UTILITIES TRANSMISSION LINE TRAFFIC AND TRANSPORT MANAGEMENT PLAN

Maragle 330kV Switching Station and 330kV Transmission Line Connections

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Plan Approval

Rev.	Approval	Name	Position	Organisation	Signature	Date
0.18	Approved By	Tim McCarthy	Project Manager	UGL Engineering Pty Ltd		14/06/24
0.18	Endorsed By	Andrew Buttigieg	Senior PM (Delivery)	Transgrid		14/06/2024

Document Revision History

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0.01	03/11/22	Ian Rembridge	Darrell Van Bruchem	Trevor Noble	Initial issue of combined TTMP
0.02	08/11/22	Ian Rembridge	Darrell Van Bruchem	Trevor Noble	Revised Transgrid Comments
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0.18	14/06/24	Ian Rembridge	Darrell Van Bruchem	Tim McCarthy	Revised Stakeholder Comments

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ACRONYMS AND ABBREVIATIONS

Term	Definition
CEMP	Construction Environmental Management Plan
COA	Conditions of Approval
CSSI	Critical State Significant Infrastructure
DPE	Department of Planning and Environment
DPI	Department of Primary Industries
EPA	Environment Protection Authority
EPL	Environmental Protection License
EMS	Environmental Management System
EP	Emergency Plan
FCNSW	Forestry Corporation NSW
FGJV	Future Generation Joint Venture
FRNSW	Fire and Rescue NSW
HSSE	Health, Safety, Security and Environment
HVNL	Heavy Vehicle National Law
KM	Kilometres
KNP	Kosciuszko National Park
KV	Kilovolts
MTCP	Marine Traffic Control Plans
MW	Megawatt
MWH	Megawatt hours
NEM	National Electricity Market
NPWS	National Parks and Wildlife Service
NSW	New South Wales
OPGW	Optical Fibre Ground Wire
OSOM	Oversize Overmass
RFS	Rural Fire Service
SHL	Snowy Hydro Limited
TfNSW	Transport for New South Wales
UGL	UGL Engineering Pty Ltd
WHS	Work Health and Safety

1. INTRODUCTION

1.1 PURPOSE

This Traffic and Transport Management Plan (TTMP) outlines strategies to optimise safe vehicle movement and transportation of people, equipment and materials associated with the Maragle Project, including the construction of Maragle 330kV Switching Station (Project Area West) and 330kV Transmission Line Connections (Project Area East).

This plan is based on the requirements as set in Australian Standard 1742.3-2019 and will be used to provide authorisation of all actions in relation to traffic management. This document and subsequent iterations will be made available to the client for the purposes of reviewing and auditing. It also addresses all Conditions of Approval.

The aim of this TTMP is to notify Transgrid, relevant roads authorities managers, UGL project staff, subcontractors, site personnel and the local public of changes to traffic conditions and to guard against operations which may pose a hazard to traffic.

The Planning Secretary has given approval to 'stage' the construction of this project per CoA C3 (a) and this TTMP relates only to the traffic and transport-related aspects associated with Stage 1 i.e.: the construction of the access tracks, 330kV transmission line and substation; but not the movement of over oversize overmass (OSOM) transformers to the substation and their installation. Refer to Appendix J.

Access protocols within Kosciuszko National Park (KNP) will be undertaken in accordance with the Agreement for the Grant of Easement and Access Licence for Construction and associated Network Access Plan between Transgrid and NPWS.

Transgrid will obtain approved forest access permits from Forestry Corporation NSW (FCNSW) prior to utilising the FCNSW road network, inclusive of Bago and Maragle State Forests. Permits must be issued prior to utilising new or existing FCNSW roads for any use including alternate routes for the Project and must satisfy long-term road maintenance and funding responsibilities following construction within the FCNSW road network.

This TTMP will be used to ensure a safe interface between construction vehicles and other road users during:

- Construction works for the Maragle Project
- Delivery of plant and equipment
- Transporting UGL staff and subcontractors to site.

1.2 SCOPE

The Scope of Works for Specification and Contract No. 1611 (Specification and Contract) is specific to the design and construction of Maragle 330kV Switching Station and 330kV Transmission Line Connections.

- Design and construction of Maragle 330kV Switching Station and supporting works.
- Design and construction of two 330kV transmission lines, cut into Line 64, the installation of Optical Fibre Ground Wire (OPGW) on a section of Line 64, and supporting works.

The work under the Contract shall be designed, procured and constructed such that the switching station, transmission lines and associated works are constructible, operable and maintainable for their design life. The work under the Contract must be designed to take into account the specific site conditions, including extreme weather conditions over the specified design life, refer to the Project Specific Design Criteria available in Part 3 – TL – Project Documents.

It is proposed that the delivery of the relevant plans and strategies be delivered in two stages and address the following activities:

Stage 1 – All activities associated with the construction and operation of infrastructure related to the 330 kV grid connection, including:

- All civil works associated with the new substation in Bago State Forest and the construction/installation of infrastructure associated with the 330 kV component of the substation.
- Two new 9 km long 330 kV double-circuit overhead transmission lines from the Snowy 2.0 cable yard in Lobs Hole, National Park to a new substation.
- 330 kV grid connection between the new substation and Transgrid's existing Line 64.

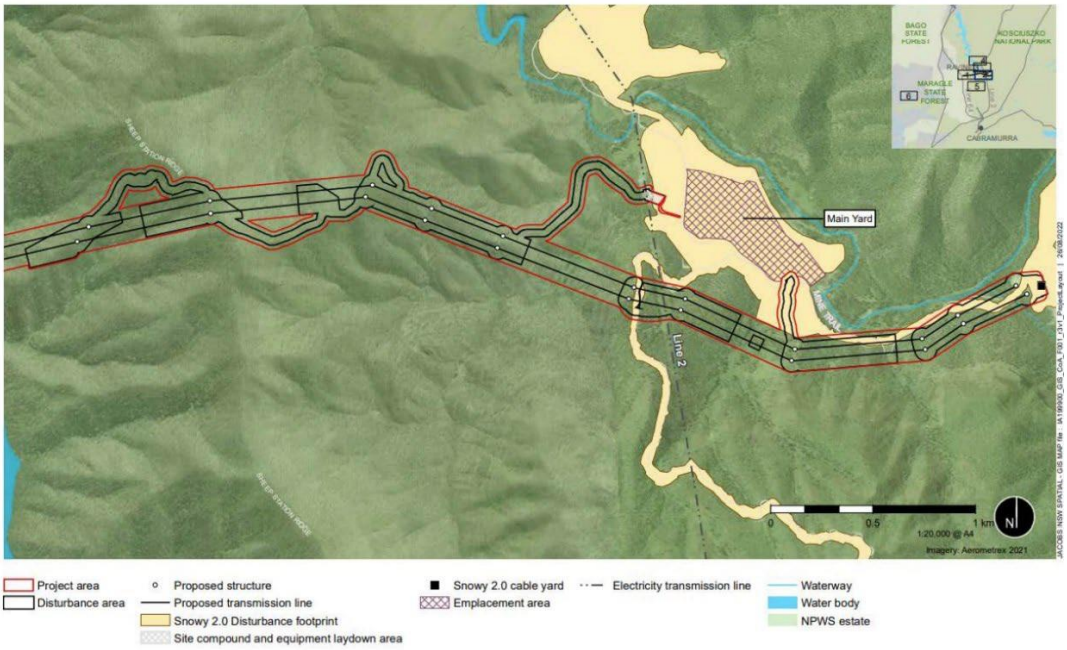
- Upgrade and widening of an existing access road off Elliott Way to the substation.
- Ancillary construction activities, including the establishment of tensioning and pulling sites for conductor and earth wire stringing, crane pads, site compounds and equipment laydown areas, water extraction and the transport and haulage of equipment and waste to and from the project area.

Stage 2 – All activities associated with the construction and operation of infrastructure related to the 500 kV component of the substation, including:

- The delivery of oversize/overmass (OSOM) components, construction/installation of infrastructure associated with the 500 kV component of the new substation in Bago State Forest (i.e., transformers, reactors, switchbays).

The upgrade of roads and bridges to facilitate the transport of OSOM 500 kV componentry to the substation.

Showing the Transmission Line Location East of Talbingo Reservoir



Showing the Transmission Line Location and Switching Station Site West of Talbingo Reservoir

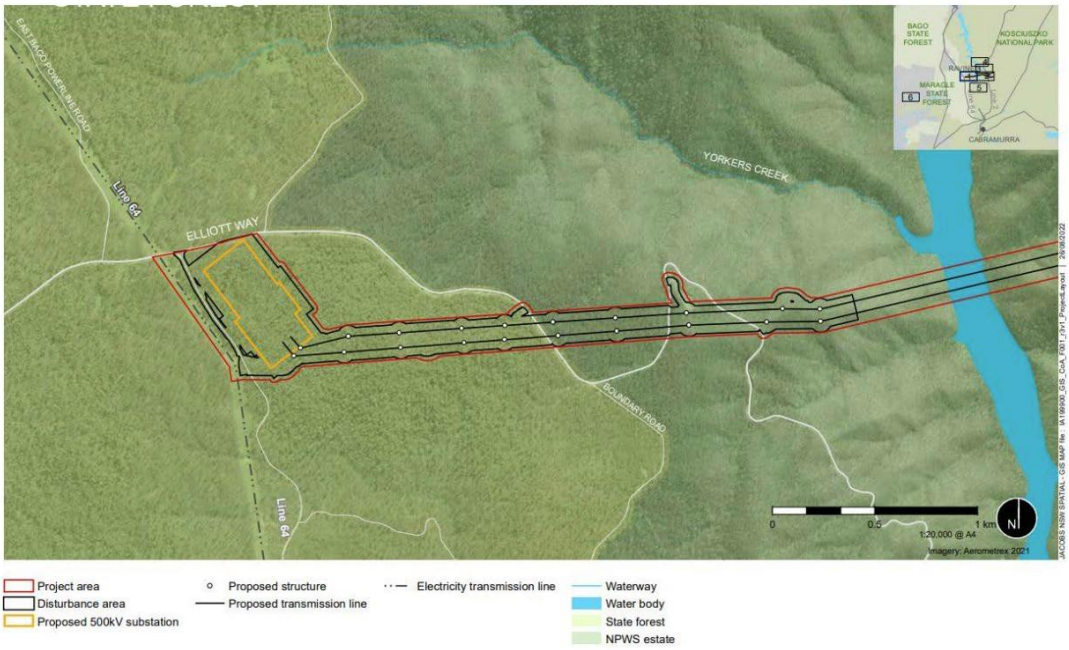


Figure 1. Transmission Line Location Maps

1.3 CONSULTATION

The following table outlines consultation undertaken with stakeholders in preparation of this TTMP in accordance with CoA B27.

Table 1 Stakeholder Consultation Summary

Stakeholder	Date	Consultation Undertaken	Outcome
National Parks and Wildlife Service	28-Nov-22	Transgrid provided TTMP for comment to NPWS	NPWS feedback on Rev 0.03 of TTMP has been incorporated into document in its entirety
Forestry Corporation NSW	28-Nov-22	Transgrid provided TTMP for comment to FCNSW	No response received
	14-Apr-23	Transgrid provided revised (rev0.08) TTMP for comment to FCNSW	FCNSW feedback on Rev 0.03 of TTMP has been incorporated into document in its entirety
Roads and Maritime Services	28-Nov-22	Transgrid provided TTMP for comment to RMS	RMS feedback on Rev 0.03 of TTMP has been incorporated into document in its entirety
Snowy Valleys Council	28-Nov-22	Transgrid provided TTMP for comment to SVC	SVC approval of TTMP received
Snowy Monaro Regional Council	03-Nov-22	Emailed SMRC to request contact person for TTMP	No response received
	28-Nov-22	Transgrid provided TTMP for comment to SMRC	SMRC advised no further comments
NSW Police	28-Nov-22	Transgrid provided TTMP for comment to NSW Police	No response received
	12-Apr-23	Transgrid provided revised TTMP (rev0.08) for comment to NSW Police. NSW Police distributed to HWP Stakeholders.	NSW Police advised no further comments. HWP Stakeholders no comments.
Transport for NSW	28-Nov-22	Transgrid provided TTMP for comment to TfNSW	TFNSW have no comment on stage 1 of the works.
	12-Apr-23	Transgrid provided revised (rev0.08) TTMP for comment to TfNSW	TFNSW have no comment on stage 1 of the works.
	08-May-23	Transgrid attempted phone contact with TfNSW to obtain feedback. Voicemail left.	TfNSW returned call advising feedback to be provided by 12 May. TFNSW have no comment on stage 1 of the works.
	15-May-23	Transgrid attempted phone contact with TfNSW to obtain feedback. Voicemail left.	TFNSW have no comment on stage 1 of the works.

2. PROJECT SITE REPRESENTATIVES

Table 2 Contact Details

Entity	Contact Name	Contact Number
UGL		
Project Manager	Tim McCarthy	0455 087 248
Construction Manager	Darrell Van Bruchem	0447 307 244
Project HSE Manager	Ian Rembridge	0466 517 794
Project Enviro Manager	Kim Lembke	0427 450 879
Authorities		
Snowy Valley Council	info@svc.nsw.gov.au	1300 275 782
FGJV	www.futuregenerationjv.com.au/contact	1800 766 992
NPWS	snowy.20@environment.nsw.gov.au	0419 400 550 (NPWS Snowy 2.0 Manager) After Hours 1800 629 104
FCNSW	Forestry Corporation NSW	02 9872 0111
Transport for NSW	service.nsw.gov.au	13 77 88
Local Police	Tumbarumba Police Station	(02) 6948 2044
Emergency	Police, Fire, Ambulance	000/112

Additional emergency contact details are included in the Project Emergency Plan. Specific traffic control diagrams shall be prepared for the following scenarios and included in Appendix B. Updates to these diagrams will be made as conditions change and will be distributed to all affected stakeholders.

- Construction access around the Laydowns and Work areas
- Site office traffic management arrangements
- Stringing activities over or in proximity to existing roadways (Supplementary side roads to controlled and managed with specific work instructions)
- Access from Elliott Way.

3. EMERGENCIES

In the event of an emergency, the Construction Manager will be immediately advised of the event and the UGL Emergency Plan will be actioned. Traffic management will be mobilised as required and equipped with electronic communications (UHF Radio / mobile phones) to contact and liaise with emergency services ensuring a prompt response. Once mobilised, UGL will communicate site access locations to local emergency services. The specific access point will be advised as part of the event notification. The UGL Interface Plan 3200-0645-PLN-030-ETL-IMP will be followed to interface with Future Gen/Snowy2.

4. APPROVALS

Approvals shall be obtained from the TfNSW, Snowy Valley Council, NPWS, and FCNSW prior to the implementation of traffic controls if required. Notification for temporary closure of roads or expected traffic delays will be communicated to any affected parties.

Generally, it is expected approvals maybe required for the following activities:

- Implementation of specific traffic management plans on public road for transmission line road cross overs as required.
- Bridge load assessments will be carried out in conjunction with the OSOM permit application process for all bridges to be crossed by vehicles accessing site in the local area.

Table 3 Project Conditions of Approval Relevant to the TTMP

Reference number	Requirement	Document Reference
Conditions of Approval		
Designated Heavy and Over-Dimensional Vehicle Routes		
B25	All heavy vehicles requiring escort associated with the development must only travel to and from the site via the Primary Access Routes described in the EIS, as identified in the figure in Appendix 4, unless the Planning Secretary agrees otherwise. Note: The Proponent is required to obtain relevant permits under the Heavy Vehicle National Law (NSW) for the use of over dimensional vehicles on the road network.	Appendix A Fig 4 Section 9.1 Haulage Routes
B26	All heavy and light vehicles associated with the development: (a) must travel to and from the site via the Primary Access Route described in the EIS, as identified in the figure in Appendix 4; and (b) may travel to and from the site via the Secondary Access may travel to and from the site via the Secondary Access Routes and Water Supply Routes, subject to the requirements in condition B31, to the satisfaction of the relevant roads authority/manager. unless the Planning Secretary agrees otherwise.	Appendix A Fig 4 Switch Yard and Western Transmission Line traffic will access via Elliott Way, Lobs Hole traffic via Link Rd.
Transport Strategy		
B27	Prior to commencing construction in Project Area West, the Proponent must prepare a Transport Strategy, in consultation with the relevant roads authority/manager, 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 that any road upgrades comply with the Austroads Guide to Road Design (as amended by TfNSW supplements), unless the relevant road authority agrees otherwise; (c) includes a detailed assessment of potential impacts of any necessary road upgrades (such as heritage and biodiversity impacts), including consideration of appropriate mitigation measures; (d) identifies whether intersections, crossing points and access points would be permanent or temporary; and (e) includes measures or notifying, seeking feedback from and	Section 9.2. Only upgrade will be Switchyard access point, nil effect to Elliott Way.

Reference number	Requirement	Document Reference
	addressing the concerns of impacted residents along the route;	
B28	Prior to commencing construction in Project Area West, the proponent must implement the road upgrades and the mitigation measures identified in the Transport Strategy in condition B27, to the satisfaction of the relevant roads authority/manager.	Section 9.2 Transport Strategy
Road Maintenance		
B29	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 the figure 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): • within 1 month of the completion of construction, upgrading or decommissioning works, or within a timeframe agreed to by the relevant roads authority/manager; • 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): (c) rehabilitate and/or make good any development related damage: (i) identified during the construction and/or decommissioning works if it could endanger road safety, as soon as possible after it is identified but within 7 days at the latest, unless the relevant road authority/manager agrees otherwise; and (ii) identified in any dilapidation survey completed after the construction, upgrading or decommissioning works within 2 months of the completion of the survey to the satisfaction of the relevant roads authority/manager	A Road Dilapidation Report to be compiled Section 9.3
Vehicle Restrictions		
B30	The Proponent must: (a) restrict development-related vehicle speeds on Lobs Hole Ravine Road, Mine Trail Road and within the site to 30 km/h between sunset and sunrise, unless the Planning Secretary agrees otherwise; (b) restrict the use of Elliott Way inside KNP to no more than 8 heavy vehicles per day, for water cartage purposes only from the Snowy Hydro T2 Tailbay site; (c) restrict development-related vessel speeds on Talbingo Reservoir to current TfNSW speed limits.	Section 9.1 Haulage Routes Section 10.2 Traffic Management
Permanent Bridge – Sheep Station Creek		

Reference number	Requirement	Document Reference
B31	The Proponent must ensure that any temporary and the permanent bridge over Sheep Station Creek is designed and constructed to comply with the relevant requirements of the: (a) Relevant Austroads Standards (such as elevating them above the 1% AEP flood level); (b) Guidelines for Controlled Activities on Waterfront Land (NRAR, 2018); and (c) Policy and Guidelines for Fish Habitat Conservation (DPI, 2013) and Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (NSW Fisheries, 2003).	Section 9.2 Transport Strategy
Traffic and Transport Management Plan		
B32	Prior to commencing construction or road upgrades identified in condition B27 (whichever comes first), the Proponent must prepare a Traffic Management Plan for the development in consultation with FCNSW, NPWS, TfNSW, Snowy Valleys Council, Snowy Monaro Regional Council and NSW Police, and to the satisfaction of the Planning Secretary. This plan must include: (a) details of the transport route to be used for all development-related traffic; (b) details of the road upgrade works required by condition B27 of this approval; (c) details of the measures that would be implemented to comply with the transport management requirements in conditions B25 to B30 above;	This Plan 3200-0645-PLN-022-TTMP a) Appendix A Fig 4 b) Appendix G c) Sections 9, 10, Appendix A Fig 4
	(d) details of the measures that would be implemented to: (i) minimise traffic safety impacts of the development and disruptions to local road users during construction, upgrading or decommissioning works, including: • a description of the proposed dilapidation surveys required by condition B29 of this approval;	(i) This plan Section 5.1 & Section 9.3
	• a description of the proposed measures for managing traffic flow around the work sites, construction compounds and accommodation camp;	Section 7 TTMP6
	• scheduling heavy vehicle movements to avoid peak periods; • minimising convoy lengths;	Section 9.1 & TTMP5
	• reducing the speeds of development-related traffic at key intersections along the Snowy Mountains Highway, including the Link Road intersection;	Section 7 TTMP6
	• temporary traffic controls, including detours and signage;	Section 7 TTMP6, Section 10.2
	• procedures for stringing cables and transmission lines across roads and Talbingo Reservoir;	Section 7 TTMP11
	• notifying the local community about development-related traffic impacts;	Section 1.1, 5.1 & 5.3
	• procedures for receiving and addressing complaints from the community about development related traffic;	Section 5.3
	• minimising potential cumulative traffic impacts with other projects in the area;	Section 5.1 and 10.2

Reference number	Requirement	Document Reference
	• 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;	Section 5.1 and 10.2
	• minimising impacts to the public using Talbingo Reservoir and any water related infrastructure such as the O'Hares campground boat ramp;	Section 10.2, Appendix F & Section 7 TTMP
	• implementing measures to minimise development-related traffic on the public road network outside standard construction hours;	Section 11
	• minimising dirt and debris tracked on to the public road network from development related traffic;	Section 6, 8.2 & ESCP
	• 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 8.4
	• encouraging car-pooling or ride sharing by employees;	Section 9
	• scheduling the haulage vehicle movements to minimise convoy lengths or platoons;	Section 10.2
	• responding to local climate conditions that may affect road safety, such as snow, ice, fog, dust, wet weather and flooding;	Appendix D Snow and Ice Traffic Management Plan.
	• ensuring loaded vehicles entering or leaving the site have their loads covered or contained and leave site in a forward direction;	Section 6 Appendix K Driver Code of Conduct for Maragle Project
	• responding to any emergency repair or maintenance requirements;	Section 9.3
	• provisions for maintaining access to the site for FCNWS, NPWS and emergency vehicle access to the site at all times;	Section 5.2
	• a traffic management system for managing over-dimensional vehicles; and;	Appendix A, Figure 4
	• fatigue management	Section 10.3, 13. Appendix C and Appendix D
	(ii) minimize the impacts of the road and intersection upgrades of the development;	Section 9.2
	(iii) provide sufficient parking on site for all vehicles and ensure vehicles associated with the development do not park on the public road network;	Section 8.3
	(iv) maintain all roads and water-related infrastructure on site in a safe and serviceable condition;	Section 9
	(v) minimise traffic noise impacts of the development	Section 9
	(e) details of the haulage of spoil to be disposed within Kosciuszko National Park in accordance with condition B7	Section 8.2 3200-0645-PLN-020-CEMP-SMP Spoil Management Plan
	(f) ensure any vessel or structure occupying waters must display appropriate shapes and lights in accordance with the Marine Safety	Appendix F– Marine Traffic Management Plan Section

Reference number	Requirement	Document Reference
	(Domestic Commercial Vessel) National Law 2012	12.1
	(g) include a detailed: (i) Heavy Vehicle Salvage Plan;	Appendix E Heavy Vehicle Salvage Plan
	(ii) Driver's Code of Conduct;	Appendix K Driver Code of Conduct for Maragle Project
	(iii) Marine Transport Management Plan;	Appendix F Marine Transport Management Plan
	(iv) Snow & Ice Traffic Management Plan;	Appendix D Snow & Ice Traffic Management Plan
	(v) Communication Strategy to keep the public informed about the impacts of the development;	Section 5.3
	(h) 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 Management Plan;	Section 10.3, Appendix K
	(ii) record and track vehicle movements; and	Section 9.4, 10.2, Appendix D Section 6
	(iii) monitor and publicly report on the effectiveness of these measures.	Section 10.4, Appendix D Section 6
Long-Term Road Strategy – Kosciuszko National Park		
B33	Within 2 years of the commencement of construction, unless the Planning Secretary agrees otherwise, the Proponent (Transgrid) must prepare a Long-Term Road Strategy for the development to the satisfaction of NPWS. This strategy must: (a) identify the road network within the Kosciuszko National Park required for the development during operations, including the detailed specifications for this road network; (b) identify which roads within the Kosciuszko National Park can be narrowed or closed following construction and then rehabilitated; (c) include a detailed program for the rehabilitation of these roads, which can be incorporated into the Rehabilitation Management Plan for the development; and (d) identify future road maintenance and funding responsibilities for the long-term road network following construction. Following the Planning Secretary's approval, the Proponent must implement the Long-Term Road Strategy	Long-Term Road Strategy to be Developed by Transgrid Within 2 Years of the commencement of construction. The Proponent commits to preparing Long-Term Road Strategy within 2 years of the commencement of construction

5. NOTIFICATIONS

5.1 RELEVANT CITY COUNCIL AND NSW ROADS

FCNSW, NPWS, TfNSW, Snowy Valleys Council, Snowy Monaro Regional Council and NSW Police will be notified through the consultation process, prior to any oversize traffic movement in and out of the construction site as per NSW requirements. (i.e., cranes, large deliveries, convoy lengths) and appropriate signage posted. No Road Occupancy Licences will be required on the Project. This will be communicated through permit applications as necessary from all necessary road authorities, regular consultation and interface meetings with all Major Stakeholders.

Elliott Way is used by the school bus up to Bradley's Drive. Approx. 7:30-8:30am and 3:30-4:30pm school days, UGL will prioritise scheduling deliveries and major traffic movements outside these times.

Link Road approaches to the FGJV Site entrance is prone to ice and slippery conditions, care is advised and Ch40 to be monitored for local updates on approach. Other sections of road prone to snow and ice include all roads between Batlow and Tumbarumba, the Elliott Way and the Snowy Mountains Highway between Adaminaby and Talbingo..

The Project will limit its transport footprint by utilising a bus to transport staff into Lobs Hole as a measure to mitigate potential interactions of construction traffic with public 'skiing/snow-season-sport-related' trafficCo.

A comprehensive dilapidation report will be compiled to assess the condition of local access roads on the transport route before and during works.

5.2 POLICE AND EMERGENCY SERVICES

Local police, ambulance, firefighting, and emergency services will be notified in the rare case a delivery brought onto site poses a risk to the operation of emergency services, local traffic movement, or the local community i.e., temporary road closure.

Emergency Services will be consulted prior to commencement of construction and site location and access details provided including maps and emergency contacts.

24 hr access for Emergency Services and NPWS/FCNSW shall be maintained with removable temporary fencing or open access, signage with contact details will be posted (PC signage).

In an emergency on the Eastern Transmission Line Project Area, Emergency Services will be given access from Link Road into Lobs Hole Ravine Road by FGJV gate staff and escorted to the UGL Lobs Hole site. See below map.

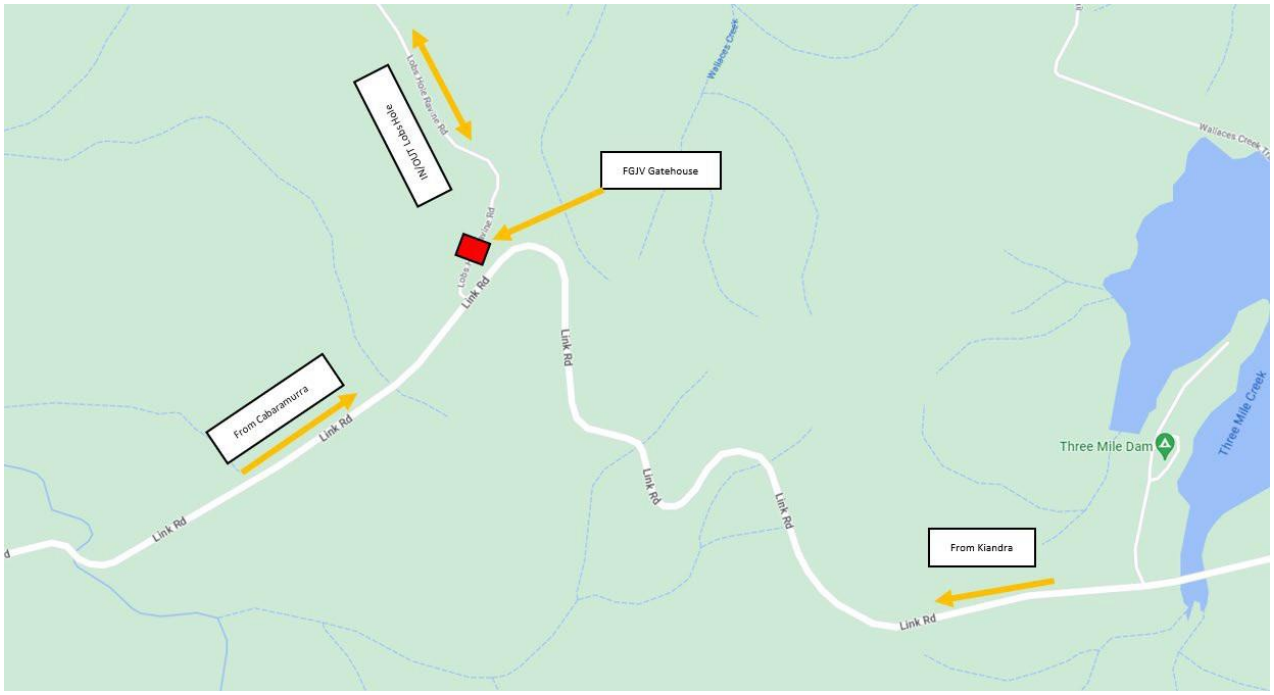


Figure 2. Emergency Access for Eastern Transmission Line Project Area

5.3 CONSULTATION

Consultation to date has been held with Transgrid, FGJV, SHL, Local Emergency Services, NPWS and FCNSW. Further consultation is to be held periodically, fortnightly with the Client, quarterly with the LEMC and as required for extraordinary meetings.

Subject to consultation the following line items will be submitted for approval prior to the implementation of this plan.

Requirement	Timing
Switching Station and Lobs Hole Access Traffic Control Plans agreed by NPWS and FCNSW in Appendix A Figure 3	Prior to possession of the site
Switching Station and Lobs Hole Access Traffic Management Diagram agreed by NPWS and FCNSW in Appendix B Figure 4	Prior to possession of the site
Detailed Stringing Methodology procedures agreed by NPWS	Prior to stringing cables and transmission lines across road and Talbingo Reservoir
Confirmation of VHF radio channel	Prior to any working construction vessel being utilised

External Communications

Regular consultation and communication meetings will be scheduled and minuted/retained with all Major Stakeholders, the local community and relevant Councils (monthly Council meetings) in accordance with the Transgrid Stakeholder and Community Liaison Plan to liaise, publicly report on and coordinate construction activities and the effectiveness of control measures. Quarterly meetings with the Snowy Valleys Local Emergency Management Committee will be attended by UGL Project management to communicate Project impacts to all attendees and Local Council for communication to the Public. Also, at significant milestones that will impact any Major Stakeholders and the local community.

Traffic Engagement and Communication Plan

The Traffic Engagement and Communication Plan outlined below aims to highlight the communication strategy that will be implemented across the project to ensure that all public stakeholders are notified of ongoing impacts and changes of the development. Frequency and communication methods have been addressed as per conditions B32(d) and (g) of Schedule 2 of the Conditions of Approval, detailing timelines, specific participants and communication methods.

Target Audiences

Engagement – regular in-person meetings, the purpose of which is to share information and collaborate to identify issues and design solutions that balance the needs of the project and the community.

- Snowy Valleys and Snowy Monaro Councils
- Emergency Services – including Ambulance, Police, Fire Brigade, Rural Fire Service, SES
- NSW State Government MPs
- National Parks
- Forestry Corporation of NSW

Communication – regular information shared with groups across the community with common interests. The purpose is to keep people informed and create opportunities to provide feedback.

- Local transport services
- Local industries that rely on transport routes (eg. Apple growers)
- Chambers of Commerce
- Locally Based Tourism Groups including Selwyn Snow Resort
- Visitor Information Centres
- General community and visitors

- Community members who own property along high volume traffic routes
- Roads and Maritime Services

Communication and Engagement Tools and Channels

Method	Purpose and frequency
Communication	
Phone and email contacts	1800 674 022 or communities@lumea.com.au: Continuous and ad hoc contact points, allow communication with the project team and facilitate community feedback.
Project newsletter or video	Provide project progress updates and news to landowners, community, and other stakeholders at regular intervals. Traffic management a focus in early newsletters and at relevant times throughout the project.
Project fact sheets	Plain English explanations of technical process through project development and delivery. Specific Traffic Fact Sheets at relevant times throughout the project.
Website	Project website designed to provide general information about the Project and facilitate feedback process. Traffic update page as the single source of truth for traffic activity.
Public displays	Share project information and provide updates – local libraries.
Local Media	Media releases and advertisements to advise traffic management plans at relevant times throughout the project.
Social media channels	Provide project progress updates and news at regular intervals. Collaborate with Council and local community groups to share information via local social media sites.
Engagement	
Briefings (MPs)	Regular briefings on project status and potential impacts, providing mechanism for feedback and collaborator.
Briefings (local councils and project stakeholders)	Regular briefings on project status and potential impacts, providing a mechanism for feedback and collaboration. Traffic management is a standing agenda item. Minimum quarterly.
Briefings Emergency Services	Emergency Services organisations and stakeholders will be offered regular briefings on the project status and its potential impacts, providing a mechanism for feedback and collaboration. Traffic management is a standing agenda item. Minimum quarterly.

Engagement and Communication Action Plan

Activity	Timing/ Frequency	Target Stakeholder	Channels, tools
Share Traffic Management Plan and	2 weeks prior to construction starting	SV Council Emergency Services	Via email

Emergency Management Plan			
Advise key stakeholders of project traffic plans and activities. **Formal notification emails**	2 weeks prior to construction starting Regular reminders of traffic activity Where major changes to traffic activity are planned	SV Council Local MP's Emergency Services Chambers of Commerce Forestry Corporation Local industries	During regular in-person meetings Letters Phone calls
Create Traffic Update page on project website	3 weeks prior to construction starting Updated as required	All stakeholders	Website, single source of truth, link provided in all communication.
Newsletter advising community of project traffic plans and activities.	**2 weeks prior to construction starting** **Regular reminders of traffic activity** **Where major changes to traffic activity are planned**	**Local transport services** **Chambers of Commerce** **Locally Based Tourism Groups** **Tourist Information Centre's** **General community and visitors** **Community members who own property along high volume traffic routes**	**Newsletters (email and printed), distributed via letterbox drop, local membership groups, Libraries, Council Offices, Tourist Information Centre's.**
Media updates	2 weeks prior to construction starting Regular reminders of traffic activity Where major changes to traffic activity are planned	Registered groups and local media	Local newspapers – articles and advertisements Social media Local noticeboards All link to website
Generate knowledge of the project online through website and social media.	Ongoing program of information – monthly	All stakeholders	Social media posts, recorded on the website
Monitor, evaluate, adapt, report.	Ongoing	All stakeholders	Adapt channels, content and tools based on feedback

Complaints Management

A Complaints Management Plan is available to all stakeholders via the Lumea website: https://www.lumea.com.au/projects/snowy-2-0-transmission-connection-project#community-and-stakeholder-plans. This plan outlines in detail the system in place for complaints to be raised and managed, and includes processes for:

- Receiving, managing, and resolving the various forms of complaints and feedback from the community
- Addressing and resolving complaints and minimising the chance of recurrence
- Escalation and mediation.

This plan applies to all complaints directed to Lumea, Transgrid Group staff, UGL and subcontractors relating to the Project. The plan will be implemented and maintained for the duration of the Project and for a minimum of 12 months following completion of construction.

The process to raise a complaint is simple for stakeholders – a variety of channels are available to lodge a complaint directly with the project team. Contact details for the project team are published on the project website, the published Fact Sheet and will be included in all communication collateral. Complaints will be registered and logged within complaints register, with the responses being overseen by the Project Engagement Lead.

Internal Communications

Weekly, toolbox talks, WHS inspections, environmental inspections, inductions, project progress meetings.

Daily prestart meetings, safety conversations and hazard observations

5.4 MONITORING AND REPORTING

Monitoring and reporting will be undertaken by UGL to measure the effectiveness of controls and implementation of this Plan.

UGL will respond in a timely manner to any requests in relation to monitoring or effectiveness of controls and their implementation raised by relevant roads authorities and affected Stakeholders.

UGL will monitor controls and the effectiveness of this Plan by;

- Inspection of access roads periodically
- Inspection and monitoring of current traffic controls
- Client Project inspections and audits
- Implementation of the audit schedule in the Project Checkit Planner
- Project and Contractor vehicle compliance.

UGL will report publicly via Transgrid on the effectiveness of this Plan by;

- Participating in monthly Council meetings, to communicate progress and any issues associated with the Project traffic management, for Council to relay to the Public through Council communication strategies
- Reporting any issues associated with Project traffic management immediately to The Client, including any changes to controls and procedures, for inclusion in The Client Community Liaison Plan
- Attending the Quarterly LEMC meeting to communicate to all LEMC Stakeholders any issues associated with traffic management, for their communication to their relevant departments.

6. CONSTRUCTION AREA SPEED ZONES

Maximum speed limit on access track to switching station from Elliott Way site will be 40km/h, variable during deliveries and significant events on Elliott Way, enforced through Traffic Control.

Maximum speed limit on access tracks will be 30km/h.

Access to structures 12 and 13 off Elliott Way will incorporate measures (final design under consultation with NPWS) to ensure safe access off Elliott Way for vehicles and personnel, such as:

- A vehicle stopping bay and access gate a suitable distance away from the main road.
- The addition of guard rails and/or safety barriers where required
- Signage to warn drivers of slowing/slow vehicles accessing and leaving site

Maximum speed limits on all FGJV access roads will be in accordance with FGJV posted speed limit signage.

Designated call up points will be located for high risk identified areas i.e. Elliott Way from the Switchyard site east to Tower Site 12, with UHF channel and call up point displayed. This detail will be included on all relevant traffic control plans implemented for the current works. Communication must be called via UHF radio advising direction of travel and location through speed reduction areas as signposted. Limits shall apply within the construction work areas of 10km/h.

All other public and gazetted roads will be managed as per sign posted speed limits. At all times personnel are reminded to drive to the current road conditions.

All vehicles leaving site shall be inspected as clean, not tracking dirt and dust with covered loads and leave in a forward direction. Wheel wash to be installed at the main Switching Station site, Lobs Hole Ravine Rd has a wheel wash already installed and operated by FGJV. The access from Elliott Way will be maintained with a stabilised road base material after the Switchyard wheel wash. A mobile wash down trailer will be provided for access track works. All plant and vehicles will be inspected and declared clean, weed and seed free, as enforced by Transgrid and UGL, in accordance with BMP Appendix H Weed and Pathogen Control and Monitoring Program.

7. TRAFFIC MITIGATION AND MANAGEMENT MEASURES

Table 4 Traffic Management Measures

The below table depicts pertinent sections of the COA's and details resources needed, implementation and responsibilities.

ID	Measure/Requirement	Resources Needed	When to Implement	Responsibility	Reference
TTMP1	Training will be provided to all Project personnel, including relevant sub-contractors on the requirements from this plan through inductions, toolboxes and targeted training	Induction materials	Pre-construction Construction	Construction Manager WHS Advisor	B32
TTMP2	Transport routes to be identified and communicated to relevant authorities	Maps and consultation	Pre-construction Construction	Construction Manager WHS Advisor	B32
TTMP3	Prepare and submit a Traffic Management Plan relevant to Eastern and Western Sites of the Project	TTMP this plan	Pre-construction Construction	WHS Advisor	B32 TTMP this plan
TTMP4	Ensuring that Project traffic (HV and LV) does not impact local road users	Driver training and awareness, Interface and consultation meetings, minimise convoy lengths.	During construction	Construction Manager	B32 Best practice
TTMP5	Local roads and tracks are not adversely impacted by Project traffic	Contracted survey company to conduct dilapidation survey, no lengthy convoys anticipated during works. Scheduling Project traffic.	Pre-construction Construction	Construction Manager	B32 Best practice

ID	Measure/Requirement	Resources Needed	When to Implement	Responsibility	Reference
TTMP6	Project traffic is controlled and managed safely with regard to speed, convoy length, number of movements, load size. Traffic flow is managed in and around construction/worksites and accommodation areas to reduce congestion and queuing. Key intersections are not affected by Project traffic.	Monitoring, scheduling, temporary traffic control devices/signage, contracted traffic control company at site access points during potential disruptions and peak traffic times.	Pre-construction Construction	Construction Manager WHS Advisor	Section 10.2 B32 Best practice
TTMP7	Users of Talbingo Reservoir are not impacted by Project activities	Signage at boat ramps, consultation and interface meetings as per the Consultation and Communication Strategy Sect 5.3	Pre-construction Construction	Construction Manager WHS Advisor	B32 Marine TTMP 7.1 (Appendix F) Best practice
TTMP8	No spoil or dust/debris leaves site and is tracked onto local roads	Monitoring of loads leaving site, vehicle clean down inspection, dust suppression, covered loads	During construction	Construction Manager Environmental Advisor	B32 Spoil Management Plan, CEMP, Best practice Section 8.2
TTMP9	Safe work and traffic movements during periods of inclement weather, snow and ice	Monitoring weather conditions via BOM, daily prestart meetings	During construction	Construction Manager WHS Advisor	B32 Snow and Ice TTMP (Appendix D)
TTMP10	Traffic related incidents are avoided ideally but responded to if they occur	Driver training, driver awareness, induction materials, vehicle recovery procedure	Pre-construction Construction	Construction Manager WHS Advisor	B32 Project WHSMP-management of injuries ERP-incident response Heavy Vehicle Salvage Plan-wreckage management (Appendix E)
TTMP11	During stringing and other construction related activities traffic is not impacted on roads or waterways	Scheduling, temporary traffic control, signage, interface and consultation meetings	During construction	Construction Manager WHS Advisor	B32 TTMP Section 10.3 Marine TTMP 7.1 (Appendix F)
TTMP12	Notification to all Stakeholders of construction activities that may affect local roads, waterways and off-site locations	Effective incident management procedure interface and consultation meetings	Pre-construction Construction	Construction Manager WHS Advisor	B32 TTMP Section 5 WHSMP
Approvals and Mitigation Measures (T1-T7 of Proponent Amendment Report)					
T1	A CTMP will be prepared and implemented and will include:	TTMP	Pre-construction Construction	Construction Manager	TTMP this plan

ID	Measure/Requirement	Resources Needed	When to Implement	Responsibility	Reference
	• Confirmation of haulage routes including the water truck moments for the project area west • Measures to maintain access to local roads, and maintain the capacity of existing roads where possible • Site specific traffic control measures (including signage) to manage and regulate traffic movement • Requirements and methods to consult and inform the local community of impacts on the local road network due to the development-related activities • Consultation with TfNSW, and Snowy Valleys Council, NPWS, FCNSW and Snowy Hydro's contractors • The investigation of alternative routes to avoid transport through Batlow through the use of roads owned by FCNSW • Consultation with the emergency services to ensure that procedures are in place to maintain safe, priority access for emergency vehicles and emergency management activities • Access to construction sites including entry and exit locations and measures to prevent construction vehicles queuing on Elliott Way • A response plan for any construction related traffic incident • Monitoring, review and amendment mechanisms • Individual traffic management requirements at each phase of construction • Measures to minimise the number of workers using private vehicles travelling to and from project area west • Employment of standard traffic management measures to minimise short-term traffic impacts expected during construction • Management of oversized vehicles			WHS Advisor	

ID	Measure/Requirement	Resources Needed	When to Implement	Responsibility	Reference
	• Relevant traffic safety measures, including appropriate signage, driver conduct and safety protocols • Identify requirements for, and placement of, traffic barriers • A fatigue and weather condition management plan for both light and heavy vehicles that details driver protocols for both driver fatigue and adverse weather • Bridge load assessments will be carried out in conjunction with the OSOM permit application process. The CTMP will also consider the following strategies to maintain access for regular and emergency management activities: • Staging of construction works to avoid the need for roads to be fully closed for any extended period of time • Development of alternative access routes in consultation with NPWS and emergency services if any closures are required • Provision of sufficient shoulder width or regular stopping bays to allow regular and emergency vehicles to pass or stop.				
T2	Should the construction planning require that heavy vehicles to use the route via Elliot Way, Link Road and Goat Ridge Road between the project area east and project area west, the details will be included in the CTMP and a road safety audit and risk assessment will be carried out.	TTMP	Pre-construction Construction	Construction Manager WHS Advisor	Section 8.5 and 9.1
T3	If works will affect the free flow of traffic a Traffic Control Plan will be prepared, and a Road Occupancy Licence will be obtained from TfNSW	TTMP	Pre-construction Construction	Construction Manager WHS Advisor	Section 2 P6, Section 6, Section 8.5. No ROL required.
T4	Road maintenance will be managed through the following measures: • A Road Dilapidation Report will be prepared prior to and following construction of the project A road dilapidation	TTMP	Pre-construction Construction	Construction Manager WHS Advisor	Section 9.3

ID	Measure/Requirement	Resources Needed	When to Implement	Responsibility	Reference
	survey of Elliott Way and other potential local roads utilised by the project will be carried out prior to commencing construction as agreed to with Snowy Valleys Council and NPWS. Any impacts identified as caused by the project will be rectified as specified with any road maintenance agreements • Routine defect identification and rectification of the access roads and tracks will be managed as part of the project maintenance procedure • Access roads and tracks will be designed in accordance with the relevant vehicle loading requirements.				
T5	Affected communities, visitors, FCNSW, NPWS and emergency services will be notified in advance of any disruptions to traffic and restriction of access impacted by project activities.	TTMP	Pre-construction Construction	Construction Manager WHS Advisor	Section 5
T6	Access protocols within KNP will be undertaken in accordance with the MOU between Transgrid and NPWS for the Procedure for the Undertaking of Inspection, Maintenance and Emergency Works of Transgrid Network Assets and Associated Infrastructure.	TTMP	Pre-construction Construction	Construction Manager WHS Advisor	Section 1.1
T7	For the access track to structures 12 and 13 (first two structures on the western side of Talbingo Reservoir), measures will be incorporated into the final design under consultation with NPWS to enable vehicles to safely stop for personnel to open and close the access track gate. Such measures may include: • The placement of the gate at a suitable distance along the track as to avoid vehicles parking on/adjacent to Elliott Way • Incorporation of a pull over bay alongside the existing Elliott Way Road surface. • Appropriate safety measures including the use of guard rails will be incorporated into the design where required.	TTMP	Pre-construction Construction	Construction Manager WHS Advisor	Section 6

8. MAIN SITE OFFICE AND LAYDOWN AREAS

Throughout the construction of the project, workshop and laydown areas, all areas will be controlled using an internal Traffic Movement Diagram, which will include details of specific signs and their locations (refer to 0).

8.1 CONSTRUCTION AND LAYDOWN AREAS

Dependent upon road and access conditions at the time, traffic access to and from lay down areas and construction areas shall be via nominated roads detailed on the Traffic Control Diagrams. Where practicable, a one-way traffic system shall be established around the workshop area to minimise interaction issues and a truck waiting area will be established away from the laydown area to reduce congestion in the laydown area.

8.2 SPOIL MANAGEMENT

All employees will be inducted and at such time informed of their responsibility to ensure vehicles are cleaned down so as to minimise mud being tracked off site and ensure loads are covered to ensure spoil is not tracked offsite or dropped on to roads. Supervisors will be responsible for monitoring condition of roads under their control and cleaning, sweeping, modifying behaviours as necessary to keep roads free of mud and rock material. Roads will be included in Environmental Site Inspections and any actions raised, tracked and closed out within prescribed time frames.

Spoil haulage into and from sites are to comply with the following spoil movement requirements.

- Abiding with designated Heavy Vehicle Routes and site-specific Traffic Management Diagrams
- Checking tailgate latches are locked before leaving site
- Covering all loads
- Checking vehicles before existing for mud and rocks on tyres and tailgates, clean down as required
- Using stabilized entry / exits
- Reporting any dirt or rocks tracked onto public roads to UGL management asap, cleanup as required
- Using Spoil Movement & Placement Permits when transporting spoil (3200-0645-PLN-020-CEMP-SMP Spoil Management Plan)
- Drivers to coordinate with other plant operators for spoil unloading. Spoil must not be placed in or near drainage lines.
- Ensure no placing of spoil close or on erosion & sediment controls like mulch bunds, which are not protected with sediment fencing or within 50m of a waterway
- Drivers to be trained in spoil transporting requirements. All spoil movement is to be managed via the Spoil Management Plan (SMP) as part of the Soil & Water Management Plan (SWMP)
- Ensuring trucks coming in from potentially weed-infested areas abide by biosecurity control measures specified in the Biodiversity Management Plan (BMP) and are cleaned of weed seed material prior to entry into the Park.
- Ensuring trucks are not overloaded when moving spoil material generated on the project.
- Ensuring truck drivers sweep loose material off trailer bars before departing site.
- Installing wash bays as required where potential for dragout onto roads may occur.

8.3 PROJECT VEHICLE PARKING

Designated parking areas shall be established within the Switching Station only and directions signposted outside the main site entrance. All vehicles must be reverse parked in designated carparking areas and all vehicles must be switched

off when unattended and braking mechanisms engaged. Vehicles are not permitted to park on public roads, within public carparks, in off-easement areas, vegetated areas, and beneath trees.

8.4 PROJECT ACTIVITIES – MOBILE PLANT AND EQUIPMENT

Outcomes from a traffic management risk assessment shall be integrated within the project risk register and appropriate safe work method statements along with other applicable documentation. All heavy equipment operators shall be ticketed for the particular machine they will be required to operate on site. Site vehicles will be minimised on site with the use of crew buses to transport crews to and from the work fronts. Shuttle bus pick up/drop off will be at workers accommodation (Tumbarumba Caravan Park) to and from the work fronts.

8.5 INSPECTION AND REVIEW PROCESS

As a minimum UGL shall perform the following:

- Monthly Inspections and routine audits of all the transport routes shall be conducted to ensure compliance to site requirements on Traffic Management
- Any scope of work or planned works introducing traffic changes shall initiate a review of traffic control plans
- Ongoing monitoring of traffic to be completed on Traffic Management Inspection Checklist
- Maintain contact with NPWS community team to be aware of special event, weather-related traffic matters that could be impacted by project-related traffic movements.

The above shall be completed as per the projects CheckIt HSE Activity Planner.

8.6 TOWING OF EQUIPMENT

A daily pre-start inspection shall be completed on any mobile plant prior to use. Trailers must be fitted with a secondary securing device (chain), which must always be used when being towed. A jockey wheel must also be attached and operational, all brake lights and indicators are to be checked as functional.

9. TRANSPORTATION

To reduce the amount of vehicle traffic on public roads, bus transportation and other project transportation will be provided for workers traveling to and from work sites and private vehicle use will be banned. Project personnel will be encouraged to carpool where possible in Project vehicles. All Project vehicles will have a UHF available on channel [TBC] (may vary pending on interface in work sites) and will stick to predetermined routes. All heavy and light must follow the Primary Access Routes shown in Figure 4, Appendix A.

The Project will minimise the traffic noise impacts of the development by maintenance and inspection of all Project vehicles and monitoring during weekly and monthly HSE inspections. Further details are contained within 3200-0645-PLN-037-CEMP-NVMP.

All heavy and light vehicles associated with the development must travel to and from the site via the designated access roads to the satisfaction of the relevant roads authority/manager. Unless the Planning Secretary agrees otherwise.

9.1 HAULAGE ROUTES

All heavy vehicles requiring escort associated with the Project must only travel to and from site via the Primary Access Routes as identified in Figure 4, Appendix A.

Due to the elapsed time between the EIS and commencement of construction and to meet WHSMP requirements, haulage routes via public roads are to be subject to a road safety audit and risk assessment, then confirmed as suitable haulage routes pending these reports. This is to be performed and confirmed prior to any construction activities commencing. UGL will confirm these agreed actions in consultation with NPWS. All agreed actions will be collated into a register which will include the actual details summarised from the discussions. Such discussions have not been required to date, however will be incorporated on an as needed basis upon network constraints. Any modifications to the Primary Access Routes must be agreed to by the Planning Secretary in accordance with COA B25.

Haulage routes to avoid transporting regular and oversize loads through Tumut to be investigated and confirmed with consultation with FCNSW. All oversize/overmass (OSOM) vehicles will be escorted as required by permit from the relevant road authority. The only OSOM load will be the Auxiliary Switchroom Building, to be delivered to the Switchyard site on the Project Area West, via Elliott Way. A Concept Level Route Analysis required for High Risk OSOM will be undertaken in consultation with Transport for NSW prior to movement of the Auxiliary Switchroom Building. The Concept Level Route Analysis must include:

- The port or point of origin and must be for the entire route to the site access or intersections required to facilitate the high risk OSOM movements required for the project.
- The TMP is required to include details of all high risk OSOM loads and vehicle configurations for the project.
- The location of pull-over bays / rest areas along the high risk OSOM routes (including GPS coordinates) and demonstrate through swept paths that the high risk OSOMs can be physically accommodate all high risk OSOMs for the project (in terms of size, width and accessibility).
- Details of the road geometry and alignment along the identified transport route/s, including existing formations, crossings, bridges, intersection treatments and any identified hazards, including:
    - Bridge Assessments for any at risk bridges on the classified road network due to dimensions and weight of OSOM vehicles.
    - Swept path analysis demonstrating the largest design vehicle can enter and leave the development, and simultaneously pass through intersections along the proposed transport route/s.
    - The design vehicle templates used in the swept path analysis software are also requested in order for TfNSW to review the performance within the software (e.g. Autodesk Vehicle Tracking or Transoft AutoTURN).
    - Highlighting each at-risk road structures that the haulage route crosses including bridges, traffic signals, signage, major culverts, and minor culverts that may not meet the desirable cover to cater for proposed axle loads.
- Identify and provide the following measurements parameters of OSOM components / materials to be moved:
    - Identify types and numbers of high risk OSOM vehicles proposed to be used for the project.
    - Overall combination type, configuration, load and vehicle configuration:
    - Length, width, height and mass (gcm, tare, weight to axle and payload) for components and nominated vehicles.
    - Wheelbase dimensions.
    - Maximum trailer articulation angle(s).
    - Minimum overhang heights above the road surface.
    - Vehicle configurations.
    - Traffic mitigation measures or road works, modifications, or road upgrades to facilitate the movement of the high risk OSOM(s) associated with the project.
    - Potential high level mitigation measures or commitments to mitigate known traffic, safety and impacts to road users along the high risk OSOM route (i.e school bus routes, mining shift changes, TSRs, harvest periods and events).
- Identify and assess implications of any road and rail projects that may be under construction during the indicative schedule for the OSOM movements.

Strategic concept designs associated with the Stage 1 OSOM Auxiliary Switchyard Building movement must to comply with TfNSW Strategic design requirements for DAs, TfNSW technical directions, supplements, corridor strategies and Austroads and any other applicable TfNSW policies/strategies.

All other OSOM vehicle movements will be part of stage 2 works as approved by DPE which will be addressed under the Snowy 2.0 Transmission Connection Stage 2 Management Plans.

Development-related vehicle speeds on Lobs Hole Ravine Road, Mine Trail Road and within the FGJV site are to be restricted to 30 km/h.

9.2 TRANSPORT STRATEGY

A Transport Strategy based on the approved 'staging' of the project has been prepared addressing B27 a) to e) inclusive and is currently out for consultation and will be included in subsequent updates of the TTMP as an Annexure.

A Transport Strategy was developed in consultation with NPWS, FCNSW and SVC. Proponent commits to preparing Long-Term Road Strategy within 2 years of the commencement of construction.

During Stage 1 of the Project the only public road upgrade will be the upgrade to the intersection of East Bago Powerline Road and Elliott Way to support the swept path of OSOM vehicles entering off Elliott Way. Widening of the existing access track will also be required. This upgrade is required to allow for the delivery of oversize plant to the substation site (refer to Appendix G). This will be permanent but will have no effect to Elliott Way or any other roads owned by Local Council or other Regulatory Bodies. Works will be managed in accordance with 10.2 Traffic Management. Works associated with access roads and intersections are detailed in the Transport Strategy, and are as follows:

- Gates will be installed at intersections with Elliott Way to restrict unauthorised access. Gates will be set back off Elliott Way to ensure that maintenance vehicles can safely park off Elliott Way when opening the gates.
- The intersections with existing formed roads (i.e. Elliott Way) will not require a change to the function or operation of the of the intersection in terms of speed or lines of sight (etc.)
- The modification to the surface and drainage design will be keeping with the intersections existing design and will comply with the Austroads guidelines where required and to the satisfaction of NPWS.

All other proposed upgrades to local roads will be facilitated by Transgrid for Stage 2 (500kV Substation future works.) CoA, namely B31.

The Proponent must ensure that any temporary and the permanent bridge over Sheep Station Creek is designed and constructed to comply with the relevant requirements of the:

a) Relevant Austroads Standards (such as elevating them above the 1% AEP flood level);

b) Guidelines for Controlled Activities on Waterfront Land (NRAR, 2018); and

c) Policy and Guidelines for Fish Habitat Conservation (DPI, 2013) and Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (NSW Fisheries, 2003).

9.3 ROAD MAINTENANCE (LOCAL ROADS)

Road maintenance will be managed through the following measures:

A Road Dilapidation Report will be prepared (in accordance with Condition B29) by an Independent Contracted Survey Company prior to and following construction of the project for all local roads on the transport route as shown in in the figure in Appendix 4, prior to construction, upgrading or decommissioning works; and condition of all local roads on the transport route (including local road crossing).Due to the approved staging of the project, the dilapidation report for Stage 1 will be prepared ahead of Stage 2. Once the design for Stage 2 has been finalised, this TTMP will be revised to include any further local roads to be added to the scope of the dilapidation survey.

Road dilapidation surveys of all local roads on the transport route will be carried out 1 month prior to commencing construction as agreed to with Snowy Valleys Council and NPWS, also annually in detail and monthly during construction works. Any impacts identified during dilapidation surveys as caused by the project will be repaired within 7 days from identification as agreed and to the satisfaction of the relevant road authority/manager.

A final road dilapidation survey will be carried out within 1 month of the completion of construction, upgrading or decommissioning works, or within a timeframe agreed to by the relevant road's authority. Any identified impacts from

construction, upgrading or decommissioning works will be rectified within 2 months of the completion of the survey to the satisfaction of the relevant roads authority/manager

Any impacts identified as caused by the project that could endanger road safety will be rectified as soon as possible after it is identified but within 7 days at the latest, including emergency repairs. Routine defect identification and rectification of the access roads and tracks will be managed as part of the project maintenance procedure. Access roads and tracks will be designed in accordance with the relevant vehicle loading requirements.

9.4 LOCAL ROAD ACCESS

Local road access and capacity for residents and regular road users is to be monitored and considered by the Construction Manager in charge of the site when planning all vehicle movements. The Construction Manager will also confer with relevant road owner / Communications Manager to inform himself of any complaints/feedback/planned events and use this feedback loop to monitor and improve effectiveness of this approach to sharing this shared public asset. The provision of extra passing bays and stopping bays to be considered if required to maintain regular traffic flow and emergency vehicle access.

All heavy vehicle movements will be tracked and recorded using a Heavy Vehicle Movement Register and published in NGER's. The National Greenhouse and Energy Reporting Act 2007 (NGER Act) introduced a single national framework for reporting and disseminating company information about greenhouse gas emissions, energy production and energy consumption. All vehicle movements are to adhere to the UGL Chain of Responsibility and Driver Code of Conduct.

There are no planned requirements for regular vehicle access to Talbingo Reservoir or other water related infrastructure.

Schedule of Road Upgrades

Bridge Crossing/Location	Upgrade	Relevant Road Authority
Stage 1 UGL Works		
Substation compound access point, Elliott Way	Access point upgrade	Snowy Valleys Council
Sheep Station Creek	Bridge Crossing	Transgrid
Access tracks 1-8, 10 & 12	Access track construction	NPWS
Access track 9	Access track construction	Snowy Valleys Council & FCNSW
Stage 2 500kV Transgrid Substation Works (future works)		
Little Billabong Creek, Little Billabong Road	Upgrade bridge as necessary	TfNSW
Vokins Creek, Little Billabong Road	Upgrade bridge as necessary	TfNSW
Lapstone Creek, Tumbarumba Road	Upgrade bridge as necessary	TfNSW
Carabost Creek, Tumbarumba Road	Upgrade bridge as necessary	TfNSW
Doughtys Creek, Tumbarumba Road	Upgrade bridge as necessary	TfNSW
Bells Creek, Wagga Road	Upgrade bridge as necessary	TfNSW
Vokins Creek, Wagga Road	Upgrade bridge as necessary	TfNSW
Mannus Creek, Wagga Road	Upgrade bridge as necessary	TfNSW
Tumbarumba Creek, Albury Street	Upgrade bridge as necessary	TfNSW
Burra Creek, Tooma Road	Upgrade bridge as necessary	Snowy Valleys Council
Paddys River, Tooma Road	Upgrade bridge as necessary	Snowy Valleys Council

10. SAFETY

10.1 PEDESTRIAN MANAGEMENT

All members of the public will be excluded from site. Drivers and operators shall remain alert to the movement of pedestrians anywhere, particularly where personnel may be required to cross roads where there is no designated pedestrian walkway and within shared public and work areas. UGL will induct all workers to site, outlining such things as pedestrian activity, hazards and controls, such as signage, designated pathways, site speed limits for vehicles, hazards. Drivers will adhere to the Project Induction driving requirements, the Pre-Arrival Safety Flyer, the UGL Chain of Responsibility Appendix J and Driver Code of Conduct Appendix K.

Pedestrian workers (UGL and Sub Contractors) shall ensure that they:

- Adequately check for approaching vehicles prior to crossing roads
- Have visual / verbal contact and acknowledgment with the vehicle operator before proceeding
- Do not enter the 'Blind Spot' of operating mobile plant.

10.2 TRAFFIC MANAGEMENT

- Access to construction sites to be designed and monitored to minimise conflict of development-related traffic on access roads (Elliott Way, Link Rd). Where site activities require such movements with potential for impact on public, traffic movements will be planned in advance through communications to the relevant road owner during regular meetings to advise of any extraordinary site access needs so as to ensure this is done safely and with the least disruption to through traffic, additional traffic control will be implemented as assessed. Elliott Way inside KNP will be restricted to no more than 8 heavy vehicles per day for water cartage purposes, there is no anticipated water cartage from Snowy 2.0 Tailbay site.
- TCP's to be monitored, reviewed and amended/improved as required during different phases of construction to ensure suitability. TCP's for specific events to be designed and implemented by a contracted traffic control company.
- Traffic flow, speed limits and control measures around worksites, construction compounds and accommodation areas will be monitored, reviewed, and amended as required by weekly and monthly HSE inspections as scheduled and corrective actions implemented in a timely manner using the Synergy reporting system.
- Traffic management on access roads to be implemented, warning signs of approach to site, heavy vehicles turning, stop slow Traffic Controllers, temporary traffic controls, detours and signage, etc as required by short term impacts to local traffic on access roads.
- Heavy and oversized vehicles to adhere to the chain of responsibility, (road permits and escort vehicles if required by HVNL). Access to site to be coordinated and timed as to not impact on local traffic and access roads.
- Measures to minimise convoy lengths include:
    - Restricting heavy vehicles for water cartage to no more than 8 per day on Elliott Way and inside KNP as required under CoA B30(b)
    - Minimising convoy lengths by staging and scheduled as to not impact local traffic.
    - Staging and scheduling to be varied around regular discussions with NPWS to maintain awareness of park events, weather conditions and any other network constraints.
    - The Project Construction Manager and the Project HSE Team will monitor heavy vehicle movements, convoy lengths and timings by conducting weekly and monthly HSE inspections, reporting and issuing corrective actions using the Synergy reporting system.
    - All vehicle movements are to adhere to the UGL Chain of Responsibility.
- Minimise potential cumulative traffic impacts with other projects in the area by staging and scheduling any expected large volumes of traffic. Weekly and monthly HSE inspections will monitor cumulative traffic and potential development related traffic issues, and corrective actions implemented in a timely manner using the Synergy reporting system.
- Scheduling of all traffic movements will be discussed, agreed upon and communicated in look ahead schedules during weekly meetings to ensure minimisation of any impacts to local traffic, including school bus routes, and prevention of queuing on public roads. Monitoring this measure will be conducted by weekly and monthly HSE inspections.
- Posted site speed limits to be adhered to within site and construction areas/access roads. Traffic control signage and additional directional signage will be placed at key intersections along Snowy Mountains Highway and Link Road intersection (if not already in place and suitable by FGJV) to control development related traffic speeds.

- All traffic on FGJV site will adhere to the FGJV TTMP, restrict development-related vehicle speeds on Lobs Hole Ravine Road, Mine Trail Road and within the site to 30 km/h between sunset and sunrise, unless the Planning Secretary agrees otherwise.
- Speed limits of any vessels used on Talbingo Reservoir to be in accordance with current TfNSW speed limits or local posted speed limits (whichever is the lower speed limit).
- Traffic on Talbingo Reservoir to be managed during stringing operations in accordance with Appendix F Marine Traffic Management Plan.
- Traffic on Elliott Way to be managed during stringing operations by adherence to the stringing methodology (TBA) and with spotters, traffic control and regular inspections as applicable. A short indicative description of the intended stringing method is outlined below (to be augmented by the UGL Stringing Methodology TBA)
    - Setup Brake and winch sites in section to be strung,
    - Unclip wire/wires that are going to be replaced, (depending on how long the wires will, be unclipped before stringing, safety rigs will be installed over any infrastructure that could be affected if the wires were to come down, i.e., roads/services.
    - Day of stringing – traffic control is to be set up a per TMP before any stringing works. Traffic control will not be in place to shut the road down but slow the traffic down in this section of road in case the wire comes down and so the TC can stop traffic safely.
    - Wire strung and terminated at correct tension and clipped in (any road/services should be clipped in first).
    - Move on to next section

  Unclip – released from permanent fixed point and put into sheave (large rolling block)
  Clip in – reverse process.
- All vehicle movements are to adhere to the UGL Chain of Responsibility.
- All heavy vehicles requiring escort associated with the development must only travel to and from the site via the Primary Access Routes described in the EIS, as identified in the figure in Appendix 4 (Appendix A Fig 4 this plan), unless the Planning Secretary agrees otherwise.
  Note: The Proponent is required to obtain relevant permits under the Heavy Vehicle National Law (NSW) for the use of over dimensional vehicles on the road network.

10.3 SAFE DRIVING REQUIREMENTS

All personnel inducted onsite shall adhere to the following at all times:

- Mobile phones shall not be operated in moving vehicles, plant or equipment. Where mobile phones are to be used, the vehicle must be stationary and parked in a safe place
- UGL Project Induction requirements for safe driving, driving to site, delivery drivers, short term workers and visitors.
- Compliance with Future Gen/Snowy 2 vehicle and driver requirements (refer UGL Interface Plan 3200-0645-PLN-030-IMP). All vehicles and mobile equipment will be fitted with seat belts. All personnel will wear, and correctly fit and secure seatbelts provided at all times
- Adherence to the UGL Fatigue Management Procedure (Appendix C) and monitoring of current and forecast weather conditions, adhering to controls for accessing and driving at site as stipulated in the 3200-0645 Project Risk Register.
- All drivers shall be fit to drive 0.00 Blood Alcohol Concentration
- All personnel traveling in excess of 4 hrs to or from site shall complete a Journey management Plan.
- The drivers rules and expected hazards will be communicated in the site-specific induction.
- Re-fuelling: The minimum requirements for re-fuelling are:

- The engine is to be shut down and ignition off, left in gear, park brake engaged
- Preventative measures required for uncontrolled movement; NO person is permitted in the cab while another person is refuelling
- No equipment is to be left unattended while refuelling and maintain separation from other traffic
- Correct PPE is to be worn when refuelling. Hydrocarbon spill response kit available at re-fuelling area
- Drip tray to be in place during refuelling.

In addition, all unauthorised vehicles will not enter site until a supervisory person (spotter) guides them to designated areas. All drivers of visiting/delivery vehicles are to report to the site office for further direction or an escort.

All off road driving activities will only be performed by personnel formally trained in 4WD driving (RIIVEH305D – Operate and Maintain a Four-Wheel Drive); and in a designated 4WD vehicle. Any vehicle driving within a "Construction Site" area of the Project will be fitted with a two-way radio and amber flashing light, or to be escorted as above.

Any vehicle driving/transiting the FGJV Site will be required to adhere to the FGJV vehicle and training requirements, including visitors and deliveries, refer to UGL Interface Plan 3200- 0645-PLN-030-IMP.

All personnel inducted on site will be made aware of known and potential NPWS and FCNSW activities including the potential for NPWS and FCNSW plant and equipment being in operation including heavy plant and log trucks.

10.4 INCIDENT MANAGEMENT

Where safe to do so, any vehicle involved in an incident on site shall not be moved until such time as the incident has been investigated and the UGL Project Manager or their delegate has issued permission for the vehicle to be moved. Incidents that occur at the project site shall be reported in accordance with the requirements set out in the Work Health Safety Management Plan. A driver of any vehicle involved in an accident shall be required to undertake a Drug and Alcohol test as requested.

All persons and organisations undertaking these works have a duty of care to take all reasonable measures to prevent accident or injury in and outside the project area.

Any incident on Elliott Way resulting in a vehicle accident, damage to infrastructure, injury/fatality, breakdown on the carriageway, or any incident requiring road closures/delays is to be reported to the Tumbarumba Police (if not an emergency), 000/112 if an emergency is deemed an appropriate level of incident classification. Further detail on traffic incident management process can be obtained from the Emergency Plan which has been developed in consultation with all relevant road owners/agencies.

All incidents/accidents occurring within the FGJV site are to be reported to FGJV as well as UGL.

All incidents will be investigated using the UGL Incident Management-Reporting and Investigation Procedure, to enable lessons learned and corrective actions to prevent reoccurrence. All incident and non-compliance notifications will be done in accordance with CoA's C7 – C9.

All incidents will be reported to Transgrid for communication to the relevant authority.

11. ENVIRONMENTAL

There are specific environmental concerns associated with construction traffic and these items are addressed in the project Construction Environmental Management Plan (CEMP).

All construction movements shall be conducted within standard construction hours and approved out of hours work (OOHW), the exception of exempt emergency works, and not travel off delineated access tracks or outside surveyed work areas. Hazardous substances will be managed in accordance with the CEMP.

12. TRAFFIC CONTROL DEVICES

Traffic control devices meeting the requirements of AS 1742 shall be installed as indicated on future Traffic Control Diagrams.

- Advance Warning signs (refer AS/NZS 1742.3-2019)
- Regulatory and other signs / devices: Workmen Ahead, Diagrammatic Traffic Controller, Diagrammatic Man Dig, Prepare to Stop, Speed Advisory, etc
- Provision of accredited (Stop/Go) traffic controllers.

At the completion of traffic management work, the removal of the traffic control devices shall be completed in a controlled manner to minimise the risk to workers and other motorists.

A NSW endorsed traffic management control company will be selected to conduct traffic management activities, develop plans and submit in a timely manner to ensure approval before works on behalf of UGL.

13. FATIGUE MANAGEMENT

All works conducted on the Maragle 330kV Switching Station and 330kV Transmission Line Connections and associated works shall adhere to the UGL Fatigue Management Procedure UGLMS-131-380 (Appendix C) and the 3200-0645 Project Risk Register.

APPENDIX A TRAFFIC MANAGEMENT PLAN AND PLANNING TOOL

NOTE: THIS FORM IS TO BE COMPLETED WHEN TRAFFIC MANAGEMENT WORKS ARE BEING MANAGED AND COMPLETED BY UGL EMPLOYEES.

ONLY UGL EMPLOYEES WHO HAVE SUCCESSFULLY UNDERTAKEN THE REQUIRED TRAINING AND HOLD THE APPROPRIATE COMPETENCIES FOR THE STATE THEY ARE WORKING IN MAY DEVELOP AND IMPLEMENT TRAFFIC MANAGEMENT PLANS.

WHERE THERE ARE NO UGL EMPLOYEES WITH THE RELEVANT TRAINING, EXTERNAL CONTRACTORS MUST BE ENGAGED.

The Traffic Management Plan (TMP) is a tool that UGL employees should use to ensure that site hazards have been appropriately identified and controlled prior to traffic control works commencing.
The Project Manager / Site Supervisor is to develop the TMP by considering the traffic management issues that are unique to their environment in consultation with the Health and Safety Representative and employees.
To complete this TMP planning tool, simply read the question in the 'hazard management' box on the left-hand side of the table and write your requirements into the 'details' box on the right-hand side of the table. The TMP can then be developed from these requirements.

Project:	_____	**Project Manager:**	_____
Date of Plan:	_____	**Construction Manager:**	_____
Date of Plan Review:	_____	**Health & Safety Rep:**	_____
Duration of Works:	_____	**HSE Manager:**	_____
SWMS attached?	_____	**Person completing TMP:**	_____

EGRESS & ACCESS		
The following safety features are in place to ensure that egress and access for the site is established and maintained in a safe manner:		
NO.	HAZARD MANAGEMENT	DETAILS
1.0	Egress (exits) from the site is located at:	
2.0	Access (entry) to the site is located at:	
3.0	Egress and Access clearly marked by (i.e. signage, marked bays etc.):	
4.0	Designated pedestrian crossings are located at:	
5.0	Designated pedestrian crossings are supervised at the following times:	
6.0	Traffic/crossing controllers will utilise the following safety aids and equipment (i.e. lollipop sign, crossing flags, high visibility jacket)	
7.0	Pedestrian walkways are physically protected from designated roadways by (i.e. bollards, fences):	
8.0	Pedestrian walkways and/or detours are clearly marked/indicated by (i.e. designated walkways, road markings):	
9.0	Speed restriction signage is clearly displayed in the workplace at the following locations (i.e. insert number and location of signs):	
10.0	Speed controlling devices are in place to restrict vehicle speed on site in the following locations (i.e. speed humps are located….):	

EGRESS & ACCESS		
The following safety features are in place to ensure that egress and access for the site is established and maintained in a safe manner:		
NO.	HAZARD MANAGEMENT	DETAILS
11.0	Shaker/Wheel wash bays are installed at the following location:	
12.0	Other conditions: Are there any 'Blind spots' on site? What are the nearby business occupier requirements? (i.e. schools, businesses) Do access and exit points need to be stabilised?	

ROAD CONDIT ONS		
The following safety features are in place to ensure that the road conditions of the site are fit for use and maintained in a safe manner:		
NO.	HAZARD MANAGEMENT	DETAILS
1.0	Poor road conditions around the site are located (i.e. insert location/s):	
2.0	Potential areas of congestion could be located (i.e. insert location/s):	
3.0	Road crossing / pedestrian crossings will be located (i.e. insert locations):	
4.0	Road closures will be needed for the following dates / times:	
5.0	Road maintenance will be managed by (i.e. insert company name, company contact and phone number):	
6.0	Alternative driving route for emergencies and/or over-sized vehicles (i.e. state what the alternative route is):	
7.0	Plan to manage the risk of end-of-queue collisions due to a build-up of traffic at the work site (plan needs to state how this will be monitored):	

DELIVERY POINTS		
The following safety features are in place to ensure that delivery points for the site are established and maintained in a safe manner:		
NO.	HAZARD MANAGEMENT	DETAILS
1.0	Designated loading bay for the site is located at:	
2.0	Loading bay or delivery drop off points are clearly marked by (i.e. marked loading bay signage etc.):	
3.0	Worksite speed limits are set at (10 km/hr.) with clearly displayed signage located at (i.e. insert number and location of signs):	
4.0	Location of speed controlling devices in place to restrict vehicle speed on site (i.e. 2 speed humps are located on the roadway adjacent the site shed):	
5.0	Other considerations: Should internal roadways be only one way? Should concave mirrors be used to assist with visibility?	

DELIVERY POINTS		
The following safety features are in place to ensure that delivery points for the site are established and maintained in a safe manner:		
NO.	HAZARD MANAGEMENT	DETAILS
	Should vehicles be prevented from accessing certain areas on site? What are the communicative arrangements? (i.e. two-way radios): How will the housekeeping of traffic management materials be maintained? Are deliveries scheduled to minimise truck waiting time?	

SAFE PASSAGE OF VEHICLES *(i.e. large vehicles, mobile plant etc.)*		
The following safety arrangements and features are in place when large vehicles or mobile plant such as scissor lifts and forklifts are required to move around the worksite:		
NO.	HAZARD MANAGEMENT	DETAILS
1.0	Vehicles are not allowed to move around the site during the following time periods of peak pedestrian traffic (i.e. insert time periods):	
2.0	Prior to entering the site, drivers of the large vehicle must report to:	
3.0	Drivers must arrange for a member of staff to act as a "spotter" to supervise vehicle movements whilst on site. Name of spotter:	
4.0	Mobile plant (i.e. forklifts/telehandlers) are only to be used in in the following areas (as clearly designated on the site map):	
5.0	Worksite speed limits are set at (10 km/hr.) with clearly displayed signage located at (i.e. insert number and location of signs):	
6.0	Other considerations: Are roadways of enough width to allow for cars going in both directions to pass each other safely?	
7.0	Above ground services impacting on vehicle/plant traffic	

PARKING ARRANGEMENTS		
The following safety arrangements and features are in place to minimise the risks associated with vehicle parking:		
NO.	HAZARD MANAGEMENT	DETAILS
1.0	Number of car parking available for site personnel and location:	
2.0	The number of car parks available for visitors:	
	The number of car parks available for people with disabilities:	
3.0	Car parking areas are clearly designated with marked parking bays and signage displayed in the following areas (i.e. insert number and location of parking signs):	
4.0	Signage identifying the whereabouts of the site office/reception is clearly visible from the car park, located at:	
5.0	Other considerations: Should there be pedestrian only pathways?	

PARKING ARRANGEMENTS		
The following safety arrangements and features are in place to minimise the risks associated with vehicle parking:		
NO.	HAZARD MANAGEMENT	DETAILS
	Should concave mirrors be used to assist with visibility? Should the community be notified of public parking usage? Will access to private property be impacted? Has the change to parking been clearly communicated?	

SPECIAL EVENTS (i.e. commissioning, large deliveries)		
The following broad safety arrangements and features are in place to minimise the risks associated with special events in conjunction with previously documented control measures:		
NO.	HAZARD MANAGEMENT	DETAILS
1.0	Appropriate numbers of traffic controllers will be in place for all special events to restrict/direct traffic to and from the workplace (i.e. number and located of traffic controllers):	
2.0	Additional car parking areas are clearly designated with marked parking bays and signage displayed in the following areas (i.e. insert number and location of parking signs):	
3.0	Loading bay and drop off areas will be widened to ensure large deliveries can be safely off-loaded from trucks in the following areas (i.e. insert locations):	
4.0	Additional bollards / fencing is in place in the following areas:	
5.0	Other considerations: Should there be pedestrian only pathways? Should concave mirrors be used to assist with visibility? Should deliveries be organised outside peak traffic and school zones? Should community (e.g. businesses, residents) be notified of expected traffic impacts?	
6.0	Transport	
Traffic control requirements for special events may vary. Specific control measures will need to be determined through a risk assessment process taking into consideration learning's from previous special events.		

APPROVAL *(i.e. local council, HSSE Coordinator)*		
The following people / bodies must sight and approve this traffic management plan prior to the establishment of such a plan on site:		
NO.	HAZARD MANAGEMENT	DETAILS
1.0	Local council or approving body (insert name of council / approving body, contact person and contact phone number):	
2.0	Road Authority approval (insert contact name and contact phone number):	
3.0	HSE /HSE Manager (insert name and contact phone number):	
4.0	Health and Safety Representative (insert name and contact phone number)	
5.0	Traffic management personnel (insert name of traffic management personnel and contact phone numbers)	
All site personnel on site must be inducted into the Traffic Management Plan through a toolbox talk or pre-start meeting. All site personnel must be aware of the traffic conditions on site and must be re-informed (through a toolbox talk or pre-start meeting) when site conditions change.		

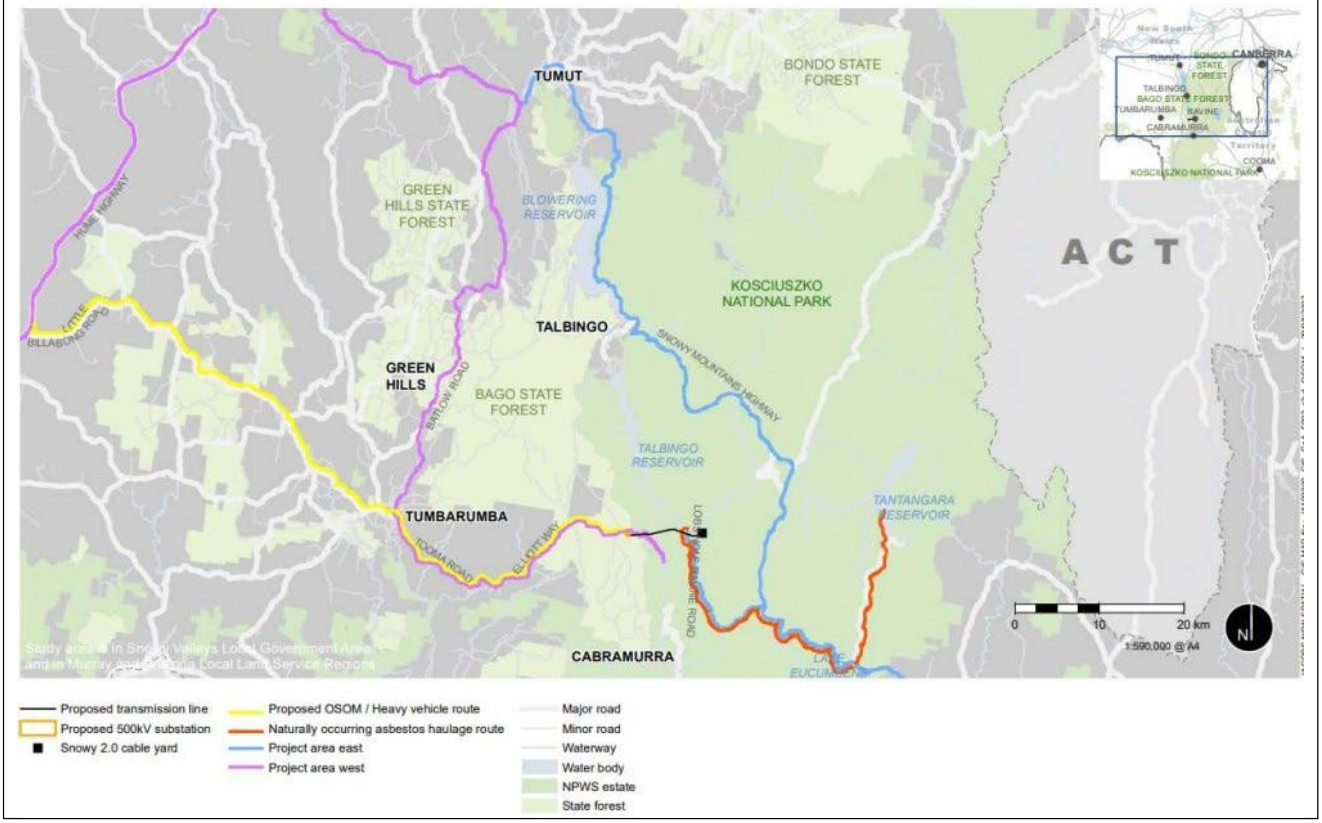
Figure 3. Switchyard Access TTMP

TRAFFIC GUIDANCE SCHEME – Access to Project site
[PLACEHOLDER] Switching Station, Elliott Way Tower Sites and Lobs Hole Access and Traffic Control TBA When Possession of Sites Takes Place, Site Set Up is Yet to be Finalised.

Figure 4. Heavy Vehicle Route

Heavy vehicle Route - Over-Dimensional and Heavy Vehicle Access Route Restrictions

Note - Switch Yard and Western Transmission Line traffic will access via Elliott Way, Lobs Hole traffic via Link Rd. Heavy vehicles may travel to and from the site via the Secondary Access Routes and Water Supply Routes, (Paddy's River Flats/existing Transmission Line access tracks) subject to the requirements in condition B31, to the satisfaction of the relevant roads authority/manager. These routes must be adhered to by HV's and LV's.



Transport
Over-Dimensional and heavy vehicle restrictions
The applicant must keep accurate records of the number of heavy vehicles entering or leaving the site each day.
Designated Over-Dimensional and Heavy vehicle access Route
All over-dimensional and heavy vehicles associated with the development must travel to and from the site via Elliott Way and Link Road and the approved site access points, as identified in Figure 4.

TRAFFIC MANAGEMENT PLAN SIGN-OFF

Project Manager: _____ Date: _____

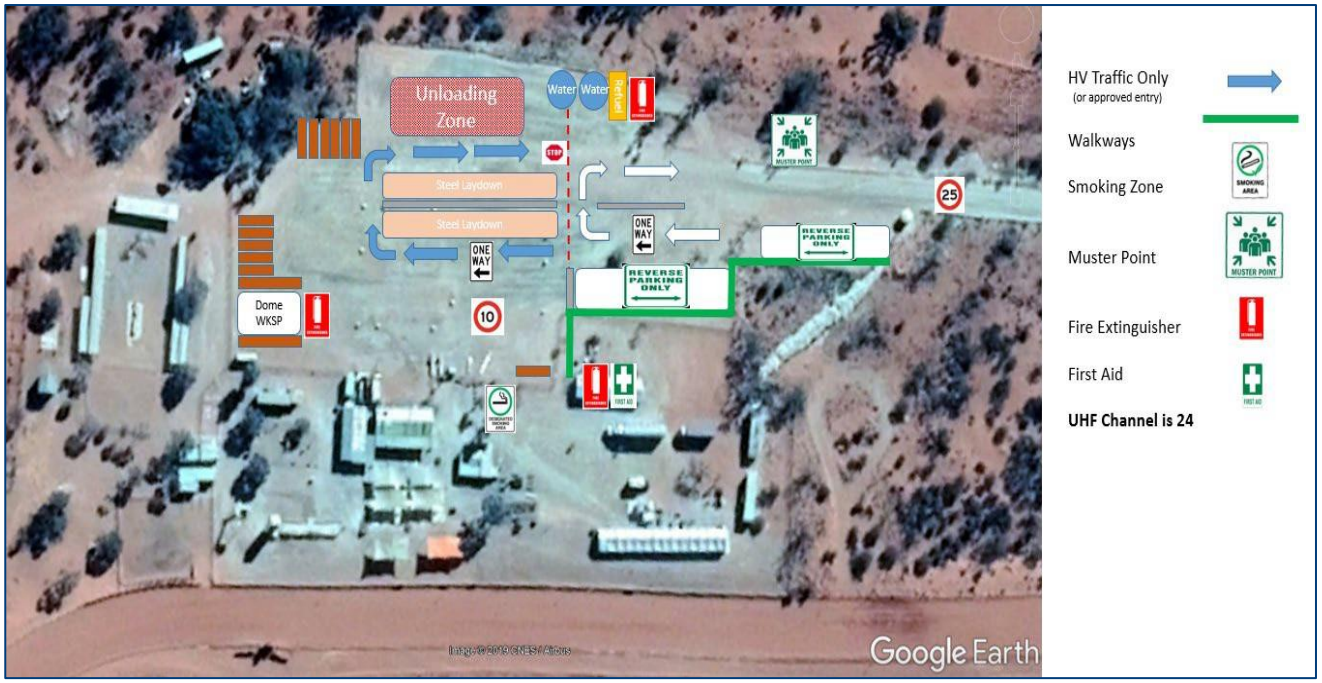
Construction Manager: _____ Date: _____

Person completing TTMP: _____ Date: _____

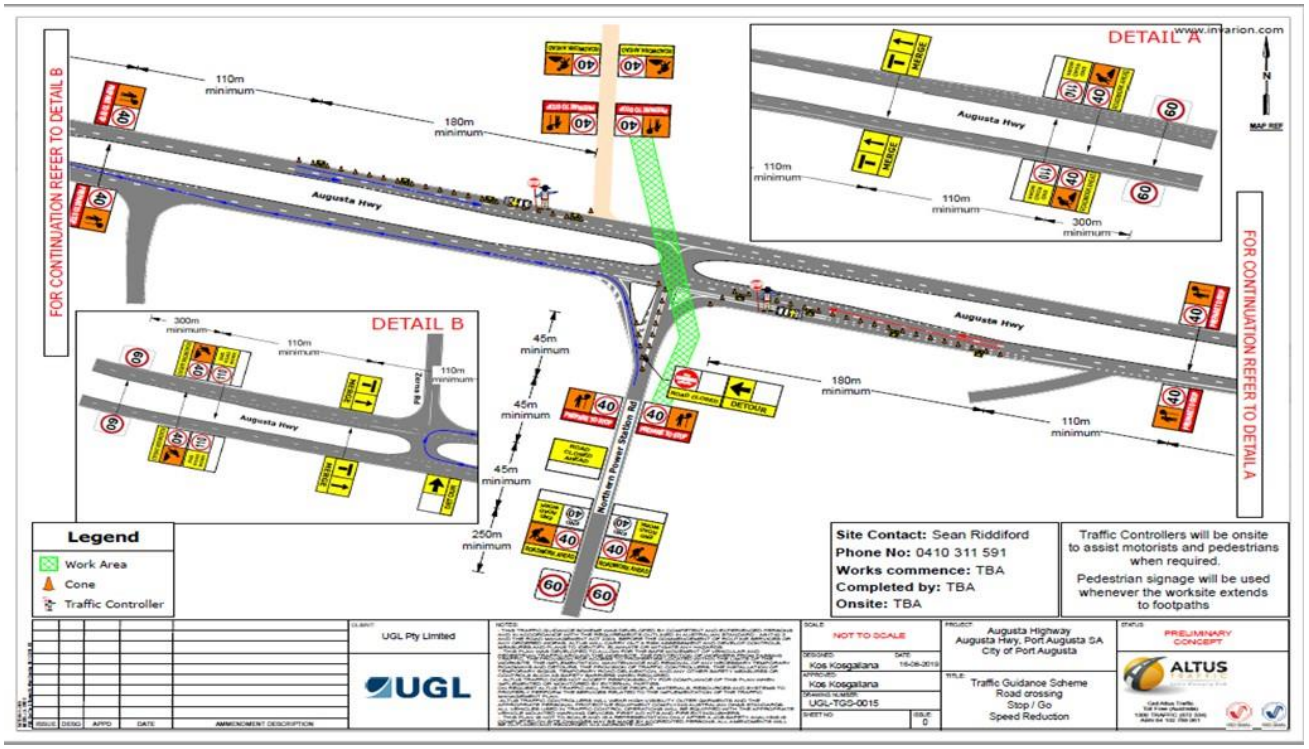
HSE Advisor Signature: _____ Date: _____

APPENDIX B EXAMPLE TRAFFIC MANAGEMENT DIAGRAMS

PLACEHOLDER TO UPDATE WHEN POSESSION OF SITE TAKES PLACE PRE CONSTRUCTION WORKS



Note: Examples only of Traffic Management Diagram. Area specific plans to be completed prior to commencement of works. The Plan will be updated in response to changes that may impact on the public's use of the road network and will be communicated to the public and relevant road authorities in accordance with the Traffic and Engagement Communication Plan (refer Section 5.3).



APPENDIX C FATIGUE MANAGEMENT PROCEDURE

FATIGUE MANAGEMENT PROCEDURE

Maragle 330kV Switching Station and 330kV Transmission Line Connections

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1. PURPOSE

The purpose of this procedure is to define the requirements for managing the risks associated with fatigue in UGL workplaces.

NOTE: This procedure is designed to guide the Risk Management activities associated with managing fatigue, it should therefore be read in conjunction with UGL's HSE Risk Management Procedure.

2. SCOPE

This Procedure applies to UGL Group employees, controlled sites, and activities.

Due to the varying internal and external factors associated with shift rostering, this procedure does not mandate maximum shift times, minimum breaks or consecutive shift numbers. Where these are required they should be developed and recorded in the respective safety management plan or supporting procedure.

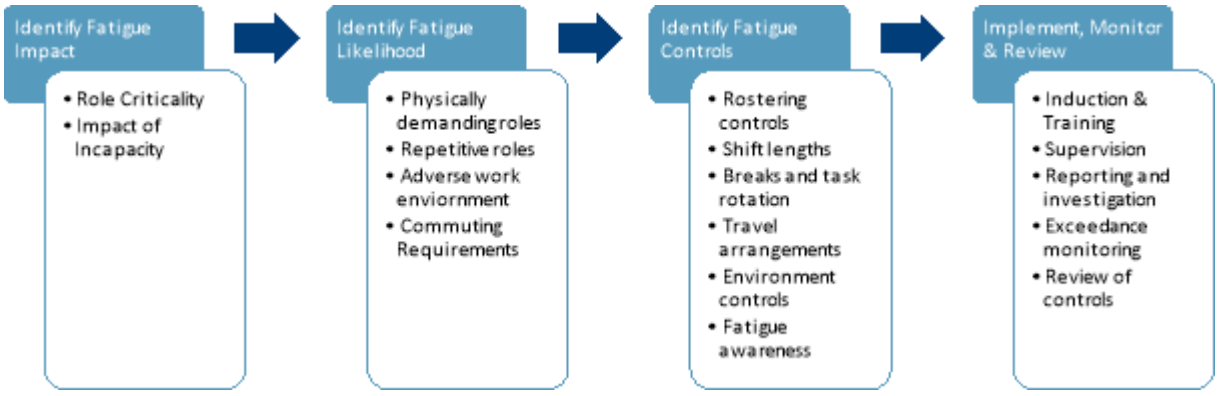
Responsibilities are detailed in Appendix A- Responsibilities

Definitions are detailed in Appendix B - Definitions

3. PROCEDURE

The risks associated with fatigue are to be assessed and controls identified as part of the Hazard Identification and Risk Management Process.

3.1 WORKFLOW



3.2 IDENTIFY FATIGUE IMPACT

In order to assess the impact which a fatigue related incident could have, the criticality of the worker role should be considered. Safety critical roles undertaken are those which involve activities which can place other workers at risk, in particular, where the immediate incapacity of the worker can impact upon others (e.g. Bus or train drivers, crane operators).

3.3 IDENTIFY FATIGUE LIKELIHOOD

Having identified the impact which fatigue can have when it affects the typical roles on a project/site, the likelihood of the role being inducing fatigue should be considered using a combination of:

- Previous instances of fatigue;
- Type of role; and
- Work Environment.

3.4 REVIEW INSTANCES OF FATIGUE

Research can determine prior evidence of fatigue for similar types of work and work environments. As part of the risk assessment process, consider;

- Incident Reports which indicate fatigue as a contributory factor;
- Self-reports from workers about fatigue; and
- Reports from supervisors about the evidence of fatigue.

3.4.1 Identify roles susceptible to fatigue

Physically demanding, mentally demanding, or repetitive work can increase the likelihood of a worker being affected by fatigue. This likelihood further increases if the task demands are continual, as opposed to periodic.

3.4.2 Review work environment factors

There are a number of factors in the work environment which increase the risk of fatigue. This includes the conditions of the immediate work area, as well as its location.

3.5 DETERMINE ROLES SUSCEPTIBLE TO FATIGUE

The risk assessment should have identified a range of risk profiles associated with the roles and tasks undertaken on a project or site.

Safety critical roles which are conducted in arduous conditions, or are physically or mentally demanding present a higher risk than those which are less demanding, or with a lower potential impact (such as office based roles).

3.6 IDENTIFY ROSTERING ARRANGEMENTS

Work patterns that involve increased likelihood of fatigue are common place in the environments in which UGL operates. As a result, diligence must be applied to identifying the appropriate controls required to minimise the risk of fatigue related incidents.

3.7 RISK CONTROLS

Having identified the impact and likelihood of fatigue affecting workers performing roles and consideration shall be given to relevant developments in research related to fatigue and any technology that may be applied to manage work-related fatigue when implementing control measures.

Controls shall be identified so far as is reasonably practicable in accordance with the hierarchy of controls:

Type of Control	Example
Elimination	Eliminating night shift in some work areas, or for 'high risk' tasks
Substitution	Increasing the length of breaks in a shift
Engineering Controls	Improving ventilation and heating to improve alertness
Administrative Controls	Procedures and training programs for control of fatigue
PPE	Hearing protection devices may not provide sufficient attenuation over a 12 hour a opposed to an 8 hour shift

Unless the risk can be eliminated, a range of control measures from across the hierarchy will need to be put in place. In particular, vigilance by supervisors, monitoring whether workers are experiencing fatigue is a fundamental control measure that will support all other risk control measures.

The following sections describe the issues associated with fatigue and suggest controls to be considered.

3.7.1 Roster Development Controls

Due to the contractual arrangements in which UGL operates, rostering arrangements are often determined by others. However should the rostering arrangements pose a risk of incident, agreement should be sought on the determination of appropriate controls, including:

Risk factor	Issues	Controls for consideration
Night shifts, including the number of consecutive night shifts	• Are too many consecutive night shifts worked? • Are tasks requiring sustained physical or mental effort undertaken on night shift? • Are complex physical or mental tasks undertaken on night shift? • Do night shift workers have difficulties getting undisturbed sleep during the day?	• Eliminate or limit night work. • Limit the number of consecutive night shifts worked. • Minimise or redesign routine administrative tasks to ensure workers can focus on core duties during their night work. • Improve the order, speed, direction and length of rotation of the shift cycle. • Ensure adequate time off after a set of night shifts.
Long hours of work in a single shift. This includes travel time, especially for remote sites.	• Does one shift involve more than 12 hours in a day (including call outs)?	• Reduce working hours. • Eliminate the use of extended hours for particular jobs or activities. • Control the length of shifts.
Long hours of work across a shift cycle	• Long hours of active work (total time spent at work including overtime)	• Reduce working hours. • Reduce the number of consecutive day shifts that can be worked.
Long hours because of on call duties	• Are there irregular and unplanned schedules as a result of call-outs?	• Limit use of standby and on-call duties.
Short breaks between work shifts	• Is there enough time between work shifts to allow for adequate sleep: • Enough time in a break for 5 hours uninterrupted sleep in 24 hours (only for one night) AND • Enough time in breaks for 12 hours of sleep in 48 hours (i.e. in two days) AND • Enough time in breaks for 50 hours sleep in 7 days? • Is the break between shifts less than 10 hours?	• Increase the length of breaks between shifts. • Allow for recovery between work periods. • Provide rest days. • Improve the timing of shifts. • Allow for family and social commitments between shifts and shift cycles.
Short breaks within work shifts	• Are breaks within shifts long enough and frequent enough to allow workers to rest, refresh and nourish themselves?	• Reduce the use of split shifts.
Shift start/finish times	• Do any shifts start or finish between midnight and 6am? • Are there split shifts? • Are complex, difficult or strenuous tasks required at the start or end of such shifts?	• Avoid starting or finishing shifts between midnight and 6am. • Minimise the work that has to be done between midnight and 6am.

Risk factor	Issues	Controls for consideration
Changes to rosters	• Do workers get sufficient notice of roster changes? • Is fatigue management taken into account in roster changes?	• Reduce irregular and unpredictable work schedules.

3.7.2 Controlling activities within rosters

Risk factor	Controls
Night shifts, including the number of consecutive night shifts	• Eliminate the use of nightshifts for particular jobs or activities. • Move as much activity as possible to day shifts, particularly work which may be a high risk at night, particularly on the first night of a night shift cycle. • Schedule complex tasks for daytime.
Long hours of work in a single shift. This includes travel time, especially for remote sites.	• Increase resourcing. • Limit the use of overtime, especially unscheduled overtime. • Monitor hours of work.
Long hours because of on call duties	• Ensure that exchange of shifts does not result in excessive hours.
Short breaks between work shifts	• Defer non-urgent work to allow appropriate rest and recuperation for workers.
Short breaks within work shifts	• Provide more and/or longer breaks to allow for recovery within work periods. • Provide adequate resources to cover breaks. • Ensure adequate number and location of crib and toilet facilities.
Shift start/finish times	• Minimise the work that has to be done between midnight and 6am.

3.7.3 Task-related Controls

Risk factor	Issues	Controls for consideration
Repetitive or monotonous work	• Do jobs involve repetitive or monotonous work, e.g. haul truck driving?	• Eliminate boring, repetitive jobs. • Provide training to allow multi-skilling and effective job rotation. • Use alarms and monitors, particularly for solo work (e.g. driving vehicles).
Sustained physical or mental effort	• Is the work physically demanding? • Is there time pressure due to a heavy workload? • Is work fast paced? • Is work intensive? • Can workers vary work pace or work tasks as desired? • Do workers have a say over work tasks or how to carry them out?	• Provide suitable resources. • Ensure adequate breaks during shifts. • Eliminate sources of risks that might exacerbate fatigue (e.g. lack of job control, manual handling, extremes of temperature). • Improve communication processes. • Improve the duration and timing of work.

Risk factor	Issues	Controls for consideration
		• Roster enough workers during peak times and demands. • Allow supervisors and workers to reschedule tasks if fatigue becomes a problem.
Complex physical or mental tasks	• Is high vigilance and/or concentration required? • Are there different demands that can be difficult to combine? • Are complex, difficult or strenuous tasks required at the end of shifts or shift cycles?	• Ensure safe and efficient shift hand-over. • Use alarms and monitors, particularly for solo work (e.g. driving vehicles).

3.7.4 Work environment factors

Risk factor	Issues	Controls for consideration
Excessive commuting times necessary	• Is significant travel to and from work necessary each day so that time for adequate sleep is reduced? • Are long distance commutes necessary at the beginning of a work cycle?	• Start work at long distance commute sites on the day AFTER arrival and start travel home on the day AFTER the shift cycle is finished. • Assist with travel arrangements, e.g. provide transport.
Stress	• Do jobs involve high demand, but low control? • Are there poor social relations at work, e.g. bullying? • Is there low social support from peers and supervisors at work? • Is there low recognition for the effort involved in the work?	• Improve job control and the other risk factors associated with stress. • Ensure effective channels of communication to allow the monitoring and reporting of fatigue related issues.
Adverse working conditions	• Do adverse working conditions exist, e.g. exposure to: • Noise? • Heat? • Cold? • Dust? • Hazardous substances?	• Control exposure to hazardous substances and environments. • Provide effective protective clothing and equipment, allowing for different skills. • Use heating and cooling to control ambient temperatures to support alertness.
Non-work related factors	• To what extent is there evidence of problems as a result of: • Family commitments? • Sleeping disorders? • Psychological issues? • Alcohol and drug use? • Second job/non-paid work?	• Provide suitable professional advice, e.g. an Worker Assistance Program, sleep disorder clinic. • Maintain vigilance in identifying non-work related factors. • Provide information and education about how non-work related factors can increase the risks of fatigue.

3.8 UPDATE HSSE RISK REGISTER

Having determined the impact and likelihood of fatigue associated with the typical roles undertaken on projects, operations or sites, the HSSE Risk Register should be used to record the information. Controls identified should be listed against each of the roles, and actions assigned to ensure the required implementation and monitoring. The following is an example of how to capture the roles (information in table is not accurate and provided for guidance only);

Role	Impact	Likelihood	Risk	Controls Required	Risk	Actions
Crew Driver	Severe	Unlikely	19	• Maximum Shift Length XX hours • Maximum XX consecutive shifts • Pre-Employment and Ongoing Health surveillance	15	XX to ensure position description details Fatigue controls
Draftsperson, Project Engineer, Office Administrator	Serious	Unlikely	10	• Standard Roster Arrangements	10	

3.9 FATIGUE MANAGEMENT PLAN – RAIL SAFETY WORK

UGL has an obligation under the Rail Safety National Law to prepare and implement a plan for the management of fatigue of rail safety workers.

The development of the Fatigue Management Plan is the responsibility of the respective sites. The purpose of the plan shall be to eliminate or minimise fatigue-related risks.

Further guidance and specific control measures for fatigue and rail safety work can be found in:

- Fatigue Risk Management Guideline – Rail Industry Safety and Standards Board; and
- Rail Safety National Law National Regulations 2012 Section 29 Fatigue Risk Management Program.

3.9.1 Factors to consider and include in Fatigue Management plan

Where Fatigue Management Plans are produced for Rail Safety related work, they should contain details of the controls required associated with:

- Scheduling of work and non-work periods, including time-on-task and rest opportunities in shifts and the total period of time in which work is being carried out;
- Call-in, on-call and lift-up and lay-back arrangements and extended hours of work, including overtime;
- The kinds of rail safety work being carried out, including—
    - Work that requires significant physical exertion or high cognitive task demand; and
    - The degree of monotony or boredom or low cognitive task demand of the work;
- The variations in shifts and rest periods that may be required by different rail safety work requirements, including different routes, crew-call practices and predictability of working hours;
- The suitability of rest environments, including barracks, rest houses and relay vans provided for rail safety workers by the operator;

- The physical environment in which rail safety work is to be carried out, including climatic conditions, noise, vibration and fumes;
- Fatigue risks arising from any one-off or occasional circumstances in which rail safety work may be required to be carried out, including in emergencies or under degraded or abnormal conditions, subject to the working hours being dependent on the rail safety workers' indication of their fitness to continue;
- Requirements and mechanisms for the monitoring of work hours; and
- Requirements for the controlling of shift-swapping, on-call and overtime work.

3.9.2 Rail Safety Fatigue Considerations

Fatigue Management Plans shall include strategies to manage the risk of fatigue, and may include prescribing requirements for Rai Safety workers such as:

- Minimum continuous break between shifts (typically 10 hours);
- Maximum hours per week (typically 5 x 12 hour shift or 6 x 10 hour shift);
- Minimum notice prior to the commencement of a nightshift (24 hours);
- Rotating shifts are rotated forward, for example a day shift moves to an afternoon shift;
- Minimum night's sleep prior to moving from day to night shift;
- Maximum consecutive shifts permissible; and
- Consideration of journey times between home and place of work.

3.9.3 Fatigue Management Tools

The following tools are available for guidance when developing the Fatigue Management Plan:

- 'Appendix 4 – Fatigue Management Chart' lists fatigue risk factors and describes strategies to minimise the risk associated with each factor; and
- Rostering spread sheet assists supervisors and management in planning their resource schedules to fulfil fatigue prevention requirements. This will involve workers being entered into the spread sheet along with their actual and proposed hours worked for more effective tracking of resources and their rest / wake patterns.

Note: The tools used for developing and maintaining the Fatigue Management Plan must be detailed in the relevant site/operational WHS Management Plan.

3.9.4 Fatigue Prevention Permit

Under the following exceptional circumstances, Project or Operations Managers may exempt the controls relating to working hours, for example when requiring:

- Emergency call outs; and
- Unforeseen delays caused by external circumstances.

Under these circumstances, Project or Operations Managers must complete a Fatigue Prevention Permit to detail how fatigue-related risk will be minimised.

The Fatigue Prevention Permit must be used only a last resort - where there is no possibility of rescheduling the work activities to allow for normal fatigue management processes.

3.9.5 Prestart meetings

Supervisors should remind workers of fatigue management controls and encourage workers and contractors to self-disclose and identify any risk of fatigue.

3.10 MONITORING & EVALUATION

Unlike impairment from the effects of alcohol or other drugs, there is no simple measure to indicate the levels of fatigue. However there are a number of simple tools and options available to aid the monitoring of fatigue.

In accordance with the Just and Fair Culture framework, UGL workers are encouraged to take their responsibilities to obtain sufficient sleep seriously, but feel confident that, if on occasion they feel too tired to work safety, they will not be punished for honestly declaring this so that alternative arrangements can be made.

3.10.1 Monitoring fatigue in the workplace

Supervisors are required to look for signs of stress, fatigue and illness, or behaviour that is unusual or different from normal in their workforce. The following table gives some examples of the symptoms which indicate fatigue, and the likely level associated.

Likely level of fatigue

Signs/Symptoms

Early warning signs of fatigue which should prompt people to look out for more conclusive evidence of fatigue

- Fidgeting
- Rubbing the eyes

Signs of moderate fatigue- suggesting performance is being affected. Take these seriously – it is not necessary to fall asleep to make a

- Frequently yawning
- Staring blankly
- Frequently blinking

Signs of severe fatigue – Liable to brief uncontrollable "micro sleeps" risk of errors very high

- Nodding head
- Difficulty keeping eyes open & focused
- Long Blinks

Where any worker or their colleague believes that a person is not fit for work, he or she must immediately notify their supervisor.

In the event that the supervisor determines that a worker is not fit for duty, the Supervisor must consult with the affected person to determine whether they are suffering from a condition that could result in their fitness for work being compromised.

On assessment of the degree of debilitation, professional assistance in confidential consultation with the Supervisor and/or HSSE Professional can be arranged through their own medical practitioner or through the company Employee Assistance Program (EAP).

3.10.2 Assessing Fatigue

Sampling fatigue amongst workers can be a useful tool to ascertain the effectiveness of the controls identified to mitigate the risk of fatigue. The following scale can be utilised to enable workers to identify the extent to which they are affected by fatigue:

1. Fully alert, wide awake.

2. Very lively, responsive, but not at peak.
3. Okay, somewhat fresh.
4. A little tired, less than fresh.
5. Moderately tired, let down.
6. Extremely tired, very difficult to concentrate.
7. Completely exhausted, unable to function effectively.

3.10.3 Reviewing Fatigue Exceedences

Reviews should be conducted periodically to ensure that the fatigue controls identified in the HSSE Risk Register have been implemented and are being applied. This may be further substantiated by reviewing records of work hours, shift patterns etc. Exceedences should be recorded with actions to prevent recurrence determined accordingly.

These monitoring requirements can be included in the Checkit Planner. Where required, the HSSE Professional will schedule regular reviews of the Fatigue Management Plan to ensure that all workers and contractors are complying with the plan.

3.11 INDUCTION & TRAINING

The controls identified for managing fatigue on projects/sites/operations should be included in the respective project induction. Typical induction content regarding fatigue includes;

- Basic information on the causes of fatigue and the importance of sleep;
- The effects of circadian rhythms on alertness and performance;
- Personal responsibility for the signs of fatigue and the need to report; and
- Details of actions to follow when fatigue is identified.

Where further training on the development and implementation of fatigue management strategies is required the following unit of competency is available;

TDTF1097B: Apply Fatigue Management Strategies through an RTO.

UGL Rail sites shall refer to UGL's Rail Specific Training and Competencies Procedure(s)

3.12 INCIDENT MANAGEMENT AND REPORTING

When an incident occurs, the HSSE Professional will review the incident to discover the causes, including fatigue in accordance with UGL's Incident Management Procedures.

4. RECORDS

Project or Operations Managers are responsible for ensuring that the following records are developed, maintained and retained in accordance with the respective Quality Management Plan:

- HSSE Risk Register and Hazard Summary Report;
- SWMS/JHA;
- Fatigue Management Plan;
- Pre-start Safety Action Plan; and
- Fatigue Prevention Permit.

5. REFERENCES

National Transport Commission & Rail Safety Regulators Panel (2008) National Rail Safety Guideline: Management of Fatigue in Rail Safety Workers.

WorkCover NSW & WorkSafe Victoria (2008) Fatigue Prevention in the Workplace.

WorkCover NSW (2010) Long Distance Truck Driver Fatigue – Compliance at a Glance.

WorkCover NSW (2005) Factsheet for Consignors and Consignees: Managing Long Distance Truck Driver Fatigue in NSW.

Department of Labour, Wellington, New Zealand, Managing Stress and Fatigue in the workplace. ISBN 0-477-03689-9.

Health and fatigue – an introduction programme for drivers of heavy motor vehicles – NZ Transport Authority, March 2015.

APPENDIX A RESPONSIBILITIES

Position	Responsibilities
Project or Operations Managers	• Ensure that fatigue-related risks are identified in the HSSE Risk Register • Ensure that Safety critical roles and appropriate controls are identified as soon as practicable • Ensure fatigue controls are implemented, monitored and incidents assessed to consider whether fatigue was a contributory factor
Supervisors (e.g. Technical Coordinator, Team Leader, Shift Supervisor, Leading Hand)	• Be aware of the fatigue controls required • Be aware of the signs of fatigue and the potential impact • Encourage workers to self-disclose and identify any risk of fatigue. • Remind workers of fatigue management requirements during prestart meetings. • Take appropriate action when signs of fatigue are detected
HSSE Professional / Rail Safety and Compliance Manager	• Assist with the development of the HSSE Risk Register, the identification of safety critical workers and the identification and implementation of appropriate fatigue controls • Review incidents and near-misses to identify any issues with fatigue. • Provide assistance to sites to monitor and prevent fatigue.
Workers	• Be aware of the risk of fatigue • Be aware of the fatigue controls identified for the role performed • Advise Supervisor if any personal circumstances may be causing fatigue • Take sufficient breaks between shifts to prevent fatigue.

APPENDIX B DEFINITIONS

Term	Definition
Fatigue	A state of perceived weariness that can result from prolonged working, heavy workload, insufficient rest and inadequate sleep
Head Carrier	A freight transport (motor vehicle) business, where the truck driver is not self-employed
RTO	Registered Training Organisation
Shift Work	Work outside of normal daylight hours (7am to 6pm)
UTake5	Process used by UGL to manage risk assessments.
WHS Regulator	Workplace Health and Safety Regulator - refers to the statutory authority or government agency with responsibility for regulating work health and safety laws in local jurisdictions. E.g. Workplace Health and Safety QLD, WorkCover NSW, WorkSafe VIC
Work Cycle/ Roster	The working period scheduled between any significant break away from work: This includes (as examples): • Two weeks on, one week off; • Three weeks on, one week off, • Nineteen days on, nine off; and • Four weeks on, one week off etc.
Workers	Persons engaged in carrying out work activities. Includes UGL workers, contractors, labour hire staff and other personal such as volunteers, unpaid work-experience staff and visitors.

APPENDIX C FATIGUE GENERAL INFORMATION

What is Fatigue?

Fatigue is "a state of weariness resulting in a reduced ability to perform work safely and effectively. A fatigued person will:

- Be less alert;
- Less able to process information;
- Take longer to react and make decisions;
- Have less interest in working; and
- Be more prone to errors compared to a person who is not fatigued.

What causes Fatigue?

Inter-related causes of fatigue include:

- The time of day that work takes place;
- The length of time spent at work and in work related duties;
- Changes in working times, e.g. time zones, change from day to night shift;
- The type and duration of a work task and the environment in which it is performed, e.g. task repetition;
- The quantity and quality of rest obtained prior to and after a work period;
- Activities outside of work, such as second jobs and family commitments; and
- Individual factors such as sleeping disorders.

Signs of fatigue can include:

- Unpleasant muscular weariness;
- Tiredness in everyday activities;
- Reduced coordination and alertness; and
- Lapses in concentration;

Fatigue can also result in long term health problems such as:

- Digestive problems;
- Heart disease;
- Stress; and
- Mental illness.

Why fatigue is a risk to UGL?

Fatigue causes an increased risk of incidents through lack of alertness and concentration on tasks. When workers are fatigued, they are more likely to exercise poor judgement and have a slow reaction to signals. Fatigued workers are less able to respond effectively to changing circumstances.

Factors contributing to fatigue

There are five factors recognised as contributing to fatigue-related performance degradation:

- The duration of a duty period (time on task), and the rest breaks between shifts;

- Inadequate sleep (or sleep debt), which results from inadequate duration and quality of prior sleeps;
- Working and sleeping against natural body rhythms that normally program people to sleep at night and be awake and work during the day (Circadian effect);
- The type of task being undertaken; and
- Environmental factors.

APPENDIX D SNOW & ICE TRAFFIC MANAGEMENT PLAN

UTILITIES TRANSMISSION LINE TTMP - SNOW AND ICE TRAFFIC MANAGEMENT PLAN

Maragle 330kV Switching Station and 330kV Transmission Line Connections

Document number: **3200-0645-PLN-023-TMP-SIMP**

Revision date: **14/06/2024**

Revision: **0.06**

Plan Approval

Rev.	Approval	Name	Position	Organisation	Signature	Date
0.06	Approved By	Tim McCarthy	Project Manager	UGL		14/06/24
0.06	Endorsed By	Andrew Buttigieg	Senior PM (Delivery)	Transgrid		14/06/2024

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0.02	04/11/2022	Geoff Fletcher	Ian Rembridge	Trevor Noble	Initial issue of combined TTMP
0.03	15/05/2023	Ian Rembridge	Darrell Van Bruchem	Trevor Noble	Revised Transgrid Comments
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0.06	14/06/2024	Ian Rembridge	Darrell Van Bruchem	Tim McCarthy	Revised Stakeholder Comments

This plan has been developed by UGL to define the management objectives and practices that are to be implemented during the execution of Contract activities. It is the private property of UGL and without their consent must not be shown or given to any competitor or third parties or used by the recipient for purposes other than those for which they are issued. Any printed documents shall be considered as uncontrolled.

ACRONYMS AND ABBREVIATIONS

Term	Definition
CEMP	Construction Environmental Management Plan
COA	Conditions of Approval
CSSI	Critical State Significant Infrastructure
DPE	Department of Planning and Environment
DPI	Department of Primary Industries
EPA	Environment Protection Authority
EPL	Environmental Protection License
ERP	Emergency Response Plan
EMS	Environmental Management System
FCNSW	Forestry Corporation NSW
FRNSW	Fire and Rescue NSW
HSSE	Health, Safety, Security and Environment
KM	Kilometers
KNP	Kosciuszko National Park
KV	Kilovolts
MTCP	Marine Traffic Control Plans
MW	Megawatt
MWH	Megawatt hours
NEM	National Electricity Market
NPWS	National Parks and Wildlife Service
NSW	New South Wales
RFS	Rural Fire Service
SHL	Snowy Hydro Limited
TfNSW	Transport for New South Wales
UGL	UGL Engineering Pty Ltd
WHS	Work Health and Safety
FGJV	Future Generation Joint Venture

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1. INTRODUCTION

1.1 BACKGROUND

In 2020, Snowy Hydro Limited (SHL) obtained approval to expand the existing Snowy Mountains Hydro-electric Scheme (Snowy Scheme) by linking the existing Tantangara and Talbingo reservoirs through a series of underground tunnels and constructing a new underground hydro-electric power station (Snowy 2.0). Snowy 2.0 is expected to increase the generation capacity of the Snowy Scheme by almost 50 percent, providing an additional 2000 megawatts (MW) of generating capacity, and making approximately 350,000 megawatt hours (MWh) of large-scale storage available to the National Electricity Market (NEM).

To connect Snowy 2.0 to the NEM, a new transmission connection is required. NSW Electricity Networks Operations Pty Ltd as a trustee for NSW Electricity Operations Trust (known as Transgrid) received development approval on 14 September 2022 under Part 5 Division 5.2 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) for the construction and operation of the Snowy 2.0 Transmission Connection Project (the Project) to enable the grid connection of Snowy 2.0 to the NEM. The Project has been declared Critical State Significant Infrastructure (CSSI) under the New South Wales (NSW) State Environmental Planning Policy (State and Regional Development) 2011 a part of the CSSI declaration for the Snowy 2.0 and Transmission Project in Clause 9, Schedule 5.

Transgrid (the Proponent) has engaged UGL Projects Division (UGL) as the Principal Contractor to construct the Maragle 330kV Switching Station and 330kV Transmission Line Connection Project as part of the broader Snowy 2.0 Project.

1.2 PURPOSE

The purpose of this SITMP is to describe how the Project vehicles will interact with the road authority/manager and the public to control the movement of Project personnel, plant, light vehicles in extreme weather conditions including inclement weather, especially snow and ice. The plan is developed in line with the UGL's Safety Management System and will be implemented and managed across the project to prevent harm to the environment, project staff, subcontractors, and the public.

The key objective of the SITMP is to ensure that any potential plant or vehicle impacts during periods of extreme weather, including snow and ice are minimised.

1.3 SCOPE

The Scope of Works for Specification and Contract No. 1611 (Specification and Contract) is specific to the design and construction of Maragle 330kV Switching Station and 330kV Transmission Line Connections.

- Design and construction of Maragle 330kV Switching Station and supporting works.
- Design and construction of two 330kV transmission lines, cut into Line 64, the installation of OPGW on a section of Line 64, and supporting works.

2. OBJECTIVES

The Snow and Ice Traffic Management Plan addresses the following items as required for Principal Contractor.

To achieve this, UGL Contractors will:

- Ensure that exposure to the impact of snow and ice on project vehicles is minimised; and
- Provide appropriate training and resources to all personnel;
- Provide information and resources that provides an environment that supports UGL contractors to comply with all relevant legislation and other Project requirements.
- Liaise closely with the road owner agency to ensure snow ice risk mitigation measures are understood, consistent, applied on public roads utilised by the project; and that feedback can be received and any corrective actions applied promptly.

- UGL Contractor will actively limit its exposure to extremes of weather and in particular snow and ice by demobilising all non-essential operational field staff from the project and implement a reduction in works (weather dependent) for the period 1st June till 31st August (winter period).

2.1 REQUIREMENTS

Approvals and reporting obligations identified below have been considered and integrated into the Snow and Ice Traffic Management Plan. Compliance and project reporting will support the actionable line items identified below in the Table 1 and reporting obligations in Table 2

Table 1 Compliance Obligations

Reference No	Requirement	Document Reference
A12	The Proponent must ensure that all of its employees, contractors (and their sub-contractors) are made aware of, and are instructed to comply with, the conditions of this approval relevant to activities they carry out in respect of the development.	Section 5.2 Training Snow and Ice
B29	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 the figure 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): • within 1 month of the completion of construction, upgrading or decommissioning works, or within a timeframe agreed to by the relevant roads authority/manager; • on an annual basis during construction, or within a timeframe agreed to by the relevant roads authority/manager;	Section 5.4 Road Upgrades
	(b) repair (or pay the full costs associated with repairing) any damage to local roads on the transport route (including local road crossings):	Section 5.4 Road Upgrades
	(c) rehabilitate and/or make good any development related damage: (i) identified during the construction and/or decommissioning works if it could endanger road safety as soon as possible after it is identified but within 7 days at the latest, unless the relevant road authority/manager agrees otherwise; and (ii) identified in any dilapidation survey completed after the construction, upgrading or decommissioning works within 2 months of the completion of the survey to the satisfaction of the relevant roads authority/manager	Section 5.4 Road Upgrades
B32	Prior to commencing construction or road upgrades identified in condition B27 (whichever comes first), the Proponent must prepare a Traffic Management Plan for the development in consultation with FCNSW, NPWS, TfNSW, Snowy Valleys Council, Snowy Monaro Regional Council and NSW Police, and to the satisfaction of the Planning Secretary. This plan must include:	
	(d) details of the measures that would be implemented to: (i) minimise traffic safety impacts of the development and disruptions to local road users during construction, upgrading or decommissioning works, including: • responding to local climate conditions that may affect road safety, such as snow, ice, fog, dust, wet weather and flooding. • fatigue management.	This Plan Section 5.2 Snow & Ice Training
	(g) include a detailed: (ii) Driver's Code of Conduct; (iv) Snow & Ice Traffic Management Plan;	Section 5.2 Snow & Ice Training
	(h) include a program to:	Section 6 Compliance Management

Reference No	Requirement	Document Reference
	(i) ensure drivers working on the development receive suitable training on the code of conduct and any other relevant obligations under the Traffic Management Plan; (ii) record and track vehicle movements; and (iii) monitor and publicly report on the effectiveness of these measures.	Section 6.3 Reporting

Table 2 Reporting Obligations

Condition	Report Notification	Timing	Purpose
C7	Notification of incident	Immediately upon becoming aware of the incident	Information
C8 – C9	Notification of non-compliance	Within seven days upon becoming aware of any non-conformance. Note: a non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.	Information

3. ENVIRONMENTAL REQUIREMENTS

UGL contractors will comply with the requirements of the conditions of approval and the conditions relevant to snow and ice traffic management presented in 3200-0645-PLN-023-TMP-SIMP - Snow and Ice Traffic Management Plan - Table Table 1 and Table 2.

4. SNOW AND ICE ASPECTS AND IMPACTS

UGL contractor have taken the decision to demobilise all non-essential operational field staff from the project and consider a reduction in works (weather dependent) over Winter. The specific date of the reduction in works and re-commencement of major works will be assessed on an ongoing basis to ensure maximisation of available works program is balanced by the risk exposure of UGL contractors.

5. ENVIRONMENTAL CONSIDERATIONS

Due to the rapidly changeable climate and weather conditions within the project area specifically Fog, Snow and Ice, have the potential to pose safety concerns for road users during construction works. These rapidly changing weather conditions may occur at anytime across the construction timeline.

The management of weather events will be managed through induction, training and specific driving measures and will include:

- Speed reductions;
- Best practice vehicle maintenance (tyres, lighting etc.);
- Adherence to legal requirements for snow chains;
- Use of fog lights during periods of low visibility;
- Cessation of works; and
- Grading and de-icing (by others in accordance with TTMP Consultation procedures, refer TTMP Section 5.3) for snow removal; and “Advising suppliers of potential adverse weather and likely site shutdowns.

UGL will ensure there is appropriate training for such conditions and that the potential for adverse weather is communicated in driver inductions and relevant procurement processes.

5.1 WEATHER MONITORING

UGL will utilise the Bureau of Meteorology website to inform personnel of inclement weather and will in consultation provide weather warning updates to all UGL contractor across the Project.

Potential risks from severe weather or snow and ice events will be assessed regularly throughout the day. Where works planning identifies potential risks, this will be communicated to all project drivers (including sub-contractors and transport companies) via daily toolbox discussions and as required by radio communications.

Where road authorities close or undertake snow and ice maintenance on road used by the project, UGL will direct all UGL employees and contract drivers to layup until snow and ice removal has been completed, or fit chains if appropriate. Section 5.2 outlines the scope of induction and covers areas that have direct influence on compliance for vehicle operations across the project areas.

5.2 TRAINING SNOW AND ICE

All UGL personnel, delivery drivers and sub-contractors will undergo site induction training relating to traffic, transport and access management issues. The induction training will address elements related to traffic management including:

- Knowledge of and requirements for the TTMP and Snow & Ice Traffic Management Plan;
- Relevant legislation;
- Roles and responsibilities for traffic management;
- Light vehicle and heavy vehicle routes to and from site;
- Arrangements for transport of workers to site;
- Traffic, transport and access mitigation and management measures;
- Procedures to be implemented in the event of an incident (e.g. traffic accidents).
- All drivers shall be fit to drive 0.00 BAC
- Mobile phones shall not be operated in moving vehicles, plant or equipment. Where mobile phones are to be used, the vehicle must be stationary and parked in a safe place
- All vehicles and mobile equipment shall be fitted with seat belts. All personnel shall wear, and correctly fit and secure seatbelts provided at all times

Targeted training in the form of toolbox talks or specific training will also be provided to personnel with a key role in traffic, transport, and access management.

Examples of training topics include:

- Vehicle movement plans – approved heavy vehicle haulage routes, safe entry and exit and other
- Access restrictions;
- Driver behaviour and the conduct for heavy vehicles including permitted parking and layup areas;
- Delivery driver's induction that includes safe protocols to be followed whilst travelling on internal and external roads. The briefing will reinforce posted speed limits, advisory speeds, and Historic high accident points on winding sections of road;
- Driving in snow and during icy conditions; and
- Driver fatigue awareness training.
- De-icing & demisting of windscreens
- 4WD and HV operations in a snow environment
- Journey management and minimum clothing requirements

5.3 SNOW CHAINS

In accordance with TfNSW and NPWS requirements, all UGL, sub-contractors and Transgrid light two-wheel drive and heavy vehicles (including trailers) will be required to carry snow chains between the June and October long weekends when travelling to and from project sites. The use of chains will be at the discretion of drivers or the direction of TfNSW, NPWS officers (on NPWS roads) and NSW Police.

UGL project four-wheel drive vehicles are not required to carry snow chains, however drivers will undertake snow and ice driver training.

All UGL project personnel that operate a 2WD vehicle on the project will be required to carry snow chains and will be trained and deemed competent in the fitting of and driving with snow chains.

5.4 ROAD UPGRADES

External road and intersection upgrades required for the Snowy 2.0 project, are detailed in Section 5.1 of the Transport Management Plan. Where required, all road and intersection upgrades will be designed and constructed to comply with Ausroad and TfNSW specifications relevant to snow and ice management.

These measures may include:

- Installation of snow poles / guideposts
- Installation of additional warning sign for upcoming curves combined with advisory speeds
- Marking of centrelines with high visibility paint suitable for snow and ice conditions where appropriate; and
- Project specific snow chain fitting bays on internal project roads

Road upgrades and maintenance will be managed through the following measures:

(a) undertake an independent dilapidation survey to assess the:
(i) existing condition of all local roads on the transport route shown in the figure 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):

- within 1 month of the completion of construction, upgrading or decommissioning works, or within a timeframe agreed to by the relevant roads authority/manager;
- 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):
(c) rehabilitate and/or make good any development related damage:
(i) identified during the construction and/or decommissioning works if it could endanger road safety as soon as possible after it is identified but within 7 days at the latest, unless the relevant road authority/manager agrees otherwise; and
(ii) identified in any dilapidation survey completed after the construction, upgrading or decommissioning works within 2 months of the completion of the survey to the satisfaction of the relevant roads authority/manager

5.5 MAINTENANCE

In a snowfall event, maintenance of public roads will be undertaken by the relevant road authority to ensure there is no build-up of snow across the roads, the exception to this is for roads located within the project boundary where maintenance works will be undertaken by Future Generation. Note - Under certain conditions it may not be possible to ensure the roads are able to remain open.

Table 3 Regional and local roads utilised for Main Works

Name	Location	Authority
Link Road	Within KNP	NPWS
Elliott Way	Within KNP	NPWS
Lobs Hole Ravine Road	Within project boundary	Future Generation
Mine Trail Road	Within project boundary	Future Generation

6. COMPLIANCE MANAGEMENT

UGL induction training will address elements related to snow and ice traffic management including:

- Vehicle routes to and from site;
- Driver behaviour and the conduct for heavy vehicles including permitted

- Parking, lay-up areas and chain fitting bays; and
- Procedures to be implemented in the event of an incident (e.g. traffic accidents)
- Targeted training in the form of toolbox talks or specific training will also be provided to driving personnel Examples of training topics include:
- Vehicle movement plans – approved heavy vehicle haulage routes, safe entry and exit; and
- Other access restrictions;
- Delivery driver's induction that will include safe protocols to be followed whilst travelling on internal and external roads. The briefing will reinforce posted speed limits, advisory speeds;
- Historic high accident points on winding sections of road;
- Driving in snow and during icy conditions; and
- Driver fatigue awareness training.

Daily briefings via toolbox talks or pre-start briefs will be delivered utilising the Project communications procedures for personnel that drive on the project and supervisory staff with a key role in traffic, transport, and access management.

All sub-contracted drivers to UGL that are required to operate heavy and Over Size Over Mass (OSOM) vehicles will be informed of the hazards of driving in alpine conditions via the Project Pre Arrival Safety Flyer, given to all Project Suppliers at engagement. All UGL subcontractors will undertake their works in accordance with the TTMP and subordinate plans, including this SITMP. The procurement process for haulage services will include statistical performance of the sub-contractor for the previous 3 years as established for UGL subcontractors.

All personnel required to drive 4WD vehicles or drive in winter conditions will be required to complete additional approved 4WD and Snow and Ice Driver training.

Emergency Preparedness and Response Awareness training will be provided and will address identified incident scenarios. This content is included via inductions, awareness and refresher training and emergency drills.

UGL utilises In Vehicle Monitoring Systems (IVMS) vehicle tracking system software to ensure compliance with project requirements, safety regulations, as well as for monitoring the movement and locations of all vehicle assets (including HVs). The IVMS vehicle monitoring systems enables UGL to actively manage and monitor our fleet by recording data utilising tracking devices. IVMS vehicle tracking systems use hardware and software that tracks and collects data during the vehicle's operation so that managers and stakeholders can actively manage and monitor fleet vehicles and drivers to ensure optimal performance, as well as strict safety compliance using vehicle speed monitoring devices. All UGL Project vehicles and Sub-Contractor vehicles will be required to have IVMS units fitted, with records available on request either routinely or following and incident.

6.1 INSPECTION AND MAINTENANCE OF WORK AREAS DURING WINTER

UGL and all contractors will reduce construction activities during the winter period, to essential works and works suitable to the conditions to minimise risks associated with extreme weather and exposure. During this period scheduled site safety inspections will be undertaken to ensure the integrity of work compounds and construction sites.

Adverse weather conditions pose a potential threat to the health and safety of personnel undertaking safety, environmental and security inspections during the reduced works period. An appropriate risk review will be considered for the task or provision of additional and appropriate safety measures if the task is considered to be project or safety critical.

UGL will ensure the Project Safety Manager attends all Local Emergency Management Committee (LEMC) meetings during the winter period, to discuss and communicate inspection and maintenance operations as required.

UGL will participate in discussions for winter preparedness and inspection/maintenance with The Client, TfNSW, Police and NPWS prior to and throughout the winter season, either through the TTLG or other forums such as the Snow Clearing Operations stakeholders meeting coordinated by NPWS.

6.2 INSPECTIONS AND AUDITING

UGL will perform system audits and inspections to assess the effectiveness of the Safety Management System and as part of the project will report the on-going compliance with this SITMP.

Weekly WHS and Environmental inspections, monthly SWMS Audits and quarterly Transgrid external audits will monitor and report on the effectiveness of this plan and the control measures for open communication as necessary during regular consultation. Any deficiencies will be reported and escalated for action as applicable using the Synergy reporting system.

Where risk assessment or safety inspections identify opportunities for improvement, the actionable item will be managed according to the non-conformance risk profile. UGL will rectify the non-conformance as soon as possible and no later than 7 days after identification.

6.3 REPORTING

. UGL will report to the Client and other agencies as required on snow and ice related traffic management issues specific to the project.

Reporting requirements and responsibilities will include:

- Reporting of non-compliances and incidents to Transgrid;
- Dissemination of information across UGL contractors relating to notification of works commencement (including commencement and completion of the required road upgrades);
- The Client and / or other agency environmental inspection reports.

7. PERSONNEL

During travel in snow or ice conditions as part of the winter Project Operations, two (2) vehicles will transit to Maragle site to assess the viability of transiting staff to and from Tumbarumba. If snow and/or ice is observed or if vehicle transit presents a potential risk, UGL will stand down works for the day until safe access to site can be achieved. Travel to and from the Lobs Hole Project Site will be assessed and monitored via FGJV notices and gazetted road closures (Snowy Mountains Hwy and Link Rd), assessed daily and as required during winter months. The 4WD vehicles used for site assessment party to the sites shall also be fitted with a vehicle mobile radio, fog lights and amber rotating flashing light.

7.1 COMMUNICATIONS REPORTING PROTOCOL

Communication requirements for all UGL Contractor personnel who are travelling to remote or alpine locations must be aware that there are limited radio communication opportunities and mobile phone black spots in the mountains, and these should be considered . All personnel should allow extra time for travel during inclement weather conditions.

7.2 CLOTHING

Due regard must be given to situations where weather conditions can change unexpectedly. It is essential that appropriate and adequate clothing be accessible to protect personnel during such adverse weather conditions. The basic philosophy used when selecting clothing items recognises a number of important characteristics.

These include:

- Maintenance of body warmth by insulation
- High visibility water/weather proofing of outer clothing layers
- The need for transmission of moisture away from the body, particularly when undertaking high physical activity.
- The water, snow and windproof characteristics of synthetic fabrics being utilised for outer garments.
- Ultraviolet Radiation and wind burn protection
- Durability of the clothing

7.3 EMERGENCY EQUIPMENT

The amount and type of equipment to be carried by personnel working at a remote location will depend on the means of transport as well as the nature and duration of the tasks associated with travel. Consideration should be given to additional or alternative equipment, appropriate to the location and type of work to be undertaken.

7.4 EMERGENCY RESPONSE

In the event of an emergency, the emergency response button on the vehicle communication radio should be used.

- If a member of the party is injured, the other member should immediately carry out first aid (DRABC if required).
- In an emergency try calling 000 or 112 on your mobile phone. Mobile phone reception is poor across the project area.
- Protect the patient from the cold and/or heat and treat for shock.
- Follow the alpine survival guide and first aid training to ensure the best possible outcomes for the person(s) involved.
- If radio communication is not possible in that location, do not leave the patient unattended. If attempts to communicate have been unsuccessful and the situation is life threatening, activate an EPIRB (Emergency Personal Indication Radio Beacon) in accordance with instructions on the device.
- Be prepared to manage the casualty in field conditions.

APPENDIX E HEAVY VEHICLE SALVAGE PLAN

UTILITIES TRANSMISSION LINE TTMP - HEAVY VEHICLE SALVAGE PLAN

Maragle 330kV Switching Station and 330kV Transmission Line Connections

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This plan has been developed by UGL to define the management objectives and practices that are to be implemented during the execution of Contract activities. It is the private property of UGL and without their consent must not be shown or given to any competitor or third parties or used by the recipient for purposes other than those for which they are issued. Any printed documents shall be considered as uncontrolled.

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Acronyms and Abbreviations

Term	Definition
CEMP	Construction Environmental Management Plan
COA	Conditions of Approval
CSSI	Critical State Significant Infrastructure
DPE	Department of Planning and Environment
DPI	Department of Primary Industries
EPA	Environment Protection Authority
EPL	Environmental Protection License
ERP	Emergency Response Plan
EMS	Environmental Management System
FCNSW	Forestry Corporation NSW
FRNSW	Fire and Rescue NSW
HSSE	Health, Safety, Security and Environment
KM	Kilometers
KNP	Kosciuszko National Park
KV	Kilovolts
MTCP	Marine Traffic Control Plans
MW	Megawatt
MWH	Megawatt hours
NEM	National Electricity Market
NPWS	National Parks and Wildlife Service
NSW	New South Wales
RFS	Rural Fire Service
SHL	Snowy Hydro Limited
TfNSW	Transport for New South Wales
UGL	UGL Engineering Pty Ltd
WHS	Work Health and Safety
FGJV	Future Generation Joint Venture

1. INTRODUCTION

1.1 BACKGROUND

In 2020, Snowy Hydro Limited (SHL) obtained approval to expand the existing Snowy Mountains Hydro-electric Scheme (Snowy Scheme) by linking the existing Tantangara and Talbingo reservoirs through a series of underground tunnels and constructing a new underground hydro-electric power station (Snowy 2.0). Snowy 2.0 is expected to increase the generation capacity of the Snowy Scheme by almost 50 percent, providing an additional 2000 megawatts (MW) of generating capacity, and making approximately 350,000 megawatt hours (MWh) of large-scale storage available to the National Electricity Market (NEM).

To connect Snowy 2.0 to the NEM, a new transmission connection is required. NSW Electricity Networks Operations Pty Ltd as a trustee for NSW Electricity Operations Trust (known as Transgrid) received development approval on 14 September 2022 under Part 5 Division 5.2 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) for the construction and operation of the Snowy 2.0 Transmission Connection Project (the Project) to enable the grid connection of Snowy 2.0 to the NEM. The Project has been declared Critical State Significant Infrastructure (CSSI) under the New South Wales (NSW) State Environmental Planning Policy (State and Regional Development) 2011 a part of the CSSI declaration for the Snowy 2.0 and Transmission Project in Clause 9, Schedule 5.

Transgrid (the Proponent) has engaged UGL Projects Division (UGL) as the Principal Contractor to construct the Maragle 330kV Switching Station and 330kV Transmission Line Connection Project as part of the broader Snowy 2.0 Project.

1.2 PURPOSE

The purpose of this HVSP is to describe how UGL will manage heavy vehicle recovery and salvage during the delivery of Maragle 330kV Switching Station and 330kV Transmission Line Connections project. The plan is developed in line with the UGL's Safety Management System and will be implemented and managed across the project to minimise the potential impacts on the road network from unexpected accidents or breakdowns and the direct impacts on the environment, project staff, subcontractors, and the public.

1.3 SCOPE

The Scope of Works for Specification and Contract No. 1611 (Specification and Contract) is specific to the design and construction of Maragle 330kV Switching Station and 330kV Transmission Line Connections.

- Design and construction of Maragle 330kV Switching Station and supporting works;
- Design and construction of two 330kV transmission lines, cut into Line 64, the installation of OPGW on a section of Line 64, and supporting works; and
- Make available information and resources that provides an environment that supports UGL contractor's compliance with all relevant legislation and other Project requirements.

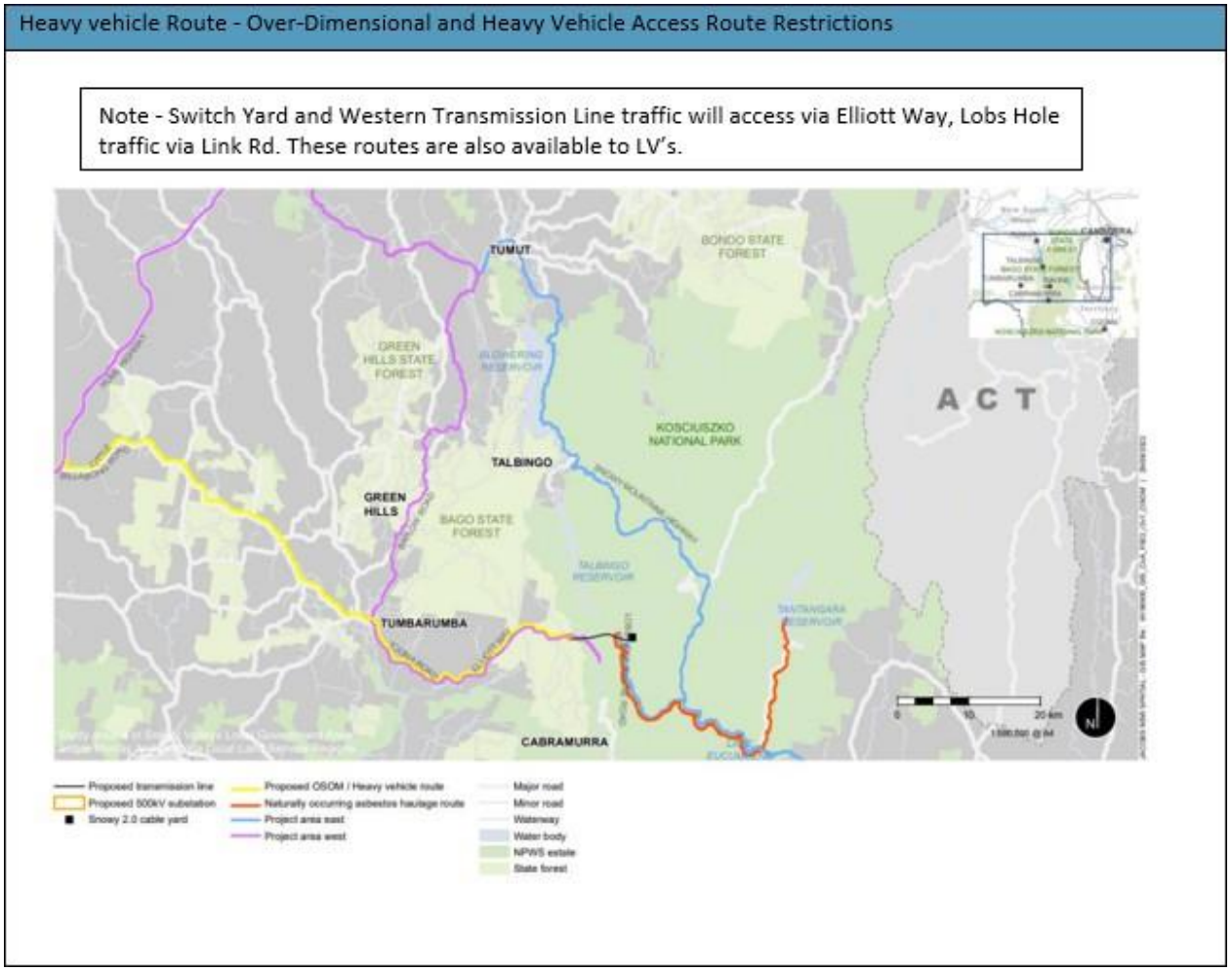

Figure 1 Heavy Vehicle Route

2. OBJECTIVES

The key objective of the HVSP is to ensure that any potential heavy vehicle recovery and salvage are minimised and within the scope permitted by the conditions of Approval.

To achieve this, UGL Contractors will:

- Ensure that appropriate measures are implemented to avoid or minimise the impact of project related heavy vehicle salvage, including safety related impacts;
- Ensure appropriate measures are implemented to comply with all relevant requirements;
- Provide appropriate training and resources to logistics and heavy vehicle drivers regarding breakdown and salvage protocols; and
- Make available information and resources that provides an environment that supports UGL contractor's compliance with all relevant legislation and other Project requirements.

2.1 REQUIREMENTS OF APPROVAL

UGL contractors will comply with the requirements of the conditions of approval and the conditions relevant to heavy vehicle salvage management presented in S2-FGJV-LOG-PLN-0011-D-Snowy 2.0 Main Works - Heavy Vehicle Salvage Plan - Table 1. This document is subordinate to the UGL Transport Management Plan.

Table 1 Compliance Obligations

Reference No.	Requirement	Document Reference
B32	Prior to commencing construction or road upgrades identified in condition B27 (whichever comes first), the Proponent must prepare a Traffic Management Plan for the development in consultation with FCNSW, NPWS, TfNSW, Snowy Valleys Council, Snowy Monaro Regional Council and NSW Police, and to the satisfaction of the Planning Secretary. This plan must include: (d) details of the measures that would be implemented to: (i) minimise traffic safety impacts of the development and disruptions to local road users during construction, upgrading or decommissioning works, including: responding to any emergency repair or maintenance requirements. (g) include a detailed: (i) Heavy Vehicle Salvage Plan;	This plan
B45	Waste must only be exported to a site licensed by the EPA for the storage, treatment, processing, reprocessing or disposal of the subject waste, or in accordance with a Resource Recovery Exemption or Order issued under the Protection of the Environment Operations (Waste) Regulation 2014, or to any other place that can lawfully accept such waste.	Section 3.1 Uncontrolled Release Management

Table 2 Reporting Obligations

Condition	Report Notification	Timing	Purpose
C7	Notification of incident	Immediately upon becoming aware of the incident	Information
C8 – C9	Notification of non-compliance	Within seven days upon becoming aware of any non-conformance. Note: a non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.	Information

3. HEAVY VEHICLE RISK ASSESSMENT

UGL contractor have taken the decision to reduce to essential only heavy vehicle operations from 1st June through to 31st August for each year of the Project. Monitoring of weather conditions and consultation with the relevant roads authority will dictate the usage of heavy vehicles, recommencement of major works will be assessed on an ongoing basis to ensure maximisation of available works program is balanced by the risk exposure of UGL contractors.

Reduction in the use of heavy vehicles and monitoring of weather conditions during the winter months will minimise the risk of heavy vehicle accidents due to slippery road conditions that have the potential to affect the availability of the road network and the direct impact on other road users. However, it is acknowledged that snow and ice can occur outside these months, weather and road conditions will be assessed and planning all vehicle movements will occur (HV and LV) around the shoulders of snow season.

An initial risk review has considered salvage operations are likely to apply to two distinct scenario's:

- Heavy vehicle accident (single or multiple vehicle); and
- Heavy vehicle breakdown (mechanical / engine);

3.1 UNCONTROLLED RELEASE MANAGEMENT

The uncontrolled release of fluids from a heavy vehicle has a direct and harmful effect on the environment, particularly in sensitive alpine regions. In the event of a mechanical failure or incident/accident, all UGL contracted heavy vehicles will carry appropriately sized spill management kits that are readily available, and the driver has been trained in the use and application of the kit to manage the uncontrolled release.

As a minimum the spill management protocol must address the flowing points:

- Attend to the release immediately;
- Where reasonably practicable, recover fuels and oils from damaged tanks under supervision of Site Environmental Advisor;
- If recovery of fuels and oils is not practicable and it is safe to do so, stop the spill at the source;
- For fuels and hydraulic spills notify the NSW Fire & Rescue (000) and your Supervisor;
- Contain the spill, use absorbent material around and over the spill;
- Ensure that all materials used in the clean-up are disposed of at a legal facility;
- Reference Contaminated Land Management Plan for regulated waste disposal as approved by EPA;
- Log the incident; and
- Notify Client (Transgrid) of EPA incident who will notify the EPA (131555), DPE and NPWS (as applicable).

4. HEAVY VEHICLE SALVAGE MANAGEMENT

UGL will deliver appropriate driver training, specific to the Project, considerate of alpine conditions and that the potential for adverse weather is communicated in driver inductions, toolbox discussions and team briefs in addition to the relevant procurement processes.

Preventative measures addressed in driver education include the following:

- Speed reductions;
- Best practice vehicle maintenance (tyres, lighting etc.);
- Adherence to legal requirements for snow chains;
- Use of fog lights during periods of low visibility;
- Cessation of works;
- Grading and de-icing (by others) for snow removal;
- Advising suppliers of potential adverse weather and likely site shutdowns;
- Passing protocols and blind spots;
- Transport communication strategies including regular call-in requirements;
- Convoy notifications, escorts, and traffic control;
- Keeping to stable ground;
- Spotters when reversing and camera checks;
- Maintaining rear travel distances; and
- vehicle and plant prechecks etc.

4.1 HEAVY VEHICLE BREAKDOWN

UGL will engage as part of a procurement process, an on-call heavy vehicle roadside vehicle breakdown service for the period of the project.

The service as a minimum will:

- Deliver roadside assistance to Project heavy vehicle breakdowns on a 24/7 basis across the project timeline;
- Ensure all roadside vehicle breakdown locations are visible to the public (hazard lights, witches hats);
- The on-call workshop service trucks will, as a minimum require amber-flashing beacons mounted atop of the service vehicle, operable hazard lights and area lighting; and
- Sufficient reflective bollards to ensure a safe working environment during repairs.

In the event of a breakdown without incident/accident, Project heavy vehicle drivers will undertake the following in order to ensure the safety of the on-call mechanic, the public road users and all Project personnel:

- Contact the Project Safety Manager (PSM) (PSM to facilitate mechanic response and notice of incident to the Client;
- Driver to establish a safe advance-warning zone for breakdown (hazard lights, witches hats);
- Project Safety Manager to notify salvage contractor for potential tow service;
- Driver to notify PSM when incident has cleared;
- PSM to notify the Client of de-escalation of breakdown event; and
- Transgrid will notify the road authority/manager to initiate public notification or other measures as required.

4.2 PUBLIC ROAD NETWORK HEAVY VEHICLE SALVAGE

In the event of an accident, involving a Project heavy vehicle on a public road requiring recovery or salvage, the Police, Ambulance (if required) and relevant road agency/authority (for that road section) will be notified by the Client with information provided by UGL PSM. Police attendance will be as the primary responder managing the accident scene for first response and or investigation. Consultation with NSW Police will consider if WorkSafe NSW notification is also required.

UGL will also notify the Client immediately after notifying emergency services to ensure open and transparent communications and supports notification to project Principal.

UGL will notify our heavy vehicle salvage contractor and traffic management provider to understand the indicative response time for arrival to site. The salvage operation will be coordinated through the emergency services agencies.

4.3 HEAVY VEHICLE SALVAGE

Where a UGL heavy vehicle has sustained a mechanical failure that is not repairable by roadside assistance, the same notification process as described in Section 4.2 (above) will be implemented. A salvage recovery plan and process will be developed onsite by our heavy vehicle salvage contractor.

When a heavy vehicle requires repair/salvage on tower access tracks, particularly on the steep incline of Sheep Station Ridge (towers 8-11) and adjacent to Elliott Way (towers 12-13) the terrain and location of the heavy vehicle will be communicated at the time of recovery/repair request to the company concerned.

In remote access tracks and Snowy Hydro private or closed roads, UGL's Client will provide appropriate notification to Future Generation and considerations will be made relevant to the size scope and complexity of the recovery. This will facilitate a combined response to any salvage operation in remote of closed areas.

As part of the tender for salvage and breakdown service, each successful tenderer will provide a three-year retrospective safety statistic performance in addition to appropriate work method statements. A review of risk assessment and mitigative methodology will also be undertaken. A heavy vehicle salvage operator will have at least UOC TLIC0011-Conduct heavy vehicle recovery operations and will have been deemed competent in:

1. Prepare for recovery operations;
2. Travel to recovery site;
3. Assess recovery site and winching requirements;
4. Hook-up disabled vehicle;
5. Tow disabled vehicle to delivery point;
6. Unhook disabled vehicle; and
7. Finalise recovery operations.

Through consultation with service providers and UGL's data analysis of heavy vehicle events the following high-risk areas have been identified and the key priority areas include:

- Prestart risk assessment;
- At risk workers;
- Musculoskeletal disorders;
- Working at heights;
- Mental and physical health;
- Traffic management; and
- Ancillary (non-driving) tasks.

4.4 RESPONSIBILITIES

UGL primary contacts, in the event of heavy vehicle breakdown, tow or salvage protocol will be to notify UGL's client (TransGrid) to undertake the statutory and project notifications (FCNSW, NPWS, visitors), with UGL being responsible for alerting Emergency Services, implementing local traffic control methods, and arranging breakdown services by alerting the salvage operator.

Table 3 Primary Contacts List Heavy Vehicle Incidents

Organisation / Agency	Contact Details
Transport for New South Wales	13 22 13
NSW National Parks and Wildlife Service	0419 400 550, After Hours 1800 629 104
Client (TransGrid)	PM Andrew Buttigieg 0429 676 165
Transport Management Centre	131 700
Environmental Protection Agency (EPA)	131 555
WorkSafe NSW	131 050
Emergency Services: Fire and Rescue NSW NSW Police NSW Ambulance	000 or 112
Traffic Control Contractor	TRAFX – Khancoban mb: 0427763244
Salvage Towing Contractor	Wagga Wagga Truck Towing - mb: 0419 693 369
Heavy Vehicle Breakdown Mechanic	Davidson's Heavy Vehicle Repairs Wagga Wagga 0401 194 338

As the Emergency Plan is the preferred process handling incidents including those involving Heavy Vehicles, you are encouraged to refer to the Emergency Plan for the most up-to-date Organisation / Agency and Contact Details.

5. COMPLIANCE MANAGEMENT

5.1 TRAINING

Induction training is undertaken for all UGL personnel and contractors engaged on the Snowy 2.0 - Maragle 330kV Switching Station and 330kV Transmission Line Connections and addresses the specific elements related to heavy vehicle salvage and recovery including:

- Vehicle routes to and from site;
- Insight into the local road network, including peak traffic periods and activities;
- Driver behaviour and the conduct for heavy vehicles including permitted parking and lay-up areas; and
- Procedures to be implemented in the event of an incident (e.g. traffic accidents or breakdown) and where vehicles require salvage or recovery.

Types of road conditions, users likely to be encountered at various times of the year and along which routes.

Specific training and situational awareness will be delivered via Team Briefs (weekly) and Toolbox Talks (daily) that manages and provides insight into the daily works schedule, heavy vehicle movements, fatigue and feedback from the previous days shift.

Typical areas of knowledge for operations personnel include but are not limited to those listed below:

- Vehicle movement plans – approved heavy vehicle haulage routes, safe entry and exit and other access restrictions;
- Delivery driver's induction that includes safe protocols to be followed when travelling on internal and external roads. The briefing will reinforce posted speed limits, advisory speeds, and historic high accident

points on winding sections of road;
- Communication of traffic incidents to the Client, road authorities and emergency services;
- Vehicle operations pre-checks;
- Driving in snow and icy conditions; and
- Driver fatigue awareness training.

Additional training requirements covered during UGL induction for personnel on the Snowy 2.0 - Maragle 330kV Switching Station and 330kV Transmission Line Connections addresses the following:

- Induction training to include snow & ice content;
- Black spot incident locations etc;
- Scheduled seasonal awareness training for snow & ice;
- VOC for plant; and
- Task Specific Training – such as snow chain fitting when required seasonally.

5.2 INSPECTION, TESTING AND AUDIT

UGL will develop desktop scenarios that address a number of heavy vehicle salvage and recovery situations as applicable to the exposure across the Maragle 330kV switching station and 330kV transmission line connections project.

The desktop scenarios will be workshopped with the Local Emergency Management Committee (LEMC) as soon as practicable after possession of site, if not possible beforehand. Validation of the scenarios to be assessed by all relevant stakeholders, including NSW Police, NPWS, TfNSW, LEMC and Councils. Where testing identifies any opportunities for process improvement, UGL will work collaboratively with TTLG to resolve the issues.

The HVSP will form part of the UGL audit and inspections regime as part of UGL systems certification program and will be reviewed and audited periodically, at premobilisation, post mobilisation and quarterly thereafter. It will audit and inspect such items including but not limited to;

- Vehicle pre-check – Heater, wipers, lights, tires, breaks, 4WD, de-icing, battery, alpine fuel, radiator fluid;
- Load checking (especially for HRs) – Straps & tension, dunnage, excess snow, trailer lights, brakes etc; and
- Journey Management Plan and prechecks – Weather forecast, black ice risk, coms protocols, road closure.

5.3 REPORTING

As outlined in Section 4 of this document all heavy vehicle incidents, breakdowns and accidents have a well-defined process of notification and escalation of scenarios by severity. In all situations UGL will notify the Client in a timely manner of all heavy vehicle events to ensure open and transparent communications that facilitates upward reporting. The effectiveness of the HVSMP will be managed by the selection process of HV transport companies, training, inspection, auditing, hazard reporting, incident reporting data, non-compliance reporting, closeout effectiveness as monitored in Synergy.

5.4 PROCUREMENT

UGL will procure a roadside heavy vehicle rescue provider on a 24/7 basis and a heavy vehicle salvage operator for all Project vehicles on the Snowy 2.0 project. As part of the procurement process the contracted service provider must provide all insurances as part of the submission to ensure adequate coverage of liabilities for the service delivery. In support of the contractor submission a statement of capability and validation of competency for employees servicing the contract will be required.

The heavy vehicle salvage procedures will address the actions to be undertaken, responsibility of individuals, communication protocols and safety obligations in response to heavy vehicle incidents. A copy of the selected salvage contractors procedures addressing the aforementioned tasks, will be appended to updates of this TTMP/HVSMP.

UGL roadside rescue and salvage strategy will include:

- Procedures in the event of a heavy vehicle breakdown;
- Procedures in the event of a heavy vehicle accident;
- Communication channels between drivers, management, road authorities and The Client; and
- Organisation of a heavy vehicle salvage and breakdown response mechanic.

5.5 COMMUNICATIONS

Communications protocols during an incident – Each project vehicle will be fitted with a UHF two-way radio. Immediate hazard reporting on Channel 40, to warn the general public and commercial road users. Where safe to do so, the driver of the heavy vehicle (if not incapacitated) will be expected to warn other road users by non-radio means as well, until further assistance arrives on the scene. Project vehicle operators involved in an incident will follow the communication requirements detailed in the Emergency Plan relating to vehicle incidents, to ensure key project staff are alerted and appropriate emergency services / road authority / managers and stakeholders, are correctly notified.

APPENDIX A RISK REGISTER FOR HEAVY VEHICLE SALVAGE

Activity	Hazard	Risks	Initial Risk Rating	Controls	Revised Risk Rating
Heavy Vehicle Salvage	Accessing incident site	Bogged tow truck. Wild animals Heavy vehicle accident	High	Ground assessed before accessing Speed limits and awareness Drive to road conditions	Moderate
	Attaching tow/axle lift	Manual handling injury Cuts/scrapes/bruises	Moderate	Two person lifts Correct manual handling techniques Gloves for task	Low
	Lift/tow	Lift failure Tow strap/chain failure	High	Inspection of equipment and maintenance Chains and straps inspected and tagged as tested Personnel out of line of fire	Moderate
	Egress from incident site	Bogged tow truck. Wild animals Heavy vehicle accident Loss of load (recovered vehicle)	High	Ground assessed before accessing Speed limits and awareness Drive to road conditions Driver chain of responsibility, check load securing	Moderate

APPENDIX F MARINE TRANSPORT MANAGEMENT PLAN

UTILITIES TRANSMISSION LINE TTMP - MARINE TRANSPORT MANAGEMENT PLAN

Maragle 330kV Switching Station and 330kV Transmission Line Connections

Document number: **3200-0645-PLN-023-TMP-MTMP**

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0.03	15/05/2023	Ian Rembridge	Darrell Van Bruchem	Trevor Noble	Revised Transgrid Comments
0.04	05/09/2023	Ian Rembridge	Darrell Van Bruchem	Tim McCarthy	Revised Transgrid and NPWS Comments

This plan has been developed by UGL to define the management objectives and practices that are to be implemented during the execution of Contract activities. It is the private property of UGL and without their consent must not be shown or given to any competitor or third parties or used by the recipient for purposes other than those for which they are issued. Any printed documents shall be considered as uncontrolled.

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ACRONYMS AND ABBREVIATIONS

Term	Definition
CEMP	Construction Environmental Management Plan
COA	Conditions of Approval
CSSI	Critical State Significant Infrastructure
DPE	Department of Planning and Environment
DPI	Department of Primary Industries
EPA	Environment Protection Authority
EPL	Environmental Protection License
ERP	Emergency Response Plan
EMS	Environmental Management System
FCNSW	Forestry Corporation NSW
FRNSW	Fire and Rescue NSW
HSSE	Health, Safety, Security and Environment
KM	Kilometres
KNP	Kosciuszko National Park
KV	Kilovolts
MTCP	Marine Traffic Control Plans
MW	Megawatt
MWH	Megawatt hours
NEM	National Electricity Market
NPWS	National Parks and Wildlife Service
NSW	New South Wales
RFS	Rural Fire Service
SHL	Snowy Hydro Limited
TfNSW	Transport for New South Wales
UGL	UGL Engineering Pty Ltd
WHS	Work Health and Safety
FGJV	Future Generation Joint Venture

1. INTRODUCTION

1.1 BACKGROUND

In 2020, Snowy Hydro Limited (SHL) obtained approval to expand the existing Snowy Mountains Hydro-electric Scheme (Snowy Scheme) by linking the existing Tantangara and Talbingo reservoirs through a series of underground tunnels and constructing a new underground hydro-electric power station (Snowy 2.0). Snowy 2.0 is expected to increase the generation capacity of the Snowy Scheme by almost 50 percent, providing an additional 2000 megawatts (MW) of generating capacity, and making approximately 350,000 megawatt hours (MWh) of large-scale storage available to the National Electricity Market (NEM).

To connect Snowy 2.0 to the NEM, a new transmission connection is required. NSW Electricity Networks Operations Pty Ltd as a trustee for NSW Electricity Operations Trust (known as Transgrid) received development approval on 14 September 2022 under Part 5 Division 5.2 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) for the construction and operation of the Snowy 2.0 Transmission Connection Project (the Project) to enable the grid connection of Snowy 2.0 to the NEM. The Project has been declared Critical State Significant Infrastructure (CSSI) under the New South Wales (NSW) State Environmental Planning Policy (State and Regional Development) 2011 a part of the CSSI declaration for the Snowy 2.0 and Transmission Project in Clause 9, Schedule 5.

Transgrid (the Proponent) has engaged UGL Projects Division (UGL) as the Principal Contractor to construct the Maragle 330kV Switching Station and 330kV Transmission Line Connection Project as part of the broader Snowy 2.0 Project.

1.2 PURPOSE

The purpose of this plan is to manage marine traffic risks associated with construction works for the Maragle 330kV Switching Station and 330kV Transmission Line Connections Project as part of the Snowy Hydro 2.0 upgrade.

This Marine Transport Management Plan (MTMP) sets out requirements for the management of waterway traffic associated with the Maragle Project scope of works in order to optimise safe movement of works vessels and recreational craft.

This plan is based on the requirements as set in Australian Standard 1742.3-2019 and Roads and Maritime Supplement document will be used to provide authorisation of all actions in relation to water traffic management. This document and subsequent iterations will be made available to the client for the purposes of reviewing and auditing. It also addresses all Conditions of Approval.

The aim of this MTMP is to notify the Regulatory Authorities, The Principal, UGL project staff, subcontractors, site personnel and the local public of changes to marine traffic conditions and to guard against operations which may pose a hazard to Marine Works Areas (MWA).

This MTMP will be used to ensure a safe interface between construction vessels and other waterway users during;

- Construction works for the Maragle Project;
- Delivery of plant and equipment;
- Transporting UGL staff and subcontractors to site; and
- Safe navigation of Talbingo Reservoir for workgroups and recreational boating.

1.3 SCOPE

The Scope of Works for Specification and Contract No. 1611 (Specification and Contract) is specific to the design and construction of Maragle 330kV Switching Station and 330kV Transmission Line Connections.

- Design and construction of Maragle 330kV Switching Station and supporting works; and
- Design and construction of two 330kV transmission lines, cut into Line 64, the installation of OPGW on a section of Line 64, and supporting works.

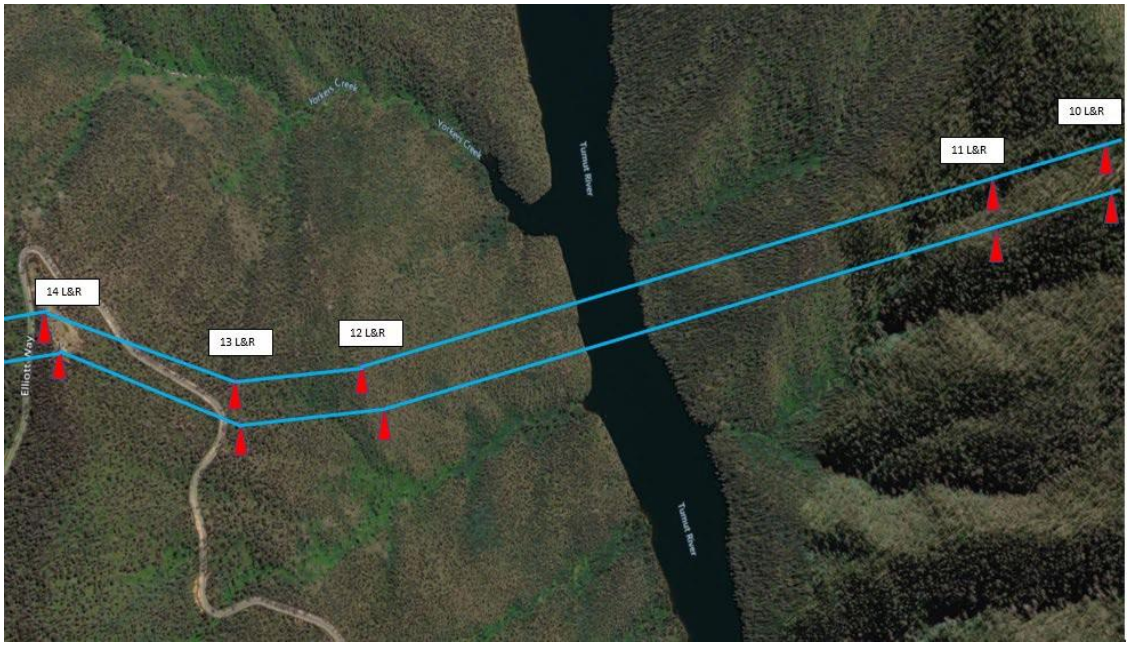


Figure 1 Talbingo Reservoir Conductor Crossing

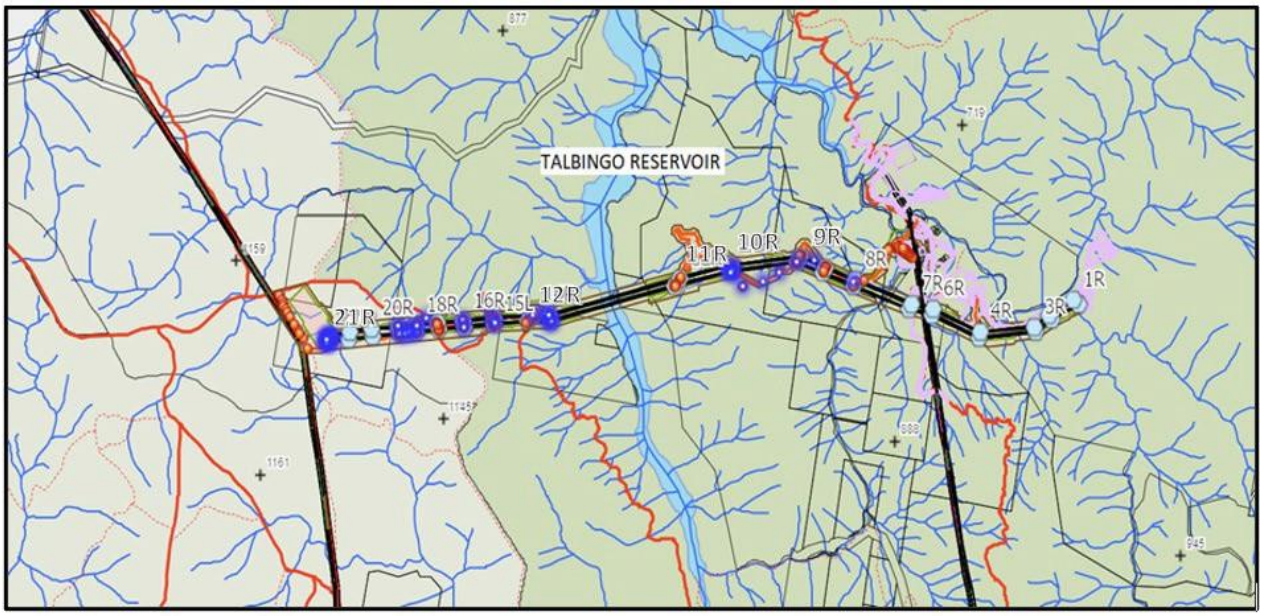


Figure 2 Location of Water Crossing for Stringing Activity

2. OBJECTIVES

The Marine Transport Management Plan addresses the following items as required for Principal Contractors to comply with the Deed and Traffic Management Plan:

- Interface with marine traffic in Talbingo Reservoir; and
- Liaison with key Stake Holders and the Public, National Parks and Wildlife Service, Forestry Corporation NSW, Snowy Valleys Council, Snowy Hydro

A copy of this Marine Transport Management Plan (MTMP) shall be kept on site and will be reviewed monthly or at a more frequent period as required by a change to the project conditions.
The effectiveness of the plan will be evaluated via project audits.

The MTMP also covers details of the Project Scope and will fulfill the following minimum requirements:

- Consultation and compliance with the Principals requirements as set out in the conditions of the Marine Transport Management Plan Approval;
- Environmental protection and security measures;
- Program requirements;
- Procedures to be used for moving construction vessels during normal operations and inclement weather;
- As constructed information and other records;
- The provision to the Principal Representative of details of marine works methods and planned resource levels;
- Minimisation of disruption to construction vessels operations and recreational craft;
- Management of recreational boating; and
- Communication with the Principal and Public around limitations of usage for nominated areas on Talbingo Reservoir.

2.1 REQUIREMENTS OF APPROVAL

Approvals and reporting obligations identified below have been considered and integrated into the Marine Transport Management Plan. Compliance and project reporting will support the actionable line items identified below in the Table Table 1 and reporting obligations in Table 2.

Table 1 Compliance Obligations

Reference No	Requirement	Document Reference
B30	(c) restrict development-related vessel speeds on Talbingo Reservoir to current TfNSW speed limits.	Appendix E Section 9 Marine Traffic Control Plans
B32.	Prior to commencing construction or road upgrades identified in condition B27 (whichever comes first), the Proponent must prepare a Traffic Management Plan for the development in consultation with FCNSW, NPWS, TfNSW, Snowy Valleys Council, Snowy Monaro Regional Council and NSW Police, and to the satisfaction of the Planning Secretary. This plan must include:	TTMP
	(a) details of the transport route to be used for all development-related traffic;	Appendix A
	• procedures for stringing cables and transmission lines across roads and Talbingo Reservoir;	Appendix D Methodology TBA
	• minimising impacts to the public using Talbingo Reservoir and any water related infrastructure such as the O'Hares campground boat ramp;	Section 7.1 Talbingo Reservoir
	(f) ensure any vessel or structure occupying waters must display appropriate shapes and lights in accordance with the Marine Safety (Domestic Commercial Vessel) National Law 2012; (iii) Marine Transport Management Plan; (v) Communication Strategy to keep the public informed about the impacts of the development;	MTMP Section 15
B39	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 12.2 Refuelling Section 12.3 Chemicals and Dangerous Goods Storage

Table 2 Reporting Obligations

Condition	Report Notification	Timing	Purpose
C7	Notification of incident	Immediately upon becoming aware of the incident	Information
C8 – C9	Notification of non-compliance	Within seven days upon becoming aware of any non-conformance. Note: a non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.	Information

2.2 REFERENCE DOCUMENTS & LEGISLATION

The primary reference document for this plan, is the conditions set out in the Transport Management Plan Approval for this project. Works under Construction (WUC) are to adhere to the Principal Contractor's Project Manager and where Marine activities are to be undertaken, the Waterways Controller, in addition to the following legislation:

NSW Legislation:

- *Marine Pollution Act 2012*;
- Marine Pollution Regulation 2014 (NSW);
- *Marine Safety Act 1998*;
- Marine Safety Regulation 2016 (NSW);
- *Work Health and Safety Act 2011* (NSW); and
- Work Health and Safety Regulation 2011 (NSW).

Commonwealth Legislation:

- *Shipping Registration Act 1981*;
- *Navigation Act 2012* and Marine Order 64;
- Maritime Safety (Domestic Commercial Vessel) National Law Act 2012; and
- Marine Safety (Domestic Commercial Vessel) National Law Regulation 2013.

3. LICENCES & PERMITS

An aquatic licence will be obtained from TfNSW for in-reservoir construction activities and exclusion zones in accordance with Section 12 and 18 of the *Marine Safety Act 1998*. Appropriate notifications of exclusive use areas and waterway restrictions will be made including statutory Marine Notices published in the NSW Government Gazette. Enquiries will also be made as to other media that may be appropriate or assist in the dissemination of notifications or advice to commercial / public users of upcoming waterway restrictions associated with the project.

3.1 GUIDELINES & STANDARDS

The guidelines also considered in the completion of this Marine Transport Management Plan include:

- Safety Management System (SMS) Guidelines – Commercial Vessels (RMS); and
- Guidelines for a Safety Management System (Australian Maritime Safety Authority, 2018)

4. ENVIRONMENTAL CONSIDERATIONS

4.1 TALBINGO RESERVOIR & RECREATIONAL FACILITIES

Talbingo Reservoir is approximately 5km south of the township of Talbingo. The reservoir has a mixed usage. Public access to the reservoir for boats is from a concrete boat ramp on the eastern side of the dam wall. The reservoir is also accessible from points within KNP including Lobs Hole Ravine campground and O'Hare's Camping and Rest Area. Access to Lobs Hole Ravine Campground is closed as part of the Snowy Hydro project. Picnic tables and toilets are provided at both the boat ramp and the spillway.

Vessel counts and movement surveys undertaken between March and April 2018, reviewed as part of the Excavated Rock Placement - Navigation Impact Assessment for Talbingo Reservoir (RHDHV, 2019) indicate a peak daily demand of 75 vessels per day using the boat ramp and a typical daily demand of less than 10 vessels.

5. CONSTRUCTION OPERATING PROTOCOLS FOR THE RESERVOIR

The UGL Waterway Controller is:

- Name: Darrell Van Bruchem
- Mobile: 0447 307 244.

The Waterway Controller is to review and approve or reject the Marine Transport Management Plan (MTMP). Communications with the Waterway Controller is absolutely critical to the ongoing safety and efficient movement of vessels within the Marine Works Areas (MWA).

UGL Contractors operate across both land and water and coordination of all construction staff associated with the stringing of conductors over the Talbingo Reservoir will be an ongoing process for the duration of aerial works. All waterway movements must be planned and communicated with the Waterway Controller to ensure vessel movements and interaction with pleasure craft is coordinated and timely.
The 24hr contact for the project for shall be:

- UGL Project Manager – Trevor Noble Mob 0413 027 480
- UGL Site Safety Manager – Ian Rembridge Mob 0466 517 794
- Waterway Controller – Darrell Van Bruchem Mob 0447 307 244

The Waterway Controller directs all construction vessel movements as required to participate in the Marine Works Area (MWA). All construction vessels for this project shall seek clearance to move from the Waterway Controller, 15minutes before moving from berths within the MWA area.

All vessel movements will be coordinated with the aerial stringing activities, with no movement of vessels permitted into the exclusion zone or under the fall zone of the stringing activity.

No vessel movements will be approved under the drop zone if the stringing operation is under tension via winches or is static without being terminated in permanent conductor clamps.

6. REPORTING

The Principal Contractor will report to the Client and other agencies as required any maritime traffic management issues related to the project. Notifications will include maritime incidents that adversely impact maritime traffic associated with the project.

Quarterly meetings with the Snowy Valleys Local Emergency Management Committee will be attended by UGL Project management to communicate Project impacts to all attendees and Local Council and NPWS for reporting and

communication to the Public. Also, at significant milestones that will impact any Major Stakeholders and the local community.

Reporting periodicity will include be monthly for internal project reports and six-monthly for compliance reporting. Six-monthly reports will track compliance against the conditions of approval and the revised environmental management measures.

7. MARINE WORKS AREA

Construction maritime traffic and temporary exclusion zones on Talbingo Reservoirs has the potential to impact recreation vessels and activities and will be made up of a combination of the following:

- Construction vessels being mobilised at existing boat ramp locations;
- Vessel mooring within the reservoir; and
- Associated work vessels and crew transport vessels assisting with the above work as well as other work including survey and monitoring.

The Marine Works Area (MWA) will be defined for Talbingo Reservoir. During stringing works the delineated exclusion zone area will be closed to recreational and fishing vessels and access to the work area will be restricted to essential construction vessels. These works are estimated to last no longer than three weeks and will avoid being undertaken during holiday periods. Consultation will be held with key stakeholders to determine the appropriate and minimal timeframe this section of the waterway will be off-limits for the least amount of time.

The MWA, and any obstructions such as anchor lines will be marked with lit yellow marker buoys. Indicative mooring plans shows typical vessel location for the works. Mooring plans will be adjusted throughout the works to suit various activities and works progress.

7.1 TALBINGO RESERVOIR

The main construction activities requiring marine transport at the Talbingo Reservoir will be:

- Conductor stringing on 330kV transmission circuits; and
- Management of recreational vessels on the Reservoir during string activities.

There will be a drop zone and a further 30 metre exclusion zone in place during stringing works and when conductors are under tension (see Appendix D).

Marine based equipment will be required for these works and will include support work vessels. These vessels will be launched and generally operated outside of the exclusion zone as delineated by marker buoys. As the work area is focused within Ravine Bay and the Yarrangobilly arm of Talbingo Reservoir the majority of Talbingo Reservoir will not be impacted by works and will remain available to the public for normal recreational use.

Marine operations will have a direct impact on O'Hare's boat ramp and campground. To reduce the construction related impacts to the public, UGL will;

- Minimal construction traffic near public facilities;
- Utilise drones to fly winch ropes to winch location;
- Remove work vessel at the end of each shift to clear the boat ramp;
- Post warning advice (MTMP Appendix E) at O'Hares and Talbingo boat ramps on exclusion zones when winching conductor cables across Talbingo Reservoir; and
- Ensure works are scheduled to ensure construction related activities do not impact public use of roads and waterways during key recreational times.

Some vessel movement outside of this area may also be required for monitoring and associated investigation activities however, generally, this work will use one work vessel.

Vessel movement between the Middle Bay barge ramp and the Talbingo Dam boat ramp may occur during the construction period. Routine use of the Talbingo Dam boat ramp is not anticipated however periodic use may be required for safety or logistics requirements.

8. HOURS OF OPERATION

Marine construction operations will potentially occur 0600-1800 hrs (and out of hours works approval) per day, 7 days per week contingent on weather conditions, noise and vibrations impacts. All works are to be scheduled to ensure construction related activities do not impact public use of roads and waterways during key recreational times.

9. MARINE TRAFFIC CONTROL PLANS

Developed of specific Maritime Traffic Control Plans (MTCPs) will be part of the construction planning process for construction activities that affect marine traffic conditions and the safety of vessels and general public utilising Talbingo Reservoir. The MTCP will be progressively developed and reviewed throughout construction and maintenance in accordance with this MTMP and the Roads and Maritime requirements. Master of Marine vessels will be inducted into the marine compliance requirements of the MTCPs, including reservoir speed limits, exclusion zones and other safety protocols.

MTCP developed by UGL Contractor will be undertaken in consultation with the Client and TfNSW.

Emergency Services will be notified prior to the implementation of any MTCP to ensure that they are aware of the potential impacts that may affect emergency responses. Emergency Services will be consulted in advance of commencement of marine works, with a number of scenarios being work shopped to provide in advance knowledge, resourcing requirements, and response capabilities for project incident management.

10. INSPECTIONS & AUDITS

Inspections will be coordinated by the Waterway Controller and will occur weekly. The completed inspection reports will be provided to the Client as part of the Principal Contractor monthly reporting obligation. The exact duration of these works is not known with high certainty at the time of writing but are expected to be approximately 3 weeks, weather dependant. As an output of the audit and inspection regime, any non-conformance or opportunity for improvement will be documented, and provided to the Client with a rectification methodology and timeframe to ensure that the safety of waterway users and workers is not compromised. All rectification will be completed within 7 days based of a risk profile.

11. TRAINING

UGL Contractor personnel will be inducted into the requirements of the project. Specific training and induction will be provided to all personnel that work on or adjacent to the MWA relating to marine compliance, reporting, operations, and emergency response.

Specific training will be delivered via Team Briefs (weekly) and Toolbox Talks (daily) that manage daily works schedule, vessel movements, fatigue and feedback form the Waterways Controller from the previous days shift.

12. SAFETY

Working construction vessels will maintain radio watch on VHF Radio Channel [TBC] at all times. Where any Construction Vessel has grounded or been involved in a collision or near miss with another vessel, navigation mark, wharf or structure, the master of the Construction Vessel will immediately report the incident to UGL Waterway Controller.

The Waterway Controller is responsible for the notification of a waterway incident to the UGL Project Manager and Safety Manager to determine if statutory notifications are required.

In complying with this direction, the master of every Construction Vessel involved in any reported collision or incident shall:

- Comply with any direction from the Waterway Controller;

- As required prepare a written report for the Waterway Controller;
- Within 24hrs of notifying the Waterway Controller, provide in writing, the circumstances of the collision or incident;
- A formal investigation will be undertaken, detailing the incident, and will be provided to the Principal; and
- Cooperate fully in any subsequent investigation into the collision or incident.

All incidents will be investigated using the UGL Incident Management-Reporting and Investigation Procedure, to enable lessons learned and corrective actions to prevent reoccurrence. All incident and non-compliance notifications will be done in accordance with CoA's C7 – C9.

All incidents will be reported to TransGrid for communication to the relevant authority.

A written report must be forward to Roads and Maritime within 24 hours setting out the particulars of the incident if one of the following applies:

- The incident has resulted in the death, or injury to, a person;
- The incident has resulted in damage in excess of $5,000 to a vessel or any other property; and
- Damage or risk to the environment has occurred.

12.1 NAVIGATIONAL AIDS, MARKERS & EXCLUSION ZONES

Working construction vessels will need to arrange anchor wire and ropes to minimise impact to the working zone. Denotation of anchors and mooring lines will be required through the deployment of lit yellow marker buoys appropriate shapes and lights, displayed between dusk and dawn.

UGL Contractor's Waterway Controller will be advised for any construction related movements in navigable sections of the river and reservoir where recreational vessels could be affected, (especially at the beginning and end of each shift).

The corners of all work vessels will be marked with appropriate navigation and clearance lights.

The exclusion zone boundary will be lit, a low intensity light such as the SL15 from Sealite, or equivalent, is to be attached to a small buoy and will be located at multiple locations along the exclusion zone.

As part of the procurement process, the successful tenderer will ensure that all vessels, staffing and services provided to UGL complies with Marine Safety (Domestic Commercial Vessel) National Law 2012. A Quality and Safety audit process is applied to all contracted services providing assurance that the service comply with all legislative and regulatory obligations. This process is report to the client periodically over the duration of the works.

12.2 REFUELLING

The re-fuelling of mobile equipment will not be performed onboard the construction vessel. All refuelling will be performed utilising a fuel cell on land. The flexible pipe connected to the bowser is fitted with a manually operated pump and this is equipped with a lock that will be locked shut when not in use.

Australian Standards and guidelines, particularly AS1940 The storage and handling of flammable and combustible liquids establishes the performance and benchmark auditing for this process.

The fuel cell has a fire extinguisher and spill kit that is stored nearby and is built with an internal bunded tray. The item being refuelled also needs to be bunded during refuelling.

Given the sensitive nature of Talbingo Reservoir a number of environmental considerations are proposed as listed;

1. Minimise refuelling on water by checking and filling tanks before launching.
2. Keep stored volumes of fuel to a minimum.
3. Make available suitable hydrocarbon spill kits onboard the vessel with floating boom and hydrophobic spill pads.
4. At refuelling location make available hydrocarbon spill kits.
5. As part of the prestart checklist or vessel also inspect for fuel leaks onboard.

As part of the refuelling process an exclusion zone will be established around the vessel. All personnel involved in fuelling equipment will wear the following PPE:

- Rubberised or chemical gloves;
- Appropriate eye protection;
- Long pants;
- Hi-Vis long sleeve shirt;
- Safety boots; and
- Personal Flotation Device (PFD)

12.3 CHEMICALS & DANGEROUS GOODS STORAGE

The Principal Contractor will ensure that all risks associated with the handling, storage and use of hazardous materials are managed as per the Safety Data Sheet (SDS) and in accordance with SafeWork NSW Code of Practice Managing Risks of Hazardous Chemicals in the Workplace August 2019.

All hazardous materials will be used and stored in accordance with the manufacturer's specifications and the legislative requirements.

13. VESSEL SPECIFICATIONS

UGL Contractors will be mobilising pieces of floating plant to Maragle 330kV Switching Station and 330kV Transmission Line Connections Project on Talbingo Reservoir. The vessels required to support this Project are listed below:

- 6m Aluminium Work Barge.

14. TRAFFIC MANAGEMENT PLAN

The travel path for construction vessels to and from the exclusion zone will be developed in consult with the Client and TfNSW and has been depicted in Appendix A.

During the period of marine works stringing marker buoys and lights will delineate the exclusion zone and a notice to recreational vessel operators will be posted at boat ramps.

Additional community consultative meetings will be held to ensure the views of all relevant stakeholders have been taken into consideration. These relevant stakeholders will be informed in advance of all marine works to ensure the safety and security of the MWA and exclusion zones. These additional meetings will be held at an appropriate time in advance if the marine works. Contact Catherine McGufficke 0488 690 457 (Lumea) for detail.

14.1 NOISE & VIBRATION MANAGEMENT

The following mitigation measures will be put in place to keep noise to a minimum;

- Diesel powered machines such as winches will not be left idling unnecessarily, particularly during rest breaks;
- Machinery engine covers are to be closed at all times;
- Operators will be encouraged to use less than full engine speed, where full power is not required, to minimise noise; and
- Plant and equipment will be regularly inspected to ensure all assets are in good working order.

Noise will be monitored, using a hand-held metering device, during the high noise periods. The results will be used to devise control methods where required with those potentially impacted by such proposed noise and agreement reached on appropriate mitigation measures to be adopted.

15. COMMUNICATION WITH STAKEHOLDERS

All communication with stakeholders to be directed through the UGL Project Manager and Communications team. Contact details have been established for stakeholders and the public for communication and notifications regarding the works.

Regular liaison and communication will be held with NPWS Communications Team regarding all traffic and transport that may affect NPWS roads and assets. Signage will be erected at campgrounds and boat ramps on NPWS owned land in the Project area to inform users of upcoming works and any restrictions.

The Project Manager Tim McCarthy will be responsible for notifying stakeholders and public bodies regarding stringing and construction activities that will affect the Talbingo Reservoir usage, including boat ramps and access.

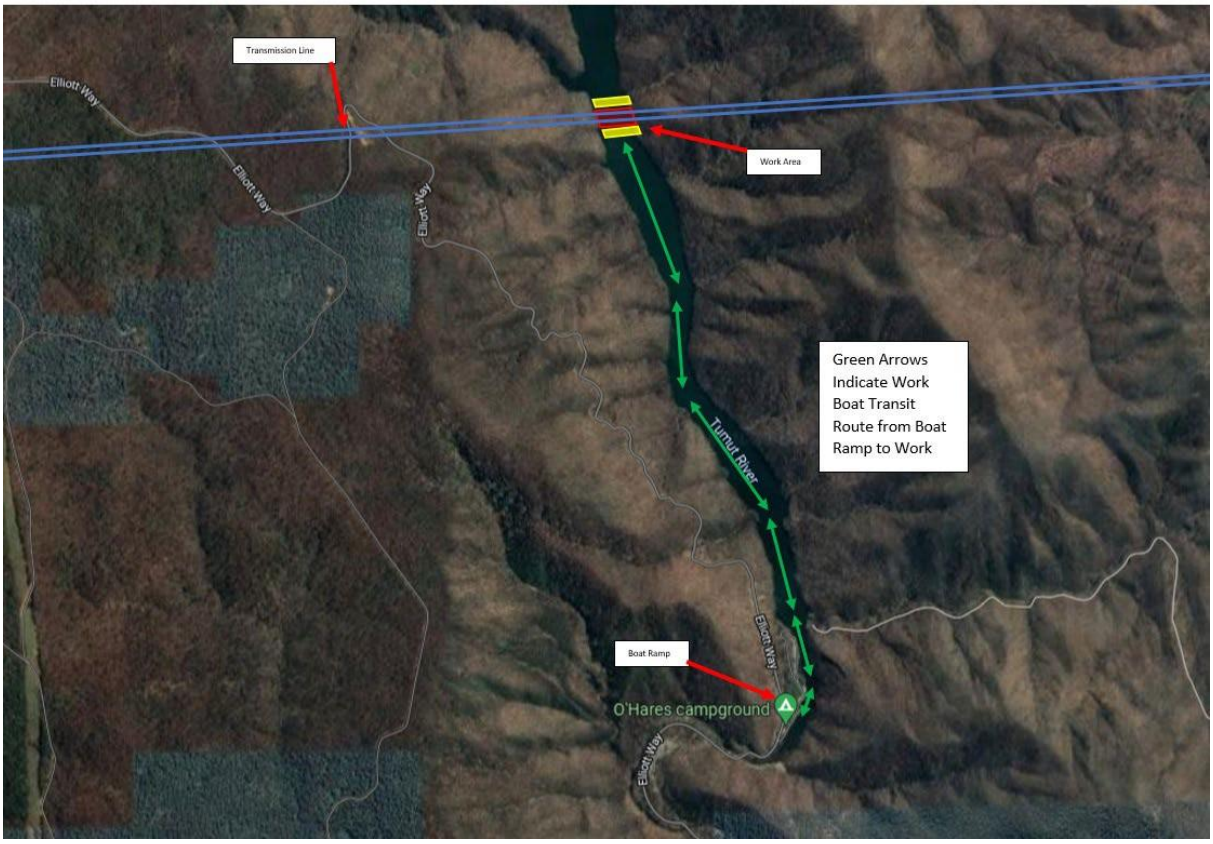
- P: 0455 087 248
- E: tim.mccarthy@ugllimited.com

For further reference to Communication with stakeholders, see Communications and Stakeholder Management Plan available on the project website.

16. EMERGENCY MANAGEMENT

Emergency Management will be as per the Emergency Response Plan submitted and approved for the project.

APPENDIX A MARINE TMP (TALBINGO RESERVOIR BOAT ROUTE)



Speed limitations will be placed on all commercial vessels used on this project and will be in line with TfNSW Talbingo Reservoir gazetted and posted limits.

APPENDIX B VESSEL SPECIFICATIONS

6m Work Barge with Outboard

APPENDIX C EXCLUSION AND DROP ZONE DELINEATION

APPENDIX D CONDUCTOR STRINGING WMS – DUAL CIRCUIT 330KV

[PLACEHOLDER TO BE ADDED BEFORE CONSTRUCTION]

The work method statement (procedure) for performing this work has not been finalised at time of pre-construction document preparation.

The proponent commits to ensuring full consultation with relevant stakeholders on methodology, timing, communication, emergency planning, etc at least 3 – 6 months out from timing of proposed stringing activity.

APPENDIX E TFNSW NAVIGATION WARNING TALBINGO RESERVOIR

Note - Example Only of Similar Signage Used by FGJV

NAVIGATION WARNING

Talbingo Reservoir, Talbingo

SNOWY 2.0 CONSTRUCTION WORKS – BLOCKED CHANNEL from Monday 20 December 2021 until further notice

THE WORKS

Vessel operators are advised that construction works associated with the Snowy 2.0 project will be occurring on the Talbingo Reservoir, Talbingo, from the start of the Yarrangobilly Arm to the Yarrangobilly River. The works will commence on Wednesday 22 December 2021 and continue until further notice.

EXCLUSION ZONE

Due to the potential to affect the safety of navigation, an **Exclusion Zone** ('the Zone') will be established on the navigable waters of the Talbingo Reservoir from the start of the Yarrangobilly Arm to the Yarrangobilly River between the above dates.

The Zone will be marked by signage and yellow special mark aqua buoys with flashing yellow lights displayed between dusk and dawn.

NAVIGATION WARNING

Access to the Yarrangobilly Arm of the Talbingo Reservoir is prohibited to all unauthorised vessels.

DIRECTIONS

Transport for NSW advises:

1. a) Persons within the vicinity of the Zone **must** comply with any directions given by a Boating Safety Officer or NSW Police Officer in relation to the Special Event or to marine safety. Failure to comply with any such direction is an offence (*Marine Safety Act 1998, s.15A* - Maximum Penalty $3,300.00).
2. b) No unauthorised vessels are permitted to enter the Zone under any circumstances, and to do so may be an offence (*Marine Safety Act 1998, s12(5)* - Maximum Penalty $1,100.00)

MARINE NOTICE SO2166

Transport for NSW

Phone 1800 766 992 community@futuregenerationjv.com.au www.futuregenerationjv.com.au

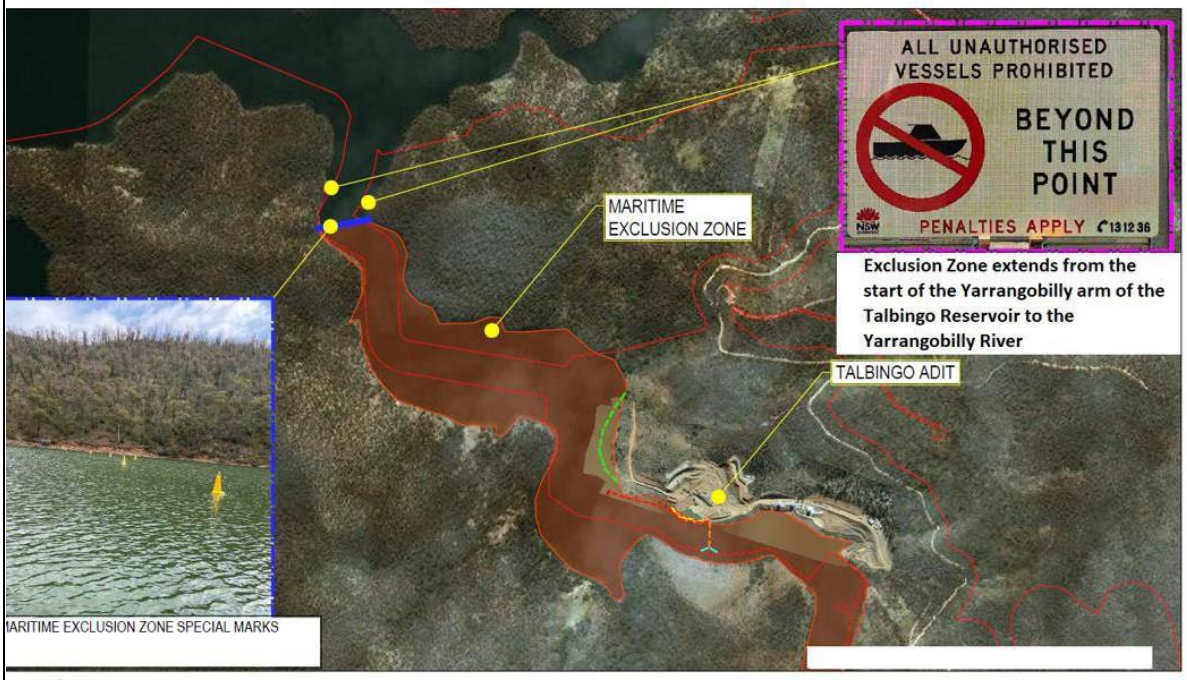
Future Generation
SALINI IMPREGILO • CLOUGH • LANE

MAPS & CHARTS AFFECTED

Transport for NSW Boating Map – 21

For further information concerning this Navigation Restriction, please contact Transport for NSW (Maritime) Info line on **13 12 36**.

MARINE NOTICE SO2166

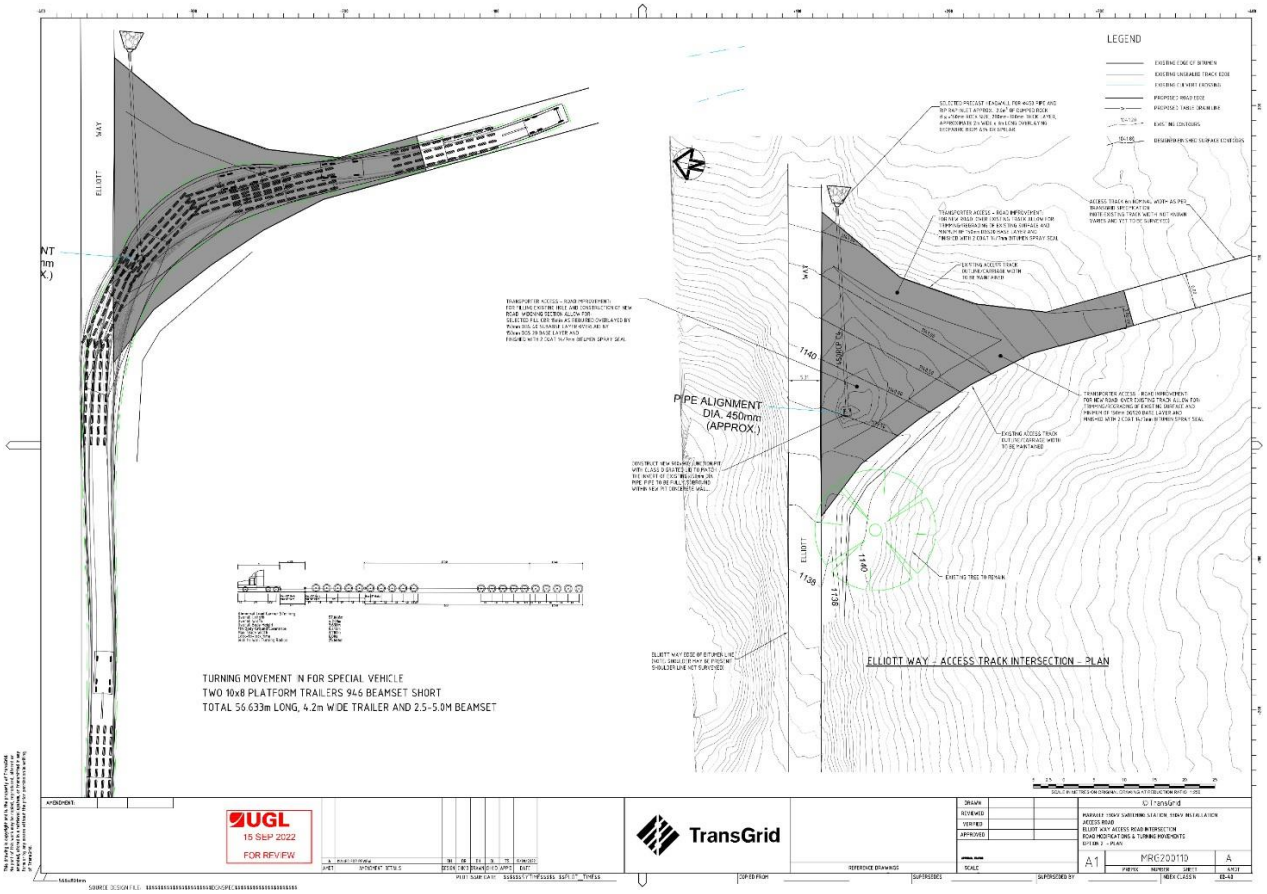


Transport for NSW

Phone 1800 766 992 community@futuregenerationjv.com.au www.futuregenerationjv.com.au

APPENDIX G TURN OUT FOR ELLIOTT WAY

Details of the proposed road upgrade works required for the western side of the transmission line (required by condition B27). This is the Elliott Way access road intersection leading to the Maragle 330kV Switching Station. Details of proposed road upgrade works for intersections with Elliott Way are provided in the Transport Strategy.



APPENDIX H REFERENCES

- Road Transport Act 2013
- Heavy Vehicle (Adoption of National Law) Act 2013 and the Heavy Vehicle National Law
- Roads Act 1993
- AS/NZS 1742.3-2019 Traffic Control for Work on Roads
- Work Health and Safety Act 2011
- RMS Traffic Control at Worksites Manual
- S2-FGJV-HAS-WIN-053 Driving and Journey Management Work Instruction
- 3200-0645-PLN-037-CEMP-NVMP

APPENDIX I PLANNING SECRETARY APPROVAL

Infrastructure Approval

Section 5.19 of the *Environmental Planning and Assessment Act 1979*

I grant approval to the application referred to in Schedule 1, subject to the conditions in Schedule 2.

These conditions are required to:

- prevent, minimise, or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the development

Minister for Planning

2/9/22 Sydney 2022

SCHEDULE 1

Application Number:	SSI 9717
Proponent:	NSW Electricity Network Operations Pty Limited as trustee for NSW Electricity Networks Operations Trust
Approval Authority:	Minister for Planning
Land:	Land in Kosciuszko National Park (Lobs Hole and Ravine) and Nurenmerenmong in the Bago State Forest as described in the EIS and shown on the development layout plans
Development:	Snowy 2.0 Transmission Connection Development of new 330 kilovolt (kV) transmission lines and associated infrastructure connecting the Snowy 2.0 Main Works project to the electricity grid.
Critical State Significant Infrastructure:	Development for the Snowy 2.0 and Transmission Project as described in Clause 9 of Schedule 5 of *State Environmental Planning Policy (Planning Systems) 2021*.

NSW GOVERNMENT

APPENDIX J UGL CHAIN OF RESPONSIBILITY PROCEDURE

Heavy Vehicle Management – Chain of Responsibility PROCEDURE

Maragle 330kV Switching Station and 330kV Transmission Line Connections

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PURPOSE

All parties involved in UGL's supply chain share the responsibility for the safe completion and management of heavy vehicle operations at UGL. This includes taking reasonably practicable steps at each point in the supply chain to prevent incidents relating to:

- How a heavy vehicle is driven e.g. Speed, Driver Fatigue;
- How heavy vehicles are loaded and loads restrained;
- How heavy vehicles are maintained; and
- The suitability of a heavy vehicle for the proposed task

Section 1 – 'Requirements' in this document is Mandatory and must be achieved across all UGL Projects and Operational sites.

Section 2 – 'Procedure' of this document must be followed where no approved alternative procedures of processes exist. Approved alternatives must be approved for use by the Divisional GM HSEQ and scoped in the applicable Plans being operated under. Approved alternatives typically relate to people working under Client, Joint Venture, or Principal Contractor Management Systems.

Definitions are detailed in Appendix A.

1. SECTION 1 REQUIREMENTS

1.1 PLANNING WORK

Compliance to HVNL must be verified including controls for risks associated with Speed, Fatigue/Fitness for Work, Load Restraint and Management, and Vehicle Roadworthiness.

UGL drivers of heavy vehicles or combinations that exceed 12T must not operate the vehicle outside the prescribed standard hours and must comply with rest requirements.

Accurate load information must be provided to Heavy Vehicle transport operators including mass, dimensions and any available load restraint information.

Falls risks associated with vehicle loading and unloading activities must be assessed and managed, including consideration for how load restraints and loads will be removed.

The project/site manager must ensure that the Project/Site/Location assesses Heavy Vehicle Risks that apply to their site or location, and incorporate the controls to manage the risks into a relevant plan or process that applies to their scope of work.

Assessments of Heavy Vehicle Risks must identify and define controls for risks associated with Speed, Fatigue/Fitness for Work, Load Restraint and Management, and Vehicle Roadworthiness.

Heavy Vehicle Management Plans, or documents used to manage heavy vehicle risks must as a minimum detail:

- Who is accountable for each role in the supply chain that applies;
- How the controls identified in the applicable risk assessment of HVNL risks will be implemented;
- How assurance/monitoring activities will be completed, e.g. frequency of random and/or targeted inspections, requirements for third party verifications etc.; and
- Any additional standard operating procedures required to safely manage heavy vehicle requirements for the site/location/contract.

When UGL acts as the transport operator, the project/site manager must nominate a person to:

- Work with relevant people on the project/site to set realistic work schedules that enable drivers to safely operate within speed and fatigue requirements, and not incentivise drivers to breach fatigue or speed requirements or controls.

- Obtain relevant road transport authority permits and approvals prior to transportation;
- For vehicles or combinations that exceed 12T, take steps to verify that drivers do not operate the vehicle outside the prescribed standard hours, and comply with rest requirements. E.g. periodic reviews of driver log books against journey plans;
- Verify that drivers employed by UGL are appropriately licensed, trained in the HVNL obligations prior to operating any heavy vehicle; and
- Ensure the suitability of the heavy vehicle for the task.

When engaging contractors to complete heavy vehicle transport operations for UGL, the UGL role responsible for engaging the contractor must verify that the operator holds accreditations for, or be able to demonstrate compliance with:

- Maintenance Management Accreditation;
- Basic Fatigue Management (BFM) or Advanced Fatigue Management (AFM) Accreditations; and
- Mass Management Accreditation.

Contractors/operators that do not hold the accreditations above must be assessed using the Pre-qualification assessment tool, or agreed alternative, including the collection of supporting documentation by a person that has completed base level CoR Training as a minimum.
When planning loading and unloading activities, the UGL Project/Site Manager must nominate who will act as the Loading Manager.
The Loading Manager in consultation with the site/project management team must set realistic schedules and plans for incoming heavy vehicles to minimise unloading (waiting), including arranging any plant or equipment for unloading activities in advance.

1.2 COMPLETING WORK

Loading/unloading exclusion zones (LUEZ) are clearly delineated with controls to prevent unauthorised access.
All vehicle loads must be restrained to prevent load movement during transit.
Drivers must be fit for work, including free from:

- alcohol and illicit drugs;
- medication impacting on your ability to operate a vehicle; and
- effects of fatigue.

When UGL is self-performing transport operations as the Transport Operator, the person managing/supervising the work must be able to demonstrate that:

- Steps are taken to verify that drivers are fit for duty, including monitoring of mandated driver work and rest times and drugs/alcohol impairment;
- They verify that drivers are completing daily work diary if travelling more than 100Km from their base location;
- They verify that drivers don't breach their work or rest hours e.g. through having agreed points of contact as part of a Journey Planning process, or reviewing IVMS Data, etc.;
- They monitor and immediately action any breaches in requirements in accordance with UGL's Incident Management Procedure, e.g. exceedance of speed limiting/monitoring devices, or fatigue requirements;
- Freight containers being transported under their control have a valid container weight declaration, regardless of whether containers are loaded or empty; and
- The heavy vehicle is suitable.

The Loading Manager overseeing loading activities (transit, dispatch and receipt) must be able to demonstrate that:

- Vehicles are operated within mass or dimension limits, or any associated safety approval ratings;
- Loads are restrained so that they are stable and not at risk of falling off the vehicle during all conditions of operation;
- Reliable weight information is provided to drivers prior to their journey;
- Appropriate engineers are engaged to review and validate, or nominates the load restraint methods to be applied for abnormal or special loads;
- Drivers are advised where there is a likely inbound or outbound delay of more than 30 minutes;

- Loaders/Unloaders under their control have the relevant skills and competency to complete the loading/unloading activities that they are designated;
- Load and transport documentation is accurately completed, e.g. Container Weight Declarations; and
- Records are created and maintained to demonstrate that loading operations don't exceed applicable mass and dimension requirements for the classes of vehicles being operated.

Falls risks associated with vehicle loading and unloading activities must be assessed and managed, including consideration for how load restraints and loads will be removed by the goods receiver.

1.3 FACILITIES, INSTALLATIONS AND EQUIPMENT

Heavy Vehicles must be fitted with In-Vehicle Monitoring Systems (IVMS).

Vehicles fitted with IVMS must be monitored to provide prompt feedback to drivers not conforming with road regulations and safe driving practices.

Over centre load binders must not be used for load restraint.

Heavy vehicle components and loads must comply with the prescribed mass and dimension requirements for that vehicles.

Heavy vehicles must be maintained to meet the minimum requirements for vehicle road worthiness according to the applicable Heavy Vehicle (Vehicle Standards) Regulations.

Vehicles must be registered with the relevant state or territory authority;.

Vehicles must be fitted with appropriate load restraint equipment to prevent load movement during transit.
The Project/Site Manager must setup UGL Facilities, Projects and Sites with appropriate controls to enable safe loading, unloading and movement of heavy vehicles, where their use is expected, including:

- Separation of pedestrians and vehicles;
- Designated areas for safe loading and unloading;
- Height access equipment (where required);
- Materials handling equipment, e.g. pallet jacks, forklifts, gantry cranes etc; and
- Amenities for drivers.

Speed monitoring systems must be implemented and monitored for UGL Heavy Vehicles to verify that speed limits and any applicable restrictions are not being exceeded; and
UGL Heavy vehicles exceeding 12 tonnes GVM must be fitted with speed limiting devices.

1.4 TRAINING AND COMPETENCY

Heavy vehicle drivers are appropriately licensed to the class of heavy vehicle being driven.

UGL workers who are working as part of the supply chain must, as a minimum, receive base level Chain of Responsibility training.

Roles responsible for overseeing transport operations must:

- Identify the training required for each person in the supply chain, taking into consideration each person's general roles and responsibilities;
- Verify that drivers hold a valid and appropriate class of licence for the vehicle(s) that they are required to drive; and
- Verify that people completing heavy vehicle movements have been trained, and are competent in their role(s) in the supply chain, including management of fatigue, loads/load restraint, and speed.

People responsible for completing load plans/restraint guides for abnormal and special loads must be a certified engineer, and be able to demonstrate relevant experience.

People acting as the loading manager must complete a loading manager induction and/or training.

People completing loading and unloading activities must complete training in loading/unloading, or be verified as competent through a VoC process.

2. SECTION 2 PROCEDURE

2.1 GENERAL PROVISIONS

2.1.1 RISK ASSESSMENTS AND HEAVY VEHICLE MANAGEMENT PLANS

Heavy Vehicle operations must be covered by an assessment of Heavy Vehicle Risks and Heavy Vehicle Management Plan.

2.1.2 Heavy Vehicle Risk Assessment

The use of heavy vehicles and the responsibilities within the Chain of Responsibilities (CoR) must be considered and documented as part of the project/location risk assessment, or alternative agreed risk assessment tool.
The Risk assessment must consider the risks and controls to manage risks identified in the HVNL, and specifically address risks associated with:

- Speed;
- Fatigue;
- Loads and dimensions; and
- Vehicle Roadworthiness.

2.1.3 Heavy Vehicle Management Plan

Heavy Vehicle Management Plans or alternative documents used to manage heavy vehicle operations must detail:

- The roles in the supply chain that apply to the Site/Project, and who is accountable for completing the associated obligations;
- How the risks from the assessment of heavy vehicle risks will be managed on the site/project; and
- Site specific requirements that apply, e.g. designated loading/unloading areas;

UGL's Heavy Vehicle Management Plan Template provides one method for achieving this requirement.

2.2 TRAINING AND COMPETENCY

Training must be provided to people that have a direct role in UGL's supply chain, taking into consideration what they are accountable for, and their scope of activities. As a minimum, UGL employees with a direct role in the supply chain must complete introductory level Chain of Responsibility (CoR) Training which provides details on:

- The fundamentals of CoR;
- General roles and responsibilities within CoR;
- Risks and management of fatigue, speed, and load restraint;
- Mass and dimension requirements;
- Liability and penalties for breaches of CoR; and
- UGL's process for managing the risks associated with CoR.

This training is available as an e-learn via the One Learning LMS.

2.2.1 Role/Task Specific Training

The following minimum role/task specific training requirements apply to HVNL operations at UGL:

Role	Minimum Training Requirements
Persons nominated to supervise or manage transport operations	• Introductory level Chain of Responsibility (CoR) Training • Transport Operator Introduction Training
Loading Manager	• Introductory level Chain of Responsibility (CoR) Training • Loading Manager induction/Training, including being able to demonstrate knowledge/understanding to: – Verify that vehicles and loads comply with mass and dimension requirements – Supervise loading/unloading activities (directly and indirectly) – Verify that serviceable and well maintained loading and restraining equipment is used – Identify any risks around delays in loading – Confirm the availability of rest facilities for drivers to rest whilst waiting – Verify reasonable arrangements are in order for managing loading and unloading times – Identify any loading and unloading practices that encourage drivers to exceed speed limits, driving hours and minimum rest requirements
Consignee / Consignor	• Introductory level Chain of Responsibility (CoR) Training
Loader / Unloader / Packer	• Site Induction • Loading/un-loading training, or verification of competency for loading and un-loading to demonstrate that: Loaders have the ability to verify that – loads do not exceed mass or dimension requirements – loads are appropriately restrained – load documents are accurate Loaders and unloaders have the ability to: – Identify and prevent delays in loading and unloading, within their area of control or influence; – Identify any loading or unloading processes which require or encourage speeding, exceeding rest hours and driving hours, or encourage driving whilst impaired; and – Report any concerns in being able to achieve these requirements to the loading manager for action.
Heavy Vehicle Driver	• UGL Driver Induction • Relevant Class of Licence for Vehicle being operated • Introductory level Chain of Responsibility (CoR) Training, or equivalent supplied by the Driver's employer.

Details of additional training needs must be detailed in the applicable Heavy Vehicle Management Plan being operated under.

2.2.2 Licences

Heavy vehicle drivers employed by UGL are required to hold a copy of the appropriate class of driver's licence for the heavy vehicle being operated. The driver must always have their licence with them when operating the vehicle. The

UGL Transport Operator/Manager must ensure that a register is maintained of all drivers employed by UGL outlining their license information including expiry dates. This regiments must be reviewed regularly by the Transport Operator/Manager throughout the project/contract to ensure currency.

2.3 MONITOR AND REVIEW

The Project/Site ensure that monitoring activities are implemented for heavy vehicle activities that apply to their project/site, and that non-conformances are tracked and managed.

Divisional audit programs must include assessments of Heavy Vehicle Management that is consistent with the operations being completed.

3. PART A – UGL ENGAGING TRANSPORT OPERATORS

3.1 PREQUALIFICATION

Contractors/suppliers must be selected based on their capability to perform the transport activities required by the site/project and manage any associated safety and compliance risks.

Prequalification can be completed as part of the broader contractor/vendor pre-qualification process, or by having the contractor successfully complete UGL's Heavy Vehicle (CoR) Contractor Pre-Qualification Assessment/Self-Assessment Tool.

the UGL role responsible for engaging the contractor must verify that the operator holds accreditations for, or be able to demonstrate compliance with:

- Maintenance Management Accreditation;
- Basic Fatigue Management (BFM) or Advanced Fatigue Management (AFM) Accreditations; and
- Mass Management Accreditation.

Contractors/operators that do not hold the accreditations above must be assessed using the Pre-qualification assessment tool, or agreed alternative, including the collection of supporting documentation by a person that has completed base level CoR Training as a minimum.

3.1.1 Duration of Prequalification Status

As a minimum, the pre-qualification status for contractors must be re-assessed once every 2 years in accordance with UGL's Procurement Procedure(s).

3.1.2 Exemption from Pre-Qualification Process

For one off engagements where it was not reasonably practicable to pre-qualify the provider, the following process applies as a minimum:

- The driver must complete a driver induction when they arrive on site; and
- The load must be inspected by an accountable UGL Supervisor, in consultation with the driver and people completing the loading/unloading activities.

3.2 CONTRACT AGREEMENTS

Commercial arrangements with Contractors must include requirements to comply with legal obligations.

Contractor/supplier agreements/contracts must not contain rate structures or incentives (for early pick-up or delivery) or penalties (for late delivery) or associated performance measures that may reward or encourage the driver:

- To exceed the speed limit;
- To drive whilst fatigued; or

- To breach their work and rest hours.

Contractor/supplier agreements/contracts must not contain rate structures or incentives or associated performance measures that may reward or encourage (or be perceived to reward or encourage) parties or the driver:

- To breach mass, dimension and loading requirements directly or indirectly (i.e. overloading); or
- To operate vehicles that are unsafe or defective.

3.3 PLANNING AND ASSIGNING HEAVY VEHICLE ACTIVITIES

When planning and assigning heavy vehicle movements provide the pre-qualified transport operator with:

Relevant information about the nature of the loads to be transported (size, weight, content):

- Realistic delivery schedules times that enable drivers to operate within their Speed restrictions and maximum hours of work;
- Details of resources and equipment available at loading/unloading points;
- Information relating to site/project entry, including:
- Vehicle movement plan(s) for the relevant area(s);
- PPE requirements and sign in / sign out procedures;
- Expectations for who will complete unloading and unloading activities, and equipment that will/won't be supplied;
- Loading and unloading equipment/methods that are accepted on UGL Sites/Projects;
- Relevant load sequence information; and
- Any requirements for pre-slung loads.

If there is a change in schedule that will likely delay loading or unloading by more than 30 minutes, the person coordinating the transportation must make contact with the driver to advise of the delay as soon as possible.

4. PART B – UGL AS THE TRANSPORT OPERATOR

For transport activities where UGL is self-performing Heavy Vehicle Operations as the Transport Operator, the Site/Project Manager must nominate a responsible person to oversee transport operations and document their details in the Heavy Vehicle Management Plan, or agreed alternative, e.g. Safety Management Plan for Small Projects.

The person nominated to oversee transport operations is responsible for setting the expectations that must be followed by Drivers and others involved in the transport operations that they are overseeing.

People overseeing transport operations do not need to be a dedicated role/resource and may form part of a person's broader duties. E.g. Site/Project Manager, Site Supervisor etc.

As a minimum, people overseeing transport operations must:

- Verify that UGL Drivers receive a UGL Driver induction before commencing Heavy Vehicle Operations on UGL's behalf, to verify understanding of responsibilities, and confirm that they agree to adhere to the road rules and HVNL requirements;
- Identify the most suitable vehicle for the load(s) being transported, with consideration for:
    - Terrain during and at each end of the journey (sealed vs unsealed roads, corrugations, etc) and how that could impact driving conditions and load restraint;
    - The nature of the loads to be transported (size, weight, content, restraint); and
    - How loading / unloading will occur, and equipment available at the points of loading and unloading.

- Establish realistic schedules that enable drivers to operate within their Speed restrictions and maximum hours of work;
- Monitor records of drivers' activities, including validating that work and rest times are maintained
- Regularly monitor drivers to verify that they are fit to drive, both physically and mentally, and not affected by fatigue, drugs or alcohol;
- Take reasonable steps to ensure drivers do not work while impaired by fatigue, drugs or alcohol, or drive in breach of their work or rest options;
- Confirm that drivers are licenced for the class of heavy vehicle or combination they are operating;
- Verify that the vehicles being driven are managed in accordance with 'Part D – Management of UGL Heavy Vehicles' of this Procedure;
- Confirm that drivers moving freight containers have a valid Container Weight Declaration; and
- Take steps to verify that loads are appropriately restrained with appropriate restraint equipment (see the Load restraint guide for more information). This may include a random and targeted sampling process, e.g. viewing 1 in 50 trucks.

4.1 DURING OPERATIONS

The person nominated to oversee transport operations must work with the Vehicle Driver, or supervisors of the Drivers to:

- Not Exceed the Vehicle manufacturer's loaded mass rating including the GVM, GCM and where applicable, the Aggregate Trailer Mass (ATM). This also extends to the mass rating for separate vehicle components such as tyres, wheels or axles;
- Not Exceed General mass limit (GML) - applicable to all heavy vehicles, stating the allowable mass for all axle groups unless an accreditation or exemption applies;
- Adhere to prescribed dimensions, as outlined in the applicable Heavy Vehicle (Mass, Dimension and Loading) Regulations being operated under, including the requirements for rear overhang; and
- Adhere to Concessional Mass Limits or Higher Mass Limits, accredited operators must provide evidence of accreditation.

NOTE: The mass and dimensions of every vehicle must fall under the prescribed guidance of the relevant state or territory.

4.2 FATIGUE MANAGEMENT FOR DRIVERS

Supervisors of UGL Heavy Vehicle Drivers must take reasonable steps to manage the fatigue of Drivers under their control. As a minimum, the following must be maintained:

- Drivers must not be permitted to exceed the Standard Hours for Solo Drivers as detailed in Appendix C– Standard Hours for Solo Drivers of Fatigue-Regulated Heavy Vehicle' or their Journey Plan (if applicable);
- Heavy Vehicle Drivers must complete a work Diary for:
- For travel that exceeds 100+ Km from a driver's base; or
- If operating under Advanced Fatigue Management (AFM) or Basic Fatigue Management (BFM) accreditations.

Work Diaries must be completed and maintained in accordance with Appendix D– Work Diary Requirements.

5. PART C – MANAGEMENT OF LOADING/UNLOADING

This section applies when UGL is managing, supervising or completing loading or unloading of Heavy Vehicles.

Loading and unloading activities must be planned between the people involved. This includes the parties (typically the transport operator, and the site supervisor coordinating the transportation) agreeing on:

- The availability of loading and unloading equipment to enable safe loading/unloading and material handling e.g. forklift, crane, reach stacker, pallet trolleys etc;
- Any specific equipment required to unload the vehicle, including having competent people available to operate the equipment the equipment if required;
- Communication and coordination of the delivery e.g. estimated arrival times, contact details of delivery drivers and persons accepting the materials etc.;
- Site requirements e.g. loading and unloading exclusion zones, inductions, site rules.

5.1 LOADING MANAGERS

A loading manager must be nominated by the site/project manager for each site where UGL is controlling/completing loading and unloading activities, and documented in the Heavy Vehicle Management Plan, or agreed alternative, e.g. Safety Management Plan for Small Projects.

The Loading Manager is responsible for setting the expectations that loaders, unloaders and packers work to, for overseeing the loading/unloading practices on the site to verify that they meet the requirements of this Procedure and broader HVNL requirements.

Loading managers do not need to be a dedicated role and may form part of a person's broader duties. E.g. Site Manager, Warehouse Supervisor etc.

5.2 COMPLETING LOADING/UNLOADING ACTIVITIES

When completing loading/unloading activities:

- Vehicles must be loaded in a safe and secure manner, and not exceed the legislative or the manufacturer's requirements for mass and dimension limits;
- The load must be placed in or on the vehicle in such a way that it does not adversely affect the vehicle's stability, steering and/or braking performance;
- The load must be secured/restrained to prevent it becoming dislodged or falling from the vehicle; and
- The load must not project from the front, sides or rear of the vehicle, without assessing the associated risks, and implementing additional controls e.g. visual flags.

5.3 MANAGEMENT OF UNSAFE OR NON-COMPLIANT CONDITIONS

The following unsafe conditions must be monitored and managed on each project/site.

5.3.1 Arrival of unsafe load

If an unsafe load arrives on site, the following must be completed:

- Stop unloading from taking place;
- Report details of unsafe load to the Transport Operator and Report as an Incident in Synergy; and
- Work with the Transport to determine a safe methodology to unload the vehicle on-site.

NOTE: Where practicable, do not permit an identified unsafe load leave the project/site.

5.3.2 Arrival of unsafe vehicle

If an unsafe vehicle arrives on site, the following must be completed:

- Stop the driver from operating the vehicle on-site;

- Report details of unsafe vehicle to the Transport Operator and Report as an Incident in Synergy; and
- Work with the Transport Operator to determine how the vehicle will be rectified before being permitted to leave site/ re-access public roads.

5.3.3 Management of at risk drivers

People that interact with drivers of heavy vehicles must take reasonable steps to observe signs of impairment, and raise any concerns about Fatigue, Drugs or Alcohol.

If concerns are observed, the following steps must be taken:

- Request that the driver stops.
- Report the concerns to the Loading Manager.

The Loading Manager must:

- Request that the driver remains on site, including the provision of an appropriate place to rest;
- Contact the driver's employer and advise of the concerns;
- Not allow the driver to operate their vehicle until they are satisfied that it is safe to do so; and
- Contact the relevant authority if the concern relates to impairment from Drugs or Alcohol.

Once the situation has been managed, the event must be reported by the site/project team in Synergy as an Incident.

5.4 LOADING AND UNLOADING EXCLUSION ZONES (LUEZ)

The requirement for loading and unloading exclusion zones (LUEZ) must be assessed for each project/site through the Project Risk Assessment, or alternative risk management process.

LUEZ may be permanently established, or setup as temporary areas, and must:

- Provide separation between people working within a project/site, and trucks being loaded/unloaded;
- Be appropriately signposted/delineated; and
- Be monitored/controlled during loading and unloading activities.

NOTE: LUEZ may form part of a project/location's broader barricading requirements.

5.5 LOAD RESTRAINT

Loads must be restrained to prevent unsafe movement during all conditions of operation. During restraint of load, the following must be considered:

1. Fit for Purpose Restraint Equipment – The load restraint equipment and vehicle body must be suitable for the load that it will be restraining. This also includes checking the equipment before use to ensure it's in good condition.
2. Apply Correct Restraint System – The methods of restraint include tie-down, where the load is prevented from moving by friction only, or direct restraint, where the load is prevented from moving by being contained, blocked or attached it to the vehicle.
3. Use appropriate driving methods – if restrained correctly, a load will not shift. However, after commencing a journey the load may settle and shift which can cause the load restraints to loosen. Vehicle operators should check the load and the restraint tension shortly after commencing the journey. Drivers must also be aware that the vehicle may operate differently with the load secured on the vehicle.

UGL's Load Restraint Guideline may be referred to as an initial reference point for information and training in appropriate/accepted restraint techniques at UGL.

For more detailed advice on the correct form of restraint, refer to the National Transport Commissions Load Restraint Guide.

5.6 RECORDING LOADS

Where vehicles do not have an On-board mass device/management system installed, a written record must be made to record that the mass and placement of the load do not exceed the mass and dimension requirements of the class of vehicle.

5.6.1 4.6.1 Container Weight Declaration (CWD)

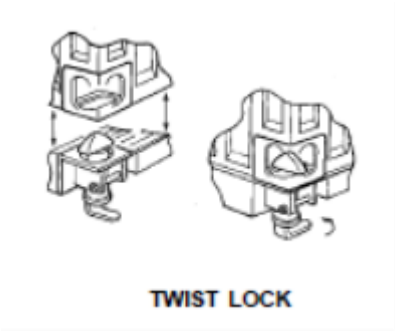
A container weight declaration (CWD) is required when transporting a freight container on a road using a heavy vehicle, regardless of whether the container is loaded or empty.

A CWD is a written declaration of the weight of a container and its contents. This can be either in hard copy or electronic form, or a placard attached to the freight container.

The CWD declaration must contain the following information:

- Weight of the container, including its contents;
- Container number and other details necessary to identify the container;
- Name and residential address, or business name and address, in Australia of the responsible entity for the freight container;
- Date of declaration.

Containers must only be transported on Vehicles fitted with Twist Locks to secure the container to the vehicle:



6. PART D – MANAGEMENT OF UGL HEAVY VEHICLES

UGL owned, leased or hired heavy vehicles must be assessed to ensure the vehicle is fit for purpose. This assessment should include environmental factors such as intended use, terrain, remote or isolated work, road conditions and access.

Heavy vehicles must be regularly inspected and maintained according to the manufacturer's requirements and include a preventative maintenance schedule.

Heavy vehicles must meet the minimum requirements for vehicle road worthiness. The Heavy Vehicle (Vehicle Standards) National Regulation nominate the prescribed requirements for all heavy vehicles.

These requirements include conditions on the following:

- Steering
- Turning ability
- Ability to travel backwards and forwards
- Protrusions
- Driver's view and vehicle controls
- Seating
- Mudguards

- Horns, alarms etc.
- Rear vision mirrors
- Automatic transmission
- Diesel engines
- Bonnet-securing devices
- Television receivers and visual display units
- Windscreens and windows
- Window tinting
- Windscreen wipers and washers
- Wheels and tyres—size and capacity
- Vehicle and engine markings
- Axle configuration
- Lights (brake, headlight, fog, interior etc) and reflectors
- Braking Systems
- Exhaust systems (Noise and diesel emissions)
- Speed limiting devices
- Electrical wiring, connections and installations
- Mechanical connections between vehicles in combinations

6.1 VEHICLE REGISTRATION

Heavy Vehicles must be registered with the relevant state or territory.

6.2 SPEED MANAGEMENT

Except where a lower speed limit applies, all heavy vehicles are limited to a maximum speed of 100 kilometres per hour.

Heavy vehicles exceeding 15 tonnes GVM and buses exceeding 14.5 tonnes GVM must be fitted with speed limiting devices.

6.3 IN VEHICLE MONITORING SYSTEMS (IVMS)

In Vehicle Monitoring Systems (IVMS) must be installed as a method to monitor compliance with speed, rest and work hour restrictions.

The IVMS unit must be securely and permanently fixed into the vehicle.

As a minimum IVMS in Heavy Vehicles must be set up to monitor speed. The parameter settings to trigger in-vehicle alarms for speed management are described in Appendix F. Other parameters for monitoring safe driving behaviour should be determined at site/project level. Suggested parameter settings for IVMS are also outlined in Appendix F.

6.3.1 Feedback on Breaches of Safe Driving Behaviours

Where installed, IVMS data must be monitored and actioned where appropriate, with prompt feedback to drivers not conforming with road regulations and safe driving practices.

Feedback on breaches of speed limits is mandatory for the categories listed below. Category 1 and 2 speeding events must be recorded in Synergy and the incident investigation process triggered.

Feedback is to be provided in accordance with the Just and Fair Conduct Management Procedure.

Driving Behaviour	Driving Exception
Exceeding Speed Limit	Category 1 Exceeding posted speed limit by greater that 20kph for longer than 15 seconds
	Category 2 Exceeding posted speed limit by greater that 15kph for longer than 15 seconds
	Category 3 Exceeding posted speed limit by greater that 10kph for longer than 15 seconds

Where monitored, feedback on other breaches of safe driving behaviours (see table below for examples) should be provided in accordance with the Just and Fair Conduct Management Procedure.

Driving Behaviour	Driving Exception
Device tampering	Interfering with an IVMS device causing it damage or making unauthorised alterations
Seat Belt	A seatbelt not engaged by driver or passenger while vehicle is in motion for >15kmh, longer than 10 seconds
Other safe driving behaviours listed in Appendix F	5 or more breaches in any month

7. EXTERNAL REFERENCE DOCUMENTS

- National Transport Commission Load Restraint Guides
- National Heavy Vehicle Regulator Role and Responsibility Fact Sheets
- Master Industry Code of Practice
- National Heavy Vehicle National Law

APPENDIX A DEFINITIONS

Term	Definition
Abnormal or special loads	Abnormal and special loads are loads that meet the following characteristics: • Not of regular shape/size/weight distribution;

Term	Definition
	• Do not have designated tie down/anchor points; and • Cannot be restrained using conventional/typical restraint methods, e.g. load restraint systems require specialised modification or design. Abnormal and special Loads also include loads where a reasonable person would expect that a higher level of design/competency is required to restrain/manage the load. e.g. an engineer is required to design the restraint system.
ADR	Australian Design Rule
Advanced Fatigue Management (AFM)	AFM brings a genuine risk management approach to managing heavy vehicle driver fatigue. Rather than prescribing work and rest hours, AFM offers more flexibility than Standard Hours or BFM in return for the operator demonstrating greater accountability for managing their drivers' fatigue risks.
AFM	Advanced Fatigue Management
ATM	Aggregate Trailer Mass
Basic Fatigue Management (BFM)	Operators with 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 some flexibility in when drivers can work and rest, as long as the risks of driver fatigue are properly managed.
BFM	Basic Fatigue Management
Consignor	Under the HVNL, you are generally classified as a consignor of goods when you engage a heavy vehicle operator (through an agent or other party) to transport your goods (consignment) to a consignee (such as a buyer receiving your goods) by road for commercial purposes. You will usually be named and identified as the consignor in the formal documentation for the road transport of the goods. For additional information, see the Consignor HVNL Fact Sheet
CoR	Chain of Responsibility
CWD	Container Weight Declarations
Fatigue regulated bus	Means a heavy motor vehicle that weighs more than 4.5t and built or fitted to carry more than 12 adults (including the driver).
Fatigue related vehicle	Means any of the following: • a motor vehicle with a GVM of more than 12t; • a combination with a GVM of more than 12t; • a fatigue-regulated bus. A vehicle **DOES NOT** to meet this definition if: • the vehicle is built, or has been modified, to operate primarily as a machine or implement off-road, on a road-related area, or on an area of road that is under construction; and • is not capable of carrying goods or passengers by road; Examples include agricultural machine, backhoe, bulldozer, excavator, forklift, front-end loader, grader.

Term	Definition
	A truck, or a combination including a truck, that has a machine or implement attached to it is a fatigue-regulated heavy vehicle— • if the GVM of the truck or combination with the attached machine or implement is more than 12t; and • whether or not the truck or combination has been built or modified primarily to operate as a machine or implement off-road, on a road-related area, or on an area of road that is under construction. Example - truck to which a crane or drilling rig is attached
GAV	**General Access Vehicles** General Access Vehicles (GAV) comply with mass and dimension requirements and do not require a notice or permit to operate on the road network. These vehicles have general access to the road network unless the road is sign-posted otherwise. GAV vehicles must not exceed the following general mass and dimension requirements: • A width of 2.5 metres. • A height of 4.3 metres. • A length of 12.5 metres for a single vehicle and 19 metres for a combination (e.g. prime mover and semi-trailer or truck/trailer combination). • A deck length of 13.7 metres for semi-trailers.
GCM	Gross Carrying Mass
GML	General Mass limit
Gross Vehicle Mass (GVM)	Means the maximum operating weight/mass of a vehicle as specified by the manufacturer including the vehicle's chassis, body, engine, engine fluids, fuel, accessories, driver, passengers and cargo but excluding that of any trailers.
GVM	Gross Vehicle Mass
Heavy vehicle	Means a vehicle with a Gross Vehicle Mass (GVM) of more than 4.5t.
HV	Heavy Vehicle
HV Risk Factors	Means management of Speed, Fatigue, Mass. Dimensions and Loading, and Vehicle Standards.
HVNL	Heavy Vehicle National Law
IVMS	in-vehicle monitoring systems
km/h	Kilometres per hour
Loaders/Unloaders	Under the HVNL, you are generally classified as a loader/unloader of goods when you engage in the process of loading or unloading a heavy vehicle or any container that is part of its load. A load includes all the goods, passengers, drivers and other persons in the vehicle along with all fuel, water, lubricants and readily removable equipment that are carried, personal items necessary for normal use of the vehicle, and anything normally removed from the vehicle when not in use.

Term	Definition
	A loader/unloader may also include such persons also known as a refueler, docker, attendant, labourer, stevedore, filler, feeder etc. See the Loaders/Unloaders NHVR Fact Sheet for additional information
Loading Managers	Under the HVNL, a loading manager can operate or work from any regular loading or unloading premises or place where a heavy vehicle or a container that is part of that vehicle is loaded or unloaded with goods. A load includes all the goods and passengers, fuel, water, and removable equipment that are carried. A loading manager may also include such persons also known as a controller, administrator, organiser, supervisor, conductor, etc. See the Loading Manager NHVR Fact Sheet for additional information
Maintenance Management Accreditation	Operators accredited in the Maintenance Management module must maintain their vehicles and comply with all relevant road transport legislation. Some jurisdictions require annual inspections as part of the registration process, but grant exemptions to vehicles with maintenance management.
Mass Management Accreditation	Operators accredited in the Mass Management module can access additional mass concessions. These concessions allow vehicles to operate at Concessional Mass Limits (CML) for general access to the road network. Participation in the NHVAS Mass Management module is a pre-requisite for access to Higher Mass Limits (HML).
Must	Means a mandatory statement.
NHVR	National Heavy Vehicle Regulator
NTC	National Transport Commission
OBM	On Board Monitoring
Operator (person overseeing transport operations)	Under the HVNL, you are generally classified as an operator of a heavy vehicle if you are responsible for controlling or directing the use of a heavy vehicle, whether or not you are actually present for any of the transport tasks. See the Operator NHVR Fact Sheet for additional information
Parties in the chain of responsibility for a heavy vehicle	Means each of the following persons— • if the vehicle's driver is an employed driver—an employer of the driver; • if the vehicle's driver is a self-employed driver—a prime contractor for the driver; • an operator of the vehicle; • a scheduler for the vehicle; • a consignor of any goods in the vehicle; • a consignee of any goods in the vehicle; • a packer of any goods in the vehicle; • a loading manager for any goods in the vehicle; • a loader of any goods in the vehicle; • an unloader of any goods in the vehicle.
PPE	Personal Protective Equipment

Term	Definition
RAV	**Restricted Access Vehicles** Restricted Access Vehicles (RAV) include Class 1, 2 or 3 heavy vehicles. These vehicles must operate under a permit approved by the Regulator. This may include restrictions on the route that the vehicle can take. The relevant road transport authority permits e.g. over height or width, must be obtained and approved during the planning process prior to transportation. Common permits include Oversize Over Mass (OSOM) Permits. Where UGL is a party in the transport supply chain for OSOM loads, UGL must validate that the correct permit has been obtained, prior to transporting the load.
RTO	Registered Training Organisation
Should	Means a recommendation.
TMP	Traffic Management Plan
Transport activities	Means activities, including business practices and making decisions, associated with the use of a heavy vehicle on a road. Examples include contracting, directing or employing a persons to drive the vehicle, maintaining or repairing the vehicle, consigning goods for transport using the vehicle, scheduling the transport of goods or passengers using the vehicle, packing goods for transport using the vehicle, managing the loading of goods onto or unloading of goods from the vehicle, loading goods onto or unloading goods from the vehicle, receiving goods unloaded from the vehicle.
VMP	Vehicle Movement Plan
WA	Western Australia
WAHVA	WA Heavy Vehicle Accreditation

APPENDIX B HEAVY VEHICLE CLASSES

Class 1

Special purpose vehicles - A special purpose vehicle is a motor vehicle or trailer, other than an agricultural vehicle or a tow truck, built for a purpose other than carrying goods, or a concrete pump. Examples of a special purpose vehicle include a mobile crane, a concrete pump or drill rig. Special purpose vehicles are considered class 1 heavy vehicles when they do not comply with the general prescribed mass or dimension requirements.

Example 1: 3-axle all-terrain crane

Oversize/overmass vehicles - An oversize or overmass vehicle is a heavy vehicle or combination which alone, or together with its load, exceeds the general prescribed mass or dimension requirements, and is a heavy vehicle carrying, or designed for the purpose of carrying. This does not include road trains or B-doubles, or vehicles carrying a freight container designed for multimodal transport. Examples include a prime mover and extendable trailer or a prime mover and low loader combination.

Example 2: Prime mover and platform trailer with 9 axles

Class 2

Freight-carrying vehicles - General freight carrying vehicles that are longer than 19m require specific networks that are capable of handling these larger vehicles. This is usually managed by declaring route networks, but where a network does not exist, an operator may apply for a permit. There are a number of common class 2 heavy vehicle combinations.

A B-double is a class 2 heavy vehicle that consists of a prime mover towing two semitrailers, with the first semitrailer being attached directly to the prime mover by a fifth wheel coupling and the second semitrailer being mounted on the rear of the first semitrailer by a fifth wheel coupling on the first semitrailer. A B-double must comply with prescribed mass and dimension requirements.

Example 3: 7-axle B-double (other axle combinations are possible)

A road train is a class 2 heavy vehicle that consists of a motor vehicle towing two or more trailers (excluding converter dollies supporting a trailer). Road trains must comply with prescribed mass and dimension requirements.

Buses - A bus, other than an articulated bus, that is longer than 12.5m but less than 14.5m, that complies with prescribed mass and dimension requirements is a class 2 heavy vehicle. These vehicles are also known as a 'Controlled Access Bus'

Class 3

A class 3 heavy vehicle is a heavy vehicle which, together with its load, does not comply with prescribed mass or dimension requirements and is not a class 1 heavy vehicle. A truck and dog trailer combination consisting of a rigid truck with 3 or 4 axles towing a dog trailer with 3 or 4 axles weighing more than 42.5t is an example of a class 3 heavy vehicle. Other examples might include a B-double or road train transporting a load wider than 2.5m.

Example 4: Truck and dog trailer combination over 42.5t

APPENDIX C STANDARD HOURS FOR SOLO DRIVERS OF FATIGUE-REGULATED HEAVY VEHICLE

Total period	Maximum work time	Minimum rest time
In any period of….	*A driver must not work for more than a MAXUMUM of ….*	*And must have a rest for the MINIMUM period of….*
5½ hours	5¼ hours work time	15 continuous minutes rest time
8 hours	7½ hours work time	30 minutes rest time, in blocks of at least 15 continuous minutes
11 hours	10 hours work time	60 minutes rest time, in blocks of at least 15 continuous minutes
24 hours	12 hours work time	7 continuous hours stationary rest time
7 days (168 hours)	72 hours work time	24 continuous hours stationary rest time
14 days (336 hours)	144 hours work time	a) 2-night rest breaks; and b) 2-night rest breaks taken on consecutive days

In addition to the requirements detailed in this section, further requirements apply for Heavy Vehicle operations in Western Australia. See 'Appendix E– Western Australia Specific Requirements' for additional details.

APPENDIX D WORK DIARY REQUIREMENTS

Description	Details
When is a Diary Needed?	• For travel that exceeds 100+ Km from a driver's base; or • If operating under Advanced Fatigue Management (AFM) or Basic Fatigue Management (BFM) accreditations.
Who must complete the diary?	• The Driver of the Heavy Vehicle
Where must the diary be kept?	• Where used, Hardcopy Diaries must be kept with the vehicle
How must the diary be completed?	• Electronically or in hard-copy, however all records must be legible. • Electronic work diaries/ systems may be used and must be approved by the regulator to ensure they meet minimum requirements. • For electronic work diaries, UGL must inform the Driver and the regulator within 2 business days if they discover the electronic system is malfunctioning or dysfunctional. • If the electronic system is not working, UGL must immediately provide Drivers with an alternative method of recording their work activity.
When must the diary be updated?	• Before or after a period of work time or rest time; • When finishing work for a day; • If there is a change of the driver's base location; • If there is a change of the driver's work location/destination; and • Any details of a two-driver arrangement.
What must the diary record?	• The driver's name and contact details; • The driver's current driver licence number and State or Territory in which the licence was issued; • The registration number of the fatigue-regulated heavy vehicle; • The location of the driver's base; • The previous 28-day history, including: – The dates on which the driver drives a fatigue-regulated heavy vehicle on a road; – The total of the driver's work times and rest times on each day; – The driver's rosters and trip schedules, including details of driver changeovers;
Where can the diary be obtained from?	• Written or Hard copy work diaries must be obtained from the regulator or an agent. The link below provides additional details on where to get a diary: • https://www.nhvr.gov.au/safety-accreditation-compliance/fatigue-management/work-diary
Lost or Stolen Work Diaries	• If the work diary is hard copy and is filled up, lost, stolen, or destroyed, the Driver must notify the regulator within 2 business days. • If a lost or stolen written work diary is found by or returned to the driver after a replacement work diary has been issued to the driver, the driver must Immediately cancel any unused daily sheets in the old work diary; • If the old work diary is found or returned within 28 days after it was lost or stolen, immediately notify the Regulator that it has been found or returned and return it to the Regulator within 2 business days after the 28-day period ends; • If the old work diary is found or returned later than 28 days after it was lost or stolen, return it to the Regulator as soon as practicable after it is found or returned.

Description	Details
Record management requirements	• All work diary records must be retained for 3 years. • UGL must also keep a copy of payment records relating to the driver, including time sheet records if the driver is paid according to time at work.

APPENDIX E WESTERN AUSTRALIA SPECIFIC REQUIREMENTS

Fatigue Management Plan

A fatigue management plan is a key component of the W.A. heavy vehicle accreditation process. Each project must ensure that a fatigue management plan is developed that covers the following areas for the management of commercial driver fatigue:

- Trip schedules and driver rosters
- Drivers' fitness for work
- Training and education of drivers in fatigue management
- Managing incidents on or relating to commercial vehicles
- Establishing and maintaining appropriate workplace conditions.

Refer: Developing a fatigue management plan for commercial vehicle drivers and operators | Department of Mines, Industry Regulation and Safety

In some situations, the fatigue management plan will be made up of several policies and procedures that are already in other corporate documents, rather than one plan which captures all this information together.

Refer: Code of practice - Fatigue management for commercial vehicle drivers | Department of Mines, Industry Regulation and Safety

Working Hour Requirements

The Fatigue Management Plan shall define the working hours requirements for workers classed as 'commercial vehicle drivers', which must be in accordance with those defined in OSH Regulation 1996 (WA) 3.132.

The working hours of commercial drivers must be scheduled in accordance with the OSH Regulation 1996 (WA) 3.132.

These are summarised in the tables beside for solo-drivers and two-up drivers respectively.

Source: W.A. Code of Practice – Fatigue Management of Commercial Vehicle Drivers

OPERATING STANDARD FOR SOLO DRIVING
At least 20 minutes of breaks from driving for every five hours of work time including a break of at least 10 consecutive minutes during or at the end of five hours.
No more than 168 hours of work time in any 14 day period.
At least 27 hours of non-work time in any 72 hour period, including at least three periods of at least seven continuous hours of non-work time.
No more than 17 hours between non-work periods of at least seven continuous hours.
If there is shiftwork on five or more consecutive days, at least 24 continuous hours of non-work time between shift changes.
Note: All of the items above and one of the options below must be complied with, so far as is practicable.
EITHER
At least two periods of 24 continuous hours non-work time in any 14 day period.
OR
At least four periods of 24 continuous hours non-work time in any 28 day period (provided hours of work do not exceed 144 hours in any 14 day period within the 28 days).

APPENDIX F PARAMETER SETTINGS FOR IN-VEHICLE IVMS ALARMS

IVMS must be capable of monitoring and reporting on the following exception events/rules:

Event Category	Rule Parameter
Exceeding speed limit	• >=5km/h instantaneously (verified by GPS) (event) or • >=5km/h for >=5 sec (verified by GPS) • all speed events to return maximum km/h value

Where any of the following IVMS capabilities have been selected for use the following rule parameters apply:

Event Category	Rule Parameter
Drive without seatbelt	• Any motion >=5km/h for >=5 sec
4WD disengaged on unsealed roads (provision for data capture)	• Any motion >40km/h for 5 mins & 4WD not engaged on an unsealed (public or private) road
Harsh deceleration/braking	• >10km/h/s
Excessive braking	• >13km/h/s
Harsh acceleration	• >10km/h/s
Harsh Cornering	• As recommended by IVMS provider
Rollover Detection	• As recommended by IVMS provider

APPENDIX K DRIVER CODE OF CONDUCT FOR MARAGLE PROJECT

Drivers Code of Conduct

All drivers involved in Maragle Project activities are to comply with this Driver's Code of Conduct for the Maragle Project. This Driver Code of Conduct will be displayed in all site buildings and will form part of the UGL Maragle Project Induction Package to enable recording of communication and compliance sign off.

Drivers' obligations

1) Drivers MUST at all times:

- Adhere to all of the obligations required by law;
- Be licensed to operate the vehicle;
- Drive at no more than the legal speed limit including those imposed by the project;
- Comply with all construction and road work signs and Traffic and Transport Management Plans (TTMPs);
- Take the necessary and/or prescribed rest breaks so that operation of the vehicle is not affected by fatigue;
- Enter and leave the site with loads covered or contained and enter and leave the site in a forward direction;
- Operate the vehicle free from the effects of drugs and alcohol;
- Where it is reasonable and safe to do so, project drivers are encouraged to reduce speed at key intersections along the Snowy Mountains Highway, Link Rd, Tooma Rd, and Elliott Way; and all other access roads,
- Ensure that vehicles are operated safely and with a high degree of care and attention, and;
- Be aware of NPWS and FCNSW activities including the potential for NPWS and FCNSW plant and equipment being in operation including but not limited to heavy plant and log trucks.

2) Vehicles will be operated in a manner that is suitable to the road and weather conditions including consideration for the likelihood for encountering wildlife.

In the event of a fauna strike or near miss, on major project access roads, drivers are to:

- Ensure their personal safety;
- Notify their supervisor who MUST in turn notify the UGL environmental staff or relevant Site Supervisor;
- Adhere to reporting and handling requirements within the Biodiversity Management Plan

In the event of a fauna strike on the broader road network, drivers are to:

- Ensure their personal safety;
- If safe to do so, check on the animal and / or notify UGL environmental staff or report to WIRES directly on 1300 094 737 (1300 WIRES) or the Snowy Mountains Wildlife Rescue Looking After Our Kosciuszko Orphans (LAOKO) wildlife rescue group on 02 6456 1313; and
- Where a large mammal (e.g., horse or deer) is injured UGL environmental staff will notify NPWS officers or WIRES.

3) There shall be no littering either onsite or whilst operating on the roads. Rubbish is to be disposed of in appropriate bins.

4) Drivers are to notify their employer or operator immediately should the status or conditions of their driver's licence change in any way.

5) Drivers of vehicles who are required to carry snow chains, are to be competent in the fitting and driving with of snow chains;

6) **Drivers are to give due consideration to the public at all times**. This includes:

- Always behaving and driving professionally;
- Limiting the use of truck engine braking on all local roads and the Snowy Mountains Highway where safe to do so;
- Laying up in approved locations only. Stopping on unformed road shoulders is not permitted;
- Not queuing or idling on local roads. Deliveries are to be staggered to allow steady entry into site and to avoid queuing on public roads;
- Adhering to the approved heavy vehicle routes and approved turn movements;
- Covering loads on transit to and from the project site;
- Responding courteously if approached by members of the public and directing them to the relevant Site Supervisor.

Additional requirements for heavy vehicles or over-dimension vehicles

In addition to the general driver requirements all heavy or over-dimension vehicle drivers involved in the Main Works are to comply with the additional requirements related to heavy vehicles.

1) **Drivers MUST at all times:**

- Adhere to their Chain of Responsibility requirements;
- Ensure the heavy vehicle is operated within its legal mass and dimension limits;
- Adhere to any permit to travel requirements; and
- Adhere to direction of road authorities and OSOM permit.

2) **Drivers are to take regular rest breaks to manage fatigue and breaks of no less than the minimum periods prescribed by the National Heavy Vehicle Regulator. For solo drivers with no Basic Fatigue Management accreditation this means:**

- For the first 11 hours a maximum of 10 hours work time with 60 minutes rest in blocks of 15 continuous minutes;
- A maximum work time of 12 hours in 24 hours with 7 continuous hours of stationary rest.

3) **Heavy Vehicle congestion can have a large impact on the local community, motorists and road authority operations and are of particular concern to UGL. Drivers are to avoid forming convoys where other road users are limited in vehicle movements by no-break in heavy vehicles. Heavy Vehicle movements will be monitored and avoid travel during peak periods through popular snow season destinations, i.e., Cooma, Tumut and the KNP:**

- Deliveries are to be scheduled to occur such that heavy vehicle travel through Cooma, Tumut or the KNP is avoided where practicable during the peak traffic periods (winter weekends and public holidays);
- Drivers are required to pull over and allow traffic to pass when safe to do so should excessive queuing occur on single lane roads.
- Heavy vehicles will aim to travel staggered from one another when in transit in order to minimise delays to non-construction vehicle movements.

APPENDIX L PROJECT STAGING APPROVAL FROM DPE

Department of Planning and Environment

NSW GOVERNMENT

Our ref: SSI-9717-PA-12

Oliver King
Project Director
The Trustee for the NSW Electrical Networks Operations
180 Thomas Street
Haymarket, NSW, 2000

18/11/2022

Subject: Staging Approval for Snowy 2.0 - Transmission Connection

Dear Mr. King

I refer to the Staging Approval Request Letter submitted in accordance with Schedule 2 Condition C3 of the Infrastructure Approval for the Snowy 2.0 - Transmission Connection (SSI-9717).

I note it is proposed that the delivery of the relevant plans and strategies be delivered in two stages and address the following activities:

- Stage 1 – All activities associated with the construction and operation of infrastructure related to the 330 kV grid connection, including:
    - All civil works associated with the new substation in Bago State Forest and the construction/installation of infrastructure associated with the 330 kV component of the substation.
    - Two new 9 km long 330 kV double-circuit overhead transmission lines from the Snowy 2.0 cable yard in Lobs Hole, National Park to a new substation.
    - 330 kV grid connection between the new substation and Transgrid's existing Line 64.
    - Upgrade and widening of an existing access road off Elliott Way to the substation.
    - Ancillary construction activities, including the establishment of tensioning and pulling sites for conductor and earth wire stringing, crane pads, site compounds and equipment laydown areas, water extraction and the transport and haulage of equipment and waste to and from the project area.
- Stage 2 – All activities associated with the construction and operation of infrastructure related to the 500 kV component of the substation, including:
    - The delivery of oversize/overmass (OSOM) components, construction/installation of infrastructure associated with the 500 kV component of the new substation in Bago State Forest (i.e. transformers, reactors, switchbays).

- The upgrade of roads and bridges to facilitate the transport of OSOM 500 kV componentry to the substation.

The Department has carefully reviewed the letter and is satisfied that it meets the requirements of the relevant conditions.

Accordingly, as nominee of the Planning Secretary, I approve the staged delivery of management plans.

However, the Department notes that the expectation is that the relevant management plan is updated to include the new stage as they are required rather than provision of separate management plans for each stage.

Please ensure you make this document publicly available on the project website at the earliest convenience.

If you wish to discuss the matter further, please contact Wayne Jones on (02) 6575 3406.

Yours sincerely

Nicole Brewer
Director
Energy Assessments
As nominee of the Planning Secretary