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MINOR ANCILLARY FACILITY ASSESSMENT

EDMONDSON STREET BRIDGE

A2I | Albury to Illabo

CONTRACT NUMBER: 0052

PROJECT DOCUMENT NUMBER:

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DEFINITIONS AND ACRONYMS

TERM	DEFINITION
A2I	Albury to Illabo, Inland Rail (the Project)
Ancillary facility	A temporary facility for construction of the CSSI including an office and amenities compound, construction compound, material crushing and screening plant, materials storage compound, maintenance workshop, testing laboratory, a fixed material stockpile area and car parking facilities.
ASS	Acid Sulfate Soils
BARM	Biodiversity Assessment Report Memo
BTEX	Benzene, Toluene, Ethylbenzene and Xylene
CCS	Community Communication Strategy
CEMP	Construction Environmental Management Plan
CNVIS	Construction Noise and Vibration Impact Statement
CoA	Condition of Approval
Construction	Includes work required to construct the CSSI as defined in the Project Description described in the documents listed in Condition A1 including commissioning trials of equipment and temporary use of any part of the CSSI but excluding Low Impact Work which is carried out or completed prior to approval of the CEMP.
Construction boundary	The area physically affected by work as defined in the Project Description as described in the documents listed in Condition A1.
CSSI	Critical State Significant Infrastructure
DGB	Densely Graded Base (Road Base)
DPHI	Department of Planning, Housing and Infrastructure
EAD	Environmental Assessment Documentation
EIS	Environmental Impact Statement
EPA	Environmental Protection Authority
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
EPL	Environment Protection Licence
ER	Environmental Representative
ESCP	Erosion and Sediment Control Plan
GDE	Groundwater Dependent Ecosystem
LGA	Local Government Area
LIW	Low Impact Works

TERM	DEFINITION
MAF	Minor Ancillary Facility – MAFs are considered to be lunch sheds, office sheds and portable toilet facilities or similar.
MAFA	Minor Ancillary Facility Assessment
NCA	Noise Catchment Area
NML	Noise Management Level
OCP	Organochlorine Pesticides
OOP	Organophosphorus Pesticides
PAH	Polycyclic Aromatic Hydrocarbons
PCT	Plant Community Type
PFAS	Per – and Polyfluoroalkyl Substances
PIR	Preferred Infrastructure Report
PoEO Act	Protection of the Environment Operations Act 1997
RBL	Rating Background Level
SSI	State Significant Infrastructure
SSWMP	Soil and Surface Water Management Plan
TRH	Total Recoverable Hydrocarbons
WWUNAHA	Wagga Wagga Utilities Non-Aboriginal Heritage Assessment

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1. INTRODUCTION

The Inland Rail - Albury to Illabo (A2I) project (the Project) will see enhancement works to structures and sections of track along 185 km of the existing operational standard-gauge railway between Albury and Illabo, to accommodate double-stacked freight trains up to 1,800 m long and 6.5 m high.

Enhancement works are required to provide the increased vertical and horizontal clearances required for double-stacked freight trains. Works to facilitate the construction of the Project would include track realignment; lowering and/or modification within the existing rail corridor; modification, removal, or replacement of bridge structures (rail, road and/or pedestrian bridges); raising or replacing signal gantries; level crossing modifications; and other associated works.

The land required for construction comprises the existing railway corridor at the work sites with additional areas at these locations to accommodate construction activities and ancillary facilities, which would be removed on construction completion, along with any infrastructure used to support construction. The Project's final land requirement would maintain the existing operational railway corridor with additions to accommodate any revised infrastructure and associated operational requirements. Clearing and grubbing of the Project site would occur as necessary to accommodate works and to maintain the safe operational area of the railway.

The Project is generally within the existing rail corridor (the Main South Line) extending from the town of Albury on the Victoria–NSW border to around 3 km to the north-east of Illabo. The Main South Line links Sydney with Melbourne with the A2I sections opened between 1877 and 1881.

The alignment passes through two major regional towns - Albury and Wagga Wagga in NSW - and several smaller regional towns. Works are proposed at 24 locations along the Main South Line corridor, described as 'enhancement sites'. The name and location of these enhancement sites are identified in Figure 1.

Precinct	Enhancement sites
Albury Precinct	Murray River bridge
	Albury Station pedestrian bridge
	Albury Yard clearances
	Riverina Highway bridge
	Billy Hughes bridge
	Table Top Yard clearances
Greater Hume-Lockhart	Culcairn pedestrian bridge
	Culcairn Yard clearances
	Henty Yard clearances
	Yerong Creek Yard clearances
	The Rock Yard clearances
Wagga Wagga	Uranquinty Yard clearances
	Pearson Street bridge
	Cassidy Parade pedestrian bridge
	Edmonson Street bridge
	Wagga Wagga Station pedestrian bridge
	Wagga Wagga Yard clearances
	Bomen Yard clearances
Junee	Harefield Yard clearances
	Kemp Street bridge
	Junee Station pedestrian bridge
	Junee Yard clearances
	Olympic Highway underbridge
	Junee to Illabo clearances

FIGURE 1: PROJECT ENHANCEMENT SITES

1.1 Definition of a Minor Ancillary Facility

In accordance with the definitions of a Minor Ancillary Facility (MAF) under SSI- 10055 (Project Approval), the following is noted:

- *Minor ancillary facilities are considered to be lunch sheds, office sheds and portable toilet facilities or similar.*

As per the Minister's Conditions of Approval (CoA) of the Project Approval, under CoA A18, MAFs are permissible, subject to approval by the Environmental Representative (ER) and determined to have minimal environmental impact.

Under CoA A23, the MAFs can be established and used where they have been assessed in the documents listed in Condition A1 or satisfy the following criteria:

a) are located within or immediately adjacent to the construction boundary; and

b) have been assessed by the ER to have:

i) minimal amenity impacts to surrounding residences and businesses, after consideration of matters such as compliance with the Interim Construction Noise Guideline (DECC, 2009) (ICNG), traffic and access impacts, dust and odour impacts, and visual (including light spill) impacts; and

ii) minimal environmental impact with respect to waste management and flooding;

and

iii) no impacts on biodiversity, soil and water, and heritage items beyond those already approved under other terms of this approval.

The proposed MAF site identified in this application is located within the approved construction boundary.

2. MINOR ANCILLARY FACILITY

2.1 Site Description

The MAF is located within the Wagga Yard construction footprint in an area east of Edmondson Street Bridge, within the rail corridor, north of Railway Street, Wagga Wagga (refer to Figure 2).

The closest residential receivers are approximately 40 metres away located on Erin Street, Wagga Wagga, with Railway Street (local road) in between the MAF and these receivers.

The closest educational receiver (South Wagga Public School) is approximately 100 metres north located on Edward Street, Wagga Wagga, with an existing rail corridor (Wagga Wagga rail line) in between the MAF and the receiver.

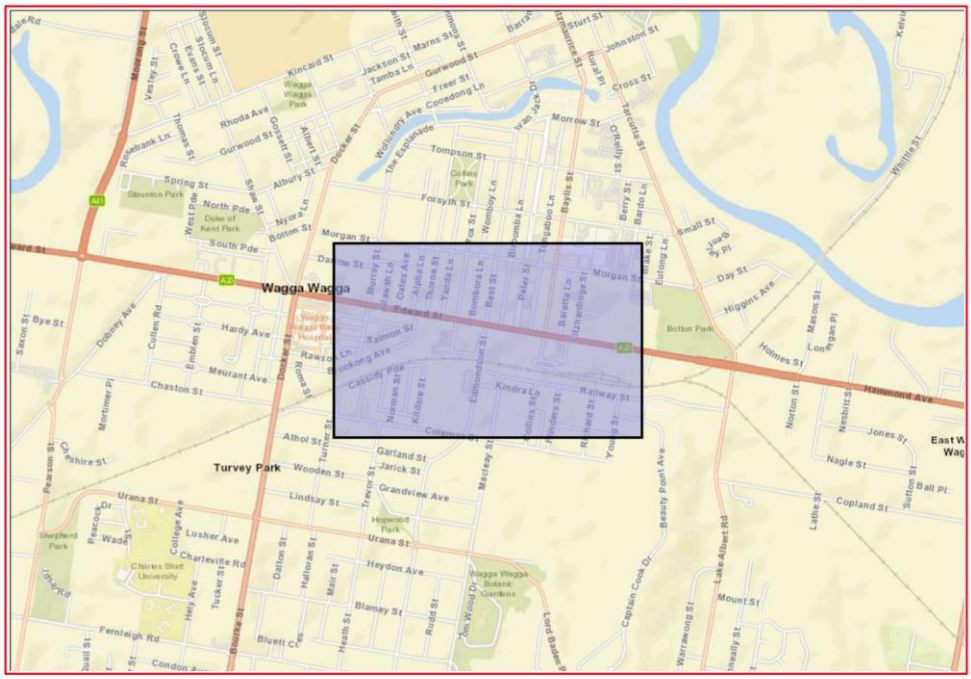
There are no waterways in the vicinity of the proposed MAF, with the closest water being Murrumbidgee River located approximately 1200m northeast of the MAF.

There are no known Aboriginal items or sites located within or in the vicinity of the proposed MAF location (refer to Figure 3).

The Wagga Wagga Railway Station and yard ground (SHR 01279) is located in the vicinity of the proposed MAF location (west of the MAF), however there are no direct or indirect impacts anticipated from the proposed MAF location, as its establishment would not involve the SHR 01279.There are Areas of Environmental Concern (AEC 36 and 37) located within the rail corridor adjacent the location of the proposed MAF.

There is minor trimming and clearing of vegetation proposed as part of the establishment of the MAF.

FIGURE 2: PROPOSED MAF LOCATION



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

FIGURE 3: AHIMS SEARCH UNDERTAKEN FOR PROPOSED MAF LOCATION

2.2 Proposed Activities

To establish the MAF, minor earthworks are required to ensure that the ground is at a suitable level for placing the site sheds, amenities, and parking. Minor trimming and clearing of vegetation will also be required as part of the site preparation activities.

Once appropriately level and site preparation activities have been undertaken, a marker layer will be placed prior to a layer of road base (DGB) to stabilise the area before the site sheds and amenity structures are placed. Levelling will be limited to surface scraping prior to the placement of the marker layer. Any materials scraped up during this process will be isolated and stockpiled on site for sampling prior to reuse or offsite disposal thereby limiting the potential for the generation of contaminated material. Line marking of parking areas and installation of signage will be undertaken last. Martinus is aware that a number of historical ballast stockpiles are currently located within this area and have sought historical characterisation data from Inland Rail to inform the treatment/management of this material. Subject to the availability of these records, Martinus will seek direction from Inland Rail on the management of these stockpiles but anticipate the adoption of one or multiple of the following options:

- Characterisation records available and materials satisfy criteria to be transferred by Inland Rail to another site in accordance with the ARTC resource recovery order (RRO);
- If no characterisation records are available, materials will be visually inspected for asbestos prior to being relocated to an adjacent area within the site to allow contamination/classification sampling to be undertaken whilst compound establishment works proceed. Materials would then be reused on site or disposed of offsite, subject to sampling results, following the commencement of construction in accordance with the requirements of the approved CEMP and sub plans.

As per the definition of a MAF under the Project Approval, the site would be used for the following during its operation:

- Office and lunch sheds
- Portable toilet facilities
- Parking areas for construction heavy and light vehicles

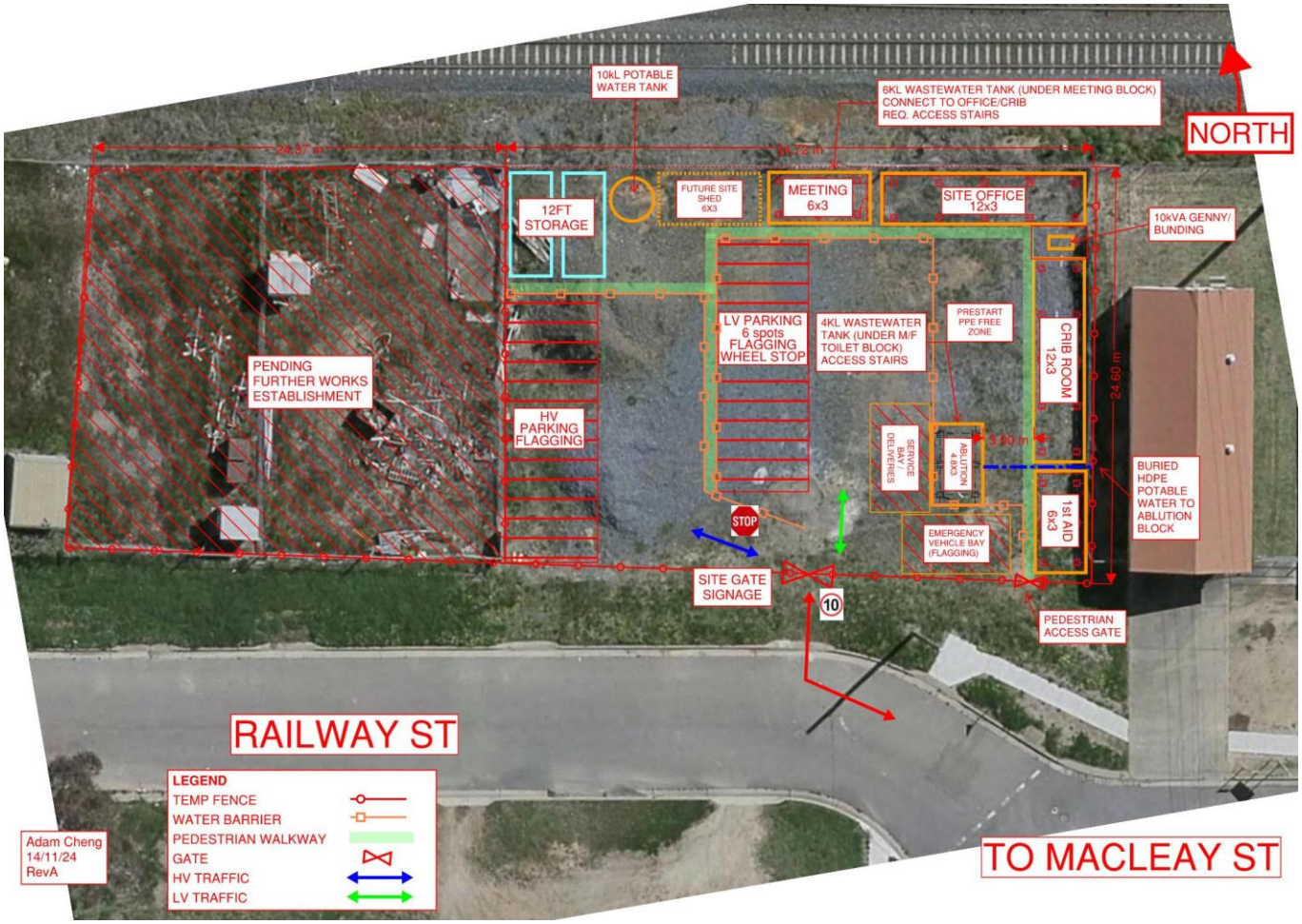


FIGURE 4: PROPOSED MAF LAYOUT

The activities associated with the establishment and operation of the MAF would be undertaken during standard construction hours only, which are as follows:

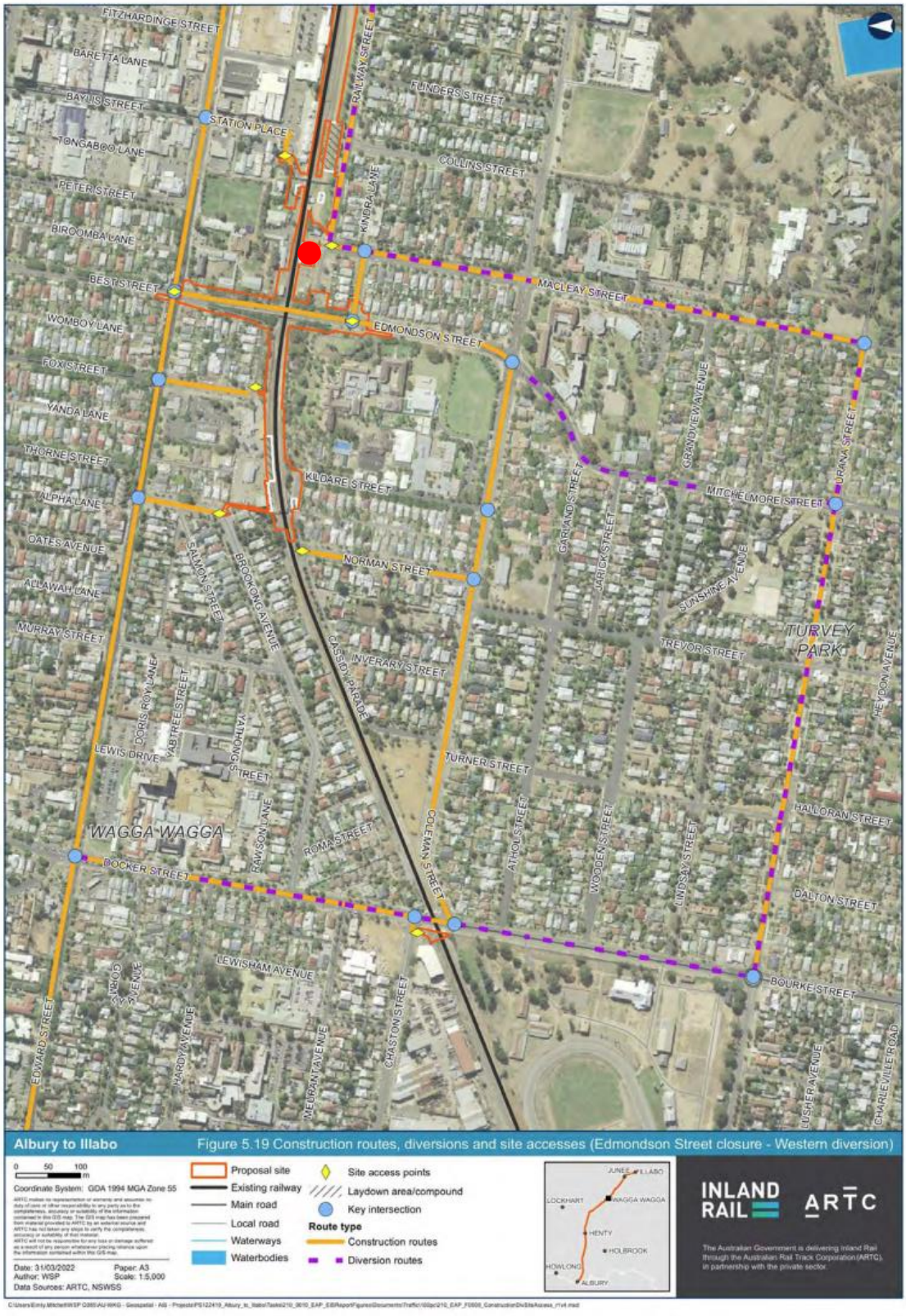
- 7:00am to 6:00pm Mondays to Fridays, inclusive;
- 7:00am to 6:00pm Saturdays; and
- at no time on Sundays or public holidays

It is anticipated that the MAF would be used by up to 25 workers per day at peak, with up to 30 construction vehicles per day at peak and would be in place from January to February 2026.

Table 1 below summarises the peak vehicle generation estimates for the MAF. Refer to Figure 5 and Figure 6 which summarise the existing approved access and egress routes which are used for heavy vehicles in this area. Access and egress to and from the MAF would be via existing access and egress on Railway Street.

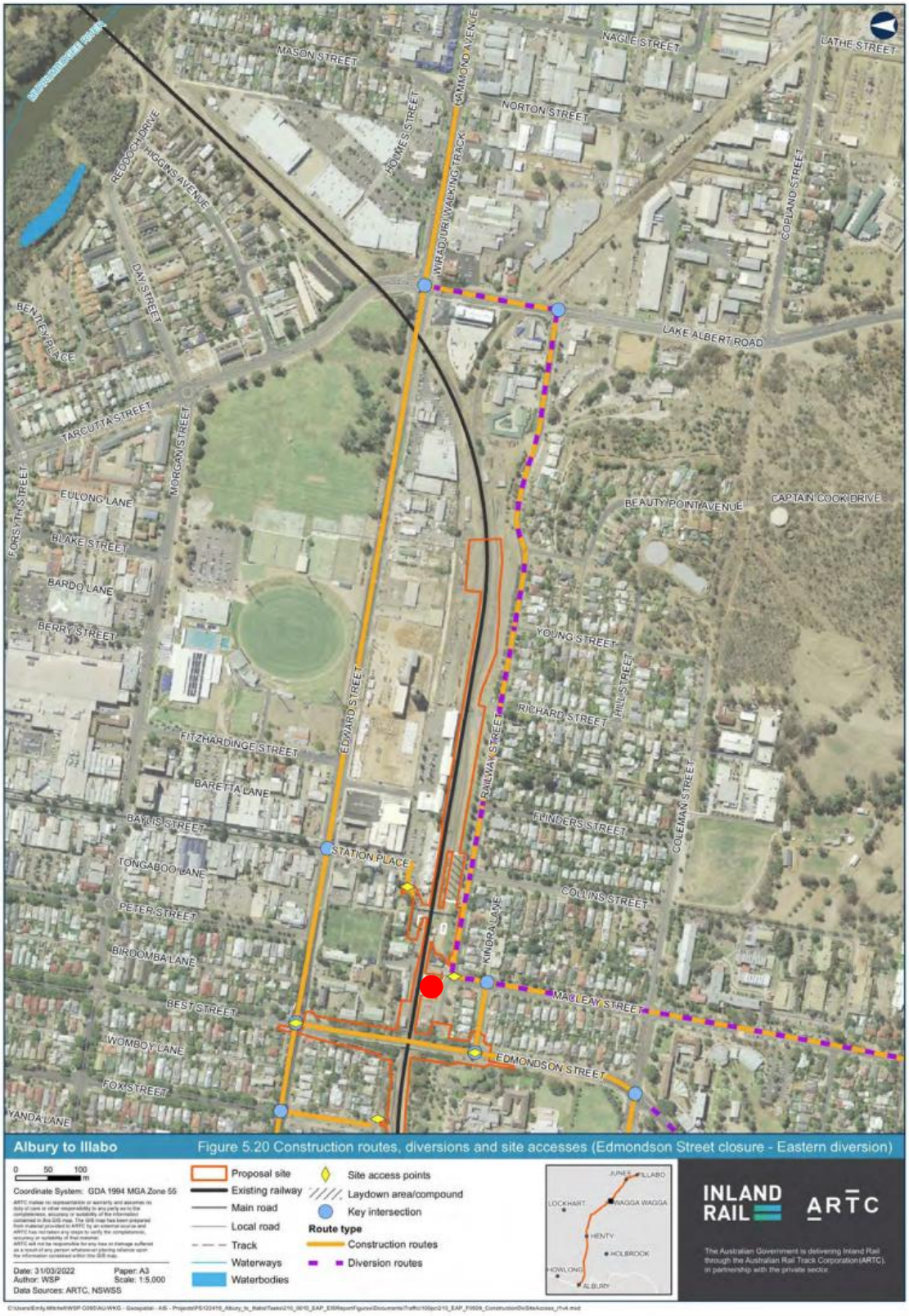
TABLE 1: DAILY VEHICLES DURING MAF ESTABLISHMENT AND OPERATION

Daily vehicles	Morning peak	Evening peak
MAF Establishment		
30	10	10
MAF Operation		
20	7	7



Approximate location of the proposed MAF shown as a red circle on Figure 5.

FIGURE 5: CONSTRUCTION ROUTES, DIVERSIONS AND SITE ACCESS (WESTERN DIVISION)



Approximate location of the proposed MAF shown as a red circle on Figure 6.

FIGURE 6: CONSTRUCTION ROUTES, DIVERSIONS AND SITE ACCESS (EASTERN DIVISION)

3. ASSESSMENT

Table 2 contains the assessment of aspects and impacts associated with establishment and operation of the proposed MAF.

TABLE 2: MAF ASSESSMENT OF ENVIRONMENTAL ASPECTS

Aspect	Existing environment	Potential impacts	Proposed mitigation measures
Community and Stakeholders	The proposed MAF is located within the approved construction boundary, with residential receivers to the south and east of the site. One educational receiver is located to the north of the MAF (Wagga Wagga rail line), with an existing rail corridor situated between them. Refer to Figure 2 for the site location of the proposed MAF.	Noise and vibration impacts are anticipated to be minor in nature as the proposed MAF location falls into the approved construction boundary and would not represent an additional impact to the approved Project (A2I). The MAF would only operate during approved standard hours and support the wider Wagga Wagga Utilities scope of work. No other potential impacts have been identified to the community in the vicinity of the proposed MAF.	The following mitigation measures have been proposed: ▪ Community communication to be undertaken in accordance with the Project's Community Communications Strategy (CCS (Appendix B). ▪ Community notifications to be made available through the below link: https://inlandrail.com.au/where-we-go/projects/albury-to-illabo/works-notifications/ ▪ Any complaints that may arise during the establishment and operation of the MAF will be managed as per the CCS.
Traffic and Transport	The proposed MAF will be located on Railway Street. Site access for the proposed MAF would involve utilising existing sub-arterial (Edmondson Street) and local roads (Erin Street, Macleay Street and Railway Street).	There are no proposed or expected changes to the existing road or rail line as part of the proposed activities associated with the MAF. There are no expected impacts to pedestrian or cyclist facilities, as there are none located within the proposed MAF activities. Lane closures may be required to accommodate for larger deliveries, resulting in increased traffic for short duration periods. Construction light vehicles while not in use, will be parked within the site compound to minimise disturbance to the community. parking while in use.	The following mitigation measures have been proposed: ▪ Traffic safety controls would be implemented under approved Traffic Guidance Schemes (TGS), where required and appropriate, to minimise the risk of traffic conflicts. ▪ Construction vehicles will enter and exit the MAF as per the approved TGS. ▪ Pedestrian and cyclist paths would be maintained, where present. ▪ Construction vehicles not used for the proposed works are to utilise the parking within the site compounds to avoid impacts on neighbouring streets.
Noise and Vibration	The activities associated with the establishment and operation of the MAF would occur within the approved construction boundary (A2I). A Construction Noise and Vibration Impact Statement	The activities associated with the establishment and operation of the MAF would be undertaken during approved standard hours as noted below: ▪ 7:00am to 6:00pm Mondays to Fridays, inclusive;	The following mitigation measures have been proposed: ▪ Equipment that is used intermittently is to be shut down when not in use.

	(CNVIS) (SLR, 2024) was undertaken for the Wagga Wagga Utility Works (form part of the Inland Rail A2I works), which also included the proposed scope of works associated with the MAF. The CNVIS can be referred to under Appendix C. The CNVIS identified the presence of residential and educational receivers in the vicinity of the proposed MAF location. The site located in Noise Catchment Area (NCA) 10, with the below Rating Background Level (RBL) and Noise Management Level (NMLs), as noted below: <u>NCA 10's RBLs:</u> ▪ Daytime – 46 dBA ▪ Evening – 45 dBA ▪ Night-time - 38 dBA <u>NCA 10's NMLs:</u> ▪ Approved hours – 56 dBA ▪ Daytime – 51 dBA ▪ Evening – 50 dBA ▪ Night-time – 43 dBA	▪ 7:00am to 6:00pm Saturdays; and ▪ at no time on Sundays or public holidays The CNVIS has identified the following NML exceedances associated with the establishment and operation of the MAF: ▪ 31 residential receivers to experience 1 to 10 dBA NML exceedance. ▪ 3 residential receivers to experience 11 to 20 dBA NML exceedance. ▪ 8 other sensitive receivers to experience 1 to 10 dBA NML exceedance. The proposed activities for the MAF would not involve any out-of-hours work (OOHW), or any ground-borne noise or vibration.	▪ Regularly inspect and maintain equipment to ensure it is operating correctly. ▪ Avoid the use of radios or stereos outdoors where neighbours can be affected. ▪ Avoid dropping materials from a height. ▪ Training and awareness programs will be delivered to Project personnel, including relevant sub-contractors on noise and vibration requirements (including operating hours) through inductions, toolboxes, and targeted training. ▪ Tonal reversing alarms (beepers) will be replaced with non-tonal alarms (squawkers) on all equipment in use (subject to occupational health and safety requirements). ▪ Noise monitoring spot checks of equipment will be completed to ensure individual items are operating as expected. ▪ Trucks will not queue outside residential properties. ▪ Truck drivers will be instructed to avoid compression braking as far as practicable. ▪ Install purpose-built screening or enclosures around long-term fixed plant that has the potential to impact nearby receivers. ▪ Noise monitoring will be conducted (as appropriate) when noise intensive works are being undertaken in close proximity to sensitive receivers. Plant and equipment associated with the MAF activities do not include vibration-intensive equipment, there no vibration monitoring is required.
Heritage	An AHIMS search was completed which showed there are no known Aboriginal heritage items or sites located within or the	There are no known Aboriginal heritage items or sites located within the MAF; therefore, no direct or indirect impact is expected from the proposed MAF.	The following mitigation measures have been proposed: ▪ Demarcation (using barricading or flagging) of the MAF boundary within listed heritage sites to be installed, to ensure

	vicinity of the proposed MAF location. The Wagga Wagga Utilities Non-Aboriginal Heritage Assessment (WWUNHA) (OzArk, 2024) has been undertaken for the Wagga Wagga Utility Works (form part of the Inland Rail A2I works) which also included the proposed MAF. The WWUNHA can be referred to under Appendix D. The following known non-Aboriginal heritage items and sites located in the vicinity of the proposed MAF location, are listed below: <u>Wagga Wagga LEP 2010 listed heritage:</u> ▪ Wagga Wagga Heritage Conservation Area (WWHCA) ▪ Edward and Best Streets intersection, former corner store (LEP item I262) ▪ Mt Erin Convent, LEP item I260 (noted as a locally significant historical site under the State Heritage Inventory (SHI)) ▪ Best Street railway gatehouse (LEP item I254) <u>State listed heritage:</u> ▪ Wagga Wagga Railway Station and yard ground (SHR 01279)	There are no known non-Aboriginal heritage items or sites located within the MAF; therefore, no direct or indirect impacts are expected in relation to the proposed MAF location. The Wagga Wagga Railway Station and yard ground (SHR #01279) is located in the vicinity of the proposed MAF location (west of the MAF). As noted in the WWUNHA it is noted there are no direct or indirect impacts anticipated from the proposed MAF location, as it's establishment would not involve the SHR #01279.	there are no inadvertent impacts beyond this. ▪ If at any time during the proposed works, any items of potential Aboriginal heritage significance are discovered works would immediately be stopped and the Environmental and Sustainability Manager notified.
Biodiversity	A Biodiversity Assessment Report Memo (East Coast Ecology, 2024) was undertaken for the proposed change in the Consistency Assessment for Edmondson Street and includes the proposed MAF location. The BARM can be referred to in Appendix E. Vegetation within the proposed MAF location has	Minor trimming and clearing of non-native vegetation is required as part of the MAF activities. As noted in the BARM, no impacts to threatened species and population or ecological communities are expected during the MAF activities.	The following mitigation measures have been proposed: ▪ The Project Ecologist will undertake a pre-clearing survey within the proposed clearing extent prior to the commencement of clearing. The pre-clearing survey will include, where applicable, the following: » Confirmation of the location and extent of any biodiversity

	noted as historically disturbed from agricultural, industrial, infrastructure (road and rail), residential and community use. As such, limited ecological function and significance is associated with it. Vegetation that has been identified as per the BARM includes: ▪ Miscellaneous Ecosystems – 'Ornamental Plantings' (MEOP), 0.40ha ▪ Miscellaneous Ecosystems – 'Highly Disturbed areas with no or limited Native Vegetation' (MEHD), 0.41ha A review of the Mapped Native Vegetation Communities (NSW State Vegetation Type Map) was undertaken as part of the BARM, which indicated the absence of Plant Community Types (PCTs) within or adjoining the Subject Land (which included the proposed MAF location).		exclusion zones as well as verify the clearing extent as permitted by CoA E20; » Identification and demarcation of all habitat trees with flagging (typically yellow), unique identifier numbers indicated by identification tags and GPS coordinates. Identification and demarcation may also occur during earlier surveys. If this is the case, the Project Ecologist will confirm that habitat trees are prominently marked/tagged; » Inspections of structures that provide potential microbat habitat; » Identification of fauna that require relocation; » Identification of nearby habitats for suitable release of fauna; » Identification of suitable resources for salvage and beneficial reuse including, for example, hollows, tree trunks, logs, mulch, bush rock and root balls; ▪ The extent of clearing required for the establishment of the MAF, is to be surveyed and marked out on site. ▪ The Unexpected Finds Procedure for Flora/Fauna would be implemented if unexpected flora and/or fauna are discovered on site (Appendix F). ▪ Weed, pest and pathogen management and control practices will be implemented throughout the MAF activities, including weed monitoring, to minimise the risk of spread into and out of the Project. ▪ Construction personnel and subcontractors will be inducted in the importance of preventing weeds from entering the Project and the measures that must be taken for vehicles, machinery and plant used on the Project.

			▪ If any threatened species or threatened ecological community are unexpectedly encountered, the Unexpected Threatened Species Finds Procedure will be implemented. ▪ Handling of fauna during the MAF activities may be required if fauna is encountered during construction and is required to be relocated or transported to a vet or wildlife carer in the case of injury. Fauna encountered will be managed in accordance with the Fauna Handling and Rescue Procedure.
Soil and Water	There are no waterways or groundwater dependent ecosystems (GDEs) located near the proposed MAF, with the closest waterway (Murrumbidgee River) located approximately 1200m northeast of the site. There is a low probability of acid sulfate soils (ASS), along with the local area mapped as a 'low' land salinity hazard.	Activities for the proposed MAF would include installation of site sheds/portable toilets, minor trimming/clearing of vegetation and laying DGB. There are minor impacts to soil and water associated with these activities. Spills from portable toilets, construction vehicles or containers may occur and have the potential to deposit contaminants in underlying soil.	The following mitigation measures have been proposed: ▪ Training will be provided to all Project personnel, including relevant subcontractors on soil, water and contamination management and the requirements from this plan through inductions, toolboxes talks and targeted training. ▪ Before undertaking any work and during maintenance or construction activities, erosion and sediment controls must be implemented and maintained to prevent water pollution consistent with Managing Urban Stormwater: Soils and Construction Vol 1 4th ed. by Landcom, 2004 (The Blue Book). ▪ An Erosion and Sedimentation Control Plan (ESCP) would be prepared and implemented as appropriate during MAF activities. ▪ If ASS are encountered, they will be managed in accordance with the Acid Sulfate Soils Manual (Acid Sulfate Soils Management Advisory Committee (ASSMAC), 1998b) and the Waste Classification Guidelines – Part 4: Acid Sulfate Soils (NSW EPA, 2014b). ▪ Construction materials such as fuels, chemicals, vehicles, and

			equipment will be appropriately stored to minimise the introduction of contaminants to the existing soil, groundwater, and surface water runoff. • In the event of a spill incident of chemicals, fuels or other hazardous substances, the Spill Response Procedure will be followed (Appendix G). • Appropriate spill containment equipment (i.e. spill kits) will be provided and placed at strategic and accessible locations within the site, such as adjacent to chemical storage areas, relevant work areas and refuelling areas.
Contamination and Hazardous Materials	The proposed MAF would be located within Areas of Environmental Concern (AEC), AEC 36 and AEC 37. These areas have been noted as having potential Underground Storage Tanks (USTs), formerly storage of firefighting storage tanks and former fuel store (not part of the proposed MAF) – Former District Engineers Office, workshop, and branch depot. There has also been historical storage of gas cylinders, grease and drums, transformers, rail components and battery acid containers and potential asbestos in buildings. Potential contaminants of concern include the following: ▪ Total Recoverable Hydrocarbons (TRH) ▪ Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) ▪ Polycyclic Aromatic Hydrocarbons (PAH) ▪ Per- and Polyfluoroalkyl Substances (PFAS) ▪ Asbestos ▪ Lead dust and/or paint	There is a general contamination risk present within the proposed MAF. Site investigations for the Wagga Wagga Utilities works would be undertaken, however no site investigations are required for the proposed MAF due to the proposed methodology which will minimise disturbance of the existing soils through the application of a marker layer and DGB capping layer.	The following mitigation measures have been proposed: ▪ Marker layer and DGB to be imported to minimise potential for contamination to be uncovered or impact existing site conditions. ▪ The Unexpected Finds Procedure for Contamination would be followed should any unexpected contamination or asbestos (suspected contamination) be encountered or otherwise discovered (Appendix H). ▪ A Sampling Analysis and Quality Plan (SAQP) has also been developed for the area and will be executed under a Low Impact Works approval to mitigate against disturbance of contamination.
Flooding and Bushfire Risk	There is an overland flooding risk within the rail corridor,	The proposed MAF is located on flood prone land.	The following mitigation measures have been proposed:

	with peak flood depth of 0.15-0.3 m noted within the rail corridor in the 1% AEP. There is a bushfire risk in Wagga Wagga between October and March (Riverina Region).	The proposed MAF may be impacted during a flood event, with flood emergencies with potential to cause property damage, injury to construction personnel and loss of life if not managed. The proposed MAF is not located within bushfire prone land, with the closest bushfire zone located approximately 600m away.	▪ Training will be provided to all Project personnel, including relevant sub-contractors on bushfire prevention and management measures and the requirements from this plan through inductions, toolboxes, and targeted training. ▪ Adequate access and egress for fire-fighting vehicles and staff will be provided during construction. ▪ Requirements for first-response capabilities, including fire extinguishers, water carts and hoses will be assessed and provided at during construction, where needed. ▪ Dangerous goods and hazardous materials will be stored in accordance with supplier's instructions and relevant legislation, Australian Standards, and applicable guidelines; and may include bulk storage tanks, chemical storage cabinets/containers or impervious bunds.
Waste, Air Quality and Odour	Waste streams have been considered as part of this assessment, with general construction and general solid waste identified to be managed during the MAF activities. The proposed activities associated with the establishment of the MAF, are likely to generate potential waste during construction.	There is the potential to generate odour or dust during the MAF activities, including the minor trimming and removal of non-native vegetation and use of portable toilets. During waste collection, there is the potential for mud/waste tracking onto local roads. Construction waste management activities will not have a significant impact on the environment or community, provided the proposed mitigation measures are implemented.	The following mitigation measures have been proposed: ▪ Where visible dust is generated from onsite activities, watering (water cart or water sprays) and/or other appropriate measures will be implemented. ▪ Waste generation is to be avoided, and where avoidance is not reasonably practicable, waste generation is to be reduced; ▪ Where avoiding or reducing waste is not possible, waste is to be reused, recycled, or recovered; ▪ Where re-using, recycling or recovering waste is not possible, waste is to be treated or disposed of at a waste management facility, premise lawfully permitted to accept the materials, in accordance with a Resource Recovery Exemption or Order issued under the Protection of the Environment Operations (Waste) Regulation

			2014, or to any other place that can lawfully accept such waste. ▪ All waste generated must be classified in accordance with the Waste Classification Guidelines (EPA 2014) with appropriate records and disposal dockets retained for audit purposes. No waste will be disposed from site under this MAFA.
Landscape and Visual	The existing Edmondson Street bridge is located adjacent to the Wagga Wagga CBD Precinct. This precinct is identified as a 'key location' for 'renewal and intensification.' The activities associated with the establishment of the proposed MAF would involve minor trimming and removal of non-native vegetation.	The proposed activities associated with the establishment of the MAF would not involve the existing Edmondson Street bridge, therefore there would be no direct or indirect impacts to this. The minor trimming and removal of non-native vegetation would be undertaken in the approved construction boundary and would have a minor, short-term visual impact. No OOHW have been proposed as part of the scope and therefore light spill impact would be avoided.	The following mitigation measures have been proposed: ▪ The site compound will be designed and orientated to minimise visual impacts. This will include locating areas of low visual amenity away from sensitive receivers, where appropriate.

APPENDICES

APPENDIX A

MAF Application Assessment

Martinus proposes to establish and operate a MAF to support works in Wagga Wagga associated with the Utilities scope and investigative works at Edmondson Street bridge.

Table 3 provides an assessment of Martinus's MAF application.

TABLE 3: MAF APPLICATION ASSESSMENT

Step 1 – Minor ancillary facility information	
Site location (attach map for reference):	Refer to the following figures in Section 1 and Section 2: ▪ Figure 1: Project enhancement sites ▪ Figure 2: Proposed MAF location ▪ Figure 4: Proposed MAF LayoutFigure 4: Proposed MAF Layout
Date works to commence: January 2025	**Date works to finish:** It is anticipated that the MAF will be in place until mid-2026, or whenever the incremental launch bridge program has been completed.
Minor Construction Ancillary Facilities in accordance with the definition of a MAF under Table 1: Definitions of the Project Approval (select all that apply):	

Lunch sheds/office sheds	X
Portable toilet facilities	X
Or similar	

Step 2 – Compliance with CoAs		
CoA	**Requirement**	**Compliance**
CoA C23	The MAFs can be established and used where they have been assessed in the documents listed in Condition A1 or satisfy the following criteria:	As noted below.
	(a) are located within or immediately adjacent to the construction boundary; and	The proposed MAF is located within the approved construction boundary, part of the Wagga Wagga Utilities works.
	(b) have been assessed by the ER to have:	As noted below.
	(i) minimal amenity impacts to surrounding residences and businesses, after consideration of matters such as compliance with the Interim Construction Noise Guideline (DECC, 2009) (ICNG), traffic and access impacts, dust and odour impacts, and visual (including light spill) impacts; and	The activities associated with the proposed MAF, as noted in Section 3, would have minimal environmental impact with respect to traffic and access, noise, dust and odour, and visual (including light spill). Traffic and transport, noise, dust, odour and visual (including light spill) impacts will be managed accordingly and as per the proposed mitigation measures in Section 3.
	(ii) minimal environmental impact with respect to waste management and flooding;	The activities associated with the proposed MAF, as noted in Section 3, would have

		minimal environmental impact with respect to waste management and flooding. The proposed MAF is located on flood prone land. The flooding and emergency plan (Appendix I) will be prepared and implemented as required during the MAF activities. The MAF activities will result to a minor amount of waste, where material will be managed and disposed of accordingly and as per the proposed mitigation measures in Section 3.
	(iii) no impacts on biodiversity, soil and water, and heritage items beyond those already approved under other terms of this approval	Due to the location and nature of the activities associated with the establishment and operation of the MAF, no impacts on biodiversity, soil and water, and heritage items, beyond those already approved under the other terms of the Project Approval, are expected. Exclusions zone will be established for any known non-Aboriginal heritage items located near the proposed activities. Minor trimming and removal of non-native vegetation will be required for site establishment activities, with appropriate flora and fauna mitigation measures to be followed as per Section 3. An Erosion and Sedimentation Control Plan (ESCP) would be prepared and implemented as appropriate during MAF activities.

Step 3 – Internal sign off		
Construction Manager		
Name: James Bradley	**Signature:** 	**Date:** 7.02.2025
Environment and Sustainability Manager		
Name: Chris Standing	**Signature:** 	**Date:** 7.02.2025

Step 4 – Environmental Representative sign off			
Does the proposed Minor Ancillary Facility meet the requirements of Condition of Approval C23?			Yes or No X
Name: Derek Low	**Signature:** Accepted Mr Derek Low - WolfPeak Feb 12, 2025, 9:45 AM GMT+11:00	**Date:**	
Additional comments/notes: Note that the ER provided satisfaction of this MAF application via outlook to Inland Rail on 30/01/25 at 14:02, but the application for sign/off execution was issued to the ER on 12/02/25. This sign off does not verify that all pre-work requirements have been fulfilled.			

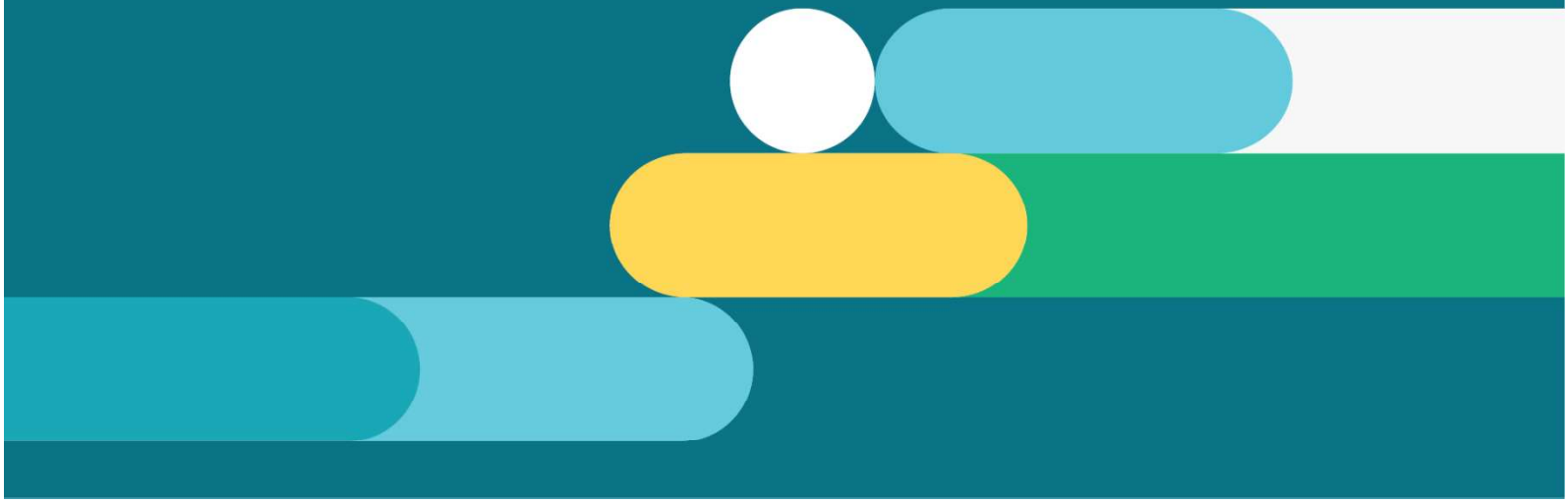
APPENDIX B

Community Communication Strategy (CCS)

INLAND RAIL

Community Communication Strategy

Albury to Illabo (A2I)



5-0000-210-PCS-00-ST-0001

Document Control

DOCUMENT TITLE	**COMMUNITY COMMUNICATION STRATEGY – A2I**
DOCUMENT OWNER	Casey Bootsma - Stakeholder Engagement Lead A2I
PREPARED BY	Olufemi Kolawole - Stakeholder Engagement Advisor A2P Jessica Jackson – Stakeholder Engagement Lead A2P
REVIEWED BY	Daniel Lumby – Principal Environment Advisor Alana Leslie – Senior Projects Communication Advisor Cameron Tomes – Communications Manager – Projects Wayne Window – Environment Manager NSW & Victoria Leanna Wrobel – Environment Advisor Dallas Nixon – Senior Environment Advisor Lisa Goodman - First Nations Engagement Advisor Joel Johnston - Social Performance Principal
QUALITY REVIEW	Alan Savage – Program Quality Advisor
ENDORSED BY	Naomi Tonscheck – Head of Stakeholder Relations

Note: The Preparer, Owner, Quality Reviewer and Endorser acceptance of this document is captured electronically via the IR Controlled Document Centre.

Approved by

	NAME	TITLE	DATE	SIGNATURE
DOCUMENT APPROVER	Malcolm Clark	Area Director A2I/S2P	Dec 2, 2024	

Revision History

REVISION	REVISION DATE	DESCRIPTION OF CHANGES
1	21/10/2024	Approved for Use
2	12/11/2024	Updates based on feedback from DPHI. Approved for Use.
3	28/11/2024	Updates based on additional feedback from DPHI. Approved for Use.
4	02/12/2024	Updates based on additional feedback from DPHI. Approved for Use.

Due for Revision: 2 years from Approved Date (or as required)

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Glossary

Specific terms and acronyms used throughout this strategy are listed and described in Table 1: Terminology below.

Table 1: Terminology

ACRONYM	DEFINITION
A2I	Albury to Illabo
ABS	Australian Bureau of Statistics
ACC	Albury City Council
ARTC	Australian Rail Track Corporation
CALD	Culturally and Linguistically Diverse
CCC	Community Consultative Committee
CSEMP	Communication and Stakeholder Engagement Management Plan
CSSI	Critical State Significant Infrastructure
CM	Consultation Manager –a cloud-based knowledge sharing platform used for effective stakeholder engagement. Consultation Manager allows project teams to capture interactions, tasks, and actions in a secure and readily accessible manner.
CoA	Conditions of Approval set by the for Minister for Planning and Public Spaces
The strategy	Community Communication Strategy
Construction Contractor or "the contractor"	Any contractor engaged by IRPL to undertake works on the project
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DITRDCA	The Department of Infrastructure, Transport, Regional Development, Communications, and the Arts (formerly the Department of Infrastructure, Transport, Regional Development and Communications)
DPHI or "the Department"	NSW Department of Planning, Housing, and Infrastructure (formerly NSW Department of Planning and Environment)
EIS	Environmental Impact Statement
EP&A Act	*Environmental Planning and Assessment Act 1979* (NSW)
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Cth)
EPL	Environmental Protection Licence
ER	The Environment Representative for the project
FAQs	Frequency asked questions
IAP2	International Association for Public Participation
JSC	Junee Shire Council
IRPL	Inland Rail Proprietary Limited
LALCs	Local Aboriginal Land Councils
LEMC	Local Emergency Management Committees
LGA	Local Government Area
LOTE	Language other than English

ACRONYM	DEFINITION
ONVR	Operational Noise and Vibration Review
OOHW	Out-of-hours work
PIR	Preferred Infrastructure Report
PLO	Public Liaison Officer
RAPs	Registered Aboriginal Parties
RtS	Response to Submissions
Planning Secretary or "the Secretary"	Secretary of the Department of Planning, Housing and Infrastructure
SEIFA	Socio-Economic Indexes for Areas
SSI	State Significant Infrastructure
TfNSW	Transport for NSW
Work	Any physical activity for the purpose of the A2I project including Construction and Low Impact Work
WWCC	Wagga Wagga City Council

Table 2: Compliance matrix

CONDITION REFERENCE	REQUIREMENT	COMMUNICATION STRATEGY REFERENCE
B1	A Community Communication Strategy must be prepared to provide mechanisms to facilitate communication about construction and operation of the CSSI with: (a) the community (including adjoining affected landowners and businesses, LALC, RAPs, community representatives and others directly impacted by the CSSI); and (b) the relevant councils and relevant agencies.	This Strategy
B2	The Community Communication Strategy must:	
B2 (a)	• identify people, organisations, councils, and agencies to be consulted during the design and work phases of the CSSI	Section 5.2 Table 6
B2 (b)	• identify details of the community and its demographics	Section 5 and 5.1 Table 5
B2 (c)	• identify timing of consultation	Section 5.2 Table 6
B2 (d)	• set out procedures and mechanisms for the regular distribution of accessible information including to CALD and vulnerable communities about or relevant to the CSSI	Section 6 Table 7 Table 8
B2 (e)	• identify opportunities for education within the community about construction sites	Section 7 Table 8
B2 (f)	• detail the measures for advising the community in advance of upcoming construction including upcoming track authorisations and possessions and out-of-hours work as required by Condition E73	Section 7 and 7.1
B2 (g)	• provide for the formation of issue or location-based community forums that focus on key environmental management issues of concern to the relevant community(ies) for the CSSI	Section 7 and Table 8
B2 (h)	• set out procedures and mechanisms: (i) through which the community can discuss or provide feedback to the Proponent (ii) through which the Proponent will respond to enquiries or feedback from the community	Section 8 Table 11
B2 (i)	• to resolve any issues and mediate any disputes that may arise in relation to the environmental management and delivery of the CSSI, including timing for mediation to be undertaken once it has been escalated to the dispute resolution process	Section 8 Table 12 Table 13
B2 (j)	• address who will engage with the relevant stakeholders	Section 5.2 Table 6
B2 (k)	• detail the roles and responsibilities of the Public Liaison Officer(s) engaged under Condition B6	Section 4 and 4.1 Table 4 Section 8.6 Table 11
B6	• A Public Liaison Officer must be appointed to assist the public with questions and complaints they may have at any time during Work. The Public Liaison Officer must be available at all times that Work is occurring.	Section 4 and 4.1 Table 4

1 Introduction

This Community Communication Strategy (the strategy) has been developed to support communication and engagement for works associated with the Inland Rail—Albury to Illabo (A2I) section (the project). This is an all-encompassing strategy that will cover all construction works including low impact works and 12 months following the completion of construction.

This strategy is informed by the definition of consultation outlined in B1 of the Conditions of Approval. The definition as per the condition is to provide information and actively engage with and obtain and consider feedback from stakeholders during development of post approval documents. How the feedback has been considered and whether any changes have been made in response to this feedback is then documented and communicated back to stakeholders. Consultation should not be limited to one-way notification about the project.

This strategy has been prepared in accordance with the NSW Minister for Planning and Public Spaces' Project Conditions of Approval (CoA) (Application Number: SSI-10055). As per Condition B2 of the CoA, this strategy seeks to:

- identify people, organisations, councils and agencies to be consulted during the design and work phases of the CSSI;
- identify details of the community and its demographics;
- identify timing of consultation;
- set out procedures and mechanisms for the regular distribution of accessible information including to CALD and vulnerable communities about or relevant to the CSSI;
- identify opportunities for education within the community about construction sites;
- detail the measures for advising the community in advance of upcoming construction including upcoming track authorisations and possessions and out-of-hours work as required by Condition E73;
- provide for the formation of issue or location-based community forums that focus on key environmental management issues of concern to the relevant community(ies) for the CSSI;
- set out procedures and mechanisms:
  - through which the community can discuss or provide feedback to the Proponent;
  - through which the Proponent will respond to enquiries or feedback from the community;
- to resolve any issues and mediate any disputes that may arise in relation to the environmental management and delivery of the CSSI, including timing for mediation to be undertaken once it has been escalated to the dispute resolution process;
- address who will engage with the relevant stakeholders; and
- detail the roles and responsibilities of the Public Liaison Officer(s) engaged under Condition B6.

Table 2: Compliance matrix demonstrates compliance of this document against the CoA B2.

1.1 Approval and review of this strategy

This strategy was submitted to the Secretary of the Department of Planning, Housing and Infrastructure (Planning Secretary) and approved in mid-2024. Refer to the document revision table for further information on the review of this document.

This strategy will be reviewed every 12 months, or as required. Details of any review and/or amendments made to the strategy will be provided to the Environmental Representative (ER) for review and approval, prior to submitting to the Planning Secretary (if deemed required by the ER).

2 Inland Rail Program overview

Inland Rail is a project that will enhance national freight and supply chain capabilities, connecting existing freight routes through rail, roads, and ports, to support Australia's growth. Inland Rail will transform the way we move freight around the country, connect regional Australia to markets more efficiently, drive substantial cost savings for producers and consumers, and deliver significant economic opportunities.

Comprising 12 individual sections and spanning approximately 1,600 kilometres (km), Inland Rail is the largest freight rail infrastructure project in Australia and one of the most significant infrastructure projects in the world.

2.1 Inland Rail Program details

The objectives of the Inland Rail Program, as stated in the Service Offering, are to:

- provide a rail link between Melbourne and Brisbane to serve future rail freight demand and stimulate growth for interstate and regional/bulk rail freight
- provide an increase in productivity that will benefit consumers through lower freight transport costs
- provide a step-change improvement in rail service quality in the Melbourne–Brisbane corridor to deliver a freight rail service that is strongly competitive with road
- improve road safety, ease congestion, and reduce environmental impacts by moving freight from road to rail
- bypass bottlenecks on the congested metropolitan Sydney rail network, and free up train-path capacity for other services on the coastal route, including passenger services through the Sydney region and bulk freight through the NSW Southern Highlands
- act as an enabler for regional economic development along the Inland Rail corridor.

For more information on the Inland Rail Service Offering, please visit inlandrail.artc.com.au/what-is-inland-rail/using-inland-rail/.

Figure 1: Beveridge to Kagaru projects

2.2 The Albury to Illabo project

The A2I section is one of the 12 individual projects in the Inland Rail Program and will form a vital freight rail link in southern New South Wales (NSW). The project will make enhancements and/or modifications to specific sites along the existing 185 km of rail corridor from the Victorian–NSW border at Albury to Illabo in regional NSW. The enhancement and modification works are required to create height and width (horizontal and vertical) clearances to accommodate double-stacked freight trains, and include footbridges and road bridges, overhead structures, signal structures and level crossings. The A2I project area covers the five Local government areas (LGAs) of Albury, Greater Hume, Lockhart, Wagga Wagga and Junee. It also includes interface and connections with neighbouring Inland Rail sections: Illabo to Stockinbingal (I2S) and Beveridge to Albury (B2A).

Key components of the A2I project include:

- adjustments to approximately 44 km of track across 14 enhancement sites to accommodate the vertical and horizontal clearances according to Inland Rail specifications, comprising:
  - realignment of track within the rail corridor at 14 enhancement sites
  - lowering of track up to 1.6 metres (m) at three enhancement sites
  - changes to bridges and culverts at enhancement sites to allow track realignment as follows:
  - replacement of two road bridges and adjustment to adjoining intersections
  - replacement of three pedestrian bridges
  - demolition of two redundant pedestrian bridges
  - modifications to four rail bridges
  - ancillary works, including adjustments to nine level crossings, modifications to drainage and road infrastructure, signalling infrastructure, fencing, signage, and services and utilities.

Construction of the project would require:

- construction compounds (including laydown areas) and other areas needed to facilitate construction works
- temporary changes to the road network, including roads closures to undertake works on road bridges and level crossings
- other ancillary works.

Figure 2: Albury to Illabo corridor

2.3 Project timeline

Table 3: A2I project timeline

YEAR	MILESTONE
2015–2019	Pre EIS, preliminary engagement, and reference design was completed.
2020	In May 2020, the project was declared State Significant Infrastructure (SSI) and, as a result, commenced the Environmental Impact Statement (EIS) approvals pathway. In June 2020, the project was classified as not a "Controlled Action' under *the Environment Protection and Biodiversity Conservation Act* 1999 (Cth) (EPBC Act).
2021	In March 2021, the project was upgraded to Critical State Significant Infrastructure (CSSI)
2022	From Mid-2021 to the end of 2022, reference design was completed. The A2I EIS was on public exhibition between 17 August 2022 and 28 September 2022.
2023	In June 2023, Inland Rail appointed the main Construction Contractor to design and construct enhancement works on the Albury to Illabo (A2I) section of Inland Rail. On 2 November 2023 the Preferred Infrastructure Report (PIR) was submitted to the NSW Department of Planning, Housing, and Infrastructure (DPHI). The PIR was placed on public exhibition from 15 November 2023 to 6 December 2023.
2024	In February 2024, a PIR Response to Submission (RtS) Report was submitted to DPHI and published for public to view. In October 2024, the CSSI approval was granted by the NSW Minister for Planning and Public Spaces.

3 Engagement approach

3.1 Engagement approach and principles

In delivering the A2I project, Inland Rail seeks to:

- Build trust through quality engagement and open and ongoing interactions with stakeholders, including affected landowners, community groups, First Nations/Aboriginal and Torres Strait Islander peoples, and government authorities; and by providing clear and up-to-date information and accessible channels to provide feedback
- Build credibility by forging consistent connections with local councils, business, and industry groups, and affected landowners, with a focus on responsive engagement practices. Credibility is also built by fostering and delivering on community benefits and opportunities, including sponsorship opportunities and capability and skills workshops
- Build visibility by building a predominantly regionally based engagement team that is responsive to the needs of the community where they work and live; being available to the community and by playing an active role in supporting local businesses, and regional community events as well as broader industry conferences.

The engagement approach is founded on the following principles:

- Timing: ensure regular engagement and timely communication through various channels over the lifecycle of the project.
- Inclusivity: demonstrate an understanding for the regional context and ensure all stakeholders are provided with open and accessible engagement opportunities.
- Transparency: encourage a diverse range of views and opinions and ensure that this feedback is accurately captured and considered throughout the lifecycle of the project.
- Equitability: ensure relevant groups are included in the conversation with recognition of those voices that may not often be readily heard. This may include Traditional Owners, people with disabilities, youth, and the elderly.
- Accessibility: encourage engagement and participation of different socio-economic groups in the community.
- Materiality: focus on identifying and addressing the issues that matter most to stakeholders.
- Responsiveness: demonstrate how engagement has influenced project considerations or decisions.

3.2 Alignment with IAP2 public participation spectrum

Inland Rail is committed to active engagement in accordance with the International Association for Public Participation (IAP2) spectrum. Inland Rail is committed to engaging with local communities along the proposed alignment openly and in a collaborative manner and will aim to collaborate on project outcomes wherever feasible.

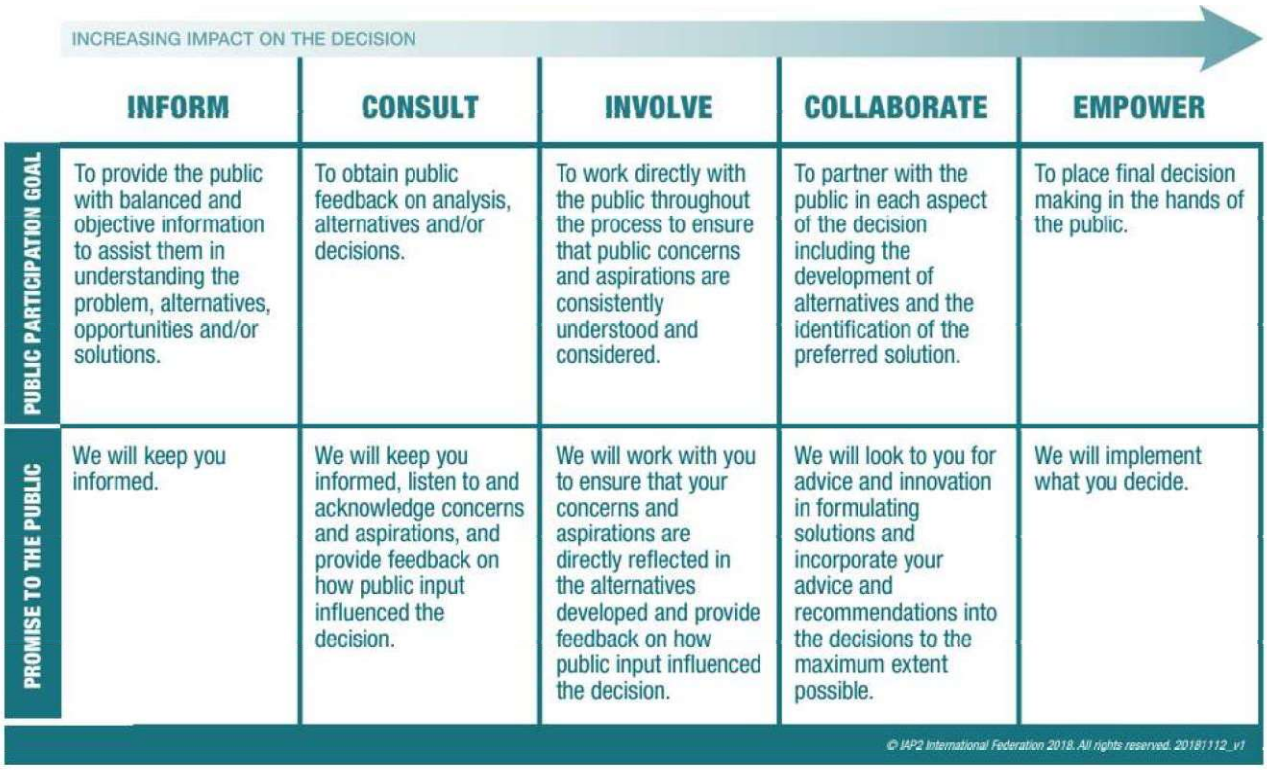
The IAP2 spectrum and core values helps organisations, decision makers and practitioners make better decisions that reflect the interests and concerns of potentially affected people and entities. The IAP2 notes:

'*Public participation means to involve those who are affected by a decision in the decision-making process. It promotes sustainable decisions by providing participants with the information they need to be involved in a meaningful way, and it communicates to participants how their input affects the decision*'.

The IAP2 spectrum for public participation is an informative tool to help clarify the role of the public (or community) in planning and decision making. The IAP2 spectrum allows for the setting of appropriate goals, expectations and activities. It also assists in better understanding community and project outcomes.

For the purpose of this strategy, consultation is defined as any element of public participation, or combination of elements, as outlined in Figure 3: IAP2 Spectrum of Public Participation below.

Figure 3: IAP2 Spectrum of public participation



4 Structure and accountabilities

The Inland Rail A2I Stakeholder Engagement team will have responsibility for stakeholder and community relations in partnership with the Construction Contractor's communication and stakeholder engagement team. The Public Liaison Officer will also assist the public with questions and complaints that they may have at any time during work. The Inland Rail Project Director has overarching accountability for the implementation of engagement related matters.

The delivery of engagement and communication activities will also involve contributions from broader Inland Rail teams, including Media, Social Media, Corporate Affairs, Property, Social Performance, Sustainability, Engineering, Project Delivery and Environment.

The Construction Contractor, in collaboration with Inland Rail, will develop a Communication and Stakeholder Engagement Management Plan (CSEMP), which will be updated as required.

Inland Rail will remain responsible for the implementation of the communications strategy for the duration of the work and for 12 months following the completion of construction.

The following positions hold key responsibilities for the engagement activities, within Inland Rail, the construction contractor and externally.

Table 4: Position and responsibilities for the A2I project

POSITION	RESPONSIBILITIES
Inland Rail	
Head of Stakeholder Relations	Oversees all Inland Rail engagement teams from a program level.
Engagement Manager	Accountable for managing the A2I stakeholder engagement team and activities. The Manager will act as the interface with the Construction Contractor on community engagement matters.
Stakeholder Engagement Lead	Responsible for the delivery of engagement activities associated with the A2I project and leads engagement with key stakeholders.
Stakeholder Engagement Advisor	Provides support to the Inland Rail A2I Stakeholder Engagement Lead and undertakes engagement activities, planning, review and reporting requirements associated with the project.
First Nations Engagement Advisor	Responsible for leading and will retain primary relationships with Local Aboriginal Land Councils. Will lead engagement with key First Nations stakeholders, organisations and the wider First Nations community.
Senior Communication Advisor—NSW South	Oversees all communication activities on the A2I project, including the provision of input and advice to the Inland Rail Stakeholder Engagement team relating to engagement and project material; interface with the Construction Contractor to support project delivery communication; and facilitate communication approvals.
The Construction Contractor These responsibilities will align with the strategy articulated in the CSEMP.	
Communications and Stakeholder Engagement Manager	Co-ordinate and manage all communications and interactions with the Inland Rail communications and stakeholder engagement team, project stakeholders and the communities located in and adjacent to the project area. The Communications and Stakeholder Engagement Manager is responsible for making sure that the stakeholder engagement and communications activities meet the needs of all project stakeholders and adhere to the standards set by Inland Rail. Act as a key conduit for the flow of information to/from the Construction Contractor's project team.

POSITION	RESPONSIBILITIES
Community and Stakeholder Leads/Advisors	The construction contractor will engage Stakeholder Engagement Leads/Advisors to be based in the regional offices in Wagga Wagga and Albury. They will be the 'on the ground' personnel. Responsible for liaising with stakeholders, landowners and the community regarding construction impacts and requirements as well as preparing community notifications, construction updates, plans and attending community events.
Indigenous Participation Manager	Responsible for implementation of social performance actions which require engagement with First Nations stakeholders. Responsible for implementation of Indigenous workforce development and industry participation actions.
Public Liaison Officer	Responsible for assisting the public with questions and complaints they may have at any time during work. This role will work collaboratively with the Community Complaints Mediator, acoustics advisor, ER and the wider engagement teams to address community concerns and will be available at all times while work is occurring.
External - Independent	
Community Complaints Mediator	As required, Independent personnel who will review unresolved disputes within the Complaints Management System to mediate and make recommendations to resolve issues and concerns when a member of the public is not satisfied by Inland Rail's handling of the complaint.
Environmental Representative	Receive and respond to communication from the Planning Secretary Report monthly to the Planning Secretary. Review documents identified by the Conditions of Approval and monitor their implementation. Other matters as requested by the Planning Secretary and as per the Conditions of Approval.

4.1 Public Liaison Officers

In accordance with CoA B6 the key roles and responsibilities of a Public Liaison Officer (PLO) include:

- Proactively communicate construction impacts with the community and engage with affected communities as required.
- Liaise with the Utility Coordination Manager and the public regarding upcoming utility works.
- Implementing the Project's complaints management system to effectively address complaints.
- Being available to receive and respond to calls while works are in progress from the Project's 1800 telephone number.
- Respond to telephone calls and written complaints and enquiries including undertaking investigations of complaints/enquiries.
- Assist community information sessions, public events and one on one stakeholder meetings as required.
- Encouraging community participation.
- Providing advice to the wider project team on matters relating to timely provision of information, engagement requirements, proactively identifying issues and promptly responding to concerns raised.
- Maintaining accurate records on community relation issues and recording all interactions with stakeholders and the community in the stakeholder management database (Consultation Manager).
- Identifying and initiating opportunities for community participation in a range of areas that have the potential to strengthen relationships with key project stakeholders and enhance the project's reputation.
- Implementing the project's Communications Strategy and involvement in other communication strategies and plans as required.

5 Stakeholders and community

Stakeholders of the A2I project are individuals or groups affected by, or with an interest in, Inland Rail between Albury and Illabo (see Table 6: A2I Key Stakeholders).

Inland Rail will consult with relevant stakeholders during the design and construction of the project and update/review our stakeholder list during these phases.

Inland Rail will minimise, where possible, impacts on stakeholders and the community, and ensure stakeholders and the community fully understand the activities to be undertaken, their objectives, benefits, potential impacts and expected outcomes, with consideration to other related infrastructure.

We will encourage community involvement and participation by being accessible and available to the community by maintaining a strong and visible presence within their townships and communities, and by tailoring our communication and the tools we use to the requirements of individual stakeholders and their circumstance.

5.1 Community demographics

The following Table 5: Community demographics, provides an overview of some of the key community demographics of the A2I communities. These community demographics will be considered when determining communication methods and developing communication material to ensure the methods and materials are suitable for the audiences they are being targeted to.

Table 5: Community demographics

LOCAL GOVERNMENT AREA	POPULATION	ABORIGINAL AND/OR TORRES STRAIT ISLANDER	MEDIAN AGE	COMPLETED YEAR 12 OR EQUIVALENT	BORN IN AUSTRALIA	SEIFA
Albury	56,093	3.8%	39 years	33.1%	81.7%	968
Greater Hume	11,157	3.4%	44 years	32%	84.6%	999
Lockhart	3,119	3.4%	46 years	30.9%	85%	976
Wagga Wagga	67,609	6.6%	35 years	34.4%	83%	989
Junee	6,415	9.2%	41 years	28.8%	85%	934

Source: Australian Bureau of Statistics 2021

Socio-Economic Indexes for Areas (SEIFA) are developed by the Australian Bureau of Statistics (ABS), based on data from the five-yearly Census, to rank areas according to relative socio-economic advantages and disadvantages. SEIFA scores are compared to the standardised baseline (state) score of 1,000, with a low score indicating relatively greater disadvantages.

As an example, the SEIFA score for Greater Hume in 2016 was 999. Across Australia's local government areas SEIFA scores ranged from 1,110 (least disadvantaged) to 492 (most disadvantaged).

5.2 Key stakeholders to be consulted during design and work phases

A2I Key Stakeholders below (Table 6: A2I Key Stakeholders) identifies key stakeholders that will be consulted during the project. Other identified stakeholders will be informed, and provided with objective information that will assist them in understanding the project.

The level of engagement with these key stakeholders aligns with the IAP2 public participation spectrum highlighted in Section 3.2.

Table 6: A2I Key Stakeholders

SECTOR	STAKEHOLDER	LEVEL OF ENGAGEMENT (IAP2)	ENGAGEMENT TIMING	RESPONSIBILITY
Commonwealth Government	Department of Climate Change, Energy, the Environment and Water (DCCEEW)	Consult/Involve	During design, construction, and post construction	Inland Rail Project Delivery Team
	Elected Representatives	Inform	During design, construction, and post construction	Inland Rail Project Delivery Team
NSW Government	Department of Planning, Housing, and Infrastructure (DPHI)	Consult/Involve	During design, construction, and post construction	Inland Rail Project Delivery Team
	Environmental Protection Authority NSW (NSW EPA)	Consult/Involve	During design, construction, and post construction	Inland Rail Project Delivery Team
	Transport for NSW	Consult/Involve	During design, construction, and post construction	Inland Rail Project Delivery Team Construction Contractor
	Crown lands	Consult/Involve	During design, construction, and post construction	Inland Rail Project Delivery Team Construction Contractor
	Biodiversity, Conservation and Science Division of the Environment and Heritage Group of the NSW Department of Climate Change, Energy, the Environment and Water (BCS)	Consult/Involve	During design, construction, and post construction	Inland Rail Project Delivery Team Construction Contractor
	Heritage NSW	Consult/Involve	During design, construction, and post construction	Inland Rail Project Delivery Team Construction Contractor
	DPI Fisheries	Consult/Involve	During design, construction, and post construction	Inland Rail Project Delivery Team Construction Contractor
	NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW - Water)	Consult/Involve	During design, construction, and post construction	Inland Rail Project Delivery Team Construction Contractor
	Elected Representatives	Inform	During design, construction, and post construction	Inland Rail Project Delivery Team
Local government	Wagga Wagga City Council (WWCC)	Consult/Involve	During design, construction, and post construction	Inland Rail Project Delivery Team

SECTOR	STAKEHOLDER	LEVEL OF ENGAGEMENT (IAP2)	ENGAGEMENT TIMING	RESPONSIBILITY
				Construction Contractor
	Albury City Council (ACC)	Consult/Involve	During design, construction, and post construction	Inland Rail Project Delivery Team Construction Contractor
	Junee Shire Council (JSC)	Consult/Involve	During design, construction, and post construction	Inland Rail Project Delivery Team Construction Contractor
	Greater Hume Shire Council	Consult/Involve	During design, construction, and post construction	Inland Rail Project Delivery Team Construction Contractor
	Lockhart Shire Council	Consult/Involve	During design, construction, and post construction	Inland Rail Project Delivery Team Construction Contractor
	Mayors and Councillors (of above Councils)	Consult	During design, construction, and post construction	Inland Rail Project Delivery Team
First Nations/Aboriginal and Torres Strait Islander peoples	Registered Aboriginal Parties (RAPs) Local Aboriginal Land Councils (LALCs)	Consult/Involve	During design and construction	Inland Rail Project Delivery Team Construction Contractor
Affected landowners	Directly impacted stakeholders including landowners, business operators and residents along the alignment	Consult/Involve	During design, construction, and post construction	Inland Rail Project Delivery Team Construction Contractor
Broader community	Community members residing in the Albury, Wagga Wagga, Junee, Lockhart and Greater Hume local government areas	Involve and Consult (as required)	During design and construction	Construction Contractor
Emergency services	NSW Police	Consult	During design and construction	Construction Contractor
	NSW Ambulance, stations located Wagga Wagga, Junee, Albury and Henty	Consult	During design and construction	Construction Contractor
	Fire and Rescue NSW	Consult	During design and construction	Construction Contractor
	Rural Fire Service	Consult	During design and construction	Construction Contractor
	State Emergency Services	Consult	During design and construction	Construction Contractor

SECTOR	STAKEHOLDER	LEVEL OF ENGAGEMENT (IAP2)	ENGAGEMENT TIMING	RESPONSIBILITY
	Local emergency management committees (LEMC)	Consult	During design and construction	Construction Contractor
Utilities	Essential Energy	Consult	During design, construction, and post construction	Construction Contractor
	NBN	Consult	During design, construction, and post construction	Construction Contractor
	Telstra	Consult	During design, construction, and post construction	Construction Contractor
	Australian Pipeline Authority (APA)	Consult	During design, construction, and post construction	Construction Contractor
	Goldenfields Water County Council	Consult	During design, construction, and post construction	Construction Contractor
	Riverina Water	Consult	During design, construction, and post construction	Construction Contractor
Educational Institutions	Kildare Catholic College	Consult	During design and construction	Construction Contractor
	South Wagga Public School	Consult	During design and construction	Construction Contractor
	Wagga Wagga High School	Consult	During design and construction	Construction Contractor
Hospitals	Wagga Wagga Base Hospital	Consult	During design and construction	Construction Contractor
	Calvary Riverina Hospital	Consult	During design and construction	Construction Contractor

6 Accessibility mechanisms and procedures

The table below identifies practices for achieving accessibility in the regular distribution of information, which will be delivered through the mechanisms listed in Table 7. The vulnerable community include people on low incomes, people living with disabilities, chronic medical conditions or in poor health requiring access to services, culturally and linguistically diverse (CALD) communities, people who are homeless or in insecure housing, people who are unable to represent themselves, or other vulnerable people such as elderly people, children or single-parent.

Table 7 Accessibility mechanisms and procedures

MECHANISM	PROCEDURE
English as a Second Language (ESL) disclaimer /footer	Inland Rail will include the following disclaimer on all works notifications provided to stakeholders and communities: *Please call our free translation and interpreter service on 131 450 (24 hours a day) if English is your second language and you need help reading this document.*
Website	Inland Rail is committed to providing a website that is easily accessible to the widest possible audience, regardless of ability or technology. The Inland Rail website will meet the Australian Government's web accessibility requirements, including the World Wide Web Consortium's Web Content Accessibility Guidelines version 2.1 (WCAG 2.1) (available at w3.org/TR/WCAG21/) at level A and AA.
Engagement	**First Nations Community and stakeholders** Engagement is undertaken with an understanding of historical, cultural and social complexity of specific local or regional First Nations contexts via First Nations Engagement Advisors in alignment with best practice Free, Prior and Informed consent framework.
	Vulnerable community For these stakeholders' engagement will be via community noticeboards and other network groups. The preferred method of continuing engagement will be determined on a case-by-case basis.

7 Communication tools and engagement methods

Inland Rail and the Construction Contractor will keep stakeholders and the community up to date about the progress of the A2I project through a range of communication tools and engagement methods outlined in Table 8: Communication tools and engagement methods. These tools present an opportunity to educate the community about construction sites and will be used to inform the community about upcoming construction, impacts, milestones, and project achievements.

Table 8: Communication tools and engagement methods

TOOL/ACTIVITY	DESCRIPTION	AUDIENCE	TIMING	FREQUENCY	SPECIFICATIONS
Planning our engagement					
Communication Action Plan (CAPs)	These plans will be developed for specific packages or work, activities, and issues management	Internal	Preconstruction & construction Developed and endorsed for use prior to the start of contractor works.	As required.	Detailed communication action plans will be developed to guide the communications and stakeholder engagement to be undertaken for specific packages of work, activities, and issues management. These plans will be developed to be consistent with this communication strategy and will include, but not be limited to stakeholder to be engaged, engagement tools and activities to be utilised, roles and responsibilities.
Crisis communication plan	Crisis communication plan will be developed to clearly outline the process and procedures for communication which will be followed in the event of an emergency or crisis.	Internal	Preconstruction Developed and endorsed for used prior to the start of contractor works.	One month before start of contractor works. Updated as required.	The crisis communication plan will detail the method of managing communication response to an emergency or crisis. The strategy of the plan is to communicate the response promptly to mitigate or reduce the adverse impacts to stakeholder.
Keeping the community up to date – notifications and communication					
Community notifications	Community notification will be used regularly to distribute information to the surrounding residents of the upcoming works near them.	Impacted community as identified in the construction noise and vibration impact statement for the proposed works.	Construction Notification to impacted stakeholders will be sent out a minimum of 7 days before works commence or change comes into effect.	As required.	Notification will be used advise the community of upcoming construction, traffic changes, track possessions and out-of-hours work. Works notifications will be sent via mail and will appear on the Inland Rail website and, depending on impact, will be advertised in the local newspapers.

TOOL/ACTIVITY	DESCRIPTION	AUDIENCE	TIMING	FREQUENCY	SPECIFICATIONS
		Community member impacted by construction works e.g. traffic diversions.	Unless otherwise stipulated by the EPL.		
Door knocking	Doorknocks will be used to facilitate face-to-face interactions with directly impacted residents and businesses where no other contact details such as phone or email are available, or the resident has nominated this as their preferred method of contact. Updates on site construction activities, schedule and key milestones will be provided during this engagement.	Directly affected residents and businesses.	Construction Doorknocks to notify and discuss general works will be carried out a minimum 5 to 7 days prior to the activity starting. Unless otherwise stipulated by the EPL. Doorknocks to notify of emergency situation or works are to be carried as soon as practical.	As required.	Doorknocks will be carried out as required and will focus on directly impacted residents and businesses. Doorknocks will be carried out in pairs.
Frequently asked questions (FAQs) and factsheets/information sheets	Frequently asked questions (FAQs) will be developed to capture and respond to the questions frequently asked by the community and stakeholders. Factsheets will be developed as needed to explain key parts of the project or specific issues or concerns raised.	Community and stakeholders, any interested parties.	Preconstruction and construction For the duration of the project.	As required.	These FAQs will be available on the Inland Rail website. Factsheets will be used to provide an overview of the project, its environment approvals/construction process and to support engagement on specific issues such as noise mitigation, managing dust during construction etc. Information sheets provide a more technical description of activities specifically undertaken by the Construction Contractor (e.g. track laying and environmental monitoring). Both fact sheets and information sheets will be displayed on the Inland Rail website and will

TOOL/ACTIVITY	DESCRIPTION	AUDIENCE	TIMING	FREQUENCY	SPECIFICATIONS
					include the projects 24/7 1800 number, email address, postal address and website address.
Advertising	Press, social media and radio advertisements will be used to: • raise awareness and understanding of the project • provide information and promote channels through which stakeholders can communicate their views, issues and concerns • raise awareness of project milestones, upcoming construction activity and timeframes • support the Construction Contractor's recruitment and supplier engagement efforts •	Local community, community and stakeholder groups, residents and any interested parties	Preconstruction and construction Between 5 and 14 days before works. Project milestones. As required for recruitment and supplier engagement.	As required.	Written advertisements will be placed in local papers relevant to the proposed works. Social media posts will be distributed via Inland Rail's existing channels Radio advertisements to be agreed based on impacts and specific activities.
Media releases	To inform and raise awareness about the project among the project's Australian Government shareholders, government agency stakeholders, local communities and businesses, and broader industry, potentially leading to coverage in news and media channels.	Local community and businesses, government agencies, broader industries, stakeholder and community groups and any interested parties.	Preconstruction and construction Project milestones, quarterly project updates. Issues of importance to Shareholding Ministers and the Department.	As required.	Inland Rail is a highly visible and important project to the Government and to ARTC and comes with a high level of reputational and political risk. By working together, Inland Rail and the Construction Contractor will reduce the reputational risks to the Australian Government and ARTC associated with the project that may attract media attention.
Out-of-hours work (OOHW) notifications and notices	Community notifications will adhere to the requirements of the project specific Construction Noise and	Local community, directly impacted	Construction Between 7 to 14 days prior to	As required.	Consultation will be consistent with the CoA and any OOHW will identify a range of reasonable and feasible mitigation measures and respite options. These options will be

TOOL/ACTIVITY	DESCRIPTION	AUDIENCE	TIMING	FREQUENCY	SPECIFICATIONS
	Vibration Impact Statements (CNVIS), Environmental Protection Licence (EPL) and Out of Hours Work (OOHW) protocol. These protocols will be developed in compliance with the CoA and appropriate levels of consultation carried out for all OOHW activities.	residents and businesses, emergency services.	commencement of the OOHW works. Unless otherwise stipulated by the EPL.		consulted with affected community members at each location.
Photographs, videography, timelapse and visualisations	Photos, video, drone and timelapse footage will be taken during construction to visually demonstrate progress. Visualisations will be used to demonstrate construction progress and design elements of key infrastructure assets throughout the delivery cycle to raise community awareness of what has changed.	Community and stakeholder groups, any interest parties.	Construction As required throughout the duration of the project.	As required.	Timelapse opportunities will be explored at all major construction sites, subject to site access and length of construction activity. Updated visualisations will be uploaded to the project website prior to and during construction.
Project signage and hoarding	Signage to include contact details and information about the project, gives the public easy access to the project team. Part of site signage and site protection. Hoarding and fencing wrap will identify the project, provide contact information and offer the opportunity to promote key project messages. Hoarding and site signage will be used in publicly visible areas such as roads and towns.	Community and stakeholder groups, any interested parties.	Preconstruction and construction Before the commencement of construction and for the duration of the project.	Reviewed and updated as required.	Signposts notifying of changed conditions will be installed before changes are implemented. Wayfinding and directional signage will be installed to support any temporary detours.

TOOL/ACTIVITY	DESCRIPTION	AUDIENCE	TIMING	FREQUENCY	SPECIFICATIONS
Getting in touch with the team – communications tools					
Community hotline	A 24-hour community hotline number (1800732 761) has been established for the community to ask questions, provide feedback or make complaints about the project.	Community and stakeholder groups, any interested parties.	Preconstruction, construction and post construction	Ongoing.	The hotline number will be included on all project communication material. Records of calls received and their responses will be captured in Consultation Manager.
Email address	An email address (InlandRailNSW@inlandrail.com.au) has and will continue to be maintained to provide a means for the community to contact the stakeholder and project teams and ask questions or make complaints about the project.	Community and stakeholder groups, any interested parties.	Preconstruction, construction and post construction	Ongoing.	The email address will be included on all project communication material. Records of received emails and their responses will be captured in Consultation Manager.
Project website	The project website (inlandrail.com.au/A2I) will provide access to digital material and provide reference point to obtain further information.	Community and stakeholder groups, any interested parties.	Preconstruction, construction and post construction	Ongoing. Content reviewed quarterly.	Information about the A2I project will be uploaded to the existing project website. The website is the single source of truth for all project information and will be updated throughout construction. All documentation required under the CoA and approvals will be uploaded to the site. Stakeholder and community members can submit enquiries, feedback and comment via the contact us feature (Contact Inland Rail: Enquiries, Information & Feedback - Inland Rail).
Online Interactive Map	The A2I Online Interactive Map (Albury to Illabo | Social Pinpoint (inlandrail.com.au)) provides community and stakeholders with an avenue to engage with project in an online forum through an interactive map. The map shows the project and includes updated designs and	Community and stakeholder groups, any interested parties.	Preconstruction and construction	Ongoing. Content reviewed quarterly.	The A2I Online Interactive Map will continue to be updated throughout construction with updated information such as detours and construction timeframes.

TOOL/ACTIVITY	DESCRIPTION	AUDIENCE	TIMING	FREQUENCY	SPECIFICATIONS
	visualisations. The public can drop a comment on the map to provide feedback or ask a question.				
How the community can learn more – digital tools					
Website and Online Interactive Map	As described above, the website has been developed to provide access to digital materials and to facilitate two-way communication. These tools are designed to increase community interaction and understanding of the project. The projects Online Interactive Map will continue to be utilised throughout construction to update community and stakeholder groups. Updated on site construction activities, schedules and key milestones will be provided.	Community and stakeholder groups, any interested parties.	Preconstruction, construction and post construction	Ongoing. Content reviewed quarterly.	Information about the A2I project will be uploaded to the existing project website. Where a condition(s) of this approval requires a document(s) to be prepared before work, construction or operational activity commences, a current copy of the relevant document(s) will be published on the website before the work, construction or operational activity is undertaken. The website will include: information on the current implementation status of the CSSI and updates on proposed upcoming works a copy of all required documents and any associated documentation related to modifications made to the CCSI a copy of the EIS CoA, in its original form, a current consolidated copy of the approval, and copies of any approval granted to a modification of the terms of the CoA a copy of the Environment Protection Licence, EPBC approval (if relevant), any licenses and approvals under the Water Management Act 2000 (NSW), and any approvals to close level crossings copies of documents that are prepared before construction or on operational activity—these will be uploaded before work commences all community newsletters, notifications, and FAQs

TOOL/ACTIVITY	DESCRIPTION	AUDIENCE	TIMING	FREQUENCY	SPECIFICATIONS
					notification of upcoming events and forums copies of visualisations, videos and construction photos showing progress.
A2I e-newsletter	To provide impacted stakeholders registered for emails regular updates on site construction activities, schedules, key milestones and rail safety messages.	Local community and businesses, stakeholder and community groups and any interest parties.	Preconstruction and construction	Quarterly (with the option to move to monthly as construction activity increases).	Distributed prior to and during construction, the e-newsletter will be promoted through socials, emails, distributed at community meetings/events and displayed on the Inland Rail website. Community contact information will be provided in this communication.
Social media platforms	Various social media platforms such as Facebook, LinkedIn and Instagram assist in raising awareness and understanding of the project, support the Construction Contractor's recruitment and supplier engagement efforts and share updates and achievements of both the project and the broader Inland Rail Program.	Community and stakeholder groups, any interested parties.	Preconstruction and construction As required during project milestones and key consultation periods including public information sessions.	As required,	Engagement through social media can be targeted and designed to engage with communities according to interests and concerns. As the project moves through construction, social media will assist in providing information to targeted communities, such as road detour notifications.
Opportunities for community to get involved					
Community information sessions/forums	These sessions will provide an opportunity for community members to find out more about the work, discuss environmental issues, and ask questions about the project and construction.	Community and stakeholder groups, any interested parties.	Preconstruction and construction As required throughout the duration of the project.	As required throughout the duration of the project.	Sessions will be held in public venues such as shopping centres, libraries or local events.
Community Consultative Committee (CCC)	Continuing to engage with the CCC will assist Inland Rail to further facilitate open and inclusive engagement on all aspects of the A2I project, beyond the EIS/PIR.	CCC members	Preconstruction and construction	To be held quarterly through the duration of the project.	The CCC will be used as a communication method throughout the delivery of the A2I project, and will ensure the community and stakeholder groups are:

TOOL/ACTIVITY	DESCRIPTION	AUDIENCE	TIMING	FREQUENCY	SPECIFICATIONS
					• kept informed of the status of the project, any new initiatives, and the performance of Inland Rail • consulted on the development of, management plans and proposed changes to A2I project • able to provide feedback to Inland Rail on key issues that may arise during the implementation of the project. The A2I CCC will be operated in accordance with the Department's CCC Guideline.
Meetings (one on one and small group forums)	Direct interaction with community members and stakeholders will be held to obtain feedback and raise or measure awareness of the project. Meetings may also be scheduled to address specific questions and issues in person.	Community and stakeholder groups, residents and businesses, any interested parties.	Preconstruction and construction Meeting with key stakeholders, nearby residents and businesses will proactively be offered for the duration of the project.	The frequency will be determined by the works being completed and the preferences to meet from the stakeholders/community.	Meetings may be formal or informal depending on the purpose of the meeting. Meetings minutes will be recorded in Consultation Manager.
Stakeholder presentations/briefings and forums	To provide technical or specific issue-related information for specific stakeholder groups and agencies. These forums may be targeted based on location and impacts on those communities.	Councils and agencies, local organisations, key stakeholder, community groups and any interested parties.	Preconstruction and construction Ahead of key milestones and as required. Meeting with key stakeholders and agencies will proactively be offered for the duration of the project.	As required.	Inland Rail and the Construction Contractor will provide update presentations to community groups. This may be at the request of community groups or at the initiative of Inland Rail and/or the Construction Contractor. Records of engagement will be captured in Consultation Manager.

TOOL/ACTIVITY	DESCRIPTION	AUDIENCE	TIMING	FREQUENCY	SPECIFICATIONS
Attendance at markets and events	Provide community with the opportunity to provide feedback, obtain project information and raise awareness of the project.	Community and stakeholder groups, any interested parties.	As required during construction.	As required.	Examples of local events include Farmers Markets and local annual shows.
Community and business capability workshops	These sessions will help regional businesses understand how to engage with buyers, to prepare compliant tender submissions, and to manage contracts for work on major projects and within regional supply chains.	Local businesses, stakeholder groups and any interest parties.	Preconstruction	As required.	Currently underway to build local businesses capability prior to works commencing.
Feedback surveys	A structured format for community feedback on the project includes written, web-based or telephone feedback. Feedback surveys will help measure awareness of and engagement with the project.	Community and stakeholder groups, residents and businesses, any interested parties.	Construction Survey to be conducted six months into construction	Frequency to be assessed after first survey results.	Feedback surveys may also be used to understand community attitudes towards noise barriers or other noise mitigation measures.
Education opportunities	Education campaign will be developed to increase community awareness around construction sites, this may include promoting safe travel through worksites/detours.	Community and stakeholder groups, residents and businesses, any interested parties.	Construction As required throughout the duration of the project.	As required.	Community education will include a variety of mediums to reach the community and may include social media, site signage and digital tools.
Engaging with culturally and linguistically diverse and vulnerable communities					
LOTE, CALD and other vulnerable and marginalised groups and communities	Information and engagement to be available for all members of the community including those in LOTE, CALD and other vulnerable and marginalised groups or communities.	LOTE, CALD and vulnerable and marginalised communities.	Preconstruction and construction	As required.	To provide for all members of the community, Inland Rail has adopted: • Disclaimer on all works communication materials for interpreting services. • Website is WCAG accessible. • First Nations Advisors to provide engagement with an understanding of historical, cultural and social complexity of

TOOL/ACTIVITY	DESCRIPTION	AUDIENCE	TIMING	FREQUENCY	SPECIFICATIONS
					specific local or regional First Nations contexts.

7.1 Community information for construction activities

Inland Rail will use a combination of measures, identified in Table 9: Communication tools and engagement methods, to advise the community in advance of upcoming construction activities, including track authorisations and possessions.

Key methods of communication with the community will vary depending on the work activity, duration, assessment of predicted impacts, and mitigation and management measures, including what, if any, respite requirements may need to be implemented. The main forms of communicating with the broader community of track authorisations and possessions and out-of-hours work are identified below and include:

- project e-newsletters
- project fact sheets/information sheets
- media (e.g. local newspapers advertisement)
- project website
- social media
- works notifications sent to impacted residents.

Where out-of-hours works (OOHW) are required to be completed, Inland Rail will undertake these works in accordance with the EPL and/or the approved OOHW protocol, where the works are not covered by an Environment Protection Licence (EPL), as required by Condition E73.

The Construction Contractor will undertake noise and vibration assessments to determine the impacts to affected residents and sensitive land users and will communicate and notify impacted residents where required by the assessment undertaken.

Additional communication tools will be utilised to communicate and notify impacted residents of the OOHW and respite requirements depending on predicted impacts associated with the work activities. These may include:

- works notifications sent to impacted residents
- media (e.g. local newspapers advertisements)
- letterbox drop
- website notifications displayed on the Inland Rail A2I webpage
- phone call
- door knock
- meetings with highly impacted residents
- negotiated agreements.

The Construction Contractor's Noise and Vibration Management Plan will set out the specific details relating to OOHW.

7.2 Consultation on documents and monitoring programs

The A2I Conditions of Approval specify documents and monitoring programs to be prepared or a review to be undertaken in consultation with identified parties. Table 9 below, lists the individual conditions of approval which relate to a deliverable (e.g. document, monitoring program, review with reference to the condition, the deliverable, stakeholders and level of engagement required. Some other conditions of approval also require consultation if the requirement is triggered, however, these conditions are not listed because the stakeholder (s) and level of engagement will be determined by the triggered circumstances.

Table 9: Key documents for stakeholder consultation

CONDITION	DELIVERABLE	STAKEHOLDERS	LEVEL OF ENGAGEMENT
C1, C2	Construction Environmental Management Plan (CEMP)	• ER • DPHI (Approve)	Review
C6, (a)	CEMP Sub Plan – Traffic, Transport and Access	• Transport for NSW • Relevant Councils • ER • DPHI (Approver)	Consult
C6, (c)	CEMP Sub Plan – Noise and Vibration	• Relevant Councils • ER • DPHI (Approver)	Consult
C6, (d)	CEMP Sub Plan – Biodiversity	• BCS • DPI Fisheries • Relevant Councils • ER • DPHI (Approver)	Consult
C6, (e)	CEMP Sub Plan – Non-Aboriginal Heritage	• Heritage NSW • Relevant Councils • ER • DPHI (Approver)	Consult
C6, (f)	CEMP Sub Plan – Heritage	• Heritage NSW • RAPS • Relevant Councils • ER • DPHI (Approver)	Consult
C6, (b), (h), (k)	CEMP Sub Plan – Soil, Salinity and Water	• BCS • NSW EPA • Relevant Councils • DCCEEW Water Group • ER • DPHI (Approver)	Consult
C6, (g)	CEMP Sub Plan – Flood and Bush Fire Emergency Management	• Hume Zone and Riverina bushfire management committees • DCCEEW • NSW State Emergency Services • Relevant Councils • ER • DPHI (Approver)	Consult
C6, (i)	CEMP Sub Plan- Contamination and	• Relevant Councils	Consult

CONDITION	DELIVERABLE	STAKEHOLDERS	LEVEL OF ENGAGEMENT
	Hazardous Material plan	• DPHI (Approver)	
C6, (j)	CEMP Sub Plan- Waste Management plan	• Relevant Councils • DPHI (Approver)	Consult
C6 (l)	CEMP Sub Plan- Social Impact management plan	• DPHI (Approver) • Relevant Councils	Consult
C18	Site Establishment Management Plan	• Relevant Councils • Relevant Government Agencies • ER • Planning Secretary (Approver)	Consult
C26 (a)	Construction Monitoring Programs – Traffic, Transport and Access	• Transport for NSW • Relevant Councils • ER • DPHI (Approver)	Consult
C26 (b)	Construction Monitoring Programs – Noise and Vibration	• Relevant Councils • ER • DPHI (Approver)	Consult
C26 (c)	Construction Monitoring Programs – Biodiversity	• BCS (NSW DCCEEW) • ER • DPHI (Approver)	Consult
C26 (d)	Construction Monitoring Programs – Surface Water	• Relevant Councils • DCCEEW Water Group • ER • DPHI (Approver)	Consult
D5 (a)	Operational Monitoring Programs – Air Quality	• NSW EPA • Relevant Councils • Planning Secretary (Approver)	Consult
D5 (b)	Operational Monitoring Programs – Operational Fauna Connectivity Monitoring, Predator Prevention and Adaptive Mitigation Program	• BCS • Planning Secretary (Approver)	Consult
E4	Background Monitoring Plan	• EPA	Consult
E6	Operational Air Quality Review Report	• EPA • Planning Secretary (Approver)	Consult

CONDITION	DELIVERABLE	STAKEHOLDERS	LEVEL OF ENGAGEMENT
E26	Sloane's Froglet Management Plan	• DCCEEW • Affected landowners • DPHI (Approver)	Consult
E32	Fauna Connectivity Strategy	• BCS • DPI Fisheries • Planning Secretary (Approver)	Consult
E43	Flood Design Report	• Relevant Councils • Planning Secretary (Approver)	Consult
E52	The Albury Railway Station and Yard Group Report	• Heritage NSW, • Planning Secretary (Approver)	Consult
E55	Heritage Interpretation Plan	• Heritage NSW • Heritage Council of NSW • Relevant Councils • RAP's	Consult
E63	Aboriginal Archaeological Test Excavation Methodology	• Heritage NSW • RAPs • LALC • Planning Secretary (Approver)	Consult
E63	Aboriginal Archaeological Salvage Excavation Methodology	• Heritage NSW • RAPs • LALC • Planning Secretary (Approver)	Consult
E64	Aboriginal Cultural Heritage Excavation Report(s)	• RAPs • Planning Secretary (Approver)	Consult
E66	Unexpected Heritage Finds and human Remains Procedure	• Heritage NSW • Heritage Council of NSW • Planning Secretary (Approver)	Consult
E72	Out-of-Hours Work Protocol	• ER • EPA • AA • Planning Secretary (Approver)	Consult
E78	CNVIS	• Affected sensitive land users	Consult
E89	Operational Noise and Vibration Review (ONVR)	• Relevant Councils • EPA • Planning Secretary (approver)	Consult
E108	UDLP	• SDRP	Consult

CONDITION	DELIVERABLE	STAKEHOLDERS	LEVEL OF ENGAGEMENT
		• Heritage NSW • TfNSW • Relevant Councils • Community • Planning Secretary (approver)	
E137	Wagga Wagga Construction Traffic Transport and Access Mitigation Report	• Relevant Road Authority • Relevant Council • TfNSW • Planning Secretary (Approver)	Consult
E146	Public Level crossing Report	• TfNSW • Relevant Councils • Planning Secretary (Approver)	Consult
E150	Private Level crossing Report	• Affected landowners • Planning Secretary (Approver)	Consult
E153	Operational Level Crossing Performance Report	• Transport for NSW • Relevant Councils	Consult
E155	Wagga Wagga Operational Road Network Performance Plan	• Transport for NSW • Relevant Council • Emergency Services • Wagga Wagga Health Service • Planning Secretary (Approver)	Consult
E156	Wagga Wagga Operational Road Network Performance Review	• Transport for NSW • Relevant Council • Emergency Services • Wagga Wagga Health Precinct	Consult
E162	System for communication of train movements	• Landowners • Stock operators • LLS	Consult
E175	Water Pollution Impact Assessment	• EPA	Consult

The process for managing the review of documents and monitoring programs as outlined in Table 9 above is outlined in Table 10 below.

Table 10: Process for managing document review

STEP	APPROACH
1	Stakeholders will be informed prior to the sending of document(s) for review. This notice may be through ongoing engagement channels such as monthly meetings or through other means such as email or phone call.
2	The relevant document will be provided to the respective stakeholder. The document will be sent via email or Aconex with a request for comments by a specified date and requesting a response even if the stakeholder has nil comments.
3	A review period will be established unless specified otherwise in the CoA. Stakeholders will be encouraged to communicate early with any limitation to meet timeframes, and requests for additional time will be duly considered.
4	Where necessary and where requested by a stakeholder, a briefing will be held.
5	Where no response is received within the communicated review period provided, a follow up phone call and/or email will be made. If no response is received within a further five to seven (5 - 7) days outside the communicated review period, a further effort will be made to contact the stakeholder. If there is still no response, the document will be progressed, and it will be assumed that the stakeholder has no comments to provide.
6	Where a stakeholder has raised an issue, Inland Rail will work with the stakeholder to resolve and provide an overview of how the issue was considered and addressed where relevant.
7	Records of engagement (including follow-up engagement) and outcomes will be kept. An associated comments register will be kept recording issues raised, how they were addressed (with associated explanation/reasoning as applicable). These records will be provided to DPHI as required to demonstrate consultation undertaken in accordance with the Conditions of Approval. All engagement is also registered in the Consultation Manager database.

8 Feedback channels and complaints management

Responding to complaints, feedback and enquiries is essential to the successful delivery of the project and maintaining a positive reputation within the community. Complaints, feedback and enquiries may be received from a range of sources including through phone calls, emails and face-to-face interactions.

8.1 Definitions

8.1.1 Complaints

Complaints may include any interaction with a community member or stakeholder who expresses dissatisfaction with the project and/or project works, policies, activities of Inland Rail's contractor's services, or their staff, complaints handling process itself, and/or actions or proposed actions during the project.

8.1.2 Feedback

Inland Rail will classify feedback in accordance with Australian Standard AS/NZS 10002:2014 Guidelines for Complaint Management in Organisations, which defines feedback as "opinions, comments and expressions of interest or concern, made directly or indirectly, explicitly or implicitly to or about the organisation, its products, services, staff or its handling of a complaint".

8.1.3 Enquiry

An enquiry is defined as an act of a stakeholder asking for information relating to the Project.

8.2 Feedback channels

Inland Rail will use the following channels to maintain contact with the community and other stakeholders throughout the life of the A2I project.

Table 11: Feedback channels

CHANNEL	WHERE CAN IT BE FOUND
Email address: inlandrailnsw@inlandrail.com.au	All communication materials and the website display this email address.
Community information line, toll free: 1800 732 761 (24 hours, 7 days a week)	The community information line number is displayed on all communication material (signage, project updates and calling cards, etc.) and on the Inland Rail website (inlandrail.artc.com.au/A2I). The number is monitored and answered by a team member 24 hours a day and is not automatically diverted to a message bank. All calls are registered and recorded on Consultation Manager. The proponent will also run a 24/7 on-call roster to respond to complaints.
Postal address and Reply-Paid facility: Inland Rail Engagement Team GPO Box 14 Sydney NSW 2000 Reply Paid 89629 SYDNEY NSW 2001	This central postal address is displayed and included on all the communication material and the Inland Rail website. It offers another way for the community and other stakeholders to contact the project team, with the Reply-Paid facility providing further encouragement. Correspondence will be redirected to the relevant project team and contractors as required.
Project information Centres: Albury and Wagga Wagga.	The Construction Contractor will establish a physical presence in the communities and ensure all stakeholders have easy access to face-to-face engagement with representatives from the contractor.

CHANNEL	WHERE CAN IT BE FOUND
	The Construction Contractor will ensure that relevant community engagement personnel are available to assist with enquiries at project information centres during business hours. The Public Liaison Officer will also be available to assist the public with questions and complaints that they may have at any time during work. The location of these project information centres will be available on the Inland Rail website.

8.3 Responsibilities

The Inland Rail Stakeholder Engagement team and the Construction Contractor will work closely to respond to all complaints, feedback, and enquiries. Whoever receives the complaint will gather details of the complaint and the complainant's contact details and will immediately pass the details onto the Stakeholder Engagement team to resolve as per the Complaint Management System. All details of complaints will be recorded in Consultation Manager.

Complaints will be managed in accordance with the CoA and other relevant conditions or licences, such as the EPL.

A complaint is deemed to be resolved when it reaches a conclusion, not necessarily resolved to the satisfaction of the complainant.

8.4 Complaints management process

All complaints received during the A2I project will be actioned and recorded through Consultation Manager and used as an improvement opportunity for Inland Rail and the Construction Contractor.

Inland Rail has already established a Complaints Management Process in the lead-up to construction commencing on the project. The Complaints Management Process will be maintained for the duration of construction and for a minimum of 12 months following completion of construction of the CSSI.

Table 12: Complaints Management Process

PROCESS FOR MANAGING COMPLAINTS		
ACTION	TIMEFRAME	TEAM MEMBER RESPONSIBLE
Interaction acknowledged with stakeholder and recorded in Consultation Manager (CM) If received via email, file into the relevant inbox folder	Day of receipt	Receiver
Complaint assigned to responsible team member via CM	Day of receipt	Complaints to be assigned to Project Stakeholder Engagement Lead in the first instance. The lead will allocate responsibility for preparing a response as appropriate and also advise any other team members who may need to be aware of the interaction, including the Stakeholder Engagement Manager, Environment Manager, Public Liaison Officer, and relevant Project Manager.
Prepare and send simple responses (e.g. project details)	1-2 days	Team member assigned to response
Information gathered for a more complex response	1-2 days	Team member assigned to response
Draft response	1 day	Team member assigned to response
Response reviewed and approved	1-4 days	Draft to be reviewed/approved by relevant Stakeholder Engagement Lead in the first instance (content of phone call discussed, if responding to an 1800 hotline contact). Lead to secure approvals from Project Manager, Environment Manager

PROCESS FOR MANAGING COMPLAINTS		
		and Head of Stakeholder Relations as required. Head of Stakeholder Relations to advise if additional approvals are required.
Response sent	Upon approval being received	Team member assigned to response
Response recorded in CM and action closed out	Day of reply	Team member assigned to response
Document any lessons learned and issues that may need to be followed up	2–3 days after response sent	Relevant Stakeholder Engagement Lead Advisor
Assist the public with questions and complaints	As required throughout the works	Public Liaison Officer
Unresolved issue where a member of the public requests the Community Complaints Mediator to review Inland Rail's response	28 days	Community Complaints Mediator.

8.5 Response times to complaints and enquiries

Complaints and enquiries will be responded to in the following timeframes.

8.5.1 Feedback and enquiries:

- provide verbal response to telephone enquiries within two hours if received during work hours or during out of hours construction works; for other times, a response will be provide the next business day
- provide written response to emails and written enquires within 24 hours or on the next business day if received outside of work hours
- follow-up calls, emails and letters will be made where required to close out the enquiry.

8.5.2 Complaints and issues:

- provide verbal response to telephone enquires within two hours if received during work hours or during out of hours construction works, for other times a response will be provide the next business day
- provide written response to emails and written complaints within 24 hours or on the next business day if received outside work hours
- where possible, all complaints will be resolved within three business days. Where responses require technical assistance, responses may take up to five business days.

8.6 Complaints Register

All complaints will be tracked and recorded in Inland Rail's CM System. Upon the request of the Secretary of the Department of Planning, Housing and Infrastructure (DPHI), a Complaints Register will be provided, within the timeframe stated in the request.

At the request of the Environment Representative, the details of complaints on the A2I project will be provided in a report format within the agreed time frame. The Environment Representative will have access to Inland Rail's CM system to see all complaints related to the A2I project.

A complaint register will also be provided to the Acoustics Advisor on a weekly basis where complaints have been received, or as otherwise requested.

The Complaints Register provided to the Secretary, Environmental Representative and Acoustic Advisor will include the number of complaints received, the date and time of the complaint, the method by which the complaint was made, the nature of the complaint, any personal details of the complainant which were provided or, if no such details were provided, the number of people affected in relation to complaint, means by which the complaint was addressed and whether resolution was reached, with or without mediation and if no action was taken, the reason(s) why no action was taken.

The Complaints Register will also note whether a complaint has necessitated independent mediation services.

In addition to the information collected in the register, complainants will be advised of the following before, or as soon as practicable after, providing personal information:

- the Complaints Register may be forwarded to Government Agencies such as DPHI to allow them to undertake their regulatory duties
- by providing personal information, the complainant authorises Inland Rail to provide that information to government agencies
- the supply of personal information by the complainant is voluntary
- the complainant has the right to contact government agencies to access personal information held about them and to correct or amend that information (Collection Statement).

A Collection Statement will be included on the project website to make prospective complainants aware of their rights under the *Privacy and Personal Information Protection Act 1998* (NSW).

8.7 Mediation process

Inland Rail has engaged a Community Complaints Mediator that is independent of the design and construction and accredited under the National Mediator Accreditation System, administered by the Mediator Standards Board. The nomination of the Community Complaints Mediator is required to be submitted to the Planning Secretary for approval within one month before commencement of Work (refer to Conditions of Approval B13 – B17) The role of the Community Complaints Mediator is to address any complaint where a member of the public is not satisfied with Inland Rail's response to issues raised through the Complaints Management System. The mediation process will review unresolved disputes relating to the environmental management and delivery of the A2I project where an acceptable resolution to both parties has not been achieved.

Escalation of issues to independent mediation will be in accordance with the Complaint Escalation and Mediation Process (see Table 121: Complaints escalation and mediation process).

Any member of the public that has lodged a complaint that is registered within the Complaints Management System may ask the Community Complaints Mediator to review Inland Rail's response. The application must be submitted in writing and the Community Complaints Mediator must respond within 28 days of the request being made, or other specified timeframe, as agreed between the Community Complaints Mediator and the member of the public.

The Community Complaints Mediator will:

- review unresolved disputes where the complaints escalation procedure and mechanisms have not been able to satisfactorily address the complaint
- make recommendations to Inland Rail to address complaints, resolve disputes or mitigate against the occurrence of future complaints and disputes
- provide a copy of the recommendations, and Inland Rail's response to the recommendations, to the Planning Secretary within one month of the recommendations being made.

Inland Rail must implement the recommendations made by the Community Complaints Mediator outlined above, in accordance with Condition B15 and within a timeframe agreed with the Community Complaints Mediator, unless otherwise agreed with the Planning Secretary.

The Community Complaints Mediator will not act before the Complaints Management System has been executed for a complaint and will not consider issues, such as property acquisition, where other dispute processes exist to manage those issues in accordance with Condition B17.

The Environmental Representative will assist in the resolution of community complaints as may be requested by the Planning Secretary.

This mediation process will be available at the commencement of work, maintained for the duration of construction and for 12 months following the completion of construction.

Table 13: Complaints escalation and mediation process

STEPS	PROCEDURE	TIMEFRAME
1	Complaint will be referred to Inland Rail A2I Stakeholder Engagement Lead and/or Project Environment Advisor for Environmental Complaints. They will complete an investigation of the complaint and advise the complainant of the outcome within three (3) business days.	Three business days
2	If not resolved at Step 1, details of the investigation and complaint will be escalated by Inland Rail A2I Stakeholder Engagement Lead to the A2I Senior Project Manager and/or HSE Manager for Environmental Complaints. The relevant level of management will subsequently complete an investigation of the complaint and advise the complainant of the outcome within three business days.	Three business days
3	If not resolved at Step 2, details of the investigation and complaint will be escalated to Inland Rail Head of Stakeholder Relations and Inland Rail A2I Area Director. The relevant level of management will subsequently complete an investigation of the complaint and advise the complainant of the outcome within five business days.	Five business days
4	If not resolved at Step 3, the complainant may request (in writing) the Community Complaints Mediator to review Inland Rail's response to the issue where they are not satisfied with the response. The Community Complaints Mediator must respond within 28 days of the request being made, or other specified timeframe, as agreed between the Community Complaints Mediator and the member of the public. Inland Rail must implement the recommendations made by the Community Complaints Mediator within a timeframe agreed with the Community Complaints Mediator, unless otherwise agreed with the Planning Secretary.	Within 28 days of receiving written application by the complainant, or as agreed by the Community Complaints Mediator

APPENDIX C

Construction Noise and Vibration Impact Statement (CNVIS)

A2I | Albury to Illabo – Wagga Wagga Utility Work

Construction Noise and Vibration Impact Statement

Martinus Rail

1/23-27 Waratah Street, Kirrawee, NSW 2232

Prepared by:

SLR Consulting Australia

Tenancy 202 Submarine School, Sub Base Platypus, 120 High Street, North Sydney NSW 2060, Australia

SLR Project No.: 610.031317.00001

Client Reference No.: R08

6 January 2025

Revision: v1.1

Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
V1.1	6 January 2025	Brandon Nguyen Khuong	Steven Luzuriaga	
V1.0	19 December 2024	Brandon Nguyen Khuong	Steven Luzuriaga	

Basis of Report

This report has been prepared by SLR Consulting Australia (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Martinus Rail (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

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Acronyms and Abbreviations

AA	The Acoustics Advisor for the CSSI approved by the Planning Secretary
A2I	Albury to Illabo section of the Inland Rail project
ARTC	Australian Rail Track Corporation
AS	Australian Standard
AV:ATG	Assessing Vibration: a technical guideline (DEC, 2006)
BS	British Standard
dBA	A-weighted decibel (referenced 20 µPa)
DPHI	Department of Planning, Housing and Infrastructure
CCHMP	Construction Cultural Heritage Management Plan
CEMP	Construction Environmental Management Plan
CNVF	Inland Rail NSW Construction Noise and Vibration Framework
CNVMP	Construction Noise and Vibration Management Plan
CSSI	Critical Stage Significant Infrastructure
DEC	Department of Environment and Conservation
DECC	Department of Environment and Climate Change (now NSW EPA)
DIN	Deutches Institut für Normung (German Institute for Standardisation)
EIS	Environmental Impact Statement
EP&A Act	Environmental Planning and Assessment Act 1979
EPA	Environment Protection Authority
EPL	Environmental Protection Licence
ER	The Environmental Representative(s) for CSSI approved by the Planning Secretary.
HNA	Highly Noise Affected
Hz	Hertz
ICNG	Interim Construction Noise Guideline (DECC, 2009
IR	Inland Rail
ISO	International Standards Organisation
km	Kilometres
km/h	Kilometres per hour
L_{Aeq}	Equivalent continuous noise level, providing a representation of the cumulative level of noise exposure over a defined period.
$L_{Aeq(15hour)}$	The equivalent continuous noise level for the 15-hour daytime period of 7.00 am to 10.00 pm
$L_{Aeq(9hour)}$	The equivalent continuous noise for the 9-hour daytime period of 10.00 pm to 7.00 am
$L_{Aeq(1hour)}$	The equivalent continuous noise for the busiest 1-hour period.

L_{Amax}	The maximum noise level during the measurement or assessment period. The L_{AFmax} or Fast is averaged over 0.125 of a second and the L_{ASmax} or Slow is averaged over 1-second.
m	Metres
mm	Millimetres
mm/s	Millimetres per second
m/s	Metres per second
MR	Martinus Rail
NCA	Noise Catchment Areas
NML	Noise Management Level
NSW	New South Wales
NPfI	Noise Policy for Industry
OOHW	Out of hours work
PPV	Peak Particle Velocity
RBL	Rating Background Level
TfNSW	Transport for New South Wales
VDV	Vibration Dose Value

Compliance Table

CoA	Requirement	Reference
A1	The Proponent must carry out the CSSI in accordance with the terms of this approval and generally in accordance with the: a) Inland Rail – Albury to Illabo Environmental Impact Statement (ARTC, August 2022) b) Albury to Illabo Response to Submissions (ARTC, November 2023) c) Albury to Illabo Preferred Infrastructure Report (ARTC, November 2023) d) Albury to Illabo Preferred Infrastructure Report Response to Submissions (ARTC, February 2024) e) Inland Rail – Albury to Illabo (SSI-10055) Response to request for additional information – Air Quality Assessment (letter dated 1 May 2024) f) Part 1 - Revised Technical Paper 8: Biodiversity Development Assessment Report (WSP, February 2024) g) Part 2 - Revised Technical Paper 8: Biodiversity Development Assessment Report (WSP, February 2024)	**The CNVMP**
A2	The CSSI must only be carried out in accordance with all procedures, commitments, preventative actions, performance criteria and mitigation measures set out in the documents listed in Condition A1 unless otherwise specified in, or required under, this approval.	**The CNVMP**
C9	The Construction Noise and Vibration Sub-plan must include, but not limited to: a) measures to reduce construction to standard ICNG hours where sensitive land uses are likely to be noise affected for more than 3 months; b) an approach to assess and manage construction fatigue from noise impacts on sensitive receivers on an ongoing basis; c) noise sensitive periods identified by the community, religious, educational institutions, noise and vibration-sensitive businesses and critical working areas and measures to ensure noise levels above the NMLs do not occur during sensitive periods in accordance with Condition E76; d) mitigation for construction traffic noise impacts from additional construction traffic and road diversions; e) the location of all heritage items, non-heritage structures and infrastructure likely to be impacted by vibration and measures to manage vibration impacts at those items and structures; and f) vibration levels at a range of distances from vibration intensive equipment such as excavators and vibratory rollers before undertaking works with the specific type and size of equipment.	**The CNVMP**
E68	A detailed land use survey must be undertaken to confirm sensitive land use(s) (including critical working areas such as operating theatres and precision laboratories) potentially exposed to construction noise and vibration, construction ground-borne noise and operational noise. The survey may be undertaken on a progressive basis but must be undertaken in any one area before the commencement of work which generates construction or operational noise, vibration or ground-borne noise in that area. The results of the survey must be included in the Noise and Vibration CEMP sub-plan required by Condition C8.	**The CNVMP, Section 3.0, Figure 1** **Figure 2**
E69	Work must be undertaken during the following hours: a) 7:00am to 6:00pm Mondays to Fridays, inclusive; b) 7:00am to 6:00pm Saturdays; and c) at no time on Sundays or public holidays.	**Section 2.2**

CoA	Requirement	Reference
E70	Except as permitted by an EPL, 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 8:00 am to 6:00 pm Monday to Friday; b) between the hours of 8:00 am to 1:00 pm Saturday; and c) if continuously, then not exceeding three (3) hours, with a minimum cessation of work of not less than one hour. For the purposes of this condition, 'continuously' includes any period during which there is less than one hour between ceasing and recommencing any of the work.	**Section 2.2.1**, **Section 8.2**
E71	Notwithstanding Conditions E69 and E70, work may be undertaken outside the hours specified in the following circumstances (a, b, or c): 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. On becoming aware of the need for emergency work in accordance with Condition E71(a), the AA, the ER, the Planning Secretary and the EPA must be notified of the reasons for such work. Best endeavours must be used to notify all noise and/or vibration affected residents and owners/occupiers of properties identified sensitive land use(s) of the likely impact and duration of those work. b) Work, that meets the following criteria: 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 'Noise affected' NMLs specified in Table 3 of the ICNG at other sensitive land use(s); and ii. construction that causes L_{AFmax} noise levels no more than 15 dB above the rating background level at any residence during the night period as defined in the ICNG. and iii. construction that causes: • continuous or impulsive vibration values, measured at the most affected residence 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 no more than the preferred values for human exposure to vibration, specified in Table 2.4 *of Assessing Vibration: a technical guideline* (DEC, 2006). c) By Approval, including: i. where different construction hours, such as those for a rail possession, are permitted 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 E72; or iii. negotiated agreements with directly affected residents and sensitive land use(s).	**Section 2.3**
E72	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 E69, and that are not subject to an EPL. The Protocol must be approved by the Planning Secretary before commencement of the Out-of-Hours Work. The Protocol must be prepared in consultation with the ER, AA and EPA.	**The CNVMP, Section 2.4**

CoA	Requirement	Reference
	The Protocol must include: a) identification of low and high-risk activities and 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 in consultation with the AA, and iii. high risk activities that are approved by the Planning Secretary; b) a process for the consideration of out-of-hours work against the relevant NML and vibration criteria; c) a process for selecting and implementing mitigation measures for residual impacts in consultation with the community at each affected location, including respite periods. The measures must take into account the predicted noise levels and the likely frequency and duration of the out-of-hours works that sensitive land use(s) would be exposed to, including the number of noise awakening events; d) procedures to facilitate the coordination of out-of-hours work including those approved by an EPL or undertaken by a third party, to ensure appropriate respite is provided; and e) notification arrangements for affected receivers for approved out-of-hours work and notification to the Planning Secretary of approved low risk out-of-hours works. This condition does not apply if the requirements of Condition E71 are met.	
E73	Except as permitted by an EPL, out-of-hours work that may be regulated through the Out-of-Hours Work Protocol as per Condition E72, but is not limited to: a) Carrying out work that if carried out during standard hours would result in a high risk to construction personnel or public safety based on a risk assessment carried out in accordance with AS/NZS ISO 31000:2009: "Risk management; or b) where the relevant roads authority has advised the Proponent in writing that carrying out the work during standard hours would result in a high risk to road network performance and a road occupancy licence will not be issued; or c) where the relevant utility service operator has advised the Proponent in writing that carrying out the work during standard hours would result in a high risk to the operation and integrity of the utility network; or d) work undertaken in a rail possession for operational or safety reasons. *Note: Other out-of-hours works can be undertaken with the approval of an EPL, or through the project's Out-of-Hours Work Protocol for works not subject to an EPL.*	**Section 2.3**
E74	Mitigation measures must be implemented with the aim of achieving the following construction noise management levels and vibration objectives: a) construction 'Noise affected' NMLs 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"; and e) the vibration limits set out in the *German Standard DIN 4150-3: Structural Vibration- effects of vibration on structures* (for structural damage).	**The CNVMP, Section 4.0**, **Section 8.0**

CoA	Requirement	Reference
	Work that exceeds the noise management levels and/or vibration criteria must be managed in accordance with the Noise and Vibration CEMP sub-plan. *Note: The ICNG identifies 'particularly annoying' activities that require the addition of 5 dB(A) to the predicted level before comparing to the construction NML.*	
E75	Mitigation measures must be applied when the following residential ground-borne noise levels are exceeded: a) evening (6:00 pm to 10:00 pm) — internal $L_{Aeq(15\ minute)}$: 40 dB(A); and b) night (10:00 pm to 7:00 am) — internal $L_{Aeq(15\ minute)}$: 35 dB(A). The mitigation measures must be outlined in the Noise and Vibration CEMP sub-plan, including in any Out-of-Hours Work Protocol, required by Condition E72.	**Section 4.2.3**
E76	Noise generating work in the vicinity of community, religious, educational institutions, noise and vibration-sensitive businesses and critical working areas (such as exam halls, theatres, laboratories and operating theatres) resulting in noise levels above the NMLs must not be timetabled during sensitive periods, unless other reasonable arrangements with the affected institutions are made at no cost to the affected institution.	**Section 8.0**
E77	At no time can noise generated by construction exceed the National Standard for exposure to noise in the occupational environment of an eight-hour (8hr) equivalent continuous A-weighted sound pressure level of $L_{Aeq,8h}$ of 85 dB(A) for any employee working at a location near the CSSI.	**Section 8.6**
E78	Construction Noise and Vibration Impact Statements (CNVIS) must be prepared for work that may exceed the noise management levels, vibration criteria and/or ground-borne noise levels specified in Condition E74 and Condition E75 at any residence outside construction hours identified in Condition E69, or where receivers will be highly noise affected. The CNVIS must include specific mitigation measures identified through consultation with affected sensitive land use(s) and the mitigation measures must be implemented for the duration of the works. A copy of the CNVIS must be provided to the AA and ER prior to the commencement of the associated works. The Planning Secretary may request a copy/ies of CNVIS.	**This report, Section 8.5**
E79	Owners and occupiers of properties at risk of exceeding the screening criteria for cosmetic damage must be notified before work 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, owners 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 owner and occupier. These properties must be identified and considered in the Noise and Vibration CEMP Sub-plan required by Condition C8 and the Community Communication Strategy required by Condition B1.	**Section 8.0**
E80	Vibration testing must be undertaken before and during vibration generating activities that have the potential to impact on heritage items to identify minimum working distances to prevent cosmetic damage. In the event that the vibration testing and attended monitoring shows that the preferred values for vibration are likely to be exceeded, the construction methodology must be reviewed and, if necessary, additional mitigation measures implemented.	**Section 6.1, Section 8.0**
E81	Advice from an independent heritage specialist must be sought on methods and locations for installing equipment used for vibration, movement and noise monitoring at heritage-listed structures. *Note: The heritage specialist is to provide advice prior to installing equipment that may impact the heritage significance or structural integrity of the heritage listed structures.*	**Section 8.0**
E83	All work undertaken for the delivery of the CSSI, including those undertaken by third parties (such as utility relocations), must be coordinated to ensure respite periods are provided. This must include:	**Section 8.0, Section 8.2**

CoA	Requirement	Reference
	a) rescheduling work to provide respite to impacted noise sensitive land use(s) so that the respite is achieved; or b) the provision of alternative respite or mitigation to impacted noise sensitive land use(s); and c) the provision of documentary evidence to the AA in support of any decision made in relation to respite or mitigation. The consideration of respite must also include all other CSSI, SSI and SSD projects which may cause cumulative and/or consecutive impacts at receivers affected by the delivery of the CSSI.	
E119	The Proponent must coordinate Work with adjoining Inland Rail Projects, including any work to relocate or connect utilities, to minimise cumulative and consecutive noise and vibration impacts and maximise respite for affected sensitive land uses. Coordination and mitigation measures must be detailed in the Construction Noise and Vibration management Sub-plan required by Condition C9.	**Section 8.0, Section 8.2, Section 9.0**
E120	Before commencement of any work, a structural engineer must undertake condition surveys of all buildings, structures, utilities and the like identified in the documents listed in Condition A1 as being at risk of damage. The results of the surveys must be documented in a Condition Survey Report for each item surveyed. Copies of Condition Survey Reports must be provided to the owners of the items surveyed, and no later than one (1) month before the commencement of construction.	**Section 6.1**
E121	After completion of construction, condition surveys of all items for which condition surveys were undertaken in accordance with Condition E120 of this approval must be undertaken by a structural engineer. The results of the surveys must be documented in a Condition Survey Report for each item surveyed. Copies of Condition Survey Reports must be provided to the landowners of the items surveyed, and no later than three (3) months following the completion of construction.	**Section 6.1**
E122	Property damage caused directly or indirectly (for example from vibration or from groundwater change) by the construction or operation must be rectified at no cost to the owner. Alternatively, compensation may be provided for the property damage as agreed with the property owner.	**Section 6.1**

1.0 Introduction

SLR Consulting Australia Pty Ltd (SLR) has been engaged by Martinus Rail (MR) to prepare a construction noise and vibration impact statement (CNVIS) for the utility work at the Edmondson Street Bridge, Pearson Street Bridge and Cassidy Footbridge enhancement sites in Wagga Wagga, NSW. These sites form part of the Albury to Illabo (A2I) section of Inland Rail (the Project). This assessment has been prepared in accordance with the Construction Noise and Vibration Management Plan (CNVMP) for the A2I section of the Project.

This report assesses the potential construction noise and vibration impacts for the utility work associated with the Edmondson Street Bridge, Pearson Street Bridge and Cassidy Footbridge enhancement sites. An explanation of the specialist acoustic terminology used in this report is provided in **Appendix A**.

2.0 Project Description

Inland Rail is an approximate 1,600 kilometres (km) freight rail network that will connect Beveridge and Kagaru via regional Victoria, New South Wales and Queensland. The Inland Rail route would involve using approximately 1,000 km of existing track (with enhancements and upgrades where necessary) and 600 km of new track, passing through 30 local government areas. Inland Rail will accommodate double-stacked freight trains up to 1,800 metres (m) long and 6.5 m high.

The Albury to Illabo (A2I) section (the Project) forms a key component of the Inland Rail program. It is a 185 km section of existing rail corridor located in regional NSW between the towns of Albury and Illabo. Works would include track realignment, lowering and/or modification within the existing rail corridor, modification, removal or replacement of bridge structures (rail, road and/or pedestrian bridges), raising or replacing signal gantries, level-crossing modifications and other associated works. This CNVIS is associated with utility work associated with the Edmondson Street Bridge, Pearson Street Bridge and Cassidy Footbridge enhancement sites.

Relevant noise and vibration conditions from the Conditions of Approval (CoA) are detailed within the compliance table at the beginning of this document and will be complied with during the work.

2.1 Scope of this CNVIS

The focus of this CNVIS is the utility work associated with the Edmondson Street Bridge, Pearson Street Bridge and Cassidy Footbridge. Work at these sites includes:

- Establishment of temporary site facilities, including site office/shed and materials laydown areas
- Site Compound Operation
- Vegetation Clearing
- Utility Work (eg Gas, 66kV Electricity, Water) - Investigation and excavation, underbores and protection works.

Further details of work activities are outlined in **Section 5.1**. The work areas are surrounded by a combination of urban and suburban residential, commercial, industrial, educational and medical receivers. Additionally, there are several childcare centres, places of worship, hotels, libraries and public buildings at various setbacks from the main areas of work. The Project location, work areas and surrounding receivers are shown in **Figure 1** and **Figure 2**.

2.2 Hours of work

In accordance with the Construction Noise and Vibration Management Plan (CNVMP) and CoA E69 construction work must be undertaken within the approved standard construction hours:

a) 7:00am to 6:00pm Monday to Friday, inclusive;

b) 7:00am to 6:00pm Saturday and

c) At no time on Sundays or public holidays.

2.2.1 Highly Noise Intensive Work

As outlined in the CoA E70, any highly noise intensive works that result in an exceedance of the applicable NML at the same receiver must only be undertaken:

a) Between 08:00am – 06:00pm Monday to Friday;

b) Between 08:00am – 01:00pm Saturday; and

c) If continuously, then not exceeding (3) hours, with a maximum cessation of work of not less than one hour.

The CoA defines 'highly noise intensive works' as those identified as annoying under the Interim Construction Noise Guideline (ICNG) and include:

- 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 hammering or rock breaking;
- Impact piling; and
- Tamping (for rail projects).

2.3 Variation to hours of work

Notwithstanding CoA E69 and E70, work may be undertaken outside the hours specified in the CoA E71 circumstances (a, b, or c):

a) Safety and Emergencies

b) Work, that meets specific criteria

c) By Approval

Note: refer to **Compliance Table** for further detail.

2.4 Justification of Out of Hours Work (OOHW)

Work activities that may be required or proposed to be undertaken outside of standard working hours will be managed in accordance with the OOHW Protocol as defined in CoA E72 and E73, unless the work is regulated by an EPL.

All work on or adjacent to roads would be carried out in accordance with a relevant Traffic Control Plan (TCP), Road Occupancy Licence (ROL) and/or rail possession to facilitate safe work near live road/rail traffic. Where an ROL/rail possession cannot be obtained for the approved project hours and/or proposed works cannot be undertaken safely during these hours, some works will be required to be undertaken outside of standard hours (ie Out of Hours Work, OOHW).

As outlined in the ICNG, work undertaken on public infrastructure may need to be undertaken outside the recommended standard hours. For this project the need is based on a requirement to sustain the operational integrity of public infrastructure, as works to restore operation of the infrastructure provide benefit to the greater community (ie more than just local residents).

Further detail around the specific work tasks, duration and justification of OOHW must be identified in the OOHW permit, required by the OOHW Protocol or EPL.

3.0 Existing Environment

The existing ambient noise environment was described in Environmental Impact Statement (EIS), Technical Paper 6 – Noise and Vibration (Non-Rail) for the Albury to Illabo project. This section provides details of the existing ambient noise environment relevant to the Wagga Wagga utilities work.

The noise catchment areas (NCAs) used are consistent with the NCAs described in the EIS and are shown in **Figure 1** and **Figure 2** with the receiver classifications and approximate noise monitoring locations. Sensitive land uses and receiver classifications within the project area were confirmed through a detailed land use survey undertaken in August 2024. Results of the land use survey have been incorporated into the receiver classifications shown in **Figure 1** and **Figure 2.**

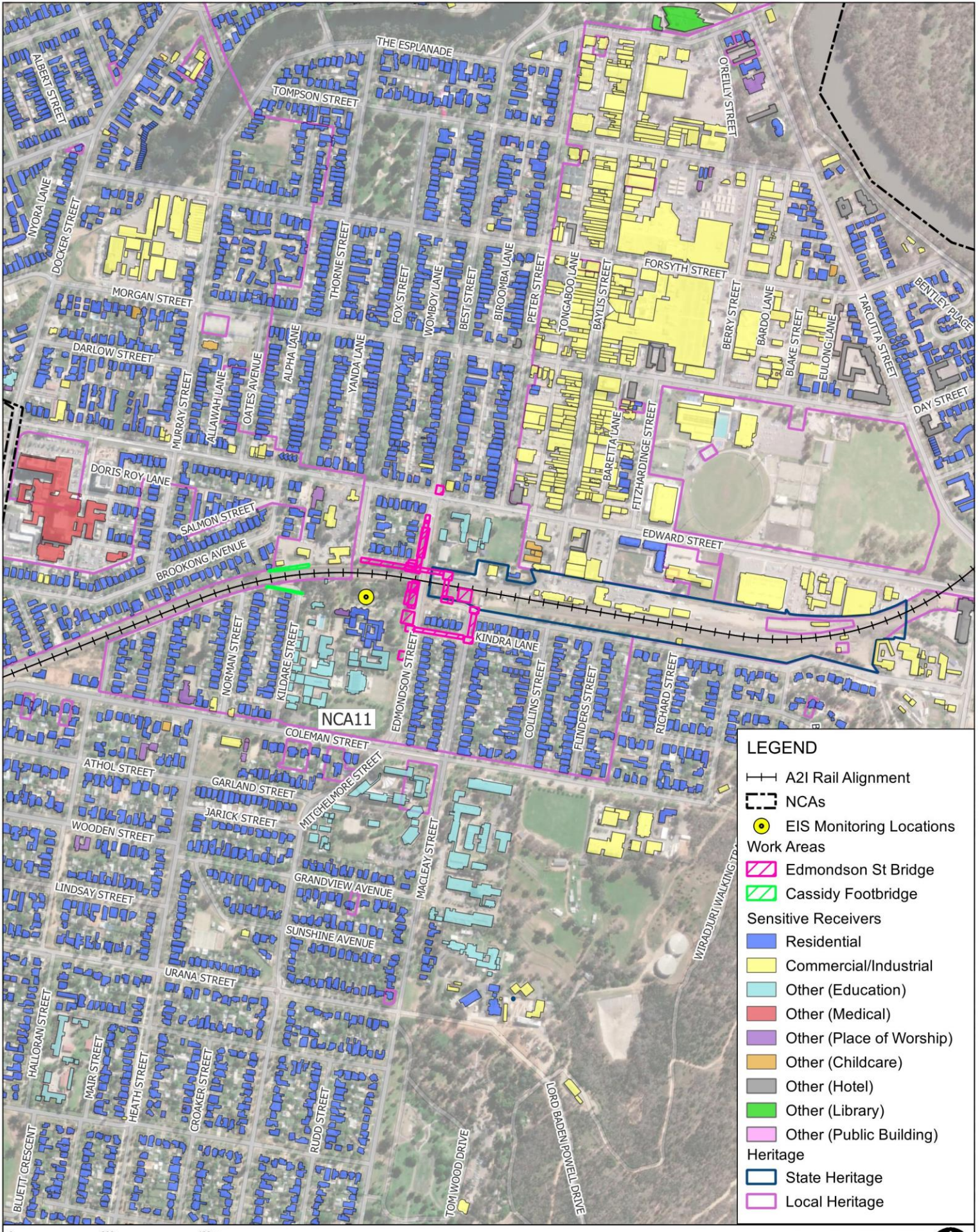
3.1 Background Noise Levels

Background noise levels have been referenced from the baseline noise survey undertaken as part of the EIS and reproduced in the CNVMP. The background noise levels relevant to the Wagga Wagga utilities work are summarised in **Table 1**.

Table 1 Background Noise Levels

Noise Monitoring Location	NCA	Rating background Level (RBL) dBA NPfI defined time periods[1]		
		Daytime period	Evening period	Night-time period
11	10	46	45	38
12	11	48	47	37

Note 1: The assessment periods are the daytime which is 7 am to 6 pm Monday to Saturday and 8 am to 6 pm on Sundays and public holidays, the evening which is 6 pm to 10 pm, and the night-time which is 10 pm to 7 am on Monday to Saturday and 10 pm to 8 am on Sunday and public holidays. See the NSW EPA Noise Policy for Industry (NPfI).



Scale: Scale: 1:10,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 18-Dec-2024
Project Number: 610.031317

SLR

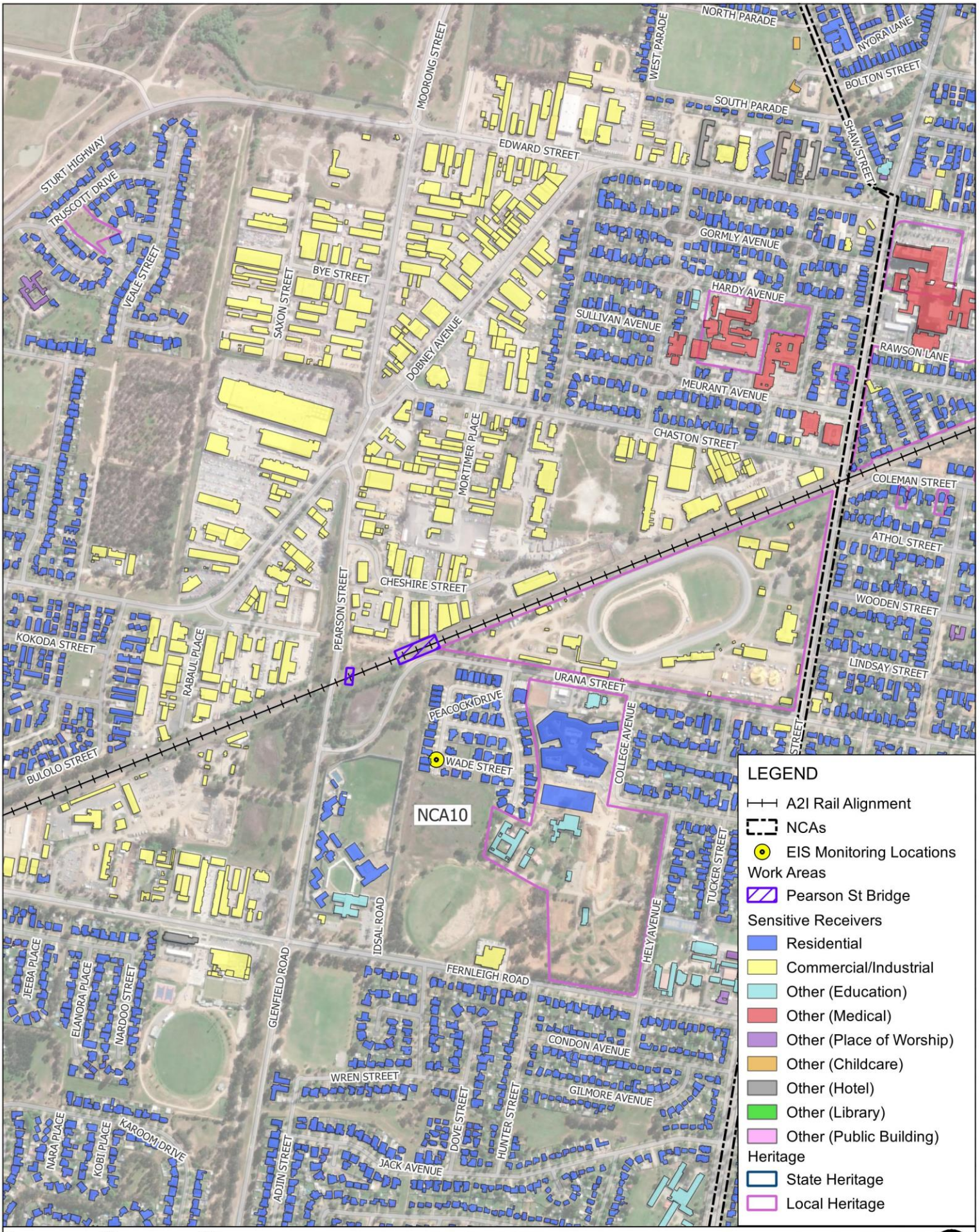
Data Source:
ESRI World Imagery

DISCLAIMER: All information within this document maybe based on external sources. SLR Consulting Pty Ltd makes no warranty regarding the data's accuracy or reliability for any purpose .

Receiver Classifications and Noise Monitoring Locations

FIGURE 1

H:\Projects-SLR\610-SnvSYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\01 CADGIS\QGIS\SLR610031317_Wagga_Utility.qgz



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Receiver Classifications and Noise Monitoring Locations

FIGURE 2

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\01 CAD\GIS\QGIS\SLR610031317_Wagga_Utility.qgz

4.0 Assessment Criteria

4.1 Construction Noise and Vibration Guidelines

The standards and guidelines relevant to the Project are listed in **Table 2**. These guidelines aim to protect the community and environment from excessive noise and vibration impacts during construction of projects.

Table 2 Construction Noise and Vibration Standards and Guidelines

Guideline/Policy Name	Where Guideline Used
Inland Rail NSW Construction Noise and Vibration Framework (CNVF)	Assessment and management protocols for airborne noise, ground-borne noise and vibration impacts for construction of NSW Inland Rail projects
Interim Construction Noise Guideline (ICNG) (DECC, 2009)	Assessment of airborne noise impacts on sensitive receivers
Environmental Criteria for Road Traffic Noise (ECRTN) (EPA, 1999)	Contains guidance for assessing potential sleep disturbance impacts
Road Noise Policy (RNP) (DECCW, 2011)	Assessment of construction traffic impacts
BS 7385 Part 2-1993 Evaluation and measurement for vibration in buildings Part 2, BSI, 1993	Assessment of vibration impacts (structural damage) to non-heritage sensitive structures
DIN 4150:Part 3-2016 Structural vibration – Effects of vibration on structures, Deutsches Institut für Normung, 2016	Screening assessment of vibration impacts (structural damage) to heritage sensitive structures, where the structure is found to be unsound
Assessing Vibration: a technical guideline (DEC, 2006)	Assessment of vibration impacts on sensitive receivers
AS2187.2:2006 Explosives – Storage and use Part 2: Use of explosives	Assessment of impacts from blasting activities
*Construction Noise and Vibration Guideline (Public Transport Infrastructure) (*CNVG-PTI) (Transport for NSW, 2023)	Utilised for minimum working distances for vibration intensive work.

4.2 Noise Management Levels

The noise management levels (NMLs) for residential and other sensitive receivers have been adopted from the CNVMP, as determined in the EIS. Receiver types and locations are shown **Figure 1** and **Figure 2**.

4.2.1 Residential Receivers

Project-specific NMLs for residential receivers were determined for each NCA. NMLs for other sensitive receivers are fixed values adopted from the Interim Construction Noise Guideline (ICNG) (DECC, 2009) and outlined in the CNVMP. Residential NMLs for NCAs surrounding the utilities work sites are shown in **Table 3**.

Table 3 Residential Noise Management Levels

NCA	Noise Management Level ($L_{Aeq(15minute)}$ - dB)				Sleep disturbance Screening Level (RBL +15dB or 52 dB)	Sleep Awakening Reaction Level
	Approved Hours (RBL +10dB)	Out of Hours[1,2]				
		Daytime (RBL +5dB)	Evening (RBL +5dB)	Night-time (RBL +5dB)		
NCA10	56	51	50	43	53	65
NCA11	58	53	52	42	52	65

Note 1: Approved Construction Hours are Monday to Saturday 7 am to 6 pm, as defined in CoA E69.

Note 2: Work outside of the Approved Hours is defined as OOHW = Out of Hours Work. Daytime out of hours is Sunday and public holidays between 8 am to 6 pm. Evening is 6pm to 10pm Monday – Sunday (including public holidays). Night-time is 10pm to 7am Monday – Saturday and 10pm to 8am Sunday (including public holidays).

Highly Noise Affected

In addition to the NMLs presented above, the ICNG highly noise affected level (>75 dBA) represents the point above which there may be strong community reaction to noise and is applicable to all residential receivers during approved project hours as outlined in the CNVMP and the ICNG.

Sleep Disturbance

Where the sleep disturbance screening level (RBL + 15 dB or 52 dB, whichever is greater, see **Table 3**) is exceeded, further assessment is required to determine whether the 'awakening reaction' level of L_{Amax} 65 dBA (external) would be exceeded and the likely number of these events. The awakening reaction level is the level above which residents are likely to be awoken from sleep.

4.2.2 Other Sensitive Land Uses and Commercial Receivers

The ICNG NMLs for 'other sensitive' non-residential land uses are shown in **Table 4**.

The ICNG references *AS2107:2016 Acoustics – Recommended design sound levels and reverberation times for building interiors* for criteria for 'other sensitive' receivers which are not listed in the guideline. Neither the ICNG nor AS2107 provide criteria for child care centres so the Association of Australian Acoustical Consultants *Guideline for Child Care Centre Acoustic Assessment* (GCCCAA) has been referenced.

Table 4 NMLs for 'Other Sensitive' Receivers

Land Use	Noise Management Level $L_{Aeq(15minute)}$ (dB) (Applied when the property is in use)	
	Internal	External
ICNG 'Other Sensitive' Receivers		
Classrooms at schools and other educational institutions	45	55[1,5]
Hospital wards and operating theatres	45	65[2]
Places of worship	45	55[1]
Active recreation areas (characterised by sporting activities which generate noise)	-	65
Passive recreation areas (characterised by contemplative activities that generate little noise)	-	60

Land Use	Noise Management Level $L_{Aeq(15minute)}$ (dB) (Applied when the property is in use)	
	Internal	External
Commercial	-	70
Industrial	-	75
Non-ICNG 'Other Sensitive' Receivers		
Hotel – daytime & evening[3]	50	60[1,5]
Hotel – night-time[3]	35	45[1,5]
Child care centres – activity areas[4]	40	50[1,5]
Child care centres – sleeping areas[4]	35	45[1,5]
Library[3]	45	55[1]
Public Building[3]	50	60[1]
Aged Care	Considered as Residential	

Note 1: It is assumed that these receivers have windows partially open for ventilation which results in internal noise levels being around 10 dB lower than the external noise level.

Note 2: It is assumed that these receivers have fixed windows which conservatively results in internal noise levels being around 20 dB lower than the external noise level.

Note 3: Criteria taken from AS2107.

Note 4: Criteria taken from Association of Australian Acoustical Consultants Guideline for Child Care Centre Acoustic Assessment.

Note 5: Some receivers near highways or rail lines may have building façade mitigation and air-conditioning. Where evidence is provided a 20dB reduction from external to internal may be adopted.

4.2.3 Ground-borne Noise

Construction work can cause ground-borne (structure-borne or regenerated) noise impacts in nearby buildings when vibration intensive equipment is in use, such as during tunnelling or excavation work using tunnel boring machines, roadheaders or rockbreakers. Vibration can be transmitted through the ground and into nearby buildings, which can then create audible noise impacts inside the building.

Ground-borne noise NMLs are applicable where ground-borne noise levels are likely to be higher than airborne noise levels, which can occur where work is underground or where surface work is shielded by noise barriers, other structures or façade mitigation at the receiver. Ground-borne noise is generally found to generate impacts during the evening and night-time periods when ambient noise levels are often much lower, and ground-borne noise is more prominent.

The internal ground-borne noise NMLs for residential receivers are shown in **Table 5**.

Table 5 Internal ground-borne NMLs

Receiver Type	Noise Management Level ($L_{Aeq(15minute)}$ – dBA)		
	Daytime[1]	Evening[2]	Night-time[2]
Residential	n/a	40	35

Note 1: Daytime ground-borne noise NMLs are not specified in the ICNG of CoA.

Note 2: Specified in the ICNG and CoA E75.

For other sensitive receivers, the ICNG does not provide guidance in relation to acceptable ground-borne noise levels. For the purpose of this CNVIS, the internal airborne NMLs presented in **Table 4** will also be adopted for ground-borne noise.

4.3 Vibration Criteria

The effects of vibration from construction work can be divided into three categories:

- Those in which the occupants of buildings are disturbed (**human comfort**). People can sometimes perceive vibration impacts when vibration generating construction work is located close to occupied buildings. Vibration from construction work tends to be intermittent in nature and the EPA's Assessing Vibration: a technical guideline (2006) (AV:ATG) provides criteria for intermittent vibration based on the Vibration Dose Value (VDV), as shown in **Table 6**. While the construction activities for the proposal are generally not expected to result in continuous or impulsive vibration impacts, corresponding criteria are provided in **Table 7**.
- Those where building contents may be affected (**building contents**). People perceive vibration at levels well below those likely to cause damage to building contents. For most receivers, the human comfort vibration criteria are the most stringent and it is generally not necessary to set separate criteria for vibration effects on typical building contents. Exceptions to this can occur when vibration sensitive equipment, such as electron microscopes or medical imaging equipment, are in buildings near to construction work. No such equipment has been identified in the study area.
- Those where the integrity of the building may be compromised (**structural/cosmetic damage**). If vibration from construction work is sufficiently high it can cause cosmetic damage to elements of affected buildings. Industry standard cosmetic damage vibration limits are specified in British Standard BS 7385 and German Standard DIN 4150. The limits are shown in **Table 8** and **Table 9**.

Table 6 Human Comfort Vibration – Vibration Dose Values for Intermittent Vibration

Building Type	Assessment Period	Vibration Dose Value[1] ($m/s^{1.75}$)	
		Preferred	Maximum
Critical Working Areas (eg operating theatres or laboratories)	Day or night-time	0.10	0.20
Residential	Daytime	0.20	0.40
	Night-time	0.13	0.26
Offices, schools, educational institutions and places of worship	Day or night-time	0.40	0.80
Workshops	Day or night-time	0.80	1.60

Note 1: The VDV accumulates vibration energy over the daytime and night-time assessment periods, and is dependent on the level of vibration as well as the duration.

Table 7 Human Comfort Vibration – Preferred and Maximum Weighted Root Mean Square Values for Continuous and Impulsive Vibration Acceleration (m/s^2) 1–80 Hz

Location	Assessment period	Preferred values		Maximum values	
		z-axis	x- and y-axis	z-axis	x- and y-axis
Continuous vibration					
Residential	Daytime	0.010	0.0071	0.020	0.014
	Night-time	0.007	0.005	0.014	0.010
Offices, schools, educational institutions and places of worship	Day or night-time	0.020	0.014	0.040	0.028
Workshops	Day or night-time	0.04	0.029	0.080	0.058
Impulsive vibration					
Residential	Daytime	0.30	0.21	0.60	0.42
	Night-time	0.10	0.071	0.20	0.14
Offices, schools, educational institutions and places of worship	Day or night-time	0.64	0.46	1.28	0.92
Workshops	Day or night-time	0.64	0.46	1.28	0.92

Table 8 Cosmetic Damage – BS 7385 Transient Vibration Values for Minimal Risk of Damage

Group	Type of Building	Peak Component Particle Velocity in Frequency Range of Predominant Pulse	
		4 Hz to 15 Hz	15 Hz and Above
1	Reinforced or framed structures. Industrial and heavy commercial buildings	50 mm/s at 4 Hz and above	
2	Unreinforced or light framed structures. Residential or light commercial type buildings	15 mm/s at 4 Hz increasing to 20 mm/s at 15 Hz	20 mm/s at 15 Hz increasing to 50 mm/s at 40 Hz and above

Note 1: Where the dynamic loading caused by continuous vibration may give rise to dynamic magnification due to resonance, especially at the lower frequencies where lower guide values apply, then the guide values may need to be reduced by up to 50%.

Table 9 Cosmetic Damage – DIN 4150 Guideline Values for Short-term Vibration on Structures

Group	Type of Structure	Guideline Values Vibration Velocity (mm/s)				
		Foundation, All Directions at a Frequency of			Topmost Floor, Horizontal	Floor Slabs, Vertical
		1 to 10 Hz	10 to 50 Hz	50 to 100 Hz	All frequencies	All frequencies
1	Buildings used for commercial purposes, industrial buildings and buildings of similar design	20	20 to 40	40 to 50	40	20
2	Residential buildings and buildings of similar design and/or occupancy	5	5 to 15	15 to 20	15	20

Group	Type of Structure	Guideline Values Vibration Velocity (mm/s)				
		Foundation, All Directions at a Frequency of			Topmost Floor, Horizontal	Floor Slabs, Vertical
		1 to 10 Hz	10 to 50 Hz	50 to 100 Hz	All frequencies	All frequencies
3	Structures that, because of their particular sensitivity to vibration, cannot be classified as Group 1 or 2 **and** are of great intrinsic value (eg heritage listed buildings)	3	3 to 8	8 to 10	8	20[1]

Note 1: It may be necessary to lower the relevant guideline value markedly to prevent minor damage.

4.3.1 Heritage Buildings or Structures

Heritage listed buildings and structures should be considered on a case-by-case basis but BS 7385 notes that buildings of historical value should not be assumed to be more sensitive to vibration, unless structurally unsound. Where a heritage building is deemed to be sensitive, the more stringent DIN 4150 Group 3 guideline values in **Table 9** can be applied.

Heritage Structures

Table 10 includes heritage structures from the State Heritage Register, Local Heritage Items and Local Environment Plan that are within 100 m of any construction work areas at Edmondson St Bridge, Cassidy Footbridge or Pearson St Bridge.

Table 10 Heritage Items Nearby Construction Work Areas

Heritage Item	Listing	Nearest Work Location	Construction/Condition
Wagga Wagga Showground, Kyeamba Smith Hall and Grandstand[1]	Local Environment Plan I246	Pearson Street Bridge	The Wagga Wagga Showground includes a number of early and mid-20th century buildings, including the 'Neil Skeers' Grandstand, the 'Kyeamba Smith' Hall and several other contemporary buildings. The Wagga Wagga Showground camping grounds are adjacent to the Pearson Street Bridge works. The Grandstand and the Hall appear to be in fair condition.
Cassidy Parade and Brookong Avenue footbridge	ARTC s170 4280661	Cassidy Footbridge	This pedestrian bridge has been constructed from cast concrete with a steel pipe and wire railing fence. The pedestrian bridge appears to be in good condition
Mount Erin Convent Chapel, High School, and Grounds	Local Environment Plan I260	Edmondson Street Bridge and Cassidy Footbridge	This complex comprises of a number of buildings, many of which date to the late 19th century.
Wagga Wagga Railway Station and Yard Group	State Heritage Register 01279, ARTC s170 4280250	Edmondson Street Bridge	The Wagga Wagga Railway Station is a substantial and ornate structure, built in the Victorian Free Classical style. West of the station building is the Wagga Wagga footbridge ('Mothers Footbridge'), which was built in 1936. It is a simple steel girder bridge with a
Best Street Railway	State Heritage Register 01279, Local	Edmondson Street Bridge	

Heritage Item	Listing	Nearest Work Location	Construction/Condition
Gatehouse (former)	Environment Plan I254		steel post-and-rail safety barrier and straight lateral bracing post). The footbridge is in fair condition.
Station Master's Residence (former)	State Heritage Register 01279, Local Environment Plan I99	Edmondson Street Bridge	Immediately west of the station building is the Wagga Wagga Railway Museum. The museum is a single-storey brick building with a corrugated iron sheet clad roof. Southwest of the station building is the former Best Street gatehouse. It has a T-shaped floorplan and has been constructed from brick— English bond— with a corrugated iron roof (partially missing). The building is in poor condition, with evidence of fire damage, ongoing squatting, and general disrepair.

Note 1 The Grandstand and Hall are further than 100 m from the Pearson Street Bridge work area, although some buildings within the camping ground Wagga Wagga Showground camping ground may fall within 100 m of the work areas.

The Mount Erin Convent Chapel, Highschool and Grounds, Wagga Wagga Railway Station and Yard group, Best Street Railway Gatehouse and Station Master's Residence are within the Wagga Wagga Conservation Area. The Wagga Wagga Conservation Area also encompasses many 19th and early 20th century buildings, including the residential dwellings at 2 Kildare St and 1 Norman St nearby the Cassidy Footbridge works.

Further information on the heritage items in **Table 10** are provided in the Construction Cultural Heritage Management Plan (CCHMP). No structures nearby the work areas identified in this CNVIS are flagged as structurally unsound in the CCHMP.

Pre- and post-condition surveys of heritage structures are to be conducted in accordance with CoA E120 and E121 when relevant (ie if the heritage buildings are within the minimum working distances for heritage items for nominated vibration-intensive equipment) refer to **Section 4.3.3** and **Section 6.1**.

4.3.2 Buried Pipework and Utilities

The German Standard DIN 4150-3:1999 "Structural Vibration Part 3: Effects of vibration in structures" provides guideline values for evaluating the effect of vibration on buried pipework. The values are based on the assumption that pipes have been manufactured and laid using current technology. Additional considerations may be required at junctions. The recommended limits for short term vibration to ensure minimal risk of damage are presented numerically in **Table 11**.

Table 11 Guideline Values for Short Term Vibration on Buried Pipework

Line	Pipe Material	Guideline value at the Pipe[1,2] (PPV mm/s)
1	Steel (including welded pipes)	100
2	Clay, concrete, reinforced concrete, pre stressed concrete, metal (with or without flange)	80
3	Masonry, plastic[3]	50

Note 1: Mounting equipment directly onto pipes may not be possible. If the vibration source is not immediately next to the pipework, measurements can be made on the ground surface to obtain an estimate. Generally, this vibration level will be greater than the level measured directly on the pipework.

Note 2: The guideline values may be reduced by 50% without further analysis when evaluating the effects of long-term vibration on buried pipework.

Note 3: Drainpipes shall be evaluated using the values given for Line 3.

4.3.3 Minimum Working Distances for Vibration Intensive Work

Minimum working distances for typical vibration intensive construction equipment have been sourced from the Transport for NSW (TfNSW) Construction Noise and Vibration Guideline (Public Transport Infrastructure) (CNVG-PTI) and are shown in **Table 12**. The minimum working distances are for both cosmetic damage (from BS 7385 and DIN 4150) and human comfort (from the NSW EPA Assessing Vibration: a technical guideline). They are calculated from empirical data which suggests that where work is further from receivers than the quoted minimum distances then impacts are not considered likely.

The minimum working distances listed in the CNVG were used to derive the minimum working distances required for cosmetic damage to industrial and heavy commercial buildings (also reinforced or framed structures). The following pseudo-power law relationship has been used in the derivations:

$$V_2 = V_1 \times \left(\frac{D_1}{D_2}\right)^B$$

where a site exponent value of B = 1.6 is adopted for the calculations, as per AS2187.2:2006

Table 12 Recommended Minimum Working Distances from Vibration Intensive Equipment

Plant Item	Rating/Description	Minimum Distance			
		Cosmetic Damage			Human Response (NSW EPA Guideline)[2]
		Residential and Light Commercial (BS 7385)	Heritage Items[1] (DIN 4150, Group 3)	Industrial and Heavy Commercial (BS 7385)	
Vibratory Roller	<50 kN (1–2 tonne)	5 m	11 m	3 m	15 m to 20 m
	<100 kN (2–4 tonne)	6 m	13 m	3 m	20 m
	<200 kN (4–6 tonne)	12 m	25 m	6 m	40 m
	<300 kN (7–13 tonne)	15 m	31 m	8 m	100 m
	>300 kN (13–18 tonne)	20 m	40 m	10 m	100 m
	>300 kN (>18 tonne)	25 m	50 m	12 m	100 m
Small Hydraulic Hammer	300 kg (5 to 12 t excavator)	2 m	5 m	1 m	7 m
Medium Hydraulic Hammer	900 kg (12 to 18 t excavator)	7 m	15 m	4 m	23 m
Large Hydraulic Hammer	1,600 kg (18 to 34 t excavator)	22 m	44 m	11 m	73 m
Vibratory Pile Driver	Sheet piles	2 m to 20 m	5 m to 40 m	1 to 10 m	20 m
Piling Rig – Bored	≤ 800 mm	2 m (nominal)	5 m	1 m	4 m
Jackhammer	Hand held	1 m (nominal)	3 m	1 m	2 m
Ballast Tamping[2]	N/A	5 m	10 m	3 m	30 m

Note 1: Minimum working distances for heritage items that have been identified as structurally unsound or otherwise particularly sensitive to vibration. These distances have been calculated based on the 2.5 mm/s PPV criteria from DIN 4150 and the cosmetic damage minimum working distances presented in the CNVG-PTI with reference to BS 7385.

Note 2: Based on SLR measurement data. The human response minimum working distance for Ballast Tamping is determined based on a residential night-time preferred VDV criterion.

The minimum working distances are indicative and will vary depending on the particular item of equipment and local geotechnical conditions. The distances apply to cosmetic damage of typical buildings under typical geotechnical conditions.

4.4 Traffic on Surrounding Roads

The potential impacts from project related traffic on the surrounding public roads are assessed using the NSW EPA *Road Noise Policy* (RNP). An initial screening test is first applied to evaluate if existing road traffic noise levels are expected to increase by more than 2.0 dB. Where this is considered likely, further assessment is required using the RNP criteria shown in **Table 13**.

Table 13 RNP/NCG Criteria for Assessing Traffic on Public Roads

Road Category	Type of Project/Land Use	Assessment Criteria (dB)	
		Daytime (7 am – 10 pm)	Night-time (10 pm – 7 am)
Freeway/ arterial/ sub-arterial roads	Existing residences affected by additional traffic on existing freeways/arterial/sub-arterial roads generated by land use developments	$L_{Aeq(15hour)}$ 60 (external)	$L_{Aeq(9hour)}$ 55 (external)
Local roads	Existing residences affected by additional traffic on existing local roads generated by land use developments	$L_{Aeq(1hour)}$ 55 (external)	$L_{Aeq(1hour)}$ 50 (external)

5.0 Noise Assessment

The potential construction noise levels from the Project have been predicted using ISO 9613:2 algorithm in SoundPLAN noise modelling software. The model includes ground topography, buildings and representative noise sources from the Project.

5.1 Work Scenario

Noise modelling scenarios have been determined based on key Project noise generating stages, supplied by the Project team. A detailed description of each work scenario and the total sound power levels (L_W) are provided in **Table 14**. A summary of construction work periods and schedule required for each scenario is shown in **Table 15**, as per the working hours defined in the CNVMP. The locations of the various work scenarios are shown in **Figure 3**.

Table 14 Work Scenario Descriptions

ID	Scenario	Description	Total Lw
Edmondson Street Bridge			
W.001	Site Establishment/ Demobilisation	• Site Compound delivery and set up • Haul road construction • Laydown construction	113
W.002	Compound Operation	• Operation of the site compound • Delivery of materials/equipment	104
W.003	Vegetation clearing	• Tree clearing and trimming for works	116

ID	Scenario	Description	Total Lw
W.004	Utility Work (Gas) - investigation and excavation	• Investigation and excavation prep for gas main works	117
W.005	Utility Work (Gas) - underbores	• Underbore installations	116
W.006	Utility Work (Gas) - cutovers & make good	• Works within cutover locations	112
W.007	Utility Work (66kV) (day)	• Pole excavation & preparation	115
W.008	Utility Work (66kV) (night outage 1)	• Pole installation via crane lifts	113
W.009	Utility Work (66kV) (night outage 2)	• Overhead conductor installation • Removal of old poles	109
Cassidy Footbridge			
W.010	Utility Work (Gas) protection works	• Installation of protection slab above existing gas main	113
W.011	Utility Work (water) relocations works protection works	• Excavation and install of new watermain	117
Pearson Street Bridge			
W.012	Utility Work (gas & water) - investigation and excavation	• Investigation and excavation prep for gas and watermain main works	117
W.013	Utility Work (gas & water) - underbores	• Underbore installations	111
W.014	Utility Work (gas & water) - cutovers & make good	• Works within cutover locations	112

Table 15 Scenarios and Periods of Work

ID	Scenario	Hours of Work				Indicative Start Date	Likely Duration
		Approved Hours	Out-of-Hours Work [4]				
			Day OOH[1]	Evening[2]	Night[3]		
Edmondson Street Bridge							
W.001	Site Establishment/ Demobilisation	✓	-	-	-	Jan 2025	1 month
W.002	Compound Operation	✓	-	-	-	Jan 2025	7 months
W.003	Vegetation clearing	✓	-	-	-	Jan 2025	1 month
W.004	Utility Work (Gas) - investigation and excavation	✓	-	-	-	Feb 2025	1 month
W.005	Utility Work (Gas) - underbores	✓	-	-	-	Feb 2025	1 month
W.006	Utility Work (Gas) - cutovers & make good	✓	-	-	-	Feb 2025	1 week
W.007	Utility Work (66kV) (day)	✓	-	-	-	Mar 2025	1 month
W.008	Utility Work (66kV) (night outage 1)	✓	✓	✓	✓	Mar 2025	1 week
W.009	Utility Work (66kV) (night outage 2)	✓	✓	✓	✓	Jul 2025	1 week

ID	Scenario	Hours of Work				Indicative Start Date	Likely Duration
		Approved Hours	Out-of-Hours Work [4]				
			Day OOH[1]	Evening[2]	Night[3]		
Cassidy Footbridge							
W.010	Utility Work (Gas) protection works	✓	-	-	-	Feb 2025	2 months
W.011	Utility Work (water) relocations works protection works	✓	-	-	-	Apr 2025	3 months
Pearson Street Bridge							
W.012	Utility Work (gas & water) - investigation and excavation	✓	-	-	-	Apr 2025	1 month
W.013	Utility Work (gas & water) - underbores	✓	-	-	-	May 2025	2 months
W.014	Utility Work (gas & water) - cutovers & make good	✓	-	-	-	May 2025	2 months

Note 1: Daytime out of hours is 8 am to 6 pm on Sunday and public holidays.

Note 2: Evening is 6 pm to 10 pm Monday – Sunday (including public holidays).

Note 3: Night is 10 pm to 7 am Monday – Saturday and 10pm to 8am Sunday (including public holidays).

Note 4: Where works are expected to occur outside of the standard working hours, further detail around the specific work tasks, duration and justification of OOHW must be identified in the OOHW permit, required by the OOHW Protocol or EPL.

Figure 3 Construction Work Locations (Edmondson Street and Cassidy Footbridge)

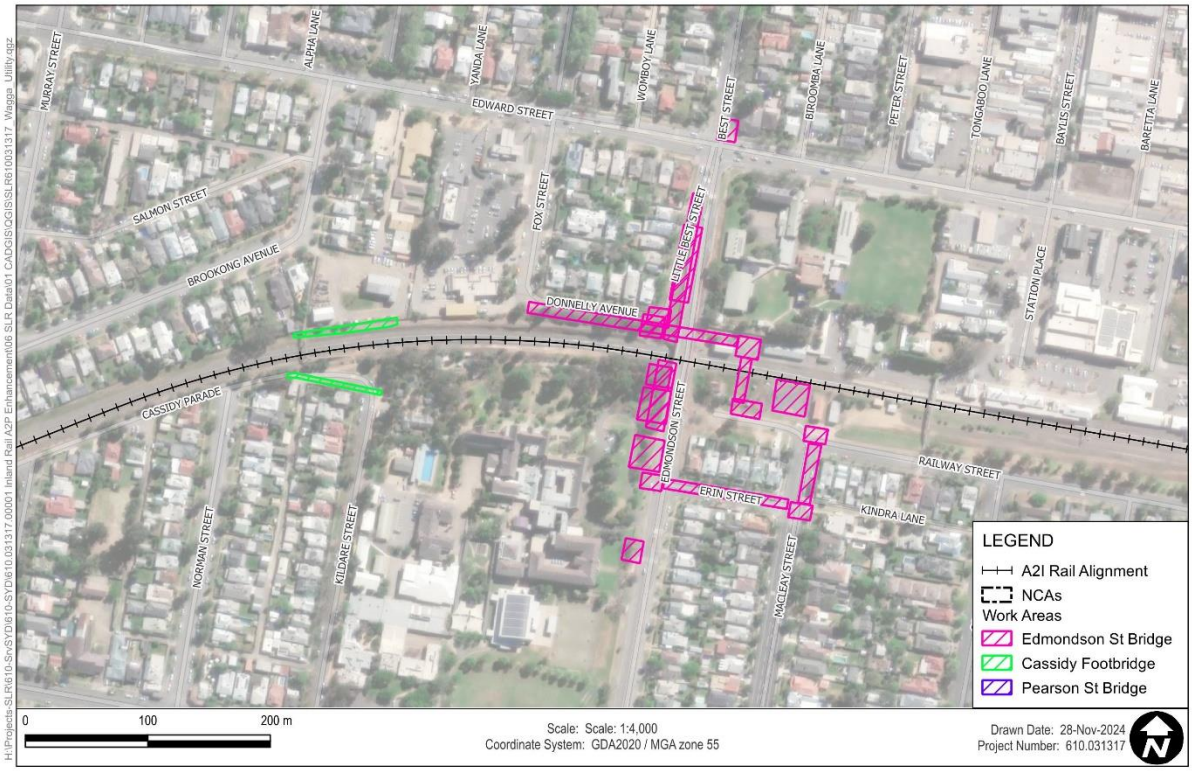
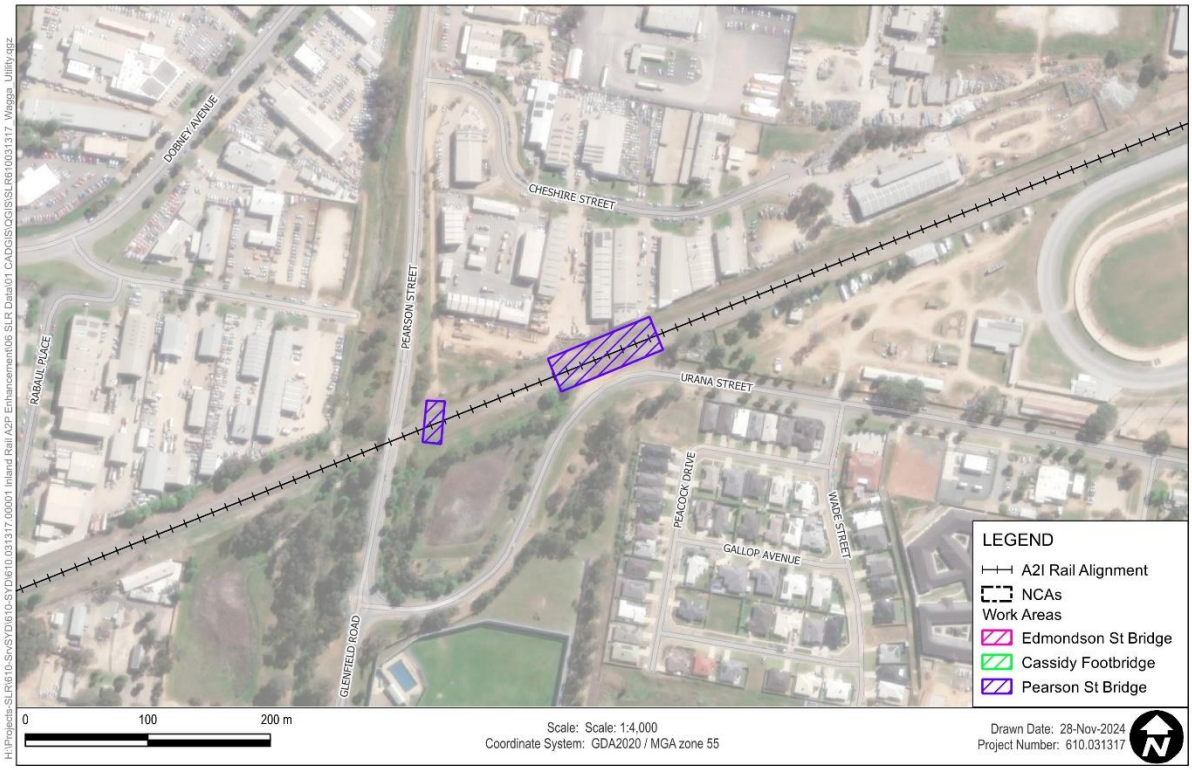


Figure 4 Construction Work Locations (Pearson Street)



5.1.1 Modelling Scenarios and Equipment

The assessment uses 'realistic worst-case' scenarios to determine the impacts from the noisiest 15-minute period that is likely to occur for each work scenario, as required by the ICNG. Sound power levels (Lw) for the construction equipment used in the modelling are listed in **Appendix B**.

5.2 Predicted Noise Levels

The following overview is based on the predicted impacts at the most affected receivers and is representative of the worst-case noise levels that are likely to occur during construction.

The assessment shows the predicted 'mitigated' impacts based on the exceedance of the noise management levels, as per the categories in **Table 16**. The mitigation and management measures adopted for this CNVIS are provided in **Section 8.0**.

Table 16 Exceedance Bands and Impact Colouring

Subjective Classification	Exceedance of Noise Management Level		Impact Colouring
	Daytime	Out of Hours	
Negligible	No exceedance	No exceedance	
Noticeable	-	1 to 5 dB	
Clearly Audible	1 to 10 dB	6 to 15 dB	
Moderately Intrusive	11 to 20 dB	16 to 25 dB	
Highly Intrusive	> 20 dB	> 25 dB	

A summary of the number of buildings where NML exceedances were predicted for the various work scenarios is shown in **Table 17**. The number of receivers above the 'highly noise affected' (HNA) level are also included in the table. Maps of the predicted worst-case noise impacts are presented in **Appendix C**.

The assessment presents the combined predicted noise impacts for each scenario. Meaning, the worst-case result at each receiver is considered from all potential work areas where each scenario is to be undertaken.

The assessment is generally considered conservative as the calculations assume several items of construction equipment are in use at the same time within individual scenarios. As outlined in **Section 5.1.1,** the assessment uses 'realistic worst-case' scenarios to determine the impacts from the noisiest 15-minute period that is likely to occur for each work scenario.

The exceedances shown in **Table 17** are therefore representative of a 'realistic worst-case' 15-minute period, and are unlikely to occur for extended periods of time throughout the entire construction period at any given receiver.

The indicative work durations presented in **Table 15** represent a window of time where the scenarios could occur, and does not represent the entire duration of the exceedances shown in **Table 17**.

In reality, there would frequently be periods when construction noise levels are much lower than the worst-case levels predicted as well as times when no equipment is in use and no noise impacts occur.

Table 17 Overview of NML Exceedances

ID	Scenario	Number of Receivers																	
		HNA[1]	With NML exceedance (dB)[2]																
			Approved Daytime			Out of Hours													
						Daytime OOH				Evening				Night-time				Sleep Disturbance	Sleep Awakening
			1-10	11-20	>20	1-5	6-15	16-25	>25	1-5	6-15	16-25	>25	1-5	6-15	16-25	>25	>Screening Level (NCA10 – 53 dB) (NCA11 – 52 dB)	>65 dB
Residential Receivers																			
Edmondson Street Bridge																			
W.001	Site Establishment/Demobilisation	-	26	3	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W.002	Compound Operation	-	5	-	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W.003	Vegetation clearing	**8**	52	9	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W.004	Utility Work (Gas) - investigation and excavation	**18**	60	30	11	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W.005	Utility Work (Gas) - underbores	**21**	70	20	17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W.006	Utility Work (Gas) - cutovers & make good	**7**	40	19	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W.007	Utility Work (66kV) (day)	**6**	48	5	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W.008	Utility Work (66kV) (night outage 1)	**6**	39	7	5	41	39	7	5	44	44	8	5	242	150	44	13	175	35
W.009	Utility Work (66kV) (night outage 2)	**5**	28	7	3	25	28	7	3	34	30	5	5	113	81	30	10	117	25
Cassidy Footbridge																			
W.010	Utility Work (Gas) protection works	**-**	33	6	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W.011	Utility Work (water) relocations works protection works	**5**	58	10	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Pearson Street Bridge																			
W.012	Utility Work (gas & water) - investigation and excavation	-	27	7	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W.013	Utility Work (gas & water) - underbores	-	19	-	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W.014	Utility Work (gas & water) - cutovers & make good	-	22	-	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

ID	Scenario	Number of Receivers																	
		HNA[1]	With NML exceedance (dB)[2]																
			Approved Daytime			Out of Hours													
						Daytime OOH				Evening				Night-time				Sleep Disturbance	Sleep Awakening
			1-10	11-20	>20	1-5	6-15	16-25	>25	1-5	6-15	16-25	>25	1-5	6-15	16-25	>25	>Screening Level (NCA10 – 53 dB) (NCA11 – 52 dB)	>65 dB
Other Sensitive Receivers																			
Edmondson Street Bridge																			
W.001	Site Establishment/Demobilisation	n/a	7	-	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W.002	Compound Operation	n/a	1	-	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W.003	Vegetation clearing	n/a	3	5	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W.004	Utility Work (Gas) - investigation and excavation	n/a	9	7	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W.005	Utility Work (Gas) - underbores	n/a	12	8	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W.006	Utility Work (Gas) - cutovers & make good	n/a	6	3	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W.007	Utility Work (66kV) (day)	n/a	9	2	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W.008	Utility Work (66kV) (night outage 1)	n/a	3	4	1	3	4	1	-	1	-	-	-	3	1	-	-	n/a	n/a
W.009	Utility Work (66kV) (night outage 2)	n/a	4	2	-	1	3	2	-	-	-	-	-	1	-	-	-	n/a	n/a
Cassidy Footbridge																			
W.010	Utility Work (Gas) protection works	n/a	17	3	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W.011	Utility Work (water) relocations works protection works	n/a	17	7	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Pearson Street Bridge																			
W.012	Utility Work (gas & water) - investigation and excavation	n/a	3	1	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W.013	Utility Work (gas & water) - underbores	n/a	2	1	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W.014	Utility Work (gas & water) - cutovers & make good	n/a	2	1	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note 1: Highly noise affected, based on ICNG definition (i.e. predicted LAeq(15minute) noise at residential receiver is greater than 75 dBA).
Note 2: Based on worst-case predicted noise levels

A summary of the predicted worst-case noise levels is shown below for each work area:

Edmondson Street Bridge

- 'Highly intrusive' noise impacts are predicted at the nearest residential receivers for *W.003* through to *W.009* during approved daytime hours. The highest noise levels and impacts would be experienced by adjacent receivers when noisy construction work is conducted nearby.
- For other sensitive receivers, 'highly intrusive' impacts are predicted for *W.003*, *W.008* and *W.0011* during approved daytime hours. A maximum of one other sensitive receivers (those closest to the works) are predicted to be affected at this level for these work scenarios. It is noted that other sensitive receivers should only be considered impacted 'when in use'.
- For work associated with *W.008* and *W.009*, 'highly intrusive' impacts are predicted at the nearest residential receivers during all assessment periods. The addresses of the residential receivers impacted by night-time works are provided in **Appendix D**.
- For work associated with *W.008* and *W.009*, generally minor impacts ('noticeable' to 'clearly audible') are predicted for other sensitive receivers during OOHW. South Wagga Public School is predicted to experience 'highly intrusive' impacts during approved daytime hours. It is noted that other sensitive receivers should only be considered impacted 'when in use'.
- For scenario *W.001*, three 'moderately intrusive' impacts are predicted at closest residential receivers to the works. No 'moderately intrusive' impacts are expected for *W.002* at residential receivers and no 'highly intrusive' impacts are expected for these work scenarios at residential and other sensitive receivers.
- Noise generating activities from the Compound Operation (*W.002*) during approved daytime hours are generally predicted to be below the NML for other sensitive receivers. However, the childcare centre at 6 Station Place is predicted to experience minor noise impacts ('clearly audible').
- Highly noise affected receivers are predicted in all scenarios except *W.001* and *W.002* (ie *W.003* to *W.009*). It is predicted that work from scenarios *W.004* and *W.005* will result in greatest number of receivers experiencing HNA levels.
- Noise levels above the screening level for sleep disturbance and sleep awakening criteria are predicted for *W.008 and W.009*. Sleep disturbance impacts would generally be caused by heavy vehicle movements and more noise intensive equipment. Where reasonable and feasible, these activities should be limited to the less sensitive periods to avoid noise impacts during more sensitive out-of-hours periods (refer to **Section 8.0**). The number of awakening events would depend on several factors, including the equipment being used, the duration of noisy work and the distance of the work to each residential receiver. Further detail around the specific OOHW, (eg duration and justification) must be identified in the OOHW permit, refer **Section 2.4**.

Cassidy Footbridge

- During approved daytime hours, 'highly intrusive' noise impacts are predicted at one residential receiver for *W.010* and four residential receivers for *W.011*. The highest noise levels and impacts would be experienced by adjacent receivers when noisy construction work is conducted nearby.
- One other sensitive receiver is predicted to experience 'highly intrusive' noise impacts during *W.011*. No 'highly intrusive' impacts are predicted for *W.010.*

- OOHW at Cassidy Footbridge are not anticipated.

Pearson Street Bridge

- No 'highly intrusive' noise impacts are predicted for residential or other sensitive receivers for all of the Pearson Street bridge work scenarios (ie *W.012*, *W.013* and *W.014*).
- OOHW at Pearson Street Bridge are not anticipated.

Review of the predictions shows that both the sleep disturbance screening level and sleep awakening reaction level are likely to be exceeded when night work occurs near residential receivers. It should be noted that sleep disturbance is only expected to occur during utility works (W.008 and W.009) and will require outages during off-peak hours between 10pm – 5am. At this stage, these works are not expected to be undertaken for more than two consecutive nights, however further detail around the specific OOHW, (eg duration and justification) will be identified in the OOHW permit.

The receivers which would potentially be affected by sleep awakening impacts are generally the same receivers where 'moderately intrusive' and 'highly intrusive' night-time impacts have been predicted (refer to **Appendix C**). These receivers may be eligible for respite offers (RO), agreements with owners (AO) or alternative accommodation (AltA), refer **Section 8.3**.

All appropriate feasible and reasonable construction noise mitigation measures will be applied to work as outlined in **Section 8.0** and **Section 8.1**.

5.3 Ground-borne Noise

Ground-borne construction noise impacts from the Project are not anticipated as vibration intensive work with the potential to generate perceptible ground-borne noise, is not included in the scope of work. Vibration intensive work for the Project will be completed outdoors meaning airborne noise levels at the nearest receivers are expected to be higher than the corresponding internal ground-borne noise levels.

Where airborne noise levels are higher than ground-borne noise levels it is not necessary to evaluate potential ground-borne noise impacts and as such, they have not been considered further for this assessment.

6.0 Vibration Assessment

Vibration intensive items of equipment that would be required during work assessed in this CNVIS include a Medium Hydraulic Hammer. These items of equipment are required during the work as shown in **Table 18**.

The potential impacts during vibration intensive work have been assessed using the Transport CNVG-PTI minimum working distances for cosmetic damage and human response shown in **Table 18**.

Table 18 Vibration Intensive Equipment

ID	Scenario	Rating/Description	Minimum Distance			
			Cosmetic Damage			Human Response (NSW EPA Guideline)
			Residential and Light Commercial (BS 7385)	Heritage Items (DIN 4150, Group 3)	Industrial and Heavy Commercial (BS 7385)	
W.004	**Edmondson Street Bridge** Utility Work (Gas) - investigation and excavation	Small Hydraulic Hammer: 300 kg (5 to 12 t excavator)	2 m	5 m	1 m	7 m
W.011	**Cassidy Footbridge** Utility Work (water) relocations works protection works	Medium Hydraulic Hammer: 900 kg (12 to 18 t excavator)	7 m	15 m	4 m	23 m
W.012	**Pearson Street Bridge** Utility Work (gas & water) - investigation and excavation					

Vibration offset distances have been determined from the TfNSW CNVG-PTI minimum working distances for cosmetic damage and human comfort (see **Table 12** and the assessment is summarised in **Figure 5** and **Figure 6**). The offset distances are representative of the highest vibration levels that would likely be experienced by the nearest receivers when work occurs nearby.

For most construction activities, vibration emissions are intermittent in nature and for this reason, higher vibration levels occurring over shorter time periods are allowed.

In the event that additional work is undertaken which requires the use of other items of plant identified than those identified in **Table 18**, a vibration impact assessment must be conducted prior to the commencement of work.

Figure 5 Medium Hydraulic Hammer - Minimum Working Distances (Edmondson Street and Cassidy Footbridge)

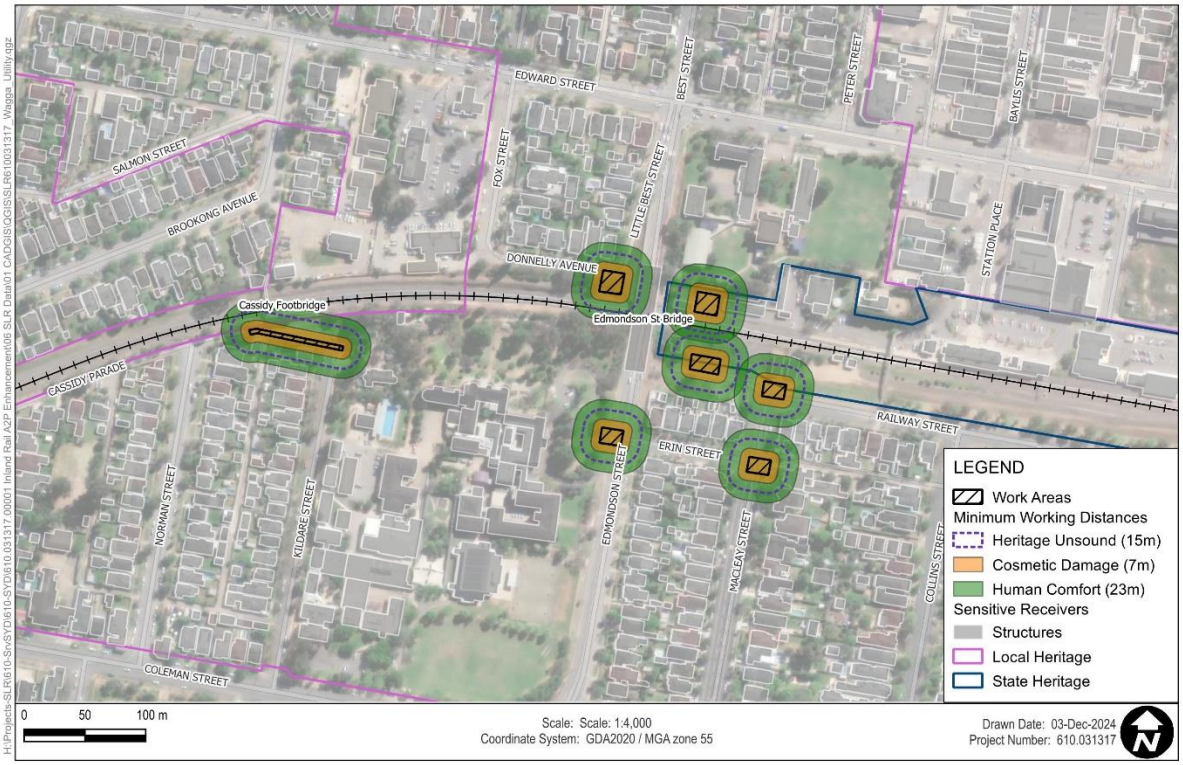


Figure 6 Medium Hydraulic Hammer - Minimum Working Distances (Pearson Street)

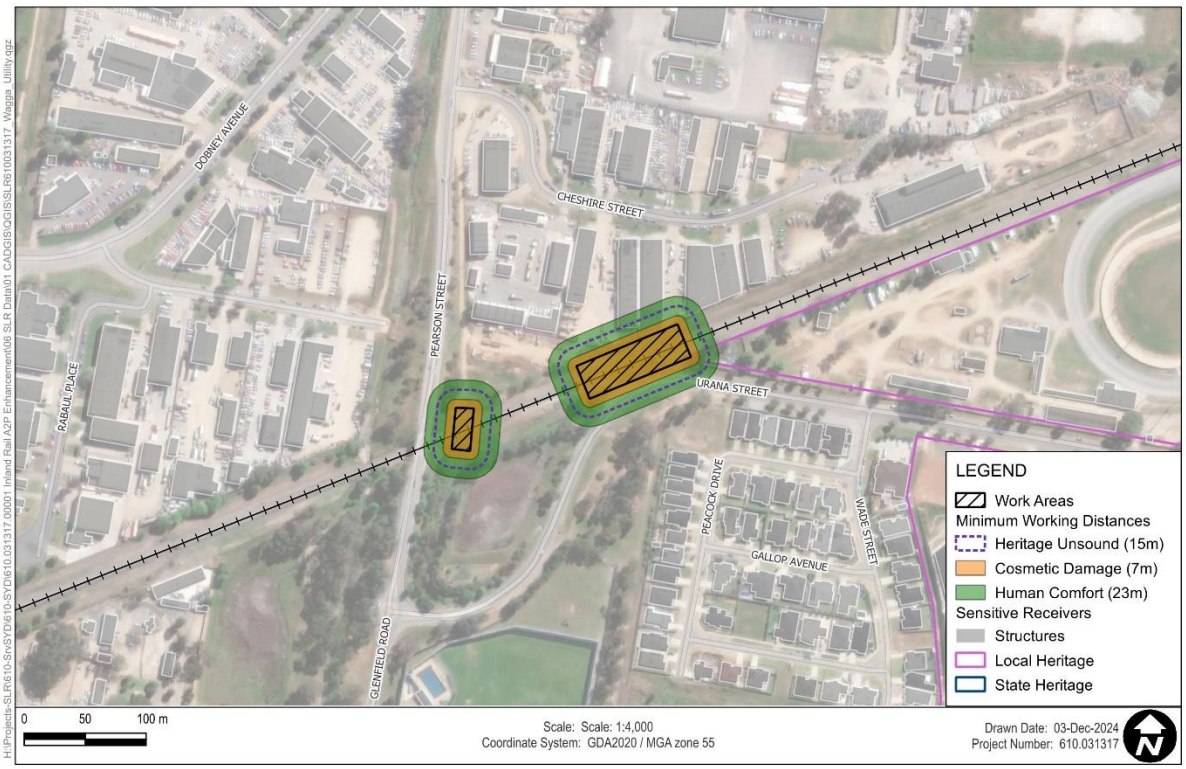


Figure 7 Small Hydraulic Hammer - Minimum Working Distances (Edmondson Street and Cassidy Footbridge)

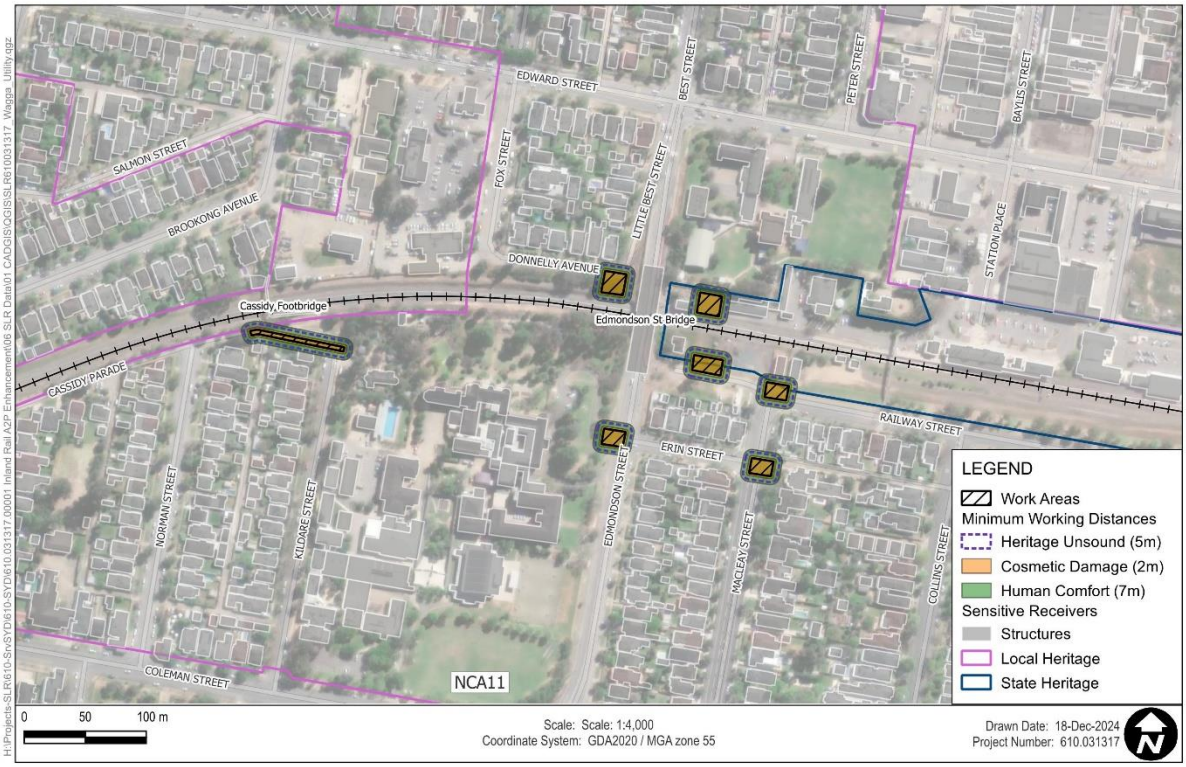
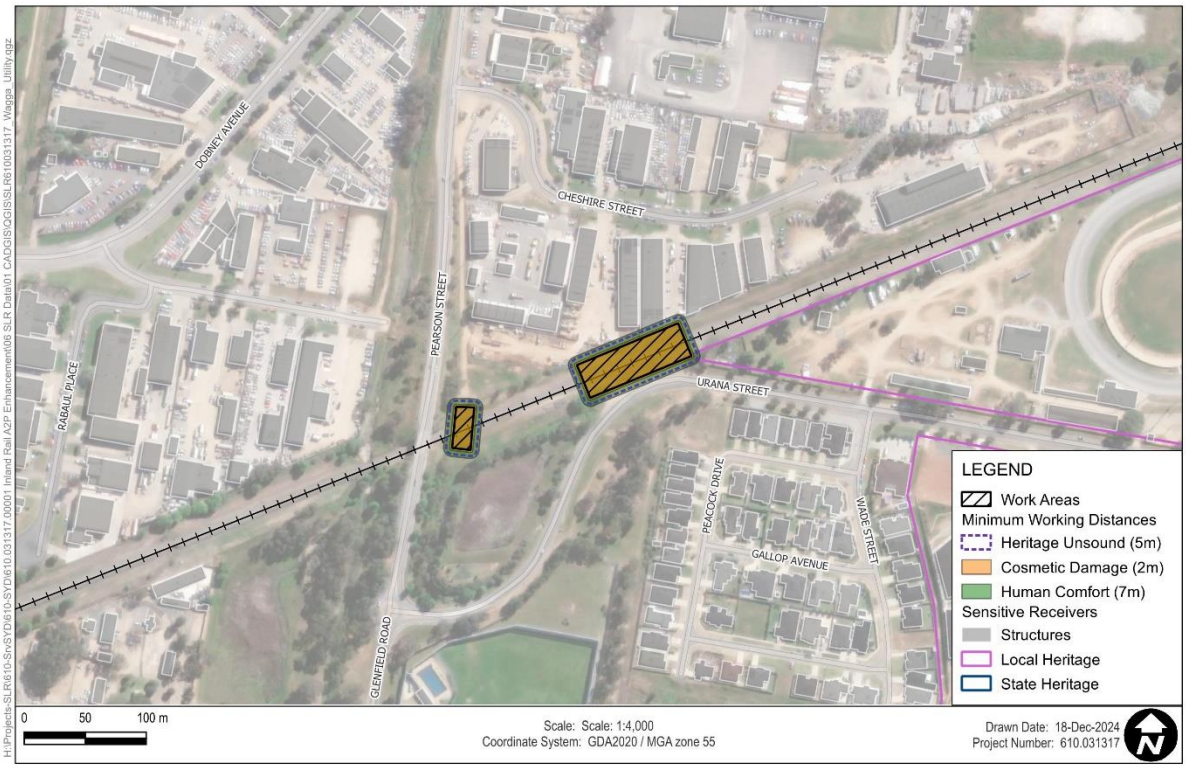


Figure 8 Small Hydraulic Hammer - Minimum Working Distances (Pearson Street)



6.1 Cosmetic Damage Assessment

Figure 5 shows that the residential building at 2 Kildare St and the garage at 1 Norman St have the potential to fall within the cosmetic damage minimum working distance for residential structures during *W.011*. **Figure 5** also shows that four sheds/structures within the Wagga Wagga Station Yard have the potential to fall within the cosmetic damage minimum working distance for residential structures during *W.004*.

Figure 6 shows that one nearby commercial building (10 Cheshire St) has the potential to fall within the cosmetic damage minimum working distance for light commercial structures during *W.012*. If the commercial building at 10 Cheshire St is classified as a Line 1-type item from BS 7385 Part 2 (reinforced or framed structure/industrial or heavy commercial structure) then the minimum working distance for cosmetic damage is 4 m. The structure at 10 Cheshire St falls within the minimum working distance of 4 m for reinforced or framed structure/industrial or heavy commercial structure.

Figure 7 and **Figure 8** depicting the minimum working distances for the small hydraulic hammer suggests that all receivers are beyond the minimum working distances for cosmetic damage. Therefore, the smaller, less vibration intensive hydraulic hammer will be prioritised where the required works can be feasibly and reasonably be completed with the smaller machinery.

Offset distances from specific vibration intensive plant to the nearest receivers and building construction should be confirmed before commencing vibration intensive work during construction.

As per CoA E120, before commencement of any work, a structural engineer must undertake condition surveys of all building, structures, utilities and the like identified in the documents CoA A1 as being at risk of damage. For this CNVIS, conditions surveys (based on the medium hydraulic hammer) are required for:

- 2 Kildare St
- 10 Cheshire St
- Garage at 1 Norman St
- Four structures within the Wagga Wagga Station Yard

After completion of construction, condition surveys of all items for which condition surveys were undertaken in accordance with CoA E120 must be undertaken by a structural engineer.

The results of the surveys must be documented in a Condition Survey Report for each item surveyed. Copies of Condition Survey Reports must be provided to the landowners of the items surveyed, and no later than one month before the commencement of construction and three months following the completion of construction.

Feasible and reasonable construction vibration mitigation measures should be applied where vibration intensive work is required within the minimum working distances. Construction vibration mitigation and management measures are discussed in **Section 8.1**.

In accordance with CoA E122, property damage caused directly or indirectly by the construction or operation must be rectified at no cost to the owner. Alternatively, compensation may be provided for the property damage as agreed with the property owner.

Heritage Structures

The following structures are within the Wagga Wagga Conservation Area or are heritage listed and fall within the ‘Heritage Unsound’ minimum working distance for a medium hydraulic hammer:

- 2 Kildare St
- Dwelling and garage at 1 Norman St

- Cassidy Footbridge
- 2 Donnelly Av
- 4 Donnelly Av
- 23 Macleay St
- 25 Macleay St
- Five structures within the Wagga Wagga Station Yard

As discussed in **Table 10**, Cassidy Footbridge is in good condition and the dwellings on Donnelly Ave and Macleay St are likely to be occupied and therefore not expected to be structurally unsound. For these structures, cosmetic damage due to vibration is not anticipated.

One structure within the Wagga Wagga Railway Yard falls within the heritage unsound but does not fall within the buffer area for cosmetic damage when using a medium hydraulic hammer. This structure is approximately 12 m offset from the track and already subjected to train vibration and is therefore not expected to be structurally unsound.

As per CoA E80, vibration testing must be undertaken before and during vibration generating activities that have the potential to impact on heritage items to identify minimum working distances to prevent cosmetic damage. Advice must be sought on methods and locations for installing equipment as per CoA E81.

If other vibration intensive activities are required within minimum working distances to heritage structures, a building condition assessment should be undertaken of the heritage item/s to assess if they are considered to be sensitive to vibration prior to vibration work commencing as per CoA E120.

Buried Pipework and Utilities

This CNVIS involves direct work on Gas, Water and Electrical utilities. This work will be undertaken in accordance with the asset owner's guidelines to ensure there are no adverse vibration impacts to the utilities. No other buried pipework or utilities have been identified in this CNVIS at risk of impact from construction vibration.

6.2 Human Comfort Assessment

Figure 5 shows that shows that 12 residential receivers have the potential to fall within the human comfort minimum working distances. **Figure 6** shows that three nearby commercial buildings have the potential to fall within the human comfort minimum working distances. Occupants of these buildings may be able to perceive vibration impacts at times when medium hydraulic hammers are in use nearby. Where impacts are perceptible, they would likely only be apparent for relatively short durations when vibration intensive equipment is in use nearby.

Similarly, **Figure 7** and **Figure 8** depicting the minimum working distances for the small hydraulic hammer suggests that all receivers (except 2 Kildare Street) are beyond the minimum working distances for human comfort. Therefore, the smaller, less vibration intensive hydraulic hammer will be prioritised where the required works can be feasibly and reasonably be completed with the smaller machinery.

Feasible and reasonable construction vibration mitigation measures should be applied where vibration intensive work is required within the minimum working distances. Construction vibration mitigation and management measures are discussed in **Section 8.1**.

7.0 Construction Traffic Assessment

The EIS identified that during the construction phase of the project, heavy vehicles would be required for materials and equipment delivery while light vehicles will transport workers to

and from the site. This additional road traffic may impact receivers along the proposed transport routes.

No additional information has been provided regarding construction road traffic, therefore a summary of the predicted daytime traffic noise levels from the EIS is shown in **Table 19**.

Table 19 Construction Traffic Assessment

Traffic Route	Road Type	Predicted Construction Traffic Noise (Both Directions) LAeq (Period)		Exceed base criterion? Day[1] (7am – 10pm)	Potential Increase > 2dB	Potential Noise Impact
		Existing	Existing + Proposed			
Wagga Wagga Precinct						
Pearson Street bridge						
Edward Street (Sturt Highway)	Arterial	58.9	59.4	No	No	No
Moorong Street (Olympic Highway)	Arterial	63.6	64	Yes	No	No
Pearson Street	Sub-arterial	58.5	58.9	No	No	No
Urana Street	Sub-arterial	54.5	55.4	No	No	No
Cheshire Street	Local	49.2	51.5	No	Yes	No
Alan Turner Depot Access Road	Local	53.4	54.6	No	No	No
Fernleigh Road	Local	61	61.3	Yes	No	No
Wagga Wagga Station/Yard, Edmondson Street bridge and Cassidy Footbridge						
Edward Street (Sturt Highway)	Arterial	60.2	61.1	Yes	No	No
Fox Street	Local	62.6	63.1	Yes	No	No
Mitchelmore Street	Sub-arterial	56.2	57.4	No	No	No
Edmondson Street	Sub-arterial	57.7	58.8	No	No	No
Norman Street	Local	62.2	62.6	Yes	No	No
Coleman Street	Sub-arterial	53.3	55.9	No	Yes	No
Cassidy Parade	Local	59.1	60.1	Yes	No	No
Erin Street	Local	51.9	55.4	Yes	Yes	Yes
Station Place	Local	49.3	53.7	No	Yes	No
Brookong Avenue	Local	57.6	59.4	Yes	No	No

Note 1: Freeway/arterial/sub-arterial roads: $L_{Aeq(15hour)}$ 60dBA(external)
Local roads: $L_{Aeq(1hour)}$ 55dBA (external)

Note 2: Freeway/arterial/sub-arterial roads: $L_{Aeq(9hour)}$ 55dBA(external)
Local roads: $L_{Aeq(1hour)}$ 50dBA (external)

The EIS found that construction traffic associated with the Wagga Wagga work stages on public roads is generally likely to comply with the road traffic noise goals. The exception is Erin Street during the daytime period, where construction traffic noise is likely exceed the base criterion by 0.4 dB. This level of exceedance is considered negligible (ie not

perceptible by the average listener). Therefore, noise impacts are unlikely to negatively affect the relevant receivers.

The EIS did not assess construction traffic during the night-time period, and no additional information has been provided regarding construction road traffic. Therefore, it is conservatively assumed that where night-time construction traffic is required, impacts would be experienced by residences along construction routes on sub-arterial and local roads within close proximity to the work sites. Night-time noise impacts are not anticipated on arterial roads.

Some sections of the Wagga Wagga utility work will require minor temporary (short-term) traffic control diversions. These will be set up and removed within the shift (eg 8am to 5pm). There are no 24/7 diversions anticipated for this CNVIS.

Mitigation and management measures to assist in minimising noise impacts from construction traffic are shown in **Section 8.0**.

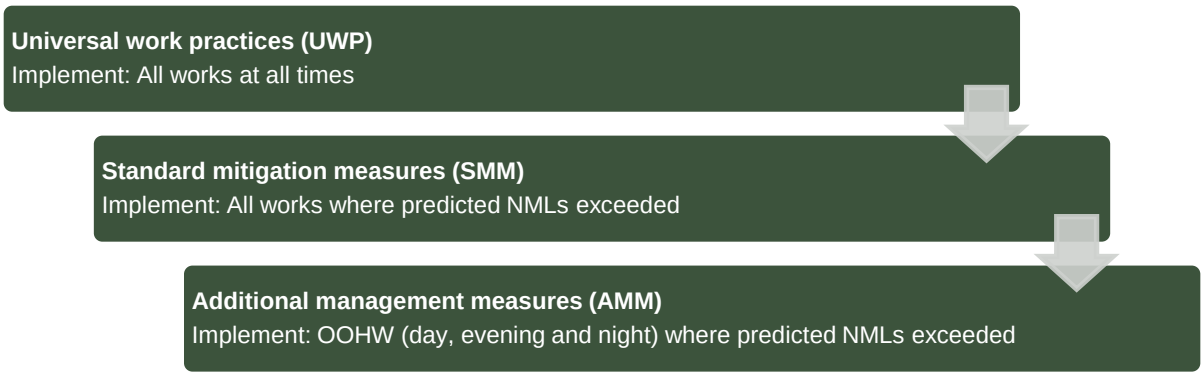
8.0 Mitigation and Management Measures

Noise from the Project may be apparent at the nearest receivers at certain times during construction. The Project should apply all feasible and reasonable mitigation measures to minimise the impacts.

In accordance with CoA E74, works that exceed the noise management levels and/or vibration criteria must be managed in accordance with the CNVMP.

The Inland Rail NSW Construction Noise and Vibration Framework (CNVF) has been adopted as a guideline for this project and outlines a hierarchy of work practices and mitigation measures to minimise the impact of construction noise and vibration on the community. This hierarchy is shown in **Figure 9**.

Figure 9 Hierarchy of Work Practices and Mitigation Measures



The universal work practices (UWP) and standard mitigation measures (SMM) for the overall A2I project are outlined in the CNVMP. All mitigation and management measures outlined in the CNVMP will be adopted in accordance with CoA E74. Site specific mitigation measures are also outlined below in **Section 8.1**. These measures have been incorporated into the noise modelling assessment to provide mitigated results. Additional Management Measures (AMM) are outlined in **Section 8.3**.

8.1 Site Specific Mitigation Measures

Table 20 outlines the mitigation and management measures that will be adopted to minimise potential noise and vibration impacts associated with this CNVIS at surrounding sensitive

receivers. These measures have been considered in noise modelling based on the total scenario sound power levels, refer **Appendix B**.

Table 20 Site Specific Mitigation Measures

Measure	Reference / Notes
Project Planning	
Use quieter and less vibration emitting construction methods where feasible and reasonable.	Best practice
Works will be completed during the approved daytime construction hours where possible, as outlined in **Section 2.2.** Some unavoidable OOHW will be required due to road and rail traffic management restrictions, as outlined in **Section 2.3**.	Best practice CoA E69 CoA E71
For gas utility works (W.005), coordination between Martinus Rail and the local council has been undertaken to revise investigation and excavation methodology to minimise construction noise exposure and reduce the duration of construction to residents along Erin Street and MacLeay Street.	Best practice
Where OOHW is required, an OOHW Permit will be prepared, as required by the OOHW Protocol or EPL. Further detail around the specific work tasks, duration and justification of OOHW must be identified in the OOHW permit.	Best practice CoA E71 CoA E72 CoA E73
Scheduling	
Highly noise intensive works that result in an exceedance of the applicable NML at the same receiver must only be undertaken: a) Between 08:00am – 06:00pm Monday to Friday; b) Between 08:00am – 01:00pm Saturday; and c) if continuously, then not exceeding three (3) hours, with a minimum cessation of work of not less than one hour. Refer **Section 8.2**.	Best practice CoA E70
Noise generating work in the vicinity of community, religious, educational institutions, noise and vibration-sensitive businesses and critical working areas (such as exam halls, theatres, laboratories and operating theatres) resulting in noise levels above the NMLs will not be timetabled during sensitive periods, unless other reasonable arrangements with the affected institutions can be made at no cost to the affected institution. Refer to Community Consultation in **Section 8.5**.	Best practice CoA E76
All work undertaken for the delivery of the project including those undertaken by third parties (such as utility relocations), must be coordinated to ensure respite periods are provided.	Best practice, CoA E83
Site Layout	
Compounds and worksites have been designed to promote one-way traffic and minimise the need for vehicle reversing.	Best practice
Construction activities must be planned to minimise vehicle movements around the Site.	
Work compounds, parking areas, and equipment and material stockpiles will be positioned away from noise-sensitive locations and take advantage of existing screening from local topography.	
Equipment that is noisy will be started away from sensitive receivers	

Measure	Reference / Notes
Training	
Training will be provided to all personnel on noise and vibration requirements for the project. Inductions and toolbox talks to be used to inform personnel of the location and sensitivity of surrounding receivers.	Best practice
The induction protocols must include awareness of noise generating activities and mitigation measures and techniques that should be implemented.	
Training must be conducted for appropriate community behaviours when access/egress the Site.	
Plant and Equipment Source Mitigation	
All plant and equipment must be maintained in a proper and efficient condition, operated in a proper and efficient manner, and feature standard noise reduction measures where applicable.	Best practice CNVF
Plant and equipment must be selected with options to minimise noise such as covers, mufflers, shrouds and other noise suppression equipment. Low noise emission plant and equipment must be selected where available.	
Tonal reversing alarms (beepers) will be replaced with non-tonal alarms (squawkers) on all equipment in use (subject to occupational health and safety requirements).	
Stationary noise sources will be sited behind structures (or temporary screens) that act as barriers, or at the greatest distance from the noise-sensitive area (where practicable). Equipment will be oriented so that noise emissions are directed away from any sensitive areas.	
Noise generating equipment will be regularly checked and effectively maintained, including checking of hatches/enclosures regularly to ensure that seals are in good condition and doors close properly against seals.	
Noise monitoring spot checks of equipment will be completed to ensure individual items are operating as expected	
Dropping materials from a height will be avoided.	
Loading and unloading will be carried out as far as possible from noise sensitive areas.	
Alternative construction methods have been considered for activities including vegetation clearing (eg electric / hydraulic chainsaws). Alternative methods will be considered for hydraulic hammers (eg smaller sized equipment, refer **Section 6.0**). Use of these methods will depend on the specific circumstances and therefore the worst-case scenario is included for the purpose of this CNVIS.	Best practice
Construction Traffic	
Construction traffic routes to site will be limited to major roads where possible.	Best practice
Trucks will not queue outside residential properties.	
Truck drivers will be instructed to avoid compression braking as far as practicable.	
Delivery vehicles should be fitted with straps rather than chains for unloading, wherever possible.	
Truck movements will be kept to a minimum (ie trucks are fully loaded on each trip).	
Screening	
Install purpose-built screening or enclosures around long-term fixed plant that has the potential to impact nearby receivers	Best practice CNVF
The layout of the site will take advantage of existing screening from local topography, where possible. Site huts, maintenance sheds and/or containers will be positioned between noisy equipment and the affected receivers.	

Measure	Reference / Notes
Implementation of temporary noise barriers for highly intensive noise activities, such as saw cutting or rock breaking.	
Community Consultation	
Regular communications on the activities and progress of the proposal shall be provided to the community (eg via newsletter, email and/or website).	Best practice CNVF
A telephone, email and web-based community information service shall be established to allow the community to obtain additional information on construction activities, provide feedback or make a complaint.	Best practice CNVF
Owners and occupiers of properties at risk of exceeding the screening criteria for cosmetic damage (and/or human comfort) must be notified before work 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, owners 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 owner and occupier.	Best practice CoA E79
Personalised communication and respite offers will be provided to all receivers that are predicted to be highly noise affected (HNA).	Best practice
Notification will be provided to all impacted residences along construction traffic routes (including temporary diversions).	Best practice
Where complaints are received, work practices will be reviewed and feasible and reasonable practices applied to minimise any further impacts.	Best practice
Monitoring	
Noise and/or vibration monitoring will be conducted (as appropriate) when noise/vibration intensive works are being undertaken in close proximity to sensitive receivers.	Best practice CNVF CoA E80 CoA E81
Noise and vibration monitoring will be undertaken in accordance with the CNVMP and Monitoring Program.	
Advice from a heritage specialist must be sought on methods and locations for installing equipment used for vibration, movement and noise monitoring at heritage-listed structures.	
See **Section 8.7** for details of monitoring requirements.	
Vibration	
Where vibration generating works are required within the minimum working distances and considered likely to exceed the criteria: • Different construction methods with lower source vibration levels (ie alternative equipment) will be investigated and implemented, where feasible (refer **Table 12**). • Attended vibration measurements will be undertaken at the start of the works to determine actual vibration levels of the item. Works will cease if the monitoring indicates vibration levels are likely to, or do, exceed the relevant cosmetic damage criteria. Note: Small hydraulic hammers will be prioritised to reduce vibration impacts to surrounding receivers.	Best practice CoA E80
Vibration intensive works required within the minimum working distance at the same receiver must only be undertaken: a) Between 08:00am – 06:00pm Monday to Friday; b) Between 08:00am – 01:00pm Saturday; and c) if continuously, then not exceeding three (3) hours, with a minimum cessation of work of not less than one hour. Refer to **Section 8.2**.	Best practice CoA E70

Measure	Reference / Notes
Where works are required within the cosmetic damage minimum working distances, building condition surveys will be completed before and after the works to ensure no cosmetic damage has occurred. Heritage status of all structures that fall within the unsound heritage minimum working distance for the nominated vibration-intensive equipment should be confirmed prior to the commencement of works. This CNVIS should be updated prior to the commencement of works to include the location of vibration-sensitive heritage items that fall within the minimum working distance for unsound heritage structures.	Best practice CoA E120 CoA E121 CoA C9
Property damage caused directly or indirectly (for example from vibration or from groundwater change) by the construction or operation must be rectified at no cost to the owner. Alternatively, compensation may be provided for the property damage as agreed with the property owner.	Best practice CoA E122

8.2 Respite

In accordance with CoA E70, except as permitted by an EPL, highly noise intensive works that result in an exceedance of the applicable NML at the same receiver must only be undertaken:

a) Between 08:00am – 06:00pm Monday to Friday;

b) Between 08:00am – 01:00pm Saturday; and

c) if continuously, then not exceeding three (3) hours, with a minimum cessation of work of not less than one hour.

For the purposes of this condition, 'continuously' includes any period during which there is less than one hour between ceasing and recommencing any of the work.

In accordance with CoA E72 and E83, the procedure outlined in the OOHW Protocol must be implemented to coordinate OOHW (including those approved by an EPL or undertaken by a third party), to ensure appropriate respite is provided. This coordination must include:

a) rescheduling work to provide respite to impacted noise sensitive land use(s) so that the respite is achieved; or

b) the provision of alternative respite or mitigation to impacted noise sensitive land use(s); and

c) the provision of documentary evidence to the AA in support of any decision made in relation to respite or mitigation.

The consideration of respite must also include all other CSSI, SSI and SSD projects which may cause cumulative and/or consecutive impacts at receivers affected by the delivery of the CSSI.

Highly noise intensive works (as defined in **Section 2.2.1**) are required in various work scenarios. As outlined above, highly noise intensive work that results in an exceedance of the applicable NML is restricted to the hours shown above and must have respite periods as defined above.

CoA E70 applies to the following work scenarios where highly noise intensive works are proposed and the NML is predicted to be exceeded:

Edmondson Street Bridge

- W.003 – Vegetation clearing

- W.004 – Utility Work (Gas) - investigation and excavation
- W.005 – Utility Work (Gas) – underbores
- W.007 – Utility Work (66kV) (day)
- W.009 – Utility Work (66kV) (night outage 2)

Cassidy Footbridge

- W.011 – Utility Work (water) relocations works protection works

Pearson Street Bridge

- W.012 Utility Work (gas & water) - investigation and excavation

In accordance with CoA E71, W.009 requires approval through the OOHW Protocol or and EPL to occur outside the hours listed above from CoA E70.

Respite offers are also required as part of the additional mitigation measured outlined in **Section 8.3**.

8.3 Additional Mitigation and Management Measures for Out of Hours Work

Where the 'mitigated' construction noise levels remain above the NMLs, the Additional Mitigation Measures Matrix (AMMM) adapted from in the CNVF and CNVMP is to be implemented. The approach, guided by the AMMM, is primarily aimed at pro-active engagement with affected sensitive receptors rather than additional noise reducing mitigation. OOHW has been divided into three periods (Day, Evening and Night) as adapted from the CNVF around the approved project hours (CoA E69).

Additional mitigation measures described in the CNVF and CNVMP are listed in **Table 21**. The additional mitigation measures for airborne noise are shown in **Table 22**. The additional mitigation measures for construction vibration are shown in **Table 23**.

Table 21 Additional Mitigation Measures

Mitigation/Management Measure	Abbreviation
Communication (Category 1)[1]	CO1
Communication (Category 2)[2]	CO2
Respite Offer[3]	RO
Alternative Accommodation	AltA
Agreement with Owners	AO

Note 1: As outlined in the CNVF, Communication to provide information on the OOHW via methods such as letter box drop, email, newsletter, media advertisements and/ or website prior to the works commencing.

Note 2: As outlined in the CNVF, Communication should be personalised (e.g. door knock, meeting, telephone call). Contact with these residents should commence early to enable feedback to be considered by the proposal.

Note 3: As outlined in the CNVF, RO are not applicable to non-residential receivers. RO may comprise of pre-purchased movie tickets, dinner vouchers or similar. RO 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.

Table 22 Airborne Noise – Additional Mitigation Measures Matrix

Time Period		Exceedance of NML	Perception	Duration	Communication Category/ Management Measure
OOHW Daytime Period	Sunday 8am – 6pm (including public holidays)	<5	Noticeable	Any	CO1
		5-15	Clearly audible	Any	CO1
		16-25	Moderately intrusive	Any	CO1, CO2
		>25	Highly intrusive	Any	CO1, CO2
OOHW Evening Period	Monday – Sunday 6pm – 10pm (including public holidays)	<5	Noticeable	Any	CO1
		5-15	Clearly audible	Any	CO1
		16-25	Moderately intrusive	Any	CO1, CO2
		>25	Highly intrusive	Any	CO1, CO2
				>2 consecutive rest periods[1]	CO1, CO2, RO
OOHW Night Period	Monday – Saturday 10pm – 7am Sunday 10pm – 8am (including public holidays)	<5	Noticeable	Any	CO1
		5-15	Clearly audible	Any	CO1
		16-25	Moderately intrusive	Any	CO1, CO2
				>2 consecutive sleep periods[1]	CO1, CO2, RO,AO
		>25	Highly intrusive	Any	CO1, CO2, RO
				>2 consecutive sleep periods[1]	CO1, CO2, RO, AO, AltA

Note 1: Where the duration exceeds 2 consecutive rest/sleep periods, the corresponding additional mitigation measures will be provided for all periods where construction exceedances are expected to occur.

Table 23 Vibration – Additional Mitigation Measures Matrix

Time Period		Duration	Exceedance of 'preferred' value	Exceedance of 'maximum' value
OOHW Daytime Period	Sunday 8am – 6pm (including public holidays)	Any	CO1, CO2	CO1, CO2, RO
OOHW Evening Period	Monday – Sunday 6pm – 10pm (including public holidays)	Any	CO1, CO2	CO1, CO2, RO

Time Period		Duration	Exceedance of 'preferred' value	Exceedance of 'maximum' value
OOHW Night Period	Monday – Saturday 10pm – 7am Sunday 10pm – 8am (including public holidays)	Any	CO1, CO2, RO	CO1, CO2, RO, AltA

8.3.1 Receivers Eligible for Additional Mitigation Measures - Noise

The receivers eligible for additional mitigation and management measures due to construction noise from the project work are presented in **Appendix C** and **Appendix D**. Where work occurs for greater than two consecutive evening or nights, receivers may be eligible for respite offers (RO), agreements with owners (AO) or alternative accommodation (AltA) depending on the exceedance level and works period as detailed in **Table 22**.

As outlined in **Section 5.2**, 'highly intrusive' impacts at nearest residential receivers and some other sensitive receivers are predicted for most work scenarios due to the proximity to the work. The addresses of the 'highly intrusive' impacted receivers are provided in **Appendix D**.

Both work scenarios that are scheduled for OOHW for Edmondson Street Bridge, ie, *W.008* and *W.009*, are predicted to create highly intrusive noise levels at residential receivers. Should these works occur for more than two consecutive sleep periods in a row, additional mitigation measures as outlined in as in **Table 22** must be provided to affected sensitive receivers. Where possible, work would be scheduled to avoid impacting the same receivers for more than two consecutive sleep periods. Receivers that would be impacted for more than two consecutive sleep periods must be identified in the OOHW permit.

8.3.2 Receivers Eligible for Additional Mitigation Measures - Vibration

Figure 5 identifies 12 receivers with the potential to fall within the minimum working distances for Human Comfort. It is noted that one of these 12 receivers (2 Kildare St) has the potential to fall within the cosmetic damage minimum working distance for residential structures.

Figure 6 identifies three nearby commercial buildings have the potential to fall within the human comfort minimum working distances. It is noted that one of these receivers (10 Cheshire St) has the potential to fall within the cosmetic damage minimum working distance for residential structures.

As defined in **Section 2.2.1** and **Section 8.2** activities involving high noise generating equipment, such as rock hammering or rock breaking, are limited to specific daytime construction hours only. Respite periods of 1 hour after every 3 hours of high noise/vibration generating work are also required.

Construction vibration mitigation and management measures are discussed in **Section 8.0**. No additional mitigation (from **Table 23**) for vibration activities is required, given the impacts will be limited to approved daytime hours only.

Any proposed works outside of the approved daytime hours will need to be assessed as part of the OOHW permit preparation discussed in **Section 2.4**.

8.4 Community Notification

As detailed in the standard management measures outlined in the CNVF.

- A telephone, email and web-based community information service will be established to allow the community to obtain additional information on construction activities, provide feedback or make a complaint.
- Regular communications on the activities and progress of the proposal shall be provided to the community (e.g. via newsletter, email and/or website).

8.5 Consultation with Affected Receivers

In accordance with CoA E78, the CNVIS must include specific mitigation measures identified through consultation with affected sensitive land user(s) and the mitigation measures must be implemented for the duration of the Work. Details of this consultation are provided below.

8.5.1 Consultation approach

This section discusses the consultation approach that has been undertaken for the purposes of the work subject to this CNVIS. It is noted that consultation with affected sensitive land users on what specific mitigation measures they may require is considered to be an ongoing and live process and as such, measures that are personal to individual affected sensitive land user(s) will not be regularly documented in this CNVIS. Consultation records will be made available to the AA upon request.

The purpose of this consultation is to identify receivers who have specific circumstances that need further consideration during construction – for example, households who have children undertaking exams (HSC or similar), households who have vulnerable persons with disabilities or medical conditions, shift workers, etc.

The consultation approach utilised by Martinus Rail is in accordance with the Community Communications Strategy (CCS). The approach involved directly contacting the affected sensitive land user identified by this CNVIS through one or more of the following methods:

- Surveys distributed by email and paper notifications
- Door-knocks with a ‘Sorry we missed you’ card for those who were not at home
- Notifications
- Phone calls
- Emails
- Community briefings / group meetings.

Affected sensitive land users contacted by Martinus Rail have been made aware of the anticipated duration and nature of construction works that may affect them, as well as mitigation measures that will be implemented in accordance with the CEMP and CNVMP. Contact information for Martinus Rail’s Community Team have been provided to assist with ongoing consultation during construction.

Depending on individual needs and circumstances, specific mitigation measures offered by Martinus Rail could include but are not limited to:

- Offers of individually agreed respite to highly noise affected sensitive land users (standard construction hours)
- Consultation on timetabling of highly noise intensive works to avoid sensitive periods
- Offers of attended noise monitoring at the premises to confirm actual levels of impact
- Offers of temporary alternative accommodation or work space
- Individual briefings.

Specific mitigation measures identified in consultation with individual affected sensitive land users will be implemented during works subject to this CNVIS. Further mitigation measures may be identified by the affected community as construction progresses and these will be assessed where reasonable and feasible and on a case by-case basis.

8.5.2 Consultation for this CNVIS

The project website includes the following key information:

- Latest approvals
- All management plans, including the CNVMP and the Construction Environmental Management Plan (CEMP), which provide information on the relevant environmental management measures
- Notifications, including three-month lookaheads, monthly updates and specific OOHW notifications
- Contact mechanisms, including requests for feedback and/or complaints on individual circumstances.

As part of the project's program of regular notifications, the following notifications have included information on the OOHW requirements subject to this CNVIS:

- Project-wide monthly notifications distributed to over 25,000 properties
- Work specific notifications
- Three-month lookahead notifications distributed to over 25,000 properties
- Regular email with details of upcoming work or changes.

All notifications include the following:

- Link to project website
- 24/7 phone number and email address for enquiries, complaints or comments
- Requests for the community to provide feedback on their individual needs and circumstances.

Prior to commencement of works subject to this CNVIS, targeted consultation occurred with a total of approximately 7,127 residential properties across the entire project alignment, approximately 3,081 of which were in the Wagga Wagga precinct. These properties received targeted letterbox drops, emails and newspaper adverts from the Community Team and feedback was sought across (3) three weeks, from 7 August to 28 August 2024.

The team requested feedback from the affected community on their individual needs during this targeted consultation.

8.5.3 Consultation outcomes

Feedback received during this consultation was primarily related to the existing operational train line and the disturbance the trains cause.

In Wagga Wagga, no additional management measures relating to construction noise were identified during this consultation (as required by CoA E78); however, the following general sentiments were noted from respondents:

- Limit noise generating work outside of standard construction hours as much as possible
- Limit noise generating work on the weekends as much as possible

- Construction works should be completed as soon as possible.

The CNVIS documents the need to limit noise generating work as much as possible and this will be achieved through the implementation of existing mitigation measures listed in this CNVIS.

Nevertheless, regular consultation with the community will continue throughout construction in accordance with the Community Communications Strategy and the Community Action Plan prepared for the relevant activities. A list of key stakeholders relevant to this CNVIS are included in, see **Table 24** below.

Table 24 Key Stakeholders for this CNVIS

Precinct Area	Receiver Type	Level of Engagement	Distance from Work Site (m)
Wagga Wagga Precinct			
Wagga Wagga City Council	Council	Consult	Various
Wagga Wagga Base Hospital	Health	Consult	350
Calvary Riverina Hospital (private)	Health	Consult	800
Pearson Street bridge			
Wagga Show Campground and Wagga & District Greyhound Club	Active Recreation	Consult	10
Peacock Drive, Bulolo Street, Gallop Avenue and Wade Street	Residential	Consult	Various
Edmondson Street Bridge and Cassidy Parade Bridge			
Kildare Catholic College	Educational / Residential	Consult	30
South Wagga Public School	Educational	Consult	5
Edmonson, Erin and Macleay Streets	Residential	Consult	Various
Kildare, Norman, Little Best, Best Streets and Cassidy Parade	Residential	Consult	Various
The Penthouse	Residential	Consult	Various
Erin Earth - 1 Kildare Street, Wagga Wagga	Educational	Consult	20

8.6 Occupational Noise Exposure

In accordance with CoA E77, worksites will be managed to ensure that noise generated by construction will not exceed the National Standard for exposure to noise in the occupational environment of an eight-hour equivalent continuous A-weighted sound pressure level of $L_{Aeq,8h}$ of 85 dBA for any employee working at a location near the project.

It is not anticipated that an exceedance will occur at any point during the project, however occupational exposure to noise will primarily be managed under the Work Health and Safety Management Plan.

8.7 Monitoring

Noise and vibration monitoring will be undertaken in accordance with the CNVMP (including monitoring program) and the CNVF.

CoA E81 requires that advice from an independent heritage specialist must be sought on methods and locations for installing equipment used for vibration, movement and noise monitoring at heritage-listed structures prior to the installation of the equipment.

8.7.1 Construction Noise Monitoring

Construction noise monitoring will be carried out at the commencement of activities to confirm that actual noise levels are consistent with the predictions presented in this CNVIS, and that the management measures that have been implemented are effective or as per the CNVMP.

Monitoring locations will be focused to the most impacted receivers identified in **Appendix C**. Indicative locations are identified in **Table 25**, however, these will be subject to provision of safe access and the specific location of work being undertaken at the time of monitoring.

Noise monitoring will, where practicable, be in a position with unobstructed views of general site activities, whilst shielded as much as possible from non-construction site noise (e.g. road traffic, rail noise and other surrounding noise). The preferred measurement height is 1.2-1.5m above the ground. In accordance with *Australian Standard AS1055:2018*, outdoor noise monitoring is to be undertaken at least 3.5m from any reflecting structure other than the ground.

Noise monitoring will be carried out on or near the property boundary at the locations representative of the nominated receivers in **Table 25** (i.e. in publicly accessible areas near the nominated receivers, if it is safe to do so). Noise monitoring results will be assessed against the noise management levels (NMLs) and predicted exceedance category identified in **Appendix C**.

The results will be documented with discussion about the details of work underway at the time and mitigation in place. Noise monitoring results will be recorded on the MR Noise Monitoring Form in Procore. Noise monitoring data will be made available to the AA and ER for information, upon request.

8.7.2 Construction Vibration monitoring

Attended or unattended vibration monitoring will be undertaken as required. Monitoring locations may vary as work progresses and will be determined on a case-by-case basis or in response to complaints. The focus of monitoring will be at risk buildings, structures and sensitive receivers as identified in **Section 6.0**. If other vibration intensive activities are required, an assessment of their potential impact is required as per the CNVMP.

Indicative locations are identified in **Table 25**, however, these will be subject to provision of safe access and the specific location of work being undertaken at the time of monitoring. Vibration monitoring data will be made available to the AA and ER for information, upon request.

Table 25 Indicative Monitoring Locations

Location	Type	Monitoring	Timing
Noise Monitoring			
Edmondson Street Bridge • 6 Little Best St, Wagga Wagga • 96 Railway St, Turvey Park • Kildare Catholic College **Cassidy Footbridge** • 2 Kildare St, Turvey Park **Pearson Street Bridge** • 8B Peacock Dr, Turvey Park	Activities based noise monitoring	• Confirming that actual noise levels are consistent with predicted noise impacts and that the effectiveness of actions and mitigation measures implemented are satisfactory • In response to a noise related complaint(s) (determined on a case-by-case basis) • Following implementation of mitigation measures or noise attenuation because of exceedance of predicted noise levels	At the commencement of the activities being undertaken
	Out of Hours Work	Attended monitoring as required by the Out of Hours Work (OOHW) plan to validate noise levels are consistent with predicted noise impacts and that the effectiveness of actions and mitigation measures implemented are satisfactory	At the commencement of the range of OOHW activities being undertaken.
	Plant / Equipment Checks	Spot checks would be carried out as required on a case-by-case basis, such as • In response to a specific noise related complaint and • During noise verification monitoring when it is possible to isolate the noise from one piece of plant or equipment.	case-by-case basis
Vibration Monitoring			
Edmondson Street Bridge • 2 Donnelly Ave, Wagga Wagga • 96 Railway St, Turvey Park • 23 MacLeay St, Turvey Park **Cassidy Footbridge** • 2 Kildare St, Turvey Park • 1 Norman St, Turvey Park **Pearson Street Bridge** • 10 Cheshire St, Wagga Wagga	Activities based vibration monitoring	• Confirming that vibration levels are below criteria and that the effectiveness of actions and mitigation measures implemented are satisfactory • In response to a vibration related complaint(s) (determined on a case-by-case basis)	Throughout vibration generating activities being undertaken within minimum working distances to nearby receivers.

9.0 Cumulative Impacts

Cumulative construction noise impacts can occur where multiple work activities are being completed near to a particular receiver at the same time. There is potential for cumulative construction impacts from multiple construction activities being completed in different areas of the project (ie Edmondson Street Bridge, and Cassidy Footbridge enhancement sites).

Since the construction scenarios required for various stages of the project would generally require similar items of equipment, concurrent construction work being completed near to a particular area could theoretically increase the worst-case noise levels in this report by around 3 dB (ie a logarithmic adding of two sources of noise at the same level).

The likelihood of worst-case noise levels being generated by two different work activities at the same time is, however, considered low and rather than increase construction noise levels, the impact of concurrent work would generally be a limited to a potential increase in the duration, and annoyance, of noise impacts on the affected receivers.

In practice, construction noise levels in any one location would vary and would be frequently much lower than the worst-case scenario assessed due to construction staging moving work around within the study area and, in many cases, only a few items of equipment being used at any one time.

Martinus Rail will take feasible and reasonable steps to consult and coordinate with other construction projects when they become aware of them and if they have the potential to impact the same receivers concurrently, to minimise cumulative impacts of noise and vibration and maximise respite for affected sensitive receivers (in accordance with CoA E72 and E83).

Appendix A Acoustic Terminology

A2I | Albury to Illabo – Wagga Wagga Utility Work

Construction Noise and Vibration Impact Statement

Martinus Rail

SLR Project No.: 610.031317.00001

6 January 2025

Doc No:
6-0052-210-EEC-W0-AS-0001_A

1. Sound Level or Noise Level

The terms 'sound' and 'noise' are almost interchangeable, except that 'noise' often refers to unwanted sound.

Sound (or noise) consists of minute fluctuations in atmospheric pressure. The human ear responds to changes in sound pressure over a very wide range with the loudest sound pressure to which the human ear can respond being ten million times greater than the softest. The decibel (abbreviated as dB) scale reduces this ratio to a more manageable size by the use of logarithms.

The symbols SPL, L or LP are commonly used to represent Sound Pressure Level. The symbol LA represents A-weighted Sound Pressure Level. The standard reference unit for Sound Pressure Levels expressed in decibels is 2×10^{-5} Pa.

2. 'A' Weighted Sound Pressure Level

The overall level of a sound is usually expressed in terms of dBA, which is measured using a sound level meter with an 'A-weighting' filter. This is an electronic filter having a frequency response corresponding approximately to that of human hearing.

People's hearing is most sensitive to sounds at mid frequencies (500 Hz to 4,000 Hz), and less sensitive at lower and higher frequencies. Different sources having the same dBA level generally sound about equally loud.

A change of 1 dB or 2 dB in the level of a sound is difficult for most people to detect, whilst a 3 dB to 5 dB change corresponds to a small but noticeable change in loudness. A 10 dB change corresponds to an approximate doubling or halving in loudness. The table below lists examples of typical noise levels.

Sound Pressure Level (dBA)	Typical Source	Subjective Evaluation
130	Threshold of pain	Intolerable
120	Heavy rock concert	Extremely noisy
110	Grinding on steel	
100	Loud car horn at 3 m	Very noisy
90	Construction site with pneumatic hammering	
80	Kerbside of busy street	Loud
70	Loud radio or television	
60	Department store	Moderate to quiet
50	General Office	
40	Inside private office	Quiet to very quiet
30	Inside bedroom	
20	Recording studio	Almost silent

Other weightings (eg B, C and D) are less commonly used than A-weighting. Sound Levels measured without any weighting are referred to as 'linear', and the units are expressed as dB(lin) or dB.

3. Sound Power Level

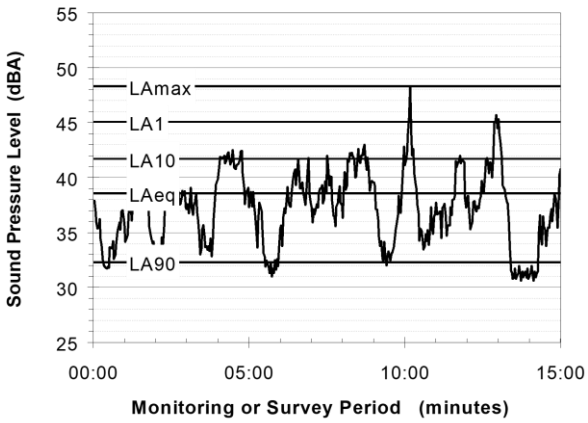
The Sound Power of a source is the rate at which it emits acoustic energy. As with Sound Pressure Levels, Sound Power Levels are expressed in decibel units (dB or dBA), but may be identified by the symbols SWL or LW, or by the reference unit 10^{-12} W.

The relationship between Sound Power and Sound Pressure is similar to the effect of an electric radiator, which is characterised by a power rating but has an effect on the surrounding environment that can be measured in terms of a different parameter, temperature.

4. Statistical Noise Levels

Sounds that vary in level over time, such as road traffic noise and most community noise, are commonly described in terms of the statistical exceedance levels LAN, where LAN is the A-weighted sound pressure level exceeded for N% of a given measurement period. For example, the LA1 is the noise level exceeded for 1% of the time, LA10 the noise exceeded for 10% of the time, and so on.

The following figure presents a hypothetical 15 minute noise survey, illustrating various common statistical indices of interest.



Of particular relevance, are:

- L_{A1} The noise level exceeded for 1% of the 15 minute interval.
- L_{A10} The noise level exceeded for 10% of the 15 minute interval. This is commonly referred to as the average maximum noise level.
- L_{A90} The noise level exceeded for 90% of the sample period. This noise level is described as the average minimum background sound level (in the absence of the source under consideration), or simply the background level.
- L_{Aeq} The A-weighted equivalent noise level (basically, the average noise level). It is defined as the steady sound level that contains the same amount of acoustical energy as the corresponding time-varying sound.
- L_{Amax} The A-weighted maximum sound pressure level of an event measured with a sound level meter.

5. Frequency Analysis

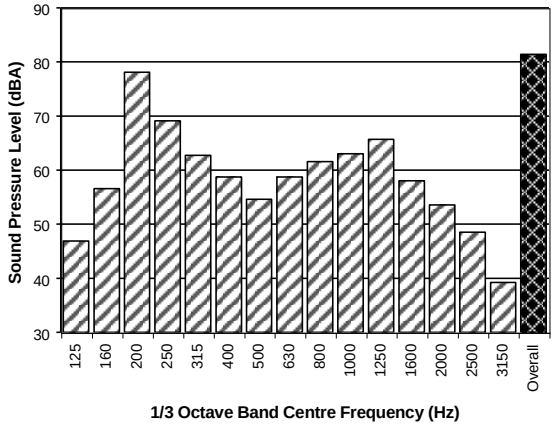
Frequency analysis is the process used to examine the tones (or frequency components) which make up the overall noise or vibration signal.

The units for frequency are Hertz (Hz), which represent the number of cycles per second.

Frequency analysis can be in:

- Octave bands (where the centre frequency and width of each band is double the previous band)
- 1/3 octave bands (three bands in each octave band)
- Narrow band (where the spectrum is divided into 400 or more bands of equal width)

The following figure shows a 1/3 octave band frequency analysis where the noise is dominated by the 200 Hz band. Note that the indicated level of each individual band is less than the overall level, which is the logarithmic sum of the bands.



6. Annoying Noise (Special Audible Characteristics)

A louder noise will generally be more annoying to nearby receivers than a quieter one. However, noise is often also found to be more annoying and result in larger impacts where the following characteristics are apparent:

- **Tonality** - tonal noise contains one or more prominent tones (ie differences in distinct frequency components between adjoining octave or 1/3 octave bands), and is normally regarded as more annoying than 'broad band' noise.
- **Impulsiveness** - an impulsive noise is characterised by one or more short sharp peaks in the time domain, such as occurs during hammering.
- **Intermittency** - intermittent noise varies in level with the change in level being clearly audible. An example would include mechanical plant cycling on and off.
- **Low Frequency Noise** - low frequency noise contains significant energy in the lower frequency bands, which are typically taken to be in the 10 to 160 Hz region.

7. Vibration

Vibration may be defined as cyclic or transient motion. This motion can be measured in terms of its displacement, velocity or acceleration. Most assessments of human response to vibration or the risk of damage to buildings use measurements of vibration velocity. These may be expressed in terms of 'peak' velocity or 'rms' velocity.

The former is the maximum instantaneous velocity, without any averaging, and is sometimes referred to as 'peak particle velocity', or PPV. The latter incorporates 'root mean squared' averaging over some defined time period.

Vibration measurements may be carried out in a single axis or alternatively as triaxial measurements (ie vertical, longitudinal and transverse).

The common units for velocity are millimetres per second (mm/s). As with noise, decibel units can also be used, in which case the reference level should always be stated. A vibration level V, expressed in mm/s can be converted to decibels by the formula 20 log (V/Vo), where Vo is the reference level (10^{-9} m/s). Care is required in this regard, as other reference levels may be used.

8. Human Perception of Vibration

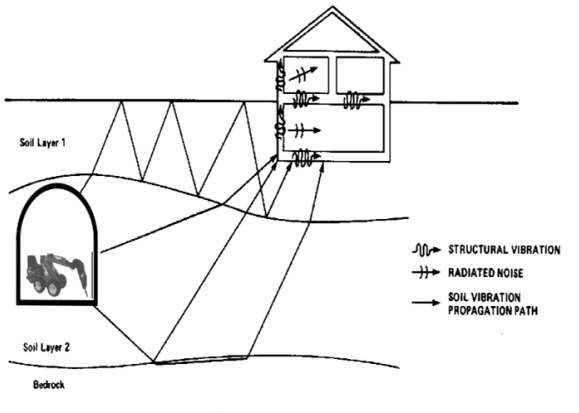
People are able to 'feel' vibration at levels lower than those required to cause even superficial damage to the most susceptible classes of building (even though they may not be disturbed by the motion). An individual's perception of motion or response to vibration depends very strongly on previous experience and expectations, and on other connotations associated with the perceived source of the vibration. For example, the vibration that a person responds to as 'normal' in a car, bus or train is considerably higher than what is perceived as 'normal' in a shop, office or dwelling.

9. Ground-borne Noise, Structure-borne Noise and Regenerated Noise

Noise that propagates through a structure as vibration and is radiated by vibrating wall and floor surfaces is termed 'structure-borne noise', 'ground-borne noise' or 'regenerated noise'. This noise originates as vibration and propagates between the source and receiver through the ground and/or building structural elements, rather than through the air.

Typical sources of ground-borne or structure-borne noise include tunnelling works, underground railways, excavation plant (eg rockbreakers), and building services plant (eg fans, compressors and generators).

The following figure presents an example of the various paths by which vibration and ground-borne noise may be transmitted between a source and receiver for construction activities occurring within a tunnel.



The term 'regenerated noise' is also used in other instances where energy is converted to noise away from the primary source. One example would be a fan blowing air through a discharge grill. The fan is the energy source and primary noise source. Additional noise may be created by the aerodynamic effect of the discharge grill in the airstream. This secondary noise is referred to as regenerated noise.

Appendix B Modelling Scenarios and Equipment

A2I | Albury to Illabo – Wagga Wagga Utility Work

Construction Noise and Vibration Impact Statement

Martinus Rail

SLR Project No.: 610.031317.00001

6 January 2025

Doc No:
6-0052-210-EEC-W0-AS-0001_A

Equipment		Total Lw (dBA)	Articulated Dump Truck	Backhoe (with auger)	Chainsaw[1]	Cherry picker	Concrete agitator truck	Crane (mobile)	Crane Franna	Dynamic Track Stabiliser	Elevated Work Platform	Excavator - Tracked (20 tonne)	Excavator - Tracked (3-5 tonne)	Excavator 10-15T + Hammer[1]	Front End Loader	Grader	Hand tools (electric)	Light Vehicle	Plate Compactor	Saw – Concrete[1]	Tracked Hydraulic Drilling Rig[1]	Truck - Medium Rigid	Truck - road truck	Truck - Vacuum (NDD)	Tub Grinder/Mulcher[1]	Watercart	Welding Equipment
Sound Power Level (Lw)[2]			109	106	105	105	109	104	98	113	97	105	90	118	113	109	102	95	104	118	114	103	108	109	116	105	110
Estimated utilisation (%)			25%	100%	50%	30%	100%	30%	30%	50%	25%	50%	50%	30%	50%	50%	75%	25%	100%	25%	100%	25%	25%	100%	100%	75%	100%
ID	**Construction Scenario**																										
Edmondson Street Bridge																											
W.001	Site Establishment / Demobilisation	**113**	1						1						1	1		2								1	
W.002	Compound Operation	**104**							1									2								1	
W.003	Vegetation clearing	**116**			2						2											1			1		
W.004	Utility Work (Gas) - investigation and excavation	**117**	1						1					1				2	1	1		1		1			
W.005	Utility Work (Gas) - underbores	**116**	1	1									3					2			1	1		1			
W.006	Utility Work (Gas) - cutovers & make good	**112**							1				1				1	2	1			1					1
W.007	Utility Work (66kV) (day)	**115**							1			1							1	1		1		1			
W.008	Utility Work (66kV) (night outage 1)	**113**					1	2	2									3					1	1			
W.009	Utility Work (66kV) (night outage 2)	**109**			1	5		1			5							3									
Cassidy Footbridge																											
W.010	Utility Work (Gas) protection works	**113**					1		1				1					1	1			1		1			
W.011	Utility Work (water) relocations works protection works	**117**	1											1				1	1	1		1		1			
Pearson Street Bridge																											
W.012	Utility Work (gas & water) - investigation and excavation	**117**	1											1				1	1	1		1		1			
W.013	Utility Work (gas & water) - underbores	**111**		1									1					2				1		1			
W.014	Utility Work (gas & water) - cutovers & make good	**112**							1				1				1	1	1			1					1

Note 1: Equipment classed as 'annoying' in the ICNG and requires a 5 dB correction.

Note 2: Sound power level data is taken from the DEFRA Noise Database, AS2436 and TfNSW Construction Noise and Vibration Guideline.

Appendix C Noise Impact Maps

A2I | Albury to Illabo – Wagga Wagga Utility Work

Construction Noise and Vibration Impact Statement

Martinus Rail

SLR Project No.: 610.031317.00001

6 January 2025

Doc No:
6-0052-210-EEC-W0-AS-0001_A

0 250 500 m

Scale: Scale: 1:8,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 19-Dec-2024
Project Number: 610.031317

SLR

Data Source:
ESRI World Imagery

W.001 Edmondson Street Bridge - Site Establishment/ Demobilisation - Approved Daytime Hours

APPENDIX C-1

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\03 A2I Utilities\01 Wagga\03 Analysis\SLR610031317_Wagga_Utility.qgz

Scale: Scale: 1:8,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 19-Dec-2024
Project Number: 610.031317

SLR

Data Source:
ESRI World Imagery

DISCLAIMER: All information within this document maybe based on external sources. SLR Consulting Pty Ltd makes no warranty regarding the data's accuracy or reliability for any purpose .

W.002 Edmondson Street Bridge - Compound Operation - Approved Daytime Hours

APPENDIX C-2

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\03 A2I Utilities\01 Wagga\03 Analysis\SLR610031317_Wagga_Utility.qgz

0 250 500 m

Scale: Scale: 1:8,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 19-Dec-2024
Project Number: 610.031317

Data Source:
ESRI World Imagery

W.003 Edmondson Street Bridge - Vegetation clearing - Approved Daytime Hours

APPENDIX C-3

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\03 A2I Utilities\01 Wagga\03 Analysis\SLR610031317_Wagga_Utility.qgz

Scale: Scale: 1:8,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 19-Dec-2024
Project Number: 610.031317

Data Source:
ESRI World Imagery

W.004 Edmondson Street Bridge - Utility Work (Gas) - investigation and excavation - Approved Daytime Hours

APPENDIX C-4

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\03 A2I Utilities\01 Wagga\03 Analysis\SLR610031317_Wagga_Utility.qgz

0 250 500 m

Scale: Scale: 1:8,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 19-Dec-2024
Project Number: 610.031317

Data Source:
ESRI World Imagery

W.005 Edmondson Street Bridge - Utility Work (Gas) - underbores - Approved Daytime Hours

APPENDIX C-5

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\03 A2I Utilities\01 Wagga\03 Analysis\SLR610031317_Wagga_Utility.qgz

Scale: Scale: 1:8,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 19-Dec-2024
Project Number: 610.031317

Data Source:
ESRI World Imagery

W.006 Edmondson Street Bridge - Utility Work (Gas) - cutovers & make good - Approved Daytime Hours

APPENDIX C-6

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\03 A2I Utilities\01 Wagga\03 Analysis\SLR610031317_Wagga_Utility.qgz

0 250 500 m

Scale: Scale: 1:8,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 19-Dec-2024
Project Number: 610.031317

Data Source:
ESRI World Imagery

W.007 Edmondson Street Bridge - Utility Work (66kV) (day) - Approved Daytime Hours

APPENDIX C-7

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\03 A2I Utilities\01 Wagga\03 Analysis\SLR610031317_Wagga_Utility.qgz

Scale: Scale: 1:8,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 19-Dec-2024
Project Number: 610.031317

Data Source:
ESRI World Imagery

W.008 Edmondson Street Bridge - Utility Work (66kV) (night outage 1) - Approved Daytime Hours

APPENDIX C-8

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\03 A2I Utilities\01 Wagga\03 Analysis\SLR610031317_Wagga_Utility.qgz

Scale: Scale: 1:8,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 19-Dec-2024
Project Number: 610.031317

SLR

Data Source:
ESRI World Imagery

W.008 Edmondson Street Bridge - Utility Work (66kV) (night outage 1) - Out of Hours Daytime

APPENDIX C-9

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\03 A2I Utilities\01 Wagga\03 Analysis\SLR610031317_Wagga_Utility.qgz

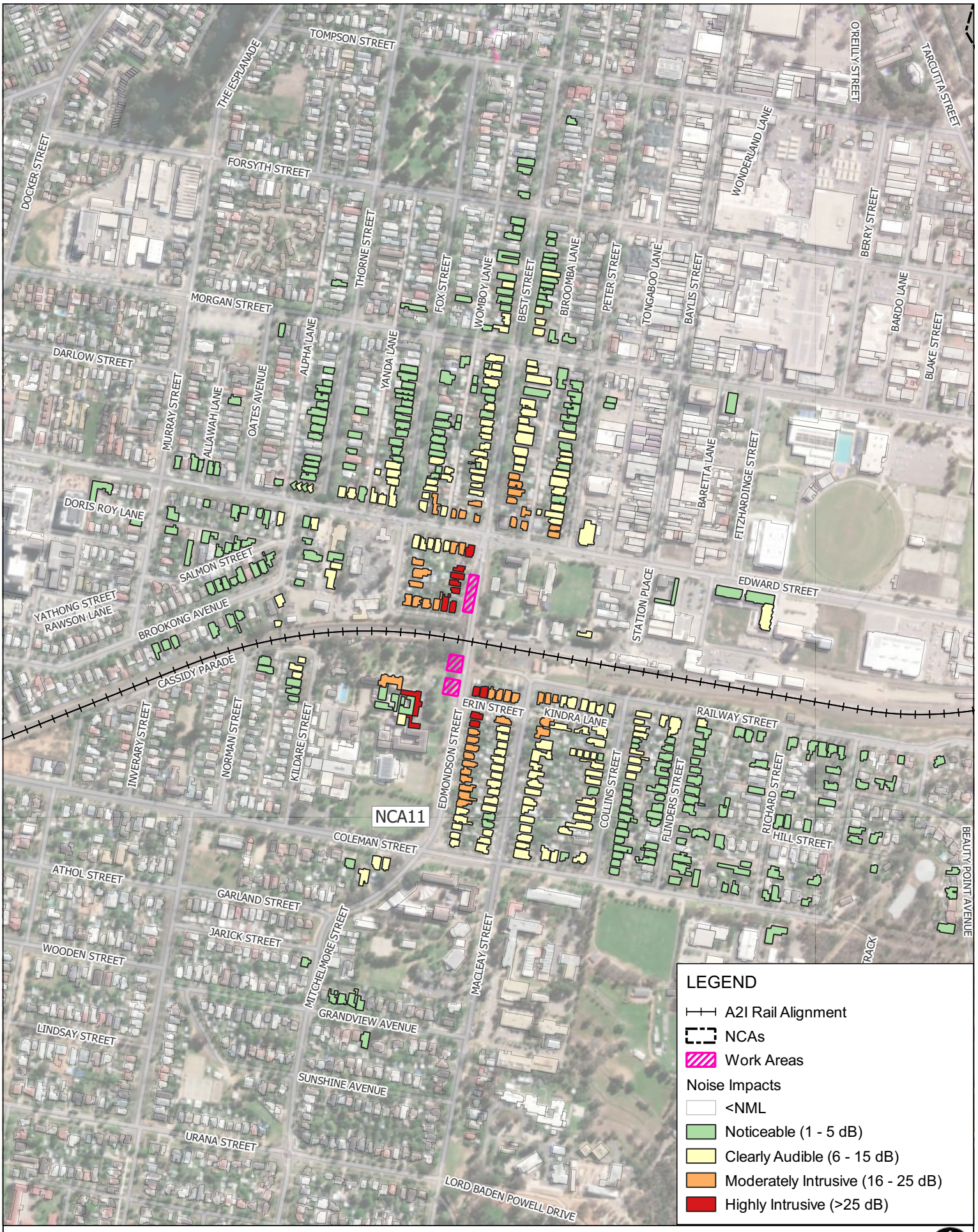
Scale: Scale: 1:8,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 19-Dec-2024
Project Number: 610.031317

Data Source:
ESRI World Imagery

W.008 Edmondson Street Bridge - Utility Work (66kV) (night outage 1) - Out of Hours Evening

APPENDIX C-10



Scale: Scale: 1:8,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 19-Dec-2024
Project Number: 610.031317

Data Source:
ESRI World Imagery

W.008 Edmondson Street Bridge - Utility Work (66kV) (night outage 1) - Out of Hours Night-time

APPENDIX C-11

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\03 A2I Utilities\01 Wagga\03 Analysis\SLR610031317_Wagga_Utility.qgz

Scale: Scale: 1:8,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 19-Dec-2024
Project Number: 610.031317

Data Source:
ESRI World Imagery

DISCLAIMER: All information within this document maybe based on external sources. SLR Consulting Pty Ltd makes no warranty regarding the data's accuracy or reliability for any purpose .

W.009 Edmondson Street Bridge - Utility Work (66kV) (night outage 2) - Approved Daytime Hours

APPENDIX C-12

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\03 A2I Utilities\01 Wagga\03 Analysis\SLR610031317_Wagga_Utility.qgz

Scale: Scale: 1:8,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 19-Dec-2024
Project Number: 610.031317

Data Source:
ESRI World Imagery

W.009 Edmondson Street Bridge - Utility Work (66kV) (night outage 2) - Out of Hours Daytime

APPENDIX C-13

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\03 A2I Utilities\01 Wagga\03 Analysis\SLR610031317_Wagga_Utility.qgz

Scale: Scale: 1:8,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 19-Dec-2024
Project Number: 610.031317

SLR

Data Source:
ESRI World Imagery

W.009 Edmondson Street Bridge - Utility Work (66kV) (night outage 2) - Out of Hours Evening

APPENDIX C-14

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\03 A2I Utilities\01 Wagga\03 Analysis\SLR610031317_Wagga_Utility.qgz

Scale: Scale: 1:8,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 19-Dec-2024
Project Number: 610.031317

Data Source:
ESRI World Imagery

DISCLAIMER: All information within this document maybe based on external sources. SLR Consulting Pty Ltd makes no warranty regarding the data's accuracy or reliability for any purpose .

W.009 Edmondson Street Bridge - Utility Work (66kV) (night outage 2) - Out of Hours Night-time

APPENDIX C-15

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\03 A2I Utilities\01 Wagga\03 Analysis\SLR610031317_Wagga_Utility.qgz

Scale: Scale: 1:8,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 19-Dec-2024
Project Number: 610.031317

Data Source:
ESRI World Imagery

DISCLAIMER: All information within this document maybe based on external sources. SLR Consulting Pty Ltd makes no warranty regarding the data's accuracy or reliability for any purpose .

W.010 Cassidy Street Footbridge - Utility Work (Gas) protection works - Approved Daytime Hours

APPENDIX C-16

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\03 A2I Utilities\01 Wagga\03 Analysis\SLR610031317_Wagga_Utility.qgz

Scale: Scale: 1:8,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 19-Dec-2024
Project Number: 610.031317

Data Source:
ESRI World Imagery

W.011 Cassidy Street Footbridge - Utility Work (water) relocations works protection works - Approved Daytime Hours

APPENDIX C-17

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\03 A2I Utilities\01 Wagga\03 Analysis\SLR610031317_Wagga_Utility.qgz

LEGEND

- A2I Rail Alignment
- NCAs
- Work Areas

Noise Impacts

- <NML
- Clearly Audible (1 - 10 dB)
- Moderately Intrusive (11 - 20 dB)

0 250 500 m

Scale: Scale: 1:8,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 19-Dec-2024
Project Number: 610.031317

SLR

Data Source:
ESRI World Imagery

W.012 Pearson Street Bridge - Utility Work (gas & water) - investigation and excavation - Approved Daytime Hours

APPENDIX C-18

LEGEND

- A2I Rail Alignment
- NCAs
- Work Areas

Noise Impacts

- <NML
- Clearly Audible (1 - 10 dB)
- Moderately Intrusive (11 - 20 dB)

0 250 500 m

Scale: Scale: 1:8,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 19-Dec-2024
Project Number: 610.031317

SLR

Data Source:
ESRI World Imagery

W.013 Pearson Street Bridge - Utility Work (gas & water) - underbores - Approved Daytime Hours

APPENDIX C-19

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\03 A2I Utilities\01 Wagga\03 Analysis\SLR610031317_Wagga_Utility.qgz

LEGEND

- A2I Rail Alignment
- NCAs
- Work Areas

Noise Impacts

- <NML
- Clearly Audible (1 - 10 dB)
- Moderately Intrusive (11 - 20 dB)

0 250 500 m

Scale: Scale: 1:8,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 19-Dec-2024
Project Number: 610.031317

Data Source:
ESRI World Imagery

DISCLAIMER: All information within this document maybe based on external sources. SLR Consulting Pty Ltd makes no warranty regarding the data's accuracy or reliability for any purpose .

W.014 Pearson Street Bridge - Utility Work (gas & water) - cutovers & make good - Approved Daytime Hours

APPENDIX C-20

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\03 A2I Utilities\01 Wagga\03 Analysis\SLR610031317_Wagga_Utility.qgz

Appendix D Receivers Triggering Additional Mitigation

A2I | Albury to Illabo – Wagga Wagga Utility Work

Construction Noise and Vibration Impact Statement

Martinus Rail

SLR Project No.: 610.031317.00001

6 January 2025

Doc No:
6-0052-210-EEC-W0-AS-0001_A

W.008 - Utility Work (66kV) (night outage 1)

SLR ID	ADDRESS	NML Daytime	NML Daytime OOH	NML Evening	NML Night-time	Predicted Level LAeq(15min)	Additional Mitigation Daytime OOH	Additional Mitigation Evening *(>2 consecutive rest periods)	Additional Mitigation Night *(>2 consecutive sleep periods)
212509	9 GRANDVIEW AV, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
212780	16 GRANDVIEW AV, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
212806	20 GRANDVIEW AV, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
212810	18 GRANDVIEW AV, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
212824	22 GRANDVIEW AV, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
213044	2 JARICK ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
213233	4 COLEMAN ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
213265	24 BEAUTY POINT AV, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
213414	3 COLEMAN ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
213467	9 COLEMAN ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
213496	18 BEAUTY POINT AV, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
213519	2/11 COLEMAN ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
213533	15 COLEMAN ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
213539	17 COLEMAN ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
213609	14 YOUNG ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
213610	61 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
213627	46 COLEMAN ST, TURVEY PARK NSW 2650	58	53	52	42	48	-	-	CO1
213634	2/19A COLEMAN ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
213673	13 RICHARD ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
213683	63 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
213694	14 BEAUTY POINT AV, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
213696	22 RICHARD ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
213701	57 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
213718	4 HILL ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
213735	42 COLEMAN ST, TURVEY PARK NSW 2650	58	53	52	42	52	-	-	CO1
213743	20 RICHARD ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
213746	48 COLEMAN ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
213758	61 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
213768	44 COLEMAN ST, TURVEY PARK NSW 2650	58	53	52	42	52	-	-	CO1
213777	56 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
213794	55 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
213800	60 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	50	-	-	CO1
213810	23 COLEMAN ST, TURVEY PARK NSW 2650	58	53	52	42	49	-	-	CO1
213811	21 COLEMAN ST, TURVEY PARK NSW 2650	58	53	52	42	47	-	-	CO1
213821	59 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
213828	29 COLEMAN ST, TURVEY PARK NSW 2650	58	53	52	42	48	-	-	CO1
213831	51-53 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	49	-	-	CO1
213841	54 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
213884	34 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	52	-	-	CO1
213885	57 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
213909	52 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
213918	49 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	49	-	-	CO1
213930	33 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	56	CO1	CO1	CO1
213961	53 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
213966	28 HILL ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
213968	55 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
213970	32 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	54	CO1	CO1	CO1
213986	13 YOUNG ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
213994	47 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	49	-	-	CO1
214000	5 HILL ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
214007	31 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	56	CO1	CO1	CO1
214027	1/49 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
214029	30 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	51	-	-	CO1
214035	53 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
214047	47 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
214060	11 YOUNG ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
214062	45 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	50	-	-	CO1
214075	29 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	57	CO1	CO1	CO1
214092	54 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	49	-	-	CO1
214102	51 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
214106	11 HILL ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
214111	28 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	47	-	-	CO1
214132	46 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
214135	17 HILL ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
214146	15 HILL ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
214154	27 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	57	CO1	CO1	CO1
214156	43 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	50	-	-	CO1
214172	49 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
214173	52 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	48	-	-	CO1
214176	26 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
214200	44 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
214233	25 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	57	CO1	CO1	CO1
214241	25 HILL ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
214254	50 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	49	-	-	CO1
214255	47 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
214258	41 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	50	-	-	CO1
214261	43 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
214264	24 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	52	-	-	CO1
214281	42 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
214307	23 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	58	CO1	CO1	CO1, CO2, (RO,AO)*
214320	39 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	51	-	-	CO1
214324	48 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	51	-	-	CO1
214327	10 YOUNG ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
214329	45 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
214338	22 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	51	-	-	CO1
214348	41 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
214361	40 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
214373	21 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	59	CO1	CO1	CO1, CO2, (RO,AO)*
214395	9 RICHARD ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
214399	43 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
214407	37 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	51	-	-	CO1
214410	20 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	50	-	-	CO1
214417	44 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	47	-	-	CO1
214427	37-39 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
214429	10 RICHARD ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
214439	38 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
214443	19 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	58	CO1	CO1	CO1, CO2, (RO,AO)*
214459	41 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	47	-	-	CO1
214479	6 YOUNG ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
214482	18 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	48	-	-	CO1
214487	35 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	51	-	-	CO1
214488	3 BURWOOD ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
214493	3 YOUNG ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
214504	5 BURWOOD ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
214509	36 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
214512	42 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	48	-	-	CO1
214515	35 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
214519	17 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	59	CO1	CO1	CO1, CO2, (RO,AO)*
214549	16 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	52	-	-	CO1
214551	39 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	48	-	-	CO1
214557	33 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	52	-	-	CO1
214567	40 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	50	-	-	CO1
214577	15 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	60	CO1	CO1	CO1, CO2, (RO,AO)*
214603	2 YOUNG ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
214604	33 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
214612	14 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	52	-	-	CO1
214617	37 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	48	-	-	CO1
214631	31 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	52	-	-	CO1
214634	38 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	50	-	-	CO1
214645	13 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	61	CO1	CO1	CO1, CO2, (RO,AO)*
214656	4 RICHARD ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
214678	31 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
214686	38 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
214688	12 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	52	-	-	CO1
214689	35 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	48	-	-	CO1
214690	42 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1

W.008 - Utility Work (66kV) (night outage 1)

SLR ID	ADDRESS	NML Daytime	NML Daytime OOH	NML Evening	NML Night-time	Predicted Level LAeq(15min)	Additional Mitigation Daytime OOH	Additional Mitigation Evening *(>2 consecutive rest periods)	Additional Mitigation Night *(>2 consecutive sleep periods)
214714	30 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
214717	11 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	62	CO1	CO1	CO1, CO2, (RO,AO)*
214720	29 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	54	CO1	CO1	CO1
214727	3/36 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	50	-	-	CO1
214730	50 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
214736	52 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
214747	10 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	52	-	-	CO1
214748	29 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
214754	31 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	48	-	-	CO1
214768	56 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
214778	9 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	63	CO1	CO1	CO1, CO2, (RO,AO)*
214781	54 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
214782	28 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
214789	58 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
214791	33 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	47	-	-	CO1
214793	8 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	49	-	-	CO1
214794	27 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	56	CO1	CO1	CO1
214826	27 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
214829	32 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	48	-	-	CO1
214831	62 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
214847	7 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	64	CO1	CO1	CO1, CO2, (RO,AO)*
214850	29 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
214853	26 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
214865	6 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	54	CO1	CO1	CO1
214873	66 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
214874	68 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	47	-	-	CO1
214880	27 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	51	-	-	CO1
214901	25 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	60	CO1	CO1	CO1, CO2, (RO,AO)*
214904	5 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	66	CO1	CO1	CO1, CO2, (RO,AO)*
214911	72 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	47	-	-	CO1
214915	23 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
214920	30 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	54	CO1	CO1	CO1
214921	1 KINDRA LANE, TURVEY PARK NSW 2650	58	53	52	42	53	-	CO1	CO1
214926	4 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	55	CO1	CO1	CO1
214934	25 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	51	-	-	CO1
214939	23 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	57	CO1	CO1	CO1
214959	3 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	69	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
214961	74 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	52	-	-	CO1
214975	21 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	51	-	-	CO1
214981	23 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	59	CO1	CO1	CO1, CO2, (RO,AO)*
214984	23 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	50	-	-	CO1
214990	2 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	65	CO1	CO1	CO1, CO2, (RO,AO)*
215001	76 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	51	-	-	CO1
215023	1 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	71	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
215032	3/21 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	52	-	-	CO1
215072	82 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	57	CO1	CO1	CO1
215077	80 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	54	CO1	CO1	CO1
215078	84 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	57	CO1	CO1	CO1
215108	86 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	56	CO1	CO1	CO1
215126	88 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	57	CO1	CO1	CO1
215132	90 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	57	CO1	CO1	CO1
215147	12 KILDARE ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
215151	94 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	59	CO1	CO1	CO1, CO2, (RO,AO)*
215160	92 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	58	CO1	CO1	CO1, CO2, (RO,AO)*
215161	96 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	60	CO1	CO1	CO1, CO2, (RO,AO)*
215163	1 ERIN ST, TURVEY PARK NSW 2650	58	53	52	42	64	CO1	CO1	CO1, CO2, (RO,AO)*
215180	3 ERIN ST, TURVEY PARK NSW 2650	58	53	52	42	65	CO1	CO1	CO1, CO2, (RO,AO)*
215190	5 ERIN ST, TURVEY PARK NSW 2650	58	53	52	42	66	CO1	CO1	CO1, CO2, (RO,AO)*
215201	7 ERIN ST, TURVEY PARK NSW 2650	58	53	52	42	67	CO1	CO1	CO1, CO2, (RO,AO)*
215216	9 ERIN ST, TURVEY PARK NSW 2650	58	53	52	42	73	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
215217	10 KILDARE ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
215219	11 ERIN ST, TURVEY PARK NSW 2650	58	53	52	42	75	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
215283	8 KILDARE ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
215326	6 KILDARE ST, TURVEY PARK NSW 2650	58	53	52	42	48	-	-	CO1
215356	3 NORMAN ST, TURVEY PARK NSW 2650	58	53	52	42	47	-	-	CO1
215365	4 KILDARE ST, TURVEY PARK NSW 2650	58	53	52	42	51	-	-	CO1
215403	1 NORMAN ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
215412	2 KILDARE ST, TURVEY PARK NSW 2650	58	53	52	42	48	-	-	CO1
215460	48 BROOKONG AV, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
215491	46 BROOKONG AV, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
215499	44 BROOKONG AV, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
215551	14 STATION PL, WAGGA WAGGA NSW 2650	58	53	52	42	57	CO1	CO1	CO1
215570	36 BROOKONG AV, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
215618	32 BROOKONG AV, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
215654	30 BROOKONG AV, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
215689	6-10 STATION PL, WAGGA WAGGA NSW 2650	45	45	-	-	57	CO1	-	-
215708	2 DONNELLY AV, WAGGA WAGGA NSW 2650	58	53	52	42	82	CO1, CO2	CO1, CO2, (RO)*	CO1, CO2, RO, (AO, AltA)*
215717	BUILDING 3 UNIT 105 1 FLINDERS ST, WAGGA WA(	58	53	52	42	45	-	-	CO1
215724	4 DONNELLY AV, WAGGA WAGGA NSW 2650	58	53	52	42	75	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
215725	6 DONNELLY AV, WAGGA WAGGA NSW 2650	58	53	52	42	64	CO1	CO1	CO1, CO2, (RO,AO)*
215731	8 DONNELLY AV, WAGGA WAGGA NSW 2650	58	53	52	42	63	CO1	CO1	CO1, CO2, (RO,AO)*
215746	12 DONNELLY AV, WAGGA WAGGA NSW 2650	58	53	52	42	61	CO1	CO1	CO1, CO2, (RO,AO)*
215748	104 EDWARD ST, WAGGA WAGGA NSW 2650	60	60	60	45	48	-	-	CO1
215749	22 BROOKONG AV, WAGGA WAGGA NSW 2650	58	53	52	42	49	-	-	CO1
215750	10 DONNELLY AV, WAGGA WAGGA NSW 2650	58	53	52	42	63	CO1	CO1	CO1, CO2, (RO,AO)*
215760	2-4 STATION PL, WAGGA WAGGA NSW 2650	45	45	-	-	49	CO1	-	-
215794	1 FLINDERS ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
215799	2 LITTLE BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	83	CO1, CO2	CO1, CO2, (RO)*	CO1, CO2, RO, (AO, AltA)*
215807	23 BROOKONG AV, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
215809	104 EDWARD ST, WAGGA WAGGA NSW 2650	60	60	60	45	48	-	-	CO1
215820	21 BROOKONG AV, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
215835	1 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	63	CO1	CO1	CO1, CO2, (RO,AO)*
215836	19 BROOKONG AV, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
215843	17 BROOKONG AV, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
215846	4 LITTLE BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	83	CO1, CO2	CO1, CO2, (RO)*	CO1, CO2, RO, (AO, AltA)*
215849	18 BROOKONG AV, WAGGA WAGGA NSW 2650	58	53	52	42	47	-	-	CO1
215874	188 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	54	CO1	CO1	CO1
215888	15 BROOKONG AV, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
215892	6 LITTLE BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	86	CO1, CO2	CO1, CO2, (RO)*	CO1, CO2, RO, (AO, AltA)*
215908	3 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	64	CO1	CO1	CO1, CO2, (RO,AO)*
215924	11 BROOKONG AV, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
215925	140 EDWARD ST, WAGGA WAGGA NSW 2650	55	55	-	-	66	CO1	-	-
215933	8 LITTLE BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	82	CO1, CO2	CO1, CO2, (RO)*	CO1, CO2, RO, (AO, AltA)*
215942	9 BROOKONG AV, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
215956	188 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	50	-	-	CO1
215984	5 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	63	CO1	CO1	CO1, CO2, (RO,AO)*
216006	7 BROOKONG AV, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
216024	12 BROOKONG AV, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
216026	188 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
216053	6 SALMON ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
216060	156 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	73	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
216073	3/12 SALMON ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
216085	158 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	67	CO1	CO1	CO1, CO2, (RO,AO)*
216088	4 SALMON ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
216094	160 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	66	CO1	CO1	CO1, CO2, (RO,AO)*
216099	162 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	54	CO1	CO1	CO1
216103	164 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	54	CO1	CO1	CO1
216107	168 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	51	-	-	CO1
216115	2A SALMON ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
216117	166 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	53	-	CO1	CO1
216122	2 SALMON ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
216127	8 BROOKONG AV, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
216128	170 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	51	-	-	CO1
216165	8 SALMON ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
216181	2 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	60	CO1	CO1	CO1, CO2, (RO,AO)*
216186	127 EDWARD ST, WAGGA WAGGA NSW 2650	60	60	60	45	51	-	-	CO1

W.008 - Utility Work (66kV) (night outage 1)

SLR ID	ADDRESS	NML Daytime	NML Daytime OOH	NML Evening	NML Night-time	Predicted Level LAeq(15min)	Additional Mitigation Daytime OOH	Additional Mitigation Evening *(>2 consecutive rest periods)	Additional Mitigation Night *(>2 consecutive sleep periods)
216200	21 MURRAY ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
216226	4 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	60	CO1	CO1	CO1, CO2, (RO,AO)*
216245	131A EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	63	CO1	CO1	CO1, CO2, (RO,AO)*
216256	196 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	49	-	-	CO1
216264	22 MURRAY ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
216272	198 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
216281	133 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	63	CO1	CO1	CO1, CO2, (RO,AO)*
216284	6 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	54	CO1	CO1	CO1
216292	202 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	48	-	-	CO1
216294	206 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
216298	153 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	64	CO1	CO1	CO1, CO2, (RO,AO)*
216306	23 MURRAY ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
216315	8 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	52	-	-	CO1
216323	157 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	59	CO1	CO1	CO1, CO2, (RO,AO)*
216327	208 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
216333	161 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	58	CO1	CO1	CO1, CO2, (RO,AO)*
216342	214 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
216346	131A EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	60	CO1	CO1	CO1, CO2, (RO,AO)*
216357	212 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
216360	163 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	54	CO1	CO1	CO1
216378	10 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	48	-	-	CO1
216391	1/173 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	52	-	-	CO1
216400	222 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
216401	WOMBOY 5/165 EDWARD ST, WAGGA WAGGA NSV	58	53	52	42	58	CO1	CO1	CO1, CO2, (RO,AO)*
216404	8 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	63	CO1	CO1	CO1, CO2, (RO,AO)*
216433	9 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	60	CO1	CO1	CO1, CO2, (RO,AO)*
216434	177 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	49	-	-	CO1
216437	12 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	47	-	-	CO1
216448	175 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	50	-	-	CO1
216464	179 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	48	-	-	CO1
216471	181 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
216472	173 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	49	-	-	CO1
216480	189 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	48	-	-	CO1
216485	12 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	53	-	CO1	CO1
216486	191 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	48	-	-	CO1
216487	11A BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	59	CO1	CO1	CO1, CO2, (RO,AO)*
216498	14 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	51	-	-	CO1
216520	7 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	51	-	-	CO1
216521	2/4-6 THORNE ST, WAGGA WAGGA NSW 2650	58	53	52	42	49	-	-	CO1
216540	14 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	54	CO1	CO1	CO1
216547	13 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	60	CO1	CO1	CO1, CO2, (RO,AO)*
216558	9 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	48	-	-	CO1
216561	20 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	53	-	CO1	CO1
216564	10 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	48	-	-	CO1
216585	16 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	55	CO1	CO1	CO1
216587	4/11 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	48	-	-	CO1
216589	8 THORNE ST, WAGGA WAGGA NSW 2650	58	53	52	42	47	-	-	CO1
216603	17 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	58	CO1	CO1	CO1, CO2, (RO,AO)*
216605	2/11 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
216624	12 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	49	-	-	CO1
216626	22 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	48	-	-	CO1
216642	12 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	48	-	-	CO1
216643	18 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	57	CO1	CO1	CO1
216649	4/11 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	48	-	-	CO1
216651	10 THORNE ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
216655	215-217 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
216657	1/11 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
216662	215A EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
216668	19 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	49	-	-	CO1
216676	11 THORNE ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
216678	24 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	47	-	-	CO1
216680	219 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
216683	14 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	48	-	-	CO1
216694	12 THORNE ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
216697	221 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
216700	20 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	56	CO1	CO1	CO1
216710	225 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
216721	13 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	50	-	-	CO1
216726	21 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	57	CO1	CO1	CO1
216729	26 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	49	-	-	CO1
216733	16 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	47	-	-	CO1
216743	14 THORNE ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
216774	15 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
216775	28 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	49	-	-	CO1
216781	24 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	51	-	-	CO1
216795	15 THORNE ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
216798	23 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	55	CO1	CO1	CO1
216799	20 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
216839	17 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
216846	26 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	55	CO1	CO1	CO1
216848	30 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
216874	26 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	47	-	-	CO1
216892	21 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
216924	20 THORNE ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
216926	28 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	54	CO1	CO1	CO1
216932	19 THORNE ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
216934	32 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	48	-	-	CO1
216952	28 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
216966	23 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
216985	30 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	53	-	CO1	CO1
216991	22 THORNE ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
216994	29 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	53	-	CO1	CO1
217012	34 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
217019	30 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
217027	25 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
217038	32 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	53	-	CO1	CO1
217048	24 THORNE ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
217052	31 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	53	-	CO1	CO1
217063	27 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
217067	36 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
217068	32 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
217090	27 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
217101	34 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	47	-	-	CO1
217114	26 THORNE ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
217115	33 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	54	CO1	CO1	CO1
217118	40 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
217125	25 THORNE ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
217129	34 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
217154	36 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	52	-	-	CO1
217161	37 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
217163	28 THORNE ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
217174	36 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
217181	35 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	53	-	CO1	CO1
217184	70 MORGAN ST, WAGGA WAGGA NSW 2650	60	60	60	45	46	-	-	CO1
217190	26 OATES AV, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
217199	39 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
217209	40 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
217223	38A FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
217225	30 THORNE ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
217244	42 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
217256	41 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
217261	38B FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
217271	42 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	47	-	-	CO1
217279	32 THORNE ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
217306	42 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	47	-	-	CO1
217311	40 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1

W.008 - Utility Work (66kV) (night outage 1)

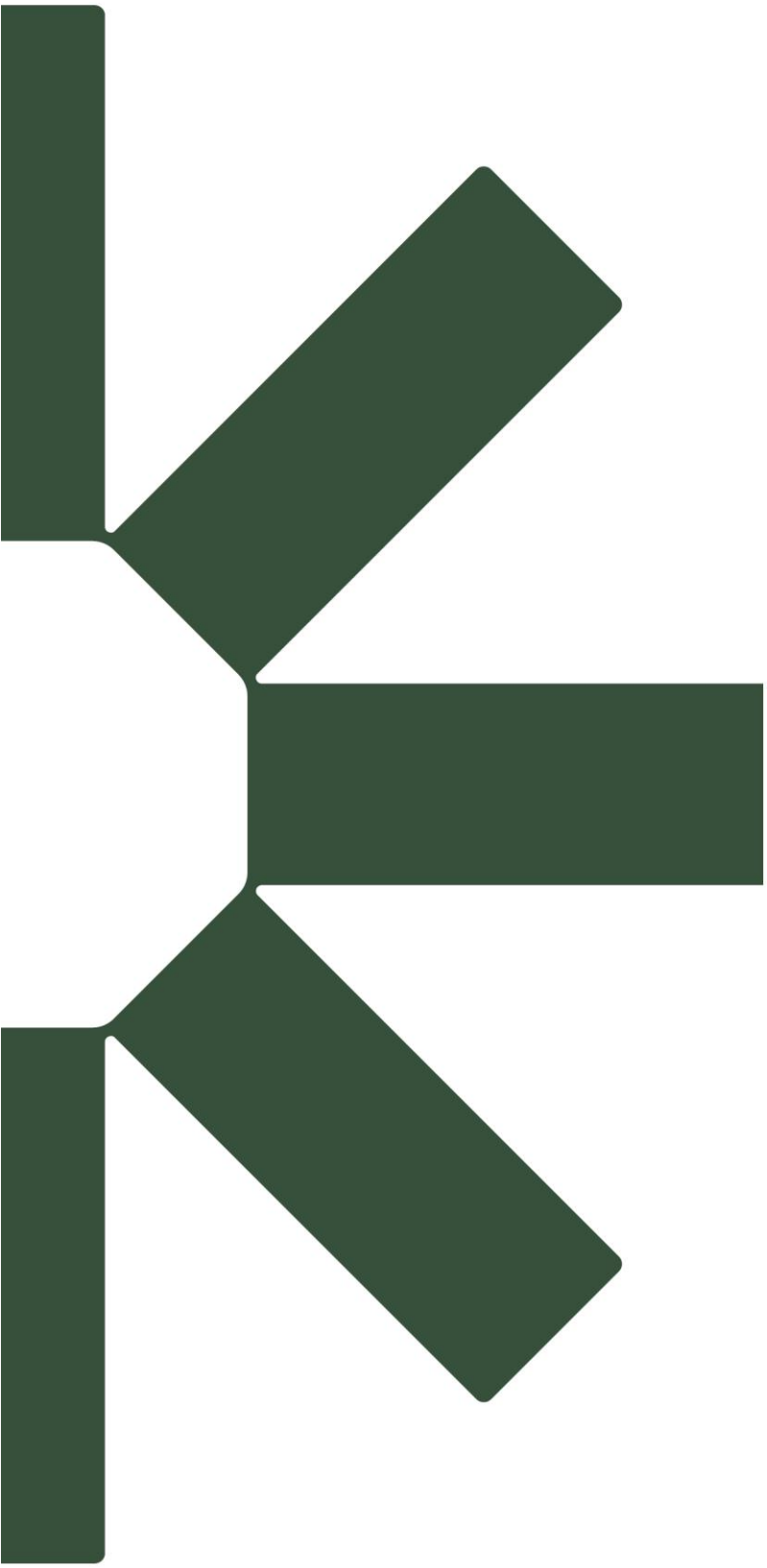
SLR ID	ADDRESS	NML Daytime	NML Daytime OOH	NML Evening	NML Night-time	Predicted Level LAeq(15min)	Additional Mitigation Daytime OOH	Additional Mitigation Evening *(>2 consecutive rest periods)	Additional Mitigation Night *(>2 consecutive sleep periods)
217314	46 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
217323	34 THORNE ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
217341	44 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	50	-	-	CO1
217357	44 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
217362	41 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	52	-	-	CO1
217382	42 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
217383	102 MORGAN ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
217392	2/39 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
217406	46 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	50	-	-	CO1
217424	38 THORNE ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
217432	43 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	50	-	-	CO1
217434	44 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
217445	1/48 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	50	-	-	CO1
217460	120 MORGAN ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
217462	45 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	49	-	-	CO1
217499	50 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	49	-	-	CO1
217600	113 MORGAN ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
217620	115 MORGAN ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
217641	49 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	48	-	-	CO1
217650	158 MORGAN ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
217660	54 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
217680	51 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	49	-	-	CO1
217743	55 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	49	-	-	CO1
217755	60 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
217759	56 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
217777	57 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	47	-	-	CO1
217792	62 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
217797	3/53 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
217808	59 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	47	-	-	CO1
217831	64 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	47	-	-	CO1
217833	61 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
217859	63 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
217863	66 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	49	-	-	CO1
217866	58 THORNE ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
217882	65 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
217899	68 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
217915	67 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	48	-	-	CO1
217942	69 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
217966	2/74 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
217971	73 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
217992	75 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
218047	79 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
218074	78 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
218081	81 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
218105	80 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
218138	82 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
218238	84 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
218341	90 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
218375	92 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
218548	109 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
1108363	244-248 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
1108530	10 SALMON ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
1108649	24-26 BROOKONG AV, WAGGA WAGGA NSW 2650	58	53	52	42	48	-	-	CO1
1108869	ERIN EARTH 1 KILDARE ST, TURVEY PARK NSW 26	55	55	-	-	67	CO1	-	-
1108960	58 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	48	-	-	CO1
1108976	27 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	56	CO1	CO1	CO1
1108990	8 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	57	CO1	CO1	CO1
1109034	2/56 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	50	-	-	CO1
1109117	32-34 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
1110631	140 EDWARD ST, WAGGA WAGGA NSW 2650	55	55	-	-	76	CO1, CO2	-	-
1110632	140 EDWARD ST, WAGGA WAGGA NSW 2650	55	55	-	-	69	CO1	-	-
1110655	ERIN EARTH 1 KILDARE ST, TURVEY PARK NSW 26	55	55	55	-	59	CO1	CO1	-
1111560	4/4-6 THORNE ST, WAGGA WAGGA NSW 2650	58	53	52	42	47	-	-	CO1
1111561	4/4-6 THORNE ST, WAGGA WAGGA NSW 2650	58	53	52	42	48	-	-	CO1
1111562	4-6 THORNE ST, WAGGA WAGGA NSW 2650	58	53	52	42	47	-	-	CO1
1111563	209A EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
1111585	5/36 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	50	-	-	CO1
1111586	6/36 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	50	-	-	CO1
1111587	6/36 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	50	-	-	CO1
1111588	36 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	47	-	-	CO1
1111589	BUILDING 1 UNIT 102 1 FLINDERS ST, WAGGA WA0	58	53	52	42	48	-	-	CO1
1111673	2/48 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
1111674	54 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	48	-	-	CO1
1111748	1 KILDARE ST, TURVEY PARK NSW 2650	58	53	52	42	67	CO1	CO1	CO1, CO2, (RO,AO)*
1111750	1 KILDARE ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
1111751	1 KILDARE ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
1111752	1 KILDARE ST, TURVEY PARK NSW 2650	58	53	52	42	73	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
1111753	1 KILDARE ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
1111754	1 KILDARE ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
1111755	1 KILDARE ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
1111757	1 KILDARE ST, TURVEY PARK NSW 2650	58	53	52	42	49	-	-	CO1
1111758	1 KILDARE ST, TURVEY PARK NSW 2650	58	53	52	42	68	CO1	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
1111767	140 EDWARD ST, WAGGA WAGGA NSW 2650	55	55	-	-	57	CO1	-	-

W.009 - Utility Work (66kV) (night outage 2)

SLR ID	ADDRESS	NML Daytime	NML Daytime OOH	NML Evening	NML Night-time	Predicted Level LAeq(15min)	Additional Mitigation Daytime OOH	Additional Mitigation Evening *(>2 consecutive rest periods)	Additional Mitigation Night *(>2 consecutive sleep periods)
213627	46 COLEMAN ST, TURVEY PARK NSW 2650	58	53	52	42	47	-	-	CO1
213735	42 COLEMAN ST, TURVEY PARK NSW 2650	58	53	52	42	50	-	-	CO1
213746	48 COLEMAN ST, TURVEY PARK NSW 2650	58	53	52	42	48	-	-	CO1
213768	44 COLEMAN ST, TURVEY PARK NSW 2650	58	53	52	42	49	-	-	CO1
213800	60 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
213804	52 COLEMAN ST, TURVEY PARK NSW 2650	58	53	52	42	47	-	-	CO1
213810	23 COLEMAN ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
213811	21 COLEMAN ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
213814	54 COLEMAN ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
213818	50 COLEMAN ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
213828	29 COLEMAN ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
213831	51-53 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
213884	34 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	48	-	-	CO1
213918	49 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
213930	33 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	52	-	-	CO1
213970	32 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	50	-	-	CO1
213994	47 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
214007	31 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	53	-	CO1	CO1
214029	30 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	47	-	-	CO1
214062	45 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
214075	29 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	54	CO1	CO1	CO1
214092	54 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
214111	28 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
214154	27 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	55	CO1	CO1	CO1
214156	43 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
214173	52 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
214233	25 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	56	CO1	CO1	CO1
214254	50 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
214258	41 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
214264	24 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	48	-	-	CO1
214307	23 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	57	CO1	CO1	CO1
214320	39 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	47	-	-	CO1
214324	48 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	47	-	-	CO1
214338	22 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	49	-	-	CO1
214373	21 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	58	CO1	CO1	CO1, CO2, (RO,AO)*
214407	37 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	47	-	-	CO1
214410	20 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
214417	44 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
214443	19 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	58	CO1	CO1	CO1, CO2, (RO,AO)*
214459	41 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
214482	18 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	49	-	-	CO1
214487	35 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	47	-	-	CO1
214512	42 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
214519	17 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	60	CO1	CO1	CO1, CO2, (RO,AO)*
214549	16 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	48	-	-	CO1
214551	39 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
214557	33 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	48	-	-	CO1
214567	40 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
214577	15 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	64	CO1	CO1	CO1, CO2, (RO,AO)*
214608	ERIN EARTH 1 KILDARE ST, TURVEY PARK NSW 265	55	55	-	-	57	CO1	-	-
214612	14 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	54	CO1	CO1	CO1
214617	37 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
214631	31 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	48	-	-	CO1
214634	38 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
214645	13 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	63	CO1	CO1	CO1, CO2, (RO,AO)*
214688	12 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	48	-	-	CO1
214689	35 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
214717	11 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	66	CO1	CO1	CO1, CO2, (RO,AO)*
214720	29 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	50	-	-	CO1
214727	3/36 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
214747	10 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	48	-	-	CO1
214754	31 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
214778	9 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	67	CO1	CO1	CO1, CO2, (RO,AO)*
214791	33 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
214793	8 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	53	-	CO1	CO1
214794	27 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	52	-	-	CO1
214829	32 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
214847	7 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	67	CO1	CO1	CO1, CO2, (RO,AO)*
214865	6 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	56	CO1	CO1	CO1
214874	68 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
214880	27 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	47	-	-	CO1
214901	25 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	56	CO1	CO1	CO1
214904	5 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	67	CO1	CO1	CO1, CO2, (RO,AO)*
214911	72 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
214920	30 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	50	-	-	CO1
214921	1 KINDRA LANE, TURVEY PARK NSW 2650	58	53	52	42	49	-	-	CO1
214926	4 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	54	CO1	CO1	CO1
214934	25 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	47	-	-	CO1
214939	23 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	53	-	CO1	CO1
214959	3 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	66	CO1	CO1	CO1, CO2, (RO,AO)*
214961	74 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	48	-	-	CO1
214975	21 FLINDERS ST, TURVEY PARK NSW 2650	58	53	52	42	47	-	-	CO1
214981	23 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	55	CO1	CO1	CO1
214984	23 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
214990	2 MACLEAY ST, TURVEY PARK NSW 2650	58	53	52	42	61	CO1	CO1	CO1, CO2, (RO,AO)*
215001	76 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	47	-	-	CO1
215023	1 EDMONDSON ST, TURVEY PARK NSW 2650	58	53	52	42	67	CO1	CO1	CO1, CO2, (RO,AO)*
215032	3/21 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	48	-	-	CO1
215072	82 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	53	-	CO1	CO1
215077	80 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	50	-	-	CO1
215078	84 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	53	-	CO1	CO1
215108	86 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	52	-	-	CO1
215126	88 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	53	-	CO1	CO1
215132	90 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	53	-	CO1	CO1
215151	94 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	55	CO1	CO1	CO1
215160	92 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	54	CO1	CO1	CO1
215161	96 RAILWAY ST, TURVEY PARK NSW 2650	58	53	52	42	56	CO1	CO1	CO1
215163	1 ERIN ST, TURVEY PARK NSW 2650	58	53	52	42	60	CO1	CO1	CO1, CO2, (RO,AO)*
215180	3 ERIN ST, TURVEY PARK NSW 2650	58	53	52	42	61	CO1	CO1	CO1, CO2, (RO,AO)*
215190	5 ERIN ST, TURVEY PARK NSW 2650	58	53	52	42	62	CO1	CO1	CO1, CO2, (RO,AO)*
215201	7 ERIN ST, TURVEY PARK NSW 2650	58	53	52	42	63	CO1	CO1	CO1, CO2, (RO,AO)*
215216	9 ERIN ST, TURVEY PARK NSW 2650	58	53	52	42	69	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
215219	11 ERIN ST, TURVEY PARK NSW 2650	58	53	52	42	71	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
215326	6 KILDARE ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
215356	3 NORMAN ST, TURVEY PARK NSW 2650	58	53	52	42	43	-	-	CO1
215365	4 KILDARE ST, TURVEY PARK NSW 2650	58	53	52	42	47	-	-	CO1
215412	2 KILDARE ST, TURVEY PARK NSW 2650	58	53	52	42	44	-	-	CO1
215551	14 STATION PL, WAGGA WAGGA NSW 2650	58	53	52	42	53	-	CO1	CO1
215689	6-10 STATION PL, WAGGA WAGGA NSW 2650	45	45	-	-	53	CO1	-	-
215708	2 DONNELLY AV, WAGGA WAGGA NSW 2650	58	53	52	42	78	CO1, CO2	CO1, CO2, (RO)*	CO1, CO2, RO, (AO, AltA)*
215724	4 DONNELLY AV, WAGGA WAGGA NSW 2650	58	53	52	42	71	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
215725	6 DONNELLY AV, WAGGA WAGGA NSW 2650	58	53	52	42	60	CO1	CO1	CO1, CO2, (RO,AO)*
215731	8 DONNELLY AV, WAGGA WAGGA NSW 2650	58	53	52	42	59	CO1	CO1	CO1, CO2, (RO,AO)*
215746	12 DONNELLY AV, WAGGA WAGGA NSW 2650	58	53	52	42	57	CO1	CO1	CO1
215749	22 BROOKONG AV, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
215750	10 DONNELLY AV, WAGGA WAGGA NSW 2650	58	53	52	42	59	CO1	CO1	CO1, CO2, (RO,AO)*
215799	2 LITTLE BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	79	CO1, CO2	CO1, CO2, (RO)*	CO1, CO2, RO, (AO, AltA)*
215835	1 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	59	CO1	CO1	CO1, CO2, (RO,AO)*
215846	4 LITTLE BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	79	CO1, CO2	CO1, CO2, (RO)*	CO1, CO2, RO, (AO, AltA)*
215849	18 BROOKONG AV, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
215874	188 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	50	-	-	CO1
215892	6 LITTLE BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	82	CO1, CO2	CO1, CO2, (RO)*	CO1, CO2, RO, (AO, AltA)*
215908	3 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	60	CO1	CO1	CO1, CO2, (RO,AO)*
215925	140 EDWARD ST, WAGGA WAGGA NSW 2650	55	55	-	-	62	CO1	-	-
215933	8 LITTLE BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	78	CO1, CO2	CO1, CO2, (RO)*	CO1, CO2, RO, (AO, AltA)*
215956	188 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1

W.009 - Utility Work (66kV) (night outage 2)

SLR ID	ADDRESS	NML Daytime	NML Daytime OOH	NML Evening	NML Night-time	Predicted Level LAeq(15min)	Additional Mitigation Daytime OOH	Additional Mitigation Evening *(>2 consecutive rest periods)	Additional Mitigation Night *(>2 consecutive sleep periods)
215984	5 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	59	CO1	CO1	CO1, CO2, (RO,AO)*
216060	156 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	69	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
216085	158 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	63	CO1	CO1	CO1, CO2, (RO,AO)*
216094	160 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	62	CO1	CO1	CO1, CO2, (RO,AO)*
216099	162 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	50	-	-	CO1
216103	164 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	50	-	-	CO1
216107	168 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	47	-	-	CO1
216117	166 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	49	-	-	CO1
216128	170 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	47	-	-	CO1
216181	2 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	56	CO1	CO1	CO1
216186	127 EDWARD ST, WAGGA WAGGA NSW 2650	60	60	60	45	47	-	-	CO1
216226	4 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	56	CO1	CO1	CO1
216245	131A EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	59	CO1	CO1	CO1, CO2, (RO,AO)*
216256	196 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
216281	133 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	59	CO1	CO1	CO1, CO2, (RO,AO)*
216284	6 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	50	-	-	CO1
216292	202 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
216298	153 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	60	CO1	CO1	CO1, CO2, (RO,AO)*
216315	8 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	48	-	-	CO1
216323	157 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	55	CO1	CO1	CO1
216333	161 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	54	CO1	CO1	CO1
216346	131A EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	56	CO1	CO1	CO1
216360	163 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	50	-	-	CO1
216378	10 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
216391	1/173 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	48	-	-	CO1
216401	WOMBOY 5/165 EDWARD ST, WAGGA WAGGA NSW	58	53	52	42	54	CO1	CO1	CO1
216404	8 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	59	CO1	CO1	CO1, CO2, (RO,AO)*
216433	9 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	56	CO1	CO1	CO1
216434	177 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
216437	12 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
216448	175 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
216464	179 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
216472	173 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
216480	189 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
216485	12 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	49	-	-	CO1
216486	191 EDWARD ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
216487	11A BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	55	CO1	CO1	CO1
216498	14 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	47	-	-	CO1
216520	7 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	47	-	-	CO1
216521	2/4-6 THORNE ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
216540	14 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	50	-	-	CO1
216547	13 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	56	CO1	CO1	CO1
216558	9 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
216561	20 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	49	-	-	CO1
216564	10 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
216585	16 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	51	-	-	CO1
216587	4/11 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
216589	8 THORNE ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
216603	17 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	54	CO1	CO1	CO1
216624	12 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
216626	22 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
216642	12 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
216643	18 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	53	-	CO1	CO1
216649	4/11 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
216668	19 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
216678	24 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
216683	14 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
216700	20 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	52	-	-	CO1
216721	13 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
216726	21 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	53	-	CO1	CO1
216729	26 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
216733	16 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
216775	28 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
216781	24 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	47	-	-	CO1
216798	23 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	51	-	-	CO1
216846	26 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	51	-	-	CO1
216874	26 FOX ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
216926	28 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	50	-	-	CO1
216934	32 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
216985	30 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	49	-	-	CO1
216994	29 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	49	-	-	CO1
217038	32 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	49	-	-	CO1
217052	31 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	49	-	-	CO1
217101	34 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
217115	33 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	50	-	-	CO1
217154	36 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	48	-	-	CO1
217181	35 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	49	-	-	CO1
217271	42 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
217306	42 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
217341	44 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
217362	41 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	48	-	-	CO1
217406	46 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
217432	43 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
217445	1/48 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	46	-	-	CO1
217462	45 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
217499	50 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
217641	49 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
217680	51 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
217743	55 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
217777	57 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
217808	59 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
217831	64 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
217863	66 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	45	-	-	CO1
217915	67 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
1108649	24-26 BROOKONG AV, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
1108869	ERIN EARTH 1 KILDARE ST, TURVEY PARK NSW 265	55	55	-	-	71	CO1, CO2	-	-
1108960	58 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
1108976	27 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	52	-	-	CO1
1108990	8 PETER ST, WAGGA WAGGA NSW 2650	58	53	52	42	53	-	CO1	CO1
1109034	2/56 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
1110631	140 EDWARD ST, WAGGA WAGGA NSW 2650	55	55	-	-	72	CO1, CO2	-	-
1110632	140 EDWARD ST, WAGGA WAGGA NSW 2650	55	55	-	-	65	CO1	-	-
1111560	4/4-6 THORNE ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
1111561	4/4-6 THORNE ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
1111562	4-6 THORNE ST, WAGGA WAGGA NSW 2650	58	53	52	42	43	-	-	CO1
1111585	5/36 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
1111586	6/36 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
1111587	6/36 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	46	-	-	CO1
1111588	36 COLLINS ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
1111589	BUILDING 1 UNIT 102 1 FLINDERS ST, WAGGA WAG	58	53	52	42	44	-	-	CO1
1111674	54 BEST ST, WAGGA WAGGA NSW 2650	58	53	52	42	44	-	-	CO1
1111748	1 KILDARE ST, TURVEY PARK NSW 2650	58	53	52	42	63	CO1	CO1	CO1, CO2, (RO,AO)*
1111752	1 KILDARE ST, TURVEY PARK NSW 2650	58	53	52	42	69	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
1111757	1 KILDARE ST, TURVEY PARK NSW 2650	58	53	52	42	45	-	-	CO1
1111758	1 KILDARE ST, TURVEY PARK NSW 2650	58	53	52	42	66	CO1	CO1	CO1, CO2, (RO,AO)*



Making Sustainability Happen

APPENDIX D

Wagga Wagga Utilities Non-Aboriginal Heritage Assessment (WWUNAHA)

View of the Best St Gatekeepers cottage in 2004, part of the Wagga Wagga Railway Station and yard group (source: Rob Nesbitt 2019)

INLAND RAIL: ALBURY TO ILABO (A2I) - NON-ABORIGINAL HERITAGE ASSESSMENT

WAGGA WAGGA UTILITIES CIZ EXTENSION

WAGGA WAGGA LOCAL GOVERNMENT AREA

NOVEMBER 2024

INLAND RAIL

Report prepared by

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Acknowledgement

OzArk acknowledge the Traditional Custodians of the area on which this assessment took place and pay respect to their beliefs, cultural heritage, and continuing connection with the land. We also acknowledge and pay respect to the post-contact experiences of Aboriginal people with attachment to the area and to the Elders, past and present, as the next generation of role models and vessels for memories, traditions, culture and hopes of local Aboriginal people.

CONTENTS

FIGURES

1 INTRODUCTION

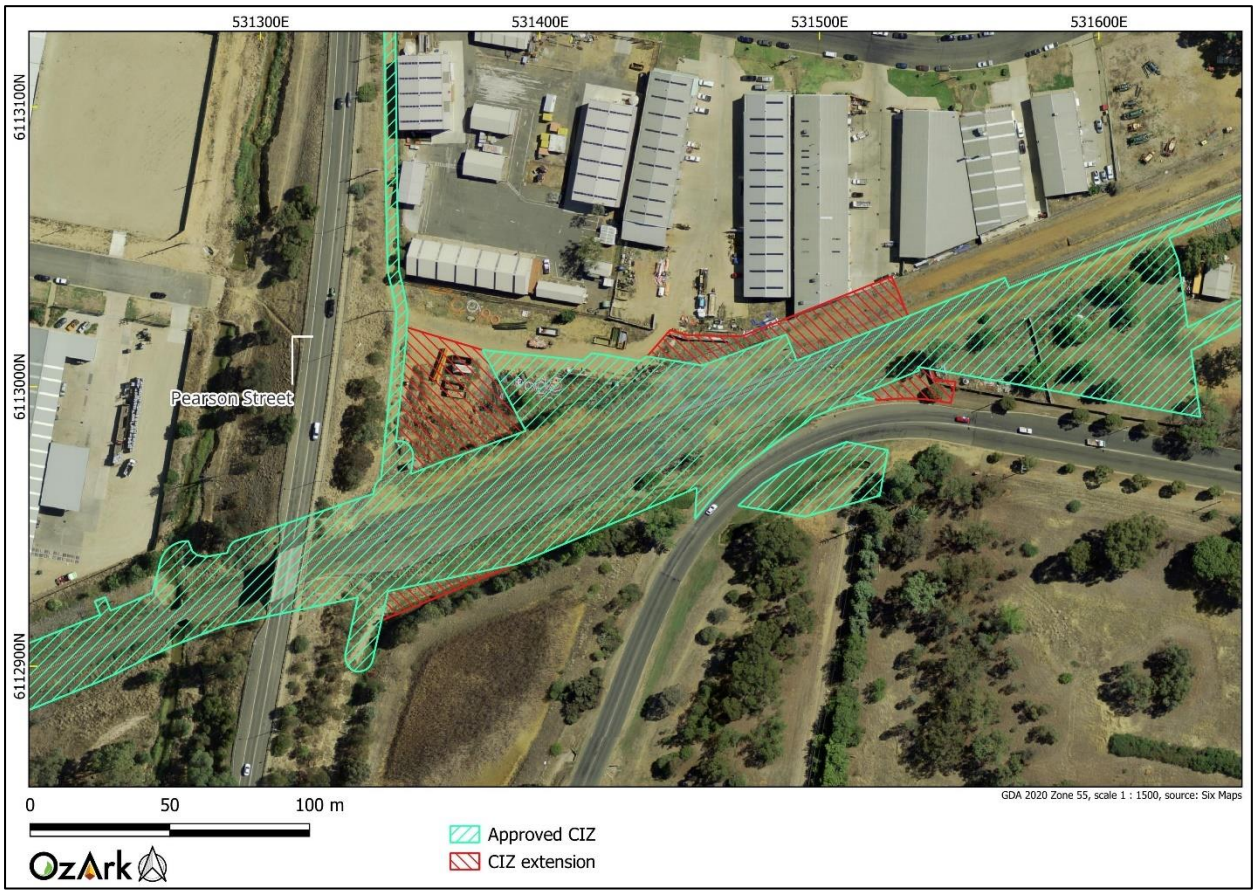
OzArk Environment & Heritage (OzArk) has been engaged by Martinus Rail (MR, the client), on behalf of Australian Rail Track Corporation (ARTC, the proponent), to complete a non-Aboriginal Heritage Assessment following a revision to the scope of works at three locations that are part of the Albury to Illabo (A2I) Inland Rail (IR) Project (the Project). These locations, that shall henceforth be referred to collectively as the Construction Impact Zone (CIZ) extension, are within the Wagga Wagga Local Government Area and comprise of:

- Cassidy Parade, Wagga Wagga (**Figure 1-1**)
- Edmonson Street, Wagga Wagga (**Figure 1-1**)
- Pearson Street, Wagga Wagga (**Figure 1-2**).

The A2I section of the Inland Rail project is Critical State Significant Infrastructure (CSSI) and was approved on 8th October 2024. The approval covered all works proposed within the CIZ. As a result of the need to relocate utilities in the Wagga Wagga area, a CIZ extension was required, the potential heritage impacts of which are addressed in this report. This additional assessment informs a Consistency Assessment for the CIZ extension, meeting the requirements of Condition of Approval (CoA) A15(c).

Figure 1-1. Map showing the Edmondson Street and Cassidy Parade existing approved CIZ and proposed CIZ extension.

Figure 1-2. Map showing the existing approved Pearson Street CIZ and proposed CIZ extension.



1.1 PREVIOUS HERITAGE ASSESSMENTS

The historic heritage impacts of the A2I project within the approved CIZ were assessed in the *Inland Rail: Albury to Illabo Non-Aboriginal Heritage Assessment* (GML 2022), which encompassed assessment of 24 locations where proposed enhancement works were being undertaken for the A2I project. This study assessed all then known potential impacts to both registered and unregistered historical heritage items, covering the CIZ shown in green hatching on **Figure 1-1** and **Figure 1-2**.

The GML study assessed both direct historic heritage impacts within the approved CIZ boundary and indirect impacts to listed historic heritage located adjacent to and within 200 metres (m) of the CIZ boundary. As the assessment beyond the approved CIZ boundary was in relation to indirect impacts (e.g. vibration, viewsheds and vistas, and curtilages) and not direct impacts as may occur within an extension to the CIZ, it was concluded that additional assessment was required to ensure that the provisions of CoA 15(c) could be met in relation to the proposed CIZ extension.

The remainder of this report provides historic heritage assessment of the three CIZ extension areas together with the management measures to be applied that will ensure compliance with CoA 15(c).

1.2 PROPOSED WORKS – CIZ EXTENSION ZONES

The extension of the CIZ is to enable Martinus Rail to undertake utility works beyond the existing approved CIZ. The required utility works vary between locations and are detailed below:

- Cassidy Parade (**Figure 1-3**)
    - The works involve a water main relocation, and the installation of a gas protection slab. The water main relocation works involve trenching and ground disturbance within the Wagga Wagga Heritage Conservation Area listed on the Wagga Wagga Local Environmental Plan 2010.
- Pearson Street (**Figure 1-4**)
    - The works involve relocation a water main, part of which will occur outside the approved CIZ. The works will not require ground disturbance within or near a heritage item.
- Edmondson Street (**Figure 1-5**)
    - The works involve relocation of APA HP & MP gas main infrastructure that will require underbore retrieval within the Wagga Wagga LEP (2010) curtilage of Item I254 “Former Best Street railway gatehouse” and State Heritage Register (SHR) item “Wagga Wagga Railway Station and yard group” (SHR#01279).
    - Clearing and trimming of tree vegetation is required within the LEP curtilage of “Mt Erin Convent, Chapel, High School & Grounds” (I260) as well as within the Wagga Wagga Conservation Area, to allow for the construction of essential distribution lines.

Figure 1-3: Cassidy Parade proposed works design (source: Martinus Rail).

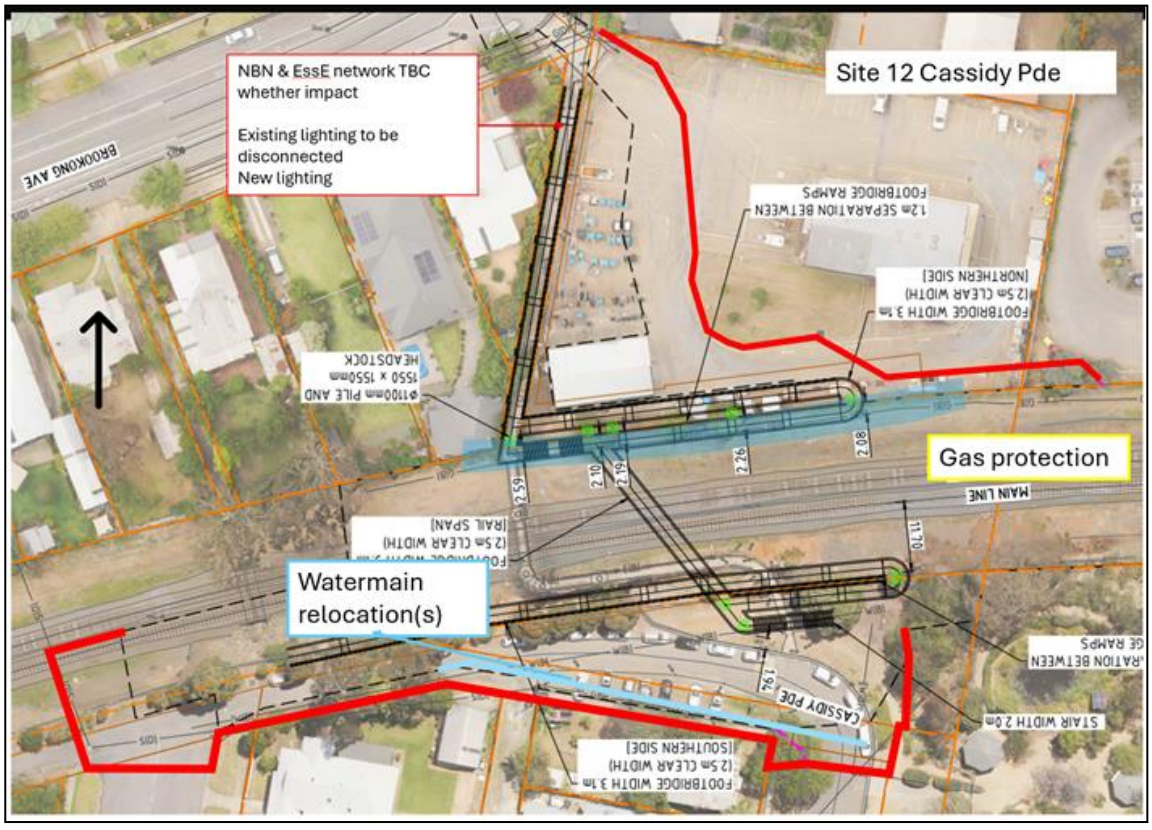


Figure 1-4: Edmondson Street proposed works design (source: Martinus).

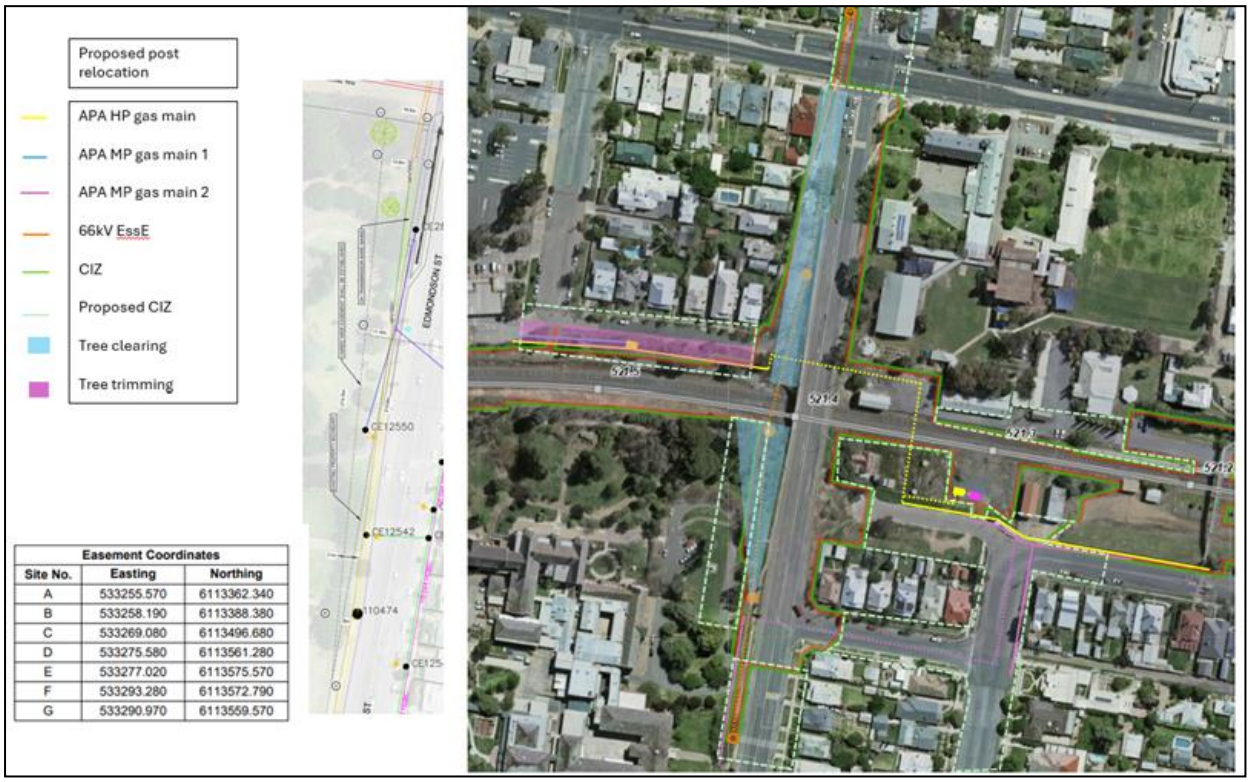
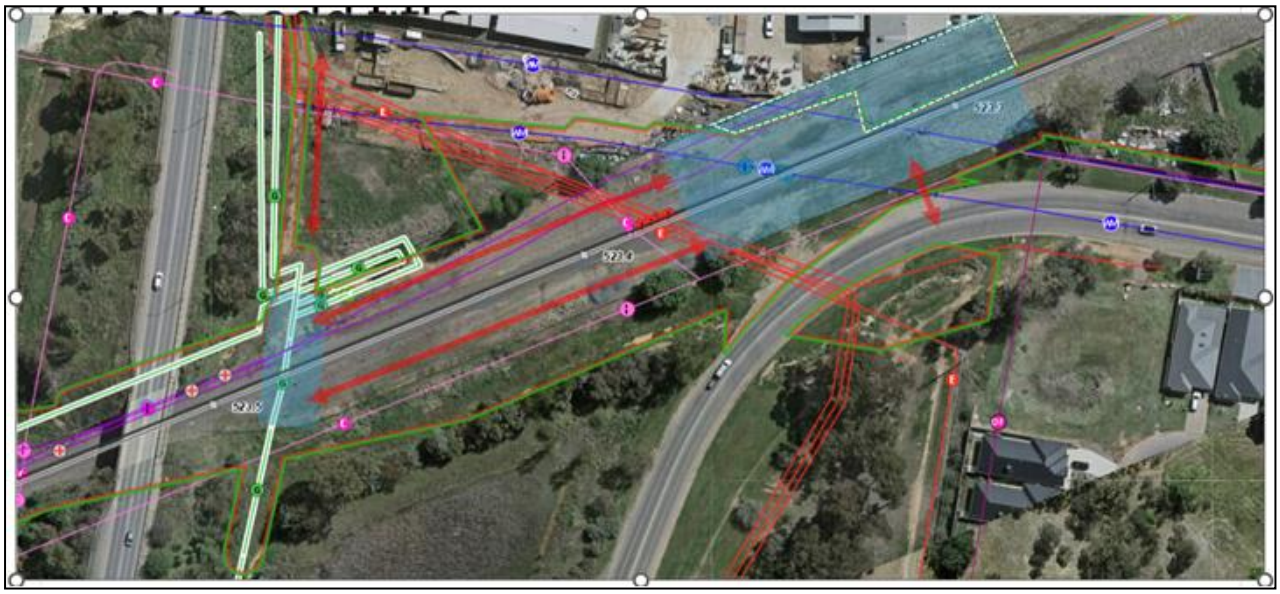


Figure 1-5: Pearson Street proposed works design (source: Martinus).



2 ASSESSMENT OF LISTED HERITAGE WITHIN THE CIZ EXTENSION

The CIZ extension involves the curtilage moving closer to several LEP listed heritage items, as well as changing its interaction with the SHR curtilage of the Wagga Wagga Railway Station and yard group. As the proposed works are primarily subsurface infrastructure movements the majority of these listed places will not be impacted by the proposed works. The assessment below documents these interactions by CIZ extension area in line with the *Guidelines for preparing a statement of heritage impact* (DPE 2023a) and Heritage Council's *Historical Archaeology Code of Practice* to assess whether these items of historic significance may be impacted by the CIZ extension.

2.1 CASSIDY PARADE

The CIZ extension at Cassidy Parade already interacts with the Wagga Wagga Heritage Conservation Area (WWHCA) listed on Schedule 5 of the Wagga Wagga LEP 2010. WWHCA, as described in the DCP, encompasses the Fitzmaurice Street commercial precinct as well as the western and southern residential precincts that form a cohesive heritage streetscape. These areas retain various buildings from the Victorian, Federation, Edwardian and Interwar period.

Interaction with the WWHCA is marginally increased on the northern side of the rail line on Brookong Avenue, and is increased on the southern side of the rail line along Cassidy Parade, as seen in **Figure 1-3** and **Figure 2-2**. As the proposed new work involves sub-surface realignment of a water main there will be no permanent alteration to the character of the WWHCA.

The Cassidy Avenue and Brookong Avenue pedestrian footbridge has already been approved for removal under the A2I CoAs and so no further consideration to this listed heritage site is considered necessary.

2.2 PEARSON STREET

No State or local heritage items are located within the CIZ extension. The CIZ extension at Pearson Street abuts the curtilage of LEP Item I246 "Wagga Wagga Showground, Kyeamba Smith Hall & grands" (**Figure 2-3**). This portion of Item I246 is within the existing approved CIZ and was assessed by GML in 2022. The proposed CIZ extension here will not increase impact to the heritage values of this listed site.

2.3 EDMONDSON STREET

The CIZ extension at Edmondson Street is the most extensive and complex of the three areas and will be considered under separate subheadings, from general to specific, from north to south.

2.3.1 LEP listed heritage

2.3.1.1 Interaction with Wagga Wagga Heritage Conservation Zone

The entirety of the CIZ extension in this area interacts with the WWHCA. The activities to take place within the CIZ extension include gas main realignment, vegetation trimming and power line realignment. The Wagga Wagga DCP 2010 guides development within the WWHCA and is primarily focused on building redevelopment with a focus on retention of the character of the area. It is not considered that the works proposed within the CIZ extension by Inland Rail will negatively impact on the heritage characteristics of the WWHCA, although consultation with Wagga Wagga City Council (WWCC) with regards to the proposed trimming of any trees under management by the WWCC within the WWHCA is recommended.

2.3.1.2 Edward and Best Streets intersection, LEP item I262, former corner store

The CIZ extension here is to facilitate the movement of a 66kV electricity transmission line. This will occur at a busy intersection with traffic lights adjacent to the LEP listed former corner store, item I262. As there are already significance above ground power provision easements through this area, the realigned 66kV easement does not cause any negative impact to the visual amenity of item I262.

2.3.1.3 Mt Erin Convent, LEP item I260

The Mt Erin Convent, chapel, high school & grounds (I260) has been assessed as a locally significant historical site, with the following summary of significance derived from the State Heritage Inventory (SHI):

> The Kildare Catholic College includes an excellent grouping of historic structures that includes some impressive individual buildings of great local historic interest. The former Presentation Convent and Chapel were built for the Presentation Nuns who taught Catholic children in Wagga Wagga from 1889. The buildings including the convent, chapel, boarding school and the 1938 high school building have associations with Catholic education and worship in Wagga Wagga. It has direct associations the Presentation Sisters who were responsible for Catholic education for many years. The buildings have local historical, historical association, aesthetic and social significance, and representativeness.
>
> It has a high degree of integrity. The siting of the building and the integrity of its aesthetic qualities also makes it a notable and attractive landmark in its local area. The place contributes positively to the streetscape of the area and contributes to the local community's sense of place. To the township and district as a place which has played an important role in the development of the Catholic community since early settlement. The place is representative of the development of educational facilities in the region,

and its fabric reflects the development that occurred in the history of education in the region in the period.

Overall, the convent, chapel, boarding school and 1938 high school buildings are assessed to be of local heritage significance.

- The Mount Erin Convent (1976)
- The Mount Erin Boarding School (1889)
- Chapel (1915)
- The Mount Erin High School (1938)

The proposed impact of the CIZ extension into the Mt Erin Convent, School and Chapel is in the northeast corner of the listed Lot and DP, in the vicinity of the entrance and driveway off Edmondson Street **Figure 1-4** and **Figure 2-2.** In this area it is proposed that trees will be removed as well as trimmed for a proposed power easement relocation, to be shifted slightly from the Edmondson Road easement into the Mt Erin property to facilitate construction of the new Edmondson Street Bridge.

Specifically, the vegetation / grounds of the Mt Erin complex are not listed as part of the significance of the listing, with the significant values being ascribed primarily to the buildings themselves and their historic functions. Consequently, minor vegetation removal to facilitate the electricity easement movement will not have a direct negative impact to the values of the listed Mt Erin Convent and buildings. Despite this, regard must be had for the overall amenity of the site and the fact that the mature vegetation does enhance the sense of place. Vegetation removal should be kept to the minimum required for safe operation within the power easement.

It is important to note that some impact to the vegetation in the northeast corner of the Mt Erin complex was already assessed as part of the heritage impact assessment (GML 2022) undertaken for the A2I Inland Rail project and is consequently approved. This acknowledged the presence of the 66vK easement and the need for the removal of some plantings. It was concluded in this report that this vegetation clearance would not alter the overall character of the Mt Wern complex and was a minor impact.

2.3.1.4 Best Street railway gatehouse (former) LEP I254

The interaction between the proposed CIZ extension and the former Best Street railway gatehouse can be seen in **Figure 2-2.** It is of note that the cottage that is the subject of this listing is situated within the western portion of the Lot and DP that is mapped as item I254. As a result of consultation with Martinus Rail over the proposed CIZ extension in this area, Martinus Rail reduced the extent so as to exclude the cottage, as can be seen in image 3, **Figure 2-1.**

The listing information for the Best Street former gatehouse is minimal, but all available data indicates it is the building itself and its former function as part of the Wagga Wagga Railway Group

that underpins its local heritage significance. Consequently, exclusion of this part of the Lot and DP from the CIZ extension ensures that this significance cannot be impacted. The only works required within the CIZ extension area east of the Best Street gatehouse is for underground gas pipeline relocation and consequently no permanent above ground changes to the visual amenity will occur in that area. The area of the CIZ extension is shown in images 1 and 2 of **Figure 2-1,** taken from the rail line. As can be seen this area is currently devoid of buildings and is used as a haphazard stockpile zone.

Figure 2-1: 2024 view of the cottage gatehouse (I254) (also see front cover image)

1. View south of the Former Best Street railway gatehouse (I254).

2. View southwest of the Former Best Street railway gatehouse (I254).

3. Aerial showing gatehouse and outbuildings excluded from CIZ extension.
KEY: Red line CIZ Extension; Blue hatch approved CIZ and pink shade LEP I254.

2.3.2 State listed heritage

2.3.2.1 Wagga Wagga Railway Station and yard group SHR 01279

There are two interaction areas between the proposed CIZ extension and the SHR curtilage of the Wagga Wagga Railway Station and yard group SHR 01279 (**Figure 2-2**).

Northern side of the rail line

The extension in this area is only required to afford access to the rail line for the purpose of the A2I Inland Rail project. The CIZ extension area is already comprised of a modern road, and there will be no permanent above ground alterations in this area and no impact to State heritage listed fabric or potential archaeological deposits. The prior high levels of development in this area will have removed any potential archaeological remains had they ever been present.

Southern side of the rail line

The eastern area is a very minor CIZ extension across a hardstand apron into a modern storage shed / garage. This area partially overlaps with the LEP Lot / DP for the Best Street Gatehouse as well as the SHR Wagga Wagga Railway Station curtilage. This area has no heritage values and is not in proximity of any heritage fabric. The incursion into the SHR curtilage will be temporary and will not alter any viewsheds of vistas of Wagga Station and its associated buildings of heritage significance. It is of note that this area also overlaps with the LEP curtilage of Wagga Wagga Railway Station (LEP I98), and the conclusions of 'no impact to heritage values' applies to this listing as well.

The western area adjacent to the Best Street railway gatehouse is the same as that discussed in **Section 2.3.1.4,** as this physical area is relevant to both the local and state heritage listings. As concluded by GML (2022), the Best Street railway gatehouse remains excluded from impact, as the CIZ extension has been limited to a section of land between the rail line and Railway Parade that contains no structures associated with the heritage significance of the Wagga Wagga Railway Station and yard group. As a consequence, there will be no impacts to the heritage significance of the SHR listed Wagga Wagga Railway Station and yard group.

Figure 2-2. Map showing the Edmondson Street and Cassidy Parade CIZ extension in relation the heritage item curtilages.

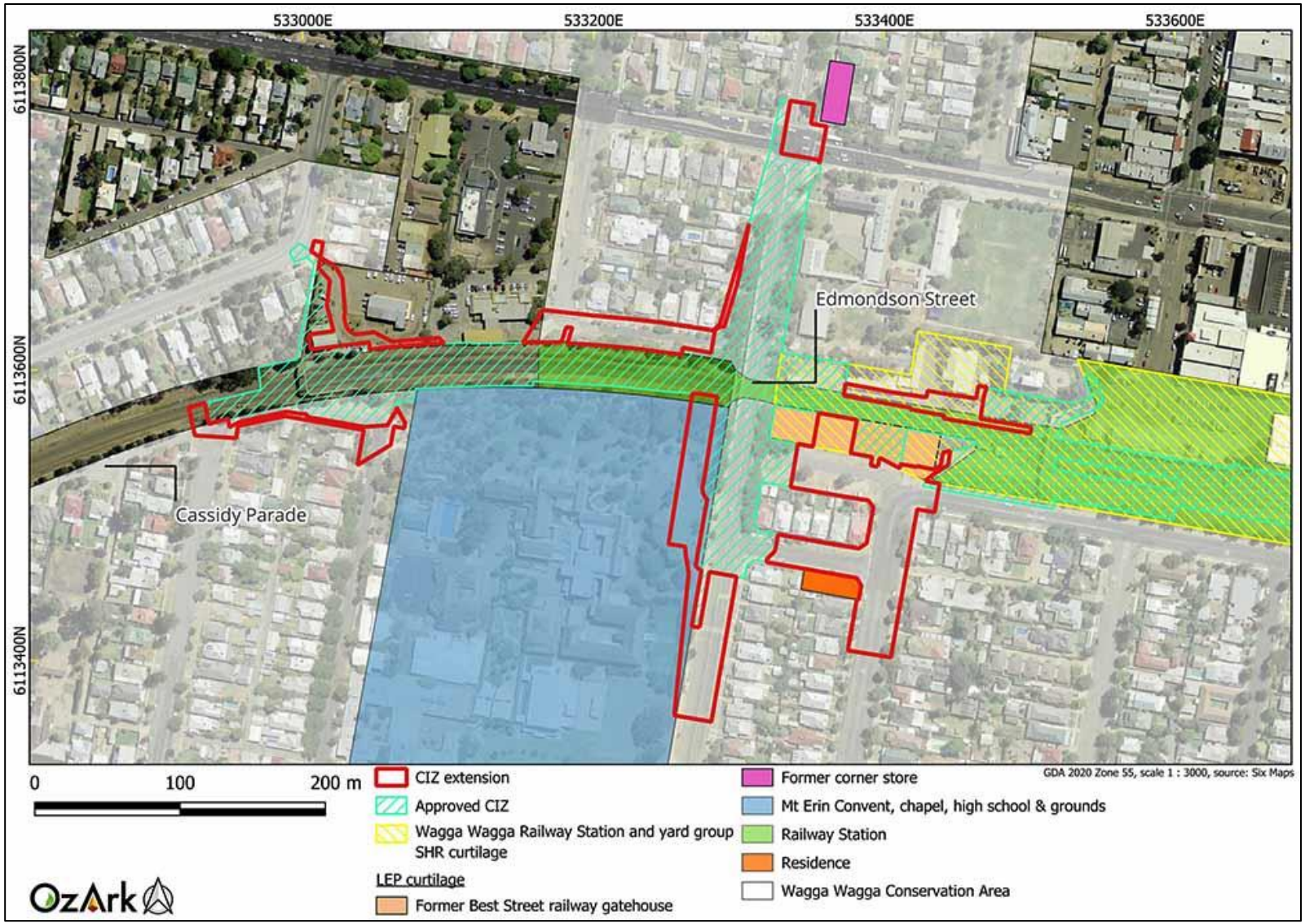
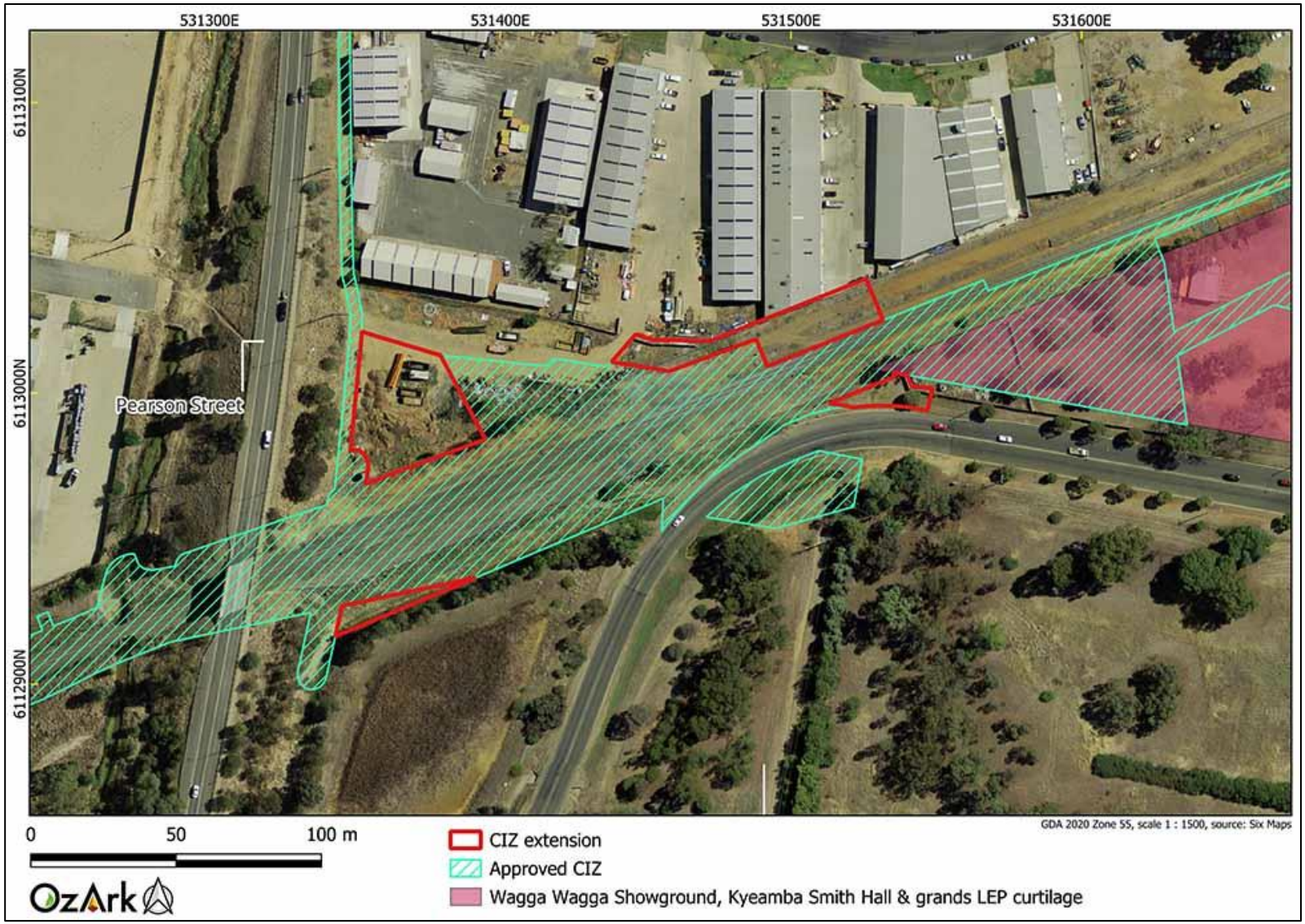


Figure 2-3. Map showing the existing approved Pearson Street CIZ extension in relation to the Wagga Wagga Showground curtilage.



3 CONCLUSIONS

The proposed works within the CIZ extension include disturbance of the ground through underboring and trenching, movement of power provision easements and vegetation trimming and removal, some partially located within LEP and SHR curtilages, as outlined in **Section 2**.

These proposed works avoid all heritage fabric, archaeological deposits and any values identified in the heritage significance documentation attached the listings and are confined to areas that have been previously highly disturbed.

As a result, it can be concluded that the impacts of the proposed CIZ extension in the Wagga Wagga local government area will have “no impacts on heritage items (including areas of archaeological sensitivity)….beyond the impacts approved under the terms of this approval” CoA 15(c).

4 MANAGEMENT MEASURES

To ensure that the proposed works within the proposed Inland Rail A2I CIZ extension in Wagga Wagga do not inadvertently impact non-Aboriginal heritage, the following recommendations should be adhered to:

- Demarcation (using barricading or flagging) of the CIZ extension footprint within listed heritage sites to ensure no inadvertent impacts beyond this
- In the unlikely event that excavation work encounters potential heritage items, the *Unexpected Heritage Finds and Human Remains Procedures*, Appendix B of the Construction Cultural Heritage Management Plan (CCHMP) should be followed.
- If further extension of the CIZ is required that interact with listed heritage sites, then further assessment would be required to ensure that the provisions of CoA 15(c) can be met.
- Other provisions as outlined in the CCHMP, specifically regarding heritage inductions for work crews, should also be followed.

REFERENCES

Burra Charter — *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance*. International Council on Monuments and Sites. 2013.

DPE 2023a — *Guidelines for preparing a statement of heritage impact.* Department of Planning and Environment. 2023.

DPE 2023b — *Assessing heritage significance. Guidelines for assessing places and objects against the Heritage Council of NSW criteria*. Department of Planning and Environment. 2023.

Rob Nesbitt 2019 — Nesbitt, R. 2019. "Gatekeepers cottages". *Building Wagga Wagga.* Accessed 31 October 2024. Available at: https://buildingwagga.blogspot.com/2019/03/gatekeeper-cottages.html

GML 2022 — GML Heritage. 2022. *Inland Rail – Albury to Illabo Technical Paper 3 – Non-Aboriginal Heritage.* Report to ARTC.

WW DCP 2010 — Wagga Wagga Development Control Plan 2010 as amended – Section 3 – Heritage Conservation. https://wagga.nsw.gov.au/__data/assets/pdf_file/0013/112252/Wagga-Wagga-DCP-2010-as-amended-Section-3-Heritage-Conservation-Version-27-Final.pdf

APPENDIX E

Biodiversity Assessment Report Memo (BARM)

Adrian Broger
Environmental Approvals Advisor
Martinus Rail Pty Ltd

18th October 2024

Biodiversity Memorandum: Inland Rail (Albury to Illabo)

Dear Adrian,

Martinus Rail Pty Ltd (Martinus) on behalf of the Australian Rail Track Corporation (ARTC) propose to conduct vegetation removal and trimming to accommodate utility relocation in Wagga Wagga, NSW (Proposed Change).

The Proposed Change is located outside of the construction boundary of the Albury to Illabo section of the Inland Rail program (the Project) and was not assessed as a part of the Inland Rail, Albury to Illabo Revised Technical Paper 8: Biodiversity Development Assessment Report (BDAR) (WSP, 2023).

1.1 Scope of Assessment

East Coast Ecology Pty Ltd (ECE) was commissioned by ARTC c/- Martinus to prepare a Biodiversity Memo, for the Proposed Change. The scope of this assessment was to identify and assess impacts to species and ecological communities listed as threatened under the *Biodiversity Conservation Act 2016* (NSW) (BC Act), *Fisheries Management Act 1994* (FM Act) and Matters of National Environmental Significance (MNES) listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and where relevant, the requirements of the *Biosecurity Act 2015* (NSW), and relevant State Environmental Planning Policies (SEPPs).

The area assessed in this memo has been defined by representatives of Martinus, this memo has been prepared to accompany a Consistency Assessment (CA) in relation to the Proposed Change, and is hereafter referred to as the Subject Land.

1.2 The Subject Land

The Subject Land covers an area of approximately 2.37ha that adjoins the Main South Line in two distinct locations centred on Edmondson Street/ Cassidy Parade and Pearson Street (**Figure 1** - **Figure 3**).

The Subject Land is located within the suburb of Turvey Park in the Wagga Wagga Local Government Area.

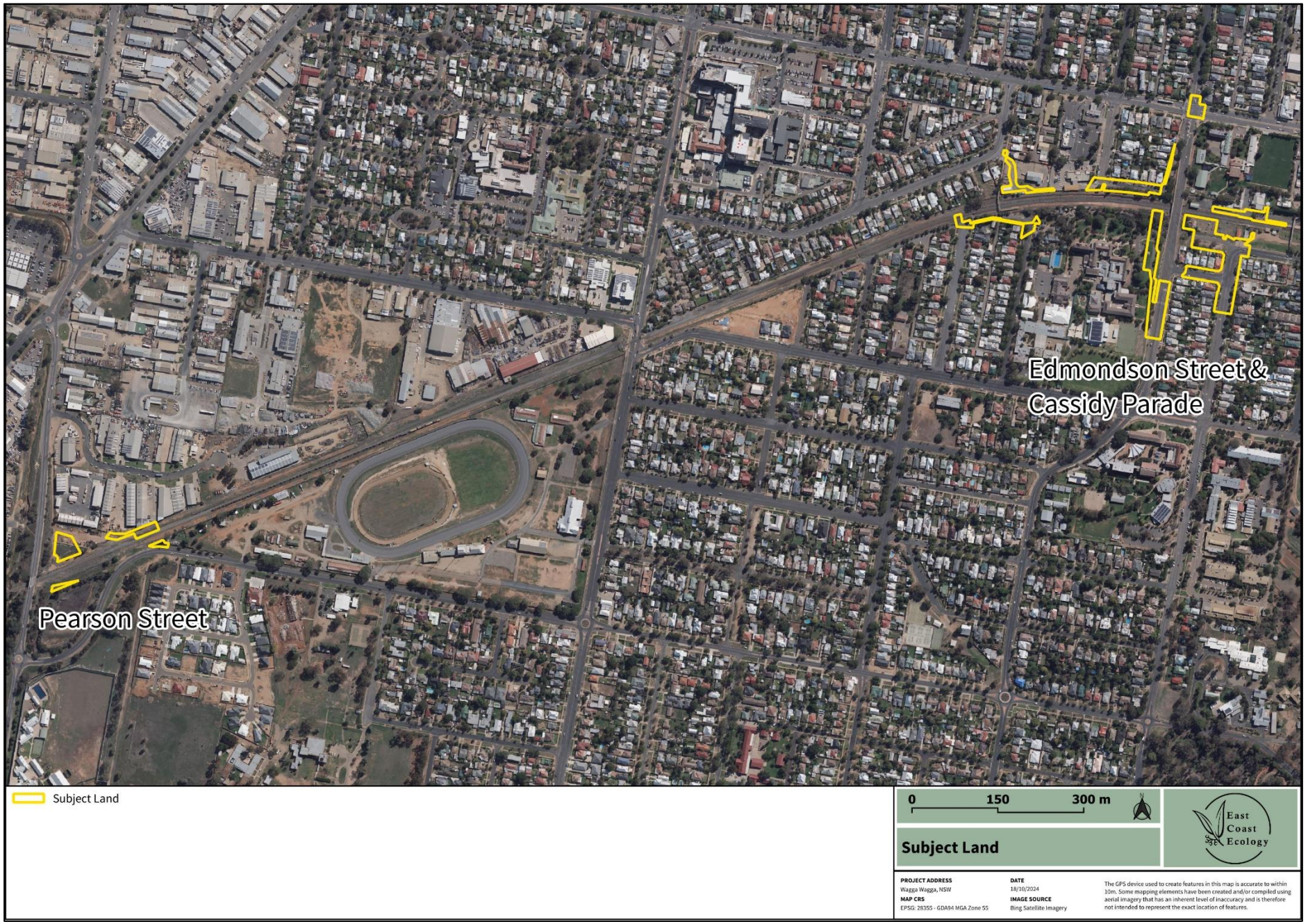


Figure 1. Location of the Subject Land.

Figure 2. Location of the Subject Land (Edmondson Street and Cassidy Parade).

Figure 3. Location of the Subject Land (Pearson Street).

2. METHODS

A thorough literature review of local information relevant to the Subject Land was undertaken. Searches using NSW Wildlife Atlas (BioNet) (NSW DCCEEW, 2024a), the Commonwealth Protected Matters Search Tool (PMST) (DCCEEW, 2024) and the Fisheries Spatial Data Portal (DPI, 2024) were conducted to identify all current threatened flora and fauna, as well as migratory fauna records, within a 5km radius of the Subject Land.

2.1 Native Vegetation

A review of the State Vegetation Type Map (NSW DCCEEW, 2024b) was used to assist in the identification of Plant Community Types (PCTs) within and surrounding the Subject Land. The PCT of 'best-fit' was determined based on the floristic descriptions within the BioNet Vegetation Classification System database (NSW DCCEEW, 2024c).

2.2 Threatened Flora Survey Methods

Threatened flora that are known or likely to occur within the Subject Land and immediate surrounds (i.e. within 5km) were identified following a review of BioNet and the PMST. Soil mapping (NSW DCCEEW, 2024d) and topography (Google Earth) were also used to provide further context on habitat constraints for threatened flora.

Targeted surveys were undertaken by Ecologist; Chris Keogh on the 1st October 2024, using parallel field traverses in accordance with the 'Surveying threatened plants and their habitats - NSW survey guide for the Biodiversity Assessment Method' (DPIE, 2020). All vegetated areas within the Subject Land were surveyed.

2.3 Threatened Fauna Survey Methods

Threatened fauna were recorded opportunistically however, their habitats (e.g. waterbodies, rocky areas, tree hollows), were targeted during the parallel field traverses. Potential habitat constraints within the broader area (500m buffer) were assessed using Google Earth, soil landscape mapping (NSW DCCEEW, 2024d) and recent vegetation mapping (NSW DCCEEW, 2024b).

3. EXISTING ENVIRONMENT

3.1 Rivers, streams, estuaries and wetlands

No watercourses occur within the Subject Land. The Subject Land is located within the Murrumbidgee River catchment, a 9th order watercourse, which occurs approximately 1km north of the Subject Land.

3.2 Habitat Connectivity

Negligible terrestrial habitat connectivity exists between the Subject Land and the broader landscape due to historical clearing and existing infrastructure (e.g. roads, railway and built areas) (**Figure 5** - **Figure 6**).

The Subject Land may provide mobile species with minor refuge while moving throughout the landscape, however due to the degraded condition of the vegetation, it is not considered likely that threatened species would be reliant on this area as a part of their life cycle.

3.3 Karst, Caves, Crevices, Cliffs, Rocks or Other of Geological Features of Significance

The Subject Land did not contain any areas of geological significance, such as karsts, caves, cliffs or crevices. The Subject Land was not mapped as occurring on acid sulfate soils nor mapped as having risk/ probability of exhibiting occurrence of acid sulfate soils.

3.4 Areas of Outstanding Biodiversity Value

No Areas of Outstanding Biodiversity Value occur on the Subject Land or the surrounding area.

3.5 Topography, Geology and Soils

The Subject Land is mapped as occurring on the 'Becks Lane' soil landscape', characterised by, gently inclined footslopes adjacent to hills of thick slope-washed and alluvial-colluvial sands, clays and gravels, mostly derived from Ordovician metasedimentary rocks. The Subject Land occurs on gently inclined terrain, ranging from 186m above sea level (asl) to 197m asl between localities (Google Earth).

3.6 Mapped Native Vegetation Communities – NSW State Vegetation Type Map

The NSW State Vegetation Type Map (NSW DCCEEW, 2024b) indicated the absence of PCTs within or adjoining, the Subject Land (**Figure 4**). The Subject Land has been mapped as 'Not classified'.

Figure 4. NSW State Vegetation Type Map (NSW DCCEEW, 2024b).

4. RESULTS

4.1 Field-validated Native Vegetation

Due to historical agricultural, infrastructure, residential and industrial development within the Subject Land, and specifically a lack of native and/ or diagnostic species for candidate PCTs, the following vegetation community types described by WSP (2023) were assigned:

- Miscellaneous Ecosystems – 'Ornamental Plantings', and
- Miscellaneous Ecosystems – 'Highly Disturbed areas with no or limited Native Vegetation'.

These vegetation community types are consistent with vegetation types described in the approved BDAR.

Table 1. Vegetation communities identified within the Subject Land.

Community Name	Area within the Subject Land (ha)
Miscellaneous Ecosystems – Ornamental Plantings	0.40ha
Miscellaneous Ecosystems – Highly Disturbed areas with no or limited Native Vegetation	0.41ha
Total Area	**0.81ha**

4.1.1 Community type Miscellaneous Ecosystems – Ornamental Plantings

Due to the Subject Land's historical and ongoing residential and community use at Edmondson Street and Cassidy Parade, much of the vegetation is comprised of ornamental native and exotic species planted for aesthetic purposes and was therefore determined to have limited ecological function (WSP, 2023) (**Figure 5**-**Figure 6**). Ornamental Plantings includes areas that are not consistent with the definition of a PCT and are not required to be assessed for ecosystem credits, per Section 9.3 of the BAM (DPE, 2020a).

4.1.2 Community type Miscellaneous Ecosystems – Highly Disturbed areas with no or limited Native Vegetation

Due to a long history of disturbance from agricultural, infrastructure (rail and road) and industrial use, the Subject Land at Edmondson Street and Pearson Street is comprised of no or limited native species and is dominated by exotic species, and provides limited ecological function (WSP, 2023) (**Figure 5**-**Figure 6**). Highly Disturbed areas with no or limited native vegetation includes areas that are not consistent with the definition of a PCT and are not required to be assessed for ecosystem credits, per Section 9.3 of the BAM (DPIE, 2020a).

Descriptions of the vegetation types are provided in **Table 2**.and **Table 3**.

Table 2. Miscellaneous Ecosystems - Ornamental plantings vegetation identified within the Subject Land.

Miscellaneous Ecosystems – Ornamental Plantings	
Novel Vegetation Type	**Miscellaneous Ecosystems – Ornamental Plantings**
Extent	0.40ha
Description of vegetation	The vegetation within this zone was comprised of exotic and non-endemic native ornamental plantings. Vegetation was mostly planted in the street verge or nature strip and consisted of *Lagerstroemia indica* (Crepe Myrtle), *Melia azedarach* (White Cedar), *Jacaranda mimsofolia* (Jacaranda), *Melaleuca linariifolia* (Paperbark), *Callistemon viminalis* (Weeping Bottle Brush), *Lophostemon confertus* (Brush Box), *Brachychiton populneus* (Kurrajong), *Corymbia citriodora* (Lemon-scented Gum), the mid-story was absent and the ground layer was mostly exotic lawn.

Table 3. Miscellaneous Ecosystems - Highly Disturbed areas with no or limited Native Vegetation, vegetation identified within the Subject Land.

Miscellaneous Ecosystems - Highly Disturbed areas with no or limited Native Vegetation	
Novel Vegetation Type	**Miscellaneous Ecosystems - Highly Disturbed areas with no or limited Native Vegetation**
Extent	0.41ha
Description of vegetation	The vegetation within this zone was heavily comprised of exotic ground cover species such as *Plantago lanceolata* (Ribwort Plantain), *Bromus* sp. and *Arctotheca calendula* (Cape Weed). The regions this vegetation occurred, were almost entirely developed and displayed a long history of disturbance from infrastructure such as roads, rail, carparks and concrete footpaths.

Plate 1. An example of Miscellaneous Ecosystems - Ornamental Plantings within the Subject Land.

Plate 2.An example of Miscellaneous Ecosystems - Highly Disturbed areas with no or limited Native Vegetation within the Subject Land.

Figure 5. Field-validated vegetation communities (Edmondson Street and Cassidy Parade).

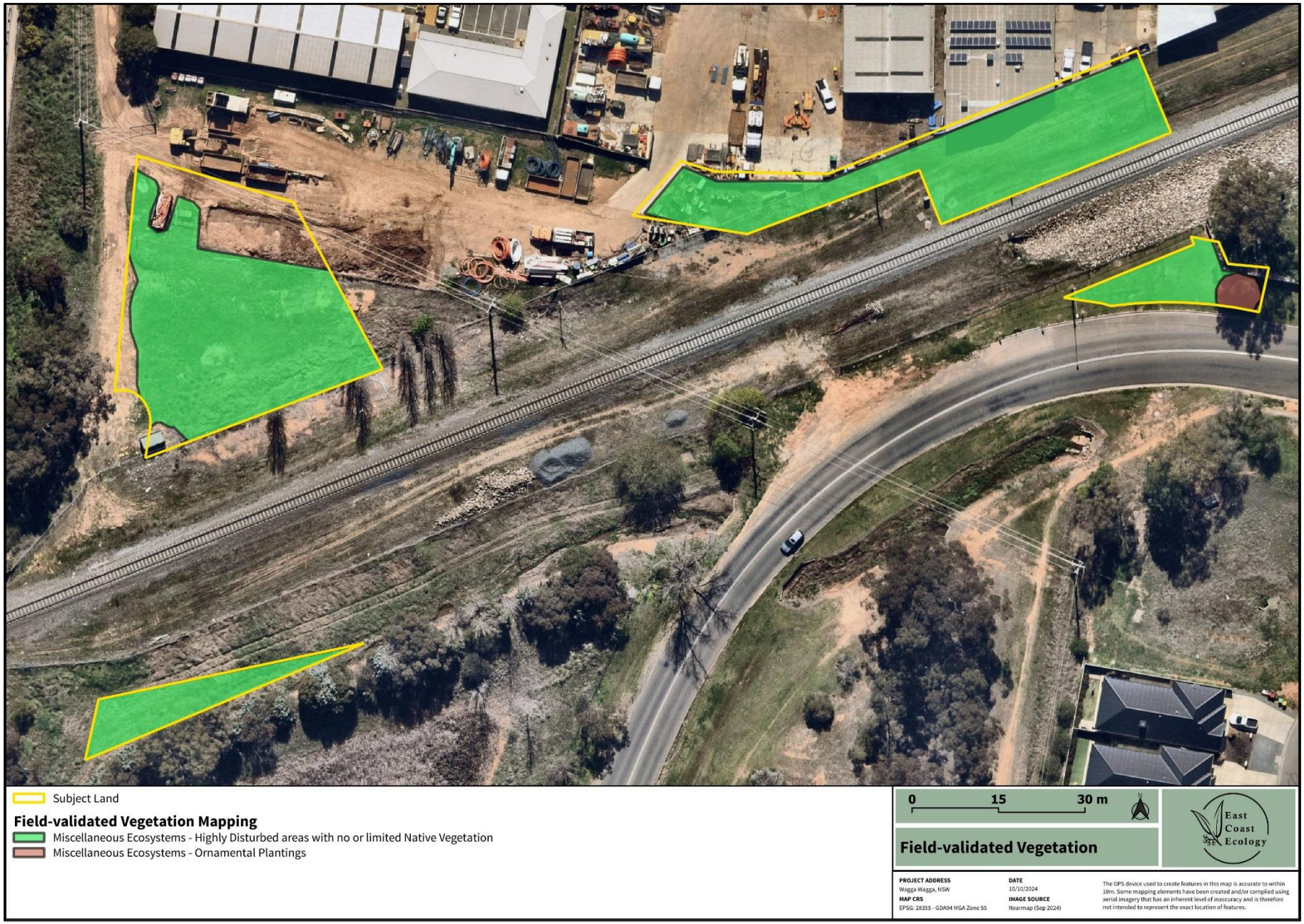


Figure 6. Field-validated vegetation communities (Pearson Street).

4.2 Threatened Flora

BioNet and PMST searches revealed ten threatened flora species occur, or have potential to occur, within a ~5km radius of the Subject Land.

Table 4. Threatened flora with potential to occur within the Subject Land.

Scientific Name	Common Name	BC Act	EPBC Act	Records within 5km
Austrostipa wakoolica	Wakool Spear-grass	E	E	Modelled Only
Brachyscome muelleroides	Claypan Daisy	V	V	1
Caladenia arenaria	Sand-hill Spider-orchid	E	E	Modelled Only
Caladenia concolor	Crimson Spider-orchid, Maroon Spider-orchid	E	V	Modelled Only
Lepidium aschersonii	Spiny Peppercress	V	V	Modelled Only
Lepidium monoplocoides	Winged Pepper-cress	E	E	Modelled Only
Prasophyllum petilum	Tarengo Leek Orchid	E	E	Modelled Only
Senecio garlandii	Woolly Ragwort	V	-	2
Swainsona murrayana	Slender Darling-pea, Slender Swainson, Murray Swainson-pea	V	V	Modelled Only
Swainsona recta	Small Purple-pea	E	E	2

V – Vulnerable; E – Endangered; EP – Endangered Population; CE – Critically Endangered

The results from the site assessment, including targeted flora surveys and habitat assessment, were used to assess each species' likelihood of occurrence within the Subject Land. After carrying out the assessment, the assessor determined that the habitat is substantially degraded such that all potential threatened flora species are unlikely to occur within the Subject Land.

4.3 Threatened Fauna

BioNet and PMST searches revealed 33 threatened fauna occur, or have potential to occur, within a ~5km radius of the Subject Land.

Table 5. Threatened fauna with potential to occur within the Subject Land.

Scientific Name	Common Name	BC Act	EPBC Act	Records within 5km
Anthochaera phrygia	Regent Honeyeater	E	CE	1
Artamus cyanopterus cyanopterus	Dusky Woodswallow	V	-	3
Burhinus grallarius	Bush Stone-curlew	E	-	4
Calidris ferruginea	Curlew Sandpiper	E	CE	3
Callocephalon fimbriatum	Gang-gang Cockatoo	E	E	3

Scientific Name	Common Name	BC Act	EPBC Act	Records within 5km
Chthonicola sagittata	Speckled Warbler	V	-	1
Circus assimilis	Spotted Harrier	V	-	2
Climacteris picumnus victoriae	Brown Treecreeper (eastern subspecies)	V	V	10
Daphoenositta chrysoptera	Varied Sittella	V	-	1
Dasyurus maculatus	Spotted-tailed Quoll	V	E	1
Epthianura albifrons	White-fronted Chat	V	-	7
Falco subniger	Black Falcon	V	-	8
Gallinago hardwickii	Latham's Snipe	V	V	17
Glossopsitta pusilla	Little Lorikeet	V	-	1
Hieraaetus morphnoides	Little Eagle	V	-	20
Hirundapus caudacutus	White-throated Needletail	V	V	1
Lathamus discolor	Swift Parrot	E	CE	5
Macrotis lagotis	Bilby	E	V	1
Melithreptus gularis gularis	Black-chinned Honeyeater (eastern subspecies)	V	-	1
Myotis macropus	Southern Myotis	V	-	2
Neophema pulchella	Turquoise Parrot	V	-	1
Ninox connivens	Barking Owl	V	-	4
Petaurus norfolcensis	Squirrel Glider	V	-	107
Petaurus norfolcensis	Squirrel Glider in the Wagga Wagga Local Government Area	E	-	107
Petroica boodang	Scarlet Robin	V	-	5
Petroica phoenicea	Flame Robin	V	-	6
Phascolarctos cinereus	Koala	E	E	1
Polytelis swainsonii	Superb Parrot	V	V	30
Pteropus poliocephalus	Grey-headed Flying-fox	V	V	83
Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	V	-	1
Stagonopleura guttata	Diamond Firetail	V	V	4
Stictonetta naevosa	Freckled Duck	V	-	1
Tyto novaehollandiae	Masked Owl	V	-	1

V – Vulnerable; E – Endangered; EP – Endangered Population; CE – Critically Endangered

The degraded vegetation within the Subject Land would only provide low-quality foraging habitat for threatened species. There was no breeding habitat identified (in the form of hollow-bearing trees, rocky outcrops/ caves, waterbodies, large trees or human-made structures).

Due to the absence of suitable habitat constraints and/ or the degraded nature of potential habitat and historical clearing, it was determined that the habitat is substantially degraded such that potential threatened fauna are unlikely to utilise the Subject Land.

4.4 Migratory Species

Database searches revealed eight migratory terrestrial species, or their habitat, are known to occur within the Subject Land (**Table 6**). These species are unlikely to occur due to the lack of suitable habitat in the Subject Land (i.e. ornamental tree dominated) and these species do not breed in Australia.

Table 6. Migratory terrestrial species with potential to occur in the Subject Land.

Species	EPBC Act Status
Actitis hypoleucos (Common Sandpiper)	Migratory, CAMBA, JAMBA, ROKAMBA
Calidris acuminata (Sharp-tailed Sandpiper)	Migratory, CAMBA, JAMBA, ROKAMBA
Calidris ferruginea (Curlew Sandpiper)	Critically Endangered, Migratory, CAMBA, JAMBA, ROKAMBA
Calidris melanotos (Pectoral Sandpiper)	Migratory, JAMBA, ROKAMBA
Gallinago hardwickii (Latham's Snipe)	Vulnerable, Migratory, JAMBA, ROKAMBA
Hirundapus caudacutus (White-throated Needletail)	Vulnerable, Migratory, CAMBA, JAMBA, ROKAMBA
Motacilla flava (Yellow Wagtail)	Migratory, CAMBA, JAMBA, ROKAMBA

CAMBA = China-Australia Migratory Bird Agreement, JAMBA = Japan-Australia Migratory Bird Agreement, ROKAMBA = Republic of Korea-Australia Migratory Bird Agreement and Bonn = Convention on the Conservation of Migratory Species of Wild Animals

5. IMPACT SUMMARY

The proposed activity will require the removal/ trimming of:

- 0.40ha of Miscellaneous Ecosystems - Ornamental Plantings, and
- 0.41ha of Miscellaneous Ecosystems - Highly Disturbed areas with no or limited Native Vegetation.

All vegetation proposed for removal provides low-quality foraging habitat for threatened fauna. Within the context of the surrounding landscape, it is unlikely this vegetation would be utilised given the presence of superior habitats adjoining the Subject Land, and in the broader landscape. Further, it is considered unlikely that any threatened species would occupy the Subject Land due to evidence of ongoing disturbance (railway, roads, residential housing). As such, no threatened flora or fauna are likely to be significantly impacted.

6. LEGISLATION

6.1 Matters of National Environmental Significance

Under the EPBC Act, a proponent must not take an action if that action will have, or is likely to have, a significant impact on matters protected under the EPBC Act, referred to as MNES. The EPBC Act identifies eight MNES:

- World Heritage properties
- National Heritage places
- Wetlands of international importance (those listed under the Ramsar Convention)
- Listed threatened species and communities
- Migratory species listed under international agreements
- Great Barrier Reef Marine Park
- Commonwealth marine areas
- Nuclear actions

The PMST identified the following as potentially occurring within the Subject Land or surrounding area:

- 3 Threatened Ecological Communities
- 43 Threatened species
- 8 Migratory species

No MNES have been identified in or adjoining the Subject Land.

6.2 State Environmental Planning Policy (Resilience and Hazards) 2021

The State Environmental Planning Policy (Resilience and Hazards) 2021 (Resilience and Hazards SEPP) commenced on the 1st of March 2022 and replaces the following former SEPPs:

- State Environmental Planning Policy (Coastal Management) 2018
- State Environmental Planning Policy 33 – Hazardous and Offensive Development, and
- State Environmental Planning Policy 55 – Remediation of Land.

The Subject Land is not situated within the 'Coastal Zone' therefore this SEPP does not apply.

6.3 *Fisheries Management Act 1994*

The FM Act aims to conserve, develop, and share the fishery resources of NSW for the benefit of present and future generations including conserving fish stocks and key fish habitats and promoting ecologically sustainable development.

The proposed activity does not require works within mapped KFH, nor did threatened aquatic species or marine vegetation protected under the FM Act occur within the Subject Land. As such, the activity would not impact upon KFH, nor are there any legislative requirements or notifications required under this Act.

6.4 *Biosecurity Act 2015*

The *Biosecurity Act 2015* (NSW) provides a framework for the prevention, elimination and minimisation of biosecurity risks posed by an activity as a matter of biosecurity. As defined in Part 3, section 23 of this Act,

any non-conformance by an individual is defined as guilty of an offence. No priority weeds were identified within the Subject Land at the time of the survey:

All priority weeds are to be appropriately managed in accordance with the *Biosecurity Act 2015*.

7. MANAGEMENT MEASURES AND IMPLEMENTATION

The potential impacts on biodiversity identified for the Proposed Change can be appropriately managed in accordance with the Conditions of Approval and through implementation of the updated management measures outlined in the Preferred Infrastructure Report Submissions Report for the Project.

8. CONCLUSION

The proposed activity will require the removal/ trimming of:

- 0.40ha of Miscellaneous Ecosystems - Ornamental Plantings, and
- 0.41ha of Miscellaneous Ecosystems - Highly Disturbed areas with no or limited Native Vegetation.

No impacts to threatened species, populations or ecological communities are expected as a result of the proposed activity.

Although outside the assessed construction boundary for the Project, the biodiversity impacts are considered consistent with the initial assessment (WSP, 2023), and no further offsets (ecosystem or species) would be required.

If you have any queries, please feel free to contact me.

Sincerely,

Alex Graham *BSc (Biology), Grad Dip (Bushfire Protection)*
Director/ Principal Ecologist - Accredited Biodiversity Assessor (BAAS19040)
E: alex.graham@ececology.com.au

9. REFERENCES

Department of Climate Change, Energy, the Environment and Water (DCCEEW) (2024) Protected Matters Search Tool

Department of Planning, Industry and Environment (DPIE, 2020) Surveying threatened plants and their habitats - NSW survey guide for the Biodiversity Assessment Method

NSW Department of Climate Change, Energy, the Environment and Water (NSW DCCEEW) (2024a) NSW BioNet Atlas

NSW Department of Climate Change, Energy, the Environment and Water (NSW DCCEEW) (2024b) NSW State Vegetation Type Map

NSW Department of Climate Change, Energy, the Environment and Water (NSW DCCEEW) (2024c) BioNet Vegetation Classification

NSW Department of Climate Change, Energy, the Environment and Water (NSW DCCEEW) (2024d) eSPADE

NSW Department of Primary Industries (DPI) (2024) Fisheries NSW Spatial Data Portal

Office of Environment and Heritage (OEH) (2018) Threatened Species Test of Significance Guidelines\

WSP (2023) Albury to Illabo Inland Rail- Revised Technical Paper 8: Biodiversity Assessment Report

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APPENDIX F

Unexpected Finds Procedure (Flora and Fauna)

Discovery of fauna or flora species or endangered ecological community

Stop all work which is likely to impact on the species or community.
The person who discovered the find is to notify all project personnel woking in the immediate vicinity of the find(s) so that any potential disturbance activity can be halted.

Notify Site Supervisor and Environmental Manager

All personnel

Notify and consult the project ecologist and install deliniation (for flora and/ or fauna habitat)
Project ecologist to confirm if the species or community would be potentially impacted and confirm appropriateness of deliniation/ initial measures.

Is the species or community a listed threatened entity under State or Commonwealth legislation?

No

Yes

Has impact to the species or community in that location been assessed in the EAD and will the absolute clearing extent be within the restrictions posed by Condition E23?

Yes

The impact to the species or community was a assessed by the EAD and is permissible in that location (Any conditions of the Infrastructure Approval must also be considered). **The impact is therefore permissible**

No

The impact to the species or community was NOT addressed in the EAD , follow up investigation is required

Martinus Rail to consult with the Project Ecologist and ARTC when developing actions to assess and manage the find.

For EPBC Act species (and as required under the BC Act) conduct and assessment of significance and review controls to mitigate impacts. Where relevant consider additional controls to minimise impacts to the unexpected find

Would the proposed action have significant impact on the species or community **(Significance Review)**

No

Yes

Record find and follow up actions

Biodiversity assessment (with the Significance Review) to be prepared and implemented (or alternatively the BDAR is to be updated with new impacts)

Measures which can be implemented prior to impact are to be implemented.

Measures required to be implemented at a later date (i.e. any revision to the offsets) with be implemented following impacts

Records of the find to be submitted to BioNet

Consult with DPHI/BCS as relevant regarding propsed measures, impacts and follow up actions

Confirm with DPHI/BCS (as relevant) that proposed controls are adequate to proceed.

Records of the find to be submitted to BioNet.

Update managemnet plans and sensitive area mapping as required

Martinus Rail Environment Manager or delegate authorises Unexpected Finds Hold Point Release

Recommence works with updated controls where necessary

APPENDIX G

Spill Response Procedure

SPILL RESPONSE PROCEDURE

A2I | Albury to Illabo

CONTRACT NUMBER: 0052

PROJECT DOCUMENT NUMBER:

6-0052-210-PES-00-PR-0002

Document Control

DOCUMENT TITLE:	Spill Response Procedure			
DOCUMENT OWNER:	Chris Standing – Environment, Approvals and Sustainability Manager (A2P)			
PREPARED BY:	Aidann Stathis	**TITLE:**	Environmental Approvals Support – A2I	
SIGNATURE:			**DATE:**	14 August 2024
REVIEWED BY:	Simon Fisher	**TITLE:**	Environmental Approvals Lead – A2I	
SIGNATURE:			**DATE:**	14 January 2025

Approved by

NAME	TITLE	SIGNATURE	DATE
Chris Standing	Environment, Approvals and Sustainability Manager		14 January 2025

Revision History

REVISION	REVISION DATE	AMENDMENT	DATE TO CLIENT
A	16 August 2024	First revision for client and ER review	16 August 2024
B	9 October 2024	Second revision for client and ER review and consultation	9 October 2024
0	14 January 2025	Issued for Information	14 January 2025

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1 INTRODUCTION

1.1 Scope and Purpose

This Spill Response Procedure (this Procedure) forms part of the Stage A Construction Soil and Water Management Plan for the Inland Rail – Albury to Illabo project (the project).

The purpose of this Procedure is to address Condition of Approval (CoA) C13(h), as well as to describe the emergency spill response approach that will be employed by all project site personnel and sub-contractors during construction of the project.

This Procedure is to be applied in the event of a chemical, fuel or oil spill that arises due to the project activities.

1.2 Responsibilities, Inductions and Training

The Martinus Rail Environment, Approvals and Sustainability Manager (MR ESM) is responsible for ensuring this Procedure is effectively implemented, and all site personnel are aware of the requirements of this Procedure.

All site personnel (including sub-contractors) will undertake an induction which will include details relating to this procedure.

Training will also occur through toolbox talks, pre-starts and targeted training, as required, and following any spills that occur on the project.

1.3 Environmental Requirements

This Procedure has been developed to meet the CoA identified in Table 1.

TABLE 1: APPLICABLE COA TO THIS PROCEDURE

CoA	Requirement	Where addressed
C13	The Soil and Water Management Sub-plan must include: h) a spill response procedure;	This Procedure

There applicable Updated Management Measures (UMMs) identified within the PIR RtS specific for spill response management are provided in Table 2.

TABLE 2: APPLICABLE UMMS TO THIS PROCEDURE

No.	Requirement	Where addressed
BD15	Refuelling will be conducted outside of waterfront land, so far as it practicable, with appropriate measures in place to avoid impacts to waterways, aquatic habitats and groundwater. This includes spill kits always kept with maintenance vehicles and or machinery within 100 m of a watercourse.	Section 2.1 Section 2.3

2 PROCEDURE

2.1 Preventative Spill Measures

In order to minimise the potential for environmental impacts to water and soil from spills the following will be undertaken:

- Training in use of spill containment materials, their locations and spill response will be undertaken proactively as required particularly for personnel who are working within or near to aquatic environments and are involved in regularly handling and using potentially contaminating substances (e.g. personnel who are carrying out refuelling activities);
- Unless unavoidable, washing and maintenance of vehicles and mechanical plant will occur at least 50 m from waterbodies;
- Refuelling will be conducted outside of waterfront land, so far as it practicable, with appropriate measures in place to avoid impacts to waterways, aquatic habitats and groundwater. This includes spill kits always kept with maintenance vehicles and or machinery within 100 m of a watercourse;
- Plant and equipment will undergo regular checks and subsequent repair for potential leakages or worn hydraulic hoses;
- All chemicals including fuels and oils will be stored when not in use in bunded areas;
- All chemicals and hydrocarbons will be stored and handled as per manufacturer's instructions.

Regular inspection of chemical storage areas will be undertaken to assess compliance of the above measures.

2.2 Reactive Spill Measures

All spills are to be managed in accordance with the steps detailed in Figure 1. This includes the following steps:

1) Assess the situation;
2) Cease work and if safe to do so, control the spill;
3) Report the incident;
4) Clean up the spill;
5) Dispose of contaminated materials;
6) Investigation and reporting.

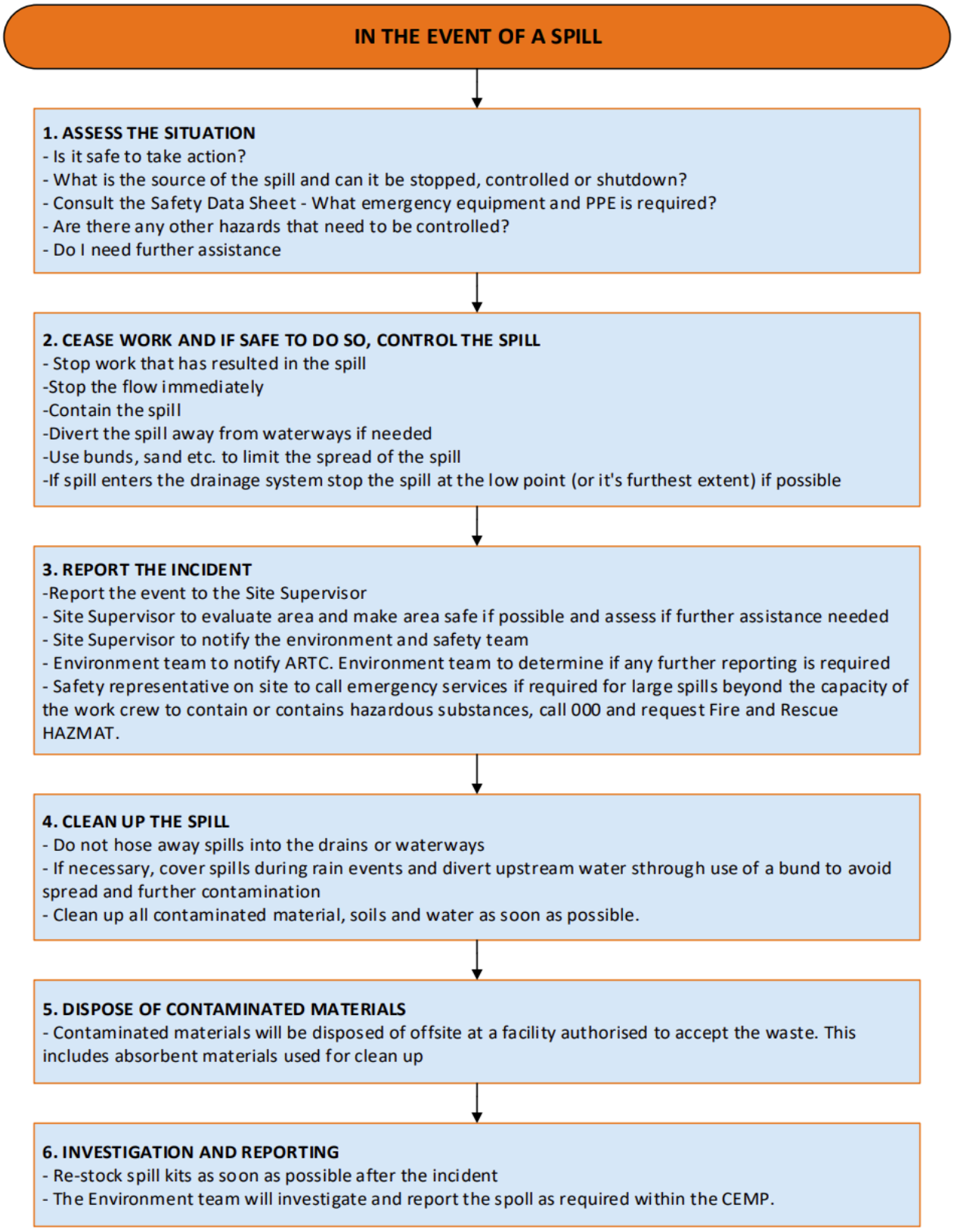

FIGURE 1: SPILL RESPONSE PROCEDURE FLOW CHART

2.3 Spill Containment

Spill containment materials such as those listed in Table 3 referred to as 'spill kits' will be kept and stocked on site at any location where there is significant risk/potential impact of a spill. Examples of potential locations include refuelling areas, chemical storage or where works are within the vicinity of waterways. Spill kits could be stored in a fixed location or be mobile. Spill kits will be placed in dedicated, visible and accessible locations.

Spill kits will always be kept with maintenance vehicles and or machinery within 100 m of a watercourse.

The spill kits will be appropriately sized according to the volume of chemicals and fuels being stored or used and the activities which are being undertaken. All staff would be made aware of the location of the spill kit and trained in its use. Spill kits would be restocked as soon as possible after each use, with used material replaced.

Table 3 provides examples of appropriate application of material types. Spill kit inspections are to be undertaken on regular intervals such as during the weekly environmental site inspections detailed within the Construction Environmental Management Plan. The inspections would check that spill kits are present at the required locations, are accessible and appropriately stocked.

TABLE 3: SPILL CONTAINMENT MATERIALS

Product	Description/Application
Pads, pillows and socks	▪ Used to clean-up (absorb) small to medium liquid spills on land rather than containing; ▪ Thin absorbent mats placed over spills; ▪ Cushion shaped products containing absorbent fibres, used directly under a leak or drip; ▪ Absorbent socks placed at the low point of a spill; ▪ Consider the need to have a spill kit containing these at the source of the activity and extras in-stock on site; ▪ If these materials are not enough to clean-up the spill, consider using absorbent granular materials or equivalent.
Sorbents	▪ Used during clean-up, sorbents are materials that soak up the spill such as saw dust, granules or peat mixture; ▪ Spread the sorbent over the contaminant after control materials have been applied; ▪ Recover the contaminant/sorbent mixture using shovels/excavator bucket or similar; ▪ Sorbents can be used from small to large spills.
Drip trays and washout bunds	▪ Used to contain incidental leaks during plant and equipment maintenance; ▪ Containers should be maintained, and liquids/sludge collected; ▪ Consider if these containers are not sufficient to contain leaks/washout then construction of permanent bunding may be suitable.
Manual recovery	▪ Used to physically remove the contaminant either by excavating the contaminant and adjacent soil on land or pump / vacuum truck removal for contaminant and adjacent liquid/sludge in waterbodies; ▪ Control materials should be installed prior to manual recovery to prevent spread during recovery task.

2.4 Incident management

Environmental incidents will be managed (including notifications and investigations) in accordance with the Construction Environment Management Plan.

MARTINUS

APPENDIX H

Unexpected Finds Procedure (Contamination)

UNEXPECTED FINDS PROCEDURE FOR CONTAMINATION

MANAGEMENT AND RESPONSIBILITY

INDUCTION/ TOOLBOX TALKS
All personnel are to receive Project/ Site Inductions and on-going training via Toolbox Talks

All personnel

EVIDENCE OF CONTAMINATION OBSERVED

STOP ALL WORK IN THE AREA IMMEDIATELY AND

PREVENT FURTHER ACTIVITY IN THE AREA.

NOTIFY THE SITE SUPERVISOR AND SAFETY MANAGER , ENVIRONMENT MANAGER AND CORDON OFF AREA.

Site Supervisor
Project Manager
Lead Safety Manager
Environment Manager

- Do not touch or disturb the item/ material
- Delineate the find from the rest of the worksite
- Inform the Environment Manager regarding the potential contamination find. The following detail should be provided:
  - The location of the potential contamination
  - Visual appearance
  - Odour (if any)
  - Depth
  - Surrounding material and works being undertaken at the time of discovering the material
- WHS and EM to determine immediate actions to prevent WHS and ENV issues
- EM to notify IR of Unexpected Find

ASSESSMENT

Contamination Consultant to assess and classify the unexpected find in accordance with the NSW regulatory requirements, including sampling and laboratory analysis.

Contamination Consultant

MANAGEMENT STRATEGY

- Contamination Consultant to develop a provide a plan for managing and/or remediating the material
- IR/ARTC to review and accept the proposed strategy

Environment Manager
Contamination Consultant
IR/ARTC

STRATEGY IMPLEMENTATION

- Implement the approved management and/or remediation as per the Contamination consultants direction
- IR/ARTC to review and accept the proposed strategy (if required)

Contamination Consultant
Site Supervisor
Environment Manager

Once the contamination find has been mitigated and clearance report received from the contamination consultant. EM is to notify Project Manager who is to approve re-commencement of works in the vicinity of the remediation site. IR/ARTC will review clearance report and must provide approval/acceptance prior to recommencing works

Environment Manager
Project Manager
IR/ARTC

Recommence works

Asbestos

An unexpected find occurs when Asbestos Containing Material (ACM) not identified in the Asbestos Register is found on site. In the event of an unexpected find the below steps are to be followed:

1. The area is to be demarcated, works in the area to cease and workers notified
2. Notify the Site Supervisor first. Site Supervisor will then notify the Project Manager, Safety Manager and Environment Manager.
3. Notify IR/ARTC within five (5) business days after the discovery.
4. Control dust by with dust suppression
5. A certified occupational hygienist is to be engaged to provide recommendations to manage the area
6. Occupational hygienist arrange for testing of the suspected ACM and monitoring of the area (if required)
7. The area is to be made safe as per the certified

Contamination Consultant

Works undertaken in relation to Contamination to investigate, assess, remediate or validate remediation or land use suitability shall be undertaken by a suitably qualified person holding valid 'Site Contamination' certification under the Certified Environment Practitioners Scheme (CEnvP) - Environment Institute of Australia and New Zealand or Certified Professional Soil Scientist – Contaminated Site Assessment and Management under the Soil Science Australia Certification Scheme.

With relevant qualifications and experience in keeping with the National Environmental Protection (Assessment of Site Contamination) Measure 1999 Amendment 2013 (ASC NEPM 2013).

Procedure

1) Potential contaminated soil/material encountered during construction activities. STOP ALL WORK AND NOTIFY IMMEDIATELY
2) Undertake a site/area contamination investigation. The Environment Manager (EM) is to assess the situation and if considered necessary, commission a suitably qualified contamination specialist to undertake a contamination investigation in the area of the find.
3) The consultation specialists in consultation with the EM will determine the appropriate management measures to be implemented. This may include leaving contamination undisturbed if it does not pose unacceptable risks to human health or the environment, capping of contamination, treatment or offsite disposal. If the material is to be disposed of offsite, ensure the waste facility is appropriately licensed. Contaminated material requiring off-site disposal is to be classified in accordance with the Waste Classification Guidelines – Part 1: Classification of Waste, NSW EPA 2014. Maintain records to demonstrate waste material was appropriately managed
4) If the material is determined to be Acid Sulfate Soil (ASS) or Potential Acid Sulfate Soil (PASS), an Acid Sulfate Soil Management Plan would be prepared and implemented in accordance with the Acid Sulfate Soil Manual (Acid Sulfate Soil Management Advisory Committee, August 1998).
5) Prior to any contamination investigation, management or remediation activities appropriate work method documentation encompassing safety and environmental risk management will be prepared for review and approval by the EM and IR
6) If required a Remedial Action Plan (RAP) will be prepared in accordance with legislative requirements
7) If material is to be treated and reused or left in situ ensure appropriate records are maintained and location of material (survey) is undertaken and provided to IR
8) Once the contamination find has been mitigated and clearance report received from the contamination consultant. This report is to be submitted to IR/ARTC for acceptance prior to recommencement of work
9) EM is to notify Project Manager who is to approve re-commencement of works in the vicinity of the remediation site.

APPENDIX I

Flooding and Bushfire Emergency Management Plan

FLOODING AND BUSHFIRE EMERGENCY MANAGEMENT PLAN - STAGE A

Albury to Illabo | A2I

CONTRACT NUMBER: 0052

PROJECT DOCUMENT NUMBER:

6-0052-210-PMA-00-PL-0008

Document Control

DOCUMENT TITLE:	Construction Flood and Bushfire Emergency Management Plan – Stage A			
DOCUMENT OWNER:	Chris Standing – Environment, Approvals and Sustainability Manager			
PREPARED BY:	Adrian Broger	**TITLE:**	Environmental Approvals Support – A2I	
SIGNATURE:	ABroger		**DATE:**	13 December 2024
REVIEWED BY:	Alison Kriegel	**TITLE:**	Environmental Approvals Support – A2I	
SIGNATURE:	Alison Kriegel		**DATE:**	13 December 2024

Approved by

NAME	TITLE	SIGNATURE	DATE
Andy Williams	Project Director		22 January 2025

Revision History

REVISION	REVISION DATE	AMENDMENT	DATE TO CLIENT
A	15 August 2024	First draft for client and ER review	15 August 2024
B	30 September 2024	Second draft for client and ER review and consultation with SES, Hume Zone and Riverina Zone Bush Fire Management Committees, DCCEEW and relevant councils	30 September 2024
0	13 December 2024	For ER endorsement	23 January 2025

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GLOSSARY

TERM	DEFINITION
AEP	Annual Exceedance Probability
APZ	Asset protection zone
ARTC	Australian Rail Track Corporation
BFMCMPs	Hume Zone Bush Fire Risk Management Plan (Hume Zone Bush Fire Management Committee, 2016) and the Riverina Bush Fire Risk Management Plan (Riverina Bush Fire Management Committee, 2015)
CCS	Community Communication Strategy
CEMF	Construction Environmental Management Framework
CEMP	Construction Environmental Management Plan – Stage A
CFBEMP	Construction Flood and Bushfire Emergency Management Plan – Stage A (this Plan)
CSWMP	Construction Soil and Water Management Plan – Stage A
CoA	Conditions of Approval
Construction	Includes work required to construct the CSSI as defined in the Project Description described in the documents listed in Condition A1 including commissioning trials of equipment and temporary use of any part of the CSSI but excluding Low Impact Work which is carried out or completed prior to approval of the CEMP
CSSI	Critical State Significant Infrastructure
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DPE	NSW Department of Planning and Environment
EAD	Environmental Assessment Documentation that includes: ▪ Inland Rail – Albury to Illabo Environmental Impact Statement (ARTC, August 2022); ▪ Albury to Illabo Response to Submissions (ARTC, November 2023); ▪ Albury to Illabo Preferred Infrastructure Report (ARTC, November 2023); ▪ Albury to Illabo Preferred Infrastructure Report Response to Submissions (ARTC, February 2024); ▪ Inland Rail – Albury to Illabo (SSI-10055) Response to request for additional information – Air Quality Assessment (letter dated 1 May 2024); ▪ Part 1 - Revised Technical Paper 8: Biodiversity Development Assessment Report (WSP, February 2024); ▪ Part 2 - Revised Technical Paper 8: Biodiversity Development Assessment Report (WSP, February 2024).
EIS	Environmental Impact Statement
EMP	Emergency Management Plan
Environmental Representative (ER)	The Environmental Representative(s) for the CSSI approved by the Planning Secretary
EMP	Emergency Management Plan
ERG	Emergency Response Guide
Fire Authority	A generic term to describe the government fire prevention and control agencies that exist in the various Australian States.
Fire Danger Period	A calendar period which may be declared by individual states during which restrictions on fires may be imposed. Typically between October/December and April/June. TFB days will typically occur during this period.
Fire Spotter/Watch	A person directed by the Nominated Site Representative to lookout for fire indications before, during, and after completion of the hot work. The person shall carry out no other tasks associated with performing the hot work.

TERM	DEFINITION
Hot Work	Work that has the potential to cause a fire. This includes structural welding, rail welding, oxy gas cutting or heating, rail grinding, cable joining, and any other heat or spark producing operation. (this definition of Hot Work is not to be confused with other uses of the term, such as "Work in High Temperatures" for which there are regulatory requirements regarding prolonged heat exposure etc.)
MR	Martinus Rail
MR ESM	Martinus Rail Environment, Approvals and Sustainability Manager
Nominated Site Representative	A person, normally an Martinus employee or a contractor to Martinus, who is nominated to control the hot work on the worksite. This person may nominate themselves or be nominated by others but shall be on site for the hot work.
NSW	New South Wales
PIR	Preferred Infrastructure Report
Planning Secretary	Secretary of the NSW Department of Infrastructure, Housing and Infrastructure, or delegate
PMF	Probable Maximum Flood
Primary CoA/UMM	CoA and/or UMMs that are specific to the development of this Plan
POEO Act	*NSW Protection of Environment Operations Act 1997*
RFS	NSW Rural Fire Service
SES	State Emergency Services
TOBAN	Total Fire Ban Day(s)
Total Fire Ban (TFB)	A ban on the lighting of fires or the conduct of fire-inducing activities which is imposed by a State Government in accordance with that state's legislation for a defined period (often a 24-hour day period)
UMM	Updated Environmental Management Measures
VMS	Variable messaging sign(s)

1 INTRODUCTION

1.1 Project Overview

Inland Rail is an approximate 1,600 kilometres (km) freight rail network that will connect Melbourne and Brisbane via regional Victoria, New South Wales (NSW) and Queensland. The Inland Rail route would involve using approximately 1,000 km of existing track (with enhancements and upgrades where necessary) and 600 km of new track, passing through 30 local government areas (LGAs). Inland Rail will accommodate double-stacked freight trains up to 1,800 metres (m) long and 6.5 m high.

The Australian Government has confirmed that Inland Rail is an important project to meet Australia's growing freight task, improve road safety and help decarbonise the economy. Inland Rail will enhance our national freight and supply chain capabilities, connecting existing freight routes through rail, roads and ports, and supporting Australian's growth. Inland Rail is being delivered by Australian Rail Track Corporation (ARTC).

Comprising 12 sections, a staged approach is being undertaken to deliver Inland Rail. Each of these projects can be delivered and operated independently with tie-in points to the existing railway. Work south of Parkes has been prioritised, which will enable Inland Rail to initially connect to existing rail networks between Melbourne, Sydney, Perth and Adelaide via Parkes and Narromine. The Parkes to Narromine (P2N) and Narrabri to North Star Phase 1 (N2NS P1) sections are complete.

The project will enable enhancement works to structures and sections of track along 185 km of the existing operational standard-gauge railway in the Albury to Illabo (A2I) section of the Inland Rail program. Enhancement works are required to provide the increased vertical and horizontal clearances required for double-stacked freight trains. Works would include track realignment, lowering and/or modification within the existing rail corridor, modification, removal or replacement of bridge structures (rail, road and/or pedestrian bridges), raising or replacing signal gantries, level-crossing modifications and other associated works.

A detailed project description is provided in Section 4 of the Construction Environmental Management Plan (CEMP).

1.2 Planning Context

The Inland Rail – Albury to Illabo project (the project) is declared State significant infrastructure (SSI) and critical State significant infrastructure (CSSI) under Division 5.2 of the *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act). The project is permissible without development consent and is subject to assessment and approval by the NSW Minister for Planning and Public Spaces.

An environmental impact statement (EIS) was prepared to support ARTC's application for approval of the proposal in accordance with the requirements of the EP&A Act and the environmental assessment requirements of the Secretary of the (then) NSW Department of Planning, Industry and Environment (the SEARs) (now the Department of Planning, Housing and Infrastructure (DPHI)).

The EIS was placed on public exhibition from 17 August 2022 to 28 September 2022. During the exhibition period, interested stakeholders and members of the community were able to review the EIS online, participate in consultation and engagement activities held by ARTC, and make a written submission to the DPE for consideration in its assessment of the proposal.

In accordance with section 5.17(6)(b) of the EP&A Act, on 13 April 2023 the Planning Secretary directed ARTC to submit a Preferred Infrastructure Report (PIR) that provides further assessment of traffic and transport, noise and vibration, and air quality impacts. The PIR was also prepared to consider changes to the exhibited proposal that have arisen as a consequence of these further assessments and related submissions.

1.3 Statutory Context and Approval

The project was assessed as part of the following documents:

- Inland Rail – Albury to Illabo Environmental Impact Statement (ARTC, August 2022);
- Albury to Illabo Response to Submissions (ARTC, November 2023);
- Albury to Illabo Preferred Infrastructure Report (ARTC, November 2023);
- Albury to Illabo Preferred Infrastructure Report Response to Submissions (ARTC, February 2024);
- Inland Rail – Albury to Illabo (SSI-10055) Response to request for additional information – Air Quality Assessment (letter dated 1 May 2024);
- Part 1 - Revised Technical Paper 8: Biodiversity Development Assessment Report (WSP, February 2024);

- Part 2 - Revised Technical Paper 8: Biodiversity Development Assessment Report (WSP, February 2024).

Together these documents are referred to as the Environmental Approvals Documentation (EAD).

Approval for the project under the EP&A Act was granted by the Minister for Planning on 8 October 2024.

1.4 Scope of this Stage A Plan

The scope of this Construction Flooding and Bushfire Emergency Management Plan (CFBEMP or this Plan) is to describe how the project will manage potential flood and bushfire emergency impacts during Stage A construction of the project (refer Section 1.4.1).

This Plan addresses the requirements of the EAD including incorporating the relevant updated management measures (UMMs), and CoAs. SMART (Specific, Measurable, Achievable, Realistic and Timely) principles have been considered and applied during the preparation of this Plan which will be implemented for the duration of construction.

This Plan is applicable to all activities during construction of the project, including all areas where physical works will occur or areas that may otherwise be impacted by the construction works, and under the control of Martinus Rail. All Martinus Rail staff and sub-contractors are required to comply with and operate fully under the requirements of this Plan and related environmental management plans, over the full duration of the construction program.

A copy of this Plan will be kept on the premises for the duration of construction.

1.4.1 Staging

The Staging Report describes how the construction and operation of the project will be staged in accordance with CoA A9, A10 and A11. A staged approach has been primarily adopted for the project to prioritise critical activities that are reliant upon infrequent and fixed rail possessions. It overall de-risks the construction program for the project, ensuring that the project is operational within the timeframe committed to by the NSW Government.

As required by CoA A14 and C16, a Construction Environmental Management Framework (CEMF) has been prepared to be consistent with the Staging Report. The CEMF has been prepared to facilitate the preparation and approval of CEMPs, Sub-plans, and construction monitoring plans (CMPs) during the construction phase of the project. It includes a guide to the general environmental, stakeholder and community management requirements which will be implemented during construction and provides a road map for environmental management documentation.

In accordance with CoA C16, the CEMF must be endorsed by the Environmental Representative (ER) and then submitted to the Planning Secretary (for approval) no later than one (1) month before the lodgement of any CEMP, CEMP Sub-plan, or Construction Monitoring Program.

This Plan has been prepared to be consistent with the Staging Report and the CEMF, as required by CoA A11 and A12, as well as C16. This Plan has therefore been prepared to address how Martinus Rail will manage potential flood and bushfire emergency impacts during construction of the first stage of the project – Stage A.

Stage A, as described in Section 2.1.2 of the Staging Report will comprise preparation activities for the March 2025 rail possession (Substage A1), the rail possession activities themselves (Substage A2), and post-possession activities (Substage A3). No construction works will occur at the follow enhancement sites as part of Stage A:

- Murray River Bridge;
- Albury Station pedestrian bridge;
- Albury Yard clearances;
- Riverina Highway bridge;
- Billy Hughes bridge;
- Culcairn pedestrian bridge;
- Culcairn Yard clearances;
- Uranquinty Yard clearances;
- Pearson Street bridge (with exception of short-term utility works);
- Cassidy Parade pedestrian bridge (with exception of short-term utility works);
- Edmondson Street bridge (with exception of short-term utility works);
- Wagga Wagga Station pedestrian bridge;
- Wagga Wagga Yard clearances;
- Bomen Yard clearances;
- Kemp Street bridge;

- Junee pedestrian bridge.

This plan applies to the entirety of Stage A.

Based on the approved CEMF approach, this Plan will be endorsed for use by the ER.

Construction work during Stage A will generally include:

- Utility works, including drainage;
- Site establishment and operation;
- Traffic management and access, including material haulage;
- Minor clearing, grubbing and topsoil strip;
- Earthworks including preparation of pads and stockpiling;
- Track work including realignment and lowering;
- Gantry and signalling work.

1.5 Interactions With Other Managements Plans and Strategies

This Plan has the following interrelationships with other management plans and documents:

- Community Communication Strategy (CCS) which details procedures and processes for community notification, consultation and complaints management;
- The Stage A Construction Contamination and Hazardous Materials Management Sub-plan addresses the management of contaminated land, hazardous materials, and unexpected contaminated finds;
- The Stage A Construction Biodiversity Management Sub-plan addresses the management of flora and fauna;
- The Stage A Construction Soil and Water Management Sub-plan (CSWMP) addresses the management of soil and water including erosion and sediment control and potential impacts on surface and groundwater.

1.6 Consultation

1.6.1 Consultation For This Plan

In accordance with CoA C6(e), this Plan has been prepared in consultation with:

- SES;
- Hume Zone and Riverina Zone Bushfire Management Committees;
- DCCEEW;
- Wagga Wagga City Council;
- Albury City Council;
- Greater Hume Council;
- Junee Shire Council;
- Lockhart Shite Council.

The consultation report prepared for this Plan in accordance with CoA A8 outlines what feedback was provided (if any), and how stakeholders' responses have been addressed. A summary of consultation has been provided in Table 1.

TABLE 1: CONSULTATION SUMMARY – STAGE A

Stakeholder	Dates	Feedback provided	How addressed
SES	06/11/2024 – response from SES	No feedback on the plan.	NA
Hume Zone Bushfire Management Committees Riverina Zone Bushfire Management Committees	24/10/2024 – response received from Hume Zone and Riverina Bush Fire Management Committee. 04/11/2024 – response received from Junee Council representative on the Riverina BFMC.	▪ Additional controls needed during hot works. ▪ The project should make use of the Hazards Near Me app. ▪ There are no APZs referenced in the plan. ▪ Grasslands are BFPL and need to be accounted for in the plan. ▪ The rail corridor requires a vegetation management program created in perpetuity. ▪ Suggestions provided for the management of hot works. ▪ The project should use the Harvest Safety Alerts to trigger a review of safety systems. ▪ A flood study referenced in the EIS was not included in Section 3.1 of the plan.	▪ Section 6.1.4 updated to include additional controls and reference the risk assessment/permitting process. ▪ The project will use the Hazards Near Me app. ▪ A section on APZs has been added to the plan. ▪ The BFPL areas are taken from the EIS and have been checked against the latest publicly available BFPL maps. ▪ A vegetation management program is outside the scope of the project. ▪ The section on hot works has been updated. ▪ The harvest safety alert system will be used to inform construction planning.

Stakeholder	Dates	Feedback provided	How addressed
		▪ Questions raised over the validity of existing environment information for bushfire and flooding. ▪ Query over the indicative construction timeframes presented in Table 7. ▪ Issues raised regarding hot works and Total Fire Ban days. ▪ The UMM H2 should be reworded.	▪ The flood study has been added into Section 3.1.2. ▪ The existing environment section is taken from the EIS/PIR/RTS and will continue to be reviewed for accuracy as flood modelling is finalised. ▪ The timeframes in Table 7 are consistent with the approved project. ▪ The section on hot works and TFB days has been updated. ▪ UMM H2 can not be reworded without modifying the planning approval.
DCCEEW	11/10/2024 – Plan provided to DCCEEW for comment. 04/11/2024 – follow up attempt made seeking feedback from DCCEEW	No feedback provided.	NA
Wagga Wagga City Council	04/11/2024 – response received from Wagga Wagga Council	Wagga council has no comments on the plan.	NA
Albury City Council	11/10/2024 – FBFEMP issued to Council. 14/10/2024 – briefing held with Albury Council. 22/10/2024 to 12/11/2024 – 9 follow up attempts made to Council to provide comment on the Plan.	No comments received on the plan.	NA
Greater Hume Shire Council	12/11/2024 response received from Greater Hume Shite Council	Council confirmed they had no comments on the plan.	NA
Junee Shire Council	12/11/2024 – response received from Junee Council	▪ When does Stage B start? ▪ The consultation summary section has not been completed. ▪ Add reference to the BFMCMPs and bushfire danger periods for Junee.	▪ Stage B is currently due to commence in mid-2025. ▪ The consultation section has now been updated following the completion of consultation.

Stakeholder	Dates	Feedback provided	How addressed
		▪ Please review flood studies for Junee. ▪ Consideration should be included for upstream damage to land or property that results from creek impact or creek diversion. ▪ A review of fire extinguishing controls is required. ▪ Consideration to be given to sandbagging, ERSED controls, diversion etc as pre-flood mitigations.	▪ References to these BFMCMPs and bushfire danger periods have been added into the plan. ▪ Impacts as result of the project will continue to be reviewed as flood modelling ▪ The fire extinguishing controls have been reviewed and updated based on feedback from the consultation period. ▪ Pre-flood mitigation measures are captured in Section 6.2.2.
Lockhart Shire Council	04/11/2024 – response received from Lockhart Shire Council	Council had no comments on the FBEMP.	NA

1.6.2 Ongoing Consultation During Construction

Ongoing consultation between Martinus Rail, Inland Rail, ARTC, other construction projects, stakeholders, the community and relevant agencies regarding the management of flood and bushfire emergency risks on the environment will be undertaken during the construction of the project as required. The process for consultation is described in the CCS.

1.7 Endorsement and Approval

In accordance with CoA C3, CEMP(s) (and relevant CEMP sub-plans) not requiring the Planning Secretary's approval, but requiring ER endorsement, must be submitted to the ER no later than one (1) month before the commencement of construction or where construction is staged no later than one (1) month before the commencement of that stage. The CEMPs (and relevant CEMP sub-plans) must be endorsed by the ER as being consistent with the conditions of this approval and all undertakings made in the documents listed in CoA A1.

Construction will not commence until the relevant CEMP(s) and Sub-plans have been endorsed by the ER (as applicable and as identified in the CEMF approved under CoA C16), in accordance with CoA C15, and approved by the Planning Secretary in accordance with CoA C3 and C4.

Additionally, the CEMP and CEMP Sub-plans, as endorsed by the ER or approved by the Planning Secretary, including any minor amendments approved by the ER, must be implemented for the duration of Stage A of construction.

2 PURPOSE

2.1 Purpose

The purpose of this Plan is to describe how potential flood and bushfire emergency impacts will be managed during Stage A construction of the project.

2.2 Objectives

The key objective of this Plan is to ensure that impacts to the local community and environment from flood and bushfire emergency risks associated with the project are minimised. To aid in achieving this objective, this Plan incorporates the relevant flood and bushfire management measures from the following sources:

- The project EAD;
- Inland Rail – Albury to Illabo Infrastructure Approval CoA (SSI-10055);
- All relevant legislation and other requirements described in Section 3.1.1 of this Plan.

2.3 Targets

Targets for the management of flood and bushfire emergency risks during the project include:

- Full compliance with the relevant legislative requirements including CoA and UMMs;
- Follow correct procedures for monitoring, preparation and evacuation of construction areas prior to a flood or bushfire event and post event;
- Ensure training is provided in the form of inductions and toolboxes to all construction personnel on flood and bushfire risks, protection measures and evacuation procedures before they begin work on site.

2.4 Performance Outcomes

Performance outcomes identified in Chapter 27 of the EIS (Approach to mitigation and management) that are relevant to the management of flood and bushfire emergency management during Stage A construction of the project are identified in Table 2.

TABLE 2: PERFORMANCE OUTCOMES (CONSTRUCTION FLOOD AND BUSHFIRE EMERGENCY)

Performance outcomes	How performance outcome will be achieved
Impacts on dedicated evacuation routes are minimised, as far as practicable, in flood events up to and including the probable maximum flood.	Implement this Plan, particularly the management measures in Section 6, which have been developed to consider the requirements in Section 3.

2.5 SMART Principles

This Plan has been developed with the consideration of SMART principles. This was achieved as follows:

- **Specific**: The measures listed this Plan are specific to bushfire and flood emergency management during construction. They include the development and implementation of procedures tailored to address bushfire and flood risks;
- **Measurable**: The document provides specific measures, requirements, and references that enable the evaluation and measurement of the effectiveness of each control measure;
- **Achievable**: The control measures outlined in the document are practical and achievable within the construction context. They involve the implementation of plans, investigations, and management strategies that can be feasibly executed during the construction phase;
- **Relevant**: The measures are directly relevant to flood and bushfire management during construction. They address potential impacts, such as those associated with works in flood or bushfire prone land. These measures are designed to mitigate or prevent bushfire or flood impacts;
- **Time-bound**: The document specifies when each measure should be implemented, such as prior to and during construction. It also assigns responsibilities to specific roles, indicating the timeline and accountability associated with each measure.

3 ENVIRONMENTAL REQUIREMENTS – STAGE A

3.1.1 Legislation

Legislation and regulations relevant to flood and bushfire emergency management includes:

- *Environmental Planning and Assessment Act 1979* (EP&A Act);
- *Protection of the Environment Operations Act 1997* (POEO Act);
- *Rural Fire Act 1997*;
- *Fire and Rescue NSW Act 1989*;
- *Work Health and Safety Act 2011*;
- *State Emergency Service Act 1989*;
- *Water Act 2007* (Cth);
- *Water Amendment Act 2008* (Cth);
- *Water Act 1912* (NSW);
- *Water Management Act 2000* (NSW).

A register of legal requirements for the project is contained in Appendix A1 of the CEMP.

3.1.2 Guidelines and Standards

The main guidelines, specifications, and policy documents relevant to this Plan include:

- Environmental Management Plan Guideline – Guideline for Infrastructure Projects (DPIE, April 2020);
- Department of Infrastructure, Planning and Natural Resources Guideline for the Preparation of Environmental Management Plans (DIPNR, 2004);
- Floodplain Development Manual: The Management of Flood Liable Land (Department of Infrastructure, Planning and Natural Resources (DIPNR), 2005);
- Australian Rainfall and Runoff: A Guide to Flood Estimation (ARR, 2019, prepared by Ball et al., 2019);
- Flood Risk Management Manual (DPE 2023);
- Floodplain Risk Management Guide—Incorporating 2016 ARR in studies (Office of Environment and Heritage (OEH), 2019a)
- Guidelines for controlled activities on waterfront land (Department of Primary Industries (DPI), 2012b);
- Guidelines for developments adjoining land and water (OEH, 2013b);
- Murray–Darling Basin Plan 2012 (including water resource plans and water quality management plans) (Murray–Darling Basin Authority, 2012) (the Basin Plan 2012);
- The flood-related planning controls contained in local planning instruments relevant to the Stage A area -
    - Albury Local Environmental Plan 2010;
    - Greater Hume Local Environmental Plan 2012;
    - Lockhart Local Environmental Plan 2012;
    - Wagga Wagga Local Environmental Plan 2010;
    - Junee Local Environmental Plan 2012.
- Relevant local flood studies and plans;
    - Albury Floodplain Risk Management Study and Plan (WMAWater, 2016);
    - Culcairn Floodplain Risk Management Study and Plan (WMAWater, 2017a);
    - Henty Floodplain Risk Management Study and Plan (WMAWater, 2017b);
    - Jeralgambeth Creek at Illabo – Floodplain Risk Management Study and Plan ((Lyall & Associates, 2012);
    - The Rock Flood Study (WMAWater, 2014);
    - NSW Murray and Lower Darling Water Quality Management Plan (NSW DPI, 2019a);
    - Murrumbidgee Water Quality Management Plan (NSW DPI, 2019b);
    - Tarcutta, Ladysmith and Uranquinty Floodplain Risk Management Studies and Plans (GRC Hydro, 2021);

- Draft Wagga Wagga Major Overland Flow Floodplain Risk Management Study and Plan (WMAWater, 2021);
- Wagga Wagga Major Overland Flow Flood Study (WMAWater, 2011);
- The Lower Butlers Gully Flood Study (Lyall & Associates, 2009);
- Bungambrawatha Creek, Lavington, South Albury and West Albury flood study (Lyall & Associates, 2011);
- Eight Mile Creek Flood Study (URS, 2012).

- Australian Disaster Resilience Handbook 7, Managing the Floodplain: A Guide to Best Practice in Flood Risk Management in Australia (Australian Institute for Disaster Resilience, 2017);
- National Water Quality Management Strategy (Australian and New Zealand Environment and Conservation Council (ANZECC), 2018);
- AS 1940-2017 The storage and handling of flammable and combustible liquids;
- AS 3959-2018 Construction of buildings in bushfire-prone areas Standards Australia, Sydney;
- Safe Work Australia, Managing risks of storing chemicals in the workplace: Guidance material;
- NSW Rural Fire Service, 2019, Planning for Bushfire Protection – A guide for councils, planners, fire authorities and developers;
- Riverina Zone Bush Fire Management Committee (BFMC), 2008, Bush Fire Risk Management Plan;
- Hume Zone Bush Fire Management Committee (BFMC), Bish Fire Risk Management Plan;
- AS/NZS 3100:2018 Risk Management—Principles and Guidelines.

3.1.3 Minister's Conditions of Approval

The requirements of the CoA relevant to the development of this Plan are shown in Table 3. A cross reference is also included to indicate where the CoA is addressed in this Plan or other project management document. CoAs E39 to E46 relating to flooding are dealt with outside this plan.

TABLE 3: COA RELEVANT TO THIS PLAN

<table>
<tr><th>No.</th><th>Requirement</th><th>Where addressed</th></tr>
<tr><td>C5</td><td>CEMP(s) (and relevant CEMP sub-plans) not requiring the Planning Secretary's approval, but requiring ER endorsement, must be submitted to the ER no later than one (1) month before the commencement of construction or where construction is staged no later than one (1) month before the commencement of that stage. The CEMPs (and relevant CEMP sub-plans) must be endorsed by the ER as being consistent with the conditions of this approval and all undertakings made in the documents listed in Condition A1.</td><td>Section 1.7</td></tr>
<tr><td>C6</td><td>Except as provided by Condition C16 the following CEMP Sub-plans must be prepared in consultation with the relevant government agencies identified for each CEMP Sub-plan. Details of all information requested by an agency during consultation must be provided to the Planning Secretary as part of any submission of the relevant CEMP Sub-plan, including copies of all correspondence from those agencies as required by Condition A8.
<table>
<tr><th></th><th>Required CEMP Sub-plan</th><th>Relevant government agencies to be consulted for each CEMP Sub-plan</th></tr>
<tr><td>(g)</td><td>Flood and bush fire emergency management</td><td>SES, Hume Zone and Riverina Zone Bush Fire Management Committees, DCCEEW and relevant councils</td></tr>
</table></td><td>This Plan
Section 1.6.1</td></tr>
<tr><td rowspan="2">C7</td><td>The CEMP Sub-plans must state how:</td><td>-</td></tr>
<tr><td>a) the environmental performance outcomes identified in the documents listed in Condition A1 will be achieved;</td><td>Section 2.4</td></tr>
</table>

No.	Requirement	Where addressed
	b) the mitigation measures identified in the documents listed in Condition A1 will be implemented;	Section 6.4
	c) the relevant terms of this approval will be complied with; and	Section 3.1.3 Section 3.1.4
	d) issues requiring management during construction (including cumulative impacts), as identified through ongoing environmental risk analysis, will be managed through SMART principles	Section 2.5 Section 5 Section 6 Section 7 Section 8
C14	The Flood and Bush Fire Emergency Management Sub-plan must include:	-
	a) Measures for managing flood and bush fire risks including access and egress for emergency vehicles and subsequent recovery;	Section 6
	b) consideration of flood and bush fire risks associated with construction works;	Section 5
	c) details of the management and maintenance of flood and bush fire mitigation measures including first-response capabilities, any temporary and permanent fencing and drainage structures.	Section 6.4
C15	Construction must not commence until the relevant CEMP(s) and CEMP Sub-plans have been approved by the Planning Secretary or endorsed by the ER, (as applicable and as identified in the CEMF approved under Condition C16). The CEMP and CEMP Sub-plans, as approved by the Planning Secretary, including any minor amendments approved by the ER, must be implemented for the duration of construction. Where the CSSI is being staged, construction of that stage is not to commence until the relevant CEMP and sub-plans have been endorsed by the ER and approved by the Planning Secretary or ER.	Section 1.7
E38	All practicable measures must be implemented to ensure the design, construction and operation of the CSSI will not adversely affect flood behaviour, or adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.	Section 5.2.2

3.1.4 Updated Management Measures

The primary UMM presented in the EAD relevant to the development of this Plan are shown in Table 4. There are no secondary UMMs relevant to this plan. A cross reference is also included to indicate where the UMM is addressed in this Plan for other project management documents.

TABLE 4: PRIMARY UMMS RELEVANT TO THIS PLAN

No.	Requirement	Where addressed
HFWQ6	Construction planning and the layout of construction work sites and compounds will be carried out with consideration of overland flow paths and flood risk, avoiding flood-liable land and flood events, where practicable. For the sites located in flood-prone land, and where temporary obstruction of overland flows or drainage systems cannot be avoided, further consideration of flood risk will be carried out to develop the staging of works to minimise impacts of the proposal and	This Plan Section 6.2.1

No.	Requirement	Where addressed
	ensure proper management of a flood event at all stages of construction. A flood and emergency response plan will be prepared for the sites located within a flood-prone area.	
H2	Adequate access and egress for fire-fighting vehicles and staff will be provided at all enhancement sites during construction. Protocols for the management of bushfire risk will be implemented during construction. Requirements for first-response capabilities, including fire extinguishers, water carts and hoses, will be assessed and provided at enhancement sites during construction, where needed.	Section 6.1

4 EXISTING ENVIRONMENT – STAGE A

4.1 Bushfire Prone Land

Bushfire-prone lands are identified areas that can support a bushfire or are likely to be subject to a bushfire. Bushfire-prone land maps have been prepared by Rural Fire Services NSW. Table 5 shows the proximity of the Stage A enhancement sites to bushfire-prone land (NSW Rural Fire Service, 2021).

Two (2) areas associated with the project are identified in the *Hume Zone Bush Fire Risk Management Plan* (Hume Zone Bush Fire Management Committee, 2016) and the *Riverina Bush Fire Risk Management Plan* (Riverina Bush Fire Management Committee, 2015) as being subject to bushfire planning measures. Together these two management plans are referred to as BFMCMPs.

TABLE 5: PROXIMITY OF ENHANCEMENT SITES TO BUSHFIRE PRONE LAND - STAGE A

Precinct	Enhancement Site	Indicative Proximity to bushfire prone land	BFMCMPs	Bush Fire Danger Period (per BFMCMPs)
Wagga Wagga	Pearson Street bridge	1.5 km	Riverina	October to March
	Cassidy Parade pedestrian bridge	800 m	Riverina	October to March
	Edmondson Street bridge	600 m	Riverina	October to March
Albury	Table Top Yard clearances	1.0 km	Riverina	October to March
Greater-Hume Lockhart	Henty Yard clearances	Within the proposal site	Hume Zone	November to March
	Yerong Creek Yard clearances	450 m	Riverina	October to March
	The Rock Yard clearances	Within the proposal site	Riverina	October to March
Junee	Harefield Yard clearances	1.0 km	Riverina	October to March
	Junee Yard clearances	1.0 km	Riverina	October to March
	Olympic Highway underbridge	1.5 km	Riverina	October to March
	Junee to Illabo clearances	2.8 km	Riverina	October to March

4.2 Flood-prone Land

Chapter 18 of the EIS (Hydrology flooding and water quality) presented a summary of the project areas which are situated on flood-prone land. The existing flood conditions for each precinct relevant for Stage A is provided in Table 6. The information within Table 6 will be reviewed and updated (where relevant) as modelling under CoA E40 is undertaken.

TABLE 6: EXISTING FLOODING CONDITIONS PER THE EAD - STAGE A

Enhancement site	Key features – Stage A	Existing flood conditions	Flood risk within and around the enhancement site for events up to the 1% AEP	PMF flood depth
Albury Precinct				
Table Top Yard clearances	Gantry removal	Not located on flood-prone land	Not affected	Not affected
Wagga Wagga Precinct				
Pearson Street bridge	N/A – not relevant to utilities scope	Overland flooding within the rail corridor. Peak flood depth of 0.15-0.3 m within the rail corridor in the 1% AEP. Rail corridor within the study area categorise as 'flood storage' and 'floodway' in the 1% AEP.	Not affected	Up to 0.7m in overland flooding events. Not affected by Murrumbigdee River flooding
Cassidy Parade pedestrian bridge	N/A – not relevant to utilities scope		5% AEP and greater events	Greater than 0.75 m in overland flooding events
Edmondson Street bridge	N/A – not relevant to utilities scope			
Greater Hume-Lockhart precinct				
Henty Yard clearances	Track realignment	No flood impacts within the rail corridor	Not affected	Up to 0.75 metres
Yerong Creek Yard clearances	Track realignment	No information available	No information available	No information available
The Rock Yard clearances	Gantry modification	No flood impacts within the rail corridor	Not affected	0.5 metres to 1 metre
Junee precinct				
Harefield Yard clearances	Track realignment	No flood impacts within the rail corridor	Not affected	No information available
Junee Yard clearances	Track realignment	Not located on flood-prone land	Not affected	No information available
Olympic Highway underbridge	Track realignment	Not located on flood-prone land	Not affected	No information available

Enhancement site	Key features – Stage A	Existing flood conditions	Flood risk within and around the enhancement site for events up to the 1% AEP	PMF flood depth
Junee to Illabo clearances	Track realignment	Not located on flood-prone land	Not affected	No information available

5 ASPECTS AND IMPACTS – STAGE A

5.1 Bushfires

5.1.1 Construction Activities

During Stage A of the project, there is a risk of fire ignition. Ignition of bushfires may result from:

- Electrical sparks and sparks from vehicles;
- Hot parts of vehicles coming into contact with dry/combustible vegetation;
- Electrical faults during testing;
- Chemical fires;
- Use of diesel powered equipment;
- Sparks from activities such as hot works, vegetation slashing and use of grinders;
- Inappropriate storage of fuels and chemicals;
- Inappropriate discarding of lit cigarettes;
- Use of open flames;
- Arson.

5.1.2 Potential Impacts

A majority of the enhancement sites are located at least 250 m from the nearest bushfire-prone land, including the associated buffer zones. Only two (2) Stage A enhancement sites are partially located on bushfire-prone land and are in areas covered by Bush Fire Risk Management Plans:

- Henty Yard clearances (Hume Zone BFRMP);
- The Rock Yard clearances (Riverina BFRMP).

These sites would have an increased risk of being impacted by bushfire during construction. Bushfires can cause property damage, injury to people and animals, and loss of life.

5.2 Flooding

5.2.1 Construction Activities

Construction activities on flood-prone land, including earthworks, concrete works, compounds, stockpiles, have the potential to temporarily affect flooding behaviour. Without the implementation of appropriate management measures, potential impacts include:

- Cause damage to construction sites, machinery, plant and equipment;
- Detrimentally impact downstream watercourses through increased flow rates in drainage lines, changes in scour, bank erosion and transport of sediments;
- Obstruct the passage of floodwater and overland flow, which could exacerbate existing flooding conditions and pose a safety risk to the public.

Construction activities at each enhancement site for Stage A would be short term and be prepared with consideration of flooding behaviour. For enhancement sites located in flood prone land and where temporary obstruction of overland flows or drainage systems cannot be avoided, further consideration of flood risk would be undertaken to develop the staging of works to ensure proper management of a flood event at all stages of construction.

5.2.2 Potential Impacts

Flood emergencies can cause property damage, injury to people and animals, and loss of life.

Overall, the Stage A enhancement sites represent a small area of the total catchments in which they are located, and any impacts of the project on drainage and flooding would be minor to negligible. Stage A works comprise of preparation activities for the March 2025 rail possession and involve negligible permanent design works that may influence on flood behaviour. There would be limited stockpiling of materials and laydown associated with Stage A, however, the small scale nature of these activities is unlikely to influence flood behaviour. Furthermore, there are no temporary creek crossings included as part of the Stage A scope. A summary of the key results of the flood modelling undertaken in the EAD is provided for context when considering overall risks to flood emergencies in Table 7 below.

TABLE 7: POTENTIAL FLOODING IMPACTS DURING CONSTRUCTION – STAGE A

Enhancement site	Location on flood prone land	Indicative duration of construction works – Stage A	Potential impacts
Albury precinct			
Table Top Yard clearances	No	2 months	No impacts, as the enhancement site is not affected by flooding.
Wagga Wagga Precinct			
Pearson Street bridge	Yes	2 months	Construction stockpiles and materials for utility works at this enhancement site may be impacted in a flood event. Flood emergencies can cause property damage, injury to people and animals, and loss of life if not managed.
Cassidy Parade pedestrian bridge			
Edmondson Street bridge			
Greater Hume-Lockhart precinct			
Henty Yard clearances	Yes	3 months	Temporary redistribution of overland flows and stormwater due to construction infrastructure. Flood emergencies can cause property damage, injury to people and animals, and loss of life if not managed.
Yerong Creek Yard clearances	No	3 months	
The Rock Yard clearances	Yes	2 months	
Junee precinct			
Harefield Yard clearances	No	3 months	No impacts, as the enhancement site is not affected by flooding.
Junee Yard clearances	No	4 months	No impacts, as the enhancement site is not affected by flooding.
Olympic Highway underbridge	No	5 months	No impacts, as the enhancement site is not affected by flooding.
Junee to Illabo clearances	Yes	5 months	Construction stockpiles and materials at this enhancement site may be impacted in a flood event. Temporary redistribution of overland flows and stormwater due to construction infrastructure. Flood emergencies can cause property damage, injury to people and animals, and loss of life if not managed.

6 MANAGEMENT AND MITIGATION

6.1 Bushfire Emergency Management

The following sections addresses the relevant CoAs and UMMs and have been developed in accordance with the SW RFS *Planning for Bushfire Protection – A guide for councils, planners, fire authorities and developers* (PBP).

6.1.1 Access Arrangements

In bushfire prone areas it is an essential to provide appropriate access for emergency services in the event of an emergency as well as appropriate exit routes in the event that an evacuation is necessary. Appendix 3 of the NSW RFS 2019 *Planning for Bushfire Protection – A guide for councils, planners, fire authorities and developers* provides design principles and specifications for emergency service vehicle access. These principles and specifications will be applied during the detailed design phase and would include the following:

- Turning requirements such as minimum curve radius and sweep path width;
- Turning requirements for dead end roads to avoid multipoint turns;
- Passing bays and parking spots to avoid pinch points that impede access;
- Width of property access roads.

The above principles will be incorporated into the planning and design of any ancillary facilities situated on bush fire prone land.

6.1.2 Asset Protection Zone

An asset protection zone (APZ) provides a low fuel hazard buffer between buildings or other assets and a bushfire hazard (e.g. patches of native vegetation). APZs create a defendable space to manage the flame, radiant heat and ember exposure of the asset and emergency service personnel.

An APZ will be developed during the establishment of areas which accommodate workers, near laydown areas, and in location where frequent hot works are occurring. The APZ will remain in place until demobilisation of each area. From the commencement of the works and for every bushfire season throughout the project duration, the APZ must be established and maintained in the following manner:

- An APZ around fixed construction equipment and occupied buildings such as the site office unless an alternative fire protection approach that achieves the same level of bushfire risk management is identified by a suitably qualified bushfire specialist;
- The APZs will be regularly maintained to a maximum grass height of up to 100mm; and
- Vegetation inside the main construction compounds and accommodation camp sites will be regularly maintained to a maximum height of 75mm, where environmental approvals allow.

The respective site supervisor is responsible for the management and maintenance of the APZ for their area. This will also be supported through visual inspections undertaken by the Environment Manager or delegate.

6.1.3 Planning for works

Ongoing reviews of site conditions will guide the site team on when it is safe to conduct hot works. These reviews will be used to plan works and will be completed using a combination of the resources and tools outlined below.

Hazards Near Me

Martinus shall promote and recommend that all staff and contractors download the ‘Hazards Near Me’ app and establish a 'Watch Zone' account onto their mobile device during the induction program. The Hazards Near Me app will then push notifications to project personnel alerting them to fires within the area and other safety messaging such as Total Fire Ban declarations.

Harvest Safety Alerts and Grain Harvesting Guide

The NSW Rural Fire Service Harvest Safety Alert and Grain Harvesting Guide will be incorporated into work planning process. Harvest Safety Alerts provide a signal to farmers that they should be taking extra precautions during harvesting operations to prevent the ignition and spread of fire due to the prevailing weather conditions. On days when the NSW Rural Fire Service (RFS) issue a Harvest Safety Alert, farmers are encouraged to review the harvest safety guide and determine whether it is safe to continue harvesting operations, due to the elevated fire weather conditions. The issuing of Harvest Safety Alerts by the NSW RFS will be used as a trigger for the review of construction activities and safety systems.

6.1.4 Management Of Onsite Activities Including Hot Works

Martinus Rail has a number of internal management plans and procedures that govern how hot work is managed. These include the Martinus Rail Hot Work Procedure, the Martinus Rail Emergency Management Plan, and the Martinus Rail Safety Management Plan.

Hot Works

Hot works is defined as any action that involves high temperatures, which includes but is not limited to the following activities:

- Grinding;
- Welding;
- Thermal or oxygen cutting or heating.

A Hot Work Permit will be required prior to commencing hot works in accordance with the Martinus Rail Hot Works Procedure. The permit will include:

- Details of the proposed work, including date, location and work type
- Firefighting equipment to be identified based on a risk assessment which takes into account:
  - The activities to be undertaken at the site
  - The vegetation, geography and topography of the site and surrounding area,
  - The prevailing and forecast weather conditions
- Any other conditions that apply to undertaking the works.

Example controls that would be implemented during or prior to Hot Works include the following:

- Firefighting equipment (fire hose, watertrucks, fire extinguisher) or similar must be present at the location of the hot works.
  - Water trucks will be fitted with hoses and rural fire grade service nozzles.
  - Water trucks will be positioned or equipped to enable access to both sides of the rail line.
  - Water trucks will have a capacity suitable for the type of works. This is generally approximately 2000 litres and will be determined via the risk assessment mentioned above.
- The work area must be cleared of combustible materials prior to commencing the hot works activity and any non-removable combustible materials covered or controlled to prevent ignition.
- Any personnel undertaking hot works will be provided with the appropriate level of training on how to operate fire extinguishing equipment in a safe and effective manner to provide a rapid response to extinguish minor fires that may occur.

Fire Watch Observer

Fire watching is a continuous inspection/observation of the work site and its vicinity by nominated personnel. The decision to appoint a fire watch observer is made based on the risks on the particular day. The fire watch observer will be trained in their roles and responsibilities prior to undertaking the works.

The fire watch observer should:

- Be alert for any fire outbreak or hazards. On days above the moderate Fire Danger Rating (refer Figure 1), monitoring for fire outbreaks should occur up to one (1) hour after the cessation of hot works activities;
- Take immediate action to combat any outbreak of fire that may occur;
- Not allow hot work to proceed outside the specified area; and
- Immediately review the work if a hazardous condition is observed.

Figure 1: Fire danger ratings (Source: NSW Rural Fire Service)

6.1.5 Total Fire Ban Days

For high fire risk activities (e.g. welding, grinding or any activity likely to cause sparks) ARTC procedure ***ETM-13-01 - Total Fire Bans*** outlines a comprehensive process detailing restrictions to activities during the Fire Danger Period and on Total Fire Ban days, including, but not limited to, required liaison with the local Fire Authority.

This procedure describes the actions required by Australian Rail Track Corporation (ARTC) employees, and contractors, to facilitate hot works during Total Fire Bans (TFB).

The arrangements within this procedure facilitate the capability for IRPL/Martinus to perform hot work in a TFB and include:

- State specific legislation for the issuing of exemptions and work permits for hot works in a TFB which is managed by the relevant state fire authorities in each state jurisdiction.
- ARTC acquisition of general exemptions or permits covering TFB hot work activities through the annual fire danger period (as declared by each state) or date and work specific permits to cover hot work activities on declared TFB days.
- A standard ARTC form *ETM1301F-01 Total Fire Ban Hot Works Checklist* for the recording of exemption or permit details, compliance to fire prevention and control requirements, and satisfactory completion of work.

In NSW each time a TFB is declared under Section 99 of the Rural Fires Act 1997 it must be published in the Government Gazette. Each notification in the Gazette includes a number of standing exemptions in the form of schedules.

Schedule 6 is the exemption for Construction and Essential Repairs or Maintenance of Services and Utilities.

In addition, Martinus shall also deploy its own procedures to support construction activities using MR-WP-023 - Hot work and MR-WF-030 – Hot Work Permit for all other project related scopes that may occur outside the rail corridor envelope or project boundary.

6.1.6 Management Of Flammable Chemicals

The inappropriate storage of incompatible or flammable chemicals has the potential to cause a chemical fire or explosion. Storage and maintenance of flammable material will be in accordance with the safety data sheet given by the manufacturers or importers and generally in accordance with AS 1940-2017. Hazards and risk will be identified through a risk assessment form and where hazards are identified, the risk shall be reduced as far as practicable by through the preferred order of control methods (hierarchy of controls).

All chemicals, fuels or other hazardous substances will be stored in accordance with the supplier's instructions, any relevant legislations or Australian Standards or the applicable guidelines.

6.1.7 Fire-Fighting Supplies and Equipment

The fire-fighting equipment, including fire extinguishers, water carts and hoses, will be provided on site and in vehicles to ensure the safety of public and property in compliance with the *Rural Fires Act 1997* and the *Local Government Act 1993*. Plant and equipment used regularly on site will be checked. The relevant site supervisory personnel will have the appropriate level of training on how to operate fire extinguishing equipment in a safe and effective manner.

6.2 Flood Emergency Management

The design of the proposal has been developed in accordance with existing hydrological conditions in order to avoid flooding, drainage and water quality impacts. Mitigation measures discussed in the sections below will be implemented to mitigate the potential residual flood impacts of the enhancement works.

6.2.1 Construction Planning

Construction planning and the layout of construction work sites and ancillary facilities will be carried out with consideration of overland flow paths and flood risk, avoiding flood-liable land and flood events, where practicable.

For the sites located in flood-prone land, and where temporary obstruction of overland flows or drainage systems cannot be avoided, further consideration of flood risk will be carried out to develop the staging of works to minimise impacts of the proposal and ensure proper management of a flood event at all stages of construction.

6.2.2 Pre-Flood Actions

The following actions will be undertaken as preventative measures to prepare for flooding on site:

- Daily monitoring of weather forecasts and flood alerts, using the BoM (http://www.bom.gov.au/australia/warnings/). A “Flood Watch” is typically issued several days before rainfall events which may cause flooding at the site (Flooding Rain);
- Training in flood preventative measures and emergency response will be provided to key personnel including the Martinus Rail Construction Manager and Foreman / Site Supervisor(s);
- Activities that may affect existing drainage systems during construction will be planned and carried out so that existing hydraulic capacity of these systems is maintained where practicable. These activities will include:
    - Temporary waterway crossings and instream work platforms;
    - Bridge Construction;
    - Culvert construction;
    - Earthworks within flood prone land.
- Temporary stockpiles will be limited in size (where ever practical) and managed in accordance with the CSWMP;
- Prior to establishing any plant or equipment on site an assessment of it's ability to be relocated prior to a flood event is to be considered and where relocation is not feasible prepare appropriate mitigations (e.g. secure to prevent floating and creating a hazard, remove fuel to prevent contamination of waterways, etc);
- Ancillary facilities will be designed to include evacuation routes for flood events;
- Ancillary facility layouts will include nominated storage areas outside the 5 per cent AEP and include a nominated evacuation area;
- Ensure that sufficient area is provided outside the 5 per cent AEP for the temporary storage of mobile plant and equipment, waste containers, chemicals and dangerous goods;
- Pre-flooding Rain inspections which include the following tasks:
    - Minimise obstructions within flood prone areas, including stockpiles;
    - Relocate waste containers, chemicals and dangerous goods above flood prone areas;
    - Relocate mobile plant and equipment to an area outside the expected flood extent;
    - Inspect/repair erosion and sediment controls in accordance with the CSWMP.

6.2.3 Flood Emergency Response

Flood response operations will begin on receipt of BoM advice, or when other evidence leads to an expectation of flooding. The key principles of emergency flood response, according to the NSW State Flood Plan (December 2021) include the following:

- Protection and preservation of human life (including the lives of responders and the community) is the highest priority;

- Evacuation is the primary response strategy for people impacted by flooding.

In the event a flood warning is issued, it will be communicated to the workforce to stop what they are doing and follow the Emergency Management Plan and Emergency Response Guide (see Section 6.3.1).

The BoM will issue Flood Warnings for the relevant catchment areas through their website. BoM also issue Severe Thunderstorm Warnings and Severe Weather Warnings for weather which may cause flooding in the catchment.

The State Emergency Services (SES) is the designated Agency for floods and is responsible for coordinating the evacuation and welfare of affected communities (SES Act 1989; EMPLAN, 2018). In response to a flood event, SES will operate 24 hours a day, seven (7) days a week an "Operations Centre" to manage the Emergency Assistance telephone number (132 500) and co-ordinate their activities. The SES provides public information management strategies and provides information to the community relating to the potential impacts of flooding and what actions need to be undertaken. The SES issue Local Flood Bulletins, Evacuation Warnings, Evacuation Orders and All Clears for areas impacted by floods in the catchment and share these on the SES website. This website will also be monitored by the project following flood warnings.

Local radio stations and other media outlets also provide information updates and advice.

The Martinus Rail Environment, Approvals and Sustainability Manager (MR ESM) in conjunction with the Martinus Rail Safety Manager, Construction Manager and Inland Rail/ARTC will regularly consult these resources to maintain awareness of any flood threats that may arise.

During a flood event, the following will be undertaken:

- Continue to monitor the BoM website / app for warnings, ABC radio broadcasts, local emergency services social media pages, and local news outlets;
- Follow all advice and instructions given by emergency services and maintain open communication with the SES;
- Ensure all occupants on-site are informed of the incident response procedures (i.e. evacuation routes, assembly areas);
- Where practical, existing Variable Messaging Signs (VMS) on the project will be made available to Inland Rail/ARTC, as well as the Emergency services, and updated to notify of temporary traffic arrangements to minimise impact on flood evacuation routes and traffic capacity;
- Implementation of the project Emergency Management Plan and Emergency Response Guide (see Section 6.3.1).

6.2.4 Post-Flood Emergency Response

Following a flood emergency that has impacted on the project, the initial response will be to determine whether or not it is safe to return to work. A safety walk through of the construction work areas will be conducted by the Martinus Rail Construction Manager and Supervisors (or delegates), in conjunction with the MR ESM and Martinus Rail Safety Manger. These parties will assess whether it is safe to return to work.

6.3 Emergency Management

6.3.1 Emergency Management Plan and Response Guides

The project has prepared an Emergency Management Plan (EMP) which defines the emergency preparedness principles, processes, procedures, systems, tools, and templates implemented for use throughout the duration of the project. This plan covers bushfire and flood emergency preparedness and management. The objectives of the EMP are to:

- Outline processes and procedures for personnel to follow in the event of an emergency, including site, and/or home office emergencies;
- Identify types of emergencies that may require assistance;
- Outline roles and responsibilities of key personnel in the event of an emergency;
- Identify emergency communication protocols and phone numbers;
- Identify evacuation processes;
- Outline traffic management requirements in the event of an emergency;
- Outline training and evacuation response exercises.

As part of the EMP process, Martinus Rail will be responsible for conducting a comprehensive risk assessment to identify potential hazards that may lead to emergencies requiring evacuation or rescue. Detailed procedures for each of these potential emergencies will be outlined in aspect specific Emergency Response Guides (ERG), including bushfire and

flood. The development and implementation of these ERGs will reduce the effect of bushfires and floods on personnel, property, and the environment.

6.3.2 Remediation And Recovery

Recovery encompasses those activities that are intended to restore normality as soon as possible, following the impact of a bushfire or flood emergency.

Recovery issues following a major emergency can be complex and the recovery process usually of long duration. These may include:

- The return of facilities to a safe condition;
- The removal of unfit damaged facilities or equipment;
- Providing for the physical and psychological effects on people involved in the emergency;
- Addressing the impacts of the emergency on the environment;
- Investigating the reasons for the occurrence of the emergency to prevent a recurrence;
- Safe resumption of normal operations;
- Evaluation of costs relating to emergency response resources; and
- Assessing and responding to the long-term effects on the community and industry.

6.4 Mitigation Measures

A range of environmental requirements and management measures are identified in the EAD and CoA. Specific measures and requirements to address impacts to bushfire and flooding are outlined in Table 8. The following mitigation measures have been developed with consideration of SMART (specific, measurable, achievable, relevant and time-based) principles.

TABLE 8: MITIGATION MEASURES

ID	Management measure	When to implement	Responsibility for implementation	Reference or source	Evidence of implementation
Bushfire emergency					
CBF-1	Training will be provided to all project personnel, including relevant sub-contractors on bushfire prevention and management measures and the requirements from this plan through inductions, toolboxes and targeted training.	Pre-construction Construction	MR Environment and Sustainability Manager MR Health and Safety/Site Manager MR Head of Competency MR Regional Area Manager MR General Superintendent	Best practice	Induction records Toolbox talk records
CBF-2	Martinus shall promote and recommend that all staff and contractors download the Hazards Near Me application and establish a 'Watch Zone' account onto their personnel device during the induction program.	Induction stage	MR Head of Competency	MR Induction Program	Induction records
CBF-3	Adequate access and egress for fire-fighting vehicles and staff will be provided at all enhancement sites during construction.	Pre-construction	MR Snr Project Manager MR Delivery Manager MR Regional Area Manager MR General Superintendent	UMM H2	Vehicle Movement Plan
CBF-4	Protocols for the management of bushfire risk will be implemented during construction in accordance with Planning for Bushfire Protection (RFS, 2019)	Construction	MR Environment and Sustainability Manager MR Health and Safety/Site Manager MR Regional Area Manager	UMM H2	Audit reports

ID	Management measure	When to implement	Responsibility for implementation	Reference or source	Evidence of implementation
			MR General Superintendent MR Senior Project Engineer		
CBF-5	Requirements for first-response capabilities, including fire extinguishers, water carts and hoses will be assessed and provided at enhancement sites during construction, where needed.	Pre-construction	MR Environment and Sustainability Manager MR Health and Safety Manager MR Snr Project Manager MR Delivery Manager MR Regional Area Manager MR General Superintendent MR Senior Project Engineer MR Site Supervisor	UMM H2	Inspection records Audit reports
CBF-6	Dangerous goods and hazardous materials will be stored in accordance with supplier's instructions and relevant legislation, Australian Standards, and applicable guidelines; and may include bulk storage tanks, chemical storage cabinets/containers or impervious bunds.	Construction	MR Environment and Sustainability Manager MR Health and Safety/Site Manager MR Regional Area Manager MR General Superintendent	UMM H3	Inspection records Audit reports

ID	Management measure	When to implement	Responsibility for implementation	Reference or source	Evidence of implementation
			MR Senior Project Engineer MR Site Supervisor		
CBF-7	Prior to hot work commencing, a Hot Work Permit will be prepared and implemented. Emergency provisions shall be determined in order to minimise the effect of potential incidents.	Pre-construction Construction	MR Environment and Sustainability Manager MR Health and Safety/Site Manager MR Regional Area Manager MR General Superintendent MR Senior Project Engineer MR Site Supervisor	Best practice	Hot Work Permits
CBF-8	Emergency response and management will be undertaken in accordance with the project Emergency Management Plan.	Pre-construction Construction	MR Snr Project Manager MR Delivery Manager MR Regional Area Manager MR General Superintendent MR Environment and Sustainability Manager MR Health and Safety/Site Manager MR Site Supervisor	Best practice	Audit reports

ID	Management measure	When to implement	Responsibility for implementation	Reference or source	Evidence of implementation
Flood emergency					
CFE-1	Training will be provided to all project personnel, including relevant sub-contractors on flood prevention and management measures and the requirements from this plan through inductions, toolboxes and targeted training.	Pre-construction	MR Head of Competency MR Regional Area Manager MR General Superintendent MR Site Supervisor	Best practice	Induction records Toolbox talk records
CFE-2	Construction planning and the layout of construction work sites and compounds will be carried out with consideration of overland flow paths and flood risk, avoiding flood-liable land and flood events, where practicable. For the sites located in flood-prone land, and where temporary obstruction of overland flows or drainage systems cannot be avoided, further consideration of flood risk will be carried out to develop the staging of works to minimise impacts of the proposal and ensure proper management of a flood event at all stages of construction.	Pre-construction Construction	MR Delivery Manager MR Regional Area Manager MR General Superintendent MR Environment and Sustainability Manager MR Health and Safety/Site Manager MR Site Supervisor	UMM HFWQ6	Construction planning documents
CFE-3	A flood and emergency response plan will be prepared for the sites located within a flood-prone area.	Pre-construction	MR Delivery Manager MR Regional Area Manager MR General Superintendent MR Environment and Sustainability Manager	UMM HFWQ6	This Plan

ID	Management measure	When to implement	Responsibility for implementation	Reference or source	Evidence of implementation
			MR Health and Safety/Site Manager MR Site Supervisor		
CFE-4	Emergency response and management will be undertaken in accordance with the project Emergency Management Plan.	Pre-construction Construction	MR Snr Project Manager MR Delivery Manager MR Regional Area Manager MR General Superintendent MR Environment and Sustainability Manager MR Health and Safety/Site Manager MR Site Supervisor	CoA C14	Audit reports

7 TRAINING

7.1 Roles and Responsibilities

The project's organisational structure and overall roles and environmental responsibilities are outlined in Section 6.1 of the CEMP. Specific responsibilities for the implementation of emergency response and management requirements are detailed in Section 7 of the project EMP.

7.2 Training

7.2.1 Inductions

All personnel who carry out works in areas identified in this Plan as bushfire or flood prone land, including employees and sub-contractors, will undergo site induction training relating to bushfire and flooding emergency management issues.

The induction training will address site and/or construction activity specific impacts relating to bushfire and flooding emergency management including:

- The requirements of this Plan;
- Relevant legislation and guidelines;
- The relevant management and mitigation measures;
- Emergency response and evacuation (bushfire and flooding).

Further details regarding staff induction and training are outlined in Section 6.2 of the CEMP.

7.2.2 Daily Pre-Start Meetings

Daily pre-start meetings conducted by the Martinus Rail Area Manager, Site Supervisor (or other delegate) will inform the site workforce of any environmental issues relevant to bush fire or flooding risks that may be impacted by, or impact on, the day's activities.

Further details regarding staff induction and training are outlined in Section 6.2 of the CEMP.

7.3 Inspections and Monitoring

The Safety Manager (or delegate) will conduct regular inspections of activities and controls with the potential to impact flood and bushfire management for the duration of the project works.

Requirements and responsibilities in relation to monitoring and inspections are documented in Section 7.1 and 7.2 of the CEMP.

7.3.1 Auditing

Audits (both internal and external) will be undertaken to assess the effectiveness of bushfire and flood emergency management measures, compliance with this Plan, CoA and other relevant approvals, licenses, and guidelines. Audit requirements are detailed in Section 9.1 and 9.2 of the CEMP.

7.3.2 Reporting and Identified Records

General reporting requirements and responsibilities for the project's works are documented in Section 10.2 of the CEMP.

8 REVIEW AND IMPROVEMENT

8.1 Continuous Improvement

Continuous improvement of this Plan will be achieved by the ongoing evaluation of environmental management performance against environmental policies, objectives and targets for the purpose of identifying opportunities for improvement.

Issues requiring management during construction (including cumulative impacts), as identified through ongoing environmental risk analysis, will be managed through SMART principles.

The continuous improvement process will be designed to:

- Identify areas of opportunity for improvement of environmental management and performance;
- Identify environmental risks not already included in the risk register;
- Determine the cause or causes of non-conformances and deficiencies;
- Develop and implement a plan of corrective and preventative action to address any non-conformances and deficiencies;
- Verify the effectiveness of the corrective and preventative actions;
- Document any changes in procedures resulting from process improvement;
- Make comparisons with objectives and targets.

The MR ESM will be responsible for ensuring project environmental risks are identified and included in the risk register and appropriate mitigation measures implemented throughout the construction of the project as part of the continuous improvement process. The process for ongoing risk identification and management during construction is outlined in the CEMP.

8.2 Update and Amendment

The processes described in the CEMP may result in the need to update or revise this Plan.

Any revisions to this Plan will be in accordance with the process outlined in the CEMP.

A copy of the updated Plan and changes will be distributed to all relevant stakeholders in accordance with the approved document control procedure.

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