Procedure

OUT-OF-HOURS-WORK PROTOCOL

P810060-EN-PL-TL-ALL-003

Project Name: Mount Piper to Wallerawang Transmission Line Upgrade

Project Location: Central West region of NSW within the Lithgow City Council Local Government Area (LGA).

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Document Approval

	Position Title	Name	Date
Approved	Project Director	Karl Littlemore	25/09/2026

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Bringing our Reconciliation Action Plan to life

"We recognise Aboriginal and Torres Strait Islander peoples as the Traditional Owners and Custodians of this land, and we pay our respects to Elders past, present and emerging."



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Compliance Tables

Table 1 - Revised Environmental Mitigation Measures (REMMs) from EIS

ID	Environmental Measures	Applicable Section
NV5	A project-specific OOHW protocol will be developed to define the process for considering, approving and managing OOHW. The protocol will include provisions to:	This document
	• confirm and verify proposed noise level impacts for specific work activities proposed outside standard construction hours, including the potential for sleep disturbance impacts	Section 5.3
	• confirm and verify the potentially affected sensitive receivers and the standard and additional mitigation measures that will be applied to such receivers	Section 5.4.2
	• additional mitigation measures will be applied to affected sensitive receivers impacted by sleep disturbance for more than two consecutive nights	Section 5.4.2, Table 4
	• notify and engage with potentially noise affected receivers about upcoming work outside standard construction hours and address any associated complaints	Section 8
	• identify appropriate respite for noise affected receivers (where required)	Section 5.4.2, Table 4
	• proactively communicate and engage with affected receivers.	Section 8

Table 2 - Department of Planning, Housing and Infrastructure - Conditions of Approval

ID	Conditions	Applicable Section
B11	Prior to the commencement of construction, the Proponent must prepare a Noise and Vibration Management Plan to the satisfaction of the Planning Secretary. The plan must:	Noise and Vibration Management Plan
(h)	Include an Out-of-Hours Work Protocol to identify a process for the consideration, management and approval of works outside the hours defined in condition B1, which must:	This Document
	(i) be prepared in consultation with the relevant Council;	Section 0
	(ii) identify low risk activities that can be undertaken without the approval of the Planning Secretary and with the approval of the ER;	Section 0 Table 5 Section 5.1
	(iii) identify high risk activities that must be approved by the Planning Secretary; and	Section 0 Table 5 Section 5.1
	(iv) identify Department, Council and community notification arrangements for approved out of hours work	Section 8

GLOSSARY

Term/Acronym	Definition
Ancillary facility	A temporary facility for construction for the Project including an office and amenities compound, construction compound, materials storage compound, and material stockpile area.
Annoying Activities	As defined by the Interim Construction Noise Guideline to include: • use of 'beeper' style reversing or movement alarms, particularly at night-time • 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 • rail tamping and regulating • bitumen milling or profiling • jackhammering, rock hammering or rock breaking • impact piling
Approved hours	7 am to 6 pm Monday to Friday and 8 am to 1 pm Saturday, with no work on Sundays or NSW public holidays, as specified in Condition B1 unless the Planning Secretary agrees otherwise. Applies to pre-construction minor works, construction, demolition, upgrading or decommissioning activities.
Attenuation	The reduction in the level of sound or vibration.
A-weighting, dBA	The unit of sound level, weighted according to the A-scale, which takes into account the increased sensitivity of the human ear at some frequencies.
CEMP	Construction Environmental Management Plan
CCS	Community Consultation Strategy
CNVIS	Construction Noise and Vibration Impact Statement
CNVMP	Construction Noise and Vibration Management Plan
CoA	Conditions of Approval
Completion of construction	The date upon which construction is completed and all requirements of the Planning Secretary (if any) have been met. If construction is staged, completion of construction is the date upon which construction is completed and all requirements of the Planning Secretary (if any) have been met, in respect of all stages of construction.
Construction	All physical work to enable operation, including but not limited to the construction of transmission infrastructure and ancillary facilities carried out before the commencement of operation, excluding pre—construction minor works.
Contractor	Any contractor or subcontractor appointed to the Project
Council	Lithgow City Council
DECC	Department of Environment and Climate Change
DECCW	Department of Environment, Climate Change and Water
Decibel (dB)	A scale for comparing the ratios of two quantities, including sound pressure and sound power. The difference in level between two sounds s1 and s2 is given by 20 log10 (s1 / s2). The decibel can also be used to measure absolute quantities by specifying a reference value that fixes one point on the scale. For sound pressure, the reference value is 20μPa.
DPHI	Department of Planning, Housing and Infrastructure
EIS	The Environmental Impact Statement titled Mount Piper to Wallerawang Transmission Line Upgrade Project Environmental Impact Statement prepared by NSW Electricity Networks Operations Pty Ltd (Transgrid).
Emergency Works	Unforeseen works immediately needed to prevent the loss of life, damage to property or environmental harm.
Environment	Includes all aspects of the surroundings of humans, whether affecting any human as an individual or in his/her/their social groupings

EBP	Environmental Business Partner, must also be a suitably qualified or experienced professional
EP&A Act	Environmental Planning and Assessment Act 1979 (NSW)
EP&A Regulation	Environmental Planning and Assessment Regulation 2000 (NSW)
EPA	NSW Environment Protection Authority
EPL	Environment Protection Licence under the POEO Act
Fast/Slow Time Weighting	Sound level meter response settings that determine how quickly measured sound levels respond to changes in noise.
Feasible and reasonable	Feasible relates to the consideration of best practice, taking into account the benefit of proposed measures and their technological and associated operational application in the NSW and Australian context, engineering considerations and what is practical to build. Reasonable relates to the application of judgement in arriving at a decision, taking into account mitigation measures, the cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements.
Free-Field	Far from the presence of sound reflecting objects (except the ground), usually taken to mean at least 3.5m
Heritage item	A place, building, work, relic, archaeological site, tree, movable object or precinct of heritage significance that is listed under one or more of the following registers: the State Heritage Register under the Heritage Act 1977 (NSW), a heritage item registered under a Local Environmental Plan under the EP&A Act, the World, National or Commonwealth Heritage lists under the Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth), and an Aboriginal object or Aboriginal place as defined in section 5 of the National Parks and Wildlife Act 1974 (NSW).
ICNG	Interim Construction Noise Guideline (DECC, 2009)
Incident	An occurrence or set of circumstances that causes or threatens to cause material harm which may or may not be, or cause a noncompliance.
Land	Has the same meaning as the definition of the term in section 1.4 of the EP&A Act
Landowner	Has the same meaning as “owner” in the Local Government Act 1993 and in relation to a building means the owner of the building
LGA	Local Government Area. Area of administration of Council.
L90,15minute	A noise level index. The noise level exceeded for 90% of the time over a 15-minute period. L90 can be considered to be the “average minimum” noise level and is often used to describe the background noise.
Leq,15minute	A noise level index called the equivalent continuous noise level over a 15-minutes period T. This is the level of a notional steady sound that would contain the same amount of sound energy as the actual, possibly fluctuating, sound that was recorded.
Lmax,T15minute	A noise level index defined as the maximum noise level during a 15-minute period. Lmax is sometimes used for the assessment of occasional loud noises, which may have little effect on the overall Leq noise level but will still affect the noise environment. Unless described otherwise, it is measured using the ‘fast’ sound level meter response.
Maximise	Implement all reasonable and feasible mitigation measures to achieve the specified outcome
Minimise	Implement all reasonable and feasible mitigation measures to reduce the impacts of the SSI
Minister	NSW Minister for Planning and Public Spaces
Minor	Not very large, important or serious
Monitoring Program	Construction Noise and Vibration Monitoring Program
Negligible	Small and unimportant, such as to be not worth considering
NML	Project Specific Noise Management Level as derived from the Interim Construction Noise Guideline (2009)
Non-compliance	An occurrence, set of circumstances or development that is a breach of this approval
NSW Vibration Guideline, the	NSW Department of Environment and Conservation – NSW Environmental Noise Management – Assessing Vibration: a Technical Guideline (the NSW Vibration Guideline), February 2006.
OOH	Out of Hours – All periods which are not Standard Construction Hours
OOHW	Out of Hours Works

OOHW Protocol	Out of Hours Work Protocol
POEO Act	Protection of the Environment Operations Act 1997 (NSW)
Planning Secretary	Planning Secretary of the DPHI
Privately-owned land	Land that is not owned by a public agency
Project	The Mount Piper to Wallerawang Transmission Line Upgrade Project
Project Area	The area subject to disturbance and/or infrastructure development, as shown on the project layout plans
Proponent	Transgrid
Public infrastructure	Linear and related infrastructure that provides services to the general public, such as roads, railways, water supply, drainage, sewerage, gas and fuel supply, electricity, telecommunications, etc.
RBL	The Rating Background Level for each period is the median value of the Assessment Background Level values for the period over all of the days measured. There is therefore an RBL value for each period (day, evening and night)
Relevant council	The council of the land on which works are to be carried out
Residence	Existing or approved dwelling
Residential zones	As defined by the relevant Local Environment Plan including Zone R1 General Residential, Zone R2 Low Density Residential, Zone R3 Medium Density Residential, Zone R4 high Density Residential
Respite Period	Any period which highly noise intensive works are not undertaken
RoL	Road Occupancy Licence
Sensitive periods	Period of time determined in consultation with affected sensitive receiver
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), active recreation areas (including parks and sports grounds). 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, and others as identified by the Secretary
SSI	The State Significant Infrastructure (the Project), as generally described in Schedule 1 of the Infrastructure Approval
Standard Construction Hours	7 am to 6 pm Monday to Friday, and 8 am to 1 pm on Saturdays. No work Sundays or public holidays
Sub-plans	Sub Plans to the CEMP requiring the approval the Secretary of the Department of Environment and Planning under Conditions including traffic and transport, noise and vibration, vegetation and biodiversity, soil and water, heritage, public infrastructure and waste.
Suitably qualified or experienced professional	An individual with demonstrated experience in construction noise and vibration prediction, assessment under the ICNG/CNVG and NSW vibration guidance, sleep-disturbance assessment, cumulative impact assessment and noise/vibration monitoring.
TfNSW	Transport for New South Wales
Works	Any physical activity for the purpose of the development including construction and pre-construction minor works.

1. INTRODUCTION

Transgrid proposes to deliver a new 330 kilovolt (kV) transmission line of approximately 8 kilometres (km) in length between the Mount Piper and Wallerawang 330 kV substations (referred to as 'the Project'). The project was declared Critical State Significant Infrastructure on 4 July 2024 and is subject to approval by the NSW Minister for Planning and Public Spaces under Part 5, Division 5.2 of the Environmental Planning and Assessment Act 1979 (NSW) (EP&A Act). The project was deemed a controlled action on 2 August 2024 under the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) and also requires approval from the Commonwealth Minister for the Environment and Water. Transgrid has appointed Zinfra as the Principal Contractor to construct and deliver this project.

Transgrid has prepared an Environmental Impact Statement (EIS) to address the Secretary's Environmental Assessment Requirements (SEARs), and supplementary SEARs addressing EPBC Act matters.

The Construction Environmental Management Plan (CEMP), and its associated sub plans builds on the EIS to detail all environmental aspects for the project ensuring compliance with approval conditions. The CEMP has also been developed in alignment with Transgrid's Environmental Policy. The policy outlines Transgrid's commitment to environmental protection, pollution prevention, responsible resource use, and full compliance with all relevant legislation and approval conditions.

This Out-of-Hours-Work (OOHW) Protocol forms part of the Construction Noise and Vibration Management Plan (CNVMP) for the Mount Piper to Wallerawang Transmission Line Upgrade (the Project), building on the EIS and Conditions of Approval (CoAs). It provides a structured, auditable, and proactive framework to manage noise and vibration risks throughout construction, ensuring impacts are reduced so far as reasonably practicable.

1.1 Purpose

This Protocol will be used to address the relevant requirements of the COAs (CoA SSI-70279722) Mitigation Measures and applicable legislation. This Protocol will be submitted to the Planning Secretary of the Department of Planning Housing and Infrastructure (DPHI) before the commencement of the Project Works.

The purpose of the OOHW is to:

- Describe how Zinfra will manage potential impacts associated with OOHW during construction of the Project.
- Provide a structured framework to identify, assess, and manage noise and vibration emissions
- Define roles, responsibilities, and accountabilities for all personnel involved in OOHW.
- Outline pre-construction and construction monitoring requirements and control measures.
- Ensure compliance with relevant legislation, approval conditions, and industry best practice.

1.2 Context

In order to complete the Project, a number of activities will be undertaken outside standard construction hours where required to meet project and third-party operational constraints or to make use of defined work windows, including network outages, rail corridor shutdowns and approved road closures, noting that an outage may also be recalled at short notice to meet network demands. General construction activities that have been nominated outside of standard construction hours, are outlined in Section 6.2 and Table 20 of the CNVMP. The CNVMP outlines each construction scenario and the number of affected receivers. Justification for undertaking these works out of hours includes:

- works in proximity to live transmission lines requiring the work to be completed under a scheduled outage for network stability and worker safety
- network security and reliability constraints associated with the existing transmission network that require the works to be completed in an outage window
- an outage recall where the transmission line would be re-energised at short notice to meet network demands
- works required for stringing of conductors undertaken in planned rail shutdowns, as scheduled by rail operators, and during partial or full local road closures, as agreed with Lithgow City Council.

As OOHW have the potential to impact on the amenity of adjacent noise and vibration sensitive receivers, these works require assessment and approval prior to commencement. This OOHW Protocol defines the process for that assessment and approval for all OOHW associated with the Project

2. CONSULTATION

2.1 Consultation for OOHW Protocol Preparation

Consultation with Lithgow City Council and EPA was undertaken during the development of this protocol to seek input on the management of OOHW. The responses received, and how the issues raised were addressed, are provided to the Planning Secretary with the supporting documentation in the Consultation Report (Rev 0, 03/09/2026), in accordance with Condition A20. Consultation will be undertaken in accordance with Section 8 of this Protocol and the process outlined in the Community Consultation Strategy (CCS).

2.2 Ongoing consultation

Any ongoing consultation and notification will be undertaken in accordance with Section 8 of this OOHW Protocol. Community feedback and complaints relating to noise and vibration will be managed in accordance with the CCS.

3. CONSTRUCTION HOURS

3.1 Standard Construction Hours

OOHW are any works that are undertaken outside of the approved hours as defined in the Condition B1 as:

- 7 am to 6 pm Monday to Friday.
- 8 am to 1 pm Saturdays; and
- At no time on Sundays and NSW public holidays.

Unless the Planning Secretary agrees otherwise.

3.2 Exceptions To Standard Construction Hours

Condition B2 of CoA recognises that there are times where works outside the standard construction hours (as described above) may be required, including:

(a) the delivery or dispatch of materials as requested by the NSW Police Force or other public authorities for safety reasons.

(b) emergency work to avoid the loss of life, property or prevent material harm to the environment.

(c) development activities carried out in accordance with the hours, and noise limits specified in any negotiated agreements with sensitive receivers (owners and occupiers), provided the negotiated agreements are in writing and finalised before the commencement of the development activities.

(d) activities that do not result in noise affected sensitive receivers, as defined in Interim Construction Noise Guidelines (ICNG) (DECC, 2009) (or its latest version).

(e) road upgrades required by the relevant road authority to be undertaken outside the standard construction hours.

(f) where a rail authority requires a rail possession for the activities to be performed outside of standard construction hours.

(g) pre-construction minor works, construction and or upgrading that require a network outage on another distribution or transmission network, and the operator of the network requires the outage and associated works outside standard construction hours.

(h) where different hours are permitted or required under an Environment Protection Licence (EPL) in force in respect of the development; or

(i) pre-construction minor works, construction and or upgrading works carried out in accordance with an OOHW Protocol in accordance with condition CoA B11.

Activities (a) to (h) are permitted under Condition B2 where the circumstances described in the relevant item are met. These activities are classified as Category 1 (Permitted) under Table 5 and do not require approval from the Environmental Representative or the Planning Secretary. They are authorised by the Environmental Business Partner (EBP) or delegate through an OOHW Permit. Where an activity does not strictly meet the circumstances of items (a) to (h), it will be categorised and approved in accordance with Section 6 and Table 5 under item (i).

3.3 Negotiated Agreements

As per Condition B2 (SSI-70279722), construction activities carried out in accordance with the hours and noise limits specified in any negotiated agreements with sensitive receivers (owners and occupiers), provided the negotiated agreements are in writing and finalised before the commencement of the construction activities. Zinfra will proactively communicate and engage with affected receivers. Zinfra will notify and engage with potentially noise affected receivers about upcoming work outside standard construction hours and address any associated complaints.

Where negotiated agreements are to be implemented, Zinfra will follow the CCS to engage with local stakeholders affected by these agreements. An agreement may be proposed by either Zinfra or an affected stakeholder. The affected owners and occupiers must be consulted in line with the CCS. Information on the activity will be provided

during negotiation and before consent, including proposed dates, hours, activities, predicted impacts and mitigations. Participation in an agreement is voluntary and shall include written acceptance by all relevant parties. The agreement is recorded and retained on the Project file and by the authorised signatories. Processes for variation, withdrawal and complaints shall be undertaken in line with the CCS, with agreement to be finalised before the relevant OOHW starts. Any such agreement and the applicable CNVIS will be attached to the OOHW Permit. A negotiated agreement does not remove the requirement for an OOHW Permit.

4. OOHW Periods

The OOHW permit will identify the period that the activity is planned to occur which is used to identify the appropriate risk and mitigation measure required.

Figure 1 - Proposed project construction hours and OOHW

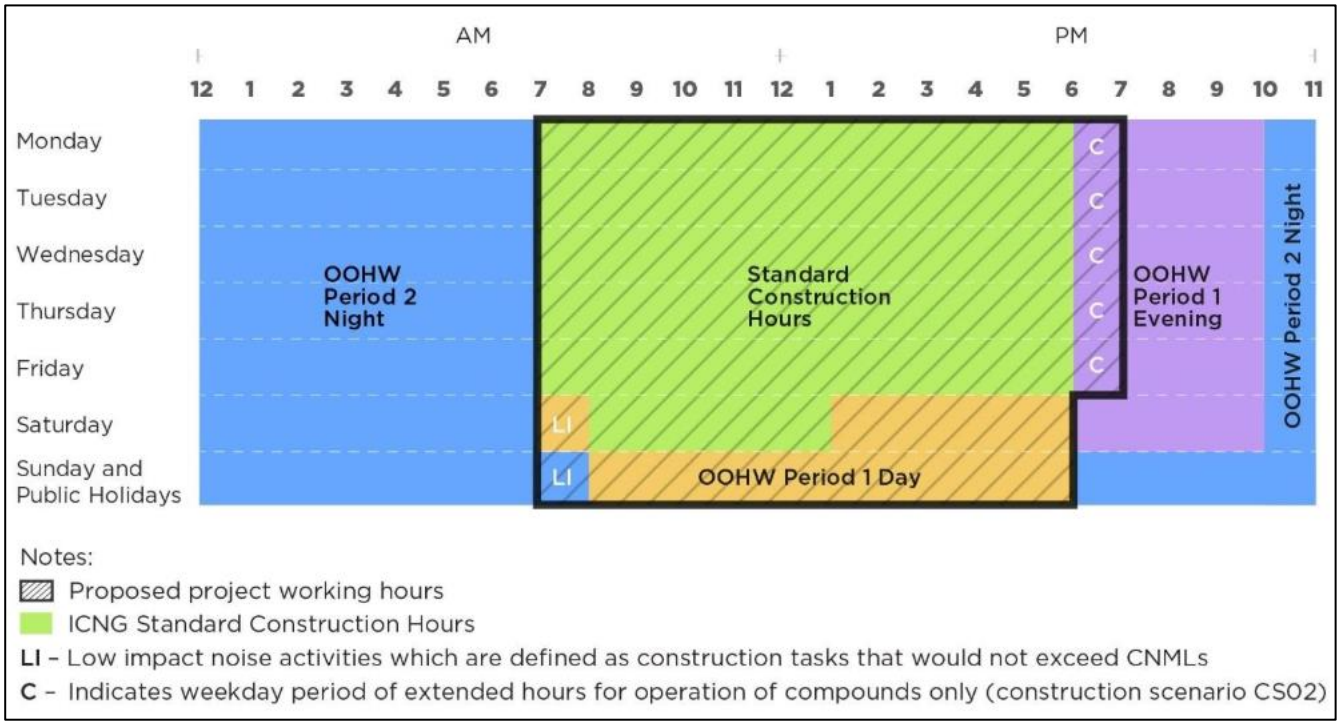


Table 3 - Construction hours and OOHW hours

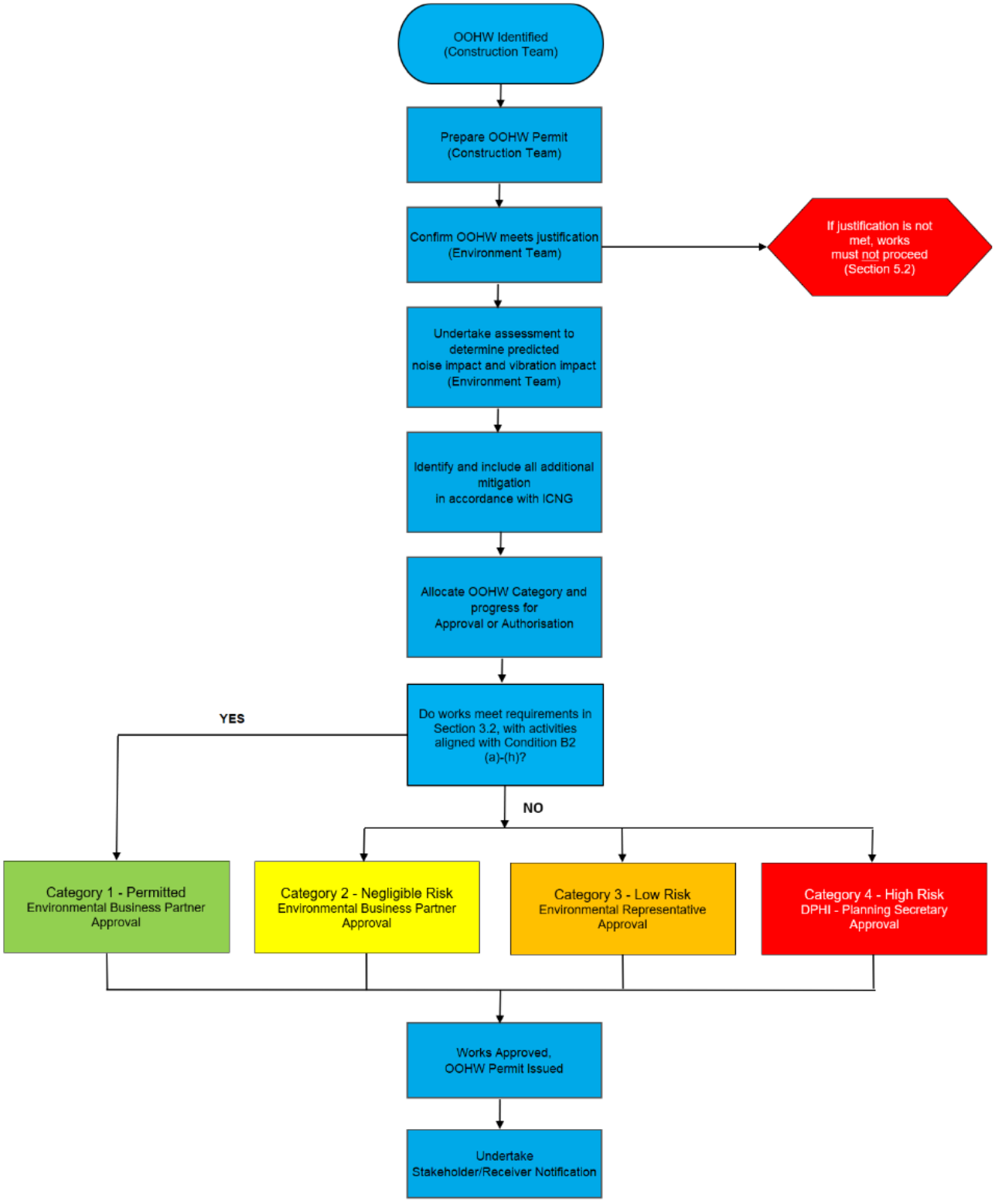
Project construction work hours	OOHW Period	OOHW working hours
Proposed project work hours	Period 1 - Day	• 7am to 8am Saturday (only for construction tasks that would not exceed Construction Noise Management Levels (CNMLs)) • 1pm to 6pm Saturday • 8am to 6pm Sunday
	Period 1 – Evening	• 6pm to 7pm Monday to Friday (use of construction compounds only)
	Period 2 - Night	• 7am to 8am Sunday (only for construction tasks that would not exceed CNMLs)
Additional OOHW hours – (as a result of power outages, outage recalls, rails shutdown periods, local road closure licence requirements)	Period 1 – Evening	• 6pm to 10pm Monday to Saturday
	Period 2 - Night	• 10pm to 7am Monday to Saturday • 6pm to 7am Sunday and public holiday

5. OOHW ASSESSMENT

5.1 OOHW Permit

Every proposed activity outside standard construction hours must be managed through an OOHW Permit, including activities permitted under Condition B2, negotiated agreements, emergency works, and activities internally authorised by the EBP. The permit process ensures that out-of-hours activities are properly assessed, authorised, and managed to minimise potential impacts. The process for obtaining an OOHW Permit is outlined below.

Figure 2 - OOHW Permit Process Flow Chart



In case of emergency works, an OOHW Permit may be completed or formally recorded as soon as reasonably practicable where prior completion is not possible.

Preparation

An OOHW Permit will be prepared for any proposed works outside standard construction hours. The permit will include sufficient information to describe the proposed activity, including the nature of the works, equipment to be used, location, anticipated duration, and the justification for undertaking the works outside standard construction hours.

Review and Assessment

The EBP (or nominated delegate) will review the Permit to ensure the proposed works are justified and that potential environmental impacts have been appropriately assessed. This review will include:

- confirmation that there is a valid justification for undertaking the works outside approved hours
- identification of nearby sensitive receivers that may be affected by the activity
- Review cumulative impacts from other projects within the vicinity of the Project. Ensure that upcoming OOHW have been discussed with other project teams and check for roadworks by Transport for NSW (TfNSW) and the local Council.
- assessment of potential noise and vibration impacts, including cumulative impacts where relevant, and determination of the associated risk level to sensitive receivers (refer to Section 0)
- identification of appropriate mitigation measures based on the predicted impacts and risk level
- confirmation of whether the works require external approval or can be internally authorised in accordance with this Protocol
- verification that the proposed works are consistent with the relevant Conditions of Approval and the requirements of this Protocol.

Approval or Authorisation

Once the assessment has been completed, the OOHW Permit will be submitted to the appropriate authority or nominated project representative for approval or authorisation. The decision will consider:

- the adequacy of the justification for undertaking the works outside standard hours
- the suitability of the noise and vibration assessment
- the effectiveness and appropriateness of the proposed mitigation measures.

Notification

As outlined in Section 8, affected receivers will be notified prior to the commencement of OOHW activities. The exception to this would be Emergency works. The type and extent of notification will depend on the predicted noise and vibration levels, the associated risk level, and the mitigation measures identified in the OOHW Permit, with consideration given to the requirements of the ICNG.

5.2 Justification

The ICNG outlines categories of work that may be undertaken OOH. Generally, the following reasons are considered to justify OOHW:

- To sustain the operational integrity of the wider associated transmission network
- Where disruption to essential services and/or considerations of worker safety do not allow work within standard hours
- Where OOHW shorten the length of construction and are supported by the affected community
- Works where a proponent demonstrates and justifies a need to operate outside the recommended standard hours

- Where works are required to be completed continuously, such as for technical and quality requirements (for example, concrete pour of foundation piles)
- Where works do not result in adverse impacts to noise and vibration affected sensitive receivers.

Review and acceptance of the justification will form part of the external approval or internal authorisation process, as described in Section 5.1.

5.3 Impact Assessment

For every proposed OOHW activity, a Construction Noise and Vibration Impact Statement (CNVIS) will be prepared to identify potential noise and vibration impacts on sensitive receivers and the surrounding environment, including the potential for sleep disturbance impacts. The CNVIS will inform the selection of appropriate mitigation measures and ensure that any OOHW complies with relevant approvals, guidelines, and project requirements.

5.3.1 Noise and Vibration Assessment

For each proposed OOHW activity, a Construction Noise and Vibration Impact Statement (CNVIS) will be undertaken by the EBP or suitably qualified or experienced professional to determine the potential impacts on sensitive receivers. This assessment will use a construction noise and vibration modelling tool developed for the project, which will:

- Incorporate the location of sensitive receivers, site topography, and the proposed construction activities.
- Include all relevant plant and equipment, considering their source noise levels and vibration characteristics.
- Assess predicted noise and vibration levels at sensitive receivers against applicable management levels.
- Identify the risk level of each activity (Permitted Works, Negligible Risk, Low Risk or High Risk) and determine whether mitigation measures are required.
- Estimate whether sensitive receivers are within minimum working distances from construction activities.
- Consider cumulative impacts where multiple OOHW activities are proposed concurrently.
- Use a reasonable worst-case scenario approach to ensure conservative and robust assessment outcomes.

Any mitigation measures incorporated into the model or identified through the assessment to reduce noise and vibration impacts will be mandatory and included in the OOHW Permit. The results of the assessment will inform the risk categorisation of the works (refer to Section 6) and the consultation requirements for affected receivers (refer to Section 8).

5.4 Mitigation

5.4.1 Activity Specific Mitigations

OOHW are typically characterised by lower background noise and increased sensitivity to construction activity impacts which increases the potential for noise and vibration impacts. To minimise these key risks, mitigation measures will be implemented, in order to reduce impacts so far as reasonably practicable. These measures will include, but are not limited to:

- Schedule noisy activities during daytime and avoid periods between midnight and 7am where practicable (e.g. hammering, sawing).
- Implement respite periods at locations involving excessively noisy activities.
- Manage behaviour on site, such as avoiding shouting or swearing, turning off idling equipment when not in use, and minimising impulsive noise (e.g., metal-on-metal contact).
- Select quieter equipment where possible, including smaller, lower-powered, newer, or well-maintained machinery.
- Consider alternative technologies or methods to complete activities more quietly.
- Ensure appropriate consultation and notification of affected receivers (see Section 8).
- Regular training on noise and vibration impacts, including site inductions, daily pre-start meetings, specific toolboxes.

- Inducting personnel into OOHW Permits to ensure that they understand what works are allowed to proceed under the permit.

5.4.2 Additional Mitigation Measures

In addition to the activity-specific mitigation measures described above, further mitigation measures may be required depending on the predicted noise and vibration levels at nearby sensitive receivers.

Zinfra will confirm and verify the potentially affected sensitive receivers and the standard and additional mitigation measures that will be implemented. Additional mitigation measures will be implemented where sleep disturbance impacts are predicted to occur for more than two consecutive nights. These measures will be determined based on the outcomes of the noise and vibration assessment and with reference to the Construction Noise and Vibration Guideline (CNVG) and the ICNG.

Where vibration impacts are predicted, potentially affected receivers will be notified in advance of the proposed activity. Where practicable and reasonable, additional mitigation measures will be implemented to minimise potential impacts on surrounding receivers.

An indicative summary of how additional mitigation measures may be applied is provided in Table 4**.**

Table 4 - Additional Mitigation Measures as outlined in the EIS

Noise perception category[1]	CNML	CNML Noise level exceedance	Additional Mitigations[2] [3]
All hours			
75dB or greater (at highly affected sensitive receivers)			N, V, PC, RO, DR
Standard Hours: Mon-Fri (7am-6pm), Sat (8am-1pm), Sun/Pub Hol (Nil)			
Noticeable	45	0	-
Clearly Audible		1 to 10	-
Moderately Intrusive		10 to 20	N, V
Highly Intrusive		>20	N, V
OOHW Period 1 Day: Sat (7am-8am and 1pm-6pm), Sun/Pub Hol (8am-6pm)			
Noticeable	40	<5	-
Clearly Audible		5 to 15	N, V
Moderately Intrusive		15 to 25	N, V
Highly Intrusive		>25	N, V, RO, DR
OOHW Period 1 Evening / Period 2 Night*: Mon-Sat (6pm-10pm)/Mon-Sat (10pm – 7am), Sun/Pub Hol (6pm – 8am)			
Noticeable	35	<5	N
Clearly Audible		5 to 15	N, V
Moderately Intrusive		15 to 25	N, V, SN, RO, DR
Highly Intrusive		>25	N, V, SN, RO, DR, AA

Note:

[1] Noise Perception as described in table C.1. of the Construction Noise and Vibration Guideline (Roads)

[2] N = Notification, V = Verification, PC = Phone Calls, RO = Respite Offers, DR = Duration Respite, SN = Specific Notifications, AA = Alternative Accommodation

[3] Additional mitigation measures may be amended following consultation with affected receivers. This will be captured within the CNVMP.

* Additional mitigation measures noted would not apply to proposed compound use Mon-Fri 6pm – 7pm.

The mitigation categories shown in Table 4 are defined below:

Notification (N): Letterbox drop for receivers within affected areas or targeted notification to certain receivers. Notifications are to include duration of work activity, proposed start date, duration and hours of use, and contact telephone number. Notification will be sent a minimum of seven calendar days prior to the start of works.

Verification (V): Monitoring will be undertaken during the initial occurrence of activities requiring verification monitoring, to confirm predicted noise levels and the effectiveness of mitigation measures. Further monitoring may be undertaken where work methods, site conditions, complaints or monitoring results indicate a potential change in noise impacts.

Specific Notification (SN): Specific notifications are letterbox dropped (or equivalent) to identified receivers a minimum of seven calendar days ahead of construction activities that are likely to exceed the applicable noise objectives. The specific notification provides additional information when relevant and informative to more highly affected receivers than covered in general letterbox drops. This form of communication is used to support periodic notifications, or to advise of unscheduled works.

Respite Offers (RO): Respite offers should be considered where there are high-noise and vibration-generating activities near identified receivers. As a guide, work should be carried out in continuous blocks that do not exceed three hours each with a minimum respite period of one hour between each block. The actual duration of each block of work and respite should be flexible to accommodate the usage of, and amenity at, nearby receivers. The purpose is to provide receivers with respite from an ongoing impact.

Duration Respite (DR): Duration Respite (DR) is offered when works are unable to comply with RO. Where it can be strongly justified it may be beneficial to increase the work duration (number of evenings or nights worked) so that the project can be completed more quickly. This allows for the schedule to condense OOHW into blocks to reduce the overall works duration.

Alternative Accommodation (AA): Could be considered for receivers predicted to experience noise levels exceeding the night CNML by more than 25 dBA. Note that night work (if required) would be very infrequent and last for no more than three consecutive nights.

6. OOHW CATEGORIES

This section outlines the criteria used to classify proposed OOHW. The classification determines the applicable approval pathway and whether external approval or internal authorisation is required.

OOHW activities will be categorised based on the predicted noise impact relative to the applicable Noise Management Level (NML), the duration of the works, and the potential impact on nearby sensitive receivers.

The OOHW approval process includes the following categories:

- **Permitted Works**
- **Negligible Risk**
- **Low Risk**
- **High Risk**

The relevant approval or authorisation authority for each category is outlined in Table 5.

Once the appropriate category has been determined, the OOHW Permit and supporting impact assessment will be submitted for either **external approval** or **internal authorisation**, as required.

7. APPROVAL AND AUTHORISATION

The pathway for either external approval or internal authorisation will be determined based on the assigned category of the proposed OOHW, as described in **Section 6**.

Table 5 outlines the relationship between the OOHW category and the corresponding approval or authorisation requirements. The approval process is also illustrated in Figure 2**.**

The category (permitted, negligible, low or high risk) is proposed by the Permit applicant through the CNVIS, checked by the EBP or suitably qualified or experienced professional, and approved or authorised by the authority identified in Table 5. The CNVIS is approved by the Construction Manager in accordance with Section 7.6 of the CNVMP before it is attached to the OOHW Permit.

The decision to approve is based on predicted noise, vibration and sleep-disturbance impacts; duration and frequency; cumulative impacts; affected receivers; feasible and reasonable mitigation; consultation outcomes; monitoring requirements; compliance with the CoA; and adequacy of the OOHW justification.

The decision and any conditions are recorded in the OOHW Permit.

Table 5 - OOHW Categories

ID	Approval Category	Applicable Period
Category 1 – Permitted. Approved by the Environmental Business Partner		
1a	Any works permitted under CoA (SSI-70279722): • the delivery or dispatch of materials as requested by the NSW Police Force or other public authorities for safety reasons. • emergency work to avoid the loss of life, property or prevent material harm to the environment. • development activities carried out in accordance with the hours, and noise limits specified in any negotiated agreements with sensitive receivers (owners and occupiers), provided the negotiated agreements are in writing and finalised before the commencement of the development activities. • activities that do not result in noise affected sensitive receivers, as defined in Interim Construction Noise Guidelines (DECC, 2009) (or its latest version). • road upgrades required by the relevant road authority to be undertaken outside the standard construction hours. • where a rail authority requires a rail possession for the activities to be performed outside of standard construction hours. • pre-construction minor works, construction and or upgrading that require a network outage on another distribution or transmission network, and the operator of the network requires the outage and associated works outside standard construction hours. where different hours are permitted or required under an EPL in force in respect of the development.	Period 1 & Period 2
1b	Negotiated agreements as described in Section 3.3	Period 1 & Period 2
Category 2 – Negligible. Approved by the Environmental Business Partner		
2a	Activities which result in noise levels which are no more than NML + <5.0 dBA	Period 1
2b	Activities which result in noise levels which are no more than NML + <2.0 dBA	Period 2
Category 3 – Low Risk. Prepared by the Environmental Business Partner and Approved by the Environmental Representative		
3a	Activities which do not meet the circumstances of Condition B2(a-h) and exceed Negligible risk, but are mandated to be undertaken outside standard construction hours due to being: • works must be completed efficiently as scheduled outages are of a limited duration due to network security and reliability constraints. • outage recalls by the network operator • to comply with road closure licence requirements from the local road authority. • Activities (e.g. concrete pours) that must occur continuously for quality reasons / technical requirements	Period 1 & Period 2
3b	Activities which exceed Negligible risk but do not exceed: • NML + <25.0 dBA; and, • Human Comfort vibration criteria under the 'Assessing Vibration – A Technical guideline'; and,	Period 1 & Period 2

	• Follows the following pattern: 1. Maximum of two consecutive days/evenings/nights per week 2. Maximum of three days/evenings/nights per week in total 3. Max 12 days/evenings/nights per 4 weeks.	
Category 4 – High Risk. Prepared by the Environmental Business Partner and Approved by the Planning Secretary		
4	Any activity which does not fit within Category 1, 2 or 3, including any activity that: • Results in noise levels more than NML + 25 dBA; or • Exceeds the human comfort vibration criteria under *Assessing Vibration: A Technical Guideline (DEC, 2006); or* • Exceeds the frequency pattern specified for Category 3b.	Any

8. NOTIFICATION

8.1 Community

The Project Engagement Lead will implement appropriate communication measures to ensure that potentially affected sensitive receivers and stakeholders are provided with clear, timely, and relevant information regarding proposed OOHW.

The communication method will be selected based on the nature of the works, the level of potential impact, and the proximity of sensitive receivers, taking into consideration relevant guidance such as the ICNG.

Communication methods may include:

- Direct phone calls
- Letterbox notifications
- Electronic communication (email)

These notifications will be undertaken as per Table 4.

Where OOHW activities may affect nearby receivers, advance notification will be provided to potentially affected stakeholders outlining the nature, location, and expected duration of the works as well as contact details so that affected parties may contact Zinfra with any enquiries or complaints.

8.2 Council

Zinfra has a dedicated Project Engagement Lead responsible for coordinating communications with Lithgow City Council.

Council will be notified of planned OOHW at the same time as potentially affected receivers, and at least five business days prior to the commencement of works, where practicable. Where works within the road reserve of a local road must occur, a Road Occupancy Licence (RoL) would be requested from Council. At that stage, Council may advise that the works should be undertaken overnight.

This notification requirement does not apply to emergency works undertaken in accordance with the relevant CoA provisions, or to unplanned activities that must continue outside standard hours for safety, operational, or quality reasons. In these circumstances, Council will be notified as soon as reasonably practicable.

8.3 Department of Planning, Housing and Infrastructure

Where the Planning Secretary is the approval authority for an OOHW Permit, the permit will be submitted through the Major Projects Portal of the NSW DPHI at least 20 days prior to the proposed commencement of works, unless otherwise agreed with the Planning Secretary.

The OOHW Permit will include sufficient detail to allow assessment of the proposed works, including:

- A description of the proposed activities
- The plant and equipment to be used
- Location, duration, and timing of the works
- Predicted noise impact outcomes
- Proposed mitigation measures
- Justification for undertaking the works outside standard construction hours

Further information regarding the content and assessment of OOHW Permits is provided in Section 5.1.

For works that do not require direct approval from the Planning Secretary, a monthly lookahead of proposed OOHW activities may be provided to the Department if requested. Any changes to the lookahead schedule will be communicated once identified.

This requirement does not apply to emergency works undertaken in accordance with Condition B2 (CoA SSI-70279722), or to unplanned activities that must continue for safety, operational, or quality reasons. In these situations, the Department will be notified as soon as reasonably practicable.

9. MONITORING

9.1 Monitoring Approach

Noise monitoring will be undertaken under the following circumstances:

- At the commencement of a **new OOHW activity** where no comparable monitoring data is available.
- At the commencement of any OOHW activity where an exceedance of the applicable NML is predicted, as identified in the OOHW Permit.
- In response to a community complaint. If the complaint is received after the activity has concluded, monitoring will be undertaken at the next available opportunity when similar works occur.

Vibration monitoring will be undertaken on a case-by-case basis, considering safe working distances, the sensitivity of nearby receivers, and in response to complaints in a similar manner to noise monitoring.

The requirement for monitoring will be specified in the relevant OOHW Permit.

Monitoring will be undertaken during a representative period of works and, where practicable, when background interference (e.g. non-project related noise or vibration) is minimal.

Noise and vibration monitoring may be undertaken using the following methods:

- **Attended monitoring**
- **Unattended monitoring**

Further details on monitoring methodologies are provided in the CNVMP, of which this OOHW Protocol forms an appendix. Monitoring activities may also be subject to access permission from residents or property owners, where monitoring on private property is required.

Appendix A - OOH Work Permit

Out of Hours (OOH) Work Permit Part A – Completed by Site/Project Engineer		
1. Permit details		
Project Site:	**OOH Permit No.:**	**Revision No.: 00**
Requested By Construction Team:	**Prepared by (Engineer):**	
Commencement Date:	**Completion Date:**	
Location Description:		
Location map attached? Yes ☐ No ☐ N/A ☐		
2. Time Period of Proposed OOH Works per day:		
Proposed project work hours	Period 1 – Day	• 7am to 8am Saturday (only for construction tasks that would not exceed CNMLs) • 1pm to 6pm Saturday • 8am to 6pm Sunday
	Period 1 – Evening	• 6pm to 7pm Monday to Friday (use of construction compounds only)
	Period 2 – Night	• 7am to 8am Sunday (only for construction tasks that would not exceed CNMLs)
Additional OOHW hours – (as a result of power outages, outage recalls, rails shutdown periods, local road closure licence requirements)	Period 1 – Evening	• 6pm to 10pm Monday to Saturday
	Period 2 – Night	• 10pm to 7am Monday to Saturday • 6pm to 7am Sunday and public holiday
Proposed work periods/hours:		
3. Description of Proposed OOH Works:		
4. Proposed plant and equipment:		
5. Justification for Proposed OOH Works:		
6. Options considered and improvements made to reduce potential noise and vibration impacts:		

7. Review cumulative impacts of works in vicinity of Project. Check with local Projects/local Council/TfNSW for other OOHW and reduce cumulative impacts where possible.

8. Highly Noise Intensive Works

Are Highly Noise Intensive Works required?
(jackhammering, rock breaking or hammering, pile driving, concrete cutting, vibratory rolling and impact piling occurring on the surface and generating noise with impulsive, intermittent, tonal or low frequency characteristics.)
Please circle: **YES / NO**

Use of any of the above will require a maximum program of **3 hours work and 1 hours respite.** *This is applicable during standard work hours, as well.*

Any high intensive noise works must **not commence until 8am and conclude before 5pm**.

9. Vibration Intensive Works

Are Vibration Intensive Works proposed?

(Jackhammering, rock breaking or hammering, pile driving, vibratory rolling and impact piling occurring on the surface.)
Please circle: **YES / NO**

Use of any of the above will require a maximum program of **3 hours work and 1 hours respite.** *This is applicable during standard work hours, as well.*

Any high-intensive noise works must **not commence until 8am and conclude before 5pm**.

10. Proposed Light Spill Mitigation Measures

Is there potential for light spill impact?

Please circle: **YES / NO**

If lighting is deemed to be required, the control measures of light spill include:

11. Traffic

Is a road occupancy licence required? If yes, attach permit
Please circle: YES / NO

Is an oversized permit required? If yes, attach permit
Please circle: YES / NO

Has the project Traffic Manager been informed?
Please circle: YES / NO / N/A

List the relevant RoL reference codes & issuing authority:	
Permit(s) Licence Number	Issuing Authority (TMC, TfNSW, Council, etc.)

12. Traffic Manager Endorsement to confirm RoL and VMPs	
Name:	Position:
Signature:	Date:

13. Project Manager Endorsement to confirm these works are necessary to be carried out as OOHW and cannot be completed during standard working hours.	
Name:	Position:
Signature:	Date:

Out of Hours (OOH) Work Permit

Part B – Noise & Vibration Impact Assessment (modelling results to be attached)

1. Noise and Vibration Impact Assessment Outcomes

Predicted noise level at most impacted sensitive receiver	Highest predicted noise level:	
	Most impacted receiver address:	
	Noise Management Level (NML):	
	Is predicted noise level below NML?	Yes ☐ No ☐ N/A ☐
Number of sensitive receivers above NML:		
Do works comply with the Safe Working Distance limits? If NO, review CNVMP for respite and monitoring requirements to be implemented.		Yes ☐ No ☐ N/A ☐
Cumulative noise	**Are works being undertaken concurrently with other works?** If yes, provide details	Yes ☐ No ☐ N/A ☐
	Has cumulative impact assessment been undertaken? If yes, provide outcome of cumulative impact assessment	Yes ☐ No ☐ N/A ☐
	Does cumulative impact assessment predict work to be below NML? If NO, the works cannot be classified as Category 1 under B2(d) and must be categorised under Table 5.	Yes ☐ No ☐ N/A ☐
Negotiated agreement	**Is negotiated agreement required?** If yes, attach evidence of agreement/s	Yes ☐ No ☐ N/A ☐

2. Noise Mitigation Measures

Noise perception category[1]	CNML	CNML Noise level exceedance	Additional Mitigations[2] [3]
All hours			
75dB or greater (at highly affected sensitive receivers)			N, V, PC, RO, DR
Standard Hours: Mon-Fri (7am-6pm), Sat (8am-1pm), Sun/Pub Hol (Nil)			
Noticeable	45	0	-
Clearly Audible		1 to 10	-
Moderately Intrusive		10 to 20	N, V
Highly Intrusive		>20	N, V
OOHW Period 1 Day: Sat (7am-8am and 1pm-6pm), Sun/Pub Hol (8am-6pm)			
Noticeable	40	<5	-
Clearly Audible		5 to 15	N, V
Moderately Intrusive		15 to 25	N, V
Highly Intrusive		>25	N, V , RO, DR
OOHW Period 1 Evening / Period 2 Night*: Mon-Sat (6pm-10pm)/Mon-Sat (10pm – 7am), Sun/Pub Hol (6pm – 8am)			
Noticeable	35	<5	N
Clearly Audible		5 to 15	N, V
Moderately Intrusive		15 to 25	N, V, SN, RO, DR
Highly Intrusive		>25	N, V, SN, RO, DR, AA

(N)- Notification, (V) Verification, (SN) Specific Notification, (RO) Respite Offers, (DR) Duration Respite, (AA) Alternative Accommodation

Mitigation Measures Selected:

3. Additional mitigation required as per OOHW Protocol

Please ensure you are assessing against the relevant period of OOHW.

	Description	**Mandatory Mitigation** (Evening & Weekend Day OOHW)	**Mandatory Mitigation** (Night)	
☐	Works assessed to comply with the NML, Sleep disturbance and human comfort vibration criteria. ***Go to part C***			
☐	Noticeable - (<5 dB(A) above NML)	N/A – Go to Part C	Notification	
☐	Clearly audible - (5 to 15 dB(A) above NML)	Notification, verification	Notification, verification	
☐	Moderately intrusive - (15 to 25 dB(A) above NML)	Notification, verification	Notification, verification monitoring, specific notification, respite offer when impacts occur over four or more consecutive nights, duration respite	
☐	Highly intrusive - (>25 dB(A) above NML)	Notification, verification monitoring, respite offer when impacts occur over four or more consecutive nights, duration respite	Notification, verification monitoring, specific notification, respite offer when impacts occur over three or more consecutive nights, duration respite, alternative accommodation	
☐	Does not comply with applicable sleep disturbance criteria	N/A	Notification, verification monitoring, respite offer when impacts occur over three or more consecutive nights, duration respite	
☐	Does not comply with applicable human comfort vibration criteria	Notification, verification monitoring, short-term respite offer	Notification, verification monitoring, respite offer when impacts occur over three or more consecutive nights, duration respite	

Do OOHW require noise or vibration respite? If Yes, provide details.	Yes ☐ No ☐ N/A ☐
Do OOHW require verification monitoring? If Yes, provide details and receiver address/es	Yes ☐ No ☐ N/A ☐

Note: Where any sensitive receiver is predicted to experience 75 dBA or greater (highly noise affected), phone calls (PC) are also required in addition to the mitigation above, consistent with Table 4.

4. Impact Category and Approval Pathway

- ☐ Category 1 – Permitted (Approved by Environmental Business Partner)
- ☐ Category 2 – Negligible Risk (Approved by Environmental Business Partner)
- ☐ Category 3 – Low Risk (Approved by Environmental Representative)
- ☐ Category 4 – High Risk (Approved by DPHI Planning Secretary)

Zinfra Internal Approval

Project Engagement Lead - for works on private property (Transmission Lines)

Name:	Signature:	Date:
Additional Comments (if applicable)		

Environmental Business Partner		
Name:	Signature:	Date:
Additional Comments or Mitigation Measures (if applicable):		

External Approval

Environmental Representative – Approval (if applicable)		
Name:	Signature:	Date:
Additional Comments or Mitigation Measures (if applicable):		

DPHI – Approval (if applicable)	
Evidence of approval attached:	Yes ☐ No ☐
Date approved:	
Additional Comments, mitigation measures or conditions of approval (if applicable):	

Out of Hours (OOH) Work Permit
Part C – Permit Close Out

Environmental Business Partner		
I confirm that all works associated with this permit have been undertaken in accordance with the requirements set out in this permit and have been closed out.		
Name:	Signature:	Date: