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PARTNERING ON DESIGN AND CONSTRUCTION

CENTRAL-WEST ORANA RENEWABLE ENERGY ZONE

TRAFFIC AND TRANSPORT MANAGEMENT PLAN

CWO-PRO-050-ENV-PLN-000010 REV 06

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Document control

This Traffic and Transport Management Plan (TTMP) is a controlled document, approved by the ACJV D&C Project Directors. The Project Wide Director, Traffic Manager and Environment Approvals Manager are responsible for ensuring this plan is kept up to date for the Project, Project risks, activities and legal requirements.

PROJECT AUTHORISATION

Authorisation				
Document Title	CENTRAL-WEST ORANA RENEWABLE ENERGY ZONE - TRAFFIC AND TRANSPORT MANAGEMENT PLAN			
Revision Number	REV 06			
Document Number	CWO-PRO-050-ENV-PLN-000010			
Discipline/Department	Operational Services | Project Wide Construction			
	Name	**Position**	**Date**	**Signature**
Review	Anthony Lusher	Environmental Approvals and Compliance Lead	11/12/2025	Anthony Lusher
Approval	Lorryn Williamson	Environment and Sustainability Manager	19/12/2025	Signed by: Lorryn Williamson 12B46C439F5743E...
Principal Endorsement	Grant Andersen	Project Director	19/12/2025	Signed by: 76C0982E0FB74E2...

DOCUMENT REVISION HISTORY

Rev	Date	Pages	Revised by	Description of changes
A	04/04/2024	All	Alex Gosper Erran Woodward	First Document for Review
B	05/07/2024	All	Alex Gosper Erran Woodward	Update to include MCoA B31 references
C	16/09/2024	All	Alex Gosper Erran Woodward	Updated for NO and EnergyCo Review
D	11/10/2024	All	Alex Gosper Erran Woodward	Updated for external consultation and ER review
E	19/11/2024	All	Alex Gosper Erran Woodward	Updated in line with stakeholder comments
F	6/12/2024	Multiple	Alex Gosper	Updated to address TfNSW and Council comments. For ER endorsement.

Rev	Date	Pages	Revised by	Description of changes
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01	05/03/2025	Multiple	Alex Gosper Erran Woodward	Update to address DPHI comments
02	01/04/2025	Multiple	Alex Gosper Mark Russell	Update to address DPHI and TfNSW comments
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05	26/05/2025	Multiple	Catherine Curlewis	Update to address TfNSW comments
06	11/12/2025	Multiple	Lauren Tompkins	Updated following Modification 2 and 3 determination

CONTROL AND RECORDS

The approved TTMP will be signed and scanned into the approved electronic document management system in accordance with CWO-PRO-050-DOC-PLN-000001 the Central-West Orana Document and Records Management Plan.

UNCONTROLLED COPIES

Any uncontrolled hard copy documents are up to date at issue and are only issued to outside organisations, customers, etc., upon request and approval by a Workplace Manager. Such uncontrolled documents will be clearly marked “Uncontrolled Copy When Printed or Downloaded” and will not be subject to an update.

REVIEW

The TTMP will be reviewed by the Traffic Manager, Environment Approvals Manager and the Project Wide Director at six monthly intervals and updated as required – including changes in processes, changes in scope, corrections, improvements identified from audits, outcomes from reviews, and other feedback or requests.

Changes to the TTMP will be approved in the same manner as the original document. The Traffic Manager, Environment Approvals Manager and the Project Wide Director are responsible for the periodic review of this plan, adopting updates and gaining approvals. The Traffic Manager, Environment Approvals Manager and the Project Wide Director are also responsible for communicating any changes to affected parties.

DISTRIBUTION

The Integrated Management System – Systems Representative on the Project is responsible for the controlled internal distribution of this document and changes. Personnel have access to the latest revision of the Plan through RIBCX.

GOVERNANCE AND AUTHORISATION

The TTMP intends to provide the framework & guidelines, to operate within the Traffic and Transport Management of ACEREZ, to ensure integrity, coherence, and effectiveness of the processes as defined in the ACEREZ Polices and Code of Conduct.

The Project Wide Director is responsible for implementing this TTMP and ensuring that the processes and associated documentation is applicable to the Project works undertaken and that it complies with the D&C Deed, Polices, code of conduct and legislative requirements. The TTMP is approved by the Project Director, who has overall accountability for the project control function.

RELATED DOCUMENTS

The key documents interfacing with this Plan that fall outside of the area of Traffic and Transport Management are outlined in *TABLE 0-1*.

TABLE 0-1 KEY INTERFACES WITH THIS PLAN

Plan	Interface
Environmental Management Strategy (MCoA (NSW) C1)	• Provides the strategic framework for environmental management of the Project • Identifies all statutory approvals that apply to the Project • Describe key roles, responsibilities authority and accountability • Sets out procedures to inform the community, local agencies of the environmental performance of the development, manage complaints, resolve disputes, response to any non-compliance or emergencies • Details the links to any strategies, plans and programmes • Details monitoring and reporting required under the approval
Community Communications Strategy (MCoA (NSW) A22)	• Describes how community and stakeholder engagement will be managed and facilitates communication about construction of the project with the community as well as relevant councils and agencies • Specifies the process for receiving, addressing, resolving and recording complaints
Transport Strategy (MCoA NSW B31)	• Identifies the location and type of road upgrades • Includes strategic concept designs of the required road upgrades • Details an assessment of potential impacts and appropriate mitigation measures • Includes a schedule for the commencement and completion of all necessary road upgrades

Abbreviations and Definitions

Term	Definition
ACEREZ Network Operator	ACEREZ Network Operator has been selected by EnergyCo as the Network Operator for the Central-West Orana REZ
ACJV D&C	A design and construction unincorporated joint venture of ACCIONA and COBRA
ARGD	Austroads Guide to Road Design
BAL	Rural Basic Left Turn Treatment
BAR	Rural Basic Right Turn Treatment
CEP	Communication and Engagement Plan
CoA	Conditions of Approval
Compliance audit	Verification of how implementation is proceeding with respect to an Environmental Management Strategy (which incorporates the relevant approval conditions)
Development	The development as described in Schedule 1, the carrying out of which is approved under the terms of the approval SSI-48323210
DPHI	Department of Planning, Housing and Infrastructure (NSW)
DPI	Department of Primary Industries (NSW)
EIS	The Environmental Impact Statement titled Environmental Impact Statement – Central West Orana REZ Transmission Project, prepared by WSP, dated February 2023, including the Proponent's: • Amendment Report, dated March 2024 • Submissions Report, dated March 2024 • Biodiversity Development Assessment Report dated March 2024 • Additional information dated 14 June 2024 • Central-West Orana REZ Transmission Project Modification 1 – Request for minor modifications to the condition of approvals, dated September 2024 and additional information dated 11 October 2024 • Central-West Orana REZ Transmission Project Modification 2 – Request for modification to allow establishment of an additional operations facility, dated 22 October 2025 • Central-West Orana REZ Transmission Project Modification 3 – Request for minor administrative changes to reflect Strategic Offset delivery Agreement, dated 15 August 2025
EMS	Environmental Management Strategy
EnergyCo	The Energy Corporation of New South Wales constituted by section 6 of the *Energy and Utilities Administration Act 1987* as the NSW Government statutory authority responsible for the delivery of NSW's Renewable Energy Zones.
Environmental Representative (ER)	A suitably qualified and experienced person independent of project design and construction personnel employed for the duration of construction. The principal point of advice in relation to environmental performance of the project and have the responsibility listed in condition A12 of the MCoA.
EP&A Act	*Environmental Planning and Assessment Act 1979*

Term	Definition
EPA	NSW Environmental Protection Authority
EPBC Act	*Environmental Protection and Biodiversity Conservation Act 1999 (Cth)*
EWMS	Environmental work method statement
High Risk OSOM Movement	As defined in the TfNSW document titled 'Transport Management Plans for oversize and/or overmass movements in NSW' (https://www.transport.nsw.gov.au/system/files/media/documents/2025/transport-management-plan-fact-sheet.pdf)
Long term	Long term traffic control is installed and remains in place for MORE than a shift. for example, barriers and speed signs Long term traffic management is usually managed through design drawings and/or staging plans and/or TMPs
MCoA (NSW)	NSW Minister for Planning and Public Spaces' Conditions of Approval
Minister, the	Minister for Planning and Public Spaces
Non-compliance	An occurrence, set of circumstances or development that is a breach of an approval
Non-conformance	Failure to conform to the requirements of Project system documentation including this EMS or supporting documentation
NPWS	NSW National Parks and Wildlife Service
NSW	New South Wales
Permanent	Is the final, approved works, for example, pavement and parapets
Planning Approval	The NSW Planning Approval as granted under Section 5.19 of the Environmental Planning and Assessment Act 1979
Project, the	The Central-West Orana REZ Transmission project as described in this EIS and as amended by this Amendment Report.
REMM	Revised Environmental Mitigation Measures from the Project Amendment Report (March, 2024)
REZ	Renewable Energy Zone
RNP	NSW Road Noise Policy
ROL	Road Occupancy Licence
RtS	Response to Submissions Report
SAM	Sensitive Area Maps
Planning Secretary	Planning Secretary under the EP&A Act, or nominee.
Short term	Short term traffic control is in place for one shift. It is installed at the start of the shift and removed at the end of the shift. It may be installed again the following shift, but between shifts it is removed, for example, cones and stop/slow for a lane closure Short term traffic management is usually managed through TGSs and ROLs
SMART	Specific, Measurable, Achievable, Relevant and Time-based
SSI	State Significant Infrastructure
TCWS	Traffic Control at Worksites Manual
TGS	Traffic Guidance Scheme
TMP	Traffic Management Plan (Site Specific)
TTLG	Traffic and Transport Liaison Group
TTMP	Traffic and Transport Management Plan (over arching, principles document)

Term	Definition
TTMP	Traffic & Transport Management Plan
VMP	Vehicle Movement Plan
VMS	Variable Message Sign

1 Introduction

1.1 CONTEXT

This Traffic and Transport Management Plan (TTMP or Plan) forms part of the suite of management plans required for facilitating the construction of the Central-West and Orana Renewable Energy Zone (REZ) project (the Project).

This TTMP has been prepared to address the requirements of the:

- NSW Minister for Planning's Conditions of Approval (MCoA (NSW)) for the Project (SSI-48323210)
- Central-West Orana Renewable Energy Zone Transmission Project Environmental Impact Statement (dated September 2023) (EIS)
- Central-West Orana Renewable Energy Zone Transmission Project Response to Submission report (dated March 2024) (RtS), including Revised Environmental Mitigation Measures (REMMs)
- Central West Orana Renewable Energy Zone Transmission Project Amendment Report (AR) including Revised Environmental Mitigation Measures (REMMs)

This Plan describes how ACJV D&C proposes to manage potential traffic impacts during the construction of the Project and functions as a set of principles and methods for traffic management.

1.2 BACKGROUND AND PROJECT DESCRIPTION

The Central-West Orana REZ Transmission Project comprises the construction and operation of:

- New electricity transmission infrastructure
- New energy hubs and switching stations
- Ancillary works required to connect new renewable energy generation
- Storage projects

Within the Central-West Orana REZ to the NSW transmission network.

The EIS was prepared to assess the impacts of construction and operation of the Central-West Orana REZ Transmission Project. As part of the EIS development, a Traffic and Transport assessment (Technical paper 13 – Traffic and Transport of the EIS) was prepared. The findings of the assessment were summarised in Chapter 17 (Traffic and Transport) of the EIS.

A Response to Submission report (dated March 2024) (RtS) was prepared in response to submissions received on the EIS. The RtS includes clarifications as well as further detail relating to

traffic management issues of the Project.

A Project Amendment Report (AR) was subsequently prepared to address project changes resulting from submissions and design progress, including an Addendum Traffic and Transport Impact Assessment (Appendix J of the AR). The AR was accepted on 13 March 2024.

The Central-West Orana REZ Transmission project was declared Critical State Significant Infrastructure (CSSI) by the NSW Minister for Planning and Public Spaces (the Minister) on 23 November 2020 (amended in February 2023) under Section 5.13 under the EP&A Act and Clause of the State Environmental Planning Policy (Planning Systems) 2021.

The project is also a controlled action and requires a separate approval from the Commonwealth Minister for the Environment and Water (or its delegate) under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (Cth).

The Central-West Orana REZ Transmission project was approved by the Minister for Planning and Open Spaces on 26 June 2024. The approval was updated to accommodate Modification 1 on 14 October 2024, Modification 2 on 22 October 2025 and Modification 3 on 15 August 2025.

The Project will utilise a suite of roads, properties and access tracks in order to deliver the scope of the Project. Those roads affect a number of key stakeholders, councils, National Parks and Wildlife Service (NPWS), road authorities and members of the community.

1.3 SCOPE

The purpose of this Plan is to describe how ACJV D&C will safely manage vehicular traffic, construction access and minimise traffic disruptions during construction of the Project.

This TTMP has been prepared to address the applicable statutory requirements and aims to ensure that commitments in the Planning Approval are met with regard to construction traffic, transport and access impacts.

The key objective of the TTMP is to ensure traffic impacts during construction are minimised and are within the scope permitted by the Planning Approval. This includes minimising delays, ensuring consideration is given to the needs of all road users and maintaining safety for both workers and the public.

To achieve these objectives, the Project will:

- Ensure appropriate controls and procedures are implemented during construction to address potential traffic impacts along the Project corridor, as well as manage risks from analysis of relevant construction activities
- Ensure appropriate measures are implemented to comply with all relevant legislation and other requirements as described in Section 2 of this Plan

1.4 PURPOSE

The purpose of this Plan is to describe how ACJV D&C will manage traffic and transport impacts during construction of the Project. The requirements of the MCoA (NSW) specifically relevant to the preparation of the TTMP are provided in Table 1-1.

This plan is intended only to address the pre-construction minor works, road upgrades and construction stage of works (including stringing of transmission lines). For the purpose of this document and ease of reading, this may be collectively referred to as 'construction' within this document. Remaining stages, including operation, upgrading and decommissioning, will be addressed in a separate document, in accordance with MCoA C3.

This TTMP has been prepared to address applicable statutory requirements and aims to ensure that the commitments in the Planning Approval are met.

Other MCoA or REMMs which interface with this Plan are detailed in Appendix A

TABLE 1-1 PROJECT REQUIREMENTS SPECIFICALLY RELEVANT TO THE TRAFFIC AND TRANSPORT MANAGEMENT PLAN

MCoA	Requirement	Document reference	How addressed
B35	**Traffic and Transport Management Plan**		
	Prior to commencing construction or road upgrades identified in condition B30 (whichever comes first), the Proponent must prepare a Traffic Management Plan for the development in consultation with NPWS, TfNSW, Dubbo Regional Council, Midwestern Regional Council, Upper Hunter Shire Council, Warrumbungle Shire Council and NSW Police, and to the satisfaction of the Planning Secretary. This plan must include:	Section 3	Section 3 outlines the consultation with the external parties. Following the Planning Secretary's approval this Traffic and Transport Management Plan will be implemented.
(a)	Details of the transport route to be used for all development-related traffic	Section 5.7 **Appendix B**	Section 5.7 and **Appendix B** describe the construction access routes for heavy and light vehicles, as well as oversize vehicle movements.
(b)	Details of the road upgrade works required by condition B32	Section 6	Section 6 outlines the road upgrade works required MCoA B32.
(c)	Details of the measures that would be implemented to comply with the transport management requirements in conditions B29 to B34	Section 6 Section 10	Section 10 details how traffic and transport impacts will be managed across the Project, including road maintenance and heavy vehicle management and Vehicle Movement Plans. Section 6 describes the road upgrades that will be included in the Transport Strategy.
(d)	Details of the measures that would be implemented to:		

MCoA	Requirement	Document reference	How addressed
(i)	Minimise traffic safety impacts of the development and disruptions to local road users during construction, upgrading or decommissioning works, including:	Section 10.2 Section 10.6 Table 11-1	Section 10.2 outlines the projects use of site specific traffic management plans. Section 10.6 outlines how Road occupancy, detours and closures will be managed, including the process to manage the safety and amenity of all road users.
	A description of the proposed timeframe and schedule of construction works	Section 5.1	Section 5.1 provides an overview of the construction program and methodology
	A description of the proposed dilapidation surveys required by condition B34	Section 10.1	Section 10.1 outlines the dilapidation surveys that will be undertaken
	A description of the proposed measures for managing traffic flow around the work sites, construction compounds and accommodation camps	Section 10 Section 8 Section 5.7 Table 11-1	Section 10 provides a number of procedural strategies for the mitigation and management of construction traffic. Section 10.2 and 5.7 outline measures to manage traffic flow around the work sites, construction compounds and accommodation camps. The access points works will include appropriate access treatments as described in Section 8.
	Procedures for stringing cables and transmission lines across roads to ensure compliance with Austroads Guide to Traffic Management	Section 10.7	The proposed approach for the stringing of transmissions lines over major roads will be by use of temporary hurdles and will include localised traffic management. For local roads or those with low traffic demand, traffic control measures will be employed to manage the stringing process, coordinating with traffic breaks, or temporarily holding vehicles. Section 10.7 provides further details
	Scheduling heavy vehicle movements to avoid peak periods where reasonable and feasible	Section 10.8.9 Table 11-1	Section 10.8.9 describes the scheduling of vehicles to avoid peak periods where possible.
	Minimising convoy lengths	**Appendix B** Section 10.8.9 Section 10.5.4 Table 11-1	The drivers code of conduct (**Appendix B**) clearly defines and details acceptable behaviour for all vehicle drivers operating in connection with the project. Section 10.8.9, Section 10.5.4 and Table 11-1 also discuss minimising convoy lengths.
	Reducing the speeds of development-related traffic at key intersections	Section 10.6.3	Section 10.6.3 outlines the process for speed adjustments.
	Temporary traffic controls, including detours and signage	Section 10.6 Section 10.6.4	The temporary traffic controls will be developed as part of TMPs and are outlined in Section 10.6.1 and Section 10.6.4.

MCoA	Requirement	Document reference	How addressed
	Procedures for stringing cables and transmission lines across roads	Section 10.7	Section 10.7 describes the process for stringing transmission lines.
	Notifying the local community about development-related traffic impacts	Section 3.1 Table 11-1	Communication tools will be used by the project to inform stakeholders and the community of periodic traffic related impacts, including proposed road network changes and access impacts.
	Procedures for receiving and addressing complaints from the community about development-related traffic	Section 3.2	Section 3.2 describes the process for receiving and managing complaints
	Minimising potential cumulative traffic impacts with other projects in the area	Section 10.8.9 Table 11-1	Scheduling and issuing of OSOM permits outlined in Section 10.8.9 will act to minimise potential for Cumulative impacts with other projects in the area.
	Minimising potential conflict between development-related traffic and rail services, stock movements and school buses, in consultation with local schools, including preventing queueing on the public road network	**Appendix B** Section 10.8.9 Section 10.7.1 Section 3.1 Table 11-1	Scheduling, outlined in Section 10.8.9, will act to minimise potential for conflict with traffic and rail services, stock movements and other projects in the area. Section 10.7.1 outlines the consultation required with ARTC prior to stringing transmission lines over rail corridors. The drivers code of conduct (**Appendix B**) clearly defines and details acceptable behaviour for all vehicle drivers operating in connection with the project. Section 3.1 describes ongoing consultation with local groups such as schools and other interest groups.
	Implementing measures to minimise development-related traffic on the public road network outside standard construction hours	Table 11-1	Development-related traffic will be scheduled within standard hours, where possible.
	Minimising dirt and debris tracked on to the public road network from development related traffic	Table 11-1	Management measure TT23 and TT35 in Table 11-1 outlines the measures used to minimise tracking of mud onto public sealed roads.
	Details of the employee shuttle bus service, including pick-up and drop-off points and associated parking arrangements for construction workers, and measures to encourage employee use of this service	Section 10.5.1	Shuttle buses will be used (demand dependant) at various stages throughout the construction of the project to transfer workers from Sydney to accommodation camps.
	Carpooling or ride sharing by employees	Section 10.5.2	Section 10.5.12 outlines details of carpooling.

MCoA	Requirement	Document reference	How addressed
	Scheduling the haulage vehicle movements to minimise convoy lengths or platoons	Section 10.8.9 Table 11-1	To limit cumulative impacts on the road network and impacts to motorists, scheduling of vehicle movements to avoid peak traffic periods and conflicts with other road users will be implemented. Management measures relating to scheduling of vehicles are outlined in Section 10.8.9 and Table 11-1
	Responding to local climate conditions that may affect road safety, such as, fog, dust, wet weather and flooding	Section 10.9 Section 10.5.4 **Appendix D**	Section 10.9 and Section 10.5.4 outline measure to respond to local climate conditions. A Flood response plan has also been developed and is included in **Appendix D**.
	Ensuring loaded vehicles entering or leaving the site have their loads covered or contained and leave site in a forward direction	Section 10.5.4 Table 11-1	Section 10.5.4 and Table 11-1 outline the approach for managing vehicles entering and leaving project sites.
	Responding to any emergency repair or maintenance requirements	Section 10.1.2	Section 10.1.2 outlines the maintenance to local roads.
	Provisions for maintaining emergency vehicle access to the site at all times	Section 10.7.2 Table 11-1	access will be always provided for emergency vehicles as noted in Section 10.7.2 and Table 11-1.
	A traffic management system for managing over-dimensional vehicles	Section 10.8	Section 10.8 describes the measures for managing over-dimensional vehicles, including permits.
	Fatigue management	Section 10.5.4 Table 8-1	The Driver's Code of Conduct in **Appendix C** describes driver's obligations including the management of fatigue. A fatigue management plan will also be implemented in accordance with TT7 detailed in Section 10.5.4 and Table 8-1.
(ii)	Minimise the impacts of the road and intersection upgrades of the development	Section 10.6.5 Table 11-1	Impacts from intersection upgrades associated with the project will be managed as described in *TABLE 11-1*, TT9, TT11, TT12, TT15 and TT24 and Section 10.6.5
(iii)	Minimises parking on the public road network	Section 10.8.9 Section 3 Section 10.5.2	Section 3 and Section 10.8.9 and Section 10.5.2 details measures to minimise parking on the public road network.
(iv)	Maintain all roads and water-related infrastructure on site in a safe and serviceable condition	Table 11-1	Management measure TT19 notes that access tracks used for construction sites, construction compounds and workforce accommodation camps will be maintained to safe standard.
(v)	Minimise the traffic noise impacts of the development	**Appendix C** Section 10.5	Management measure TT29 states that development-related traffic will be

MCoA	Requirement	Document reference	How addressed
			scheduled within standard hours, where possible. The Driver Code of Conduct speaks to limiting compression braking. Section 10.5 speaks to carpooling and shuttle bus to minimise construction traffic
(e)	Include a driver's code of conduct that addresses:	**Appendix C**	The Driver's Code of Conduct is provided in **Appendix C**
(i)	Travelling speeds	**Appendix C**	The Drivers Code of Conduct in **Appendix C** describes driver's obligations including obeying the speed limits.
(ii)	Procedures to ensure that drivers to and from the development adhere to the designated heavy vehicles requiring escort and heavy vehicle routes;	**Appendix C**	The Drivers Code of Conduct in **Appendix C** describes the additional requirements for heavy vehicles or over dimension vehicles.
(iii)	Procedures to ensure that drivers to and from the development implement safe driving practices	**Appendix C**	The Driver's Code of Conduct in **Appendix C**
(iv)	Including a detailed program to monitor and report on the effectiveness of these measures and the code of conduct.	Section 12.3 Table 12-4	The effectiveness of management measures identified in the Drivers Code of Conduct will be monitored and reported through independent audit reports as described in Section 12.3
(f)	include a program to:		
(i)	Ensure drivers working on the development receive suitable training on the code of conduct and any other relevant obligations under the Traffic and Transport Management Plan;	Section 12.4	Training will be provided as detailed in Section 12.4.
(ii)	Record and track vehicle movements; and	Section 10.5.3	Section 10.5.3 details how vehicles will be tracked across the project area.
(iii)	Monitor and publicly report on the effectiveness of these measures	Section 12.3 Section 12.7	Monitoring the effectiveness of management measures is outlined in Section 12.3 and 12.7
(g)	A flood response plan detailing procedures and options for safe access to and from the site in the event of flooding	**Appendix D**	A flood response plan is provided in **Appendix D**
Following the Planning Secretary's approval, the Proponent must implement the Traffic and Transport Management Plan.		-	-

2 Legislation

2.2 RELEVANT LEGISLATION

Legislative and regulatory requirements relevant to traffic, transport and access for this Project include:

- Australian Road Rules
- AS1940—2004 *The storage and handling of flammable and combustible liquids*
- AS/NZS 1596:2014 *The storage and handling of LP Gas*
- *Environmental Planning and Assessment Act 1979 (NSW)*
- Heavy Vehicle National Law (HVNL)
- NSW Environment Protection Authority (EPA) *Storing and Handling of Liquids: Environmental Protection – Participant's Manual*
- *Heavy Vehicle (Adoption of National Law) Act 2013 (NSW)*
- *Heavy Vehicle (Adoption of National Law) Regulation 2013 (NSW)*
- *Heavy Vehicle (Fatigue Management) National Regulation (NSW)*
- *Heavy Vehicle (General) National Regulation (NSW)*
- *Heavy Vehicle (Mass, Dimension and Loading) National Regulation (NSW)*
- *Heavy Vehicle (Registration) National Regulation (NSW)*
- *Heavy Vehicle (Vehicle Standards) National Regulation (NSW)*
- *Roads Act 1993 (NSW)*
- *Road Transport Act 2013 (NSW)*

2.3 GUIDELINES

The guidelines, specifications and policy documents relevant to this Plan include:

- AS 1742.3: Manual of Uniform Traffic Control Devices – Part 3: Traffic Control for Works on Roads
- AS 1743:2018 - Road Sign and Traffic Signals
- AUSTROADS Guide to Traffic Management, 2020 – Parts 1-13
- AUSTROADS Guide to Road Design, 2021 – Parts 1-7
- AUSTROADS Guide to Road Safety, 2021 – Parts 1-7
- AUSTROADS Guide to Pavement Technology (AGPT)
- TfNSW Truck and Plant Requirements: Specification (2020)

- TfNSW Supplement to Australian Standard AS 1742.9:2018, Manual of Uniform Traffic Control Devices
- TfNSW – Traffic Control at Worksites Manual (Version 6.1, 2022)
- TfNSW – Safety Barrier Acceptance
- TfNSW – Variable Message Signs (VMS) Guidelines
- TfNSW – Delineation Manual
- TfNSW – Traffic Modelling Guidelines

2.4 MINISTER'S CONDITIONS OF APPROVAL (NSW)

The MCoA (NSW) relevant to this Plan are listed in **Appendix A**. A cross reference is also included to indicate where the MCoA (NSW) are addressed in this Plan or other project management documents.

3 Consultation

In accordance with MCoA (NSW) B35 of the Planning Approval, this TTMP has been prepared in consultation with stakeholders:

- NSW National Parks and Wildlife Service (NPWS)
- Transport for NSW (TfNSW)
- Warrumbungle Shire Council
- Mid-Western Regional Council
- Dubbo Regional Council
- Upper Hunter Shire Council
- NSW Police

The TTMP has been issued to each of the stakeholders listed above, and each have been given the opportunity to provide comment.

Consultation with each stakeholder, including responses received and how issues raised were addressed in the development of the Plan have been provided to the Planning Secretary along with the relevant document for submission, in accordance with MCoA (NSW) A7.

Separate to the consultation noted above, schools and local bicycle groups have been consulted as part the wider project consultation in the area with an aim to minimise conflict with development related traffic and school buses. Bicycle groups included Central West Cycle (CWC), and schools consulted as part of the project community engagement includes those outlined below, and in Figure 3-1.

- Dunedoo Central School
- St Michael's Catholic Primary School
- Dunedoo Preschool & Kindergarten
- Cassilis Public School
- Ulan Public School

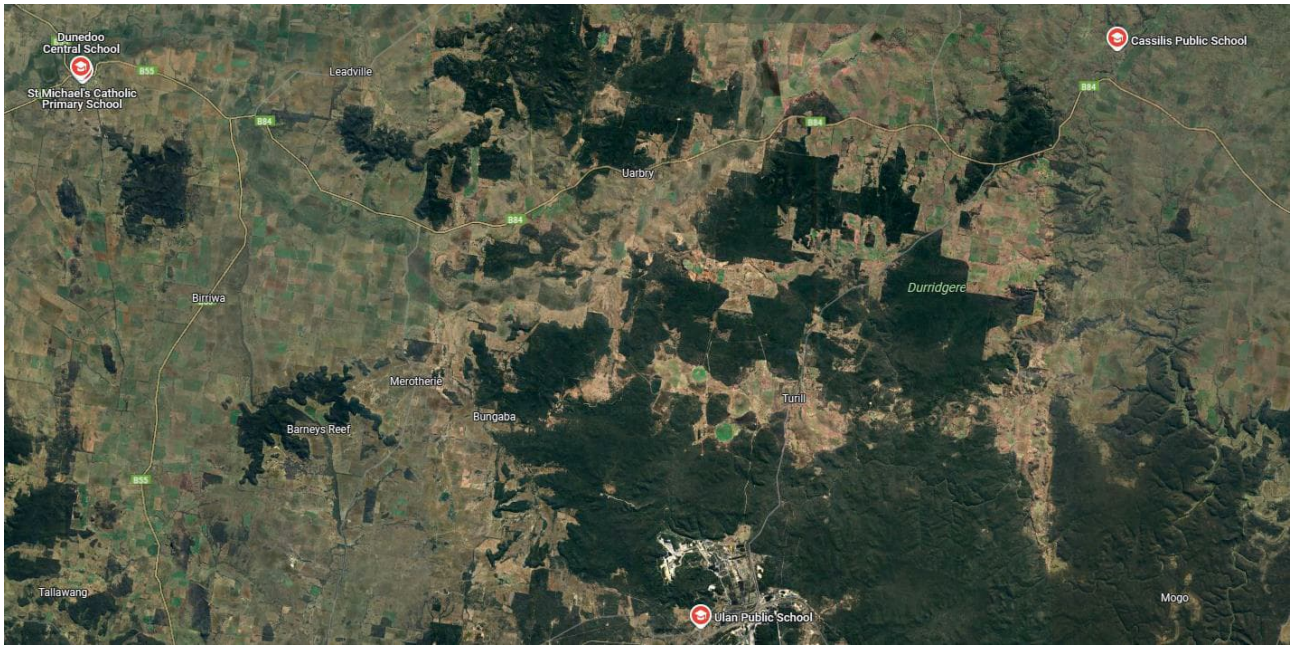


FIGURE 3-1 SCHOOLS INCLUDED IN CONSULTATION

Consultation with schools and cycle groups included an initial briefing as part of a doorknock, followed by being added to the monthly construction updates outlined in Section 3.1. Where appropriate, follow up consultation occurred by which the schools were telephoned and their concerns discussed. The focus of consultation was ensuring the pickup and drop off process saw minimal impact.

As a result of consultation, one school bus route was identified as being partially impacted, for a bus stop directly at the intersection of Merotherie Road and Golden Highway. Once this was identified direct contact was made with the driver of the bus, and the site was visited with the relevant community members who utilise this school bus stop, to agree an appropriate location to relocate the bus stop.

Where works will require an extended closure or detour, consultation will be undertaken with affected stakeholders (i.e., those residents who live on or near the affected road), as well as the relevant council representatives and/or TfNSW.

Consultation will be conducted prior to the commencement of works, including community notifications. Road closures will be advertised on VMS. Refer to Section 10.6.1.

3.1 ONGOING CONSULTATION

ACJV D&C will use a range of tools in accordance with the Community Communication Strategy (CCS) to facilitate ongoing consultation and communication with the community and stakeholders (listed in Section 3). Communication tools will be used by the Project to inform stakeholders and the community of periodic traffic related impacts, including proposed road network changes (Short and Long Term works affecting roads), movement of Oversize Overmass (OSOM) vehicles, stringing of

transmission lines over state and local roads and access impacts. Communication tools include, but are not limited to:

- Stakeholder briefings/meetings
- Working groups (if required)
- Project website
- Community drop-in sessions
- Door knocks
- Traffic and Transport Liaison Group (TTLG)
- Project factsheets

Monthly construction updates will be provided to interested parties, with registered users being identified from existing distribution lists from EnergyCo.

In accordance with MCoA (NSW) C17, project documents including the EIS, approved strategies, plans, audits or programs required under the Conditions of Approval will be publicly available on the project website.

Day to day communications on traffic and transport related issues will be established between the Traffic Manager and the nominated representative of each of the roads and traffic stakeholders (client, council, TfNSW and NPWS). The Traffic Manager will provide mobile phone and email details as requested and at the first TTLG.

3.1.1 Traffic and Transport Liaison Group (TTLG)

A regular monthly TTLG meeting, chaired by the Traffic Manager, will be established as a forum for relevant parties to liaise regarding road safety and traffic management, cumulative impacts on the road, pedestrian and cycle network, OSOM movements, TMPs and program. The TTLG will also include issues and performance of the Drivers Code of Conduct, effectiveness of the Vehicle Movement Plans, incidents and maintenance issues as necessary.

The TTLG will invite representatives from TfNSW, relevant Councils, NSW Police, Bus Operators, NPWS, relevant client and construction representatives, nearby major projects (that affect or may be affected by the work) and any other parties as required.

The TTLG is not an approval body, a community forum or a place to discuss commercial matters.

3.1.1.1 Emergency services

Emergency service representatives, including NPWS (where appropriate), will be confirmed at the commencement of works and invited to the TTLG. Ad hoc direct or standalone engagement may

occur on relevant matters as required, such as emergency access requirements.

3.1.2 Special Events

As part of ongoing consultation with stakeholders (as listed in Section 3) and road authorities, special events will be identified and incorporated into planning and communications for the Project. There are several events across the various council areas which may be affected, should project works proceed when the events are to be held.

A forecast for events will be an agenda item as part of the regular TTLG meeting agenda to allow the project to adjust their planning as would be necessary to avoid any impacts.

3.2 COMPLAINTS

Community feedback and complaints will be managed in accordance with the CCS MCoA (NSW) A22 as part of the complaints management system. This system includes complaints register which will record the details of all complaints relating to the Project, including the following:

- Date and time of the complaint
- Method by which the complaint was made
- Only required personal details
- Number of people affected in relation to a complaint
- Nature of the complaint
- Action taken, means by which the complaint was addressed and any follow up
- Whether resolution was reached, with or without mediation
- If no action taken, reasons why
- The status of resolution of the complaint

All complaints will be recorded in the Complaints Register. If investigation identifies Project activities being undertaken as the likely source of the complaint, the relevant contractor will initiate an investigation. The complainant will be advised of the results of the investigation into their complaint and any proposed remedial action as relevant.

4 Existing Environment

The road network in the Project area comprises of Highways, main roads, regional roads and local roads that connect population centres, mining sites and residential properties with a network of sealed and unsealed roads. The classification, authority and annual daily volumes of the roads that will be used by the Project are presented in Table 4-1.

4.1 ROAD TYPES

4.1.1 Highways

The key highways within the study area include the Golden Highway and Castlereagh Highway. Highways form part of classified roads network and are operated and maintained by TfNSW. They are typically constructed to a standard suitable to accommodate the higher traffic demand, high-speed conditions and for freight movements.

4.1.2 Main roads

Main roads are typically sealed, bidirectional two-lane roads (one lane in each direction) with wide travel lanes, unsealed road shoulders, basic turn treatments at key intersections and less generous horizontal and vertical curve radii when compared to the highway road network. Main roads are classified roads which has a function support the highways by connecting smaller towns to the highway network and with each other in rural areas.

4.1.3 Regional Roads

Regional roads perform an intermediate function between the main arterial network of State Roads and are council controlled.

4.1.4 Local Roads

Local Roads include roads that are not classified under the Roads Act 1993, as well as some classified roads that provide only local access and communication. Local Roads would be used to access the Approved Project area during the development. The proposed Local Roads for use are included in Table 4-1, below, which includes those shown in Figure 4-1 to 4-4 in Appendix 4 of the Planning Approval. Roads listed in Table 4-1 are included as maps in Appendix B of this plan.

Additional local roads required for construction access will be addressed in accordance with MCoA B30, and on agreement from the Planning Secretary will be updated into subsequent iterations of this document.

TABLE 4-1 ROAD NETWORK - CONSTRUCTION ROUTES

Road classification	Road name	Authority	Pavement	Configuration	Annual Daily Traffic (source)
State Roads	Golden Highway	TfNSW	Sealed	Bidirectional two-lane road (one land in each direction) Predominantly 100 km/h posted speed limit and 50km/h through towns.	1,282 - Dunedoo 930 - Uarby (EIS Chapter 13 – Survey ID H01,H02,H03)
	Castlereagh Highway	TfNSW	Sealed	Bidirectional two-lane road (one land in each direction) Predominantly 100 km/h posted speed limit and 50km/h through towns.	725 - Birriwa 1,445 - Gulgong 1,000 - Beryl 6,608 - Mudgee (EIS Chapter 13 – Survey ID H03, H04, H05, H09)
Regional Roads	Ulan Road	Mid-Western Regional Council	Sealed	Bidirectional two-lane road (one land in each direction) Predominantly 100 km/h	8,409 - Milroy 5,770 – Ulan 2,610 – North of Wollar Rd (EIS Chapter 13 – Survey ID M03, M04, M08)
	Cope Road	Mid-Western Regional Council	Sealed	Bidirectional two-lane road (one land in each direction) Predominantly 100 km/h	1,095 – Cope 1675 – Gulgong (EIS Chapter 13 – Survey ID M01, M02)
	Wollar Road	Mid-Western Regional Council	Sealed	Bidirectional two- lane road (one land in each direction) Predominantly 100 km/h	170 – West of Wollar (EIS Chapter 13 – Survey ID R01)
	Hill End Road	Mid-Western Regional Council	Sealed	Bidirectional two- lane road (one lane in each direction)	Not available

Road classification	Road name	Authority	Pavement	Configuration	Annual Daily Traffic (source)
				Predominantly 100 km/h	
Local Roads	Ancrum Street Cassilis	Upper Hunter Council	Sealed with unsealed shoulder and no line marking	Bidirectional two-lane road (50km/h)	Not available
	Bald Hill Road Dunedoo	Warrumbungle Shire Council	Unsealed	Bidirectional two-lane road – 100km/h (rural speed limit)	Not available
	Barigan Road Wollar	Upper Hunter Council	Unsealed	Bidirectional two-lane road – 100km/h (rural speed limit)	100 – Wollar (EIS Chapter 13 – Survey ID L09)
	Barigan Street Wollar	Upper Hunter Council	Sealed with unsealed shoulder and no line marking	Bidirectional two-lane road (50km/h)	150 – Wollar (EIS Chapter 13 – Survey ID L08)
	Birkalla Road, Merotherie and Bungaba	Mid-Western Regional Council	Unsealed	Bidirectional two-lane road – 100km/h (rural speed limit)	Not available
	Birriwa Bus Route South	Mid-Western Regional Council	Unsealed	Bidirectional two-lane road – 100km/h (rural speed limit)	Not available
	Blue Springs Road Bungaba and Uarbry	Warrumbungle Shire Council	Sealed and unsealed sections	Bidirectional two-lane road – 100km/h (rural speed limit)	180 – North and South (EIS Chapter 13 – Survey ID L10 and L11)
	Brooklyn Road Dunedoo	Warrumbungle Shire Council	Unsealed	Bidirectional two-lane road – 100km/h (rural speed limit)	Not available
	Cassilis Road Cassilis	Upper Hunter Council	Sealed with unsealed shoulder	Bidirectional two-lane road – 100km/h (rural speed limit) – 50 km/h near town of Cassilis	Not available

Road classification	Road name	Authority	Pavement	Configuration	Annual Daily Traffic (source)
	Cliffdale Road Turill and Uarbry	Warrumbungle Shire Council	Unsealed	Bidirectional two-lane road – 100km/h (rural speed limit) – 50 km/h near town of Cassilis	Not available
	Coolah Road Cassilis	Upper Hunter Council	Sealed and unsealed sections	Bidirectional two-lane road – 100km/h (rural speed limit) – 50 km/h near town of Cassilis	Not available
	Corishs Lane, Tallawang	Mid-Western Regional Council	Unsealed	Bidirectional two-lane road – 100km/h (rural speed limit)	Not available
	Dapper Road Dunedoo	Warrumbungle Shire Council	Unsealed	Bidirectional two-lane road – 100km/h (rural speed limit)	Not available
	Highett Road Ulan	Mid-Western Regional Council	Unsealed	Bidirectional two-lane road – 100km/h (rural speed limit)	Not available
	Merotherie Road Merotherie	Mid-Western Regional Council	Unsealed	Bidirectional two-lane road – 100km/h (rural speed limit)	Not available
	Neeleys lane Turill	Mid-Western Regional Council	Unsealed	Bidirectional two-lane road – 50km/h	Not available
	Phillip Street Wollar (Maitland Street)	Upper Hunter Council	Sealed and unsealed sections	Bidirectional two-lane road – 50km/h	Not available
	Puggoon Road Beryl and Tallawang	Mid-Western Regional Council	Unsealed	Bidirectional two-lane road – 100km/h (rural speed limit)	Not available
	Spir Road Orana	Warrumbungle Shire Council	Unsealed	Bidirectional two-lane road – 100km/h (rural speed limit)	Not available
	Spring Ridge Road Dunedoo and Tallawang	Mid-Western Regional Council	Sealed with unsealed shoulder and no line marking	Bidirectional two-lane road – 100km/h (rural speed limit)	120 (EIS Chapter 13- Survey ID L05)

Road classification	Road name	Authority	Pavement	Configuration	Annual Daily Traffic (source)
	Trgo Close Willpinjong	Mid-Western Regional Council	Unsealed	Bidirectional two-lane road – 100km/h (rural speed limit)	Not available
	Tucklan Road Dunedoo	Warrumbungle Shire Council	Unsealed	Bidirectional two-lane road – 100km/h (rural speed limit)	120 (EIS Chapter 13 – Survey ID L01)
	Turill Bus Route	Mid-Western Regional Council	Unsealed	Bidirectional two-lane road – 100km/h (rural speed limit)	Not available
	Ulan – Wollar Road Ulan, Wilpinjong and Wollar	Mid-Western Regional Council	Sealed with unsealed shoulder and no line marking	Bidirectional two-lane road – 100km/h (rural speed limit)	3,760 – Ulan (EIS Chapter 13 – Survey ID L12)
	Upper Laheys Creek Road Dunedoo	Warrumbungle Shire Council	Unsealed	Bidirectional two-lane road – 100km/h (rural speed limit)	40 – Dunedoo (EIS Chapter 13 – Survey ID L06)
	Whistons Lane Tallawang	Mid-Western Regional Council	Unsealed	Bidirectional two-lane road – 100km/h (rural speed limit)	Not available
	Main Street Cope	Mid-Western Regional Council			Not available
	Upper Cumbo Road Wollar	Upper Hunter Council	Unsealed		Not available

4.2 HEAVY VEHICLE ROUTE RESTRICTIONS

4.2 HEAVY VEHICLE ROUTE RESTRICTIONS

General Access Vehicles (GAV) that meet mass and dimension requirements can operate on the road network without a permit. Other heavy vehicles, like Restricted Access Vehicles (RAV) and OSOM vehicles, must comply with road network restrictions. The permitting process includes documenting load, weight, size, transport configuration and route analysis. This ensures that an assessment occurs for all OSOM movements. Additional information of the required permits and identified OSOM loads for the Project is included in Section 10.8.6.

The Golden Highway is used as a construction route for the Project for OSOM requiring escort. This is outlined in the VMPs included in Appendix B, the route assessment in Appendix F, and detailed in Section 10.8.

4.3 REGIONAL RAIL LINES AND CROSSING

The Project will cross two active freight railways, both of which are managed by ARTC.

- Sandy Hollow - Gulgong railway, which is a single-track rail line extending between Muswellbrook and Gulgong
- Wallerwang - Gwabegar railway, which is a single-track rail line extending between Gulgong and Binnaway

4.3.1 Level crossings

Details of level crossings in the Project area that may be used by the project are listed in Table 4-2.

TABLE 4-2 LEVEL CROSSINGS

ID	Road name / Suburb	LGA	Control type[1]	Rail operator	Line section
1300	Ulan-Wollar Road / Wilpinjong	Mid-Western Regional	Active – Boom gates and flashing lights	ARTC	Ulan
1301	Ulan-Wollar Road / Wilpinjong	Mid-Western Regional	Passive – Stop signs	ARTC	Ulan
1304	Cope Road / Ulan	Mid-Western Regional	Active – Flashing lights	ARTC	Ulan
1414	Station Street / Gulgong	Mid-Western Regional	Active – Flashing Lights	ARTC	Wallerawang Gwabegar
1421	Puggoon Road / Tallawang	Mid-Western Regional	Passive – Stops signs	ARTC	Wallerawang Gwabegar
1422	Whistons Lane / Tallawang	Mid-Western Regional	Passive – Stops signs	ARTC	Wallerawang Gwabegar

ID	Road name / Suburb	LGA	Control type[1]	Rail operator	Line section
1425	Castlereagh Highway / Birriwa	Mid-Western Regional	Active – Flashing lights	ARTC	Wallerawang Gwabegar
1428	Golden Highway	Warrumbungle	Active Flashing lights	ARTC	Wallerawang Gwabegar

4.4 PUBLIC TRANSPORT

Within the Project area, coaches are the main form of public transport between towns like Gulgong, Dunedoo, and Coolah. There are no local bus services within the Project area. The coaches are part of NSW Train Link's Regional Train and Coaches Network, which operates infrequently, offering one to four return trips per week. A summary of the coach services is provided in Table 4-3 and Figure 4-1 showing the TfNSW Regional train and coach network.

TABLE 4-3 COACH SERVICES

Bus No.	Route	Network and operator	Service frequency
539	Lithgow to Coonabarabran	NSW Train Link Regional trains and coaches	One service per week on Sunday only, during the evening
540	Coonabarabran to Lithgow	NSW Train Link Regional trains and coaches	One service per week on Monday only, during the afternoon
545	Lithgow to Coonabarabran	NSW Train Link Regional trains and coaches	One service per week on Monday only, during the morning
546	Coonabarabran to Lithgow	NSW Train Link Regional trains and coaches	Four services per week in total. One service per day on the following days – Tuesday / Wednesday / Thursday / Sunday during the afternoon
547	Lithgow to Coonabarabran	NSW Train Link Regional trains and coaches	Two Services per week in total, One service per day on the following days – Wednesday / Friday during the morning
549	Lithgow to Coonabarabran	NSW Train Link Regional trains and coaches	One service per week on Tuesday only, during the morning
573	Lithgow to Baradine	NSW Train Link Regional trains and coaches	One service per week on Thursday only, during the morning
574	Baradine to Lithgow	NSW Train Link Regional trains and coaches	One service per week on Friday only, during the morning

4.5 ACTIVE TRANSPORT

Active transport infrastructure includes off-road or on-road facilities for pedestrians and cyclists, which can be mixed with traffic, visually separated, or segregated. In the Project area, footpaths are typically available only in town centres like Gulgong, Cassilis, Dunedoo, and Wollar, providing separate walking facilities. Outside of these centres, active transport facilities are generally not

available. Cycling infrastructure is even less developed, with the only bicycle facility being a 4.5 km stretch on the Golden Highway west of Cassilis Road, consisting of wide shoulders on either side, but disconnected at road bridges.

Despite generally having limited cycling infrastructure, the Central West Cycle (CWC) trail, follows the quiet backroads in a circuit through Mudgee-Gulgong-Dunedoo-Mendooran Ballimore, Dubbo-Geurie-Wellington-Goolma-Gulgong to Mudgee. It traverses through rural landscapes, native bush areas, small towns and regional cities. The route mapped by CWC in November 2020 is depicted in Figure 4-2 and Figure 4-3.

FIGURE 4-1 TFNSW REGIONAL TRAIN AND COACHES NETWORK

FIGURE 4-2 CENTRAL WEST CYCLE TRAIL

FIGURE 4-3 CENTRAL WEST CYCLE TRAIL

5 Construction, transport and access impacts

5.1 CONSTRUCTION SEQUENCE

Based on Project program and approval documents required, there are three main stages of works, being:

1. Pre-construction Minor Works (PCMW) and accommodation camps
2. Road Upgrades
3. Construction

The Project sequence for works commenced with PCMW at the Merotherie Road Site in February 2025. Traffic movements during PCMW and prior to the commencement of the relevant road and/or access point upgrades will be managed in accordance with MCoA (NSW) B32, with details of the restricted use included in Table 5-1.

Road upgrades and access points will commence following approval of the relevant Transport Strategy, and this Plan. This is proposed to occur around April 2025. At this time, the upgrade of Merotherie Road and the intersection upgrade at Merotherie Road and the Golden Highway will commence. Traffic movements and management will change from the PCMW restricted movements to align with the permissible movements as approved in the Transport Strategy

The staged establishment and use of the Merotherie camp is outlined in the table below.

TABLE 5-1 CAMP CONSTRUCTION AND OCCUPATION

Month	Approx. camp capacity (at end of month)	Anticipated occupation	Use of Golden Highway/Merotherie Road intersection
February 2025	-	-	Per condition B32 approval – no more than 5 HV and 20 LV prior to Golden Highway/Merotherie Road intersection upgrade commencing
March 2025	-	-	Per condition B32 approval – no more than 5 HV and 20 LV prior to Golden Highway/Merotherie Road intersection upgrade commencing
April 2025	50	30	Transport Strategy and Traffic and Transport Management Plan approved – Golden Highway/Merotherie Road intersection upgrade commences
May 2025	100	35	Golden Highway/Merotherie Road intersection upgrade ongoing
June 2025	200	40	Golden Highway/Merotherie Road intersection upgrade complete

Month	Approx. camp capacity (at end of month)	Anticipated occupation	Use of Golden Highway/Merotherie Road intersection
July 2025	300	150-300	

Following approval of remaining applicable documents, construction of the Project is proposed to commence around July 2025 and includes:

- Commencement of construction of the Elong Elong and Barigan Creek Energy Hubs
- Commencement of construction of a variety of other intersection upgrades
- Commencement of construction of a variety of local and regional road access points
- Commencement of construction of access tracks

5.2 SEPARABLE PORTIONS

Separable Portions is a term used to describe the phases of a construction program, the access points for the Project have been numbered based on which separable portion of the construction program they relate to. Figure 5-1 below shows the Project overview map with the relevant separable portion highlighted for clarity.

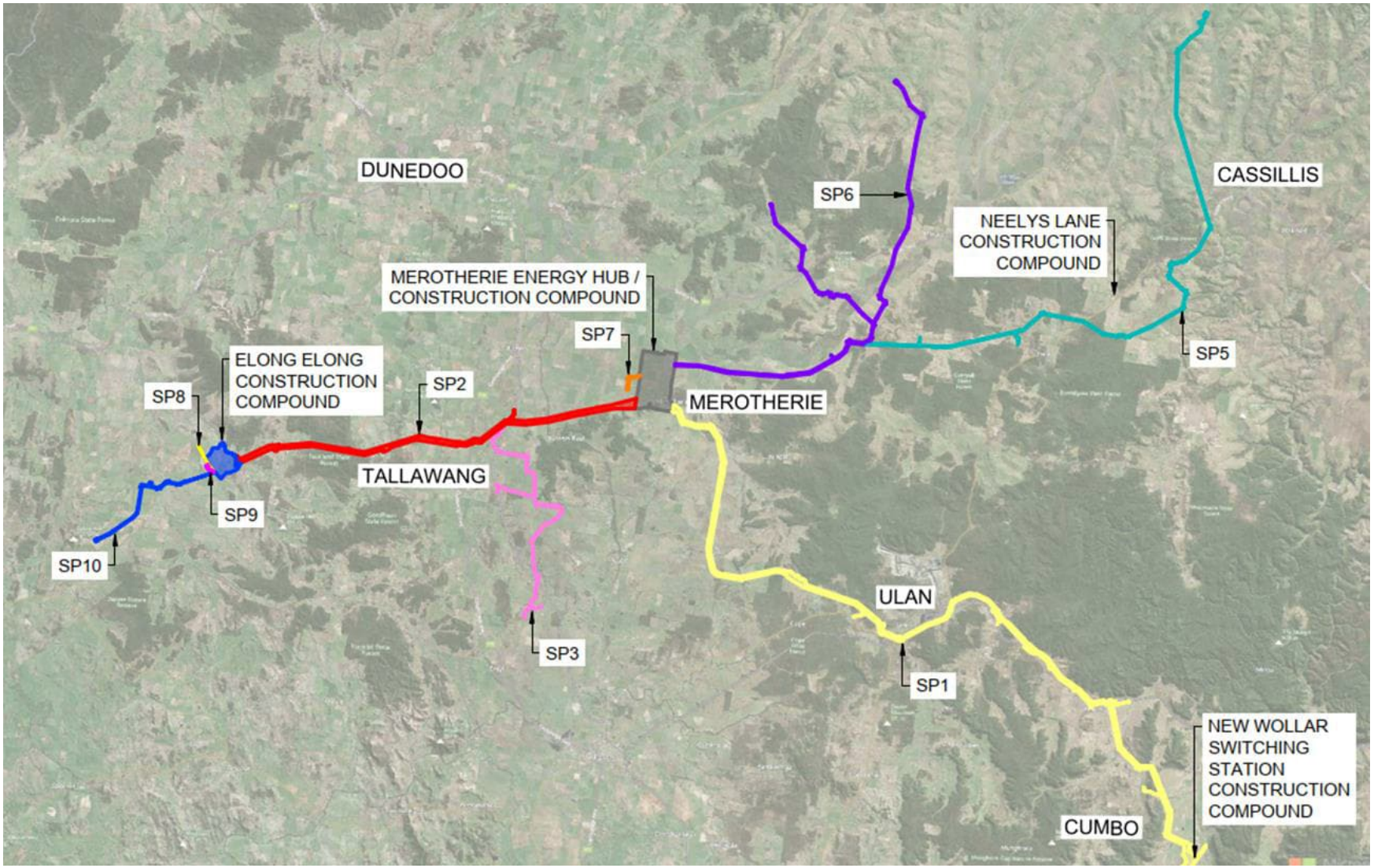


Figure 5-1 PROJECT MAP SHOWING SEPARABLE PORTIONS

5.3 CONSTRUCTION PROGRAM

The indicative timeframe for the Project is for construction to commence in Q2 of 2025, for a period of around five years, with pre-commissioning expected to commence in Q1 of 2027 and demobilisation rehabilitation expected to extend until the end of 2032. Figure 5-2 below provides an indicative construction program for the Project, and outlines the anticipated sequence and staging of the project works in relation to the camp construction stages and intersection upgrades.

The dates shown within this schedule are subject to approvals of this Plan, the associated Transport Strategy which captures the identified upgrade (where required to be in a Transport Strategy) and approval of the Works Authorisation Deed (WAD) from the relevant TfNSW team. The approved TTMP would also need to incorporate the necessary information pertaining to the described upgrade.

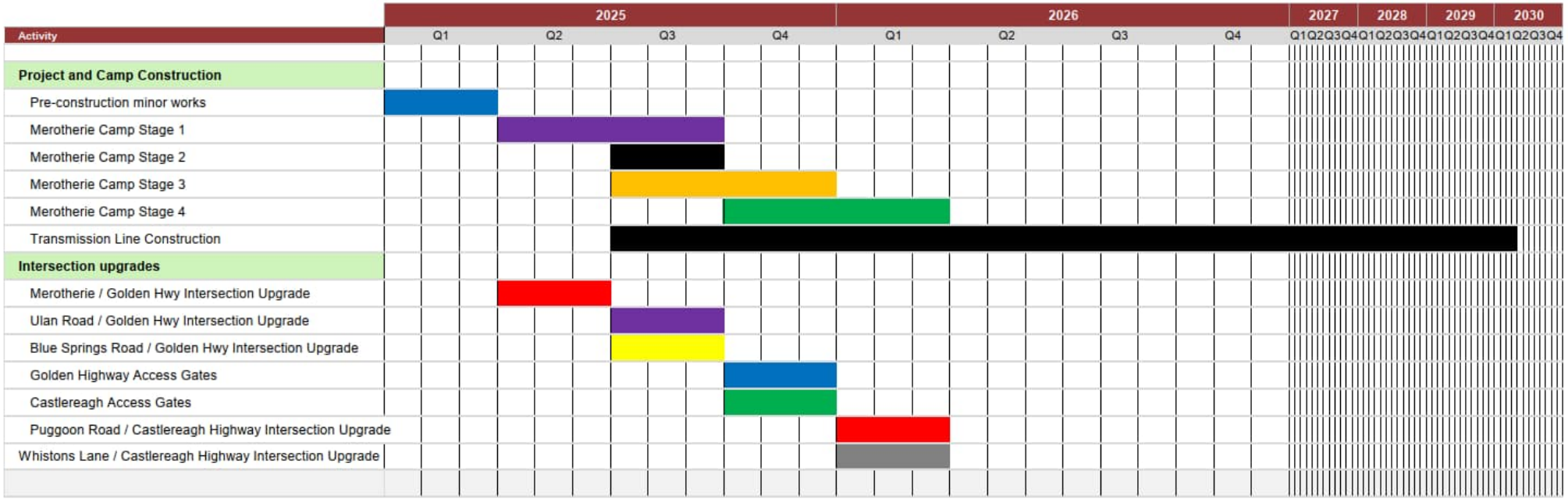


FIGURE 5-2 INDICATIVE CONSTRUCTION PROGRAM

Construction of the Project is planned to occur concurrently across multiple work fronts. This would mean that at any one time, construction activities are likely to be occurring concurrently at several locations within the construction.

As discussed above, the Project will commence with PCMW, including the establishment of camps, followed by road upgrades and then remaining construction. Works specifically associated with road upgrades are summarised in Section 6 and will also be detailed in the Transport Strategy in accordance with MCoA (NSW) B31.

Energy hubs and/or switching stations will be constructed at the following locations:

- Barigan Creek Switching Station
- Merotherie Energy Hub
- Elong Elong Energy Hub
- 330 kV switching stations (Cassilis, Coolah, Leadville, Merotherie, Tallawang, Dunedoo, Cobbora, Goolma)

Towers and lines will be installed using cranes, with exclusion zones established during line installation to manage traffic around public roads. For major roads like the Castlereagh and Golden Highways, temporary traffic controls will be implemented, holding traffic for 5 to 10 minutes during wire crossings.

Additional information relating to stringing lines is included in Section 10.7, with further details and plans to be provided to key stakeholders as part of a site specific Traffic Management Plan as described in Section 10.2.

After the Project is completed, temporary access works will be decommissioned, with some access points retained for operation and maintenance. Access points required to be retained for operation and maintenance will be described in the operation applicable management plans.

A summary outlining the approximate delivery dates of each of the synchronous condensers and transformers for the project is outlined below, in Table 5-2.

TABLE 5-2 INDICATIVE HIGH RISK OSOM DELIVERY DATES

High Risk OSOM Deliveries	
Synchronous Condenser 1 & 2 - Merotheire Energy Hub	22/02/2027
Synchronous Condenser 3 & 4 - Merotheire Energy Hub	1/05/2026
Synchronous Condenser 1 & 2 - Elong Elong Energy Hub	13/09/2027
Synchronous Condenser 3 - Elong Elong Energy Hub	6/09/2026
Transformers 1, 2 & 3 - Merotherie Energy Hub	31/12/2026

High Risk OSOM Deliveries	
Transformers 4 & 5 - Merotherie Energy Hub	25/03/2027

5.4 ROAD AND RAIL CROSSING

Key roads that would be crossed by the Project (stringing of transmission lines) are detailed in Table 5-3. All access to construction sites is to be facilitated by the routes identified in Appendix B

TABLE 5-3 ROAD AND RAIL CROSSINGS

Roads		
Upper Cumbo Road	Birriwa Bus Route South	Barneys Reef Road
Wollar Road	Merotherie Road	Puggoon Road
Wilpinjong Road	Ross Crossing South Road	Upper Laheys Creek Road
Ulan-Wollar Road	Golden Highway (B84)	Spring Ridge Road
Ulan Road	Moorefield Road	Dapper Road
Lagoons Road	Cliffdale Road	Sandy Creek Road
Cope Road	Turill Bus Route Road	
Highett Road	Summerhill Road	
Blue Springs Road	Coolah Road	
Birkalla Road	Rotherwood Road	
Castlereagh Highway (B55)	Tucklan Road	

Key railway line crossings would include:

- Three crossings of the Sandy Hollow/Gulgong Railway, which are operated by the Australian Rail Track Corporation and are referred to as the Ulan Line. The crossings are located along Ulan Road and the Ulan-Wollar Road adjacent to the existing mining operations.
- Three crossings of the Wallerawang/Gwabegar Railway, two crossings around five and seven kilometres south of the rail line's intersection with the Castlereagh Highway and one crossing around two kilometres northeast of switching station M9. These crossings align to Separable Portions 2 and 3, as shown in Figure 5-1.

The crossing points for the railway lines will be accessed from either side, from within the Project boundary, and in accordance with the access routes included in the VMPs in Appendix B.

Consultation is underway with Australian Rail Track Corporation (ARTC) for transmission line stringing. Works for stringing will be coordinated to ensure no trains are running when wires are being installed over any rail line.

5.5 ACCOMMODATION CAMPS

Two temporary workforce accommodation camps would be required to cater for the construction workforce. The workforce accommodation camps would be located at the main construction compound at Merotherie Road, Merotherie on land adjacent to the Merotherie Energy Hub, and at Neeleys Lane in Turill. The workforce accommodation camps will be established as pre-construction minor works and will be demobilised at the completion of construction (currently planned in 2030).

The main construction workforce accommodation camp at Merotherie Road, Merotherie will be located next to the Merotherie Energy Hub main construction compound, about six kilometres south of the intersection of Merotherie Road with the Golden Highway and access to the site would be provided via these roads.

The Neeleys Lane workforce accommodation camp will primarily service the construction workforce undertaking works along the 330 kV network infrastructure, particularly the Cassilis, Coolah and Leadville connections. Access to the site would be provided via Neeleys Lane, Ulan Road and Golden Highway. No access will be permitted from the intersection of Neeleys Lane and the Golden Highway.

5.6 CONSTRUCTION WORKER PARKING

During the construction phase and following the establishment of the accommodation camps and compounds, workers will be based within these camps and will park within the respective main construction compounds or substation area. There will be no planned worker parking in road reserves unless they are:

- Accessing a work area as part of an intersection, access point construction or road upgrade, and as part of an approved ROL or S138 permit
- Accessing a necessary work area as part of transmission line stringing across a Local, Regional or State Road, and as part of an approved ROL or S138 permit

There is a significant portion of parking included within the Merotherie Accommodation Camp, which will allow parking for site vehicles as well as private vehicles driven by workers to attend camp during their time on site.

The current planned layout of the accommodation camp at the time of this document preparation is included below, in Figure 5-3.

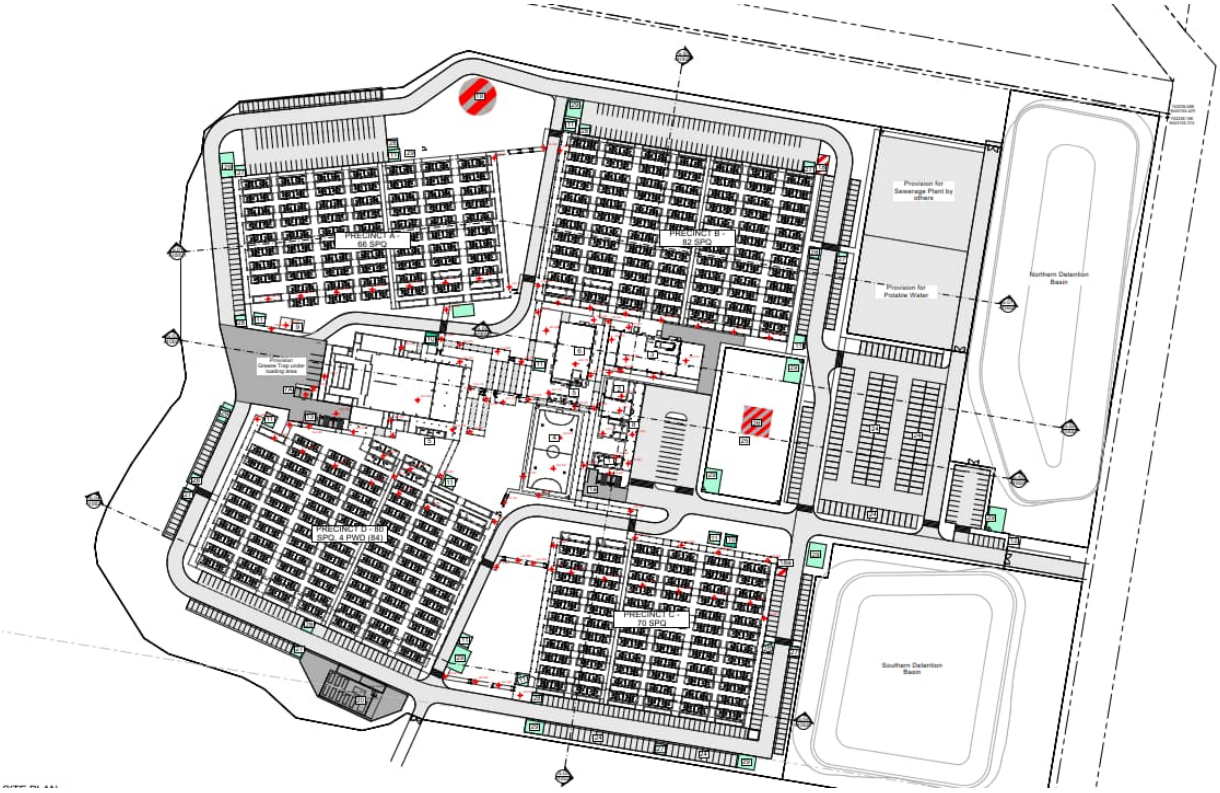


FIGURE 5-3 INDICATIVE MEROTHERIE ACCOMMODATION CAMP SITE PLAN

5.7 ACCESS ROADS AND TRANSPORT ROUTES

MCoA (NSW) B29 and B30 require that both heavy, light and OSOM vehicles requiring escort only use the construction routes identified in the EIS and shown in Appendix 4 of the Planning Approval to access the site, unless otherwise approved by the Planning Secretary.

A list of the proposed roads, and the classification is provided in Table 4-1 in Section 4. This has been adjusted to omit some roads which are not proposed for use.

Maps showing the proposed access routes listed in Table 4-1 are provided in Appendix B. The key changes in Appendix B from the maps included in Appendix 4 of the Planning Approval are as follows:

- Birriwa Bus Route South to only be used where accessed from Merotherie Road, and only to a point approximately 1.5km west of the Merotherie Road intersection
- Ross Crossing North is no longer proposed for use by the Project
- Ginger's Lane is no longer proposed for use by the Project

5.8 PROJECT VEHICLE MOVEMENTS EXCLUDING STRINGING

The delivery of the Project works will be governed in some areas by the permissible vehicle movements identified in the amended TTIA of the EIS. Similarly, as a result of the removal of some of the access routes identified in the EIS, there will be some displaced traffic to nearby construction access points. Where there is a discrepancy between the AM/PM peak traffic volumes identified in the EIS and those identified in an approved Transport Strategy, the volumes identified in the approved Transport Strategy are to be complied with.

The updated construction traffic demands are outlined below, in Table 5-4.

TABLE 5-4 CONSTRUCTION TRAFFIC DEMANDS PER SITE

Site	Movement per hour			Movement per day		
	Light vehicle	Heavy vehicle	Total	Light vehicle	Heavy vehicle	Total
New Wollar Switching Station*	4	20	24	44	198	242
Merotherie Energy Hub and workforce accommodation camp	44	33	77	376	431	808
Neelys Lane workforce accommodation camp	32	24	56	296	70	366
Elong Elong Energy Hub*	4	20	24	44	198	242
330kV switching stations (typical)	12	1	13	34	38	72
Access gate (typical) (along transmission line)	12	20	32	148	194	342

Construction traffic accessing a typical ‘Access gate’ along the alignment will include movements from a variety of sources, namely:

- Worker transport accessing the worksites
- Delivery and collection of construction plant and equipment, examples including
  - Graders
  - Excavators
  - Scrapers
  - Bulldozers
- Importing materials, including;
  - Hardstand material for access tracks and tower pads
  - Concrete and reinforcing materials
  - Steel components for tower erection
  - Transmission cable and stringing equipment
- Delivery of building equipment and supplies

- Delivery of prefabricated buildings (these are limited to camps, switching stations and Energy Hubs)

The movements associated with each of the activities will vary, based on the project program and the extent of work accessed from the 'Access point'. The works are programmed to be linear, originating at an access point and continuing until they reach the limit of works (creek or river, railway or road). In some instances, works will progress from each end of a worksite (if accessible) and meet in the middle.

A breakdown of indicative vehicle movements and crew sizes associated with some key activities is included below. These movements would be attributed to a particular work front (noting that there may be multiple workfronts accessed from a single access point), and in sequence shown (ie. Clearing will come before access track and pad construction).

Light Vehicle (LV) movements associated with the activities outlined below will typically consist of crews arriving at site in the morning and then departing at the completion of the shift. Heavy vehicles (HVs) will often include concrete trucks or truck and dogs operating on a turn-around arrangement, carrying multiple loads of materials from a quarry, or concrete from a batch plant daily. The number of HVs references those on turn-around which would make-up the expected daily movements.

TABLE 5-5 CONSTRUCTION ACTIVITY VEHICLE MOVEMENTS

Activity	Crew Size	No. of LV	No. of HV	Mov. / day
Civil Works				
Clearing and Grubbing	9	1	6	**34**
Access Tracks	8	2	7	**42**
Pads for towers	8	2	7	**42**
Foundations				
Excavation	6	0	2	**11**
Concrete	12	2	2	**16**
Towers				
Erection	13	2	7	**42**
Pre-Assembly	19	2	1	**11**
Torquing	12	2	0	**6**

The relationship between work activities and access gates / access points is detailed indicatively in Figure 5-4, below. Work crews will progressively move between access gates along a Separable Portion alignment. Work fronts will be determined based on program priority, works availability and necessary approvals and upgrades being in place to facilitate the works. As such, the program is subject to change.

Works will follow the same sequence for each work front, and movements associated with construction utilising nearby intersections and upgrades will be monitored to ensure provision of

upgrades is adequate for the movements. Where necessary, works will be delayed or re-sequenced to ensure movements and impacts are consistent with those anticipated as part of the TIA, and as identified in the EIS.

Means of monitoring are further detailed in Section 12.2, as part of the overall monitoring and reporting requirements.

FIGURE 5-4 INDICATIVE WORKS SCHEDULE PER SEPARABLE PORTION

5.9 STRINGING MOVEMENTS

Stringing has been left out of the above, as stringing will be undertaken only after all of the activities above have been completed for the section of works.

Movements associated with Stringing will vary, depending on the voltage of the lines being strung. The 330kV wires will see about 110 total movements per day however this may be spread across multiple access points. 500kV will see a larger requirement of movements, up to 160 total per day.

The stringing will progress quite quickly once the towers and section has been completed to a point where stringing can be undertaken, notwithstanding – stringing movements will not exceed the indicated movements identified on a typical day in the Traffic Impact Assessment for the Project as part of the EIS.

5.10 CUMULATIVE IMPACTS

Appendix L Cumulative Impacts Assessment of the Amendment Report identified 18 potential projects that may utilise similar construction routes. These projects primarily involve renewable energy generation, such as wind and solar farms, and include projects like the Liverpool Range wind farm and the Sandy Creek solar farm.

Of the 18 projects, some projects have been identified as having negligible cumulative traffic impacts because they either use roads outside the study area or are already operational. Additionally, certain projects like the Wilpinjong coal mine and the Moolarben coal mine extensions are considered part of the baseline traffic conditions and are not included in the cumulative impact assessment.

The Cumulative Impacts Assessment of the Amendment Report provides a quantitative sensitivity analysis of the predicted road network performance due to the anticipated increase in construction traffic from the Project and the 18 identified cumulative projects. The assessment indicates that the additional traffic volumes generated by the 18 relevant future projects (in combination with this project) would have only a minor impact on the capacity and efficiency of the impacted roads, with the existing level of service (LoS) (LoS A for all routes) maintained on most roads.

A moderate impact on capacity (reduction of LoS from A to B) is expected on Cope Road and Ulan Road due to the high traffic generation estimate produced by the Stubbo solar farm. At LoS B however, traffic would still be considered as free-flowing. The free-flowing conditions were mainly due to the current low traffic demand on these roads.

An intersection analysis was also conducted for 16 key intersections along the Project's construction routes. The results indicate that, for most intersections traffic conditions during construction (including cumulative impacts from the other projects) would be similar to those expected from this project alone, with intersections operating mainly at LoS A, B, or C. Two intersections, the Ulan Road/Cope Road (Main Street) and Ulan Road/Ulan-Wollar Road intersections, performing at LoS D during the AM peak (which is considered acceptable by Transport for NSW).

- The majority of the access intersections required for this Project would only be used temporarily during construction for a short duration of time. Once this Project is operational, the majority of these intersections would revert back to existing or similar traffic conditions
- The assessment is based on the assumption that all of the 18 relevant future projects would proceed, and that the peak periods of the peak construction period for all of the projects assessed would coincide with the peak periods of the peak construction period for this Project, if they do proceed
- The road upgrades detailed in Section 6 will help mitigate some of the potential minor cumulative impacts

Background traffic volumes assessed as part of the development of various Transport Strategy documents for the Project will incorporate an assessment of any approved projects as part of

considerations for intersection treatments. These volumes and approved projects will be outlined within the Transport Strategies, and any cumulative impacts will be addressed accordingly.

Mitigation of cumulative impacts would then be captured in a revised intersection treatment or upgrade as determined by the Transport Strategy document. Further mitigation measures for cumulative impacts relating to Heavy Vehicles is included in Section 10.8.

5.11 TRAFFIC MODELLING

Traffic modelling for each of the intersection upgrades proposed will be incorporated into the design reports attached to designs where the intersection operation is proposed to change as part of the design. These modelled scenarios will capture the existing performance, the performance during peak construction and the performance during operation (post construction).

6 Planning Approval Road Upgrades

6.1 REQUIRED UPGRADES

Road upgrades or mitigations will be necessary to reduce the impacts of construction traffic entering and exiting construction areas or to accommodate the size and weight of components being transported. As such, upgrade treatments are defined in the Planning Approval, Appendix 4 Table 5, to ensure safe access and egress for construction traffic, equipment, and personnel as well as providing for the ongoing use and amenity for the public.

These upgrades treatments may involve constructing new pavements, enhancing existing road surfaces, and installing traffic signs and devices (to the satisfaction of the relevant road authorities and TfNSW) to accommodate all types of construction vehicles, or other mitigations as appropriate.

The road upgrades required in accordance with the Planning Approval are shown below in Table 6-1.

TABLE 6-1 PLANNING APPROVAL IDENTIFIED ROAD UPGRADES AS TAKEN DIRECTLY FROM APPENDIX 4, TABLE 5 OF THE PLANNING APPROVAL

Road/intersection	Treatment	Timing
Merotherie Road	Widening and upgrade, as necessary to sealed standard between the Golden Highway and the Merotherie Energy Hub access point.	Commencement of the upgrade with commencement of any of the following: Merotherie Energy Hub, construction compound or any workforce accommodation camp. *Note – the timing of the use and upgrade of Merotherie Road has been amended via an approved request under MCoA B32
Merotherie Road	Installing a new bridge to replace the existing crossing of the Talbragar River.	Prior to delivery of oversized specialist electrical equipment (power transformers and synchronous condensers) to the Merotherie Energy Hub
Intersection of Merotherie Road and Golden Highway	Basic Left Turn and Short Channelised Right Turn Confirmation that the design for upgrade meets Austroads requirements (and TfNSW supplements), including checks for OSOM movements to be provided in Transport Strategy under condition B31.	Commencement of the upgrade with commencement of any of the following: Merotherie Energy Hub, construction compound or any workforce accommodation camp *Note – the timing of the use and upgrade of Merotherie Road and Golden Highway intersection has been amended via an approved request under MCoA B32

Road/intersection	Treatment	Timing
Spring Ridge Road	Upgrade road and install new bridge to replace the existing causeway at Laheys Creek as necessary as per the Transport Strategy under condition B31	Timing as outlined in Transport Strategy
Intersection of Golden Highway and Spring Ridge Road	Current intersection configuration (AUL and BAR) is adequate, subject to: Confirmation SISD for this intersection is adequate (to be provided in Transport Strategy under condition B31). If SISD is non-compliant, mitigations to address the non-compliance to be detailed in the Transport Strategy.	Commencement of the upgrade with commencement of development related construction traffic
Intersection of Neeleys Lane and Ulan Road	Auxiliary Left Turn and Short Channelised Right Turn	Commencement of the upgrade with commencement of the construction of the Neeleys Lane workforce accommodation camp
Intersection of Ulan Road and Golden Highway	Basic Left Turn and Short Channelised Right Turn	Commencement of the upgrade with commencement of right turn movement of construction traffic from Golden Highway into Ulan Road *Note – the timing of the use and upgrade of Ulan Road and Golden Highway has been requested under MCoA B32, to commence construction prior to the operation of Neeleys Lane Accommodation Camp.
Intersection of Blue Springs Road and Golden Highway	Upgrade as necessary as per the Transport Strategy under condition B31	Timing as outlined in Transport Strategy
Intersection of Whistons Lane and Castlereagh Highway	Basic Right Turn and Basic Left Turn Confirmation that the design for upgrade meets Austroads requirements (and TfNSW supplements), including checks for OSOM movements to be provided in Transport Strategy under condition B31.	Commencement of the upgrade with commencement of development related construction traffic
Intersection of Puggoon Road and Castlereagh Highway	Basic Right Turn and Basic Left Turn Upgrade to be outlined in the Transport Strategy under condition B31.	Commencement of the upgrade with commencement of development related construction traffic
Golden Highway (East of Merotherie Road) access gates	Basic Left Turn and Basic Right Turn Upgrade to be outlined in the Transport Strategy under condition B31.	Prior to construction of the relevant minor access track off the public road network
Castlereagh Highway access gates	Basic Left Turn and Basic Right Turn Upgrade to be outlined in the Transport Strategy under condition B31.	Prior to construction of the relevant minor access track off the public road network

Road/intersection	Treatment	Timing
Wollar Road access gates	Upgrade as necessary as per the Transport Strategy under condition B31	Prior to construction of the relevant minor access track off the public road network
Cope Road access gate (North)	Upgrade as necessary as per the Transport Strategy under condition B31	Prior to construction of the relevant minor access track off the public road network
Cope Road access gate (South)	Upgrade as necessary as per the Transport Strategy under condition B31	Prior to construction of the relevant minor access track off the public road network
Other Local Roads, as identified in Figure 4-1 to Figure 4-4 of this Appendix	Upgrade as necessary as per the Transport Strategy under condition B31	Prior to commencing the use of the local road for any heavy vehicle traffic associated with construction
Minor Access Points intersections (any Access Point associated with minor access tracks off public road network)	Upgrade as necessary as per the Transport Strategy under condition B31	Prior to construction of the relevant minor access track off the public road network

6.2 UPGRADES NOT REQUIRED

Some roads included into Planning Approval Appendix 4 Table 5 are not proposed to be upgraded as they are no longer being used, have already been upgraded or are otherwise not applicable. These items are shown in Table 6-2, along with the justification of this approach..

TABLE 6-2 PLANNING APPROVAL UPGRADES - NOT REQUIRED

Road/intersection	Timing (as per Planning Approval)	Comment
Intersection of Cassilis Road and Golden Highway	Commencement of the upgrade with commencement of use the of Cassilis Road by development related Construction traffic	This intersection will not be upgraded by the Project as there has already been an upgrade constructed at this intersection.
Intersection of Laheys Creek Road and Castlereagh Highway	Commencement of the upgrade with commencement of development related construction traffic	It is not proposed to upgrade this intersection as Laheys Creek Road is not shown on the approved routes map, nor is it required for construction.
Access to Magpie Hill microwave repeater	Prior to commencing work on the Magpie Hill repeater	No works are planned at the Magpie Hill repeater. Alternative locations for repeaters have been identified within the existing Project boundary to service the camp.

Road/intersection	Timing (as per Planning Approval)	Comment
Intersection of Golden Highway and Spring Ridge Road	Commencement of the upgrade with commencement of development related construction traffic	This intersection upgrade is not currently proposed as the existing treatment is stated to be sufficient on the condition that SISD checks are undertaken. These have been undertaken and no issues with SISD have been identified.
Intersection of Tucklan Road and Castlereagh Highway	Commencement of the upgrade with commencement of development related construction traffic	This intersection and trigger are currently proposed to be avoided due to the proximity of the main access point to and from the Castlereagh Highway.

6.3 UPGRADES TIMING

As a result of the accepted change to the timing of the intersection upgrade at Merotherie Road and the Golden Highway, a permitted use of the existing intersection has been agreed during the Pre-construction Minor Works phase of the Project, and until the commencement of the road upgrades.

The B32 permitted the use of the intersection for up to 5 heavy vehicles and 20 light vehicles daily. This is being facilitated by scheduling of deliveries to align with the requirements of the B32 approval. A Closed Circuit Television Camera (CCTV) will be installed at the intersection to assist in monitoring movements associated with the intersection prior to the commencement of the intersection upgrade.

Once the intersection upgrade commences at Merotherie Road and Golden Highway, access will be maintained during construction hours with traffic control assistance. Movements will increase at the worksite in line with the requirements of the upgrade and as a result of the commencement of the upgrade as outlined by original timing criteria of the Planning Approval.

6.4 ADAPTED UPGRADES

The design of upgrades described in the Planning Approval will progressively develop in consultation with the relevant road authority and TfNSW (for state classified roads). Requirements of the road authority and TfNSW (for state classified roads), and consideration of changes traffic conditions and cumulative impacts with other Approved Projects may require an adaptation to the Planning Approval treatment to reflect an improved condition to accommodate higher volumes of traffic (through traffic or turning) or affect the depth and composition of the pavement based on varied traffic loading.

Based on consultation with the applicable roads authority and TfNSW (for state classified roads) that has occurred to date, and as part of the preparation of this TTMP, the current designs that have been adapted from the Planning Approval are included in Table 6-3 and Appendix G. It is noted,

however, that these designs are subject to further consultation and approval as part of the Transport Strategies described in Section 7.

TABLE 6-3 PROPOSED ADAPTED TREATMENTS

Road/intersection	Adopted treatment
Merotherie Road	Widening and upgrade to seal standard providing 2 x 3.5m lanes and 0.5m shoulders throughout.
Merotherie Road	A new bridge to replace the existing crossing of the Talbragar River.
Intersection of Merotherie Road and Golden Highway	Short Auxiliary Left Turn (AUL(s)) and Channelised Right Turn (CHR)
Spring Ridge Road	Upgrade to the intersection of Dapper Road and Spring Ridge Road along with a new bridge to replace the existing causeway at Laheys Creek
Intersection of Golden Highway and Spring Ridge Road	No upgrade proposed
Intersection of Neeleys Lane and Ulan Road	Auxiliary Left Turn and Short Channelised Right Turn
Intersection of Ulan Road and Golden Highway	Short Channelised Right Turn to be provided, an existing Auxiliary Left Turn is already in place and provides sufficient capacity.
Intersection of Blue Springs Road and Golden Highway	Basic Left Turn and Basic Right Turn
Intersection of Whistons Lane and Castlereagh Highway	Basic Right Turn and Basic Left Turn
Intersection of Puggoon Road and Castlereagh Highway	Basic Right Turn and Basic Left Turn
Golden Highway (East of Merotherie Road) access gates	Basic Left Turn and Basic Right Turn
Castlereagh Highway access gates	Basic Left Turn and Basic Right Turn
Wollar Road access gates	Articulated rural driveway
Cope Road access gate (North)	Basic Left Turn and Basic Right Turn
Cope Road access gate (South)	Basic Left Turn and Basic Right Turn

6.5 ADDITIONAL OR MODIFIED UPGRADES

Should any additional roads need to be upgraded for the Project, or modifications to the treatment described in Appendix 4 Table 5 of the Planning Approval be required, this will be captured within a Transport Strategy for consultation and approval in accordance with MCoA (NSW) B31. In accordance with MCoA (NSW) B31, if there is a dispute about the road upgrade works, or the implementation of these works, then either party may refer the matter to the Planning Secretary for resolution.

Any upgrades submitted which were not assessed as part of the Planning Approval would need to undergo appropriate assessments, consultation and development of appropriate treatments, concept designs or mitigation measures to support the submission of the Transport Strategy to TfNSW or council. This is a requirement of MCoA (NSW) B31. The TTMP will be updated to reflect any new upgrades identified within Transport Strategies that are required by MCoA (NSW) B31 and that are not currently captured in Section 6.1.

The Transport Strategies prepared in accordance with MCoA (NSW) B31 should be referred to for the final detail on proposed road upgrades, timings and treatment.

In accordance with the requirements of MCoA (NSW) B32, the Project will implement road upgrades as outlined in the MCoA (NSW) B31 and as outlined in Table 6-1, unless a change has been requested and agreed from the Planning Secretary under MCoA (NSW) B32.

Any changes to timing for the required upgrades will be submitted to the Planning Secretary for agreement, following consultation with the relevant council or TfNSW. Any changes may be subject to conditions from either the Planning Secretary or as part of consultation with TfNSW or relevant council. B32 requests will be publicly available on approval, and the revised timings included in a Transport Strategy.

7 Transport Strategies

7.1 STAGING

A Transport Strategy is required in accordance with MCoA (NSW) B31, incorporating strategic concept designs for the proposed upgrades, along with impact assessments and mitigation measures for any impacts not previously assessed and approved by the Planning Approval. Each Transport Strategy will be prepared in consultation with relevant councils, TfNSW and submitted for approval to the Planning Secretary.

In accordance with MCoA (NSW) C3 the Planning Secretary has approved a staged approach to the Transport Strategies to prioritise the road upgrades required for the early stages of the project timeline.

Each Transport Strategy shall (applicable to its relevant scope):

a. Identify the location and type of any necessary road upgrades (including roads, intersections, crossing points, bridges and access points), including consideration of relevant amenity impacts

b. Ensure the road upgrades comply with the Austroads Guide to Road Design (as amended by TfNSW supplements), unless the relevant road authority agrees otherwise

c. Include strategic concept designs prepared in accordance with Austroads Guide to Road Design (as amended by TfNSW supplements)

d. Include a detailed assessment of potential impacts of any necessary road upgrades (such as heritage and biodiversity impacts) and appropriate mitigation measures, including consideration of cumulative traffic impacts from approved projects, for upgrades not previously assessed as part of the approved project

e. Include a schedule for the commencement and completion of all necessary road upgrades

f. Include strategic concept designs for transmission lines crossing state roads and any structures required to facilitate stringing

g. Detail the methods for installing transmission lines across State roads, ensuring the number and length of delays is minimised and avoids peak traffic hours for Golden and Castlereagh Highways

h. Identify whether intersections, crossing points and access points would be permanent or temporary

The relevant Transport Strategy should be referenced for more explicit detail on each proposed upgrade.

In accordance with MCoA (NSW) B33 the timeframes for the road upgrades will be specified in the Transport Strategy. Where timings are required to be changed from those listed in the Planning

Approval Appendix 4 Table 5, this will be undertaken in consultation with the relevant roads authority and TfNSW and by agreement from the Planning Secretary, in accordance with MCoA (NSW) B32. Refer to Section 6.5 for further information.

7.2 UPDATE FOLLOWING TRANSPORT STRATEGY APPROVAL

In accordance with MCoA (NSW) C3c, the proponent may seek the approval of the Planning Secretary to update any plan to ensure it incorporates additional measures or amendments to improve the environmental performance of the development. To align with the approved staging request (MCoA (NSW C3a) for the Transport Strategies detailed in Section 7, ACJV D&C will request Planning Secretary approval to allow this Plan to be updated in accordance with MCoA (NSW) C3c. Updates to this plan would be triggered when:

- A Transport Strategy identifies a treatment which is materially different to the treatments identified in Table 6-1, this Plan would be updated to reflect the proposed upgrade, upon approval of the Transport Strategy
- A Transport Strategy requires a traffic management measure which is different to those detailed within this Plan, this Plan would be updated, upon approval of the Transport Strategy
- When a strategic concept design / general arrangement is approved as part of a Transport Strategy, the design will be added to Appendix G of this Plan upon approval of the Transport Strategy.

If the changes to this Plan are limited to those agreed as part of the Transport Strategy, further consultation of this Plan would not be required and an update under condition A12c (ER minor amendment) would be sought. The Transport Strategy will clearly outline any changes required to this Plan, if applicable.

8 Access Points

As described in Section 3.2.3 of the EIS, access points will be constructed or augmented to provide access into the alignment for import of construction materials, movement of construction personnel and the movement of plant and machinery between the various construction sites.

Access points will be assessed and adjusted based on the largest anticipated vehicle, the volume of movements anticipated to enter the site and the existing features of the roadway. This assessment will determine the extent of the upgrade requirements that will be detailed in the Transport Strategies (refer to Section 7). Typically, access points will be upgraded based on a variety of design options outlined in the Austroads Guide to Road Design, specifically the sections describing different intersections and crossings.

Basic Left Turn (BAL) and Right Turn (BAR) treatments are anticipated to be the typical treatment at each of the access locations connecting with State and Regional Roads. These treatments will provide sufficient trafficable carriageway width for motorists to pass construction vehicles as they turn into the construction gates. These access types consider the available sight distance, speed of the existing road, anticipated traffic volumes (public and construction) and design vehicle size.

The following access types may be implemented for the construction works:

- BAR on the major road (two-lane undivided roads only)
- BAL on the major road (two-lane undivided roads and multi-lane roads)
- Conceptual designs of the proposed access types and pavement types will be developed

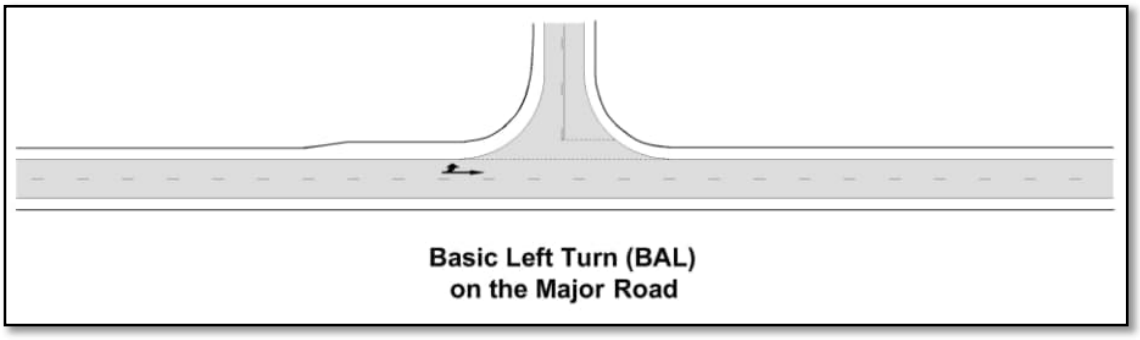


FIGURE 8-1 BASIC LEFT TURN (BAL)

BAL treatments consist of a shoulder widening to allow vehicles to safely turn left into a gate.

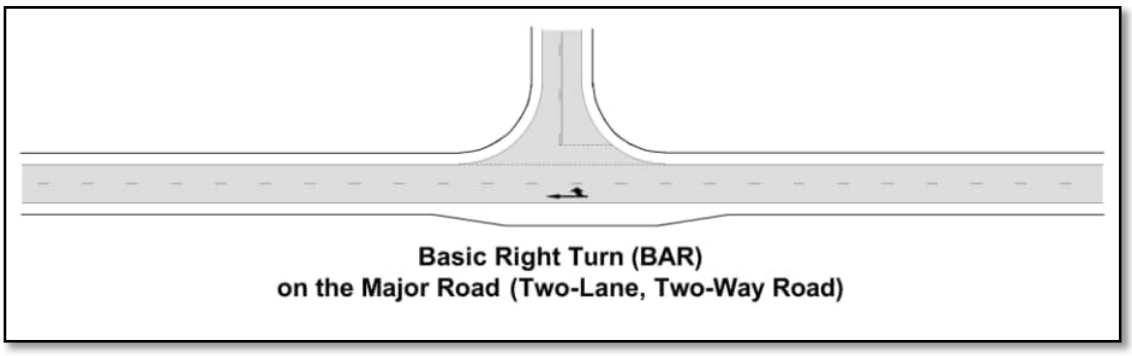


FIGURE 8-2 BASIC RIGHT TURN (BAR)

Similar to the BAL, a BAR treatment provides additional pavement width for motorists to pass a vehicle waiting to turn right into the minor road.

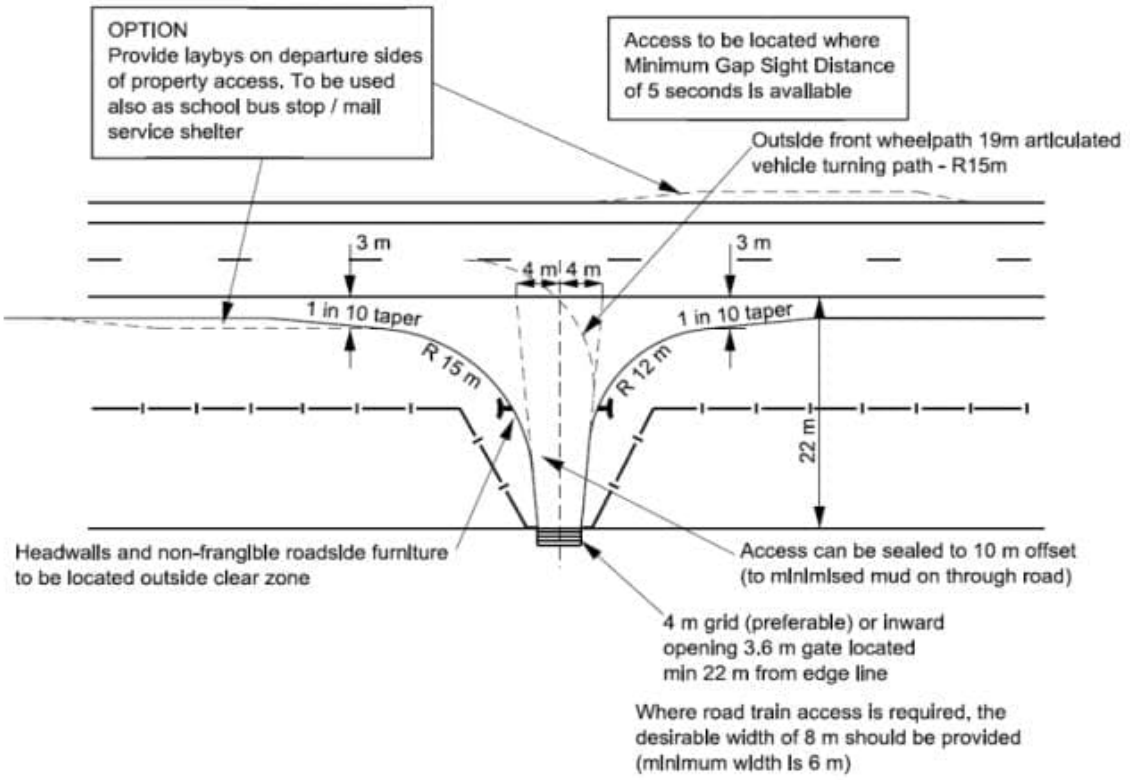
Additional treatments are proposed for access on some lower volume roads (excluding State Roads) which will be generally based on either Figure 8-3, below which is for articulated vehicles where there are lower Average Annual Daily Traffic movements, otherwise as shown in Figure 8-4 which would be reserved for rare heavy vehicle access, or light vehicle access only.

Designs of Access Points will incorporate swept path checks and sight distance checks for the site conditions and locations to ensure suitable safety measures can be put in place to accommodate safe construction access and egress.

Should sight distances not be achieved for the speed limit of the road, additional mitigation measures will be implemented to ensure safe operation. For Local Roads these measures may include a combination of any of the following:

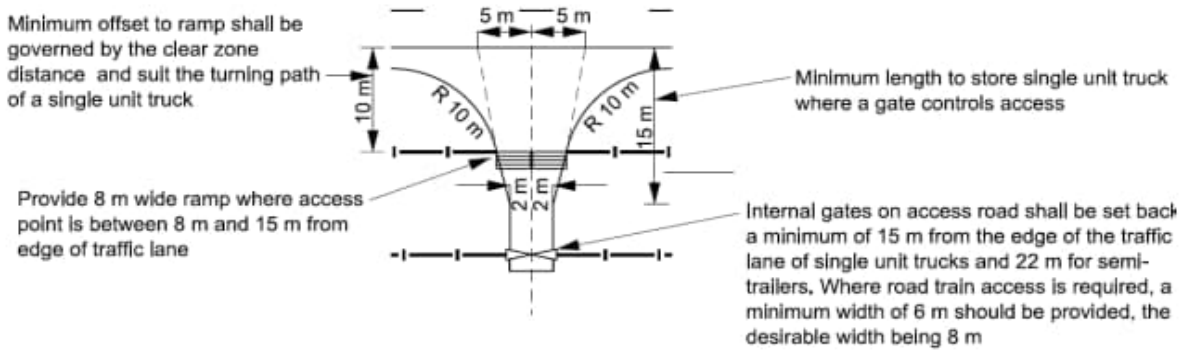
- Safety and warning signage
- Localised speed reduction (short-term under an approved S138 permit)
- Additional traffic control

Designs for access on State Roads will be developed to maintain the existing posted speed limit of either the Golden Highway or the Castlereagh Highway. The access points on State Roads will also be designed to provide a BAR/BAL treatment to ensure safe operation.



Note: Minimum requirement for a single carriageway with design AADT < 2000 or minimum requirement for dual carriageway left-in–left-out access for single unit truck. Where AADT > 1000 and access is required for a semi-trailer then use the layout.

FIGURE 8-3 RURAL ARTICULATED ACCESS



Option without indented access

Note: This rural property access treatment may be used where articulated vehicles:

- *do not use the driveway on single and dual carriageway roads*
- *infrequently use the driveway on two-lane two-way roads that have an AADT < 2000.*

FIGURE 8-4 RURAL ACCESS

The introduction of improved intersection treatments based on the existing access and the construction requirements will minimise the potential conflict between construction related traffic and stock movements, school buses and prevent queueing on the public road network.

Full detail of works required for a new, or for augmenting an existing access point, will be included in the relevant Transport Strategy, which will be provided to TfNSW and the relevant Council for consultation, and approved by the Planning Secretary in accordance with MCoA (NSW) B31.

8.1.1 Local and Regional Road construction access points

The proposed construction access points for the Project are shown on the VMPs and maps in Appendix B, and a table summary is included in Appendix E. Their precise locations, designs and use will be further clarified within the Project Transport Strategies. The construction of each access will only be undertaken when the appropriate approvals have been received.

All access points are to be constructed under the proposed temporary use, with further assessment required to select and assess the permanent locations of maintenance access points. These permanent access points will be confirmed as part of future Transport Strategies and appended here when finalised.

8.1.2 Construction access off the State Road network

There will be a need for construction access points off the State Road network in several locations because of crucial access to sections of the alignment. Unless otherwise agreed with the Roads Authority, these access points will be temporary. These access points are outlined in Table 8-1 below. These access points will connect into the Access Tracks constructed within the project corridors.

The EIS identified additional access points required off the state road network, however these have not been pursued as alternate access is available to service these sections of construction. It is also due to the proposed use of the existing access point within the Cassilis Rest Area off the Golden Highway.

TABLE 8-1 STATE ROAD CONSTRUCTION ACCESS POINTS

Entry point	Road	Road classification	Council
SP2-H1	Castlereagh Highway	State	Mid-Western Regional
SP2-H2	Castlereagh Highway	State	Mid-Western Regional
SP5-G	Golden Highway – Cassilis Rest Area	State	Upper Hunter
SP6-Y1	Golden Highway	State	Warrumbungle
SP6-H	Golden Highway	State	Warrumbungle

Entry point	Road	Road classification	Council
SP6-Z1	Golden Highway	State	Warrumbungle
SP6-Z2	Golden Highway	State	Warrumbungle

The access points above have been shown on the VMP and site gate map in Appendix B. No other access points are proposed to or from the State Road network.

8.1.2.1 Cassilis Rest Area

The Cassilis Rest Area is proposed to be used for the access to a portion of works associated with the Project. The use of which will include access and egress for construction traffic utilising the existing intersection at the rest area. The operation would require supporting signage for the access point which will be submitted as part of an ROL application to TfNSW for approval. It is anticipated that the timing for the use of Cassilis Rest Area to access the Project would be between July 2025 (or earlier should approvals permit) and June 2028. Further detail relating to the schedule and usage of the Cassilis Rest Area will be provided within the Site Specific TMP that will accompany the ROL application.

The access to site will be via the intersection outlined in the blue circle in Figure 8-5, below. The existing private access proposed for use is shown with the red arrow. This will provide two-way traffic for construction traffic in and out of this portion of construction corridor.

The movements for traffic entering and exiting is proposed to only operate within the blue circle, and to avoid the other access and egress points due to their non-provision of an acceleration and merge lane.

No parking of construction vehicles is proposed within the Cassilis Rest Area unless as part of necessary fatigue management. Parking for the works nearby will be facilitated within the construction boundary and within the construction site. Monitoring of the use of the rest area will be undertaken as part of regular monitoring and inspections outlined as part of Section 12.2 to ensure unnecessary use of the rest area is kept to a minimum.

The swept paths of construction traffic and the largest expected vehicles for this location have been checked, and the existing access provides sufficient width for construction traffic entering and exiting.

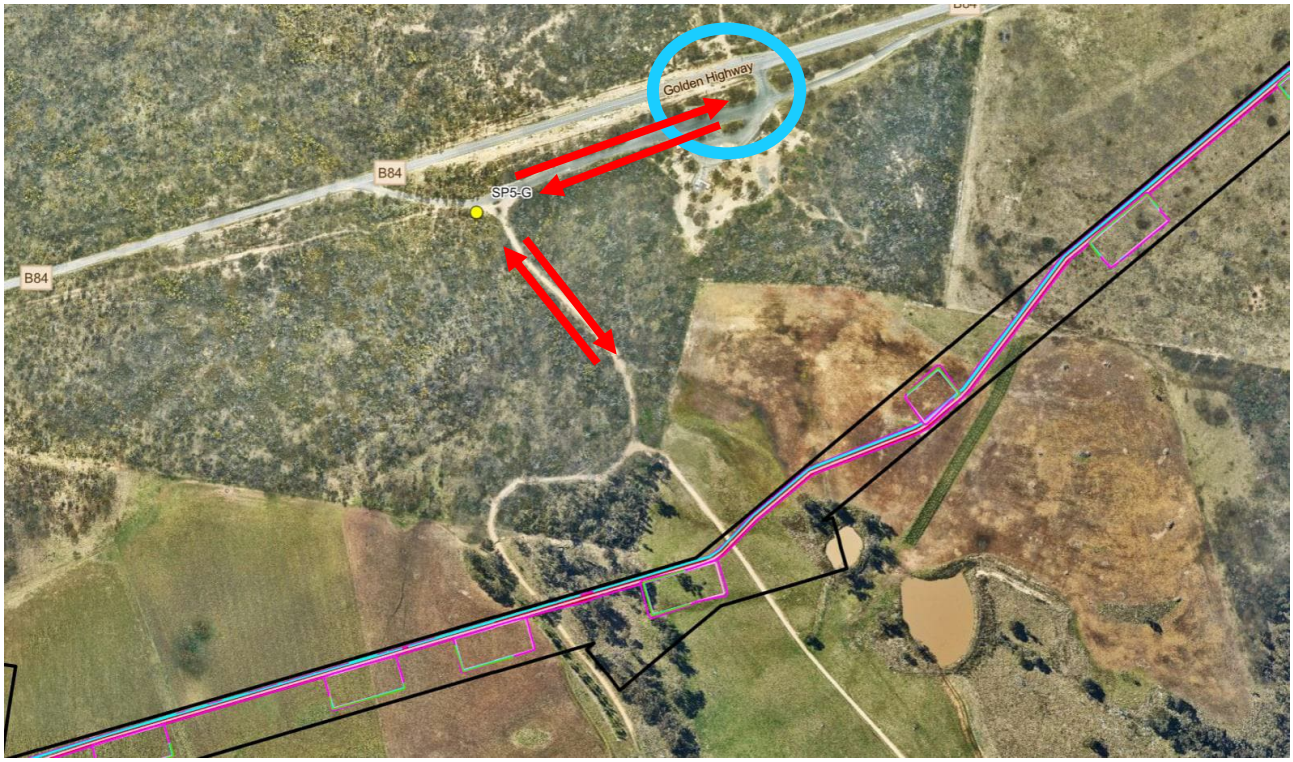


FIGURE 8-5 CASSILIS REST AREA ACCESS AND EGRESS

The Cassilis Rest Area access will only be used during standard construction hours, or in a manner agreed with TfNSW and in accordance with the Out-Of-Hours Work Protocol.

The Cassilis Rest Area will not be used for maintenance or require traffic control once established. The area will remain accessible for OSOM movements and public rest stops as it is currently available and the use of the Cassilis Rest Area by the project will not conflict with high-risk OSOM usage and access.

9 Road Authority Approvals

Road upgrades which impose a change to the TfNSW State Road network will be undertaken in accordance with the Works Authorisation Deed (WAD) process and require concurrent approval from the relevant TfNSW representatives before the works can be undertaken. Upgrades which propose a modification to a council road asset will be communicated with council through the normal design consultation process and incorporate any appropriate comments from council representatives as part of the design development. The construction of the upgrade would then commence as part of a S138 permit submission and subsequent approval.

9.1 UPGRADES ON THE STATE ROAD NETWORK

The construction of identified upgrades on the State Road Network will be undertaken in accordance with the process described within this Plan, including the submission of a Site-Specific Traffic Management Plan, along with Traffic Guidance Schemes and the application of Road Occupancy Licences.

The following upgrades will not be used by construction traffic for the purpose of construction of transmission lines, until the upgrade is complete:

- Intersection of Puggoon Road and Castlereagh Highway
- Intersection of Whistons Lane and Castlereagh Highway
- Golden Highway Access Gates
- Castlereagh Highway Access Gates
- Intersection of Blue Springs Road and Golden Highway

The following intersection upgrades will have localised traffic control in place to facilitate the ongoing operation of the intersection concurrent to construction traffic use whilst the intersection upgrade is being completed.

- Ulan Road and Golden Highway
- Merotherie Road and Golden Highway

Traffic control will typically be on site to actively manage traffic movements (both public and construction) around and past the works. These arrangements will include shuttle flow controls for instances where a lane is required to be closed to facilitate works. Traffic controllers will then manage public traffic where construction traffic is required to enter or leave an adjacent road or work area.

The intersection of Ulan Road and Golden Highway requires widening to the north of the existing intersection on the Golden Highway, this work is expected to be able to be completed without limiting the operation of the existing intersection.

10 Traffic, transport and access management

Construction associated with the Project has the potential to impact traffic, transport and access in the vicinity of the construction footprint. To avoid, mitigate and/or minimise these potential impacts, a range of environmental requirements and control measures have been identified in the various environmental documents, including the EIS and other documents summarised in Section 1.2. Specific measures and requirements to address impacts on traffic, transport and access are outlined in Table 11-1.

Works will be undertaken in accordance with the movements and volumes identified in the EIS and associated Traffic and Transport Impact Assessments (unless modified or adjusted as a result of a Transport Strategy). Any Transport Strategy proposing a change will include consultation with necessary stakeholders (including relevant Councils and TfNSW) prior to adopting any proposed change.

10.1 DILAPIDATION SURVEYS

Independent dilapidation surveys will be conducted in accordance with MCoA (NSW) B34. These surveys will cover all Local Roads proposed for use as detailed in the VMP included in Appendix B, including local road crossings. The surveys will be performed prior to use for construction-related purposes. All relevant roads' authorities will be provided with a high-level program in advance of the dilapidation surveys being conducted, that will outline the likely timeframes of each road or road segment dilapidation survey, with any changes to the program reported at the TTLG meeting, as required.

The dilapidation surveys will consist of a combination of both photo and video assessments of the affected road network outlined in the VMP included in Appendix B. These designated areas will consist of the road formation and pavement surface across the extent of the roads affected and will be documented in a report. Furthermore, dilapidation surveys will include visual and photographic inspections of water related infrastructure which are identified on the project construction routes.

Subsequent dilapidation surveys of Local Roads identified in the VMP included in Appendix B will be undertaken on an annual basis, during construction, unless an alternative timeframe is agreed to by the relevant roads' authority. At completion of construction, upgrading or decommissioning works, a survey will be completed within one month (20 working days) or within alternative time frame as agreed to by the relevant roads' authority.

Some dilapidation surveys will be undertaken as part of PCMW for example, Merotherie Road. This will occur after a request is lodged (by the relevant road authority) and an agreement is reached with the principal contractor's representative (Traffic Manager).

10.1.1 Regular inspections and emergency repairs

As part of regular construction accesses and inspections the site project teams, traffic team representatives and supervisors will undertake either formal or informal inspection of construction access points and associated access roads.

Inspections of temporary controls, access and maintenance are expected to be undertaken regularly for roads actively affected by works, and site access points which are being utilised by heavy construction traffic. This will be incorporated into regular site inspections undertaken in accordance with the TMP inspections, prescribed in Section 12.2, below.

Weekly inspections are to be undertaken of temporary traffic controls in place (as part of intersection or road upgrade works). Otherwise, monthly inspections as a minimum will be undertaken for all roads currently in use by the Project, and their associated access points.

A checklist of roads and access points inspected each month will be filled in and filed for verification.

Should these regular inspections identify issues requiring attention, the issues will be raised with the relevant council representatives and/or TfNSW (where traffic control and permits or approvals are required to control traffic) and resources will be dispatched to rectify the issues.

Issues which will be inspected include debris tracking, potholes and maintenance, and sign visibility and cleanliness.

In severe cases where there is potential risk to the safety of road users, damage that needs immediate attention will be raised with emergency services or police to accommodate immediate rectification by available construction staff and resources, and Council will be notified where applicable. This includes responding to any emergency repair or maintenance requirements related to OSOM movements.

10.1.2 Maintenance and repair

If the dilapidation surveys, regular construction access inspection, or notification by a stakeholder (such as Council), identify that a local roadidentify that a Local Road has been damaged by the Project during construction, upgrading or decommissioning works, the identified damage will be repaired in consultation with the affected council representatives. Should a road become unusable to the public and road safety is compromised by the damage (after periods of rain resulting in rapid deterioration of road condition), the Project will prioritise works to repair the road.

All repairs, if required, will be undertaken in accordance with relevant guides, manuals, Project Deed, EIS and MCoA. Any additional agreements will need to be discussed and/or agreed by the relevant Project Directors, Client Representatives and stakeholder Executives. A report will be developed in consultation with the relevant roads authority within 6 months of completion of road repairs in accordance with MCoA (NSW) B34b. Should there be a dispute between ACJV D&C and the relevant roads authority about the road maintenance works, or the implementation of those works,

then either party may refer the matter to the Planning Secretary for resolution in accordance with MCoA (NSW) B34c.

10.2 TRAFFIC MANAGEMENT PLANS

Site specific TMPs will be developed as part of the construction planning process for construction activities that affect traffic conditions and or the safety of road users. TMPs will include site specific details of construction activities, traffic, pedestrian and vehicle impacts associated with the planned works including:

- Overview Site Construction Program (program will include dates and locations)
- Traffic Staging Plans (will show each work stage, road names, direction of traffic)
- Traffic Guidance Schemes (TGS) including applicable speed limit changes
- Vehicle Movement Plans (VMPs)
- Pedestrian and/or cyclist Movement Plans
- Local access arrangements for local properties, side roads, NPWS roads, relocated bus stops and any temporary parking arrangements
- Design drawings for any temporary roadways and detours, alignment and surface levels, pavement widths, pavement cross-sections, speed limits, lane configurations, pavement markings, signage and approved traffic signal plans if applicable
- Where applicable, details of safety barrier type, positioning, signage, public notifications and traffic analysis

The TMPs will be developed progressively and in accordance with AS 1742.3 and the Project Deed requirements. Site-specific TMPs will be submitted to the appropriate road authority or TfNSW, affected by the construction works, this includes NPWS as required.

TMPs may be discussed at TTLGs, but it is usually focused on the specific issue/s the TMP was created to manage.

Site specific TMPs may not be required for some lower impact works and works on local roads where the road authority agrees, for construction of site access points on local roads as an example. These would be captured within a S138 permit.

10.2.1 Vehicle Movement Plan (VMP)

The VMP for the Project is incorporated into the drawings included in Appendix B of the TTMP. These drawings reflect the roads proposed for use by the Project, the access gates outlined within this Plan, and the permitted vehicle types which can use the proposed roads.

The Project VMP will be provided to all subcontractors, suppliers and be included in training or induction information for staff as part of onboarding. This is to ensure vehicles utilise the correct roads, which are approved for the Project and incorporated in the monitoring and maintenance area.

The VMP will have a staged implementation to align with the staged Transport Strategies. A copy of the VMPs for each of the following stages is included in Appendix B and will be periodically distributed to staff and subcontractors to align with the stage of Transport Strategy which is the latest to be approved.

There are three versions of the VMP included, they align with the following Transport Strategies, in chronological order:

- Merotherie Transport Strategy
- Elong Elong and Wollar Transport Strategy
- Project Wide Transport Strategy

The VMP also includes the approved routes for OSOM vehicles requiring escort from the port of Newcastle to the relevant sites.

The VMPs will be approved as part of the TTMP document, and any updates will be circulated to TfNSW and councils as part of any changes to the project planning and access.

The VMP is intended to reflect vehicle movements and volumes as outlined in the EIS and Appendix J - Traffic and Transport Impact Assessment (TTIA) for the Project.

10.2.2 Traffic Guidance Schemes

As noted above, Traffic Guidance Schemes (TGS) for the Project will be developed for site specific activities. The activities which will require assistance and traffic control will include, but isn't limited to the following:

- Construction of temporary and permanent access points
- Construction of intersection upgrades
- Maintenance of roads
- Stringing of powerlines across Local, Regional and State Roads

Portable Traffic Control Devices (PTCDs) will typically be used to control traffic on the Project, where lanes are closed and traffic is operating in a shuttle-flow arrangement, or where traffic is being held on any State or Regional Road. These devices may include either boom gates or Temporary Traffic Signals.

Traffic Guidance Schemes will be submitted to accompany either Road Occupancy Licences (ROLs) from TfNSW, or to support Section 138 applications to councils for occupancy of the road. The plans will then be implemented in accordance with the conditions outlined on the permits received. TfNSW

is responsible for issue of ROLs for impacts on the State Road Network (including The Golden Highway and Castlereagh Highway). Councils are responsible for issue of Section 138 permits for local roads, regional roads and areas adjacent State Roads.

10.3 CONSTRUCTION OF UPGRADES

The construction of access points and intersection upgrades will be undertaken using a variety of traffic arrangements. These will include:

- Stop/slow arrangements with lanes closed including PTCDs
- Stop/slow arrangements with both lanes and side roads closed, including PTCDs
- Detours of Local Roads where practical and possible (noting no detours of State Roads are proposed for the Project)

These typical arrangements will be further defined based on consultation with the local council as well as TfNSW where the works affects a State Road. Traffic Management Plans will incorporate methodology and site specific TGS for intersection upgrades as part of the WAD process.

Diagrams showing the anticipated impacts and arrangements around intersection or access point construction are included below.

A TGS will be in place continuously during the construction of intersection upgrades on the State Road network. The arrangement will vary from time to time, including in duration. Long-term roadwork signs will typically be installed on the approach to the works, and supplementary TGS will be installed in varying configurations to provide the necessary work areas. This will be subject to approval from either Council (under a Section 138 permit) or TfNSW (under a Road Occupancy Licence (ROL) approval).

Typically, during works and normal construction hours, traffic controllers will be on site to further manage the interaction of construction traffic with public traffic and in accordance with any Section 138 and ROL approvals. The TGS will be adjusted to suit the different stages of the works as described in the associated Traffic Management Plans for the upgrades.

Where the temporary construction arrangements are to remain outside of construction hours, the configurations will be in accordance with approved permits and licences.

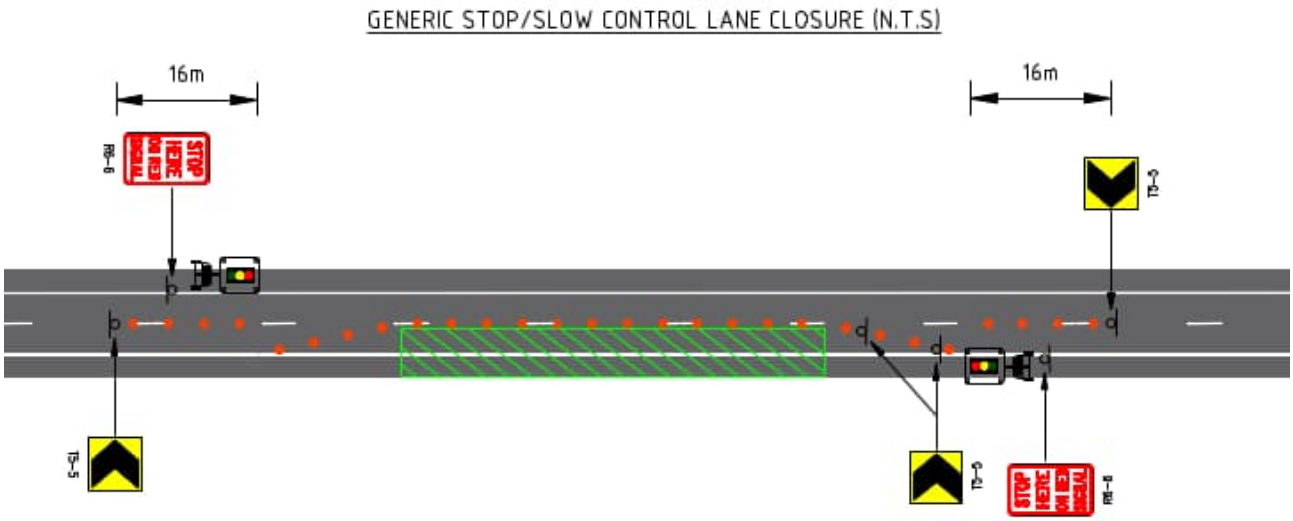


FIGURE 10-1 ARRANGEMENT FOR CONSTRUCTION OF ACCESS POINTS

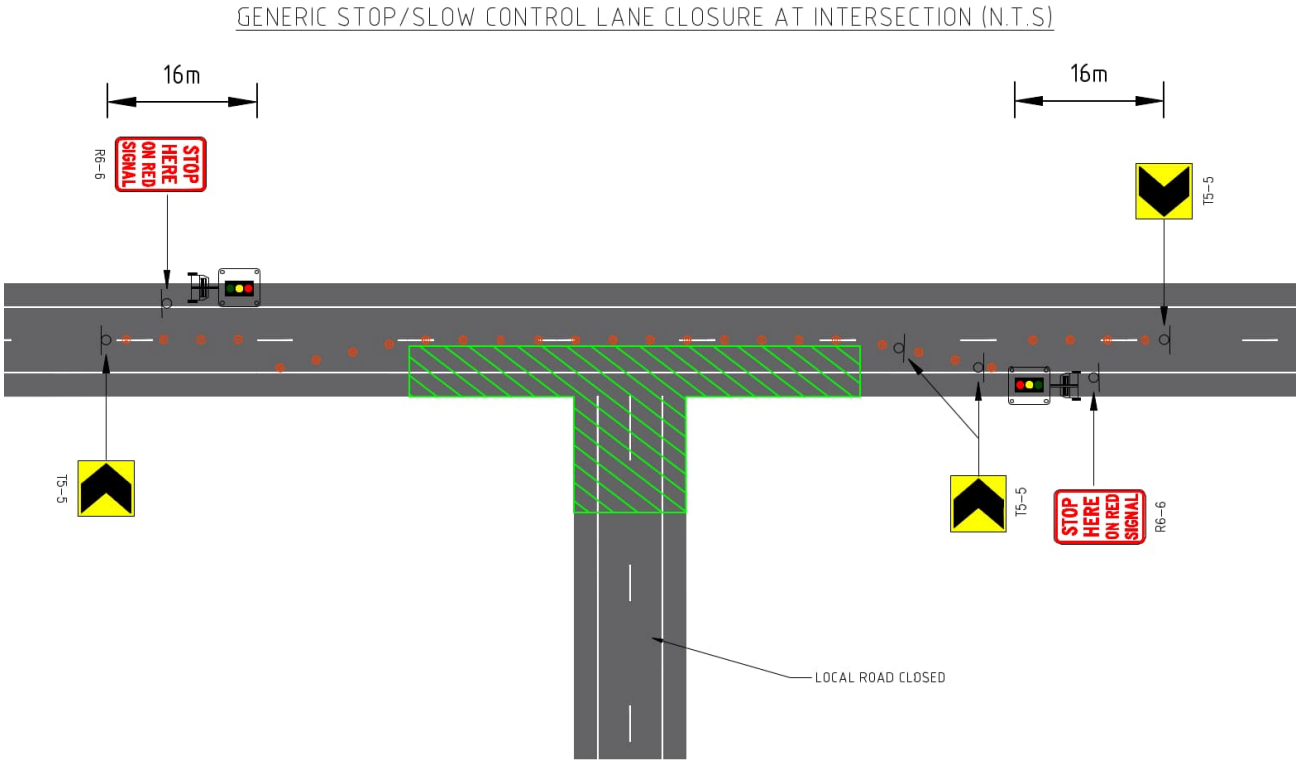


FIGURE 10-2 ARRANGEMENT FOR CONSTRUCTION OF INTERSECTION UPGRADES

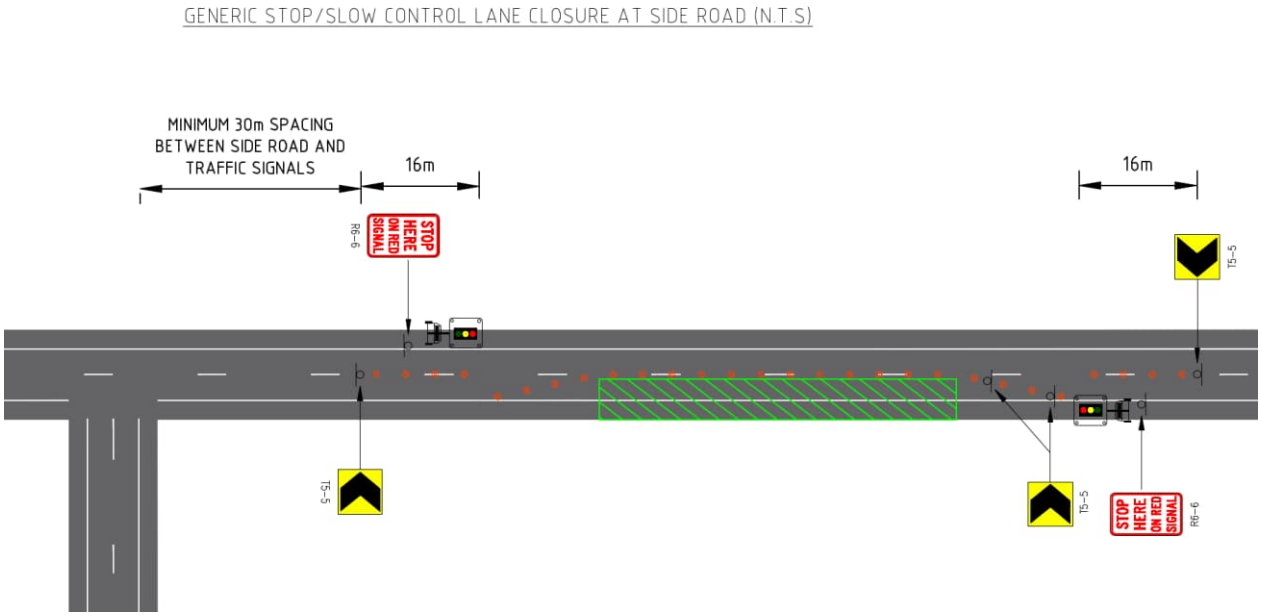


FIGURE 10-3 ARRANGEMENT FOR CONSTRUCTION OF INTERSECTION UPGRADES WITHOUT CLOSING LOCAL ROAD

10.3.1 Mitigation measures for State Road public intersection upgrades

The below measures will be adopted during the construction of required for State Road intersection upgrades as specified in Appendix 4 Table 5 of the Planning Approval, while construction vehicles are using that intersection concurrently:

- No high-risk OSOM using the intersection or access point until the completion of the intersection upgrades
- The maximum length of the heavy vehicle using the intersection shall not exceed 19m, unless otherwise demonstrated through a swept path analysis provided to TfNSW.
- Use of the intersections and access points during upgrade, by construction traffic will occur in accordance with approved Road Occupancy Licences (ROLs) approved by TfNSW, which will consider the concurrent use of the intersection by heavy vehicles during upgrade.
- Management of traffic queues associated with the Project construction traffic will be undertaken in accordance with AS1742.3 and Austroads Guide to Temporary Traffic Management during peak periods.
- Provide signage within the TGS to facilitate construction which will inform the public of the increased traffic and turning movements at each intersection or access point that will be used during this period.
- Dilapidation inspections to be undertaken prior to commencement of the State Road intersection upgrades. Regular inspections of the intersections to be undertaken for any damage due to increased activity on a weekly/monthly basis, with any issues rectified in accordance with the process outlined in Section 10.1.2.

10.4 TRAFFIC STAGING PLANS

Traffic Staging Plans and temporary road design drawings may be developed if required. They will be developed to meet AS1742.3 requirements, and road design criteria to meet the site constraints and requirements.

The Project has not yet identified any need for Traffic Staging Plans at this stage, as all access and intersection upgrade treatments are intended to be constructed within localised short-term TGS, with associated approvals and ROLs or council permits.

Should this change, then the Traffic Staging requirements will be clarified as part of the TTLG meetings and incorporated into a site-specific Traffic Management Plan for consultation, comment and approval through the relevant authority, TfNSW, or as part of an ROL application via TfNSW. Where any modification to a TfNSW asset is required, details of the proposed staging and need will be identified as part of a Transport Strategy and be incorporated into a Works Authorisation Deed submission and associated approval.

10.5 WORKFORCE MANAGEMENT

10.5.1 Shuttle bus

Shuttle services will be provided for two purposes, to shuttle workers from regional and local centres (to avoid driving) to the energy hubs, and to shuttle workers from the accommodation camps to key work areas.

10.5.1.1 Key transport hub(s) to Accommodation Camp

A shuttle service will be established between Sydney and regional centres and the workforce accommodation camps. The pick-up point is currently expected to be from Emu Plains train station, subject to further consultation with workers, providing connectivity to public transport options for accessing the shuttle. Staff onboarding will identify those interested in shuttle services from other regional centres and those from Sydney to assist in determining demand and schedules. The service timing will coincide with the shift changes on site for workers.

The routes identified that will be provided (subject to demand) for workers to travel to the accommodation camp will be as follows:

- Bathurst, Orange and Dubbo to Merotherie Accommodation Camp
- Sydney, Lithgow and Mudgee to Merotherie Accommodation Camp

Routes proposed for the accommodation transports are outlined in Figure 10-4 and Figure 10-5, below.

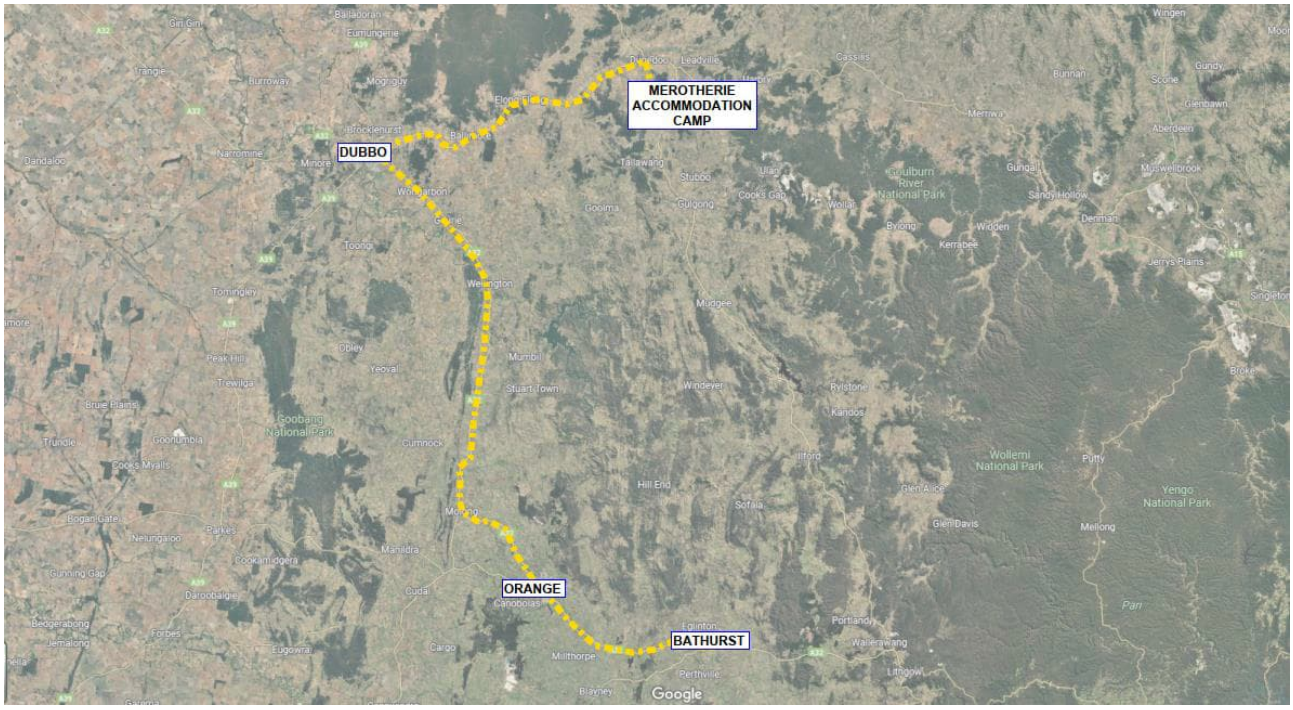


FIGURE 10-4 SHUTTLE ROUTE FOR BATHURST, ORANGE, DUBBO AND MEROTHERIE ACCOMMODATION CAMP

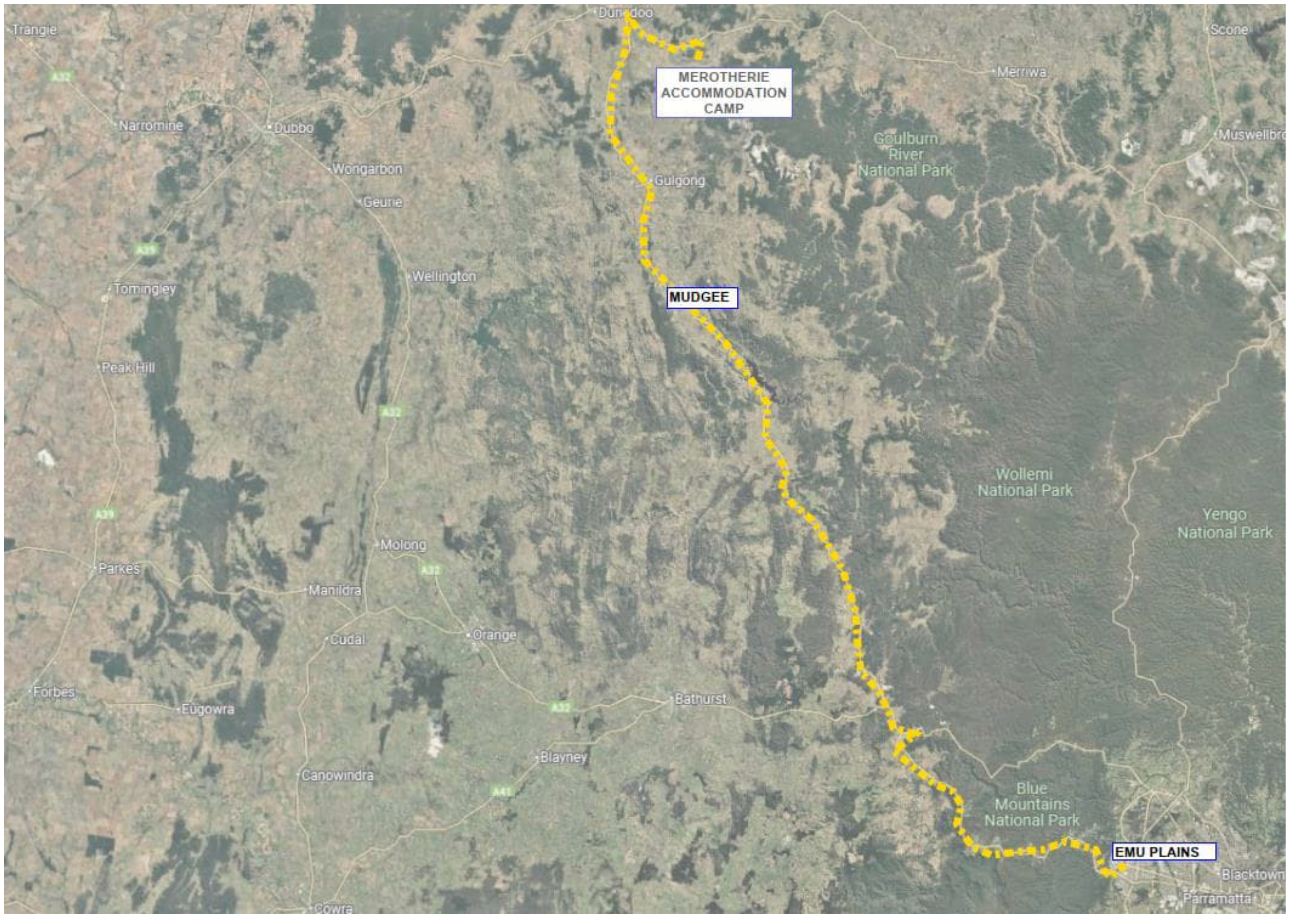


FIGURE 10-5 SHUTTLE FOR EMU PLAINS, MUDGEE AND MEROTHERIE ACCOMMODATION CAMP

The origin of workers is still unknown, but if additional routes need to be investigated, they will be identified in consultation with workers.

The number of shuttles will be based on the demand of the workforce and be determined through ad-hoc consultation.

10.5.1.2 Inter-site shuttle service

Shuttle services will be established to transport workers between the accommodation camp(s) and key construction sites (i.e. energy hubs and switching stations). Carpooling is expected to be the main form of transport for the smaller work crews working at transmission tower construction sites, as these typically have a much smaller work crew in comparison to the energy hubs or switching stations.

The frequency and scheduling of the shuttle services around site will be dependent on the construction schedule and demand and will be adjusted throughout the Project lifecycle. Workers will be informed of the shuttle bus service in project inductions.

Shuttle use and carpooling will be enforced by restricting the number of light vehicles inducted and available for use on the project work sites. This approach will limit the induction of subcontractor light vehicles to an as-needs basis, members of the workforce without a need for tools and equipment on site will therefore be required to use shuttle services to access the work sites. The monitoring of vehicle movements and shuttle services is described in Section 10.5.3.

The scheduling and capacity will be subject to demand from workers and the Project program. The key shuttles expected to be established will connect Merotherie Accommodation Camp to the following key locations during peak construction:

- Barigan Creek Switching Station
- Elong Elong Energy Hub
- Merotherie Energy Hub

Switching stations may require ad-hoc shuttle services at times, which will be coordinated with the work crews constructing these sites and will be subject to the program and alignment of work crew demand.

Shuttle buses are expected to be a combination of 11-seater vehicles, 25-seater small buses and (depending on demand) coach style buses may be scheduled for transfers between Emu Plains and the accommodation camp. Coach style buses are not expected to be necessary for commuting workers around site, but will be considered should the need arise.

10.5.2 Carpooling and worker parking

Workers will travel to the site in designated site vehicles. Since there won't be a site vehicle assigned to each individual worker, these vehicles will transport groups (where practicable) to specific worksites. Parking facilities will be available at the camps to accommodate all site vehicles.

Heavy vehicles will be instructed to not park on public roads unless it is necessary to meet fatigue management requirements, or is required as part of a designated work site (designated worksites, near a road, would require a TGS and relevant approvals as outlined by this plan). This is also captured in the Code of Conduct. Parking for transmission line energy hub and accommodation camp construction will be facilitated within the associated construction boundary. Parking for construction and private vehicles is included in the planning for the associated construction camps. The proposed layout for the Merotherie Accommodation Camp and associated parking is included in Figure 5-3, in Section 5.

Due to the remoteness of the worksites, the need for parking on public roads is expected to be very little to none. Monitoring of roads will be undertaken as regular maintenance and necessary surveillance inspections as outlined in Section 12.2, worker parking on public roads will be included in these inspections with any identified issue being raised with work crews to reinforce the code of conduct and induction requirements. This will also be communicated through the Project Induction, toolbox talks and site inductions. A note has also been included in the VMPs included in Appendix B.

10.5.3 Vehicle tracking

Vehicle recording will be undertaken utilising the Linkedsite system. The Linkedsite system tracks vehicle positions using GPS and stored for later review. This will allow the Project to review movements of tracked vehicles associated with the project works.

The following vehicles will be tracked with Linkedsite:

- Inducted pool vehicles
- Shuttle buses between camps and worksites
- Heavy vehicles importing materials

Typically, smaller or ad-hoc delivery trucks are not captured with inductions and onboarding but will have delivery dockets and chain of responsibility reviews undertaken to monitor movements and compliance in lieu of GPS tracking.

Private vehicles will not be tracked.

10.5.4 Driver code of conduct

All drivers involved in the project must comply with the legal obligations whilst operating vehicles. To assist in achieving safe outcomes during construction, a driver code of conduct has been developed and is included in **Appendix C**. This Code of Conduct clearly defines and details fatigue management and acceptable behaviour for all vehicle drivers operating in connection with the project including suppliers and subcontractors. Prior to working on the Project, vehicle drivers will be required to have read the Drivers Code of Conduct and acknowledge their compliance with it throughout their involvement in the Project. The expectations of the Drivers Code of Conduct will be established in the Project induction and will be reiterated through pre-starts. The acceptance and signing of the Drivers Code of Conduct will allow the Project to impose restrictions on workers for non-compliance, or in some extreme cases may be removed from site.

Compliance with the Code of Conduct will be monitored as required as outlined in Section 12.7.

10.5.5 Out-of-hours works (OOHW)

An out-of-hours works protocol has been prepared for the Project in accordance with condition B13 (f). The OOHW Protocol includes the process to be followed for any works proposed outside of standard construction hours and is summarised below.

The works will be assessed and approved under a permit process for those works proposed and will typically require approval from either the Environmental Manager, Environmental Representative, or Planning Secretary. The works and approvals would also require justification on the need for the works to be undertaken outside of normal construction hours.

Works out of normal construction hours are expected to be limited, especially due to the scope of the Project works, access via access tracks and navigating works through properties is expected to be difficult at night.

Construction vehicle movements on the road network outside of normal construction hours will be limited as a result of the out-of-hours works protocol, but limiting movements outside of normal construction hours is also referenced in the Driver Code of Conduct located in Appendix C.

Standard construction hours are outlined below:

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

Works outside of these hours will not be undertaken without an approved OOHW permit.

10.6 ROAD OCCUPANCY

Any impacts (for example: installation of traffic control devices, regulatory signage, barriers or bollards) proposed within the road corridor will not be implemented without the appropriate approvals in place from the relevant road authority or TfNSW for State Roads. These impacts would be consulted with the road authority(s) and TfNSW as part of regular interface meetings and as part of the TTLG meetings (Refer Section 3.1.1).

10.6.1 Closures and detours

Where detours and road closures are required to deliver the works, the alternative routes identified will be signed in accordance with an approved Traffic Guidance Scheme and road occupancy permit. This will include either a council permit and/or a Road Occupancy Licence (ROL).

The traffic guidance schemes (TGS), detour routes and signage arrangement would be reviewed and approved in consultation with the relevant road authorities, and TfNSW for State Roads or where there is likely to be an impact to the State Road network, and if required with NPWS (note that all information for NPWS will be provided at TTLGs. See Section 3.1.1). TfNSW will not support the closure and detour of any State Roads as part of the construction methodology.

Advanced warning of the detour will be provided if required via VMS where the road type is deemed to be significant enough to require wider advertising. Where the road is smaller more targeted communications would be employed to affected stakeholders (as per list in Section 3). Closures will also be communicated to TfNSW and included on livetraffic.com.

A detour sign would be provided at every decision point. Where possible, detours and road closures will be implemented outside of peak periods.

10.6.2 Safety and amenity of road users and the public

Safety and amenity of road users and the public will remain at the forefront of all planning and preparation works of construction activities. Construction staging, TMPs and localised traffic control arrangements will be risk assessed, ensuring suitable and safe access options are available for public traffic, pedestrians, cyclists and that connectivity is suitable for disabled persons where defined pedestrian and cyclist accesses are impacted by works.

Regular road safety audits, inspections and surveillance will be conducted by either the independent road safety auditor or the traffic team members. This will ensure these considerations are met and maintained for the duration of Project delivery. More detail on the frequency of inspections and audits is included in Section 12.3.

10.6.3 Speed zoning

Any changes to speed zones will be implemented in accordance with a Speed Zone Authorisation (as part of a Road Occupancy Licence) or as part of a road occupancy Section 138 permit. These speed zones would only accommodate ‘Roadwork’ type speed limits during approved roadworks.

Any extended speed zone changes which would not fall within a typical roadworks or Road Occupancy Licence approval and would fall under a speed zone review process with council and TfNSW. These changes would need to be validated by TfNSW prior to implementation.

Any changes in speed (either reduction or reinstatement) would be implemented in accordance with the NSW Speed Zoning Standard. TfNSW control permanent speed zoning on all classified roads. No permanent changes to speeds are proposed on any State Roads.

10.6.4 Traffic control signage

Temporary signage (information, advance warning and traffic control) will be incorporated into the temporary staging as necessary to warn, inform and guide traffic around, past and through the worksite/s. All non-standard temporary signs will be reviewed and approved by TfNSW and/or relevant Authorities as part of the temporary design review, and/or site specific TMP approval process.

Where temporary signage is required, it will be designed in accordance with:

- AS 1428 Design for access and mobility
- AS 1742.1-15
- AS 1743 Road Signs – Specifications
- TfNSW Signs Index Database
- Austroads' Guide to Traffic Engineering Practice, Parts 1–15

10.6.4.1 Local community and Business

Signs associated with property access, community access and businesses will be reviewed during detailed design and implementation of temporary traffic management schemes. Any impacts to the sign (or by the sign) will be considered and addressed accordingly, which may include the proposal of supplementary signage or modification of signage to accommodate works and upgrades.

10.6.5 Traffic delay management

Methods for maintaining existing road capacity will be considered when planning of any construction works that may impact the road network performance. To minimise road user delays, the following measures will be implemented:

- Plan road occupancies to occur outside of network peak periods where possible
- Scheduling heavy vehicle movements to avoid network peak periods, where possible
- Implementing additional community consultation, modifications to staging, and adjusting detour routes, to ensure diversions and detours are managed effectively, minimising delays for motorists as much as possible

- Undertaking planning and careful consultation with client representatives, TfNSW, councils, NPWS and community and stakeholder engagement teams to ensure any works with an anticipated impact are appropriately planned and communicated

Where localised traffic controls are necessary, the duration of any holds will be minimised as much as possible without compromising public or motorist safety. Table 10-1 outlines appropriate worksite lengths compared to two-way traffic volumes as a guide for what would be appropriate to perform shuttle-flow arrangements. If vehicle numbers or worksite distances exceed those outlined in Table 10-1, alternative work hours during lower traffic periods will be sought. If this is not feasible, a community notification campaign will be implemented to reduce the number of vehicles affected by the works. This table and length of single lane sections is based on the Austroads Guide to Temporary Traffic Management Part 3 – Static Worksites.

All works involving traffic control would only be undertaken after consultation with the relevant road authority had been undertaken, and methodology and conditions agreed as part of a S138 or Road Occupancy Licence application and approval.

TABLE 10-1 SHUTTLE FLOW OPERATION LENGTHS AND VOLUMES

Traffic volume in both directions (vph)	Length of single lane section (m)
701-800	70
601-700	100
501-600	150
401-500	250
351-400	400
301-350	600
≤300	800

10.7 STRINGING TRANSMISSION LINES

This section relating to the stringing of transmission lines is subject to an approved Transport Strategy, in accordance with condition B31 and as outlined in Section 7.1. As detailed in Section 7.1, and in accordance with MCoA (NSW) C3, the Planning Secretary has approved a staged approach to the Transport Strategies and a specific Stringing Transport Strategy will be prepared for the activity of stinging transmission lines. Once this Stringing Transport Strategy has been consulted with the relevant stakeholders and approved by the Planning Secretary, this section will be reviewed and updated (if required) to align with any additional detail relating to methodology and mitigation measures identified within that Strategy.

The transmission line alignment would involve crossing the Golden Highway at three locations and at one location along the Castlereagh Highway.

The figures below show the proposed locations of the transmission lines crossing the State Road network. The figure below shows the crossing location of the Castlereagh Highway, which is approximately 17km south of the intersection of the Castlereagh Highway and the Golden Highway.

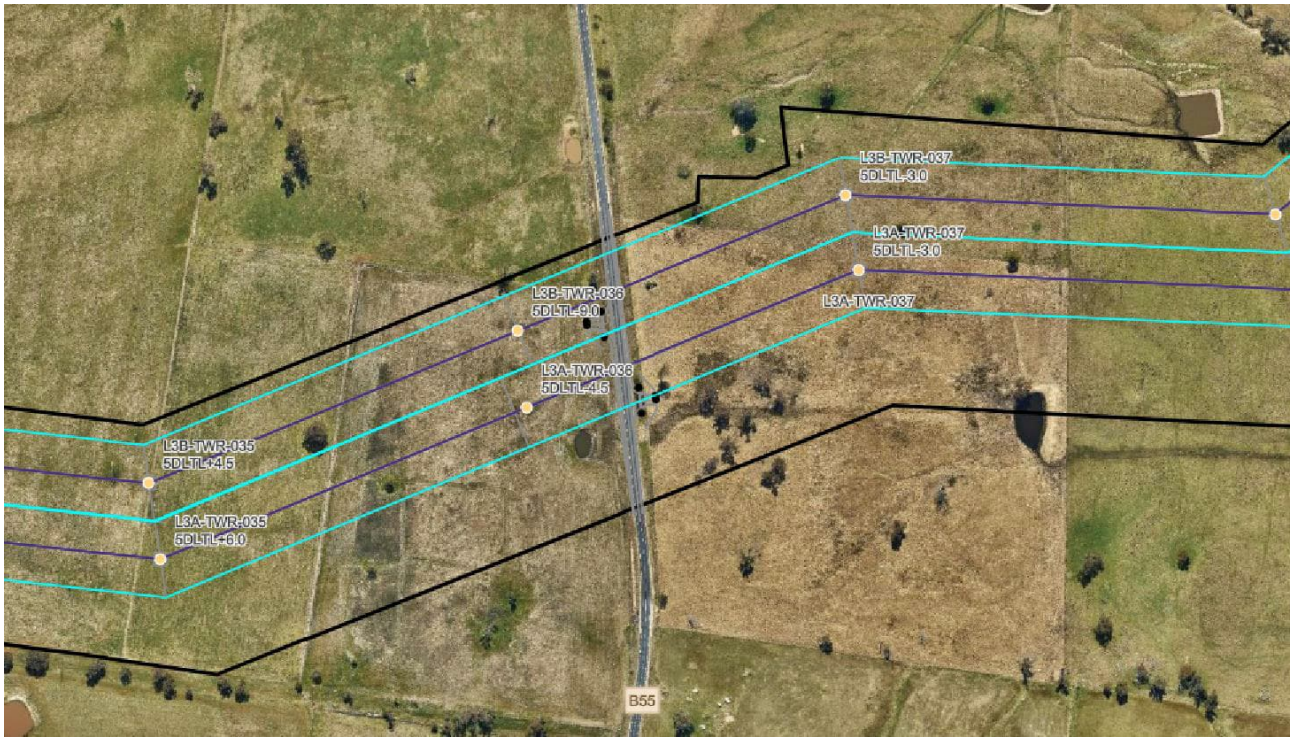


FIGURE 10-6 TRANSMISSION LINES CROSSING CASTLEREAGH HIGHWAY

The figure below shows the three locations that the transmission lines will be crossing the Golden Highway. The Separable Portion 6 crossing is approximately 8.5km east of the intersection of Merotherie Road and the Golden Highway. The eastern section for Separable Portion 6 is approximately 6.5km further east.

Separable Portion 5 crossing in the very eastern section of the Project is approximately 5km North-East of the intersection of Ulan Road and the Golden Highway.

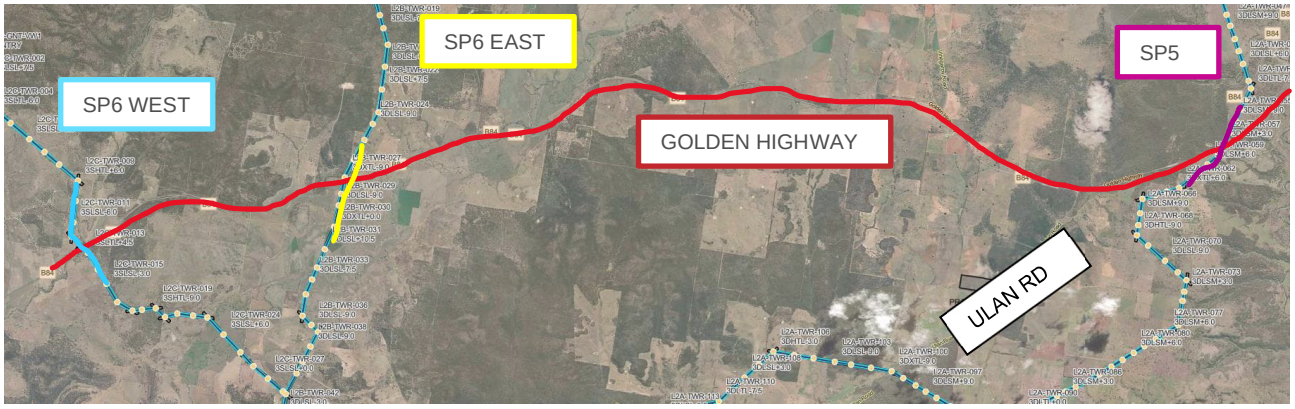


FIGURE 10-7 TRANSMISSION LINES CROSSING THE GOLDEN HIGHWAY

The proposed approach for the stringing of transmissions lines of these crossings and other major roads is the use of temporary hurdles. The hurdles will be constructed so that their poles are away from the road edge, and outside of the clear zone. Further details of the designs of the hurdles are still in development but will be included in the Project Transport Strategy developed for Stringing.

The hurdle designs will provide a catch net strung across the roads at approximately 10m above the road surface, subject to the Stringing Strategy development, design development and consultation with TfNSW.

Table 10-2 outlines the anticipated sequence and traffic management during the stringing process.

TABLE 10-2 SEQUENCE FOR STRINGING ACROSS STATE ROADS OR HIGHWAYS USING HURDLES.

Activity	Comment
Install hurdle support structures on the edge of the road, outside the clear zone (the area along the edge of roads that should be kept free from features)	Traffic management will be required while installing hurdles. This may include speed reductions and or holding traffic.
String draw wire(s) across hurdles	Road needs to be closed (traffic held) for 5-7 minutes for splicing and raising each draw wire over the hurdles. The road can be opened for traffic with slow speed between each cable draw. The process will be repeated for each draw wire, which is estimated to be 6 – 8 times.
Draw transmission line (s) across	No road closure is required. Road can be opened for traffic with slow speed. Process may take up to 7 days
Removal of hurdles	Traffic management will be required while removing hurdles. This may include speed reductions and or holding traffic.

For local roads and/or those roads with low traffic demand, traffic control measures will be employed to manage the stringing process, coordinating it with traffic breaks or temporarily holding vehicles (up to 7 minutes). If feasible, a road closure or detour will be implemented to minimise the risk of public interaction with the stringing activities and reduce the chance of delays (no detours will be implemented on State Roads)

These arrangements will all be subject to short term TGS being developed in consultation with relevant road authority(s) to meet the requirements of the Austroads Guide to Traffic Management and AS1742.3.

Stringing over any classified roads will only be undertaken with the concurrence from TfNSW with an approved Road Occupancy Licence and approval from any other relevant road authorities. NPWS will be advised via the TTLG. Any holding of traffic will avoid the peak periods, especially on the state road network. This will be further discussed as part of the Project Stringing Strategy submission.

The TTMP will be updated subject to consultation with TfNSW on the Stringing Transport Strategy in accordance with Section 7.2.

An indicative layout for the Traffic Guidance Scheme configuration to facilitate lifting wires or components over roads is included below and will be further described in the associated Stringing Transport Strategy.

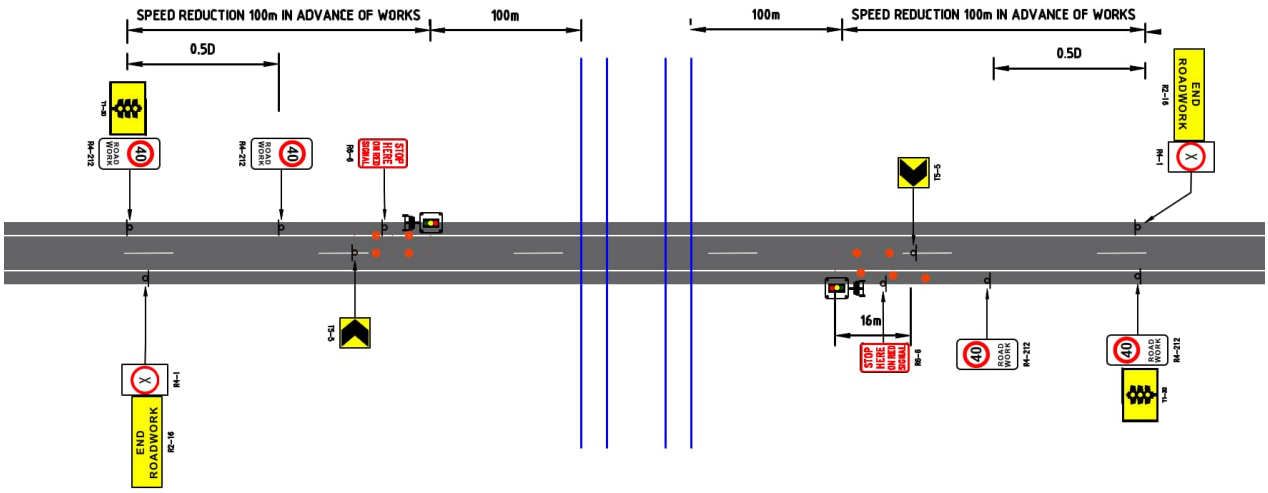


FIGURE 10-8 INDICATIVE MEASURES TO HOLD TRAFFIC FOR WIRES OR HURDLE CROSSING

Consultation for any impact on the state road network will be undertaken as part of the development of the Transport Strategy for Stringing once designs and information are finalised. An initial briefing for TfNSW representatives with the proposed approach and methodology will be undertaken, with any preliminary feedback informing the content of the Transport Strategy. The Transport Strategy will then be finalised and submitted for consultation as per the requirements of the Planning Approval. As outlined in Section 3.1, consultation with the community and the TTLG representatives will be undertaken prior to the stringing of transmission lines over state and local roads and

10.7.1 Rail crossings

Impacts on rail lines from transmission line stringing across railway tracks will be minimal and will be conducted in consultation with ARTC. These activities are expected to take place during rail maintenance periods or rail possessions, ensuring no disruption to rail services. Track possessions will be requested for any temporary works requiring access to the rail corridor. Each activity involving rail corridor crossings will be individually assessed, with prior approval sought from ARTC. Work will only commence after obtaining the necessary approvals and permits, including accreditations for workers needing access to the rail corridor for construction.

10.7.2 Emergency Services

Potential impacts that may affect the access for emergency services (this includes NPWS) will be communicated prior to the commencement of the activity through either site specific TMPs, the TTLG and/or other meetings as agreed with emergency services.

Any construction works on or near roads, using traffic control, that can be safely halted/paused because of lights and sirens will be halted/paused and access provided (priority given) for emergency services.

Access to properties (including those under the control of NPWS) will be provided at all times for emergency vehicles (this includes NPWS).

10.8 HEAVY AND OVERSIZE / OVERMASS VEHICLE MANAGEMENT

10.8.1 Chain of responsibility

Heavy Vehicle National Law (HVNL) requires that every party in the heavy vehicle transport supply chain has a duty to ensure the safety of their transport activities.

Under the HVNL, a road-going vehicle that has a Gross Vehicle Mass (GVM) of more than 4.5t must meet a number of requirements in relation to mass, dimension, loading and speed. Vehicles that have a GVM or gross combination mass (GCM) of more than 12t, or a bus with a GVM of more than 4.5t, designed to carry more than 12 people including the driver, are fatigue-regulated heavy vehicles and subject to fatigue management requirements.

A heavy vehicle is determined by its GVM rating, not the load it is carrying at the time. There are still legislative obligations regarding speed and fatigue which must be complied with when a heavy vehicle is returning to its depot without a load.

The Project will comply with the requirements of the HVNL and requirements around Chain of Responsibility. The Project has a Chain of Responsibility management plan which will be implemented, and representatives of The Project will be tasked with monitoring compliance with that plan. This includes a number of elements around load weights, restraints, covering and fatigue.

10.8.2 Fatigue management

Fatigue management of HV operators (including OSOM operators) will be managed in accordance with the Heavy Vehicle (Fatigue Management) National Regulation (NSW).

The Project and its subcontractors will ensure that driver fatigue will be managed in accordance with the following principles:

- The Project and its subcontractors will not cause, incentivise, or encourage any driver to drive while impaired by fatigue by following the Chain of Responsibility work and rest hour options outlined below

- Where ACJV D&C has a direct impact, steps will be taken to assess and minimise any negative impact of any of our activities on a driver's work and rest hours by managing work schedules and project task work hours to ensure adequate time for rest is provided
- Prescriptive work/rest breaches will be monitored by the driver's employer in the first instance (subcontractor) with the primary duty to ensure the safety of the driver
- ACJV D&C will monitor corrective actions implemented by the subcontractor in relation to driver non-compliance through GPS tracking or audits and inspections for Chain of Responsibility compliance (by checking log books and work schedules)

The Chain of Responsibility laws provide for three work and rest hours options:

1. **Standard hours** - Standard hours are the work and rest hours allowed in the HVNL for all drivers who are not operating under National Heavy Vehicle Accreditation Scheme (NHVAS) accreditation or an exemption. They are the maximum amount of work and minimum amount of rest possible that can be performed safely without additional safety countermeasures.
2. **Basic Fatigue Management (BFM)** - Those operating under NHVAS with Basic Fatigue Management (BFM) accreditation can operate under more flexible work and rest hours, allowing for (among other things) work of up to 14 hours in a 24-hour period. BFM gives operators a greater say in when drivers can work and rest, as long as the risks of driver fatigue are properly managed.
3. **Advanced Fatigue Management (AFM)** - Those operating under NHVAS with AFM accreditation can operate under more flexible work and rest hours allowing for work of up to 15.5 hours in a 24-hour period. A driver operating under an AFM accreditation must comply with the maximum work time and minimum rest time requirements set out in the AFM accreditation certificate.

10.8.3 Heavy vehicle routes

All heavy vehicles, OSOM vehicles requiring escort and light construction vehicles associated with the Project will travel to and from the site only via the routes described in the EIS, Amendment Report and identified in Appendix B of this Plan.

The NSW Heavy Vehicle Access Policy Framework (TfNSW, 2018) provides guidance for heavy vehicle access on both state and local council roads. Heavy vehicle routes to and from construction sites have been designed with the objective of minimising impacts on Local Roads and maximising the use of State and Regional Roads where feasible and reasonable.

The parking, idling, and queuing of heavy vehicles on public roads, particularly within regional towns, will be minimised. If a heavy vehicle is identified parked on a public road without cause they'll be instructed to move on and to ensure they park within the project boundary in future. Heavy vehicle drivers will be required to always obey all road rules, including covering loads when in transit to and from the Project site, and when entering or exiting from the public road network. They will be required

to enter and exit site in a forward direction unless authorised through a TMP or TGS, and within a traffic management zone.

10.8.4 Access tracks

Access tracks will be constructed within and/or to provide access to accommodation camps, laydowns, compounds and throughout the Project corridors, connecting the transmission tower locations and energy hubs to the public road network via access points identified in Appendix 4 of the Planning Approval, as well as those access points described within the Transport Strategies and referenced in Section 7.

These tracks will be constructed based on a profile and design that will enable the largest expected construction vehicles to access necessary areas for construction. This might include cranes, trucks, trailers and in some instances oversize and over mass deliveries.

The tracks will be used regularly during construction. Ongoing informal monitoring by the workforce will be undertaken as part of day-to-day work and as part of routine safety inspections. Any deficiencies identified in the safety of either the roadway or water infrastructure will be rectified. These deficiencies may include a blockage in drainage infrastructure, or wash-out of the roadway resulting in a void that may be difficult for vehicles to navigate without either bottoming out or losing traction.

10.8.5 Covering loads

Vehicles will be required to cover loads in accordance with the Chain of Responsibility requirements and be prescribed in the Drivers Code of Conduct.

Site supervisors and engineering staff will be responsible for monitoring the compliance of load covering for vehicles entering and leaving the sites, and be required to report any non-compliance to the Project team.

Depending on the extent of the non-compliance, this may result in a contract notice being issued to the relevant subcontractor to ensure their compliance.

A contract notice from ACJV D&C to a subcontractor may request they deliver a toolbox talk to their staff as a refresher of the project requirements, or in some extreme cases of non-compliance or repeat offence may see drivers removed from the Project.

Audits will be conducted as part of the Chain of Responsibility inspections by representatives from The Project which will include an audit requirement of at least weekly. These inspections will typically be undertaken by a member of the safety team or the logistics team. The audits will inspect elements relating to Chain of Responsibility, and includes covering of loads.

10.8.6 Permits

A route assessment and NHVR permit will be required for all OSOM loads which require escort. Refer Section 10.8.7, below.

The NHVR permit process typically sees NHVR contact each road authority for the entire route and request their concurrence for acceptance of the movement before it can be undertaken, this would be based on the standard permit process for the NHVR permits and would include OSOM movements requiring escort. No NHVR permits will be approved without the acceptance of the various road authorities first.

Swept path analysis has been conducted to determine if the routes can accommodate the expected vehicle type or load. A number of upgrades have been identified for the project to better facilitate the movements of large equipment, these are included in the route assessment for the largest expected deliveries in Appendix F.

The necessary upgrades to accommodate the deliveries include:

- Merotherie Road and Golden Highway intersection upgrade
- Spring Ridge Road and Dapper Road intersection

These upgrades have been designed to accommodate the movements along with a number of other structural upgrades on the alignment.

Further upgrades have been identified for delivery of the largest equipment to the site, including temporary pavement at Spring Ridge Road and the intersection with the Golden Highway. The upgrade here is already required to be constructed by the Port to REZ Project to a greater extent for the delivery of wind turbines to neighbouring projects. This upgrade will provide sufficient width for the deliveries to the Elong Elong Energy Hub.

(Note that the NSW Government is funding upgrades to the State Road network to enable the movement of oversize and/or overmass (OSOM) loads from the Port of Newcastle to Renewable Energy Zones. These Port to Rez upgrades will be managed collectively by EnergyCo and Transport for NSW)

Larger OSOM deliveries for the project are listed below, in Table 10-3.

TABLE 10-3 OSOM DELIVERIES REQUIRED FOR ENERGY HUBS

Energy Hubs	# of Transformer	# of Syncon
Merotherie North 500 / 330 kV (XME)	7	2
Merotherie South 500 /300kV (YME)	6	2

Energy Hubs	# of Transformer	# of Syncon
Elong Elong 500/330kV (EEL)	0	3
Total	13 units	7 units

10.8.7 High-Risk OSOM Movements

10.8.7.1 Route assessment

The designs of the relevant upgrades have been developed to accommodate the movements detailed in Table 10-3. The design vehicle for the swept paths has been based on the delivery of the beamset carrying the synchronous condensers as outlined by the vehicle combination below, in Figure 10-9.

A route assessment has been undertaken using an overall vehicle length of 140m, as well as load weights and swept paths as provided in Appendix F. Approximately six months prior to the planned high-risk OSOM movement, the Project will repeat this route assessment to ensure consistency with Appendix F, or otherwise update Appendix F (including re-consultation and approval as applicable) to reflect any required changes. This route re-assessment will include the improvements of the Newcastle Inner City Bypass and a consistency check of the Port to REZ project (inclusive of the road upgrades, assessed envelope and design high-risk OSOM dimensions and weights), as applicable at that time, and confirmation of the overall vehicle length.

The route analysis re-assessment will also confirm that the pull over bays identified within the VMP in Appendix B, and any others required for the mobilisation of the high-risk OSOM to site, are suitable to accommodate the vehicle assumptions including length and width of the high-risk OSOM vehicles.

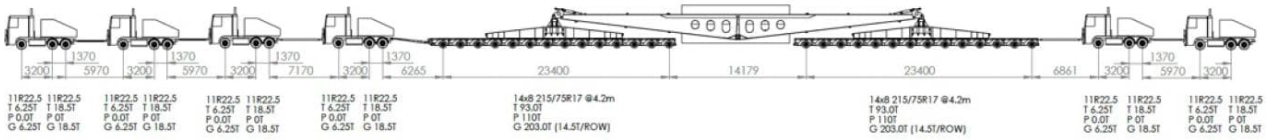


FIGURE 10-9 BEAMSET VEHICLE COMBINATION FOR OSOM TRANSPORT

10.8.7.2 Spring Ridge Road and Golden Highway intersection

Spring Ridge Road and Golden Highway intersection has been identified to require additional pavement to accommodate the largest anticipated load.

EnergyCo, as part of the Port to REZ upgrade works, will be undertaking the upgrade as outlined in Figure 10-10 below, which will accommodate these anticipated movements.

FIGURE 10-10 WIDENING FOR SPRING RIDGE ROAD COMPARISON TO REZ WORK

10.8.7.3 Merotherie Road and Golden Highway intersection

Upgrades for Merotherie Road and Golden Highway have been developed to accommodate the largest expected delivery vehicle as outlined above, in Figure 7-9, and as shown in the swept path in Figure 10-11, below.

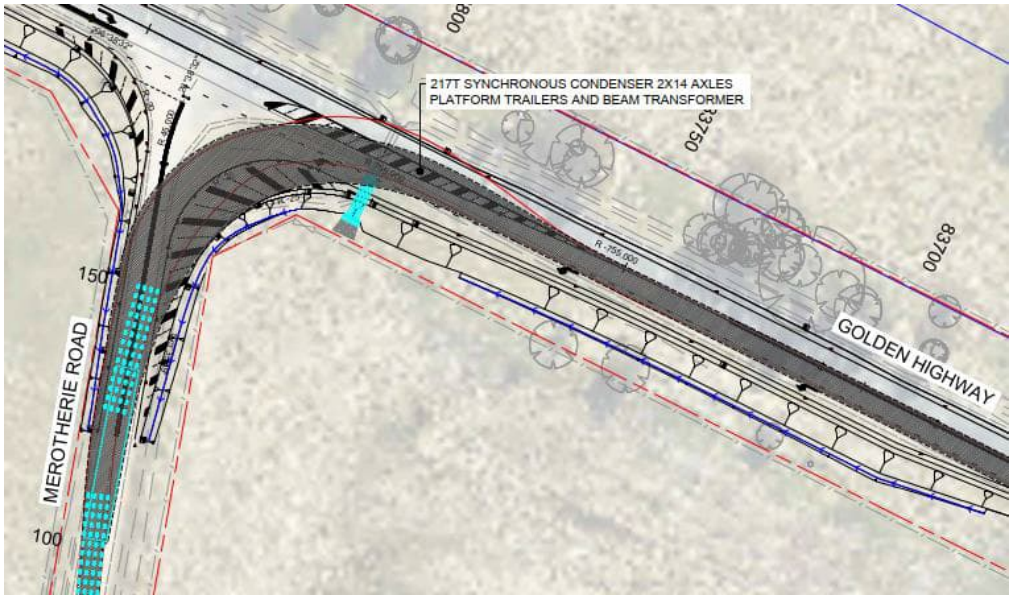


FIGURE 10-11 SWEPT PATH WIDENING REQUIREMENT FOR CWO OSOM DELIVERIES AT MEROTHERIE ROAD

This upgrade will be undertaken prior to the high risk OSOM deliveries.

10.8.7.4 Bridges and Culverts

TfNSW bridge branch has assessed the entire route from the Port to REZ (including the furthest site at Elong Elong) for a combination of movements and weights which exceed those identified for the Project. This confirms the bridges and culverts will have sufficient capacity to carry the proposed loads required by the Project.

10.8.8 Dangerous goods

In NSW, the transportation of dangerous goods and hazardous substances is governed by the Dangerous Goods (Road and Rail Transport) Act 2008. All contractors involved in the transportation of such will be expected to adhere to the requirements of this Act, Road and Rail Transport (Dangerous Goods) (Road) Regulation 1998 and the Australian Code for the Transport of Dangerous Goods by Road and Rail (National Transport Commission, 2007) while travelling on both public roads and on the site.

Dangerous goods will be stored, handled and transported in accordance with AS1940 The storage and handling of flammable and combustible liquids and AS/NZS 1596:2014 The storage and handling of LP Gas, the Australian Code for the Transport of Dangerous Goods by Road and Rail (National Transport Commission 2020), and the EPA's Storing and Handling of Liquids.

10.8.9 Cumulative impacts and scheduling

To limit cumulative impacts on the road network and motorists, project vehicle movements will be scheduled, as required, to avoid peak network traffic periods and conflicts with other road users and or projects.

The Project Traffic Manager will be responsible for ensuring appropriate scheduling, which will be determined in consultation with the TTLG, which will be used to understand local vehicle, and bus patterns plus any movements unique to an area for e.g., stock movements. If required specific interface meetings will be undertaken with relevant stakeholders, for example bus companies and NPWS. Schedules will be communicated to project staff and subcontractors through the site Vehicle Movement Plans (VMPs).

Scheduling of vehicles will:

- Minimise vehicles travelling during times of poor local climate conditions such as fog, wet weather and flooding
- Minimise interaction of construction traffic with special events through consultation with relevant stakeholders including schools, NPWS and other special interest groups
- Minimise construction interaction with public traffic, bus, rail services, stock movements and other projects in the area, as far as practicable
- Minimise convoying or platoons
- Minimise impacts with nearby projects

Where the formation of convoys may impact on the vehicle movement of other road users, the formation of convoys is to be avoided. This requirement will be included in the Driver Code of Conduct and included on the Vehicle Movement Plans. The impact of heavy vehicles from convoys and congestion through local townships during peak traffic periods are to be mitigated through the following initiatives:

- Heavy vehicle parking, idling and queuing on public roads will be discouraged (except where permitted)
- All heavy and light construction vehicles associated with the project will travel to and from site via the routes nominated in this Plan unless otherwise approved by the Planning Secretary (and included in an update to this Plan).
- Minimising traffic movements by ensuring full loads
- Drivers will communicate via radio and aim to maintain distance between each heavy vehicle
- Scheduling of delivery of materials (i.e., quarry materials or concrete) to be communicated to suppliers to both avoid peak periods where practical, and to separate movements when dispatching to site
- Departing trucks to be monitored where practical by site supervision, to minimise peak periods but also to avoid convoys

Typically loading of materials at a quarry or concrete plant will automatically see separation between movements as a result of load time.

OSOM permits will be obtained from NHVR for all OSOM deliveries requiring escort. The issuing authority typically take into account the scheduling and conditions of the OSOM movements to minimise cumulative impacts on the road network.

Scheduling requirements from OSOM permits and associated VMP will be included in driver inductions and will be reiterated through pre-start meetings. Project Managers will be responsible for ensuring all required permits are obtained.

Heavy vehicles requiring escort will only be permitted to use the roads prescribed within the Vehicle Movement Plans in Appendix B of this Plan. A detailed route assessment for the largest loads has been undertaken, with details and the route assessment being included in Appendix F. This route assessment is for the synchronous condensers for the energy hubs at Elong Elong and Merotherie.

These measures and monitoring of the effectiveness of these measures is incorporated into the Monitoring and Inspections proposed in Section 12.2.

10.9 FLOOD RESPONSE

A Flood Response Plan has been prepared detailing procedures and options for safe access to and from the site in the event of flooding (refer to **Appendix D**).

In the event of a flood, staff will remain at the accommodation camps.

11 Mitigation and Management Measures

Management and mitigation measures relevant to the Project are outlined in Table 11-1. These will be implemented to minimise traffic and transport impacts and ensure all commitments and requirements of the Planning Approval are met. These specific management and mitigation measures have been developed to address the requirements of applicable legislation, the MCoA (NSW), CoA (Commonwealth) and commitments of the REMMs.

TABLE 11-1 TRAFFIC AND TRANSPORT MANAGEMENT MEASURES

ID	Measure / requirement	Timing	Responsibility	Source
Road upgrades and Transport Strategy				
TT1	Prior to commencing any road upgrades, the Project must prepare a Transport Strategy, for those road upgrades identified in Appendix 4, in consultation with the TfNSW and relevant Councils, to the satisfaction of the Planning Secretary,	Pre-Construction	Traffic Manager	MCoA (NSW) B31 REMM T1,
Road dilapidation / Road maintenance				
TT2	Independent dilapidation survey(s) will be undertaken to assess the existing condition of all local roads on the transport route shown in MCoA (NSW) Figure 4-1 to Figure 4-4 in Appendix 4 (including local road crossings) and the condition of all local roads on the transport route (including local road crossing);	Prior to construction, upgrading or decommissioning works.	Traffic Manager	MCoA B34 (a)(i),(ii) REMM T7
TT3	Independent dilapidation survey(s) will be undertaken on an annual basis during construction, or within a timeframe agreed to by the relevant roads authority/manager;	Annual basis	Traffic Manager	MCoA B34 (a)(iv)
TT4	Independent dilapidation survey(s) will be undertaken within 1 month of the completion of construction, upgrading or decommissioning works, or within a timeframe agreed to by the relevant roads authority/manager;	1 month following completion	Traffic Manager	MCoA B34 (a)(iii)
TT5	Any damage to local roads (including road crossings) as a result of construction vehicles will be repaired following the completion of construction.	Prior to the completion of the project unless the road becomes unusable to the public and road safety is compromised by the damage.	Traffic Manager	MCoA B34 (b) REMM T7
Road Safety – Driver related				
TT6	A Driver Code of Conduct will be developed and implemented for the entire workforce. The code will define acceptable driver behaviour for proposal personnel to promote	Pre-Construction	Traffic Manager	MCoA (NSW) B35 (e) REMM T4

ID	Measure / requirement	Timing	Responsibility	Source
	road safety and ensure that the impacts of construction-related vehicle movements on local roads and the local community are minimised			
TT7	A Driver Fatigue Management Plan will be developed and implemented as part of the Construction Environmental Management Plan, and will incorporate appropriate measures to manage driver fatigue risks, including, but not limited to: — planning of regular breaks — mapping locations of driver rest areas along the proposed construction routes.	Pre-Construction	Traffic Manager	MCoA (NSW) B35 (d,(i)) REMM T4
Consultation				
TT8	Early and ongoing consultation with the ARTC will be undertaken for works which will cross over existing rail lines. Relevant works will only proceed following receipt of applicable approvals/permits, including accreditations for workers requiring access within the rail corridor to undertake construction activities	Prior to works near ARTC rail corridors	Traffic Manager / supervisors / design engineers	MCoA (NSW) B35 (d,(i)) REMM T5
TT9	Disruptions to property access and traffic will be notified to landowners at least five days prior and in accordance with the relevant community consultation processes outlined in the Construction Environmental Management Plan.	5 days prior to property access disruption	Community Manager / Environment Manager	REMM T9
TT10	The project will actively consult with local bicycle groups, such as Central West Cycle (CWC) during construction, particularly regarding construction routes proposed on CWC's cycling route between Gulgong to Dunedoo.	Construction	Community Manager / Environment Manager / Traffic Manager	MCoA (NSW) B35 (d,(i)) REMM T10
TT11	Where road closures are likely to result in a significant traffic impact (e.g. short-term full road closure and long-term temporary lane/ road closures), prior consultation will be undertaken with potentially affected stakeholders (e.g. landowners, emergency services, transport services) and relevant approval(s) obtained from the relevant roads authority.	Construction	Community Manager / Environment Manager / Traffic Manager	MCoA (NSW) B35 (d,(i)) REMM T8
TT12	Access points on the public road network will be confirmed and implemented in consultation with the relevant roads' authority. Establishment of access points will occur in accordance with road occupancy licences (or similar) where issued by the relevant roads' authority.	Pre- Construction Construction	Traffic Manager / supervisors / design engineers	REMM T13

ID	Measure / requirement	Timing	Responsibility	Source
TT13	A monthly Traffic and Transport Liaison Group (TTLG) meeting, led by the Traffic Manager, will be set up as a forum to discuss road safety, traffic management, and related issues. Representatives from TfNSW, local councils, NSW Police, bus operators, relevant client and construction teams, and nearby major projects will be invited, along with any other necessary parties.	Construction	Traffic Manager / supervisors	MCoA (NSW) B35 (d,(i))
Permits, plans and licences				
TT14	Road Occupancy Licence(s) will be sought for all temporary lane closures (as required by the relevant roads authority).	Construction	Traffic Manager / supervisors / design engineers	REMM T8
TT15	Where feasible, temporary road closures will be planned to occur outside of the traffic peak periods to minimise impacts to the road network.	Construction	Traffic Manager / supervisors / design engineers	REMM T8
TT16	Vehicle Management Plans will be prepared for locations where construction-related traffic enters and leaves the public road network for project construction related purposes. The plans will be implemented by licensed traffic management contractors. Necessary road occupancy licences and road related work approvals will be obtained prior to the commencement of relevant works (including site access and access tracks)	Pre-Construction	Traffic Manager	REMM T2
TT17	Traffic Management Plan will be prepared which identifies the construction vehicle route(s) (including OSOM routes) to be used during construction. The Traffic Management Plan will include details of activities of adjoining land uses and awareness of public safety measures (e.g. entering urban areas from the highways) to provide guidance to drivers of construction vehicles travelling to and from project locations. Ongoing consultation will be undertaken with Transport for NSW regarding the use of State roads for OSOM vehicle routes	Pre- Construction Construction	Traffic Manager / supervisors / design engineers	REMM T11
TT18	The storage, handling, and transport of dangerous goods will be undertaken in accordance with the relevant Australian Standards and guidelines, particularly AS1940	Construction	supervisors	MCoA (NSW) B43

ID	Measure / requirement	Timing	Responsibility	Source
Access, Scheduling and Maintenance				
TT19	Access tracks used for construction sites, construction compounds and workforce accommodation camps will be maintained to safe standard.	Construction	supervisors	REMM T6
TT20	All accesses will be designed to accommodate the required construction vehicle(s) requiring access, and in accordance with relevant Austroads guidelines (where applicable) in consultation with the relevant roads' authority. Appropriate traffic management and controls may be adopted to facilitate safe site access and egress for vehicles prior to access point installation and upgrading. Routine inspections will be completed on a regular basis.	Pre-Construction Routine inspections will be undertaken throughout construction	Traffic Manager	REMM T3
TT21	Access to properties will be maintained throughout construction where feasible. Where this is not feasible, temporary alternative access arrangements will be provided following consultation with affected landowners and in accordance with the requirements of the pre-construction and construction Communication and Engagement Plan (as detailed in mitigation measure SI5).	Construction	Traffic Manager / supervisors / design engineers	REMM T9
TT22	Safe pedestrian and cyclist access will be maintained where the project interacts with existing pedestrian or bicycle facilities. Where this is not feasible, temporary alternative access arrangements will be provided following consultation with affected stakeholders and the relevant roads authority.	Construction	Traffic Manager / supervisors / design engineers	REMM T10
TT23	The following maintenance and safety measures will be implemented at relevant locations along each of the access tracks, construction compounds and workforce accommodation camp accesses: • Appropriate line marking and signage at access points • Wheel cleaning facility as required at access points/intersections • Signage to indicate trucks turning • Potential use of road plates, propping (or similar) over culverts where required • Improvements to existing roads at new access points which may include importing or stabilising material if required	Construction	Traffic Manager / supervisors / design engineers	REMM T12

ID	Measure / requirement	Timing	Responsibility	Source
TT24	For access points that are deficient in Safe Intersection Sight Distance, temporary speed limits would be implemented at these intersections and access gates. This is to ensure sufficient sight distance for road users during construction. Temporary speed limits will be agreed with the relevant road authorities.	Pre- Construction Construction	Traffic Manager / supervisors / design engineers	REMM T13
TT25	To limit cumulative impacts on the road network and impacts to motorists, scheduling of vehicle movements to avoid peak traffic periods and conflicts with other road users will be implemented where possible.	Construction	Traffic Manager / supervisors / design engineers	MCoA (NSW) B35 (d,(i))
TT26	All heavy and light vehicles associated with the project will travel to and from site via the routes nominated in this plan.	Construction	Traffic Manager / supervisors / design engineers	MCoA (NSW) B29 and B30
TT27	The project will minimise traffic movements by ensuring full loads.	Construction	Traffic Manager / supervisors / design engineers	MCoA (NSW) B35 (d,(i))
TT28	Drivers are to avoid forming convoys and communicate via radio to maintain distance between each heavy vehicle	Construction	Traffic Manager / supervisors / design engineers	MCoA (NSW) B35 (d,(i))
TT29	Development related traffic will be scheduled within standard hours, wherever possible.	Construction	Traffic Manager / supervisors / design engineers	MCoA (NSW) B35 (d,(i))
TT30	OSOM permits will be obtained from NHVR for all OSOM deliveries.	Construction	Traffic Manager / supervisors / design engineers	MCoA (NSW) B35 (d,(i))
Emergencies				
TT31	Impacts that may affect the access for emergency services will be communicated prior to the commencement of the activity through either site specific TMPs, the TTLG and/or other meetings as agreed with emergency services.	Construction	Traffic Manager / supervisors / design engineers	MCoA (NSW) B35 (d,(i))

ID	Measure / requirement	Timing	Responsibility	Source
	Any construction works on or near roads, using traffic control, that can be safely halted/paused because of lights and sirens will be halted/paused and access provided (priority given) for emergency services. Access to properties will be provided at all times for emergency vehicles.			
Miscellaneous				
TT32	A flood response plan will be implemented which details procedures and options for safe access to and from the site in the event of flooding.	Pre- Construction	Environment Manager / Traffic Manager / Supervisors	MCoA (NSW) B35 (g)
TT33	Carpooling and other shared transport initiatives for construction workers will be encouraged throughout construction.	Pre- Construction Construction	Traffic Manager / supervisors /	MCoA (NSW) B35 (d,(i))
TT34	All trucks entering or leaving the site with loads will have their loads covered.	Pre- Construction Construction	Traffic Manager / supervisors /	MCoA (NSW) B35 (d,(i))
TT35	In order to minimise tracking of mud from the project area onto public sealed roads, progressive erosion sediment control plans (ESCP) will be implemented to minimise on-site mud and covering of heavy vehicle load where loaded	Construction	Environment Manager / Traffic Manager / supervisors /	MCoA (NSW) B35 (d,(i))

12 Compliance Management

12.1 ROLES AND RESPONSIBILITIES

The roles and responsibilities relating to Traffic Management are outlined in Table 12-1.

TABLE 12-1 ROLES AND RESPONSIBILITIES

Position	Skill levels required/authority
Traffic Manager	The Traffic Manager is responsible for traffic management on the Project. The Traffic Manager will be qualified, as a minimum, in the SafeWork Prepare a Work Zone Traffic Management Plan course. The Traffic Manager must oversee, delegate or deliver the following key elements of the project scope: • Development of TTMP, TMPs, VMPs, TGS, Approvals and various road occupancy approvals in a timely manner • Manage interface meetings, consultation and dissemination of information and requirements to project and stakeholders alike in relation to traffic matters • Manage the traffic management teams, budgets, forecast, program and delivery methodologies • Ensure all legislated and company procedural inspections and documentation are completed and filed, as well as any quality assurance documentation • Ensure works are safe for both workers, pedestrians, cyclists and the travelling public (including temporary traffic arrangements and side-tracks). • Review of installed traffic management controls • Regularly review and update management plans and approvals • Ensure Road Safety Audits are conducted on all necessary project works, and any audit findings are responded to and closed out in a timely manner
Traffic Control Crews	Traffic Controllers must have a minimum competency of RIIWHS205E – Control traffic with a stop-slow bat. Traffic Control Team Leaders must have a minimum competency of RIIWHS302E – Implement traffic management plans. Implement and manage traffic guidance schemes (TGS) in accordance with the approved plans.
Independent Road Safety Auditor(s)	The Project will engage an independent road safety audit team to conduct independent road safety audits on relevant construction staging arrangements and road openings. The audit team will comprise at least two auditors, one of which will be a minimum level 3 (lead) road safety auditor with the additional team member being of at least a level 2 certification. Both auditors shall be listed on the NSW Centre for Road Safety's Register of Road Safety Auditors (https://www.roadsafetyregister.com.au/).
Dilapidation inspectors.	As part of Project delivery there will be a need for both internal and external (independent) dilapidation and maintenance inspections. The external dilapidation inspections will be undertaken by an independent inspector (where this is prescribed as a requirement). Their inspection will be establishing the baseline of the proposed roads.

Position	Skill levels required/authority
	Intermittent additional inspections will be undertaken as defined by Project documents for independent dilapidation, with regular internal inspections to be undertaken by some or all of the members of the traffic and construction team on roads affected by the project works.

12.2 MONITORING AND INSPECTION

12.2.1 Traffic Management inspections

Inspections for traffic controls will be undertaken in accordance with the requirements of AS1742.3. Table 12-2 outlines the planning and delivery monitoring and inspections that will be undertaken. This includes a monthly inspection of temporary controls (which would typically include current long-term traffic arrangements on public roads).

Note, that most works being undertaken as part of the Project will be on private property and not within the public domain. Inspections within the construction sites will be conducted by the relevant project managers and site safety representatives.

TABLE 12-2 TRAFFIC CONTROL INSPECTIONS

Stage	Activity	Purpose	Responsibility
Planning	TGS verification	To ensure that the TGS selected or designed is suitable for the works and location	Traffic Manager
During	Weekly inspections (includes pre-opening inspection)	To ensure that the TMP and relevant TGS are appropriate and operating safely, effectively and efficiently	Traffic Manager/Traffic Controllers
	Shift inspections	To ensure that the TGS is implemented as designed. This includes at a minimum twice per shift and when: • A TGS is installed, changed or updated • At regular frequency after work commences, recommended every two hours • Once aftercare arrangements have been installed if required (including sign covers for where works are halted)	Traffic Manager/Traffic Controllers
	TMP review	To ensure that TMP controls are achieving the required outcomes. Completed monthly	Traffic Manager
Post Completion	Post-completion inspection	To ensure that the site has been demobilised as planned and is safe for opening to traffic	Traffic Manager/Traffic Controllers

12.2.2 Environmental performance

The impacts and environmental performance of the Project relevant to traffic and transport, and the effectiveness of the management measures identified in Section 11 will be monitored through the proposed monitoring program in Table 12-3.

TABLE 12-3 MONITORING PROGRAM.

Item	Scope	Frequency	Responsibility
Weekly inspections	Inspections of environmental controls	Weekly	Environment Manager / Advisor / coordinators
Weather monitoring	Inclement weather impacting project light and heavy vehicles	As required	Environment Advisor
Informal visual inspections	Access track quality and safety Load coverings	Daily, as part of use	Site supervisor, all workers using access tracks (required to notify of safety and environmental issues)
Traffic volume monitoring	Review traffic movements associated with construction	Monthly	Traffic Manager or delegate are to undertake a review of vehicle movements at one of the key intersections of the project and summarise against permitted movements (using GPS data or monitoring on site)

12.3 AUDITING AND REPORTING

A desktop road safety audit will be conducted on a set of staging or construction plans or as part of design development where they form part of a Traffic Management Plan. Pre-construction audits will be conducted on all intersection and road upgrades identified as part of the Project works, including the intersections incorporated in Section 6.1 and those triggered from Table 6-1.

Implementation (Roadworks) audits would typically include implementation of construction staging plans in a high-speed road environment where a substandard condition is proposed, or barriers introduced in the shoulder of an existing high-speed or high-volume road.

The audit will include review of the design and/or TMP documentation by an audit team consisting of at least a Level 3 (Lead) Road Safety Auditor and minimum Level 2 Road Safety Auditor.

A field (Roadworks) Road Safety Audit may be conducted by the audit team described above, in the field on any new roadways recently opened to traffic (including permanent intersection upgrades and works captured within works authorisation deeds). The audit will be issued to the relevant road authority and relevant stakeholders once completed, along with any corrective actions taken.

Reporting which will be undertaken in accordance with the TTMP is summarised in Table 12-4.

TABLE 12-4 REPORTING PROGRAM

Item	Scope	Frequency	Responsibility	Recipient
Road dilapidation surveys	Assess existing conditions of all local roads on the transport route	Prior to construction or upgrading or decommissioning works	Traffic Manager	Relevant road authority
	Annual inspection of local roads throughout construction	Annual basis	Traffic Manager	Relevant road authority
	Completion inspection of local roads	Within 1 month of completion of construction, upgrading or decommissioning works	Traffic Manager	Relevant road authority
Independent audits (MCoA NSW) C14	Independent audits undertaken in accordance with the MCoA (NSW) will include audits of traffic and transport measures (based on the Independent Auditor's program). Audit reports will be prepared.	At intervals, no greater than 26 weeks from the date of the initial Independent Audit or as otherwise agreed by the Planning Secretary.	Environment Manager	DPHI, made publicly available.
Traffic and Transport Report (MCoA NSW B35(f)(iii)) Refer to Section 12.7	A report will be prepared that details the effectiveness of; • Traffic related incidents on site • Maintenance issues identified on roads • Effectiveness of the Vehicle Movement Plans and associated vehicle tracking • Effectiveness of Driver Code of Conduct	Quarterly for first 12 months, then TBC	Traffic Manager	DPHI, made publicly available.

12.4 TRAINING

It will be the responsibility of the Traffic Manager to arrange sufficient information pertaining to the management of traffic and transport across the Project, including the requirements outlined within this Plan. Training will be provided as part of onboarding and inductions.

This will include key elements about:

- Requirements of travelling between and around sites
- Driver Code of Conduct
- Drivers reporting their works locations in accordance with the controls nominated in the Safety Management Plan and

- Monitoring of vehicle movements

Records of training and onboarding for staff will be kept as well as other relevant training exercises and toolbox briefings that relate to the driver code of conduct and vehicle movement requirements. Vehicle Movement Plans will also be included in procurement packages for subcontractors with a need to undertake construction works on site.

12.5 NON-COMPLIANCE, EMERGENCY AND INCIDENT MANAGEMENT

12.5.1 Non-Compliance

Non-compliance is defined in the MCoA (NSW) as “an occurrence, set of circumstances or development that is a breach of this approval”.

In the event an activity is identified to be non-compliant, that activity may be stopped, if deemed necessary, by the ER, or Project Superintendent and Supervisors, or ACJV D&C Environment and Sustainability Manager, or Construction Manager.

- The management of Planning Approval non-compliances is described in detail in the Project’s Environmental Management Strategy (EMS) which has been prepared in accordance with MCoA (NSW) C1 and applies to all project works, including road upgrades and traffic management.

Notification of a non-compliance will occur via the Major Projects website portal within seven days after becoming aware of any non-compliance as per MCoA (NSW) C11, and will include the information as required in MCoA (NSW) C12. Where applicable notifications will also be undertaken in accordance with the Commonwealth approval. Please refer to the EMS for further detail on the process of non compliance management and notification

12.5.2 Emergency Management

Emergencies are an event, actual or imminent, which endangers or threatens to endanger life, property or the environment. All emergencies will be managed in accordance with the Project Emergency Plan required under MCoA (NSW) B46 (or equivalent), which is separate to the Environmental Management Strategy.

12.5.3 Incidents

As per the definition utilised in the Planning Approval an Incident is “an occurrence or set of circumstances that causes, or threatens to cause material harm and which may or may not be or cause a non-compliance”.

Material harm is defined in the Planning Approval, as harm that:

- *“Involves actual or potential harm to the health or safety of human beings or to the environment that is not trivial, or*

- *results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000, (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment)*

  This definition excludes "harm" that is authorised under either this approval or any other statutory approval".

The management of an Incident is described in detail in the Project's Environmental Management Strategy (EMS) which has been prepared in accordance with MCoA (NSW) C1 and applies to all project works, including road upgrades and traffic management.

Incident notification will be undertaken in accordance with MCoA (NSW) C10. Please refer to the EMS for further detail on incident management and notification.

12.6 DOCUMENT REVIEW

Following the occasion of an incident or non-compliance, MCoA (NSW) C2 requires that:

- The Proponent must review and, if necessary, revise the strategies, plans or programs required under this approval to the satisfaction of the Planning Secretary within 3 months of the:
  - The submission of an incident report under condition C10
  - The submission of an Independent Audit under condition C14
  - Any modification of the conditions of this approval
  - The issue of a direction of the Planning Secretary under condition A3 which requires a review

12.7 EFFECTIVENESS AND REPORTING

Independent audit reports in accordance with MCoA (NSW) condition C14 will be used to demonstrate the effectiveness of the measures prescribed within this plan including the Driver Code of Conduct. These audit reports will be uploaded to the project website in accordance with MCoA (NSW) condition C17.

A periodic report will be developed in accordance with MCoA (NSW) B35(f)(iii) to capture the effectiveness of controls outlined within this Plan. The report will initially be prepared on a quarterly basis, with the frequency being revised subject to consultation with the TTLG representatives. The report will be issued to stakeholders within one month of the period ending and uploaded to the project website prior the completion of the next reporting period. Refer to Table 12-4 for additional details on responsibility and content.

The report will be prepared to capture an update for the following metrics.

- Traffic related incidents on site
- Maintenance issues identified on roads
- Effectiveness of the Vehicle Movement Plans and associated vehicle tracking
- Effectiveness of Driver Code of Conduct

Any incidents identified at any of the roadwork sites or as part of our staff travelling to and from worksites will be logged in a register and reported with non-personal information, including location, time of day, and severity and any other necessary commentary.

Maintenance issues will be registered in a log and a summary of the maintenance issues identified will be appended to the periodic report.

Effectiveness of both the VMPs and Driver Code of Conduct will be assessed by reporting

- Any incidents involving reported (by public) non-conformance of vehicles using non-approved local roads
- Incidents of GPS tracked vehicles using non-approved local roads report (by project)

The periodic report by the Project will be uploaded to the project website to be publicly available.

The periodic reports above will be issued to council and will meet the requirement then of condition B34 (c) for reporting on road repairs completed under condition B34 (b) in consultation with the relevant roads authority. These reports will be issued within 6 months of any repair being undertaken.

Where deficiencies are identified, this TTMP and the implementation of the mitigation measures described within, will be reviewed.

Appendix A MCoA and REMMs relevant to this document

MCoA	Requirement	Document reference	How addressed
B29	All heavy vehicles requiring escort associated with the development must only travel to and from the site via the construction routes described in the EIS, as identified in Figure 4-1 to Figure 4-4 in Appendix 4, unless the Planning Secretary agrees otherwise.	Section 5.7 Section 10.8 Table 11-1 REMM TT26 **Appendix B**	Section 5.7 outlines the approved routes that will be used by the project for both light and heavy vehicles. **Appendix B** includes maps showing the approved routes.
B30	All heavy and light vehicles associated with construction, upgrading and decommissioning of the development must travel to and from the site via the construction routes as described in the EIS and identified in the Figure 4-1 to Figure 4-4 in Appendix 4, unless the Planning Secretary agrees otherwise.	Section 5.7 Section 10.8 Table 11-1 REMM TT26 **Appendix B**	
B31	Prior to commencing any road upgrades, the Proponent must prepare a Transport Strategy, for those road upgrades identified in Appendix 4, in consultation with the TfNSW and relevant Councils, to the satisfaction of the Planning Secretary, which: (a) identifies the location and type of any necessary road upgrades (including roads, intersections, crossing points, bridges and access points), including consideration of relevant amenity impacts; (b) ensures the road upgrades comply with the Austroads Guide to Road Design (as amended by TfNSW supplements), unless the relevant road authority agrees otherwise; (c) includes strategic concept designs prepared in accordance with Austroads Guide to Road Design (as amended by TfNSW supplements); (d) includes a detailed assessment of potential impacts of any necessary road upgrades (such as heritage and biodiversity impacts) and appropriate mitigation measures, including consideration of cumulative traffic impacts from approved projects; (e) include a schedule for the commencement and completion of all necessary road upgrades; (f) includes strategic concept designs for transmission lines crossing state roads and any structures required to facilitate stringing; (g) details the methods for installing transmission lines across State roads, ensuring the number and length of delays is minimised and avoids peak traffic hours for Golden and Castlereagh Highways; (h) identifies whether intersections, crossing points and access points would be permanent or temporary.	Section 6 REMM TT1	The transport strategy(s) will be prepared separately to this plan. Section 6 outlines the upgrades required under the Transport Strategy McoA B31.
B32	Unless the Planning Secretary agrees otherwise, the Proponent must implement the road upgrades and the mitigation measures identified in the Transport Strategy in	Section 6	The transport strategy(s) will be prepared separately to

MCoA	Requirement	Document reference	How addressed
	condition B31 and Appendix 4 in accordance with the relevant standard and timing requirements in Appendix 4, and to the satisfaction of the relevant roads authority. If there is a dispute about the road upgrade works, or the implementation of these works, then either party may refer the matter to the Planning Secretary for resolution.		this plan. Section 6 outlines the upgrades required under the Transport Strategy McoA B31.
B33	The road upgrades must be completed within the timeframes specified in the Transport Study, as required under Condition B31(e).	Section 6	The transport strategy(s) will be prepared separately to this plan. Section 6 outlines the upgrades required under the Transport Strategy McoA B31.
B34	The Proponent must: (a) undertake an independent dilapidation survey to assess the: (i) existing condition of all local roads on the transport route shown in Figure 4-1 to Figure 4-4 in Appendix 4 (including local road crossings) prior to construction, upgrading or decommissioning works; and (ii) condition of all local roads on the transport route (including local road crossing); (iii) within 1 month of the completion of construction, upgrading or decommissioning works, or within a timeframe agreed to by the relevant roads authority/manager; (iv) on an annual basis during construction, or within a timeframe agreed to by the relevant roads authority/manager; (b) repair (or pay the full costs associated with repairing) any damage to local roads on the transport route (including local road crossings) that are linked to development related road traffic; (c) prepare a report in consultation with the relevant roads authority. If there is a dispute about the road maintenance works, or the implementation of these works, then either party may refer the matter to the Planning Secretary for resolution.	Section 10.1 Table 11-1 REMM TT2 REMM TT3 REMM TT4 REMM TT5	Section 10.1 outlines the dilapidation surveys that will be undertaken across the project.
B43	The Proponent must ensure that the storage, handling, and transport of dangerous goods is undertaken in accordance with the relevant Australian Standards and guidelines, particularly AS1940 *The storage and handling of flammable and combustible liquids and AS/NZS 1596:2014 The storage and handling of LP Gas, the Dangerous Goods Code*, and the EPA's *Storing and Handling of Liquids: Environmental Protection – Participants Manual*.	Section 10.8.8 REMM TT18	Section 10.8.8 details the procedures for the transport of dangerous goods.

REMMs	Requirement	Document reference	How addressed

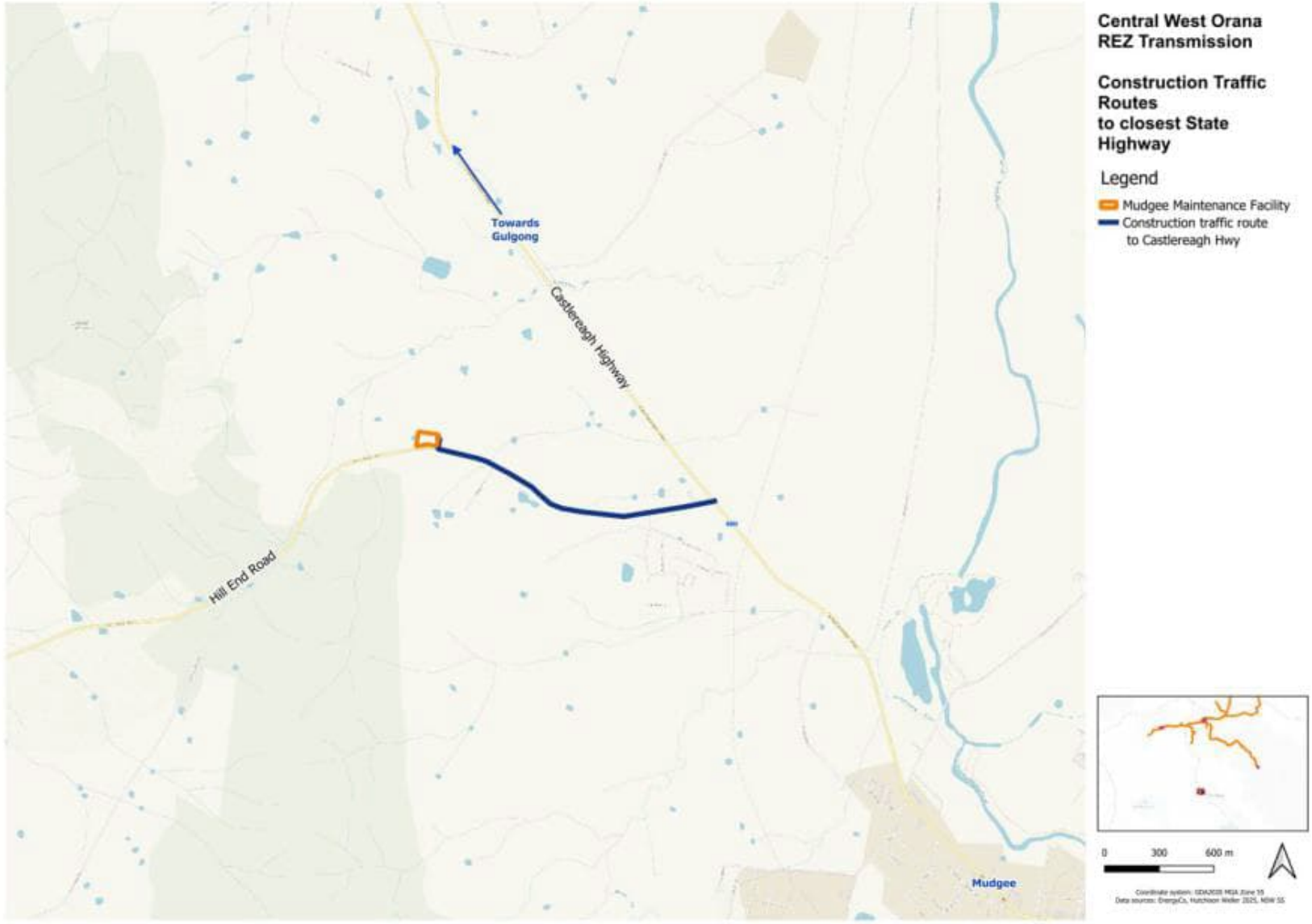
T1	As part of the detailed design process, an evaluation of the potential need for upgrades to the following intersections will be undertaken as detailed below:
	• Intersection of Ulan Road/Neeleys Lane: Investigate and confirm if short channelised right and/or auxiliary left turn treatments (or suitable alternative) are required for safe access to the workforce accommodation camp
	• Intersection of Golden Highway/Ulan Road: Investigate and confirm if a new short channelised right turn treatment (or suitable alternative) is required to provide safer intersection operation and to accommodate additional increases in traffic demand during construction.
	• Intersection of Golden Highway / Blue Springs Road: Investigate option to restrict construction vehicle volumes to levels which avoid the need for implementation of intersection upgrades. Where construction vehicle volumes cannot be limited to provide safe intersection operation, the required turning treatment upgrades (new short channelised right turn treatment or suitable alternative) will be implemented
	• Typical access gates off Cope Road: Construction vehicle movements turning right into access gates on the northern side of Cope Road will be limited to vehicles 25 per hour during the AM peak hour period to ensure safe and efficient traffic movements compatible with a Basic right turn (BAR) treatment. If higher construction vehicle movements are required and are incompatible with a BAR treatment, the required turning treatment upgrades will be implemented.
	• Typical access gate locations off Ulan Road (near Ulan township): Construction vehicle movements turning into the northwest and southeast access gates will be limited to the following during the AM peak hour period:
	  ○ left turning vehicles
	  - 18 vehicles per hour (southeast access gates)
	  - 5 vehicles per hour (northwest access gates)
	  ○ right turning vehicles – 5 vehicles per hour (all access gates)
	Turn warrant assessments will be conducted for each hour outside of the AM peak period to determine the maximum number of vehicle movements allowed to ensure safe and efficient traffic movements compatible with a Basic right turn (BAR) and Basic left turn (BAL) treatments. If higher construction vehicle movements are required and are incompatible with BAR / BAL
		Section 6	Section 6 of this plan evaluates and considers the design and potential need for upgrades of the relevant intersections and access gate locations.

REMMs	Requirement	Document reference	How addressed
	treatments, the required turning treatment upgrades will be implemented. • Typical access gate locations off Ulan Road (north of Ulan-Wollar Road): Construction vehicle movements turning into the northwest and southeast access gates will be limited to during the AM peak hour period: ○ left turning vehicles - 25 vehicles per hour ○ right turning vehicles - 5 vehicles per hour Turn warrant assessments will be conducted for each hour outside of the AM peak period to determine the maximum number of vehicle movements allowed to ensure safe and efficient traffic movements compatible with a Basic right turn (BAR) and Basic left turn (BAL) treatments. If higher construction vehicle movement volumes are required and are incompatible with BAR / BAL treatments, the required turning treatment upgrades will be implemented. Where the intersection upgrades are required, these will be designed and constructed in accordance with Austroads Guidelines, relevant applicable standards and consider the appropriate design vehicles.		
T2	Traffic control plans will be prepared in for locations where construction-related traffic enters and leaves the public road network for project construction related purposes. The plans will be implemented by licensed traffic management contractors. Necessary road occupancy licences and road related work approvals will be obtained prior to the commencement of relevant works (including site access and access tracks).	Section 10.2 Section 10.6	Sections 10.2 and 10.6 of this plan provides and overview of the relevant traffic management plans and the necessary road occupancy licences and road related work approval details.
T3	All accesses will be designed to accommodate the required construction vehicle(s) requiring access, and in accordance with relevant Austroads guidelines (where applicable) in consultation with the relevant roads authority. Appropriate traffic management and controls may be adopted to facilitate safe site access and egress for vehicles prior to access point installation and upgrading. Routine inspections will be completed on a regular basis.	Section 6 Section 10	Section 6 provides an overview of the access requirements in accordance with the relevant Austroads guidelines. Section 10 details the appropriate traffic management and controls to ensure the provision of safe access.
T4	The following road safety measures will be implemented with regard to driver management during construction: • a Driver Code of Conduct will be developed and implemented for the entire workforce. The code will define acceptable driver behaviour for proposal personnel to promote road safety and ensure that the impacts of construction-related vehicle movements on local roads and the local community are minimised	**Appendix C**	A Driver Code of Conduct is provided in **Appendix C**.

REMMs	Requirement	Document reference	How addressed
	• a Driver Fatigue Management Plan will be developed and implemented as part of the Construction Environmental Management Plan, and will incorporate appropriate measures to manage driver fatigue risks, including, but not limited to: ○ planning of regular breaks ○ mapping locations of driver rest areas along the proposed construction routes.		
T5	Early and ongoing consultation with the ARTC will be undertaken for works which will cross over existing rail lines. Relevant works will only proceed following receipt of applicable approvals/permits, including accreditations for workers requiring access within the rail corridor to undertake construction activities.	Section 10.7.1	Section 10.7.1 outlines the consultation required with ARTC prior to stringing transmission lines over rail corridors.
T6	Access tracks used for construction sites, construction compounds and workforce accommodation camps will be maintained to safe standard.	Section 10.8.4	Section 10.8.4 of this plan provides an overview of access tracks design and monitoring requirements.
T7	Pre-construction road dilapidation surveys and routine inspections will be completed along all nominated construction routes on local roads. Where rectification works are required due to project impacts, consultation with the appropriate road authority will be undertaken to confirm the scope of the work required.	Section 10.1	Section 10.1 of this plan outlines the dilapidation surveys that will be undertaken.
T8	Road Occupancy Licence(s) will be sought for all temporary lane closures (as required by the relevant roads authority). Where road closures are likely to result in a significant traffic impact (e.g. short-term full road closure and long-term temporary lane/ road closures), prior consultation will be undertaken with potentially affected stakeholders (e.g. landowners, emergency services, transport services) and relevant approval(s) obtained from the relevant roads authority. Where feasible, temporary road closures will be planned to occur outside of the traffic peak periods to minimise impacts to the road network	Section 3 Section 10.6	Section 3 of this plan details consultation requirements. Section 10.6 provides an overview of the required road occupancy licenses, detours and closures.
T9	Access to properties will be maintained throughout construction where feasible. Where this is not feasible, temporary alternative access arrangements will be provided following consultation with affected landowners and in accordance with the requirements of the pre-construction and construction Communication and Engagement Plan (as detailed in mitigation measure SI5). Disruptions to property access and traffic will be notified to landowners at least five days prior and in accordance with	Section 3 Section 6	Section 3 of this plan details consultation requirements. Section 6 details access requirements and arrangements.

REMMs	Requirement	Document reference	How addressed
	the relevant community consultation processes outlined in the Construction Environmental Management Plan		
T10	The project will actively consult with local bicycle groups, such as Central West Cycle (CWC) during construction, particularly regarding construction routes proposed on CWC's cycling route between Gulgong to Dunedoo. Safe pedestrian and cyclist access will be maintained where the project interacts with existing pedestrian or bicycle facilities. Where this is not feasible, temporary alternative access arrangements will be provided following consultation with affected stakeholders and the relevant roads authority.	Section 3 Section 6	Section 3 of this plan details consultation commitments, including consultation with CWC. Section 6 details safe access arrangements.
T11	A Vehicle Movement Plan will be prepared which identifies the construction vehicle route(s) (including OSOM routes) to be used during construction. The Vehicle Movement Plan will also include details of activities of adjoining land uses and awareness of public safety measures (e.g. entering urban areas from the highways) to provide guidance to drivers of construction vehicles travelling to and from project locations. Ongoing consultation will be undertaken with Transport for NSW regarding the use of State roads for OSOM vehicle routes.	Section 10.2.1 Section 10.8.9	Section 10.2.1 of this plan details the VMP requirements. Section 10.8.9 details OSOM permit requirements.
T12	The following maintenance and safety measures will be implemented at relevant locations along each of the access tracks, construction compounds and workforce accommodation camp accesses: • appropriate line marking and signage at access points • wheel cleaning facility as required at access points/intersections • signage to indicate trucks turning • potential use of road plates, propping (or similar) over culverts where required • improvements to existing roads at new access points which may include importing or stabilising material if required	Section 10.2 Section 10.1.2	Section 10.2 and 10.1.2 outline appropriate measures around the access tracks, construction compounds and accommodation camps.
T13	Access points on the public road network will be confirmed and implemented in consultation with the relevant roads authority. Establishment of access points will occur in accordance with road occupancy licences (or similar) where issued by the relevant roads authority. For access points that are deficient in Safe Intersection Sight Distance, temporary speed limits would be implemented at these intersections and access gates. This is to ensure sufficient sight distance for road users during construction. Temporary speed limits will be agreed with the relevant road authorities.	Section 8	The access points provisions are detailed in Section 8.

Appendix B Approved Construction Routes and Maps & OSOM Escort Map



Appendix C Drivers Code of Conduct

Appendix D Flood Response Plan

Appendix E Construction access points on Local and Regional Roads

Appendix F RJA Route assessment for OSOM

Appendix G General arrangement designs for upgrades

APPENDIX G.1 – MEROTHERIE ROAD AND BRIDGE UPGRADE DESIGN

APPENDIX G.2 – INTERSECTION OF MEROTHERIE ROAD AND GOLDEN HIGHWAY

APPENDIX G.3 – SPRING RIDGE ROAD UPGRADE DESIGN

APPENDIX G.4 – INTERSECTION OF NEELEYS LANE AND ULAN ROAD

APPENDIX G.5 – INTERSECTION OF ULAN ROAD AND GOLDEN HIGHWAY

APPENDIX G.6 – INTERSECTION OF BLUE SPRINGS ROAD AND GOLDEN HIGHWAY

General arrangement design for the intersection of Blue Springs Road and Golden Highway to be appended upon approval of the relevant Transport Strategy.

APPENDIX G.7 – INTERSECTION OF WHISTONS LANE AND CASTLEREAGH HIGHWAY

General arrangement design for the intersection of Whistons Lane and Castlereagh Highway to be appended upon approval of the relevant Transport Strategy.

APPENDIX G.8 – INTERSECTION OF PUGGOON ROAD AND CASTLEREAGH HIGHWAY

General arrangement design for the intersection of Puggoon Road and Castlereagh Highway to be appended upon approval of the relevant Transport Strategy.

APPENDIX G.9 – GOLDEN HIGHWAY CONSTRUCTION ACCESS GATES

General arrangement designs for access gates off the Golden Highway to be appended upon approval of the relevant Transport Strategy.

APPENDIX G.10 – CASTLEREAGH HIGHWAY CONSTRUCTION ACCESS GATES

General arrangement designs for access gates off the Castlereagh Highway to be appended upon approval of the relevant Transport Strategy.

APPENDIX G.11 – WOLLAR ROAD ACCESS GATE

APPENDIX G.12 – COPE ROAD ACCESS GATES (NORTH AND SOUTH)