the NCA's and the receivers within these. NCA2 identifies the area in which the noise generated from OOHW have the potential to be 'moderately intrusive', the receivers within this area will additionally have specific notification by way of phone call or door knocking prior to the works. NCA1 highlights the area in which the noise generated from the OOHW has the potential to be highly intrusive, in accordance with the Noise and Vibration Management Plan, receivers within these areas will be offered alternate accommodation.

2.5 Sleep Disturbance Risk

An assessment was also carried out to determine the sleep disturbance impact of the work. Noise impacts or events that can cause interruptions to sleeping patterns are considered separately to noise levels during works outside standard hours. The ICNG does not provide a specific method for assessment of potential sleep disturbance noise impacts; and guidance on the acceptability of these events is taken from the NSW Road Noise Policy (RNP) (DECCW, 2011).

The RNP provides targets for considering sleep disturbance impacts:

- Sleep disturbance screening criterion – used to identify situations where there is the potential for sleep disturbance.
- Sleep disturbance awakening criterion – levels below which awakening is unlikely to occur.

The sleep disturbance screening criterion recommends that where the LA1 (1 minute) does not exceed the LA90 (15 minute) by 15 dB(A) or more, sleep disturbance impacts are likely to be maintained at an acceptable level. The LA1, (1 minute) descriptor is meant to represent a typical maximum noise level when measured using a 'fast' time response. The sleep disturbance awakening guideline is the threshold at which an awakening reaction is likely to occur.

Research discussed in the RNP identified this threshold to be an internal bedroom noise level of around 50 to 55 dB(A). Windows often allow the greatest amount of sound transmission from outside to inside across a building façade.

Noting guidance presented in AS2436-2010, where bedrooms are ventilated by an opened window, a sleep disturbance awakening criterion measured outside the bedroom window of 60 to 65 dB(A) less the conversion from LAeq 15 minute to an LA 1 minute (conservatively assumed to be 10 dB(A) would generally apply (i.e. 55 dB(A)).

The proposal would have the potential to create sleep disturbance to:

- Receivers located within 180m of the work zone where there is a line of sight to the between to the property
- Receivers located within 70m of the proposed works where there is no line of sight

This includes the following properties:

- R1: 27 Wilberforce
- R16: 3 Thompson Square
- U20: 5 Freemans Reach Road
- R3: 10 Bridge St
- U5: 20 Bridge St
- U7: 26 Bridge St (vacant property still under construction)
- U8: 28 Bridge St
- U4: 3/52 George St
- U2: 48 George St
- U18: 46 Court St
- U19: 44 Court St
- U1: 51 George St
- U2: 48 George St
- U3: 50 George St
- R4: 53 George St
- R11: 45 George St
- R12: 43 George St

This has been modelled via the *RMS Construction Noise Estimator – Distance (scenario)* to experience sleep disturbance noise levels of L_{Amax} 65 dB(A). This assessment has been conducted for the works on both the north and south banks.

The mitigation measures outlined in Section 2.7 and 2.8 minimise the identified sleep disturbance risk and sleep disturbance remains at a 'risk' level. This includes the offer of alternate accommodation for these receivers. Details of the community consultation including the letter of alternate accommodation is provided in Appendix 1.

2.6 Standard noise mitigation measures

Why not? / Comment

Can work be carried out during a less sensitive time period?	No	ROL requirements do not allow for the works to be complete during standard construction hours
Are all construction vehicles fitted with non-tonal reversing ambient sensitive alarms?	Yes	Site vehicles have non-tonal beepers installed.
Can mobile acoustic hoarding be used to shield stationary items where noise levels are 20 dB(A) above RBL at affected receivers?	Potentially	Can be used in some instances, will be assessed on site
Is there appropriate communication method on site to avoid communicating at elevated voice levels?	Yes	Two-way radios or mobile phones will be used in lieu of elevating voices

Identify any other standard measures where applicable:

Other standard mitigation measures will also be implemented these include;

- No shouting, swearing or loud music
- Two-way radios will be used for communication in lieu of shouting, whistling, horns etc.
- No dropping of materials or objects
- Affected receivers will be notified of the upcoming works
- Works resulting in an impulsive or tonal noise emission will be undertaken in continuous blocks not exceeding three hours each with a minimum respite from those activities and works of not less than one hour between each block.
- Works will commence as soon as the ROL permits to allow for early as possible completion
- Site vehicles and plant that have non-tonal 'quackers' will be used to complete the works
- Regular monitoring of construction lighting will be done to avoid unnecessary light spill
- Noisy works will be completed prior to midnight where possible. It has been identified that there are two nights of works where there is potential for noisy works to be carried out past midnight, this is due to the time constraint and nature of the activity (the utilities crew needs access to the road after it has been milled and

prior to asphalting, there is a chance that this window of time may lead to the utilities work going past midnight).

- Attended monitoring will occur during all out-of-hours work to confirm the predictions in the noise assessment were accurate. Monitoring will occur at the nearest sensitive receiver. Monitoring will also occur if a complaint is received during any works including out-of-hours work.
- Alternate accommodation will be offered to the receivers within NCA1 – ‘Highly Intrusive’

The mitigation measures detailed here will be conveyed to all staff through a pre-start tool box

2.7 Additional Noise Mitigation Measures

Table 2.7 below details the noise impact categories as per the RMS Construction Noise Guidelines and the mitigation measures which are triggered by each category. Additionally, the table details the distance which is affected by the relative noise impact category and the receivers which fall within that category.

These works will be done under Duration Respite. Consultation with 47 properties demonstrated support for the works. Of the 47, the project team made contact with 18 of them, 100% of those contacted had no issues with the three blocks of works being completed between 26th of October and 27th of November. Calling cards with requests to contact the project team were delivered to all properties at each visit. No residents returned the projects request, demonstrating that the residents have no issues with and support the works.

Note: The impacts and mitigation measures discussed are in relation to the OOHW Period 2 to ensure a conservative approach is taken in this assessment

****Identify noise affected zones and additional noise mitigation measures using Roads and Maritime’s Maintenance Noise Estimator****

Noise Impact Category and relative mitigation measures (See Section 3 below for definitions)	Affected distance [metres]	Applicable Residential Receivers
Noticeable (5 to 10 dBA above RBL) Notification	230m – north 305m – south	All in ‘Noticeable’ radii
Clearly Audible (10 to 20 dBA above RBL) Notification	180m – north 200m – south	All in ‘Clearly Audible’ radii
Moderately Intrusive (20 to 30 dBA above RBL) Notification, Phone Call (or other form of engagement), Specific Notification	70m (without line of sight)	All in NCA2: U11a, U11b, U9, U10, U11d, U12, U13, U15, U16, U17, U18, U19.
Highly Intrusive (>30 dBA above RBL) Alternative accommodation, Phone Call (or other form of engagement), Specific Notification Respite Period 1	10m (with line of sight)	All in NCA1: R1, U20, R16, R2, R4, U1, R3, R11, R12, U3, U4, U5, U7, U8, R17

2.8 Mitigation Measures Comments

- **Community Consultation:** Community consultation has been carried out in preparation for the works. With the key points of this consultation being that completing these OOHW will enable the George and Bridge Street intersections to be operating to its full capacity.
- **Notification:** All residents within the ‘Noticeable’ radius will be notified by letter box drop of the works prior to construction
- **Engagement:** The majority of the residents within the “noticeable’ radii have been consulted with during September 2020, the residents have been made aware of the works and the further notifications to come and there has been no objections to the works. Furthermore, all in residents within moderately intrusive NCA (NCA2) will have other forms of engagement such as phone call or door knock prior to works commencing.

- **Respite Period 1/2:** Due to the nature of the works and the justification provided in Part 1, the works cannot adhere to the respite periods. As such, extensive community consultation has begun for the works to ensure the community are well informed.
- **Duration Respite:** Duration respite is relevant to this assessment as there is it is of utmost importance to open this intersection to its full capacity prior to the Christmas break.
- **Alternate Accommodation** - Alternate accommodation will be offered to the relevant receivers prior to the works commencing.

2.9 Monitoring During OOHW

Noise Monitoring

Noise monitoring will be conducted throughout the works to confirm that the noise levels predicted in this assessment are accurate. The monitoring locations have been chosen as they are the properties of the nearest sensitive receivers. Additionally, safety of the personnel undertaking the noise monitoring has been taken into consideration with locations chosen that are in close proximity to the main works. As these monitoring locations are close to the works, they are considered to be 'worst-case scenario' and noise levels at a greater distance from the works to be significantly less. The receiver which monitoring will be conducted at R3: 10 Bridge Street on the south side and R1: 27 Wilberforce on the north side.

Vibration Monitoring

Vibration monitoring will be conducted on the heritage properties closest to the works, for this block of works this will be 10 Bridge Street and 27 Wilberforce Road. This will only be during asphaltting works. Previous similar works have been completed and vibration impacts monitored with no exceedances recorded.

2.10 Community Consultation

Community consultation has entailed doorknocking and phone calls during the month of September 2020, to ensure that the community are well informed about the works. 100% of the residents contacted have shown no objections to the works being completed in the order as specified in Section 1. Furthermore, prior to works the affected receivers in NCA1 and NCA2 will receive targeted notification and the affected receivers within NCA1 have received offers of alternate accommodation 5 days prior the works being completed, this will be followed up by a written notification to all in the 'noticeable' radius 5 days prior to the works commencing.

The project team made contact with residents via phone call. Residents who were unable to be contacted by phone were given calling cards/emails with a request to call the project team if there were any issues with the date change and the contingency dates. No residents have taken up the opportunity to call/text the project team. Additionally, all residents that have been contacted have had no issues with the works. The details and results of the community consultation and the example letters offering alternate accommodation are found in the Community Consultation Strategy for these works attached as Appendix A.

In the event a contingency weekend is required, an updated notification will be distributed and follow up consultation will occur with the impacted residents at least 5 days prior to the rescheduled date.

3.0 Definition of mitigation measures from RMS Construction Noise Estimator for Individual Plant

Abbreviation	Measure	Description
N	Notification (letterbox drop or equivalent)	Advanced warning of works and potential disruptions can assist in reducing the impact on the community. The notification may consist of a letterbox drop (or equivalent) detailing work activities, time periods over which these will occur, impacts and mitigation measures. Notification should be a minimum of 5 working days prior to the start of works. The approval conditions for projects may also specify requirements for notification to the community about works that may impact on them.
SN	Specific notifications	Specific notifications are letterbox dropped (or equivalent) to identified stakeholders no later than seven calendar days ahead of construction activities that are likely to exceed the noise objectives. The specific notification provides additional information when relevant and informative to more highly affected receivers than covered in general letterbox drops. The exact conditions under which specific notifications would proceed are defined in the relevant Additional Mitigation Measures. This form of communication is used to support notifications, or to advertise unscheduled works.
PC	Phone calls	Phone calls detailing relevant information made to identified/affected stakeholders within seven calendar days of proposed work. Phone calls provide affected stakeholders with personalised contact and tailored advice, with the opportunity to provide comments on the proposed work and specific needs. Where the resident cannot be telephoned then an alternative form of engagement should be used.
IB	Individual briefings	Individual briefings are used to inform stakeholders about the impacts of high noise activities and mitigation measures that will be implemented. Project representatives would visit identified stakeholders at least 48 hours ahead of potentially disturbing construction activities. Individual briefings provide affected stakeholders with personalised contact and tailored advice, with the opportunity to comment on the project. Where the resident cannot be met with individually then an alternative form of engagement should be used.
RO	Respite offer	Respite Offers should be considered made where there are high noise and vibration generating activities near receivers. As a guide work should be carried out in continuous blocks that do not exceed 3 hours each, with a minimum respite period of one hour between each block. The actual duration of each block of work and respite should be flexible to accommodate the usage of and amenity at nearby receivers. The purpose of such an offer is to provide residents with respite from an ongoing impact. This measure is evaluated on a project-by-project basis, and may not be applicable to all projects.
R1	Respite period 1	Out of hours construction noise in out of hours period 1 shall be limited to no more than three consecutive evenings per week except where there is a Duration Respite. For night work these periods of work should be separated by not less than one week and no more than 6 evenings per month.
R2	Respite period 2	Night time construction noise in out of hours period 2 shall be limited to two consecutive nights except for where there is a Duration Respite. For night work these periods of work should be separated by not less than one week and 6 nights per month. Where possible, high noise generating works shall be completed before 11pm.
DR	Duration respite	Respite offers and respite periods 1 and 2 may be counterproductive in reducing the impact on the community for longer duration projects. In this instance and where it can be strongly justified it may be beneficial to increase the work duration, number of evenings or nights worked through Duration Respite so that the project can be completed more quickly. The project team should engage with the community where noise levels are expected to exceed the NML to demonstrate support for Duration Respite. Where there are few receivers above the NML each of these receivers should be visited to discuss the project to gain support for Duration Respite. Support may be demonstrated from surveys, contact phone numbers and community events.

3.0 Definition of mitigation measures from RMS Construction Noise Estimator for Individual Plant

Abbreviation	Measure	Description
AA	Alternative accommodation	Alternative accommodation options may be offered to residents living in close proximity to construction works that are likely to experience highly intrusive noise levels. The specifics of the offer will be identified on a project-by-project basis. Additional aspects for consideration shall include whether the highly intrusive activities occur throughout the night or before midnight. This measure is currently not available due to the Covid-19 pandemic.
V	Verification	Please see Appendix F of CNVG for more details about verification of Noise and Vibration levels as part of routine checks of noise levels or following reasonable complaints. This verification should include measurement of the background noise level and construction noise.

Appendix A

Community Consultation Strategy for OOHW No. 42

1. INTRODUCTION

1.1 Purpose

The purpose of this strategy is to detail the community consultation to be conducted prior to and during the OOHW for the works detailed in this assessment and associated assessments *OOHW Assessment 041* and *043*. As it is necessary that these works are conducted prior to the Christmas break.

This is to ensure that the George St/Bridge St intersection is operating to its full capacity prior to the Christmas break. This will greatly improve traffic flows while also providing safe pedestrian access with designated signalised pedestrian crossings in the final traffic configuration.

1.2 Requirements of Mitigation Measures

The requirements of consultation:

Specific notifications are letterbox dropped (or equivalent) to identified stakeholders no later than seven calendar days ahead of construction activities that are likely to exceed the noise objectives.

Phone calls detailing relevant information made to identified/affected stakeholders within seven calendar days of proposed work. Phone calls provide affected stakeholders with personalised contact and tailored advice, with the opportunity to provide comments on the proposed work and specific needs

As such the project team will engage with affected receivers by way of phone call, email or letter box drop.

The requirements of alternate accommodation are as follows;

Alternative accommodation options may be offered to residents living in close proximity to construction works that are likely to experience highly intrusive noise levels. (Source: RMS Construction Noise and Vibration Guidelines)

Alternate accommodation will be offered to those residents as specified in the assessment above. This will be offered by letter, see section 2.2, delivered to residents 5 days prior to works commencing.

2. CONSULTATION MATERIAL

2.1 Transcript Example for Community Consultation (Phone Call)

We are here today on behalf of Georgiou, TfNSW and the Windsor Bridge Project, to speak with you regarding some upcoming out of hour's works. These works are necessary in order to have the George and Bridge St intersection operating to its design capacity prior to Christmas. This will allow for improved traffic flow and safe access for pedestrians, as there is signalised crossings.

The first works block are planned for the 26th to the 28th of October, which will involve the removal of barriers, asphaltting of the new merge lane and then line marking. The following dates are proposed for contingency if adverse weather is encountered:

- 3 nights commencing 2nd November 2020

The second block will be 10 night shifts across two weeks, with no works Saturday and Sunday night in between. There will be 5 nights without works between the first and second block. This second block will involve:

- *Construction of the new median on Bridge Street*
- *Installation of the traffic lights*
- *Laying of the final course of asphalt across the entirety of the works*

The third block will commence one week after the second block is completed. This is expected to be the week commencing the 23rd of November and will involve the final line marking.

You will be made aware of these works closer to the date through written notifications and media releases.

2.2 Letter of offer of alternate accommodation

GEORGIOU GROUP PTY LTD
New South Wales Office
Suite 3.02, 53 Berry Street
North Sydney NSW 2060
PO Box 6193
North Sydney NSW 2059
T: +61 2 8072 3600
F: +61 2 8072 3601
E: nsw@georgiou.com.au
W: www.georgiou.com.au
ABN: 82 073 851 948

To the Resident,

The Georgiou Project Team would like to discuss upcoming night work with you. It is important for us to engage with you safely during the COVID -19 climate. Should you not be comfortable in a face-to-face situation but require further information regarding the night work, you can contact us via email, call or text.

These works will be carried out between 7pm and 6am Monday – Friday for a period of five weeks commencing **Monday 26 October through to Friday 27 November 2020**, weather permitting.

The out of hours work will occur in stages over a period of five weeks, weather permitting, with respite in between these works. A contingency period will be included for these works, should weather conditions affect the work.

Works will consist of the following activities at the Macquarie Street, George Street and Bridge Street intersections;

- Removal of existing pavement and linemarking
- Placement and connection of cables, traffic signals and service pits
- Commissioning of traffic signals on George Street
- Construction of median, footpath and pram ramp on Bridge Street
- Reinstate any pavement removed during construction work

You will be notified of these works one week prior to work commencing

If you would like further information regarding this work, or would like to discuss the possibility of alternate accommodation during this work; please contact the Georgiou Windsor Bridge Project Team on 1800 983 657 or 0427 805 479 or email windsorbridge@georgiou.com.au

Kind regards,

The Georgiou Windsor Bridge Project Team

OOHW community notification

2.3 Request for Contact Calling Card



Upcoming Out of Hours Work

1 October 2020

Members of the Georgiou Project team were in the area today **1 October 2020** to discuss upcoming out of hours work required from **Monday 26 October** through to **Friday 27 November 2020**.

Work will include removal of concrete barriers, installation of traffic lights, construction of the median on Macquarie Street and Bridge Street, asphaltting work and line marking.

The out of hours work will occur in stages over a period of five weeks, weather permitting, with respite in between these works. We will include a contingency plan for these works.

We will notify prior to the commencement of these works.

It is important for us to engage with you safely during the COVID -19 climate. Should you not be comfortable in a face-to-face situation but require further information regarding the night works you can contact us via email, call or text.

Please call or text Toni on **0468 654 860** or email toni.ford@georgiou.com.au to discuss any concerns or more information regarding this night work.



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 983 657.

2.4 Request for Contact Email

Good afternoon,

Please see attached information regarding proposed night works on Macquarie Street and Bridge Street. The project team expect to commence this work 26 October 2020, for a period of five weeks, weather permitting, with periods of respite in between these works. A contingency period will be in place for this work, in the event weather conditions affect the work.

Please contact the Project Team on 1800 983 657 or 0427 805 479 or windsorbridge@georgiou.com.au, with any feedback or questions you may have regarding this work.

We look forward to hearing from you.

Kind Regards,

Community Team

3. CONSULTATION DETAILS AND RESULTS

3.1 September 2020 Consultation Results

The following table details the results of the community consultation conducted in relation to the works.

ID	Address	First Visit – Email/Phone and Calling Card Date: 28/09/2020	Second Visit – Calling card Date: 30/09/2020	Third Visit – Email/Phone and Calling Card Date: 01/10/2020	Alternate Accommodation to be Offered?
■	■■■■■	Phone call attempt – no answer. Voicemail left and dropped calling card	Not home – left calling card	No issues with the work	Yes
■	■■■■■	Phone call attempt – no answer. Voicemail left and dropped calling card	Not home – left calling card	No issues with the work	No
■	■■■■■	Not home - left calling card	Not home – left calling card	Not home – left calling card	Yes
■	■■■■■	Not home – left calling card	Request to Contact' email sent		Yes
■	■■■■■	No issues with the work			Yes
■	■■■■■	Phone call attempt – no answer. Voicemail left	Not home – left calling card	No issues with the work	Yes
	■■■■■	Not home – left calling card	Not home – left calling card	Not home – left calling card	Yes
■	■■■■■	No issues with the work			Yes
■	■■■■■	Phone call attempt – no answer. Voicemail left	Not home – left calling card	No issues with the work	Yes
■	■■■■■	Not home – left calling card	Not home – left calling card	Not home – left calling card	Yes
■■■	■■■■■	No issues with the work			N/A
■■■	■■■■■	No issues with the work			N/A
■	■■■■■	Not home – left calling card and email sent	Not home – left calling card	Email sent	Yes
■	■■■■■	Not home – left calling card and email sent	Not home – left calling card	Email sent	Yes
■	■■■■■	Not home – left calling card and email sent	Not home – left calling card	Email sent	No
■	■■■■■	Phone call attempt – no answer. Voicemail left and dropped calling card	Not home – left calling card	No issues with the work	Yes
■	■■■■■	Phone call attempt – no answer. Voicemail left and dropped calling card	Not home – left calling card	No issues with the work	Yes
■	■■■■■	No issues with the work			Yes
■	■■■■■	No issues with the work			Yes
	■■■■■	Not required - Vacant property. Currently construction site			N/A
	■■■■■	Not home – left calling card	Not home – left calling card	Not home – left calling card	No
	■■■■■	Phone call attempt – no answer. Voicemail left and dropped calling card	Not home – left calling card	Phone call attempt – no answer. Voicemail left and dropped calling card	No
	■■■■■	Not home – left calling card	Not home – left calling card	Not home – left calling card	No

		No issues with the work			No
		No issues with the work			No
		No issues with the work			No
		Phone call attempt – no answer. Voicemail left and dropped calling card	Not home – left calling card	Phone call attempt – no answer. Voicemail left and dropped calling card	No
		No issues with the work			No
		Not home – left calling card	Not home – left calling card	Not home – left calling card	No
		Phone call attempt – no answer. Voicemail left and dropped calling card	Not home – left calling card	No issues with the work	No
		Phone call attempt – no answer. Voicemail left and dropped calling card	Not home – left calling card	No issues with the work	No
		No issues with the work			No
		No issues with the work			No
		Not required - Vacant property. Currently construction site			No
		Phone call attempt – no answer. Voicemail left, calling card dropped and email sent	Not home – left calling card	Email sent	No
		Not home – left calling card	Not home – left calling card	Not home – left calling card	No
		Not home – left calling card	Not home – left calling card	Not home – left calling card	No
		No issues with the work			No
		Phone call attempt – no answer. Voicemail left, calling card dropped and email sent	Not home – left calling card	Email sent	No
		Not home – left calling card	Not home – left calling card	Not home – left calling card	No
		Not home – left calling card	Not home – left calling card	Not home – left calling card	No
		No issues with the work			No
		Not home – left calling card	Not home – left calling card	Not home – left calling card	No
		Not home – left calling card	Not home – left calling card	Not home – left calling card	No
		Phone call attempt – no answer. calling card left	Not home – left calling card	Not home – left calling card Gate always locked and number disconnected	No
		Not home – left calling card	Not home – left calling card	Not home – left calling card	No
		Not home – left calling card	Not home – left calling card	Not home – left calling card	No

	■■■ ■■■ ■■■	Not home – left calling card	Not home – left calling card	Not home – left calling card	No
	■■■ ■■■ ■■■	Not home – left calling card	Not home – left calling card	Not home – left calling card	No
	■■■■■ ■■■	Not home – left calling card	Not home – left calling card	Not home – left calling card	No
	■■■■■ ■■■	No issues with the work			No

3.1.2 Results

47 properties were visited or contacted during the consultation for the works. Of the 47, the project team made contact with 18 of them, 100% of those contacted had no issues with the three blocks of works being completed between 26th of October and 27th of November.