

Out of Hours Works Protocol – State Land

Sydney Gateway Road Project

SGWPW-JHSW-NWW-EN-PRO-000531

Document status

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Glossary/ Abbreviations

Abbreviations	Expanded text
CEMP	Construction Environmental Management Plan
CNVIS	Construction Noise and Vibration Impact Statement
CNVMP	Construction Noise & Vibration Management Plan
CoA	Conditions of Approval
CSSI	Critical State Significant Infrastructure
dB(A)	Decibels using the A-weighted scale measured according to the frequency of the human ear.
DPIE	NSW Department of Planning, Industry and Environment
EIS	Environmental Impact Statement
EPL	Environmental Protection License
EPA	NSW Environment Protection Authority
ER	Environmental Representative
ICNG	Interim Construction Noise Guideline
JHSWJV	John Holland Seymour Whyte Joint Venture
LAeq (15min)	The A-weighted equivalent continuous (energy average) A-weighted sound pressure level of the construction works under consideration over a 15-minute period and excludes other noise sources such as from industry, road, rail and the community.
LA (max)	The A-weighted maximum noise level only from the construction works under consideration, measured using the fast time weighting on a sound level meter.
MDP	Major Development Plan
NML	Noise Management Level
OOHW	Out-of-hours-works
TfNSW	Transport for NSW (formerly Roads and Maritime Services)
UMM	Updated Management Measures
VDV	Vibration Dose Value

1 Introduction

This Out-of-Hours Work Protocol (herein referred to as the Protocol) for the Sydney Gateway Project has been prepared in accordance with State Conditions of Approval (CoA) E18. This Protocol defines the process for assessment and approval of work undertaken outside standard construction hours (out-of-hours work) that is not subject to an Environment Protection Licence (EPL) and is located on NSW State land.

While all works occurring within NSW State land under approval SSI 9737 are intended to ultimately be performed subject to an EPL. Some works will be required to be undertaken prior to obtaining an EPL or works undertaken outside of the project boundary, this protocol will facilitate the approval of those out of hours works. Once an EPL is in place out of hours works undertaken within the EPL premised area will be undertaken in accordance with the licence conditions.

This Protocol was provided to the Department of Planning, Industry and Environment (DPIE) Planning Secretary on 04/03/2021 and subsequently approved on 28/04/2021.

2 Construction Hours

In accordance with the State CoA E14, the standard construction working hours for the Project within State land are defined as being:

- 7:00 am to 6:00 pm Mondays to Fridays; inclusive
- 8:00am to 6:00pm Saturdays; and
- at no time on Sundays or public holidays.

In accordance with CoA E16(g), this Protocol defines the process for the assessment and approval of work that is not subject to an EPL and needs to occur outside of the time periods stipulated above i.e. needs to occur during an OOHW period.

This Protocol will apply to the two following OOHW periods:

- OOHW Period 1:
 - Monday to Friday: 6pm to 10pm;
 - Saturday: 7am to 8am; 6pm to 10pm;
 - Sunday (including public holidays): 8am to 6pm.
- OOHW Period 2:
 - Monday to Friday: 10pm to 7am;
 - Saturday: 10pm to 8am;
 - Sunday and public holidays: 6pm to 7am the following day unless that day is Saturday then to 8am.

2.1 State Conditions of Approval

The State CoA relevant to this Protocol are listed in Table 2-1 below. A reference is also included to indicate where the CoA is addressed in this Protocol or other Project documents.

Table 2-1 State Conditions of Approval requirements

CoA No.	Condition Requirements	Document Reference
E14	Work must only be undertaken during the following hours: (a) 7:00 am to 6:00 pm Mondays to Fridays, inclusive; (b) 8:00 am to 6:00 pm Saturdays; and (c) at no time on Sundays or public holidays.	Section 2 of this OOHW Protocol
E16	Notwithstanding Conditions E14 and E15 , Work may be undertaken outside the hours specified in the following circumstances: (g) where an EPL is not required or in force, Work approved through an Out-of-Hours Work Protocol developed in accordance with Condition E18 ; or (h) construction that causes: (i) LAeq(15 minute) noise levels no more than 5 dB(A) above the rating background level at any residence in accordance with the Interim Construction Noise Guideline (DECC, 2009), and (ii) LAeq(15 minute) noise levels no more than the 'Noise affected' noise management levels specified in Table 3 of the Interim Construction Noise Guideline (DECC, 2009) at other sensitive land uses <i>Note: Section 5.24(1)(e) of the EP&A Act requires that an EPL be substantially consistent with this approval.</i>	This OOHW Protocol
E18	An Out-of-Hours Work Protocol must be prepared to identify a process for the consideration, management and approval of Work outside the hours defined in Condition E14 and that is not subject to an EPL. The Protocol must be approved by the Planning Secretary before commencement of the Work. The Protocol must identify Work activities in terms of their risk of adverse impacts on sensitive receivers and include: (d) a process for the consideration of out-of-hours Work against the relevant noise management level (NML) and vibration criteria, including the determination of low, medium and high-risk activities; (e) a process for selecting and implementing mitigation measures for residual impacts in consultation with the community at each affected location, including respite periods consistent with the requirements of Condition E19 and Condition E20 . The measures must take into account the predicted noise and vibration levels and the likely frequency and duration that sensitive receivers would be exposed to residual impacts, including the number of noise-awakening events; (f) procedures to facilitate the coordination of out-of-hours Work, including those approved by an EPL or undertaken by a third party, to ensure appropriate respite is provided; (g) an approval process that considers the risks, proposed mitigation, management and coordination of Work, including where - (i) the ER reviews all proposed out-of-hours Works and confirms their risk levels, (ii) low risk activities can be approved by the ER , and (iii) medium and high-risk activities are approved by the Planning Secretary; and (h) notification arrangements for affected receivers and the EPA for all approved out-of-hours Work and notification to the Planning Secretary of approved low risk out-of-hours Work.	This OOHW Protocol
E19	In order to undertake Work outside hours specified in Condition E14 , the Proponent must identify appropriate respite periods for out-of-hours Work in consultation with the community likely to exceed the NML and vibration criteria in Condition E23(a) and (b)	Section 7 of this OOHW Protocol

CoA No.	Condition Requirements	Document Reference
	<p>at each affected location on at least a three (3) monthly basis. This consultation must include (but not be limited to) providing the community with:</p> <ul style="list-style-type: none"> (a) a schedule of likely out-of-hours work for a period no less than three (3) months; (b) a description of the potential Work, location and duration; (c) the noise characteristics and likely noise levels of the Work; and (d) likely mitigation and management measures to be implemented. <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 EPA, ER and Planning Secretary for information within two (2) week of undertaking the community consultation.</p> <p><i>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 level at any residence.</i></p>	
E20	<p>Additional mitigation measures such as temporary alternative accommodation or other agreed mitigation measures, must be offered/ made available to residents affected by out-of-hours Work (including where utility works are being undertaken for the CSSI) where the construction noise levels, between:</p> <ul style="list-style-type: none"> (a) 10:00 pm and 7:00 am, Monday to Friday; (b) 10:00 pm Saturday to 8:00 am Sunday; and (c) 6:00 pm Sunday and public holidays to 7:00 am the following day unless that day is Saturday then to 8:00 am, <p>are predicted to exceed the NML by 25 dB(A) or are greater than 75 dBA (LAeq(15 min), whichever is the lesser and the impact is planned to occur for more than two (2) nights over a seven (7) day rolling period.</p> <p>The NML must be reduced by 5 dB where the noise contains annoying characteristics and increased by 10 dB if the property has received at-property noise treatment. The noise levels and duration requirements identified in this condition may be changed through an EPL applying to the CSSI.</p>	Section 5 of this OOHW Protocol
E21	<p>All Work undertaken for the delivery of the CSSI, including those undertaken by third parties (such as utility relocations), must be coordinated to ensure respite periods are provided. The Proponent must:</p> <ul style="list-style-type: none"> (a) reschedule any Work to provide respite to impacted residential receivers so that the respite is achieved in accordance with Conditions E19 and E20; or (b) consider the provision of alternative respite or mitigation to impacted noise sensitive receivers; and (c) provide documentary evidence to the ER in support of any decision made by the Proponent in relation to respite or mitigation. 	Section 4.5 of this OOHW Protocol
E24	<p>Mitigation measures must be applied when the following residential ground-borne noise levels are exceeded:</p> <ul style="list-style-type: none"> (a) evening (6:00 pm to 10:00 pm) - internal LAeq(15 minute): 40 dB(A); and (b) night (10:00 pm to 7:00 am)- internal LAeq(15 minute): 35 dB(A). 	Section 5 of this OOHW Protocol

CoA No.	Condition Requirements	Document Reference
	The mitigation measures must be outlined in the Noise and Vibration CEMP Sub-plan required by Condition CS, including in any Out-of-Hours Work Protocol required by Condition E18.	
E27	The Proponent must conduct vibration testing before and during vibration generating activities that have the potential to impact on heritage items to identify minimum working distances to prevent cosmetic and structural damage. In the event that the vibration testing and monitoring shows that the preferred values for vibration are likely to be exceeded, the Proponent must review the construction methodology and, if necessary, amend the methodology and/or implement additional mitigation measures to prevent damage.	Section 5 of this OOHW Protocol
E30	At no time can noise generated by Work exceed the National Standard for exposure to noise in the occupational environment of an eight-hour (8 hr) equivalent continuous A-weighted sound pressure level of LAeq,ah of 85 dB(A) for any employee working at a location near the CSSI.	Section 5 of this OOHW Protocol

2.2 Updated Management Measures

The Updated Management Measures (UMM's) contained within the Submissions Report which are relevant to this Protocol are listed in Table 2-2 below. A reference is also included to indicate where the UMM is addressed in this Protocol or other Project documents.

Table 2-2 UMM requirements

No.	Condition Requirements	Document Reference
UMM# NV5	A Construction Noise and Vibration Management Plan will be prepared as part of the CEMP and implemented during construction. The plan will detail processes, responsibilities and measures to manage noise and vibration and minimise the potential for impacts during construction, consistent with the management approach and mitigation measures in the Roads and Maritime's Construction Noise and Vibration Guideline (Roads and Maritime, 2016).	CNVMP
UMM# NV6	<p>Location and activity specific noise and vibration impact assessments will be undertaken prior to those works (as a minimum):</p> <ul style="list-style-type: none"> • With the potential to result in noise levels above 75 dBA at any receiver • That need to occur outside standard construction hours and are likely to result in noise levels greater than the relevant noise management levels • With the potential to exceed relevant performance criteria for vibration. The assessments will confirm predicted impacts at relevant receivers in the vicinity of the activities to assist with the selection of appropriate management measures <p>Monitoring will be carried out at the start of new noise and vibration intensive activities to confirm that actual levels are consistent with the predictions.</p>	Section 4 of this OOHW Protocol

No.	Condition Requirements	Document Reference
UMM# NV10	Noisy work and vibration intensive activities (those activities that exceed the vibration criteria) will be scheduled during standard construction hours as far as possible. Works or activities that cannot be undertaken during standard construction hours will be scheduled as early as possible during the evening and/or night-time periods. Respite measures will be implemented for noisy work and vibration intensive activities in a manner consistent with the Roads and Maritime's Construction Noise and Vibration Guideline (Roads and Maritime, 2016).	Section 5 of this OOHW Protocol
UMM# NV13	The likelihood of cumulative and consecutive construction noise impacts, particularly when undertaken outside standard construction hours, will be reviewed prior to construction and coordinated with other nearby projects to minimise impacts, where possible.	Section 4 of this OOHW Protocol

3 OOHW Assessment Process

3.1 OOHW Justification

Construction work associated with the Project will be undertaken in accordance with the assessment and management approach outlined in the Interim Construction Noise Guidelines (ICNG).

The ICNG outlines the standard construction hours for the Project and requires that work proposed outside of these hours must be appropriately justified. These requirements are reflected in CoA E14 to E20 for the Project. In general, OOHW undertaken on public infrastructure projects, such as on road construction projects where the OOHW is necessary to sustain the operational integrity of roads, is considered justified in the ICNG.

As per CoA E16, OOHW not subject to an EPL that are regulated through this Protocol include:

- the delivery of materials required by the NSW Police Force or other appropriate authority for safety reasons; or
- the relevant road authority has advised the Proponent in writing that carrying out Work during the hours specified in Condition E14 would result in a high risk to road network operational performance and a road occupancy licence will not be issued during the hours specified in Condition E14; or
- where an approval is required for a controlled activity in accordance with the Airports Act 1996 and the approved time is outside the hours specified in Condition E14; or
- where the rail authority has advised the Proponent in writing that a Rail Possession is required and approval has been given to complete Work during the rail possession; or
- construction that causes:
 - a. LAeq(15 minute) noise levels no more than 5 dB(A) above the rating background level at any residence in accordance with the Interim Construction Noise Guideline (DECC, 2009);
 - b. LAeq(15 minute) noise levels no more than the 'Noise affected' noise management levels specified in Table 3 of the Interim Construction Noise Guideline (DECC, 2009) at other sensitive land used;
 - c. continuous or impulsive vibration values, measured at the most affected residence are no more than the preferred values for human exposure to vibration, specified in Table 2.2 of Assessing Vibration: a technical guideline (DEC, 2006);
 - d. intermittent vibration values measured at the most affected residence are no more than the preferred values for human exposure to vibration, specified in Table 2.4 of Assessing Vibration: a technical guideline (DEC, 2006); or
 - e. where negotiated agreements with directly affected residents and sensitive land uses have been reached.

3.2 OOHW Permit

For any proposed OOHW, the following process will be carried out:

1. An OOHW Permit will be prepared that summarises the activities, equipment required, location and duration and includes a detailed justification for works (in accordance with Section 3.1).
2. The OOHW Permit will be submitted to the Environment Team, who will undertake a noise and vibration assessment for the OOHW (refer to Section 4). Predicted noise impacts and appropriate mitigation measures will be determined as per Section 5 of this Protocol.
3. The JHSWJV Environment Manager will determine whether the justification for the OOHW works is satisfactory.

4. The OOHW Permit will be submitted to the ER/TfNSW for review. If deemed low risk, the ER will endorse the OOHW Permit and if deemed medium or high risk, approval will be sought from the Planning Secretary. See Section 6 for further details.

5. Community consultation and notification will be undertaken in accordance with the Project Communication Strategy, as outlined in Section 7 of this Protocol.

6. Monitoring will be undertaken in accordance with Section 9 of this Protocol and the Project's Construction Noise and Vibration Monitoring Program.

4 OOHW Noise & Vibration Assessment

4.1 Noise

To manage potential impacts from noise and vibration during OOHW, JHSWJV's noise and vibration specialists have developed an online 3D noise and vibration management tool (Gatewave, www.gatewave.com.au) that enables the prediction and assessment of potential noise and vibration impacts resulting from proposed OOHW in specific work areas, including identification of the likely occurrence of noise awakening events as detailed in the CNVMP.

This management tool provides assistance in managing noise and vibration impacts on sensitive receivers, based on the specific work areas and types of construction machinery operating in the work area. Gatewave will identify the potentially affected sensitive receivers, the predicted impacts and any additional mitigation measures required. To minimise cumulative noise impacts, Gatewave will also consider any other OOHW that is planned during the proposed OOHW.

The results of the OOHW noise assessment, including the selection of reasonable and feasible management measures from the CNVMP and ICNG will be considered by the JHSWJV construction team and the Environment Manager. This will be used to determine the appropriate approval pathway for the OOHW. Ongoing monitoring and validation of predictive outputs will be undertaken as detailed in the CNVMP (refer Section 5).

4.2 Vibration

If vibration intensive activities are proposed as OOHW and have the potential to impact on sensitive receivers or structures, they will be assessed for compliance with minimum working distances as defined in relevant Construction Noise and Vibration Impact Statements (CNVISs) including:

- Cosmetic structural damage impacts.
- Disturbance to building occupants due to vibration.

Ongoing monitoring and validation of predictive outputs will be undertaken as detailed in the CNVMP.

4.3 High Noise Intensive Works

In accordance with CoA E15, except as permitted by an EPL or approved under this Protocol, high noise intensive works that result in an exceedance of the applicable NML (i.e. 75dBA at residential receivers) at the same receiver will be undertaken:

- Between the hours of 8:00 am and 6:00 pm Monday to Friday.
- Between the hours of 8:00 am and 1:00 pm Saturday.

- If continuous, then not exceeding 3 hours, with a minimum cessation of work of not less than 1 hour. 'Continuous' includes any period during which there is less than one-hour respite between.

For OOHW subject to this Protocol that involves the use of highly noise intensive equipment, JHSW JV will consider, wherever reasonable and feasible:

- Use of alternative quieter plant and equipment,
- Planning works during less noise sensitive periods (e.g. try and complete highly noise intensive works as early in the night as possible),
- Schedule highly noise intensive equipment prior to 10 pm,
- Where the above cannot be achieved, the equipment will be used prior to midnight.

Note – there may be instances where high noise intensive works will be required after 10pm and/or midnight as outlined above. Examples where this might occur include specific conditions detailed in the Road Occupancy License (ROL), reinstating trafficable areas using whacker packers and asphaltting plant at the end of applicable shifts.

In accordance with CoA E19, to identify the appropriate respite periods for work proposed under this Protocol, JHSWJV will consult the community at each affected location. The affected locations will be identified from the Project's noise and vibration management tool (Gatewave) outputs for the proposed OOHW. The outcomes of the consultation and the noise management tool outputs will also be used to identify appropriate mitigation measures to be implemented for the proposed OOHW. The process for stakeholder consultation for OOHW is further detailed in Section 7.

4.4 Coordination of OOHW approved by an EPL

As part of the noise and vibration assessment process, JHSWJV will ensure all OOHW permitted by either an EPL or this protocol are co-ordinated to implement appropriate respite and/or mitigation measures for potentially affected sensitive receivers. OOHW Permits for works under an EPL will be reviewed and approved by JHSWJV Environment Manager, Community Engagement Manager and responsible engineer in accordance with any relevant OOHW conditions detailed in the Projects EPL.

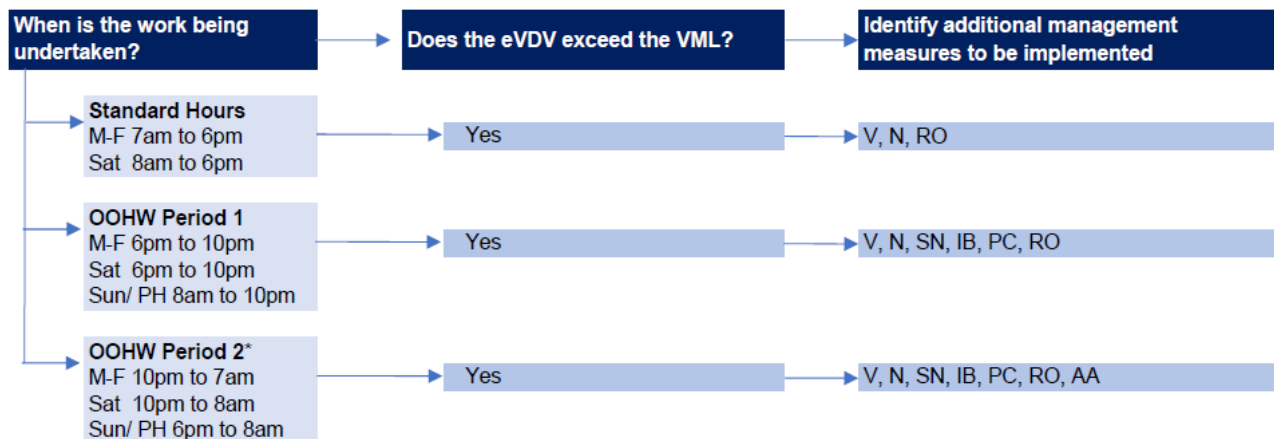
4.5 Coordination of OOHW undertaken by a third party

As part of the noise and vibration assessment process, JHSWJV will ensure all OOHW undertaken for the delivery of the CSSI, including works undertaken by a third party are co-ordinated to implement appropriate respite and/or mitigation measures for potentially affected sensitive receivers. Consultation will be undertaken with the Environment Manager, Community Engagement Manager and responsible engineer associated with works by a third party to ensure works can be coordinated to satisfy CoA E18(f) and E21.

5 OOHW Noise & Vibration Management and Mitigation Measures

Following the noise assessment process as described in Section 4, the most appropriate reasonable and feasible management measures will be determined in accordance with the ICNG. Table 5-1 and Table 5-2 detail the relevant additional mitigation measures from the Roads and Maritime's Construction Noise and Vibration Guideline (RMS CNVG) to be applied during OOHW as required.

Table 5-2 Triggers for Additional Mitigation Measures – Vibration



Notes: Use the abbreviation codes in the table above to confirm management measures required

* Where OOHW occur in the evening/night shoulder period (10pm to 12am) or the night/morning shoulder period (5am to 7am) apply additional airborne mitigation measures from the OOHW Period 2

N = Notification (should be issued a minimum of five working days prior to the start of works)
 SN = Specific notifications (issued no later than seven calendar days ahead of construction activities)
 IB = Individual briefing
 PC = Phone Call
 V = Verification of predicted noise levels
 AA = Alternative accommodation**
 RO = Project specific respite offer
 R1 = Respite period 1
 DR = Duration respite
 R2 = Respite period 2

** Where construction activity impacts receiver for more than two (2) nights over a seven (7) day rolling period (CoA E20).

6 Approval of OOHW not subject to an EPL

Refer to Annexure A for a flow chart of the approval process for OOHW not subject to an EPL.

When it is identified that OOHW are required and are not subject to an EPL, the engineer responsible for the work will submit an OOHW Permit to the JHSWJV Environment Team. This OOHW Permit will include details of the proposed activity and justification for the need to carry out the work as OOHW.

Following this, the noise and vibration assessment process as described in Section 4 will be undertaken by a member of the JHSWJV Environment Team for the proposed OOHW. The outcomes of the noise and vibration assessment, including relevant management measures, will be forwarded to the JHSWJV Environment Manager and Community Engagement Manager, who, will review the level of risk associated with the activity, the predicted impacts and the management measures to be implemented.

Once the OOHW Permit has been developed, it will be provided to the Environmental Representative (ER) for review and to confirm the risk level.

The proposed Out-Of-Hour Works (OOHW) are classified low risk if the noise assessment (including the assessment of sleep disturbance) as described in section 4 identifies works:

1. Meet the perception classification (table 5.1) of Noticeable;
2. Meet the perception classification (table 5.1) of up to Clearly Audible at any one residential receiver for a maximum of:
 - i. 2 consecutive evenings and/or nights per calendar week; and
 - ii. 3 evenings and/or nights per calendar week; and
 - iii. 10 evenings and/or nights per calendar month

The effect of the above facilitates two evening and/or night periods in a row and at least one period off before the third period that week. In accordance with CoA E18 (g)(ii), the Environmental

Representative (ER) has the authority to approve low risk OOHW activities. If the duration limitations outlined above cannot be achieved, the proposed OOHW will be classified medium/high risk. In this instance, the assessment of the proposed OOHW and the OOHW Permit will be issued to the Secretary for review and approval.

Following approval by the ER or the Planning Secretary, the approved OOHW Permit will be provided to the relevant construction team by the JHSW Environment Manager. On receipt of the approved OOHW Permit, any standard and additional mitigation measures that relate to the OOHW will be:

- Implemented prior to OOHW (such as specific conditions that relate to the community).
- Communicated to relevant workforce and site personnel before each shift to introduce/reinforce work restrictions, management measures and expected workforce behaviour.
- Implemented during OOHW and monitored by the JHSWJV Environment Team to confirm/validate the noise predictions where required by the permit.

Following the OOHW, JHSWJV will review any lessons learnt and monitoring data to help inform future OOHW activities and mitigation measures and minimise impacts.

Note – Works being conducted under the *Environmental Planning and Assessment (COVID-19 Development – Infrastructure Construction Work Days No. 2) Order 2020* (the Order), does not require approval from the ER, TfNSW or Planning Secretary.

7 OOHW Stakeholder Consultation and Communication

The Community and Stakeholder Team will use a range of communication tools to provide clear, effective and timely information to the predicted affected sensitive receivers and stakeholders. The method of communication will be chosen based on the nature of works and the potential impacts, as noted in Section 8.7 of the CNVMP.

In accordance with Section 3.7.2.2 of the TfNSW G36 specification, relevant sensitive receivers will be notified of upcoming planned OOHW detailing the location, nature, scope, duration, impacts and likely mitigation measures to be implemented for the proposed works. This will be conducted not less than 5 working days and not more than 10 working days, before commencing OOHW.

In addition to the above and in accordance with E19, where OOHW is predicted to exceed NML and vibration criteria detailed in the ICNG and *'Assessing vibration: a technical guideline'*, JHSWJV must consult with those impacted receivers on at least a 3 monthly basis. The consultation must include:

- A schedule of likely out-of-hours work for a period of no less than three (3) months.
- A description of the potential works, location and duration.
- The noise characteristics and likely noise levels of the works.
- Likely mitigation and management measures.

The outcomes of the 3 monthly community consultation, the identified respite periods and the scheduling of the likely out-of-hour Work will be provided to the EPA, ER and Planning Secretary for information within 2 weeks of undertaking the community consultation.

8 External Approval Authorities for OOHW

In accordance with CoA E18(g)iii), if the proposed OOHW (that is not subject to an EPL) includes medium or high risk activities, approval of the OOHW will be sought from the Secretary.

The EPA will be notified of all approved out-of-hours works with the Planning Secretary being informed of all low risk out-of-hours works in an agreed format during regular updates.

9 OOHW Monitoring

Noise and vibration monitoring of OOHW will be conducted as determined by Construction Noise and Vibration Impact Statements (CNVISs) or Construction Noise and Vibration Assessment (CNVA) reports generated by Gatewave (see Section 4.1). Additionally, monitoring will be conducted and documented in accordance with the Project's Construction Noise and Vibration Monitoring Program and serves to validate the predicted levels.

10 OOHW Noise and Vibration Exceedances

10.1 Management Response

Where monitored noise and vibration levels are found to be above modelling predictions or noise/vibration goals during OOHWs, the following actions will be undertaken:

- Identify whether the exceedance is caused from JHSW construction related sources.
- Confirm if the exceedance is due to an uncharacteristically loud/vibratory piece of equipment.
- Confirm that the modelling reflects the actual activity being undertaken.
- If determined to be caused by JHSW construction, cease the noise and/or vibration generating source causing the exceedance.
- Identify if the equipment can be swapped out for another piece of equipment or alternative equipment or plant, or if additional mitigation can be included in the site design.
- Implement other feasible and reasonable measures which may include reducing plant size, modifying time of works, changing operational settings (such as turning off the vibratory function of the machine), and utilising alternative construction methodology or a combination of these.
- Continue work where impacts can be reduced or if the exceedance is deemed minor i.e. does not trigger additional community mitigation measures to be implemented such as AA.
- Refine the noise modelling assessment process based on the learnings. For example, if noise or vibration predictions are lower/higher than expected, noise modelling would take this into consideration to more accurately predict impacts for future works.
- Communicate lessons learnt to relevant personnel.

10.2 Reporting

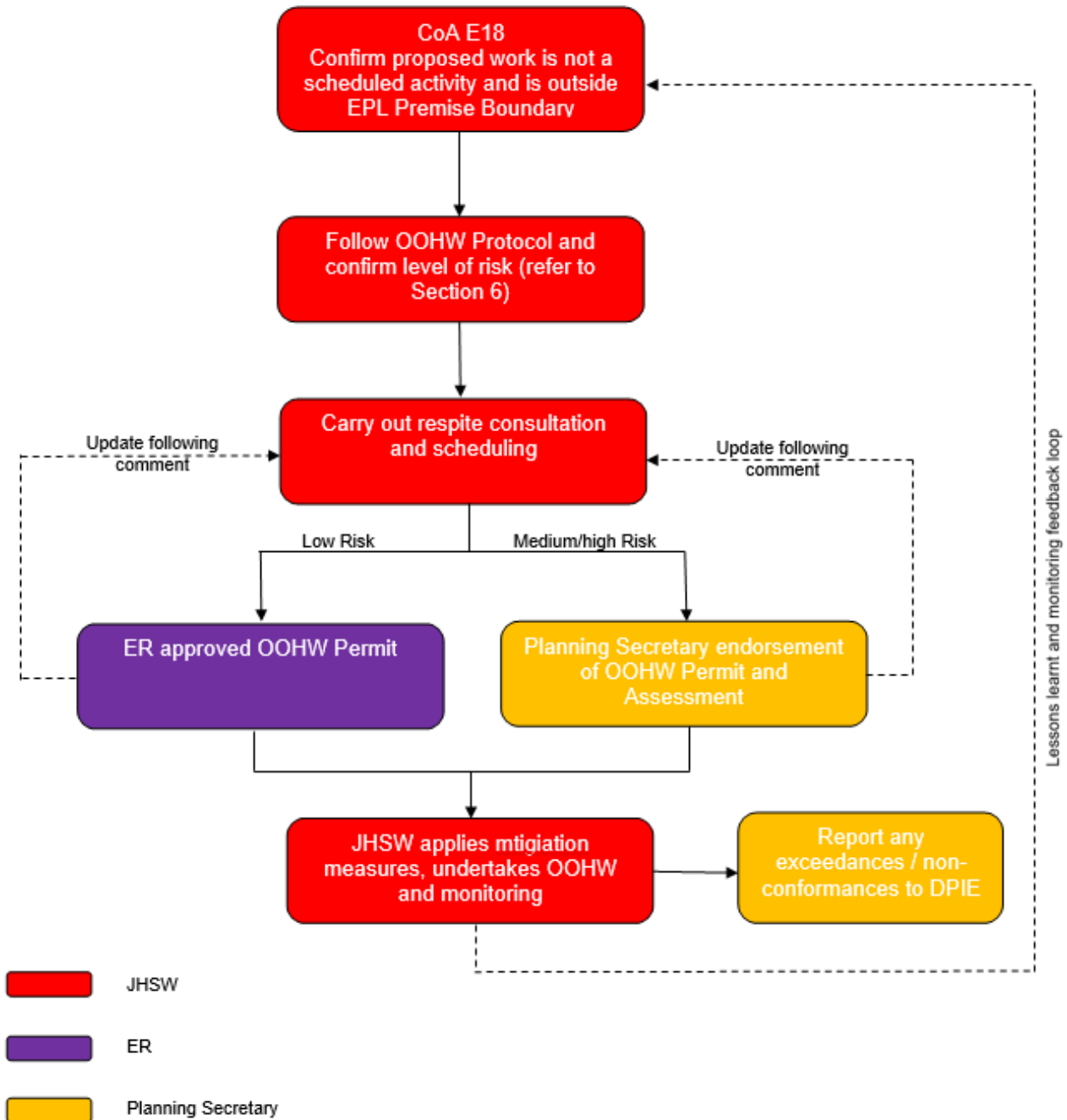
A noise and vibration related non-conformance for OOHW is defined as:

- Where a piece of plant/equipment is being used for OOHW which has not been assessed in noise/vibration modelling and is causing an exceedance of the predicted noise impacts at relevant sensitive receivers.
- Relevant noise and vibration mitigation measures have not been implemented for OOHW in accordance with the OOHW Permit or CNVMP and monitoring shows exceedance of the noise/vibration goals at relevant sensitive receivers.

All non-conformances will be reported in accordance with Section 3.10 of the CEMP.

Any noise and vibration complaints will be reported in accordance with the Project Communication Strategy.

Annexure A - JHSW Sydney Gateway Project OOHW Protocol Approval Flow Chart



Annexure B - Out of Hours Permit Template

OUT OF HOURS WORK PERMIT



Project Name: SYDNEY GATEWAY	Project Number: 11146
Location and Description of Works:	Plant Required:
Expected Duration:	Proximity to Sensitive Receivers:
Date/Time:	OOH Permit No:
ROL No:	Traffic HP No:

Requested date and applicant:

Tick	Category of Works	Actions Required
<input type="checkbox"/>	<p>TYPE 1 - DELIVERIES</p> <p>Delivery of material outside of normal working hours, where delivery at such times is required by the Police or other authorities for reasons of safety or otherwise</p>	<ol style="list-style-type: none"> 1. Document relevant authority instruction 2. Complete relevant sections of permit 3. Arrange delivery 4. Notify TfNSW and ER
<input type="checkbox"/>	<p>TYPE 2 - EMERGENCY</p> <p>Work during an emergency, where such work is necessary to avoid the loss of lives, property and/or prevent environmental harm</p>	<ol style="list-style-type: none"> 1. Proceed with the works as directed by the authorities or as necessary to avoid loss of life and/or property and environmental harm. 2. Notify TfNSW and ER 3. Document emergency details and works undertaken
<input type="checkbox"/>	<p>TYPE 3 - ROL</p> <p>A relevant road authority has advised in writing that carrying out Work during standard construction hours would result in a high risk to road network operational performance and a road occupancy licence will not be issued during standard construction hours</p>	<ol style="list-style-type: none"> 1. Document relevant road authority instruction/ROL 2. Undertake Noise Modelling 3. Complete community notifications 4. Complete relevant sections of permit 5. Obtain approval from Area Manager, Environment Manager and Community Manager 6. Forward to TfNSW and ER for approval
<input type="checkbox"/>	<p>TYPE 5 – Negotiated Agreement</p> <p>A negotiated agreement is in place with directly all affected residents and sensitive land uses</p>	<ol style="list-style-type: none"> 1. Document request justifying need to undertake works 2. Undertake Noise Modelling 3. Complete relevant sections of permit 4. Complete community notifications 5. Obtain approval from Area Manager, Environment Manager and Community Manager 6. Forward to TfNSW and ER for approval

OUT OF HOURS WORK PERMIT



<input type="checkbox"/>	<p>TYPE 6: $L_{Aeq(15\text{minute})}$ noise levels no more than 5dB(A) above RBL at any residence</p>	<ol style="list-style-type: none"> 1. Document request justifying need to undertake work; 2. Undertake Noise Modelling 3. Complete relevant sections of permit 4. Obtain approval from Area Manager, Environmental Manager and Community Manager 5. Forward to TfNSW and ER for approval
<input type="checkbox"/>	<p>TYPE 7: $L_{Aeq(15\text{minute})}$ noise levels no more than the 'noise affected' noise management levels</p>	<ol style="list-style-type: none"> 1. Document request justifying need to undertake work; 2. Undertake Noise Modelling 3. Complete relevant sections of permit 4. Obtain approval from Area Manager, Environmental Manager and Community Manager 5. Forward to TfNSW and ER for approval

Demonstrated Need for Out of Hours Work

Description and Justification of Proposed Out of Hours Works required and reason.
Include plant/equipment to be used.

Description
 This permit covers all works associated with the following activities:

Detail alternative methods of undertaking work:

Justification:

Noise Assessment
 A noise assessment has been completed for these works and JHSW concludes:
 (refer appendix A for noise assessment)

The noise activities associated with the works include:
 -

Mitigative Measures
 JHSW will adopt the following noise mitigation measure to minimise the impact of noise of nearby residents, these include:
 -

OUT OF HOURS WORK PERMIT



Location of Out of Hours Work:	Refer to plan in Appendix B			
Proposed Noise Mitigation Measures				
Noise Mitigation Measure	Reasonable (Y/N)	Feasible (Y/N)	Implement (Y/N)	Comments
Have you considered programming of noisy activities to reduce community impacts?				
Are there alternative plant or methods that can be used to reduce noise? e.g. using smaller equipment to do the job, or using a different (quieter) method to do the job				
Are non-tonal reverse beepers fitted and in use on all plant and vehicles?				
Can any temporary noise barriers be installed adjacent to the works?				
Can any "at residence treatments" be installed adjacent to the proposed works?				
Are/can plant be positioned onsite to reduce emission of noise to the surrounding neighbourhood?				
Are site access points and haul roads located away from sensitive receivers.				
Where possible, is construction equipment located in a position that provides the most acoustic shielding from buildings and topography.				

OUT OF HOURS WORK PERMIT



<p>Is equipment equipped with noise control measures i.e. mufflers, silenced exhausts acoustic enclosures for any diesel generators and/or air compressors etc.</p>				
<p>Are equipment and diesel combustion engines (including delivery and disposal trucks) turned off when not in use.</p>				
<p>Is machinery used appropriately sized to prevent overloading and associated over-revving?</p>				
<p>Are plant and equipment adequately and regularly maintained?</p>				
<p>Is traffic movement being kept to a minimum, e.g. ensure trucks are fully loaded so that the volume of each delivery is maximised, and the number of trips is therefore minimised.</p>				
<p>Is staff behaviour monitored to control unwanted noise such as loud radios, shouting and revving of engines. Are horn signals between drivers kept to a minimum?</p>				
<p>Are all acoustic screens/fences maintained appropriately? I.e. are all gaps between panels sealed, are gaps between the screen/fence and the ground sealed</p>				

OUT OF HOURS WORK PERMIT



Additional Attachments Required to Complete OOH Report for Submission to TfNSW			
Additional Attachment Title	Y?	N?	
<i>Noise Assessment</i>			
<i>Works Location</i>			
<i>Community Notification</i>			
<i>Road Occupancy Licence (ROL)</i>			
<i>Other:</i>			
Submit for Consideration	Name	Signature	Date

JHSW- Permit Approved for Submission by:

POSITION:	Project Engineer	Area Manager	Environmental Manager	Community Manager
NAME:				
SIGNATURE				
DATE:				

Forwarded to TfNSW and ER	BY:	DATE:
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Independent Environmental Representative – Permit Approved by:

Name: _____

Position: _____

Date: _____

Signature: _____

Risk Rating: _____

TfNSW – Permit Approved by:

Name: _____

Position: _____

Date: _____

Signature: _____

OUT OF HOURS WORK PERMIT



SYDNEY GATEWAY

A Joint Venture Project

JOHN HOLLAND BEYMOUR WHYTE

Appendix A: Noise Assessment

OUT OF HOURS WORK PERMIT



SYDNEY GATEWAY

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Appendix B: Works Location

OUT OF HOURS WORK PERMIT



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Appendix C: Community Notification

OUT OF HOURS WORK PERMIT



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Appendix D: Road Occupancy Licence