1. Introduction

The Newcastle Inner City Bypass is part of Transport for NSW's long-term strategy to provide an orbital road within Newcastle's road network to connect the Pacific Highway at Bennetts Green with the Pacific Highway at Sandgate. The Rankin Park to Jesmond project is the fifth section of the Bypass.

The Rankin Park to Jesmond section of the Newcastle Inner City Bypass will provide traffic relief to the surrounding road network, in particular the existing route of Lookout Road, Croudace Street and Newcastle Road, which is currently used by about 40,000 to 60,000 vehicles each day. The new bypass will remove up to 30,000 vehicles each day from this route.

When completed, motorists travelling north-south on the new section of bypass would avoid up to 11 sets of traffic lights along the existing route, which is expected to reduce travel times by up to 80 per cent during the morning and afternoon peaks.

To ensure appropriate information was provided to the community and support the application for this variation, condition E1.2 was used as guidance in this variation application.

Section 5.4.4 of the EIS outlines that extended construction hours would shorten the length of the project and is supported by the affected community. It also notes that the extension of the hours of work outside of the recommended standard hours would result in significant benefits to the greater community. The EIS states that feedback received during previous community consultation was that the community is largely supportive of extended work hours.

1.1. License to be varied

The purpose of this proposal is to provide the EPA with the required information for the Rankin Park to Jesmond – Newcastle Inner City Bypass project to seek a variation to Condition L5.7 of the Environment Protection Licence (EPL) No.21762. The variation is proposing to vary condition L5.7 c) to e) to allow for up to 5 consecutive evenings and /or nights per week without a restriction on the total number of nights per month between Sunday and Thursday.

1.2. Name of current license holder

Full name(s) of licence holder(s)	Fulton Hogan Construction PTY LTD	
ACN /ABN (if applicable)	ACN:010 240 758	ABN:46 010 240 758

2. Changes to scheduled activities

2.1. Vary conditions of the licence

Fulton Hogan are proposing to vary EPL No.21762 Condition L5.7 c), d) and e) to allow for up to 5 consecutive evenings and/or nights per week without a restriction on the total number of nights per month between Sunday and Thursday.

3. Noise impacts

3.1. Noise impact results

A noise assessment for the predicted worst case scenario has been carried out by Fulton Hogan using a site specific noise model application called NoiseCheck developed by an acoustic consultant that incorporates topography referenced to one metre, digital ground contours, ground terrain, the built environment, validated sound power levels and atmospheric conditions. A noise model has been completed for the southern interchange and the northern interchange and provided in Annexure A.

The noise model has been prepared in accordance with the relevant sections of the "Interim Construction Noise Guidelines" (DEC 2009), the "Noise Policy for Industry" (EPA, 2017) and AS2436-2010 "Guide to noise and vibration control on construction, demolition and maintenance sites", as per EPL condition E1.2.

The noise reports provided in Annexure A have been developed to predict the worst-case impact of the construction works in the southern and northern interchanges on the surrounding receivers outside of standard construction hours.

The noise results contained within this noise assessment are representative of the worst-case scenario, with all activities occurring concurrently within the southern and northern interchange. Typically, the noise impacts presented in the noise models during out of hours work would be less than predicted as the noise model has accounted for the worst-case scenario.

As per the projects approved Construction Noise and Vibration Management Plan and EPL condition L5.7, Construction Noise and Vibration Impact Statements (CNVIS) will be prepared and implemented as required, including mitigation measures and community notification (as required by Condition L5.9) as outlined in the plan for each activity. CNVIS's will be prepared and submitted to Transport for NSW to release the Hold point for each CNVIS. The CNVIS's will be prepared progressively and refined to suit the proposed activities.

3.1.1. Northern interchange

Exceedances of the relevant Noise Management Level (NML) were considered minor to highly intrusive exceedances, with 583 properties between 0 – 5 dBA, 1087 properties between 5 – 15 dBA, 531 properties between 15-25dBA and 155 properties above 25dBA. The NMLs represented within this report are equivalent to the RBL +5 dBA, during the evening and night period. A summary of the NMLs and the results of the noise assessment can be found in Annexure A.

3.1.2. Southern interchange

Exceedances of the relevant NML were considered minor to highly intrusive exceedances, with 295 properties between 0 – 5 dBA, 279 properties between 5 – 15 dBA, 25 properties between 15-25dBA and 14 properties above 25dBA. The NMLs represented within this report are equivalent to the RBL +5 dBA, during the evening and night period. A summary of the NMLs and the results of the noise assessment can be found in Annexure A.

4. Community Consultation

4.1. E1.2 b) Consultation with noise sensitive receivers

Consultation has been undertaken with all sensitive receivers within the moderately intrusive and highly intrusive categories presented in Annexure A based on the loudest activity anticipated to occur across the southern and northern interchange to the end of 2025 being asphalting and traffic staging

works. Consultation was also carried out with sensitive receivers in the clearly audible category for the southern interchange.

4.2. E1.2 c) Consideration of additional requirements

The Community agreement letter includes options for translating and interpreting service if required and numbers to call. During door knocking the community team utilised the phone number listed on the agreement when translating was required.

4.3. E1.2 d) Requirements for community consultation and agreement

When seeking agreement and feedback for the RP2J works, the community team doorknocked the residents and advised the resident of the following:

- The actual works proposed
- Any expected impacts in clear, simple English based on noise modelling
- The expected duration of the works
- Any expected benefits for receivers
- Any other concurrent OOHW that will be occurring; and
- Any other OOHW that will be occurring on the nights preceding and following the proposed works or, if the proposed work precedes or follows a weekend period, any other OOHW that will be occurring on the weekend.

4.4. E1.2 e) EPA consent

Annexure B includes the consent requested from the Noise Sensitive Receiver for responses to be provided to the EPA. The declaration section is shown on Page 3 of the community agreement provided in Annexure B to be signed by the resident.

4.5. E1.2 f) Unable to contact a Noise Sensitive Receiver

Annexure C includes a summary of noise sensitive receiver responses and records the dates and times each noise sensitive receivers were door knocked.

4.6. E1.2 g) demonstrate understanding

Demonstrating sensitive receivers understanding and nature of the works and the predicted impacts is included in the signed agreement. Page 3 of Annexure B presents the declaration section to be signed by the resident.

4.7. E1.3 Consultation and Engagement

As described in Section 3.1 and Annexure A, the northern interchange noise model identifies 2,356 sensitive receivers and 613 sensitive receivers in the southern interchange that are predicted to be impacted more than the relevant NML.

Receivers within the moderately intrusive and highly intrusive has been undertaken as these receivers are the most impacted and would be representative of the predicted support based on level of impact. Receivers identified in the clearly audible and noticeable categories are further away from the noise impacts and support is represented support is predicted and represented by the moderately and highly intrusive receivers.

4.7.1. Northern interchange

The noise model for the northern interchange identified 683 properties identified as highly intrusive and moderately intrusive, which includes 531 properties between 15-25dBA and 155 properties 25dBA and above the respective NMLs. Doorknocking has been completed for all properties identified as highly intrusive and moderately intrusive.

4.7.2. Southern interchange

The noise model for the southern interchange identified 318 properties as highly intrusive, moderately intrusive and clearly audible, which includes 279 properties between 5-15dBA, 25 receivers between 15-25dBA and 14 receivers above 25dBA of the respective NML.

Doorknocking has been completed for all properties identified as highly intrusive, moderately intrusive and clearly audible categories for the southern interchange.

4.8. E1.3 e) Analysis of responses / outcomes

Noise sensitive receivers identified as highly intrusive and moderately intrusive have indicated a large percentage of support. In the northern interchange, the highly intrusive and moderately intrusive categories from the noise assessment (refer to Annexure A) were used as an indicative sample size for the worst case scenario activity to occur in the northern interchange. In the southern interchange the highly intrusive, moderately intrusive and clearly audible were considered an indicative sample size.

4.8.1. Northern interchange

The community responses for the northern interchange is as follows:

- 26 out of 686 properties were vacant or not occupied outside of standard construction hours and have not been included in the analysis. For the purpose of the analysis, total properties have been reduced to 660
- 532 out of 660 receivers in the moderately and highly intrusive categories support the proposed 5 nights a week between Sunday and Thursday and have signed the Community Agreement form
- 5 out of 532 receivers signed the community agreement, however did not consent to details being provided to the EPA
- 1 out of 660 objected to the community agreement and objected to their details being provided to the EPA
- 20 out of 660 residents have objected to the proposed 5 nights were week
- 102 residents out of 660 residents were doorknocked three times and were not able to be contacted and no response received.

Removing noise sensitive receivers that were doorknocked three times, no response received or properties were vacant, the total number of receivers that have responded is 558. Therefore 95% of receivers who were contacted are in support of the proposed 5 nights per week who represent the most affected receivers in the northern interchange.

4.8.2. Southern interchange

The community responses for the southern interchange is as follows:

- 71 properties were vacant or not occupied outside of standard construction hours and have not been included in the analysis. For the purpose of the analysis, total properties have been reduced to 299
- 212 out of 299 receivers in the moderately and highly intrusive and clearly audible categories support the proposed 5 nights a week between Sunday and Thursday and have signed the Community Agreement form

- Three receivers signed the community agreement, however did not consent to details being provided to the EPA
- One objected to the community agreement and objected to their details being provided to the EPA
- Ten receivers objected to the proposed 5 nights per week
- 80 out of 299 receivers were doorknocked three times and were not able to be contacted and no response received.

Removing noise sensitive receivers that were doorknocked three times, no response received or properties were vacant, the total number of receivers that have responded is 219. Therefore 97% of receivers who were contacted are in support of the proposed 5 nights per week who represent the most affected receivers in the southern interchange.

5. Noise Monitoring and Validation Plan

5.1. Monitoring Methodology

During the works, RP2J will conduct attended noise monitoring as required by EPL condition E1.5. Noise monitoring will be undertaken by a competent person. All monitoring will be conducted in accordance with the *RMS Construction Noise and Vibration Guidelines* and Australian Standard *AS2659.1 – 1988: Guide to the use of sound measuring equipment – Portable sound level meters.* Monitoring data will be recorded using the Project's Environmental Management System.

Monitoring will be undertaken for modelling verification at sensitive receivers, to assess compliance in response to complaints if monitoring has not already been undertaken to assess compliance at a location closer to the works than the location of the complaint, for equipment spot checks and verification of construction traffic.

Attended monitoring will be undertaken:

- During key points of the work within the night period
- In response to complaints unless previous monitoring of the activity has provided measurements of noise and vibration levels consistent with noise level predictions, impacts have been communicated to the community and all reasonable and feasible mitigation measures are already in place.
- Verification monitoring after exceedance will ensure continual compliance with model outputs.
- As otherwise required by the Project EPL.

A member of the RP2J Environment Team will be either on site or available to provide immediate advice and direction to the workforce to minimise the noise to residences from the Project works.

Complaints management will be managed in accordance with EPL condition M7.1 and M7.2. The site team will investigate any noise complaints received during these works.

5.2. Validation Plan

Representative noise monitoring locations will be identified in accordance with each separate CNVIS that is prepared. Each CNVIS that is prepared by Fulton Hogan will identify noise monitoring locations applicable to each request.

Monitoring frequency will be based upon the need for initial validation and ongoing compliance. Monitoring will be conducted to ensure the mitigations are consistent with the noise impact of the works for each activity. Details for this monitoring are presented in Table 1.

Table 1: Monitoring Program

Monitoring Frequency	Monitoring Purpose	Monitoring Locations
First two nights of work for each activity	Validation	Locations identified in each respective CNVIS.
Until predictions have been validated	Validation	Locations identified in each respective CNVIS.
Night after exceedance	Compliance	Locations identified in each respective CNVIS.

All monitoring will be undertaken on nights when no other works above the relevant NML are being undertaken that might impact the receivers identified within the CNVIS.

Should inclement weather occur that does not allow for noise monitoring to be undertaken (rainfall or winds above 5 m/s), monitoring will be rescheduled to the next suitable night shift.

5.3. E1.6 Monitoring results analysis

Monitoring results will be compared to the predicted levels immediately following any monitoring session. If the works have caused the monitored levels to be above the relevant predictions, then all reasonable and feasible measures will be implemented appropriate for the measured levels. Monitoring will then be undertaken for continual compliance (see Table 1).

5.4. E1.7 Ongoing community engagement and agreement

The feedback form notes that staff will be available to respond to any questions, concerns or complaints during the work. The project will continue to involve the community regarding the evening and night works in accordance with MCoA E29 through the 3-month look ahead, distributed on a monthly basis. This includes:

- a schedule of likely out-of-hours work for a period of no less than three (3) months in advance;
- potential work, location and duration;
- proposed respite periods;
- noise characteristics and likely noise and vibration levels; and
- likely mitigation and management measures.

6. Community Outcome

6.1. Results

Responses were collected over three weeks, to give the residents adequate time to decide on their preferred course of action. The total number of receivers that responded is 558 in the northern interchange, and 532 receivers have signed the community agreement. Therefore 95% of receivers who were contacted are in support of the proposed 5 nights per week.

The total number of receivers that responded is 219 in the southern interchange, and 212 receivers have signed the community agreement. Therefore 97% of receivers who were contacted are in support of the proposed 5 nights per week.

A summary spreadsheet of communication with the sensitive receivers and copies of signed agreement and/or email correspondence is provided in Annexure C.