Out of Hours Work Protocol

Narromine to Narrabri CSSI 9487 MCoA E5

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Document Control

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Revision History

REVISION	REVISION DATE	DESCRIPTION OF CHANGES
0	10/07/2024	IRPL Developed OOHW Protocol
1	26/07/2024	ER Review – IRPL revised Protocol based on comments from Environmental Representative (ER)
2	12/09/2024	AA Review – IRPL Revised Protocol based on comments from Acoustics Advisor (AA)
3	04/02/2025	EPA Consultation Review – IRPL Revised Protocol based on comments from EPA

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Specific terms and acronyms used throughout this report are listed and described in the table below.

Table 1 Terminology

TERM	DEFINITION
AA	Acoustics Advisor
Ambient Noise	The all-encompassing noise associated within a given environment at a given time, usually composed of sound from all sources near and far
CoA	Conditions of Approval
dB(A)	Decibels using the A-weighted scale measured according to the frequency of the human ear
DPHI	Department of Planning, Housing and Infrastructure
EPA	Environment Protection Authority
ER	Environmental Representative
Highly noise affected	As defined in the Interim Construction Noise Guideline (DECC, 2009)
Highly noise intensive works	Works which are defined as annoying under the Interim Construction Noise Guideline (DECC, 2009) including: (a) use of power saws, such as used for cutting timber, rail lines, masonry, road pavement or steel work (b) grinding metal, concrete or masonry (c) rock drilling (d) line drilling (e) vibratory rolling (f) bitumen milling or profiling (g) jackhammering, rock hammering or rock breaking (h) impact piling
ICNG	Interim Construction Noise Guideline (DECC, 2009)
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
LIW	Work defined as low impact includes: (a) survey works including carrying out general alignment surveys, installing survey controls (including installation of global positioning system (GPS)), installing repeater stations, carrying out surveys of existing and future utilities and building and road dilapidation surveys; (b) investigations including investigative drilling, contamination investigations and excavation; (c) site establishment work approved under a Site Establishment Management Plan in accordance with Condition A24; (d) operation of ancillary facilities if the ER has determined the operational activities will have minimal impact on the environment and community; (e) treatment of contaminated sites subject to the recommendations of a Remediation Report prepared in accordance with Condition E165; (f) minor clearing and relocation of native vegetation, as identified in the documents listed in Condition A1; (g) installation of mitigation measures including erosion and sediment controls, temporary exclusion fencing for sensitive areas and acoustic treatments; (h) property acquisition adjustment work including installation of property fencing;

	(i) relocation and connection of utilities where the relocation or connection has been determined by the ER to have a minor impact to the environment; (j) establishing minor ancillary facilities in accordance with Condition A28; (k) archaeological testing under the Code of practice for archaeological investigation of Aboriginal objects in NSW (Department of Environment Climate Change and Water, 2010)or archaeological monitoring undertaken in association with Low Impact work to ensure that there is no impact on heritage items; (l) archaeological and cultural salvage undertaken in accordance with a strategy or salvage operation required by the conditions of this approval; (m) maintenance work to existing buildings and structures as required to facilitate the carrying out of the CSSI; and (n) other activities determined by the ER to have minimal environmental impact which may include construction of minor access roads (other than access roads' connection to the road network), temporary relocation of pedestrian paths and the provision of property access. Despite the above, the following works are not Low Impact Work: (i) where heritage items, or threatened species or their habitat, or threatened ecological communities (within the meaning of the Biodiversity Conservation Act 2016), are adversely affected or potentially adversely affected by any low impact work as defined in (a) to (n) above, that work is construction, unless otherwise determined by the Planning Secretary in consultation with Heritage NSW, EHG or DPI Fisheries (in the case of impact upon fish, aquatic invertebrates or marine vegetation); and (ii) any night time work that exceeds noise management levels as defined in the ICNG. The low impact work described in this definition becomes Construction with the approval of a CEMP. Where low impact work has already commenced, this is considered to remain as low impact work and is managed in accordance with the framework under which it commenced.
N2N	Narromine to Narrabri
OOHW	Out of Hours Works
Particularly annoying	a) use of 'beeper' style reversing or movement alarms, particularly at night-time b) use of power saws, such as used for cutting timber, rail lines, masonry, road pavement or steel work c) grinding metal, concrete or masonry d) rock drilling e) line drilling f) vibratory rolling g) rail tamping and regulating h) bitumen milling or profiling i) jackhammering, rock hammering or rock breaking j) Impact piling.
Planning Secretary	Planning Secretary of the Department (or nominee, whether nominated before or after the date on which SSI 9487 was granted).
RBL	The Rating Background Level for each period is the medium value of the RBL values for the period over all of the days measured. There is therefore an RBL value for each period (day, evening and night)
Sensitive Receiver	Includes residences, educational institutions (including preschools, schools, universities, TAFE colleges), health care facilities (including nursing homes, hospitals), religious facilities (including churches), child care centres, passive recreation areas (including outdoor grounds used for teaching), commercial premises (including film and television studios, research facilities, entertainment spaces, temporary accommodation such as caravan parks and camping grounds, restaurants, office premises, and retail spaces), and others as identified by the Planning Secretary
SPL	Sound Pressure Level

Sensitive land uses	Includes residences, educational institutions (including preschools, schools, universities, TAFE colleges), health care facilities (including nursing homes, hospitals), religious facilities (including churches), child care centres and passive recreation areas (including outdoor grounds used for teaching). Receivers that may be considered to be sensitive include commercial premises (including film and television studios, research facilities, entertainment spaces, temporary accommodation such as caravan parks and camping grounds, restaurants, office premises, and retail spaces), and industrial premises as identified by the Planning Secretary
Work (as defined by CoA Table 1)	Any physical work for the purpose of the CSSI including construction and low impact work but not including operational maintenance work

1 Introduction

1.1 Purpose and Scope

The Narromine to Narrabri (N2N) Project was approved by the Minister for Planning under Section 5.19 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) on 21 February 2023 (SSI-9487), and approved by the Federal Minister for the Environment under Section 133(1) of the *Environment Protection and Biodiversity Conservation Act 199*9 (EPBC Act) on 31 January 2024 (EPBC number:2018/8259), subject to Conditions of Approval (CoA).

NSW CoA E5 identifies the process for the consideration, management and approval of work which will occur outside of the standard construction hours defined in CoA E1. Inland Rail have identified the potential requirement for Out of Hours Work (OOHW) to carry out Low Impact Works (LIW) to facilitate preconstruction activities excluded from the construction definition in the Project Approval and outside of requiring an Environment Protection License under the *Protection of the Environment Operations Act 1997* (POEO Act).

Low impacts works are defined within CoA Table 1 as;

(a) survey works including carrying out general alignment surveys, installing survey controls (including installation of global positioning system (GPS)), installing repeater stations, carrying out surveys of existing and future utilities and building and road dilapidation surveys;

(b) investigations including investigative drilling, contamination investigations and excavation;

(c) site establishment work approved under a Site Establishment Management Plan in accordance with Condition A24;

(d) operation of ancillary facilities if the ER has determined the operational activities will have minimal impact on the environment and community;

(e) treatment of contaminated sites subject to the recommendations of a Remediation Report prepared in accordance with Condition E165;

(f) minor clearing and relocation of native vegetation, as identified in the documents listed in Condition A1;

(g) installation of mitigation measures including erosion and sediment controls, temporary exclusion fencing for sensitive areas and acoustic treatments;

(h) property acquisition adjustment work including installation of property fencing;

(i) relocation and connection of utilities where the relocation or connection has been determined by the ER to have a minor impact to the environment;

(j) establishing minor ancillary facilities in accordance with Condition A28;

(k) archaeological testing under the Code of practice for archaeological investigation of Aboriginal objects in NSW (Department of Environment Climate Change and Water, 2010) or archaeological monitoring undertaken in association with Low Impact work to ensure that there is no impact on heritage items;

(l) archaeological and cultural salvage undertaken in accordance with a strategy or salvage operation required by the conditions of this approval;

(m) maintenance work to existing buildings and structures as required to facilitate the carrying out of the CSSI; and

(n) other activities determined by the ER to have minimal environmental impact which may include construction of minor access roads (other than access roads' connection to the road network), temporary relocation of pedestrian paths and the provision of property access.

Despite the above, the following works are not Low Impact Work:

(i) *where heritage items, or threatened species or their habitat, or threatened ecological communities (within the meaning of the Biodiversity Conservation Act 2016), are adversely affected or potentially adversely affected by any low impact work as defined in (a) to (n) above, that work is construction, unless otherwise determined by the Planning Secretary in consultation with Heritage NSW, EHG or DPI Fisheries (in the case of impact upon fish, aquatic invertebrates or marine vegetation); and*

(ii) *any night time work that exceeds noise management levels as defined in the ICNG.*

The low impact work described in this definition becomes Construction with the approval of a CEMP. Where low impact work has already commenced, this is considered to remain as low impact work and is managed in accordance with the framework under which it commenced.

Inland Rail may require some components of works to take place outside of standard working hours due to worker and community safety reasons, operational constraints imposed by remote locations and the ability for contractors to undertake works on rosters.

This OOHW protocol has been developed to:

- Provide a process to justify and assess the impact of OOHW against relevant noise and vibration criteria, in consultation with the DPHI, EPA, ER and the AA.
- Define criteria to determine the risk of OOHW and the approval authority for OOHW.
- Determine the application of standard and additional noise and vibration mitigation measures based on defined criteria.
- Outline community consultation and other notification requirements.

1.2 CoA for OOHW

Table 2 Conditions of Approval relevant to OOHW

COA	CONDITION	REFERENCE IN THIS OOHW PROTOCOL
E1	Work must be undertaken during the following hours: (a) 7:00 am to 6:00 pm Mondays to Fridays; (b) 7:00 am to 6:00 pm Saturdays; and (c) at no time on Sundays or public holidays.	**Section 2.1**
E2	Despite Condition E1, work (excluding the use of Borrow Sites, Narrabri multi-function compound, Narrabri structure compound, and construction related heavy vehicles travelling on any road not zoned RU1 or SP2 (where adjacent to land zoned RU1) and establishment of the temporary workforce accommodation facilities) may be undertaken during the hours of 6:00 am to 6:00 pm each day provided: (a) no work affects any given receiver between the hours of 6:00 pm on a Saturday and 7:00 am on a Monday every second week; (b) only low impact noise activities are permitted between 6.00 am and 7.00 am; and (c) consultation with affected receivers occurs at least every three months, or more frequently following complaints recorded in the Complaints Register required by Condition B8 and as determined by the AA, to determine respite or additional mitigation measures. In consulting with the affected receivers, the following must be provided: (i) a progressive schedule of anticipated hours of works beyond those permitted by Condition E1 for periods of no less than three months; (ii) a description of the anticipated construction activities, location and duration of the work; (iii) the noise characteristics and likely noise levels of the work;	**Section 2**

	(iv) the practical measures implemented to minimise noisy work and heavy vehicle movements before 7:00am and any time on a Sunday; and (v) likely mitigation and management measures which aim to achieve the relevant noise management levels identified in the documents listed under Condition A1(including the circumstances in which respite or other offers will be available and details about how the affected receivers can access these). Evidence of consultation and the outcomes, including any changes to construction practices or staging, must be reviewed by the AA and ER and provided to the Planning Secretary on request.	
E3	Despite Conditions E1 and E2 work may be undertaken outside the hours specified in the following circumstances: (a) Safety and Emergencies, including: (i) for the delivery of materials required by the NSW Police Force or other authority for safety reasons; or (ii) where it is required in an emergency to avoid injury or the loss of life, to avoid damage or loss of property or to prevent environmental harm; or (b) Low impact noise activities, including: (i) construction that causes LAeq(15 minute) noise levels: • no more than 5 dB(A) above the rating background level at any residence in accordance with the ICNG, and • no more than the 'Noise affected' NMLs specified in Table 3 of the ICNG at other sensitive land uses; and (ii) construction that causes LAFmax noise levels no more than 15 dB(A) above the rating background level at any residence during the night period as defined in the Noise Policy for Industry (EPA, 2017); and (iii) construction that causes: • 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), or • 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 (c) By Approval or agreement, including: (i) where different construction hours are permitted or required under an EPL in force in respect of the CSSI; or (ii) works which are not subject to an EPL that are approved under an Out-of-Hours Work Protocol as required by Condition E5; or (iii) negotiated agreements with directly affected residents and sensitive land uses. On becoming aware of the need for emergency work in accordance with Condition E3(a)(ii) above, the ER, the Planning Secretary and the EPA must be notified of the reasons for such work. The Proponent must use best endeavours to notify as soon as practicable all noise and/or vibration affected sensitive land uses of the likely impact and duration of those work All negotiated agreements with owners and occupiers of sensitive land uses to carry out work in accordance with Condition E1(c)(iii) must be in writing, and include the hours, duration and likely noise levels compared to the Noise Management Level defined in the ICNG. The negotiated agreement must be agreed and finalised before the commencement of work affecting the sensitive land uses.	**Section 2 & 5**

E4	Except as permitted by an EPL or approved through an Out of Hours Work Protocol (for work not subject to an EPL), highly noise intensive work that results in an exceedance of the applicable NML at the same receiver must only be undertaken: (a) between the hours of 8:00 am to 6:00 pm Monday to Friday (excluding public holidays); (b) between the hours of 8:00 am to 1:00 pm Saturday; and (c) in continuous blocks not exceeding three hours each with a minimum respite of at least one hour between each block of highly noise intensive work. For the purpose of this condition, 'continuous' includes any period during which there is less than a one-hour respite between ceasing and recommencing any work that is the subject of this condition.	**Section 2, 3, 4 & 5**
E5	An Out-of-Hours Work Protocol must be prepared to identify a process for the consideration, management and approval of work which is outside the hours defined in Conditions E1 and E2, and that is not subject to an EPL. The Protocol must be approved by the Planning Secretary before commencement of any out-of-hours work. The Protocol must be prepared in consultation with the EPA. The Protocol must: (a) provide a process for the consideration of out-of-hours work against the relevant noise and vibration criteria, including the determination of low and high-risk activities; (b) provide a process for the identification and implementation of mitigation measures for residual impacts, including respite periods in consultation with the community at each affected location; (c) identify procedures to facilitate the coordination of out-of-hours work approved by an EPL to ensure appropriate respite is provided; (d) identify an approval process that considers the risk of activities, proposed mitigation, management, and coordination, including where: (i) the ER and AA review all proposed out of hours activities and confirm their risk levels; (ii) low risk activities can be approved by the ER, and (iii) high risk activities that are approved by the Planning Secretary; and (e) identify Department, EPA and community notification arrangements for approved out-of-hours work, which maybe detailed in the Communication Strategy.	**This Protocol**
E6	Noise generating work in the vicinity of potentially-affected community, religious, educational institutions and noise and vibration-sensitive businesses and critical working areas (such as theatres, laboratories and operating theatres) resulting in noise levels above the NMLs must not be timetabled within sensitive periods or during important events, unless other reasonable arrangements with the affected institutions or businesses are made at no cost to the affected institution or business or as otherwise approved by the Planning Secretary.	**Section 4**
E7	Mitigation measures must be implemented with the aim of achieving the following construction noise management levels and vibration criteria: (a) construction 'Noise affected' noise management levels established using the Interim Construction Noise Guideline (DECC, 2009); (b) vibration criteria established using the Assessing Vibration: A Technical Guideline (DEC, 2006) (for human exposure);	**Section 3**

	(c) Australian Standard AS 2187.2 - 2006 “Explosives - Storage and Use - Use of Explosives”; (d) BS 7385 Part 2-1993 “Evaluation and measurement for vibration in buildings Part 2” as they are “applicable to Australian conditions”; (e) the vibration limits set out in the German Standard DIN 4150-3: Structural Vibration- effects of vibration on structures (for structural damage), and (f) Project Noise Trigger Levels and maximum noise level event trigger levels established using the Noise Policy for Industry (EPA, 2017) for noise generated by mechanical plant and on-site vehicles at workforce temporary workforce accommodation facilities and borrow sites. Any work identified as exceeding the noise management levels and/or vibration criteria must be managed in accordance with the Construction Noise and Vibration Management Sub-plan required by Condition C6.	
E8	Owners and occupiers of properties at risk of exceeding the screening criteria for cosmetic damage must be notified before construction that generates vibration commences in the vicinity of those properties. If the potential exceedance is to occur more than once or extend over a period of 24 hours, owner and occupiers must be provided with a schedule of potential exceedances for the duration of the potential exceedances, unless otherwise agreed by the owner and occupier. These properties must be identified and considered in the Construction Noise and Vibration Management Sub-plan required by Condition C6.	**Section 4, 5 & 6**
E9	The Proponent must coordinate work with other Inland Rail projects, including any work to relocate or connect utilities conducted under any approval pathway, to minimise cumulative and consecutive noise and vibration impacts and maximise respite for affected sensitive receivers. Coordination and mitigation measures must be detailed in the Noise and Vibration Management Sub-plan required by Condition C6.	**Section 3 & Appendix A**

1.3 Mitigation Measures

The Construction Nosie and Vibration Mitigation Measures identified in the EIS Submission include the requirement below, relating to preparation of an OOHW Protocol.

Table 3 Applicable Construction Nosie and Vibration Mitigation Measures

REMM	MANAGEMENT MEASURE
CNV4	The Inland Rail NSW Construction Noise and Vibration Management Framework would be implemented, and the proposal would be constructed, with the aim of achieving the construction noise management levels and vibration criteria identified by the noise and vibration assessment. All feasible and reasonable noise and vibration measures would be implemented. Any activities that could exceed the construction noise management levels and vibration criteria would be identified and managed in accordance with the framework, the noise and vibration management plan and the

	construction noise and vibration impact statements. Notification of impacts would be undertaken in accordance with the communication management plan for the proposal.
CNV5	An out-of-hours work protocol would be developed to define the process for considering, approving and managing out-of-hours work, including implementation of feasible and reasonable measures and communication requirements. Measures would be aimed at pro-active communication and engagement with potentially affected receivers, provision of respite periods and/or alternative accommodation for defined exceedance levels. All work outside the recommended standard working hours would be undertaken in accordance with the Inland Rail NSW Construction Noise and Vibration Management Framework and in accordance with the out-of-hours work protocol. The protocol would provide guidance for the preparation of out-of- hours work plans for each construction work location and for key works, which would be prepared in consultation with key stakeholders (including the NSW EPA) and the community, and incorporated into the construction noise and vibration management plan.

2 Justification for OOHW

2.1 Project Construction Hours

Project construction hours for N2N are:

- 6:00am to 6:00pm each day provided the conditions in E2 are met.

Where the Conditions in E2 cannot be met, the project work hours are:

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

Highly Intensive Works

- 8:00am pm to 6:00pm Monday to Friday (excluding public holidays)
- 8:00am to 1:00pm Saturday

Note: Continuous blocks not exceeding three hours each with a minimum respite of at least one hour between each block of highly noise intensive work must be implemented.

Works between 6:00am to 6:00pm may be undertaken in accordance with CoA E2.

An assessment of all OOHW must be reviewed by the ER and AA prior to being undertaken.

OOHW assessment and approval is required for all work activities outside of the hours specified above.

Sections **2.3** and **2.4** provide further information on what constitutes emergency or other work and other justified OOHW that can take place with approval.

2.2 Variation to Project Construction Hours

In accordance with CoA E3, despite Conditions E1 and E2 work may be undertaken outside the hours specified in the following circumstances:

a) Safety and Emergencies, including:
(i) for the delivery of materials required by the NSW Police Force or other authority for safety reasons; or
(ii) where it is required in an emergency to avoid injury or the loss of life, to avoid damage or loss of property or to prevent environmental harm; or NSW Government 39 Department of Planning and Environment Conditions of Approval for Inland Rail – Narromine to Narrabri SSI 9487
b) Low impact noise activities, including:
(i) construction that causes LAeq(15 minute) noise levels:
- no more than 5 dB(A) above the rating background level at any residence in accordance with the ICNG, and
- no more than the 'Noise affected' NMLs specified in Table 3 of the ICNG at other sensitive land uses; and
- construction that causes LAFmax noise levels no more than 15 dB(A) above the rating background level at any residence during the night period as defined in the Noise Policy for Industry (EPA, 2017); and

(ii) construction that causes:
- 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), or
- 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

c) By Approval or agreement, including:
(i) where different construction hours are permitted or required under an EPL in force in respect of the CSSI; or
(ii) works which are not subject to an EPL that are approved under an Out-of-Hours Work Protocol as required by Condition E5; or
(iii) negotiated agreements with directly affected residents and sensitive land uses.

On becoming aware of the need for emergency work in accordance with Condition E3(a)(ii) above, the ER, the Planning Secretary and the EPA must be notified of the reasons for such work. The Proponent must use best endeavours to notify as soon as practicable all noise and/or vibration affected sensitive land uses of the likely impact and duration of those work.

All negotiated agreements with owners and occupiers of sensitive land uses to carry out work in accordance with Condition E3(c)(iii) must be in writing, and include the hours, duration and likely noise levels compared to the Noise Management Level defined in the ICNG. The negotiated agreement must be agreed and finalised before the commencement of work affecting the sensitive land uses.

Note: Section 5.24(1)(e) of the EP&A Act requires that an EPL be substantially consistent with this approval.

2.3 Emergency Works and Police escorted deliveries

CoA E3(a)(ii) allows for a variation to project work hours for OOHW that can be carried out without further approval in the following circumstances:

a) for the delivery of materials where required by the NSW Police Force or other authority for safety reasons
b) where it is required in an emergency to avoid injury or the loss of life, to avoid damage or loss of property or to prevent environmental harm.

As required by CoA E3, on becoming aware of the need for emergency work in accordance with CoA E3(a)(iii) above, the Inland Rail Environmental Manager (or delegate) will notify the project ER, AA, Planning Secretary (or delegate) and the EPA of

the reasons for such work. Inland Rail must then endeavour to notify all noise and/or vibration affected sensitive receivers of the likely impact and duration of those works.

2.4 OOHW requiring approval

Work associated with the Inland Rail Project will be undertaken generally in accordance with the CoA's. Where it is considered reasonable for work to be undertaken during project construction hours, OOHW proposals will not be considered justified and will not be considered further. These works would be undertaken during the project construction hours.

In relation to the Inland Rail Project this OOHW protocol considers valid reasons for work to be undertaken out of hours specified in Conditions E2 and E3 to include, but not be limited to:

- Ensuring the safety of the public and Inland Rail Project personnel
- Minimising disruption to the existing rail network and the network level of service
- Following directions by ARTC and/or relevant rail authority
- Minimising disruption to rail customers
- Minimising disruptions to essential services and utilities for surrounding businesses and adjoining residential receivers
- Work that shortens the length of the project and is supported by the affected community
- Technical and/or engineering justification that requires the work to be undertaken outside project work hours e.g. deck pours, concrete curing requirements, etc.

2.4.1 Low risk OOHW activities

The ER has the authority to approve low risk OOHW activities in consultation with the AA, following impact assessment described in Section 3.2 and classification as specified in Table 4 in accordance with one of the following requirements:

1) OOHW (including highly noise intensive activities) assessed to not exceed NML by more than 10dB at noise sensitive receivers OR
2) OOHW (including highly noise intensive activities) assessed to not exceed NML by more than 15dB at noise sensitive receivers
    a. Two consecutive evenings or nights, in a calendar week; or
    b. Three evenings or nights in a calendar week; and/or
    c. A maximum of 10 evenings or nights in a calendar month.
3) Where negotiated agreements with directly affected sensitive receivers have been agreed to the OOHW and mitigation measures proposed.

2.4.2 High risk OOHW activities

OOHW are considered high risk when the duration limitations outlined above cannot be achieved. In this instance, the OOHW assessment and application for high risk OOHW activities will be issued to the Planning Secretary for review and approval.

Table 4 OOHW approval delegation

APPROVAL DELEGATE	OOHW RISK CATEGORY
Inland Rail Environmental Manager or delegate (in consultation with the AA)	Justified OOHW where it is demonstrated that noise is not predicted to exceed the NML at the nearest receiver.
Inland Rail Project ER (in consultation with the AA)	Justified OOHW where it is demonstrated the OOHW is low risk
Planning Secretary	Justified OOHW where it is demonstrated the OOHW is high risk

2.5 Key OOHW application submission timeframes

In order to obtain approval for justified OOHW, a number of submissions might be required. Table 5 identifies the number of days in advance of that each OOHW application is required to be submitted to the relevant person within Table 5, based on the assessed risk category.

Table 5 OOHW submission timeframe

OOHW RISK CATEGORY	APPLICATION SUBMISSION TO	DAYS PRIOR TO OOHW
Equal to or less than NML	Inland Rail Environment Manager or delegate (in consultation with the AA)	7
Low risk	Inland Rail Environment Manager or delegate (in consultation with the AA)	14
	Environmental Representative (in consultation with the AA)	14
High risk	Inland Rail Environment Manager or delegate (in consultation with the AA)	28
	IRPL to provide high risk OOHW application to EPA (for information only)	28
	Planning Secretary	28

3 OOHW impact assessment and approval

Condition E7 lists the guidelines and standards for establishing project-specific noise and vibration criteria to guide the application of mitigation measures. The guidelines and standards adopted for the Inland Rail Project include:

(a) construction 'Noise affected' noise management levels established using the Interim Construction Noise Guideline (DECC, 2009);
(b) vibration criteria established using the Assessing Vibration: A Technical Guideline (DEC, 2006) (for human exposure);
(c) Australian Standard AS 2187.2 - 2006 "Explosives - Storage and Use - Use of Explosives";
(d) BS 7385 Part 2-1993 "Evaluation and measurement for vibration in buildings Part 2" as they are "applicable to Australian conditions";
(e) the vibration limits set out in the German Standard DIN 4150-3: Structural Vibration- effects of vibration on structures (for structural damage), and
(f) Project Noise Trigger Levels and maximum noise level event trigger levels established using the Noise Policy for Industry (EPA, 2017) for noise generated by mechanical plant and on-site vehicles at workforce temporary workforce accommodation facilities and borrow sites.

Note: The Interim Construction Noise Guideline identifies 'particularly annoying' activities that require the addition of 5 dB(A) to the predicted level before comparing to the construction Noise Management Level (NML).

3.1 Noise and vibration assessment criteria

Project-specific noise management levels (NMLs) and sleep disturbance criteria have been calculated within the Project area and are summarised in Table 6. Construction NML criteria for non-residential, commercial and industrial receivers have also been defined. Mitigation measures will be applied with regard to relevant thresholds as described in Section 4.

3.1.1 Noise management levels

Table 6 below (based upon Table 2 of the *NSW Interim Construction Noise Guideline* (DECC, 2009) (ICNG)) sets out the noise management levels and how they are to be applied to residential receivers.

Table 6 ICNG and N2N construction noise management levels at residential receivers

TIME OF DAY	NOISE MANAGEMENT LEVEL (NML) $L_{AEQ(15MIN)}$	HOW TO APPLY	PROJECT SPECIFIC NOISE MANAGEMENT LEVEL $L_{AEQ(15MIN)}$
Standard hours in accordance with Condition E1: **Monday to Saturday 7.00am to 6.00pm**	Noise affected RBL + 10 dB(A)	The noise affected level represents the point above which there may be some community reaction to noise. Where the predicted or measured $L_{Aeq\ (15\ min)}$ is greater than the noise affected level, the proponent should apply all feasible and reasonable work practices to meet the noise affected level. The proponent should also inform all potentially impacted residents of the nature of works to be carried out, the expected noise levels and duration, as well as contact details.	45
	Highly noise affected 75 dB(A)	The highly noise affected level represents the point above which there may be strong community reaction to noise. Where noise is above this level, the relevant authority (consent, determining or regulatory) may require respite periods by restricting the hours that the very noisy activities can occur, considering: • times identified by the community when they are less sensitive to noise (such as before and after school for works near schools, or mid-morning or mid-afternoon for works near residences) • if the community is prepared to accept a longer period of construction in exchange for restrictions on construction times	75
Outside recommended standard hours	Noise affected RBL + 5 dB(A)	A strong justification would typically be required for works outside the recommended standard hours. The proponent should apply all feasible and reasonable work practices to meet the noise affected level. Where all feasible and reasonable practices have been applied and noise is more than 5dB(A) above the noise affected level, the proponent should negotiate with the community. For guidance on negotiating agreements see section 7.2.2 of the ICNG.	35

3.1.2 Noise Management Levels - Other noise sensitive receivers

Table 7 sets out the noise management levels for various noise-sensitive land use developments, including commercial premises adopted from the ICNG. Internal (or indoor) noise management levels for land uses not identified in the ICNG are referenced to the 'maximum' internal noise levels presented in Australian Standard AS2107. The noise management levels presented in Table 7 are applicable where the premises are in use.

Table 7 presents a detailed, but not exhaustive list of typical 'other' land uses identified along the Project alignment. Where a land use has not been identified in Table 7, a suitable noise management level can be determined by taking guidance from Australian Standard AS2107.

As identified for residential receivers, where the predicted or measured $L_{Aeq(15\ min)}$ is greater than the noise management level, the proponent should apply all feasible and reasonable work practices to meet the noise management level.

Table 7 Airborne construction noise management levels at other noise sensitive land uses

LAND USE	NOISE MANAGEMENT LEVEL $L_{AEQ(15MIN)}$	WHERE NML APPLIES	REFERENCED FROM:
Classrooms at schools and other educational institutions	45 dB(A)	Internal noise level	ICNG
Hospital wards and operating theatres	45 dB(A)	Internal noise level	ICNG
Places of worship	45 dB(A)	Internal noise level	ICNG
Library (reading areas)	45 dB(A)	Internal noise level	AS2107 'maximum'
Community centres – Municipal Buildings	50 dB(A)	Internal noise level	AS2107 'maximum'
Railway platform and concourse areas	55 dB(A)	Internal noise level	AS2107 'maximum'
Passive recreation areas (e.g. area used for reading, meditation)	60 dB(A)	External noise level	ICNG
Active recreation areas (e.g. sports fields)	65 dB(A)	External noise level	ICNG
Commercial premises (including offices and retail outlets)	70 dB(A)	External noise level	ICNG
Industrial premises	75 dB(A)	External noise level	ICNG

3.1.3 Noise and vibration assessment

Vibration criteria has been adopted directly from the standards outlined in BS 5228-2:2009 Code of practice for noise and vibration on construction and open sites—Part 2: Vibration (British Standards Institute, 2008) forms the basis of vibration assessment criteria for the Project. German Standard DIN 4150-3: Structural Vibration- effects of vibration on structures would be considered in assessment of vibration where a heritage listed structure is present in poor condition. An adaptive approach to mitigation will be applied to vibration from OOHW including plant selection, plant substitution and consultation with affected receivers. Vibration criteria adopted for the Inland Rail project are summarised in **Appendix B**.

3.1.4 Noise assessment

A quantitative noise assessment of the proposed OOHW will be undertaken for all planned OOHW using an appropriately detailed noise prediction tool (the ARTC Noise Prediction Tool is to be used for pre-construction assessments). The assessment will predict the level and extent of noise impact that OOHW activities will have on potentially affected sensitive receivers based on inputs including distance from the worksite, and the types and number of construction machinery operating at any one time.

NMLs have been established for the N2N project (Table 6).

Quantitative noise assessments conducted for all OOHW will predict the potential exceedances of the OOHW scenario against the relevant NMLs and sleep disturbance screening criteria identified for potentially affected sensitive receivers. The assessment will include, but not be limited to:

1) Details of the nature and scope of each activity, including details of times, location of works, distance to nearest receivers, duration, vehicles, plant and equipment to be used
2) Justification of the selected construction and work methods, plant and equipment compared to alternatives taking into consideration noise and vibration impacts
3) An evaluation of the worst-case scenario for each affected receiver including:

- the addresses of the most affected noise sensitive receivers
- the background noise level at each receiver
- NMLs for each receiver
- the predicted LAeq (15 min) noise level, incorporating any 5 dB correction for particularly annoying activities as listed in the ICNG
- assessment of sleep disturbance against EIS construction noise assessment criteria (refer to Appendix B)
- The cumulative impact of other OOHW activities approved under this Protocol

4) The potential noise impacts for highly noise intensive works described in CoA E4 need to be considered in the assessment of OOHW proposals, highly noise intensive works are defined as the following:

- use of power saws, such as used for cutting timber, rail lines, masonry, road pavement or steel work;
- grinding metal, concrete or masonry;
- rock drilling;
- line drilling;
- vibratory rolling;
- bitumen milling or profiling;
- jackhammering, rock blasting, machinery ripping, rock hammering or rock breaking; and
- impact piling

5) Assessment against CoA E4 which requires that highly noise intensive works that result in an exceedance of the applicable NML at the same receiver must only be undertaken
    a) between the hours of 8:00am to 6:00pm Monday to Friday (excluding public holidays);
    b) between the hours of 8:00am to 1:00pm Saturday; and
    c) in continuous blocks not exceeding three hours each with a minimum respite of at least one hour between each block of highly noise intensive work.

Highly noise intensive works that is conducted outside of project construction hours requires an OOHW assessment (refer to flow chart Section 6). The assessment should be undertaken to consider the following principles:

- the equipment will be used before 10 pm where reasonable and feasible;
- where the above cannot be achieved the equipment will be used before midnight where reasonable and feasible.

3.1.5 Vibration assessment

An assessment of vibration intensive activities that may impact properties at risk of exceeding the screening criteria, sensitive receivers or cosmetic damage of structures will be required for out of hours vibration intensive work. The proposed out of hours work activities will be assessed for compliance with safe working distances for:

1) Human comfort impacts due to vibration. Assessments will be undertaken in accordance with the safe working distance guide in Appendix B. The safe working distances provided in Appendix B are indicative and will vary depending on the item of plant (particularly its power rating) and local geotechnical conditions. Consideration to these factors will be undertaken during the assessment of all vibration generating OOHW.

Prior to undertaking an assessment, all other feasible and reasonable options to use less vibration intensive equipment will be investigated and exhausted.

3.2 OOHW proposal risk classification and approval

3.2.1 Preparation of OOHW Application

All planned works outside of standard construction hours can only proceed where a comprehensive OOHW application has been prepared and approved. Appendix A of this OOHW protocol provides the application template to capture all necessary information for this process including:

- Relevant personnel details
- Detailed work description including location, activity, equipment required, duration etc.
- Valid justification
- Noise and vibration assessment against N2N Inland Rail Project specific criteria
- Review and endorsement of all OOHW applications by the Project AA, and concurrence on the determination of a risk category based on criteria in section 2.4
- Standard and additional mitigation measures to be adopted
- Identify procedures to facilitate the coordination of out-of-hours work approved by an EPL and how respite has been coordinated
- Details of community consultation including relevant feedback and how it has been addressed, and
- the status of any community agreements.

This information will be reviewed by the relevant approval delegate when considering whether proposed OOHW can proceed as documented, proceed on a conditional basis, or not proceed at all.

3.2.2 Risk classification and approval delegation

The approval process for justified OOHW will be determined on a risk-based case-by-case basis to ensure that OOHW is approved by the appropriate delegate in accordance with CoA E5.

The approval process for OOHW application follow the simplified steps detailed below:

1) The person/manager responsible for the works will prepare and submit an application form detailing the scope, need and justification for the works to the wider project team.
2) The Contractor's Environmental Team will undertake a noise and vibration assessment for the proposed activity.
3) The completed application form and supporting information is then provided to the ER and AA for review and concurrence on the risk classification and proposed reasonable and feasible mitigation and management measures.
4) Consultation with will be held with the following stakeholders, as appropriate:
   - Potentially affected sensitive receivers
   - Relevant Council (Narromine, Gilgandra, Narrabri, Coonamble, Warrumbungle)
   - NSW EPA
5) The complete endorsed and signed application form is then forwarded to the approval delegate based on the risk classification in Table 4.
6) Management and mitigation measures are to be planned for implementation and monitoring undertaken as required during the activity.

The overarching OOHW approval process is also captured in the flow chart in Section 6

Following assessment of the risk category classification of the proposed OOHW, justified OOHW applications will be reviewed by the ER and AA to confirm assessment and risk classification, and will then be referred to the approval delegate indicated in Table 4.

4 Application of mitigation measures

4.1 Standard mitigation measures

Reasonable and feasible standard mitigation measures will be implemented for all project works including OOHW where there is predicted to be impacts on sensitive receivers.

These measures include, but are not limited to:

- Modifying behavioural practices on site
- Equipment selection / maintaining and monitoring plant
- Use and siting of plant and hoardings
- Switching off plant and machinery when not in use
- Site inductions
- Use of non-tonal reversing alarms
- Stakeholder notification
- Planning noisier work to be carried out earlier in the period.
- Additional planning to reduce noise impacts.

4.2 Additional mitigation measures

Where construction noise and vibration levels are still predicted to exceed the noise or vibration objectives after the application of the standard mitigation measures, resulting in potential sleep disturbance or impacts from longer duration activities, additional mitigation measures will be implemented in consultation with affected sensitive receivers.

4.3 Communication (CO)

The level of noise and vibration impact and duration shall guide communication with receivers by the Contractor and/or ARTC. Accurate and timely communication is essential to manage and understand community expectations for out of hours works (OOHW).

Two categories of communication have been developed commensurate with the scale of the impact. The purpose of the communication is described below, but the method of communication will be at the discretion of the Contractor and detailed in the Contractor's Communications and Stakeholder Management Plan. It is intended that this Framework will compliment, and be referred to, in all relevant Communications and Stakeholder Management Plans to achieve the engagement outcomes described below.

- Category 1 CO1: Communication to provide information on the proposal via letter box drop, email, newsletter, media advertisements and/or website a minimum of 5 days and maximum of 14 days prior to the works commencing.
- Category 2 CO2: Communication should be personalised (e.g. door knock, meeting, telephone call). Contact with these residents should commence a minimum of 5 days and maximum of 14 days prior to the works commencing to enable feedback to be considered by the proposal.

At minimum the information provided to Stakeholders (CO1 or CO2) will include:

- The reason the Works are required to be undertaken outside of the standard program construction hours
- A diagram that identifies the location of the proposed works in relation to nearby cross streets and local landmarks
- The nature, scope and duration of the works, including start and finish times
- The expected noise impacts on receivers
- Information on how to obtain further information or make a complaint, including an after-hours number and Inland Rail Program website

4.4 Stakeholder Engagement Measures

Category 1 CO1: In order to meet the requirements of CO1, IR will undertake the following mitigation measures to demonstrate compliance with this OOHW Protocol: letter box drop, email where details exist and publish information on the works on the IR website.

Category 2 CO2: In order to meet the requirements of CO2, IR will attempt contact via the following means: phone call or email where contact details exist. If unsuccessful, IR will conduct one in person door knock during business hours. If unsuccessful IR will conduct a door knock out of hours and a calling card will be left for unsuccessful door knocks.

4.5 Respite Offer (RO)

Residential receivers subject to lengthy periods of noise or vibration may be eligible for a respite offer in accordance with Tables 8 & 9. The purpose of such an offer is to provide residents with respite from an ongoing impact and may comprise of pre-purchased movie tickets, dinner vouchers or similar.

Respite offers are not applicable to non-residential receivers.

Respite can also be provided by limiting high noise generating works and allowing at least a one-hour respite period between blocks of work. Where possible, the timing of this respite should be discussed with the impacted community.

4.6 Alternative Accommodation (AA)

Alternate accommodation options (i.e. accommodation in motels away from the worksite) may be provided for residents living in close proximity to construction sites in accordance with Tables 8 & 9 below.

Acceptable accommodation measures shall be developed by the Contractor and ARTC for the affected community and be approved by the ATRC Representative prior to discussion with the resident.

4.7 Assigning additional management measures

Tables 8 & 9 identify appropriate additional management measures for noise sensitive receivers by matching the predicted exceedance of the relevant management level to the appropriate management measures which serve to counter or mitigate that exceedance. The management levels are derived from the assessment process outlined in the relevant guideline or Standard.

Out of Hours Work (OOHW) has been divided into two periods (rest and sleep) in Tables 8 & 9 to recognise the different impact Works can have at those times.

Standard Program Construction Hours are listed in Section 2.1, and therefore only Works outside of this period are considered in Tables 8 & 9.

Project construction hours approved in the CoA's are also included within Table 8 & 9 for clarity.

Table 8 Additional Management Measures – Airborne Noise

TIME PERIOD	EXCEEDANCE OF NML	PERCEPTION	DURATION	COMMUNICATION CATEGORY/ MANAGEMENT MEASURE
OOHW Period 1: Monday – Saturday 6pm – 10pm	<5dBA	Noticeable	Any	CO1
	5-15 dBA	Clearly audible	Any	CO1
	16-25 dBA	Moderately intrusive	Any	CO1, CO2

Sunday and public holidays 8am – 6pm[2]	>25 dBA	Highly intrusive	Any	CO1, CO2
			>2 consecutive rest periods	CO1, CO2, RO
OOHW Period 2: Monday – Saturday 10pm – 7am Sunday and public holidays 6pm – 8am	<5 dBA	Noticeable	Any	CO1
	5-15 dBA	Clearly audible	Any	CO1
	16-25 dBA	Moderately intrusive	Any	CO1, CO2
			>2 consecutive sleep periods[1]	CO1, CO2, RO, AO
	>25 dBA	Highly intrusive	Any	CO1, CO2, RO
			>2 consecutive sleep periods[1]	CO1, CO2, RO, AO AA

(1) Additional mitigation measure to be applied for the duration of the relevant out of hours works period.
(2) Where condition E2 cannot be met.

Table 9 Additional Management Measures – Ground-borne Noise Management Measures – Ground-borne Noise

TIME PERIOD EXCEEDANCE OF NML	EXCEEDENCE OF NML	PERCEPTION	DURATION	COMMUNICATION CATEGORY/ MANAGEMENT MEASURE
OOHW Period 1: Monday – Saturday 6pm – 10pm Sunday and public holidays 8am to 6pm[2]	<5 dBA	Noticeable	Any	CO1
	5-15 dBA	Clearly audible	Any	CO1
	16-25dBA	Moderately intrusive	Any	CO1, CO2
	>25 dBA	Highly intrusive	Any	CO1, CO2
			>2 consecutive rest periods	CO1, CO2, RO
OOHW Period 2: Monday – Saturday 10pm – 7am Sunday and public holidays 6pm to 8am	<5 dBA	Noticeable	Any	CO1
	5-15 dBA	Clearly audible	Any	CO1
	16-25 dBA	Moderately intrusive	Any	CO1, CO2
			>2 consecutive sleep periods[1]	CO1, CO2, RO, AO
	>25 dBA	Highly intrusive	Any	CO1, CO2, RO
			>2 consecutive sleep periods[1]	CO1, CO2, RO, AO AA

(1) Additional mitigation measure to be applied for the duration of the relevant out of hours works period.
(2) Where condition E2 cannot be met.

4.8 Mitigation measures for other sensitive receivers

Noise generating work in the vicinity of sensitive receivers (including community, religious, educational institutions and noise and vibration-sensitive businesses and medical facilities) resulting in noise levels above the NMLs at critical working areas

(such as operating theatres and precision laboratories) will not be timetabled within sensitive periods, unless other reasonable arrangements with the affected receivers are made at no cost to the affected receivers.

5 Consultation and Notification

5.1 Project stakeholder notification

In accordance with CoA E5(e), The EPA and Planning Secretary are to be notified of all approved OOHW, including low impact works approved by the ER, approved application forms are to be issued to EPA and the Planning Secretary by appropriate means (Via DPHI Submissions Portal and nominated EPA Representative email) and detailed in the monthly AA Noise and Vibration Reports. In addition to this Protocol, the Narromine to Narrabri Communication Strategy (Low Impact Works) provides a detailed overview of how Inland Rail will engage with the community, including in advance of upcoming construction including out-of-hours works, in accordance with CoA B2(e).

5.2 Emergency work notification

On becoming aware of the need for emergency work in accordance with CoA E3(a) (i) or (ii), the Inland Rail HSE Manager (or delegate) will notify the Planning Secretary, project ER, AA and the EPA of the reasons for such work. Inland Rail will use best endeavours to notify all noise and/or vibration affected sensitive receivers of the likely impact and duration of those works.

5.3 Community consultation

Prior to carrying out OOHW that have the potential to impact noise sensitive receivers, consultation will be held with the following stakeholders, as appropriate:

- Potentially affected sensitive receivers
- Inland Rail Project Manager
- Inland Rail HSE Manager (or delegate)
- Australian Rail and Track Corporation (as applicable).
- Narrabri Shire Council (as applicable)
- Gilgandra Shire Council (as applicable)
- Narromine Shire Council (as applicable)
- Coonamble Shire Council (as applicable)
- Warrumbungle Shire Council (as applicable)

As required by the Narromine to Narrabri Communication Strategy (Low Impact Works) and CoA E9, consultation with the community at each location affected by OOHW will occur on a regular basis. The consultation will include, but not be limited to:

- Providing a schedule of likely OOHW for a period of no less than three months in advance
- Explaining potential work, location and duration
- Explaining reasons for the work to be done OOH
- Providing proposed respite periods
- Discussing noise characteristics and likely noise and vibration levels
- Discussing likely mitigation and management measures to be implemented

The outcomes of the community consultation, the identified respite periods and the scheduling of likely OOHW will be included in the assessment and mitigation measures as part of the OOHW application and provided to the ER, AA, EPA, Council and the Planning Secretary by Inland Rail with the application.

5.4 Community agreements

Where noise or vibration modelling for proposed OOHW shows that high risk factors and/or screening criteria is predicted to be exceeded, and the work would otherwise be subject to approval by the Planning Secretary, Inland Rail may enter into individual

voluntary agreements with all potentially affected sensitive receivers. The ER, in consultation with the AA, may then consider and approve the OOHW application as a low risk activity subject to the following.

- Community agreements must include all relevant information required for community consultation (refer 6.3), but also:
- Advise of the level and extent of the potential impact of the proposed OOHW
- Identify any unique measures or requirements agreed to by both parties (e.g. regular advice on the status of the OOHW by text message)
- Document the period in which the agreement remains in effect
- Provide a mechanism to review annually and/or revise the agreement where circumstances might have changed.
- >50% of sensitive receivers have entered into voluntary agreements with Inland Rail.

In these situations, the ER (in consultation with the AA) can only consider an application for OOHW to be categorised as a low risk activity if agreement with directly affected residents and land uses has been reached.

In circumstances where a sensitive receiver has no objections to the OOHW, but has indicated they do not wish to sign a written agreement, the ER can consider a communication record (or file note) of the verbal agreement. The record must include the date, time and place of the conversation and those in attendance. It must also include any special circumstances under which the receiver has advised that they are in agreement with the OOHW. The record must be signed by the N2N Inland Rail Project representative in attendance and an electronic copy retained. Details of identified receiver properties that have been deemed vacant or unoccupied are to be included in the consultation records.

All agreements would be recorded in accordance with the processes outlined in the N2N Communications Strategy (LIW) and captured in the Consultation Manager database. Any agreements made for the purposes of undertaking OOHW that might otherwise be categorised as a high risk activity would be made available to the ER and/or Planning Secretary on request.

5.5 Community notification

Community notifications will be used as a mitigation measure for receivers of potential noise and vibration impacts from OOHW.

Where OOHW have been scheduled, the Community Liaison Representative will notify the potentially affected noise sensitive receivers of upcoming OOHW.

Specific notifications of OOHW events will be issued to potentially affected sensitive receivers a minimum 5 days and maximum of 14 days prior to the OOHW commencing.

OOHW notifications will be prepared generally in accordance with the OOHW Protocol. The notifications will:

- Be undertaken by letterbox drop or email
- Clearly outline the reason that the work is required to be undertaken outside standard construction hours specified
- Include a diagram that clearly identifies the location of the proposed works in relation to nearby cross streets and local landmarks
- Include details of relevant time restrictions that apply to the proposed works
- Clearly outline in plain English, the location, nature, type of work, scope and days and dates and hours of the proposed works, including contingency for wet weather, cancellation of works and unforeseen delays
- Detail the expected noise impact of the works on potentially affected noise sensitive receivers
- Detail mitigation and management measures and proposed respite periods
- Clearly state how complaints may be made and additional information obtained
- Include the number of the 24-hour telephone complaints line, site contact (where available) and the Inland Rail Project website address.

In accordance with CoA E8, the Inland Rail Stakeholder Engagement team will notify the landowners and occupiers of properties at risk of exceeding the screening criteria for cosmetic damage prior to OOHW that generate vibration commencing near those properties. If the potential exceedance is to occur more than once, or extend over a period of 24 hours, landowners and occupiers are to be provided a schedule of potential exceedances on a monthly basis for the duration of the potential exceedances, unless otherwise agreed by the landowner and occupier.

6 Overview of the OOHW process

To undertake OOHW not permitted by Condition E2, the project team will be required to undertake a number of evaluation tasks, answer a series of questions and document these in an OOHW application for approval by the delegate, note that the AA and ER are to review all completed applications. Figure 1 explains the step-by-step process from justification to approval. OOHW requiring assessment and approval are defined in Section 2.4 of this Protocol.

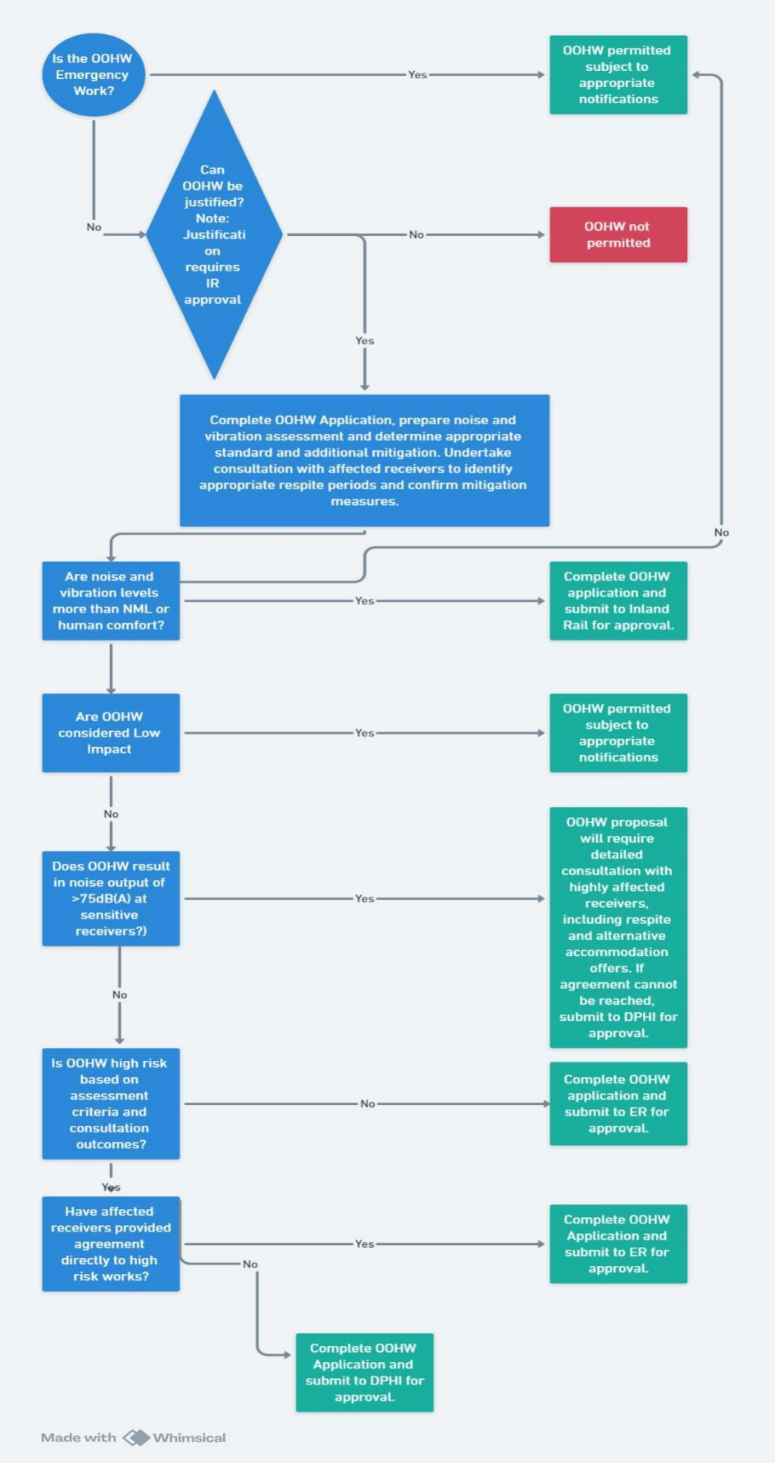

Figure 1 OOHW Approval Process Flow Chart

7 Monitoring and auditing

7.1 Monitoring of OOHW

The Contractor's Environmental Site Representative (or equivalent) will ensure the following OOHW noise and vibration monitoring

is undertaken:

- Attended noise monitoring at representative sensitive receivers in the first instance of an activity predicted to be moderately intrusive or worse (20 to 30 dB(A) above RBL)
- Attended vibration monitoring at representative sensitive receivers in the first instance of work where vibration generating plant are within safe working distances for cosmetic damage
- Additional noise and vibration monitoring and review if complaints about the activity are received and monitoring would assist with resolving the complaints.

All OOHW noise and vibration monitoring will be carried out by an appropriately trained person in the measurement and assessment of construction noise and vibration.

7.2 Complaints management

Complaints received as a result of the OOHW will be managed in accordance with the N2N Project Complaints Management System (CMS). On receipt of any complaints, an investigation will be undertaken and where feasible and reasonable, changes to the works implemented to address the issue of concern. Where relevant to the detail of the complaint, monitoring will be undertaken to confirm compliance with the noise levels identified in CoA E3, the predicted noise levels and predicted vibration levels

7.3 Exceedances / non-conformances

Where monitoring identifies any exceedances of the levels predicted in the OOHW assessment, a review of OOHW activities will be carried out to determine whether noise or vibration levels can be further reduced via additional feasible and reasonable measures.

7.4 Records

Accurate records of all OOHW applications and noise and vibration monitoring undertaken during OOHW will be maintained for the duration of the works.

Appendix A OOHW application form

Out of hours work approval request form			
No:	**Notification date:**	**Approval date:**	**Project:**
A. Contact details	**Name**	**Mobile number**	**Email**
Inland Rail HSE Site Representative			
Inland Rail Project Manager			
Contractor Project Manager			
Contractor Project Engineer			
B. Details of work: Include a map showing location of work extent and nearest sensitive receivers			
Location / chainages:			
RBL/s:			
Description of works – also include a brief description of the sequence of activities including justification of OOHW:			
Number of Machinery/ plant to be used			
Traffic control measures required:			
Lighting required:			
Proposed dates:			
Proposed times:			

Justification - why does work need to occur outside of project construction hours? **(attach support information as required)**		
Select OOHW Category as defined by CoA E3 – Safety and Emergencies	Select ☐ ☐	(a) **Safety and emergencies**, including: (i) for the delivery of materials required by the NSW Police Force or other authority for safety reasons; or (ii) where it is required in an emergency to avoid injury or the loss of life, to avoid damage or loss of property or to prevent environmental harm; or
	☐ ☐ ☐ ☐ ☐	(b) **Low impact noise activities**, including (i) Construction that causes $L_{Aeq(15\ minute)}$ noise levels: • No more than 5 dB(A) above the rating background level at any residence in accordance with the ICNG, and • No more than the 'Nosie affected' NMLs specified in Table 3 of the ICNG at other sensitive land uses; and (ii) Construction that cases L_{AFmax} noise levels no more than 15 dB(A) above the rating background level at any residence during the night period as defined in the Noise Policy for Industry (EPA, 2017); and (iii) Construction that causes: • 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), or • 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
	☐ ☐	(c) **By Approval or agreement**, including: (i) Where different construction hours are permitted or required under an EPL in force in respect of the CSSI; or (ii) Works which are not subject to an EPL that are approved under an Out-of-Hours Work Protocol as required by Condition E5; or

	☐	(iii) Negotiated agreements with directly affected residents and sensitive land uses.

C. Risk assessment	
NML (refer Table 6 & 7 of OOHW protocol)	
Is the work highly noise intensive work (E4)?	Yes ☐ No ☐ *If yes, the work can only proceed if it complies with the following:* (a) between the hours of 8:00 am to 6:00 pm Monday to Friday (excluding public holidays); (b) between the hours of 8:00 am to 1:00 pm Saturday; and (c) in continuous blocks not exceeding three hours each with a minimum respite of at least one hour between each block of highly noise intensive work. *Comments*:
Out of hours work approval request form	
Risk factor category (refer section 2.4 of OOHW protocol):	*Other* *Low* *High* *Comments:*
D. Details of noise or vibration assessment completed (Include any sleep disturbance assessment):	
Comments:	
E. Proposed mitigation measures, including respite	
Comments:	
F. Community consultation	
Outline consultation proposed to be undertaken for the proposed OOHW:	

Has the outcome of community consultation, the identified respite periods and scheduling of likely OOHW been provided to the ER, AA and Planning Secretary as required?
G. Respite framework
Outline any previous respite within the last month and the status of community agreements (where relevant)?
Have cumulative impacts from OOHW permitted by an EPL or third party works been considered during the development of appropriate respite?
H. Details of non-residential sensitive receivers (if any) and corresponding NMLs
Comments:
Out of hours work approval request form
I. Are there any properties at risk of exceeding the screening criteria (Appendix B minimum distances for vibration intensive equipment) for cosmetic damage?
Comments:
I. Review / Endorsements

Inland Rail Community Liaison Representative	Community notified	Date:
	Additional consultation requirements:	
	Have the works been reviewed and endorsed?	Yes / No

	Name:	Signature:	Date:
	Comments:		
Inland Rail Environmental Manager (or delegate)	Agreed mitigation measures:		
	Have the works been reviewed and endorsed? Yes / No Can the works be approved as Low impact noise activities in accordance with E3(b) Yes / No		
	Name:	Signature:	Date:
	Comments:		
Project Acoustic Advisor (low risk activities)	Agreed mitigation measures:		
	Confirm Risk Level:		
	Have the works been reviewed and endorsed? Yes / No Have the works been approved where neither low nor high risk (predicted to be <NML and below cosmetic damage vibration screening criteria)? Yes / No		
	Name:	Signature:	Date:
	Comments:		
Inland Rail Project Manager	Have the works been reviewed and endorsed? Yes / No Have the works been approved where neither low nor high risk (predicted to be <NML and below cosmetic damage vibration screening criteria)? Yes / No		
	Name:	Signature:	Date:
	Comments:		

ER approval (low risk activities)	Are the works approved? Yes / No		
	Name:	Signature:	Date:

	Comments:		
Planning Secretary approval (high risk activities)	Are the works approved?		Yes / No
	Name:	Signature:	Date:
	Comments:		

Appendix B Noise and Vibration Criteria

Note:

1. The *Noise Policy for Industry* (NSW EPA, 2017a) defines day as the period from 7am to 6pm Monday to Saturday and 8am to 6pm on Sundays and public holidays. Evening is defined as the period from 6pm to 10pm. Night is defined as the remaining period.
2. The *Noise Policy for Industry* states that where the rating background level is less than 30 dB(A) then it is set to 30 dB(A). The *Noise Policy for Industry* also states that the evening rating background level should not be higher than the day-time level, and that the night-time rating background level should not be higher than the evening level.

MINIMUM WORKING DISTANCES FOR VIBRATION INTENSIVE EQUIPMENT—HUMAN COMFORT

Plant item	Minimum distance based on BS 5228-2.2009[1] (metres)	Minimum distance based on AVTG[2] (metres)			
		Day preferred value (0.2 m/s)	Day maximum value (0.4 m/s)	Day preferred value (0.13 m/s)	Day maximum value (0.26 m/s)
Roller	90	220	89	160	65
15 tonne vibratory roller	140	310	130	230	94
7 tonne compactor	90	220	89	160	65
Dozer	60	130	54	94	39
Backhoe	10	23	9	17	7
Excavator	25	57	24	42	18
Piling (impact)	700	1590	670	1170	490
Piling (vibratory)	110	770	110	150	83
Piling (bored)	120	280	120	210	85

GUIDELINE VALUES FOR SHORT-TERM VIBRATION ON STRUCTURES

Group	Structure type	Guideline values vibration velocity (mm/s)[1]		
		Frequency of 1 to 10 hertz	Frequency of 10 to 50 hertz	Frequency of 50 to 100 hertz
1	Buildings used for commercial purposes, industrial buildings, and buildings of similar design	20	20 to 40	40 to 50
2	Dwellings and buildings of similar design and/or occupancy	5	5 to 15	15 to 20
3	Structures that have a particular sensitivity to vibration, e.g. heritage-listed buildings	3	3 to 8	8 to 10

There is potential for sleep disturbance where night works are located close to residential receivers. Where construction works are planned to extend over more than two consecutive nights, the *Interim Construction Noise Guideline* (DECC, 2009) recommends the assessment should cover the maximum noise level from the proposed works. If a screening

test indicates a potential for sleep disturbance, then a detailed maximum noise level assessment should be undertaken. The detailed assessment should cover the maximum noise level, the extent to which the maximum noise level exceeds the rating background level, and the number of times this happens during the night-time period. A summary of the sleep disturbance criteria is provided in Table B8.3.

TABLE B8.3 SLEEP AWAKENING AND DISTURBANCE CRITERIA

Criteria	L_{Amax} criteria	Assessment location
Sleep awakening	55 dB(A)	Internal
Sleep disturbance screening level	52 dB(A)	External

CONSTRUCTION GROUND-BORNE NOISE MANAGEMENT LEVELS

Time period	Ground-borne noise management level $L_{Aeq(15\ min)}$
Evening (6pm to 10pm)	40 dB(A)
Night-time (10pm to 7am)	35 dB(A)

GUIDELINE VALUES FOR SHORT-TERM VIBRATION ON STRUCTURES

		Guideline values vibration velocity (mm/s)[1]		
Group	Structure type	Frequency of 1 to 10 hertz	Frequency of 10 to 50 hertz	Frequency of 50 to 100 hertz
1	Buildings used for commercial purposes, industrial buildings, and buildings of similar design	20	20 to 40	40 to 50
2	Dwellings and buildings of similar design and/or occupancy	5	5 to 15	15 to 20
3	Structures that have a particular sensitivity to vibration, e.g. heritage-listed buildings	3	3 to 8	8 to 10

Appendix C Mitigation measure definitions

Standard notification for OOHW

Standard notifications of OOHW will be issued to potentially affected sensitive receivers a minimum 5 days and maximum of 14 days prior to the OOHW commencing. The notification will include:

- potential work, location and duration
- proposed respite periods
- noise characteristics and likely noise and vibration levels
- likely mitigation and management measures
- the name and contact telephone number of the Community Liaison Representative's representative to enable potentially affected sensitive receivers to lodge any concerns about extended working hours.

OOHW notifications will be prepared in accordance with the OOHW Protocol and Communications Strategy for LIW.

Additional Mitigation Measures – (Where construction noise and vibration levels are still predicted to exceed the noise or vibration objectives after the application of the standard mitigation measures)

Specific notifications

Specific notifications will be provided in the form of letterbox drops (or equivalent), email, newsletters, media advertisements, door knocks and meetings to identified stakeholders no later than five days ahead of OOHW that are predicted likely to exceed the noise objectives. The specific notification provides additional information when relevant and is informative to more highly affected receivers than what is covered by a standard notification.

Phone calls

Phone calls to potentially affected sensitive receivers detailing relevant information will be made within five working days and no less than 48 hours prior to the proposed OOHW. Phone calls provide potentially affected sensitive receivers with personalised contact and tailored advice, with the opportunity to provide comments on the proposed OOHW and specific needs. The responses of sensitive receivers will be addressed to ensure an optimum outcome is achieved regarding mitigation of OOHW impacts. Where the resident cannot be telephoned then an alternative form of engagement will be used.

Individual briefings

Where required, individual briefings will be used to inform affected sensitive receivers about the impacts of OOHW and mitigation measures that will be implemented. Where required, the Community Liaison Representative will visit potentially affected sensitive receivers at least 48 hours ahead of the proposed OOHW. Individual briefings provide potentially affected sensitive receivers with personalised contact and tailored advice. Contact with sensitive receivers will be documented and concerns addressed where feasible and reasonable.

Where there are many sensitive receivers predicted to be above the NML and it is not practical to discuss the proposed OOHW with every resident, or the resident cannot be met with individually, then an alternative form of engagement will be used.

Respite Offers

Respite Offers will be considered where noise and/or vibration levels are predicted to be moderately or

highly intrusive, or exceed maximum vibration levels, respectively, at affected sensitive receivers to provide residents with respite from an ongoing impact. Work will 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 will be flexible to accommodate the usage of and amenity at nearby receivers. The purpose is to provide residents with respite from an ongoing impact. This measure will be evaluated on an event-by-event basis, and may not be applicable to all OOHW events.

Respite Periods

Inland Rail will identify appropriate respite periods for the OOHW in consultation with the community and AA at each affected location, in accordance with CoA E2.

Consultation with affected receivers will occur at least every three months or more frequently following complaints, and Inland Rail will provide the following:

- a progressive schedule of anticipated hours of works beyond those permitted by Condition E1 for periods of no less than three months;
- a description of the anticipated construction activities, location and duration of the work;
- the noise characteristics and likely noise levels of the work;
- the practical measures implemented to minimise noisy work and heavy vehicle movements before 7:00am and any time on a Sunday; and
- likely mitigation and management measures which aim to achieve the relevant noise management levels identified in the documents listed under Condition A1 (including the circumstances in which respite or other offers will be available and details about how the affected receivers can access these).

Alternative accommodation

Alternative accommodation options may be offered to residents living in close proximity to construction works who are likely to experience highly intrusive noise levels, as determined by the AA.

Verification

Verification should include measurement of the background noise level and construction noise (and vibration where considered a risk factor). Monitoring would be undertaken in accordance with Section 7.1 of this protocol.