Appendix B3
Construction Traffic Management Protocol

Project: Keepit Dam Work Package 2 - Post Tensioning Works
Location: Keepit Dam, Namoi River, Northern NSW
Client: WaterNSW
Contract: 04532F31

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Construction Traffic Management Protocol

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ACCEPTED:		Date:	25 - 04 - 17
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Abbreviations

Term	Definition
CEMP	Construction Environmental Management Plan
CoA	Conditions of Approval
CTP	Compliance Tracking Program
DPE	Department of Planning and Environment
EA	Environmental Assessment
EMR	Environmental Management Representative
EMS	Environmental Management System
EP&A Act	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	*Environmental Planning and Assessment Regulation 2000*
EPA	Environment Protection Authority
EPBC Act	*Environment Protection and Biodiversity Conservation 1999*
EWMS	Environmental Work Method Statement
NSW	New South Wales
POEO Act	*Protection of the Environment Operations Act 1997*
Project, the	Keepit Dam Work Package 2 – Post Tensioning Works
RMS	Roads and Maritime Services
SoC	Statement of Commitments
SRG	SRG Limited
TMP	Construction Traffic Management Protocol
VMP	Vehicle Movement Plan
WaterNSW	The client

Construction Traffic Management Protocol

1. Introduction

1.1. Context

This Construction Traffic Management Protocol (TMP or Plan) is a Sub plan of the Construction Environmental Management Plan (CEMP) for the Keepit Dam Stage 2, Work Package 2 – Post Tensioning Works project (Keepit Dam Post Tensioning Works) (the Project).

This TMP has been prepared to address the requirements of the *Keepit Dam Upgrade Environmental Assessment* (PB, 2007), the *Keepit Dam Upgrade Submissions Report and Preferred Project Report* (Submissions Report)(PB, 2008), the resulting Project Approval (06_0155) issued for upgrade of Keepit Dam, and all applicable legislation.

1.2. Background

Keepit Dam is situated on the Namoi River, 13 km upstream of its confluence with the Peel River in the north-west of NSW.

The NSW Dams Safety Committee requires that Keepit Dam be upgraded to be able to safely pass the probable maximum flood and to withstand earthquake events. WaterNSW is therefore undertaking dam safety upgrade works to Keepit Dam to comply with the requirements of the NSW Dams Safety Committee.

WaterNSW has adopted a two stage approach to upgrading Keepit Dam:

- Stage 1 - Construction of two fuse plug spillways – completed in 2011.
- Stage 2 - Electrical relocation, post tensioning of the main dam wall and raising of the dam concrete monoliths and the main embankment.

The Stage 2 works have been procured into three separate contract work packages, these being:

1. Electrical relocation works - completed in 2015.
2. Post tensioning the main dam wall.
3. Raising of the dam concrete monoliths and main embankment.

This Construction Traffic Management Protocol (TMP) has been prepared for the Stage 2, Work Package 2; Post tensioning of the main dam wall project.

1.3. Environmental Management System Overview

The overall Environmental Management System for the Project is described in the Construction Environmental Management Plan (CEMP).

The TMP is part of the SRG Limited (SRG) environmental management framework for the Project, as described in Section 4.1 of the CEMP. Management measures identified in this Plan will be incorporated into site or activity specific Environmental Work Method Statements (EWMSs) or Work Method Statements (WMSs) where relevant.

EWMSs / WMSs will be developed and signed off by environment and management representatives prior to associated works, and construction personnel will be required to undertake works in accordance with the identified mitigation and management measures.

Used together, the CEMP, strategies, procedures and EWMSs form management guides that clearly identify required environmental management actions for reference by SRG personnel and contractors.

The review and document control processes for this Plan are described in Section 9 of the CEMP.

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2. Purpose and objectives

2.1. Purpose

This Construction Traffic Management Protocol describes how SRG will minimise and manage traffic impacts during construction of the Keepit Dam Stage 2, Work Package 2 – Post Tensioning Works project.

2.2. Objectives

The objectives of the TMP are to:

- Minimise and manage impacts on existing traffic including pedestrians.
- Ensure the safety of road users is not compromised during construction.
- Maintain access for vehicles, local residents, cyclists and disabled persons.
- Allow provision for construction vehicle access including heavy vehicles.
- Limit damage to existing roads.

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3. Environmental requirements

3.1. Legislation

Legislation relevant to traffic management includes:

- *Environmental Planning and Assessment Act 1979.*
- *Roads Act 1993*.
- *Transport Administration Act 1998.*
- *Road Rules 2014.*

Relevant provisions of the above legislation are explained in the register of legal and other requirements included in the CEMP.

3.2. Guidelines and Standards

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

- *Road Occupancy Manual* (Roads and Maritime Services (RMS)), 2015.
- *Traffic Control at Work Sites Manual* (RMS) Ver 4, June 2010.
- Australian Standard 1742.3-2009 *Traffic control for works on roads.*
- Australian Standard 1742 Parts 1 to 14 *Manual of Uniform Traffic Control Devices*.
- AGRS06/09 Guide to Road Safety Part 6: Road Safety Audit (Austroads).
- AGTM 02-08 *Guide to Traffic Management Part 2: Traffic Theory, 2015.*
- AGTM 06-07 *Guide to Traffic Management Part 6: Intersections and Crossings – General, 2013.*
- *RMS Traffic Control at Worksites Manual* Ver 4, June 2010.
- *RMS Road Occupancy Manual,* 2015.

3.3. Conditions of Approval

The TMP has been prepared as a requirement of CoA 6.3(c). The relevant requirements stipulated by the Conditions of Approval are detailed in Table 3-1.

Table 3-1 Conditions relevant to construction traffic management

CoA No.	Condition	Where addressed
2.10	The Proponent shall:	
	(a) Ensure that any measures to restore roads as a result of the construction of the project, are undertaken in a timely manner, in accordance with the requirements and to the satisfaction of the relevant road authority and at the full expense of the Proponent;	Table 6-1 Measure T3
	(b) Ensure that adequate signage is provided to inform road users of any change in traffic conditions resulting from construction works, e.g. for the construction of the right-hand abutment spillway, the Proponent should inform the public of the alternate route via Orange Grove Road for through-traffic;	Table 6-1 Measure T4
	(c) Undertake all roadworks in consultation with Council and any relevant road authority.	Table 6-1 Measure T5

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CoA No.	Condition	Where addressed
6.3	As part of the Construction Environmental Management Plan for the project, required under condition 6.2 of this approval, the Proponent shall prepare and implement the following:	CEMP
(c)	a Traffic Management Protocol to outline management of traffic conflicts that may be generated during construction of the project. The Plan shall address the requirements of Council, the RTA and any other relevant road authority and shall include, but not necessarily be limited to:	This document, Appendix F of the CEMP
	i) details of how construction of project infrastructure will be managed in proximity to local and regional roads;	Section 5.3, 5.5, 5.6, 5.7 and 5.8.
	ii) details of traffic routes for heavy vehicles, including any necessary route or timing restriction for oversized loads;	Section 5.3, 5.5 and 5.6.
	iii) detailed consideration of measures to be employed to ensure traffic volume, acoustic and amenity impacts along the heavy vehicle routes are minimised;	Section 5.5, 5.8 and Table 6-1
	iv) detailed consideration of alternative routes (where necessary); and	Section 5.3.1
	v) demonstration that all statutory responsibilities with regard to road traffic impacts have been complied with.	Section 3.1 and Section 3.2

3.4. Statement of Commitments

Statement of Commitments from the Submissions and Preferred Project Report relevant to traffic management are detailed in Table 3-2.

Table 3-2 Statement of Commitments relevant to traffic management

SoC No.	Condition	Where addressed
39.1	Road dilapidation reports will be prepared before Construction commences for all public roads likely to be used by Construction traffic. Copies of the reports will be provided to the relevant roads authority.	Table 6-1
39.2	Road dilapidation reports will be prepared after Construction is complete for all public roads likely to be used by Construction traffic. Copies of the reports will be provided to the relevant roads authority. Any damage resulting from Construction, except that resulting from normal wear and tear, will be repaired at State Water's cost. Alternatively State Water may negotiate an alternative arrangement for road damage with the relevant roads authority.	Table 6-1
39.3	A Construction Traffic Management Sub Plan will be prepared as part of the CEMP. The Sub Plan will be prepared in consultation with the relevant roads authority and include:	This Protocol. Appendix F of the CEMP – Consultation Records
	c) identification of all roads to be used by Construction traffic, in particular roads proposed to transport large quantities of Construction materials. The expected timing and duration of road usage will be stated;	Section 5.3, Figure 5-1,
	d) management methods to ensure Construction traffic uses identified roads;	Section 7
	e) identification of all roads that may be partially or completely closed during Construction and the expected timing and duration of these closures. Consideration will be given to programming Construction works to minimise road closures during peak hours and/or holiday periods;	Section 5.5
	f) impacts on all types of existing traffic including pedestrians, vehicles, cyclists, and disabled persons;	Section 5.4
	g) temporary traffic arrangements including property access;	Section 5, Appendix A
	h) access to Construction sites including entry and exit locations and measures to prevent Construction vehicles queuing on public roads;	Section 5.3, Figure 7-1,
	i) a response plan for any Construction traffic incident; and	Appendix A
	j) monitoring, review and amendment mechanisms.	Table 6-1, Section 7

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4. Construction traffic aspects and impacts

4.1. Predicted construction traffic volumes and routes

Section 5.1.7 of the Submissions Report assessed construction traffic movements. The Submissions Report advised that construction traffic would access the dam from the Oxley Highway via Rushes Creek Road and Keepit Dam Road. All of these roads are sealed, undivided two lane roads with open shoulders.

They were found to be satisfactory for use by construction traffic.

Traffic volumes determined in the traffic assessment found the number of vehicles entering the Keepit State Park for recreational activities and servicing of facilities to be highly variable, and can depend on factors such as the water level in the dam, the season, weather conditions and holiday factors. The existing Keepit State Park average traffic volume is likely to between 40 and 200 vehicles per day.

It was determined that the 'less intrusive' truck movements would occur between the southern and northern sides of the main dam wall (relevant to Stage 2, Package 2).

A summary of construction traffic movements and routes assessed in the Submissions Report is provided in Figure 4-1.

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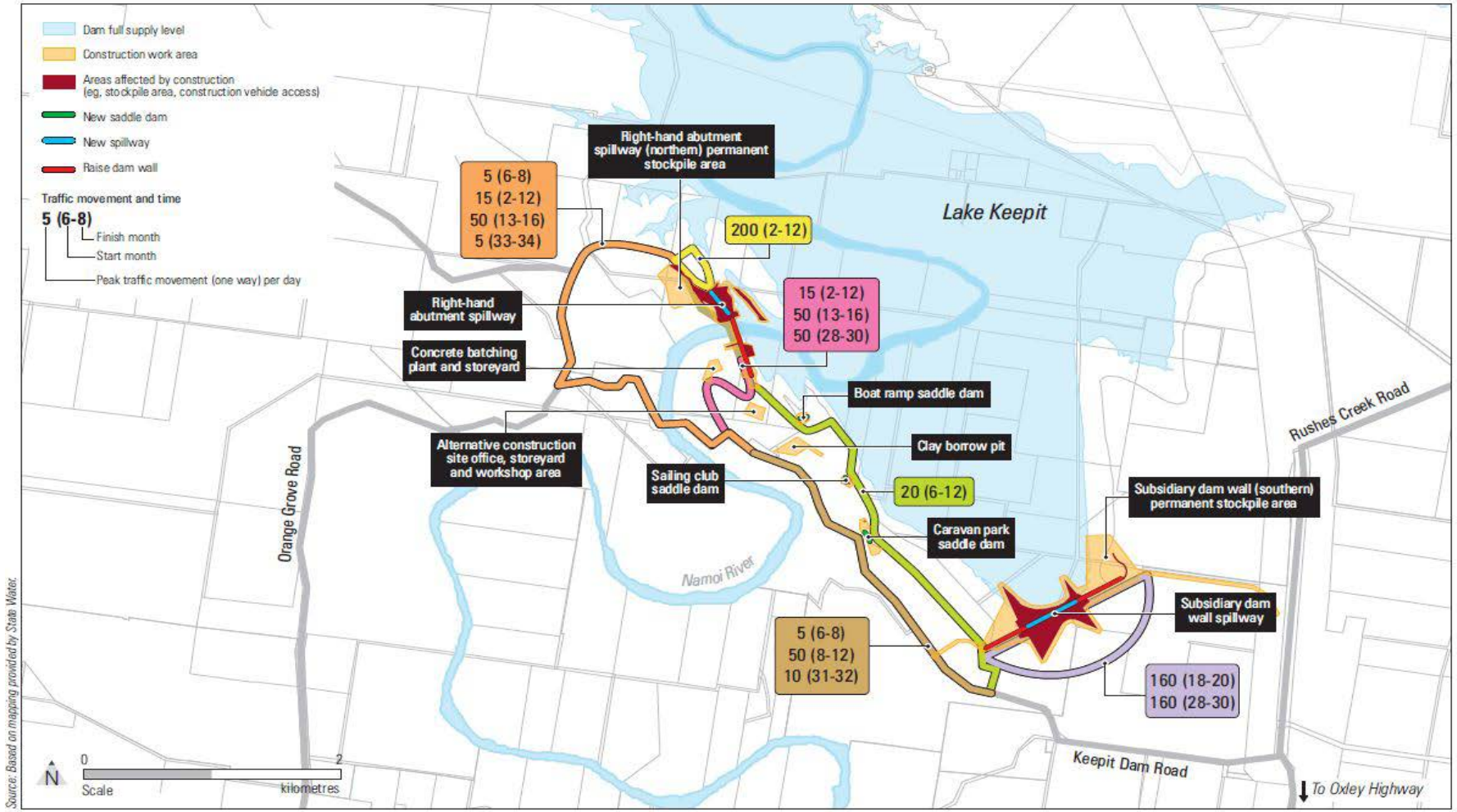

Figure 4-1 Submissions Report assessment of traffic movements, routes and volumes

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5. Construction traffic management

5.1. Traffic Management Protocol

This Construction Traffic Management Protocol (TMP) describes how SRG will minimise and manage traffic impacts during construction of the Keepit Dam Work Package 2 – Post Tensioning Works project in accordance with the project objectives and requirements.

This Traffic Management Protocol outlines the overall traffic management measures and mitigation strategies for the project. Compliance with project requirements is also demonstrated in the Traffic Management Protocol.

5.2. Construction program and expected traffic impacts

The overall construction program for the project is broadly described below including current anticipated timing for each stage of the project.

• Site mobilisation	March 2017
• Test Anchor – Left Abutment and Crane Erection	April 2017 – August 2017
• Left Abutment Works	August 2017 – February 2018
• Right Abutment Works	November 2017 – June 2018
• Bay 6 and Pier 5 Works	August 2017 – November 2017
• Bay 5 and Pier 4 Works	November 2017 – February 2018
• Bay 4 and Pier 3 Works	February 2018 – May 2018
• Bay 3 and Pier 2 Works	May 2018 – August 2018
• Bay 2 and Pier 1 Works	August 2018 – November 2018
• Bay 1 Works	November 2018 – February 2019
• Restressing of Right and Left Abutment	February 2019 – May 2019
• Completion and Demobilisation	June 2019

The major traffic impacts expected during construction are predominately associated with deliveries of material and transport of workers to and from site.

During each of the above phases these are likely to be:

- Site Mobilisation and test anchor – deliveries, site sheds, crane delivery, access and walkway delivery, local waste disposal, concrete deliveries, transport of workers to and from site.
- Coring and anchoring activities – deliveries, stressing strand, local waste disposal, concrete deliveries, transport of workers to and from site.
- Completion and demobilisation – transport of site sheds, crane removal, access and walkway removal.

Other traffic impacts expected:

- No expected impacts on pedestrians, cyclists and the disabled other than restricted access to the immediate dam area during construction.
- No expected impacts to resident access.

5.3. Site access requirements and construction traffic movements

General access to the site compound and left abutment shall be via the Oxley Highway, Rushes Creek Road and Keepit Dam Rd. This is the primary access to Keepit Dam. Heavy and light vehicles accessing from the Oxley Highway will enter from the east (from Tamworth area) or from the west (from Gunnedah area).

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Access to the right abutment is via the Oxley Highway, Rushes Creek Road, Keepit Dam Road and then on to Orange Grove Road and Bulga Road.

A summary of construction traffic movements and routes is provided in Table 5-1.

Table 5-1 Summary of heavy vehicle construction traffic movements

Road utilised	Route (depart – arrive)	Construction month start to finish	Average (each way) per day	Peak (each way) per day
Access and egress to project site				
Oxley Highway	Heavy vehicles	1 to 22	0.3	3
	Oversized vehicles	1 to 22	0.3	1
	Light vehicles	1 to 22	16	40
Rushes Creek Road	Heavy vehicles	1 to 22	0.3	3
	Oversized vehicles	1 to 22	0.3	1
	Light vehicles	1 to 22	16	40
Keepit Dam Road	Heavy vehicles	1 to 22	0.3	3
	Oversized vehicles	1 to 22	0.3	1
	Light vehicles	1 to 22	16	40
Internal road use				
Unnamed road from fabrication yard to dam wall	Heavy vehicles Fabrication and storage area to main dam wall by left abutment. Anchor on trolleys.	2 to 22	1	3
	Oversized vehicles	2 to 22	0.4	1
	Heavy vehicles Fabrication and storage area to main dam wall by left abutment. Sheathing for anchors on small truck.	2 to 22	3	8
	Oversized vehicles	2 to 22	0.4	1
	Light vehicles	2 to 22	5	10
Left abutment road to dam crest	Heavy vehicles Movement of cement from storage to dam crest, by forklift and small truck.	2 to 22	4	12
	Oversized vehicles	2 to 22	0.4	1
	Light vehicles	2 to 22	10	15
Access to right abutment from fabrication yard / Keepit Dam Road	Heavy vehicles	2 to 22	0.4	1
	Oversized vehicles	2 to 22	0.4	1
	Light vehicles	2 to 22	0.4	1

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Refer to Appendix A for figures indicating the location of the internal roads including the road to the left abutment and right abutment.

Construction vehicles will be coming from the east or the west and entering from the Oxley Highway.

Table 5-2 Construction traffic access routes

Site	Access route
Keepit Dam	Heavy vehicles – via Oxley Highway (from east or west), Rushes Creek Road, turn left into Keepit Dam Road Light vehicles - via Oxley Highway (from east or west), Rushes Creek Road, turn left into Keepit Dam Road
Keepit Dam Left Abutment	Heavy vehicles – via Oxley Highway (from east or west), Rushes Creek Road, turn left into Keepit Dam Road, follow onto unnamed road that leads to the left abutment of Keepit Dam Light vehicles - via Oxley Highway (from east or west), Rushes Creek Road, turn left into Keepit Dam Road, follow onto unnamed road that leads to the left abutment of Keepit Dam
Keepit Dam Right Abutment	Heavy vehicles – via Oxley Highway (from east or west), Rushes Creek Road, turn left into Keepit Dam Road, left onto Orange Grove Road, right onto Bulga Road Light vehicles - via Oxley Highway (from east or west), Rushes Creek Road, turn left into Keepit Dam Road, left onto Orange Grove Road, right onto Bulga Road

Heavy vehicles will be used during construction works, including for deliveries, concrete transport, and mobilisation and demobilisation of plant and equipment. Materials such as steel cables and concrete grout will be transported to site. Delivery trucks are typically single unit trucks and semi-trailers.

When travelling to and from the project site, access routes and heavy vehicle delivery routes will access the site compound and left abutment via the Oxley Highway, Rushes Creek Road and Keepit Dam Road.

Access to the right abutment will be via the Oxley Highway, Rushes Creek Road, Keepit Dam Road, Orange Grove Road and Bulga Road.

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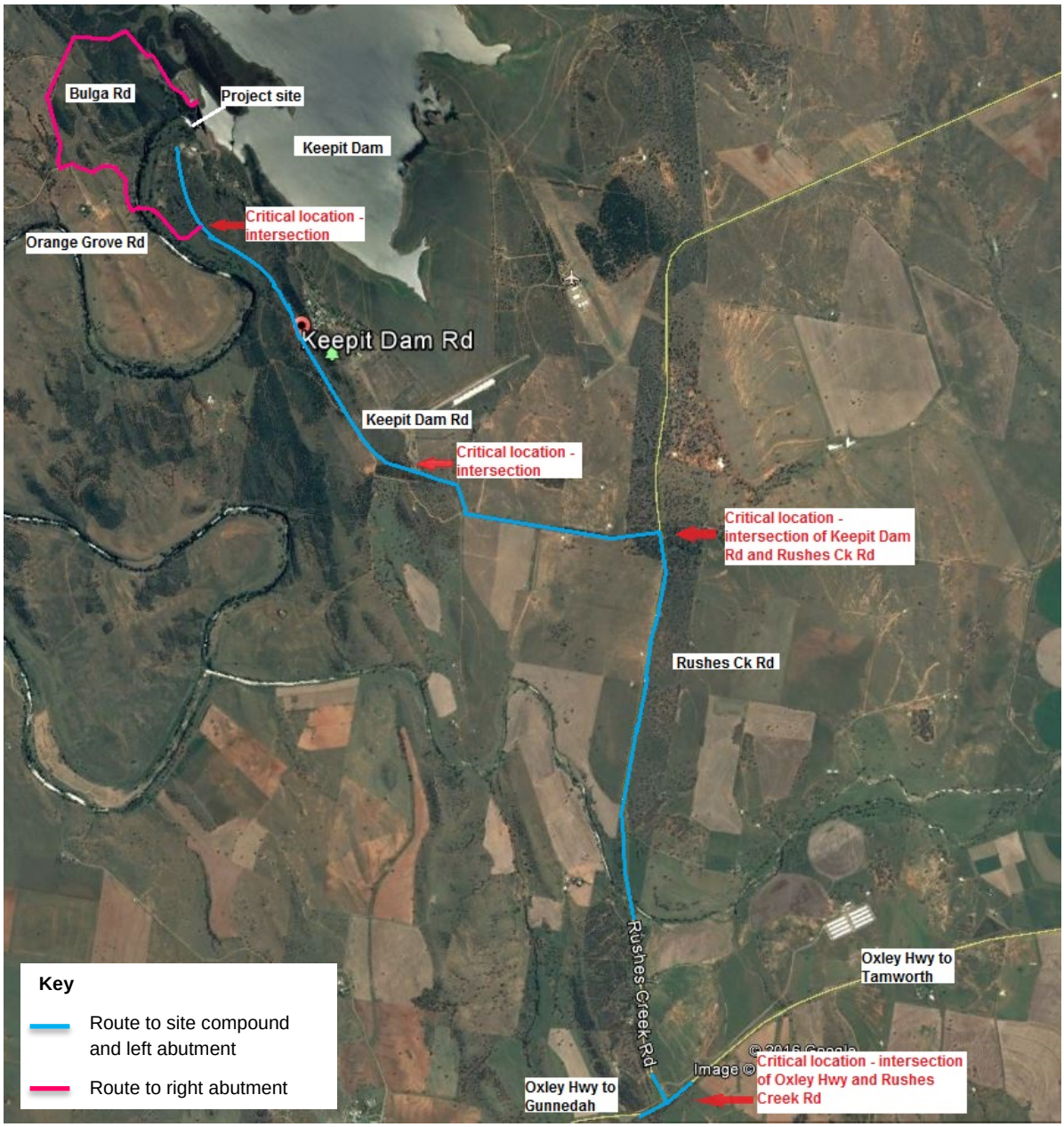

Figure 5-1 Access roads indicating heavy and light vehicle access to site

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5.3.1. Alternative access routes

Alternative access routes were considered in the preparation of this TMP. Alternative access routes include:

- From the west - Oxley Highway, Orange Grove Road; and
- From the north - Manila Road, Rushes Creek Road.

In terms of vehicles accessing the site from the west, some may choose to use the Oxley Highway, then Orange Grove Road, however it would be much faster and more efficient to use the Oxley Highway, then Rushes Creek Road.

There are limited / no current deliveries proposed from the north. In the event that material is being delivered from the north, use of Manila Road and Rushes Creek Road may be considered.

5.4. Road Use and Dilapidation Reporting

As a minimum the following roads are to be used by construction traffic for the duration of the project:

- Oxley Highway.
- Rushes Creek Road.
- Keepit Dam Road.
- Orange Grove Road.
- Bulga Road.
- Kelvin Road.

Road dilapidation reports will be prepared to support the suitability assessments and traffic management controls implemented accordingly. The dilapidation reports will provide a photographic record of the condition of the existing roads intended to be used during construction. The dilapidation reports will be compiled prior to construction and provided to WaterNSW and road authorities for their records.

It is noted that where the roads are lawfully used (observing speed and load limits) during construction SRG will not be held liable for repairs. On completion of construction a further dilapidation report will be completed and compared with the original report. This will then be used to determine the impacts of construction if any and remedial work that maybe required. The post construction report will be provided to WaterNSW and road authorities for their records.

The private and local roads are sometimes unsuitable for large or rigid vehicles as a result of their narrow width, sharp turns or grades. For example access is restricted to the spillway bridge, the available width for a vehicle is less than 3.6m and a load restriction of approximately 44 tonnes plus 30% applies. All traffic routes shall be assessed for suitability prior to construction. Consideration being given to the available routes and selection of suitable material delivery vehicles. Where necessary appropriate traffic control signage will be installed and traffic controllers utilised where no other suitable alternate routes exist.

5.5. Vehicle Movement Plans

The Vehicle Movement Plans will be used as a communication tool between the construction team and transport companies bringing materials to site. They are intended to inform delivery companies of the correct route to use to access site and any special caution that needs to be exercised during the delivery of the materials to site.

The initial site Vehicle Movement Plans are included in Appendix A. The Vehicle Movement Plans will be updated regularly as required to accommodate changes to traffic access requirements.

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After the initial delivery of plant and equipment, most transit operations will be within the site on existing haul roads. Where new haul roads are determined necessary they will be constructed only after approval from WaterNSW.

5.6. Heavy and oversize vehicle traffic

There will be a requirement to bring heavy plant and equipment on to site and to move it within the site, and hence this will necessitate the use of private and public roads by heavy vehicle traffic or oversize vehicle traffic.

Heavy or oversize vehicle movements on public roads will be undertaken with consultation and approval from the NSW Roads and Maritime and where required permits obtained by the transport provider. SRG's Project Manager will be responsible for the management of heavy vehicle movements. During heavy or oversize vehicle movements, traffic management controls will be implemented in accordance with the permit requirements where required and/or the Manual of Traffic Control Devices.

Heavy vehicle movements along private roads will be managed by SRG's Project Manager. There will be consultation and information provided to WaterNSW to inform the public and park users of heavy and oversize vehicle movements. Where necessary signage, barricading and/or traffic controllers will be utilised to restrict local traffic access into areas required to be used by heavy or oversize traffic.

All spoil materials are to be re-used on site so there will be no need for haulage of spoil material offsite.

5.7. Traffic interface

Construction sites and facilities will require direct access to the private roads within the Keepit Dam area and as a result, there will be a continual interface between construction vehicles / sites and other road users.

The interface between these areas will include the following mitigation measures:

- Designated entry and exit points, control of entry and egress to sites through specified 'gates' and the use of physical barriers, fencing and gates where required to prevent or restrict access from the public into construction facilities and areas.
- Traffic and access signage, clearly showing relevant requirements such as speed limits, traffic direction, stop signs and markings etc.

Signage will be fixed for the locations such as the site compounds. This signage includes project details / description, speed limits (where required) and local requirements – eg give way or stop signs and any other signage as required.

Activities based signage will also be in place as required. For example, notification of heavy vehicle movements, notification of specific road closures / times / durations / details etc. This signage will be detailed within a Traffic Control Plan, approved (by WaterNSW) and deployed progressively throughout the project.

5.8. Road closures and temporary traffic arrangements

Unless otherwise specified, SRG shall make provision for traffic, including pedestrians, in accordance with the relevant parts of AS 1742 "Manual of Uniform Traffic Control Devices". Specific Traffic Control Plans will be developed to document and managed the traffic control setup. The number, type and location of signs and devices shall be not less than the standards set out in AS 1742.3 as is applicable. Should circumstances arise which are not adequately covered by AS 1742.3, SRG shall submit alternative proposals to the EMR for review prior to works proceeding. SRG shall provide and maintain appropriate traffic management arrangements for the duration of the obstruction.

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SRG will obtain approval from the relevant roads authority before altering access or hindering the passage of traffic on public roads. SRG will seek approval from the EMR before altering access on private roads (owned by State Park or WaterNSW or other party). WaterNSW will be responsible for advising and consulting with the State Park and WaterNSW and any affected residents.

Short term stoppage of local road traffic maybe required during the delivery of oversize loads on the following roads:

- Keepit Dam Road.
- Orange Grove Road.
- Bulga Road.
- Kelvin Road.

The stoppages are expected to be infrequent and up to a maximum of 15 minutes in duration to accommodate the passage of oversize materials on narrow local roads. The short-term stoppages will be implemented through appropriate traffic control measures and approved by the road authority prior to implementation. Short term stoppage will be coordinated to occur outside of peak traffic periods where possible.

Measures to be used to ensure traffic volume, acoustic and amenity impacts along the heavy vehicle routes are minimised include:

- Implementation of the measures within Table 6-1 of this TMP.
- Clear instructions to all project staff including delivery drivers with regards to speed limits, approved access routes, approved working hours and delivery times, noise mitigation requirements (such as no idling of machinery) and requirements in regards to interface with the park users and the community. These instructions will be through vehicle movement plans, project inductions, toolbox talks, site instructions and subcontract agreements.
- Before any deliveries are undertaken, all heavy vehicle drivers will be required to read and endorse the Drivers Code of Conduct (Appendix B).
- Signage and instructions with regards to speed limits, entry and exit points, designated laydown and parking areas to prevent access and acoustic impacts.
- Construction traffic will be in three forms; deliveries to site (5), local construction traffic movement around site (10) and worker access to the dam site at the start and finish of each shift (15). The approximate 1 way average volumes of each are shown bracketed. These are considerably less than that experienced around the dam during previous phases of construction and unlikely to have any significant impact on the existing traffic and acoustic/amenity impacts.
- There will be careful planning to ensure no unnecessary movement of heavy vehicles. This will provide mitigation of noise and amenity impacts, reduce environmental impacts associated with fuel use and provide a more cost effective project outcome. Light vehicles will generally be parked at the main site office. Light vehicle impacts on traffic volume and amenity will be minimal.

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6. Environmental Mitigation Measures

A range of environmental requirements and control measures are identified in the various environmental documents, including the EA, Submissions / Preferred Project Report and Conditions of Approval. Specific measures and requirements to address impacts from traffic are outlined in Table 5-1.

The following sub plans detail the affects and mitigation measures related to traffic impacts:

- Soil and Water Management Plan – erosion and sediment control, dust control, vehicles to be covered, fixed tailgates, maintenance of vehicles.
- Noise and Vibration Management Plan – noise limits, dust criteria, speed limits, maintenance of roads, fixed tailgates, maintenance of vehicles.

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Table 6-1 Environmental management measures

ID	Environmental Management Measure	When to implement	Responsibility	Reference
T1	Vehicle Movement Plans will be prepared to detail proposed access roads for construction traffic including heavy vehicle traffic. The Vehicle Movement Plans will be included in the site induction to inform workers of the permitted access around site and issued to all supplies and subcontractor prior to working on site.	Construction	SRG's Project Manager	Good practice
T2	Dilapidation inspections and photographic recording of roads intended to be used during construction are to be undertaken prior to the commencement of construction. Post construction inspection and photographic recording will be undertaken on completion of construction and compared against the initial records to determine remedial measures required.	Pre-construction	SRG's Project Manager	SoC 39.1
T3	Measures to restore roads as a result of the construction of the project, are undertaken in a timely manner, in accordance with the requirements and to the satisfaction of the relevant road authority and at the full expense of the Proponent.	Construction	SRG's Project Manager / WaterNSW's Project Manager	CoA 2.10
T4	Adequate signage is to be provided to inform road users of any change in traffic conditions resulting from construction works.	Construction	SRG's Project Manager / Superintendent / WaterNSW's Project Manager	CoA 2.10
T5	Undertake all roadworks in consultation with Council and any relevant road authority.	Construction	SRG's Project Manager / WaterNSW's Project Manager	CoA 2.10
T6	Provide clear instructions to all project staff including delivery drivers with regards to speed limits, approved access routes, approved working hours and delivery times, noise mitigation requirements (such as no idling of machinery) and requirements in regards to interface with the park users and the community. These instructions will be issued through the Vehicle Movement Plans, project inductions, toolbox talks, site instructions and subcontract agreements.	Construction	SRG's Project Manager / Site SQE Representative / WaterNSW's Project Manager	CoA 6.3(c)(iii)
T7	Drivers are required to comply with gazetted road speed limits on Oxley Highway, Rushes Creek Road and Keepit Dam Rd. Speed limit around site is 20 kmph.	Pre-construction and construction	SRG's Superintendent	CoA 6.3(c)(iii)

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ID	Environmental Management Measure	When to implement	Responsibility	Reference
T8	When driving around site, a speed limit of 20km/hr is to be complied with.	Pre-construction and construction	SRG's Superintendent	CoA 6.3(c)(iii)
T9	Deliveries will occur during normal working hours of 7:00am to 6:00pm Monday to Friday, and 8:00am to 1:00pm Saturday.	Pre-construction and construction	SRG's Project Manager / Superintendent	CoA 6.3(c)(iii)
T10	Before any deliveries are undertaken, all heavy vehicle drivers will be required to read and endorse the Drivers Code of Conduct (Appendix B).	Construction	SRG's Project Manager	Good Practice
T11	Signage and instructions with regards to speed limits, entry and exit points, designated laydown and parking areas are to be provided to prevent access and acoustic impacts.	Construction	SRG's Project Manager / Superintendent	CoA 2.10
T12	SRG will obtain approval from the relevant roads authority before altering access or hindering the passage of traffic on public roads. SRG will seek approval from the EMR before altering access on private roads (owned by State Park or WaterNSW or other party). WaterNSW will be responsible for advising and consulting with the State Park and WaterNSW and any affected residents.	Construction	SRG's Project Manager	CoA 2.10
T13	There will be careful planning to ensure no unnecessary movement of heavy vehicles. This will provide mitigation of noise and amenity impacts, reduce environmental impacts associated with fuel use and provide a more cost effective project outcome. Light vehicles will generally be parked at the main site office.	Construction	SRG's Project Manager	CoA 2.10
T14	In the event of an incident, the project Safety Management Plan will be implemented.	Construction	SRG's Project Manager / Superintendent / Site SQE Representative	SoC 39.3
T15	Heavy vehicle movements on public roads will be undertaken with consultation and approval from the NSW Roads and Maritime and any required permits obtained by the transport provider. During heavy vehicle movements, traffic management controls will be implemented in accordance with the permit requirements.	Construction	SRG's Project Manager	Good practice
T16	Traffic control plans will be developed for each specific area to be controlled. Traffic control plans will be designed in accordance with the Manual of Uniform Traffic Control devices by authorised designers.	Construction	SRG's Project Manager	Good practice

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ID	Environmental Management Measure	When to implement	Responsibility	Reference
T17	Consideration shall be given to avoid peak traffic volumes during any planned short term stoppage or oversize vehicle deliveries.	Construction	SRG's Project Manager / Superintendent	Good practice

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7. Compliance Management

7.1. Drivers code of conduct

All drivers employed on the project, whether direct employees or not, have a responsibility to drive safely, comply with State road regulations and the Australian Road Rules. In particular, before any deliveries are undertaken all heavy vehicle drivers will be required to read and endorse the Drivers Code of Conduct.

To reinforce these obligations a Driver's Code of Conduct has been prepared and is included in Annexure B.

7.2. Roles and Responsibilities

The organisational structure and overall roles and responsibilities are outlined in the CEMP. Specific responsibilities for the implementation of environmental controls are detailed in Section 6 of this Protocol.

7.3. Training

All employees and contractors working on site will undergo site induction training relating to traffic management issues. The induction training will address elements related to traffic management including:

- Existence and requirements of this sub-plan.
- Relevant legislation.
- Traffic mitigation and management measures.

Further details regarding staff induction and training are outlined in Section 5 of the CEMP.

7.4. Monitoring and Inspections

The Site SQE Representative will undertake regular inspections and monitor compliance with the requirements of this sub plan.

Weekly inspections will be undertaken with the inspection form provided in Appendix D of the CEMP completed.

Inspections are to include a review of:

- Ensuring that Traffic Control Plans are in place as required and that the measures of the TCP are being implemented (to also be inspected by the engineers);
- The access and egress routes used by heavy vehicles. Should there be any change to those indicated in this TMP, consultation is to occur with WaterNSW and the EMR and as required, and the TMP is to be amended;
- Divers Code of Conduct – that the Drivers Code of Conduct (Appendix B) is being implemented.

7.5. Non-conformances

Non-conformances will be managed in accordance with Section 8.5 of the CEMP.

7.6. Audits

Audit requirements are detailed in Section 8 of the CEMP.

Construction Traffic Management Protocol

8. Review and Improvement of the TMP

8.1. Continuous improvement

Continuous improvement of this Protocol will be achieved by the ongoing evaluation of environmental management performance against environmental policies, objectives and targets for the purpose of identifying opportunities for improvement.

The continuous improvement process will be designed to:

- Identify areas of opportunity for improvement of environmental management and performance.
- Determine the cause or causes of non-conformances and deficiencies.
- Develop and implement a plan of corrective and preventative action to address any non-conformances and deficiencies.
- Verify the effectiveness of the corrective and preventative actions.
- Document any changes in procedures resulting from process improvement.
- Make comparisons with objectives and targets.

8.2. TMP update and amendment

The processes described in Section 8 of the CEMP may result in the need to update or revise this Protocol. This will occur as needed.

Only the Site SQE Representative, or delegate, has the authority to change any of the environmental management documentation. In terms of approval of updates or amendments to this Protocol, this is to be carried out by the Environmental Management Representative (EMR), with the EMR verifying that the amendments are consistent (or not) with the Project Approval.

A copy of the updated Protocol and changes will be distributed to all relevant stakeholders in accordance with the approved document control procedure – refer to Section 9 of the CEMP.

Construction Traffic Management Protocol

Appendix A – Vehicle Movement Plans

Construction Traffic Management Protocol

Figure A-1 Vehicle access routes to the left and right abutments

Construction Traffic Management Protocol

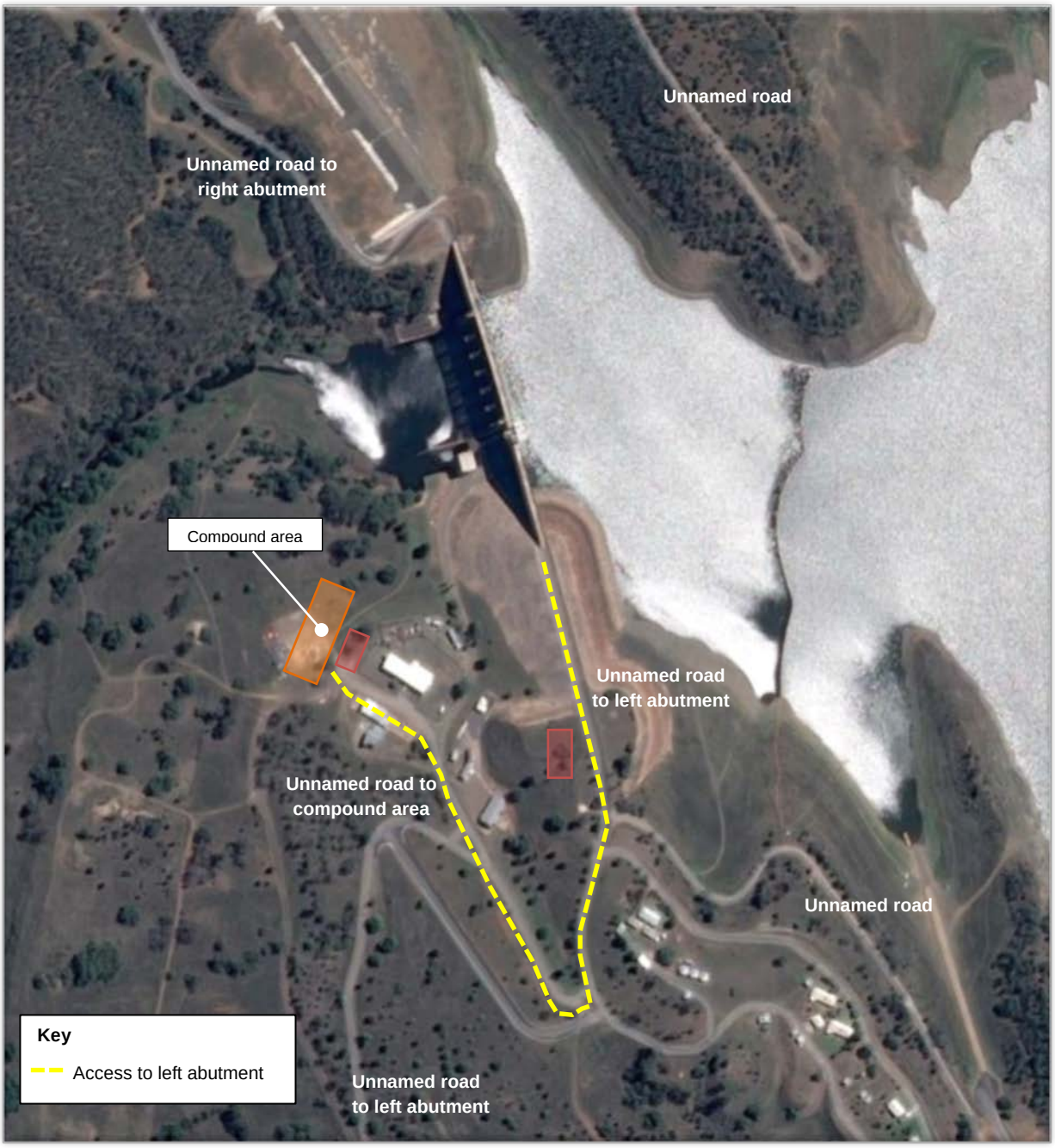

Figure A-2 Vehicle access to the left abutment

Construction Traffic Management Protocol

Appendix B – Drivers Code of Conduct

Construction Traffic Management Protocol

Drivers Code of Conduct

Purpose and Objectives

This Driver Code of Conduct aims to minimise the impacts of construction traffic on roads networks and adjoining properties. The purpose of this Code is to clearly define and detail acceptable behaviour for all heavy vehicle drivers operating as part of the project works including materials supply and subcontract drivers.

Responsibilities of Drivers

Drivers are to follow ALL rules and regulations required by law including:

- Hold a current and valid licence appropriate for the vehicle that you operate
- Comply with speed limits on all roads
- Obeying posted (road) load limits
- Comply with all road works speed limits
- Obey construction traffic signs and devices
- NO overload or allow vehicles to be overloaded

Drivers are to practice safe driving and behaviour which includes, but is not limited to:

- Operating the vehicle in a safe manner within and external to the Project
- Be aware of school zones, school bus routes and residential areas
- Ensure that if passing any pedestrians or cyclists a safe separation distance exists between trucks and pedestrians as well as a reduction in speed if appropriate
- Driving in a manner that is appropriate with road and weather conditions
- Comply with the direction of authorised site personnel when within the site
- Be aware that wildlife exists in the project area. Kangaroos and other fauna have been identified on the roads to and from the dam. Please comply with speed limits and drive to the conditions.
- Not operating any machines whilst suffering from fatigue or under the influence of drugs and/or alcohol.

Other requirements:

- Drivers must behave in a professional manner at all times. No yelling at others.
- Drivers are to arrive and depart from project construction sites during approved hours, 07:00 – 18:00 Monday to Friday and 08:00-13:00 on Saturday. There are to be no deliveries Sunday or Public Holidays. Any out of hours deliveries must be approved by SRG.
- Drivers parking are to engage the park brake and leave the vehicle in gear. Never leave the vehicle with the engine running. Drivers leaving their vehicle must wear appropriate PPE (site standard).
- Vehicles must not transfer dirt or debris onto public roads. If any materials are deposited on the roads, then the SRG Supervisor must be contacted immediately.
- As a courtesy to individuals who may be impacted by driver behaviour, drivers will:
  - Minimise idling
  - Ensure that there is no littering
  - Remain calm and courteous when in contact with other members of the public
  - Maintain trucks in good working order and a clean and tidy condition
  - Not block residential driveways or any other access points