



Design and Construction of Stage AB of the Googong Water Recycling Plant (WRP)

Contract Number WRP01

Traffic Management Protocol

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1 Introduction

1.1 Context

This Traffic Management Protocol (TMP or Protocol) forms part of the Construction Environmental Management Plan (CEMP) for the Googong Township IWC Project Stage AB – WRP.

Refer to Section 1 and Section 2 of the CEMP for additional detail on the scope of Stage AB WRP to which this TMP applies.

This TMP has been prepared to address the requirements of the Minister's Conditions of Approval (CoA), the Statement of Commitments (SoC), the safeguards listed in the Googong Township water cycle project Environmental Assessment (EA), submissions report, and all applicable legislation.

1.2 Background

The Googong Township water cycle project EA assessed the impacts of construction and operation of the IWC Project on traffic.

As part of EA development, a detailed assessment was prepared to address the Director-General's Requirements issued by the Department of Planning and Infrastructure (DP&I). The traffic assessment was addressed in Section 13.1 and Appendix H of the EA.

The EA concluded that there were unlikely to be significant traffic and access impacts associated with the construction and operation of the IWC Project, following the implementation of the proposed mitigation measures identified in the EA.

1.3 Environmental Management System overview

The overall Environmental Management System for Stage AB WRP and approach to managing environmental impacts during construction is described throughout the CEMP.

This TMP forms part of the environmental management framework for Stage AB WRP, as described in Section 1.6 of the CEMP. In accordance with CoA C20(c), this Protocol has been developed in consultation with Queanbeyan City Council (QCC), Palerang Council and the Roads and Maritime Services (RMS).

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2 Purpose and objectives

2.1 Purpose

The purpose of this Protocol is to describe how Googong Township Proprietary Limited (GTPL) and John Holland Propriety Limited JHPL will manage traffic and access during construction of Stage AB WRP.

This TMP is an overarching plan that establishes the procedures for work area or task specific traffic control plans (TCPs) to control and maintain safe and effective road traffic.

This Protocol also assists in ensuring that the construction of Stage AB WRP meets the environmental objectives and targets as defined in Section 3.5 of the CEMP.

2.2 Objectives

The key objective of the TMP is to ensure that impacts to traffic and access are minimised. To realise this objective, the following will be undertaken:

- Ensure appropriate controls and procedures are implemented during construction activities to avoid or minimise potential adverse impacts to traffic and access (refer Section 5.1).
- Ensure appropriate measures are implemented to address the relevant CoA and SoC, and the safeguards detailed in the EA and submissions report (refer Section 3.2 and Section 3.3).
- Ensure appropriate measures are implemented to comply with all relevant legislation and other requirements as described in Section 3.1 of this Protocol.

3 Environmental requirements

3.1 Relevant legislation and guidelines

Section 3.1 of the CEMP identifies the legal and other requirements applicable to the IWC Project and the construction of Stage AB WRP. This section identifies the key legislation applicable to managing traffic and access.

3.1.1 Legislative requirements

Environmental Planning and Assessment Act 1979 (EP&A Act)

As outlined in Section 3.1 of the CEMP, the IWC Project has been assessed and approved by the Planning Assessment Commission under delegation from the Minister for Planning and Infrastructure (DP&I) under Part 3A (now repealed) of the EP&A Act.

Roads Act 1993

Section 138 of the *Roads Act 1993* requires that a person must not carry out work, dig out, pump water into or connect to a classified road without consent from the appropriate roads authority.

A road occupancy licence permits the use a specified road space at approved times, provided certain conditions are met. The licence applies to the occupation of the 'road space' only and does not imply permission or approval for the actual (physical) works being undertaken.

Works may be required to be undertaken in Googong Dam Road, which is under the control of the local road authority (QCC). JHPL will apply for a road occupancy licence from local council/RMS where required (refer Table 4 (T7)).

3.1.2 Relevant guidelines

This Protocol has been prepared in accordance with the following:

- *AS1742.3 Traffic Control for Works on Roads* (AS1742.3: 2009)
- *Development Construction Specification C201 Control of Traffic* (QCC, 2011)

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3.2 Minister's Conditions of Approval

The CoA relevant to this Protocol are listed Table 1. A cross reference is also included to indicate where the condition is addressed in this Protocol or other management documents.

Table 1 Conditions of Approval relevant to traffic and access

CoA No.	Condition requirements	Document reference
C14	Prior to the commencement of construction of the project, the Proponent shall assess the condition of roads and footpaths which may be potentially impacted by construction of the project, including over-mass of over-dimensional vehicles), in consultation with the relevant road authorities.	Table 4 (T2)
C15	The Proponent shall:	Table 4 (T3, T4)
	(a) ensure that any measures to restore roads as a result of the construction of the project, are undertaken in a timely manner, to the satisfaction of the relevant road authority and at the full expense of the Proponent;	
	(b) ensure that adequate signage is provided to inform road users of any change in traffic conditions resulting from construction work; and	Table 4 (T12, T14)
	(c) undertake all road works in consultation with Councils and any relevant road authority.	Table 4 (T2, T6, T10, T12)
C20(c)	A Traffic Management Protocol to outline the management of traffic impacts that may occur during construction of the project. The Plan shall be developed in consultation with Councils, the RTA and any other relevant road authority and shall include, but not necessarily be limited to:	This Plan Section 1.3
	(i) details of traffic routes for heavy vehicles, including any necessary route or timing restriction for oversized loads;	Section 4.3 Table 4 (T8, T9)
	(ii) measures to verify the condition of roads used by construction vehicles prior to and following construction;	Table 4 (T2, T3)
	(iii) details of how the construction of project infrastructure will be managed in proximity to local and regional roads and with respect to sensitive receivers located in close proximity to these roads (such as maintaining access to property) and any other concurrent works occurring in close proximity to the project, such as the Googong Dam Spillway Remediation Works;	Section 4.1 Table 4 (T5, T10, T11, T12, T13, T14, T15, T16)
	(iv) detailed consideration of measures to be employed to ensure traffic volumes and acoustic and amenity impacts along heavy vehicle routes are minimised;	Table 4 (T6, T8, T9, T10, T11, T15 T16)
	(v) details of requirements to restore roads used for the construction of the project, including Old Cooma Road and Googong Dam Road; and	Table 4 (T3, T4)
	(vi) demonstration that all statutory responsibilities with regard to road traffic impacts have been complied with;	Section 3.1 Table 4 (T7, T13, T16)

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3.3 Statement of Commitments

The SoC relevant to this Protocol are listed in Table 2. A cross reference is also included to indicate where the commitment is addressed in this Protocol or other management documents.

Table 2 Statement of Commitments relevant to traffic and access

Objective	Ref. No.	Commitment	Timing	Document reference
Minimise disturbance to local traffic and amenity during construction	T1	<p>A traffic management plan will be prepared prior to the commencement of construction. It will detail traffic arrangements for the construction phase of the Project. This will include:</p> <ul style="list-style-type: none"> The use of standard mitigation and management controls. Planning of vehicle use to maximise efficiency and reduce vehicle trips An education program for construction personnel in relation to local traffic arrangements (as per the plan) and local conditions (such as the intersection of Googong Dam Road and Old Cooma Road) Access to properties and provisions for temporary access A traffic control contractor will be engaged to implement the traffic management plan (such as partial road closures), where necessary specialist advice is required. 	Prior to and during construction	<p>This Protocol</p> <p>Table 4 (T5, T6, T8, T9, T10, T11, T12, T13, T14, T15)</p> <p>Table 4 (T17)</p> <p>Table 4 (T1)</p> <p>Table 4 (T10, T11, T15)</p> <p>N/A</p>
Manage traffic, transportation and access with local authorities	T2	Traffic, transportation and access will be managed in consultation with relevant stakeholders, including Queanbeyan City Council and the RTA, including impact mitigation and management measures to address partial road closures, access to properties and provisions for temporary access and re-instatement.	Prior to and during construction	<p>Section 1.3</p> <p>Table 4 (T2, T3, T6, T7, T8, T10, T11, T12, T13, T14, T16)</p>
Minimise the impact of transportation	T3	Any oversized or overweight loads will be transported in accordance with RTA guidelines and requirements.	Construction	Table 4 (T8, T9)
Minimise impact of traffic and access on stakeholders and the local community	T4	Councils, property owners and local community members will be informed of any potential loss of or disruption to access to properties, roads and/or pathways. Appropriate temporary measures to either provide alternative access or to reinstate access at the end of each workday will be negotiated with relevant parties.	Construction	Table 4 (T10, T11, T15)

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4 Environmental aspects and impacts

The following sections summarise existing traffic environment and the local road network identified in the environmental assessment. Identified impacts are then reviewed. The key reference documents are Section 13.1 and Appendix H of the EA.

4.1 Environmental aspects

4.1.1 Main roads and traffic flow

There are two sealed local council roads that would be used to access the Stage AB WRP construction site – Old Cooma Road and Googong Dam Road.

Old Cooma Road is a two-lane sealed road that predominantly carries rural residential commuter traffic to and from Queanbeyan and provides a connection between Monaro Highway near Royalla and Queanbeyan.

Googong Dam Road is a two-lane sealed road that connects Old Cooma Road to Googong Dam. The road provides access to the new township, Googong Foreshores for recreational activities, the ACTEW water treatment plant, and a Ranger's Station and information centre.

The posted speed limits are 100 kilometres per hour on Old Cooma Road and 60 kilometres per hour on Googong Dam Road.

The only public transport is a weekday school bus service along Old Cooma Road.

Table 3 outlines existing traffic flows on these two main roads documented for the environmental assessment. Old Cooma Road has been divided into two parts (north and south of Googong Dam Road) in relation to traffic flow statistics.

Since the environmental assessment, the traffic in the immediate area has changed. There have been increased vehicle movements associated with the construction of Stage A – Network (West), Stage A – Network (East) and the Part 4 subdivision works. It is likely that most of the Stage A – Network (West/East) works will be complete before construction of Stage AB WRP. However there will be some vehicle movements associated with the Part 4 subdivision works and/or Stage B – Network works taking place at the same time as construction of Stage AB WRP.

In addition, as the development of Googong Township progresses there will be additional traffic movements associated with the residents who have moved into Neighbourhood 1A (NH1A) which is about 400 metres west of the Stage AB WRP construction site. Most traffic movements would likely be away from the Stage AB WRP as residents enter/exit the township into Old Cooma Road.

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Table 3 Previous traffic flows in the vicinity of the IWC Project

Road	Date	Average weekday traffic (total vehicles)	Peak two-way traffic flow (vehicles/hr)	Percentage of heavy vehicles traffic
Old Cooma Road (south of Googong Dam Road)	May 2005	2,120	244	5.7%
Old Cooma Road (north of Googong Dam Road)	December 2006	2,537	265	5.7%
Googong Dam Road	August 2004	260	29	9.5%

4.1.2 Intersections

The intersection at Old Cooma Road and Googong Dam Road is the only significant intersection in the vicinity and is being upgraded as part of the IWC Project.

The traffic volumes at this intersection are low in relation to the capacity of the intersection. Both the morning peak hour and afternoon peak hour flows are classified as level of service (LoS) A and B, respectively.

4.2 Construction activities

Key aspects of the construction of Stage AB WRP that could result in adverse impacts to traffic and access include:

- Increase in vehicular use of the existing road network.
- Access for construction vehicles off Googong Dam Road.

4.3 Traffic and access impacts

Access routes

Construction traffic will use Old Cooma Road and Googong Dam Road. This will include personnel vehicles and large vehicles for the delivery and removal of equipment and materials.

The majority of truck movements will be for concrete required for the construction of the Stage AB WRP treatment facilities. Some spoil may need to be removed off site.

Heavy vehicles entering from the south would likely arrive via the Monaro Highway, turn right onto Old Cooma Road and right into Googong Dam Road. Trucks originating from the north would arrive via the Kings Highway, turning onto Cooma Street, Old Cooma Road and left into Googong Dam Road.

Relevant TCPs will be further developed showing specific truck/haul routes to and from Stage AB WRP site, and a permit will be sought from RMS for any oversized and over mass loads (refer Table 4 (T8)).

Consultation will be ongoing with QCC and Palerang Council for use of local council roads during construction (refer to mitigation measures outlined in Table 4).

Traffic generation

The main truck movements will be associated with the concrete pours where up to 6-12 concrete trucks may be required per hour (at the peak of construction). Generally for all other activities the estimated truck movements would be around one truck per hour.

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Potential impacts on main roads

The assessment of construction traffic impacts in the EA took a conservative approach and included likely traffic generated by all activities for Stage 1 (Stage A – Network (West), Stage A – Network (East), Stage A – WRP, Stage B – Network and WRP), Googong NH1A early works and the Googong Dam Spillway rehabilitation project.

Given the conservative approach taken, the estimated traffic impacts are likely to be slightly overestimated as construction of Stage A – Network (West/East) will most likely be complete and in addition the spillway rehabilitation assessed in the EA phase has also been completed.

There will be some construction overlap with Stage AB WRP and the Part 4 subdivision works, along with new traffic from NH1A and depending on project timing, construction of Stage B – Network.

The additional traffic generated during construction of Stage AB WRP is relatively minor and will retain acceptable LoS on Old Cooma Road, Googong Dam Road and the intersection of these roads. In addition, major damage to these roads is not anticipated but should any unforeseen damage occur the road surface would need to be repaired to its former condition. Refer to mitigation measures outlined in Table 4 (T2, T3, T4).

Potential impacts on access to properties

Access to properties would generally be maintained during construction of Stage AB WRP and it is not anticipated that the property access to the private residence and rangers station located immediately north of the Stage AB WRP on Googong Dam Road would be adversely affected. However if temporary alterations to access are required, arrangements will be negotiated with relevant landowners (refer Table 4 (T10, T11)). The community will be notified of any traffic alterations as outlined in the Community Information Plan.

Construction traffic noise

Construction traffic noise impacts from vehicle movements to and from the construction site are covered in the Noise and Vibration Management Plan (refer Appendix D of CEMP).

5 Environmental control measures

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5.1 Traffic and access mitigation and management measures

A range of environmental requirements and control measures are identified in the various environmental documents, including the CoA, SoC and the EA. Specific measures and requirements to address impacts on traffic and access are outlined in Table 4.

Table 4 Traffic mitigation measures

ID	Measure	When to implement	Reference	Responsibility
T1	All personnel will be required to attend the project induction and will receive ongoing training via toolbox talks regarding their responsibilities related to traffic management and access.	Construction	CoA A8 SoC T1	Environment Manager
T2	A road dilapidation survey will be carried out prior to the commencement of construction. The survey will include as a minimum Googong Dam Road and Old Cooma Road. Dilapidation surveys will be carried out in consultation with QCC, Palerang Council and RMS (if relevant). Dilapidation surveys will document the current condition of roads through photographic and written reports, or similar.	Prior to construction	CoA C14 CoA C15(c) CoA C20(c)(ii) SoC T2	GTPL Assistant Project Director
T3	At the completion of construction of Stage 1 of the IWC Project, the condition of roads utilised for the construction works will be reviewed in consultation with QCC, Palerang Council and RMS (if relevant). Road restoration measures and nominated timeframes to repair roads will be developed in consultation with the relevant road authority. The timeframe for repair work will be developed with consideration of potential future impacts, for example Stage 2). GTPL will ultimately bear the cost of any repair work attributable to construction of Stage 1.	Construction	CoA C15(a) CoA C20(c)(ii) CoA C20(c)(v) SoC T2	GTPL Assistant Project Director

ID	Measure	When to implement	Reference	Responsibility
T4	Any damage to local roads (e.g. Googong Dam Road) that poses a potential safety impact and is attributable to the construction of the Stage AB WRP will be repaired as soon as possible. The contractor will bear the cost of any repair work for footways, roadways, kerbs and gutters, pits and covers, surfaces, structures, improvements and services, whether on or adjacent to the site.	Construction	CoA C15(a) CoA C20(c)(v)	Project Manager
T5	Prior to construction, individual TCPs will be developed for each specific section of works. These plans will show the specifics of the proposed works and individual traffic controls for the site. TCPs will further describe the implementation of the measures prescribed by this TMP on a site and activity specific basis.	Prior to construction, construction	CoA C20(c)(iii) SoC T1	Project Manager
T6	TCPs will be developed in consultation with QCC and/or Palerang Council/RMS for any work that would involve any obstruction to traffic on council/classified roads. TCPs will include the following information: <ul style="list-style-type: none"> • Design drawings for any temporary roadways and detours. • Details of arrangements for construction under traffic. • A signpost layout. • Working hours when traffic control measures will be in place. 	Prior to construction, construction	CoA C15(c) CoA C20(c)(iv) SoC T1 SoC T2	Project Manager
T7	The contractors will obtain a road occupancy licence from the relevant road authority (local council/RMS) as required by Section 138 of the <i>Roads Act 1993</i> .	Construction	CoA C20(c)(vi) SoC T2	Project Manager Environment Manager
T8	Construction haul routes and heavy vehicle routes will be developed by the contractors and identified in relevant TCPs. Where possible, routes will be developed to minimise impacts on noise and amenity of nearby residents. Any oversized and over mass loads will be transported in accordance with RMS guidelines. A permit will be sought from RMS' Special Permits Unit in Glen Innes (phone 1300 656 371).	Construction	CoA C20(c)(i) CoA C20(c)(iv) SoC T1 SoC T3	Project Manager
T9	Deliveries will be scheduled to occur within approved work hours (7.00am to 6.00pm Monday to Friday and 8.00am to 1.00pm on Saturday) to minimise impact on amenity.	Construction	CoA C20(c)(i) CoA C20(c)(iv) SoC T1 SoC T3	Project Manager

ID	Measure	When to implement	Reference	Responsibility
T10	JHPL will notify councils, property owners and the local community (including the Googong Foreshore Committee) of any potential loss of or disruption to access to properties, roads and/or pathways. Notification protocols and communication tools are outlined in the Community Information Plan. Details of notification will be provided to GTPL for inclusion in the stakeholder database.	Construction	CoA C15(c) CoA C20(c)(iii) CoA C20(c)(iv) SoC T1 SoC T2 SoC T4	Project Manager
T11	Safe and convenient passage for vehicles, pedestrians and stock to and from side roads and property accesses to the roadway will be maintained or alternative arrangements made following consultation with the affected community. If required, appropriate temporary measures – to either provide alternative access or to reinstate access at the end of each workday – will be negotiated with relevant parties. The details for maintaining access will be provided on individual TCPs.	Construction	CoA C20(c)(iii) CoA C20(c)(iv) SoC T1 SoC T2 SoC T4	Project Manager
T12	If required, posted speed limits will be reduced on the road network to comply with work safety requirements and enhance road safety through temporary construction zones that impact on traffic flows. QCC and/or Palerang Council will be consulted prior to installation of any speed limit changes on local roads. Consultation with NSW Police Service will be undertaken where required to determine the strategies to enforce these speed restrictions through work sites.	Construction	CoA C15(b) CoA C15(c) CoA C20(c)(iii) SoC T1 SoC T2	Project Manager
T13	Traffic control will be in accordance with AS1742.3 and the <i>Specification 201: Control of Traffic Design</i> (QCC, 2011).	Construction	CoA C20(c)(iii) CoA C20(c)(vi) SoC T1 SoC T2	Project Manager
T14	Directional signposting, driver information signposting and variable message signs to provide advance warning of changes to traffic conditions will be erected to minimise disruption to traffic.	Construction	CoA B15(b) CoA C20(c)(iii) SoC T1 SoC T2	Project Manager

ID	Measure	When to implement	Reference	Responsibility
T15	Pedestrian and cyclist access will be maintained on sealed roads. The Stage AB WRP site will be fenced as necessary to prevent unauthorised pedestrian access and to enhance pedestrian safety.	Construction	CoA C20(c)(iii) CoA C20(c)(iv) SoC T1 SoC T4	Project Manager
T16	GTPL will ensure there is effective communications between the other contractors delivering other sections of the IWC Project and relevant authorities to allow the identification of potential cumulative impacts from other developments. In the event of cumulative impacts from construction traffic generated by other developments, GTPL will communicate with the relevant developers or authority to identify any possible ways of minimising impacts. This may include coordination of high traffic events, or scheduling to minimise overall impacts.	Construction	CoA C20(c)(iii) CoA C20(c)(iv) CoA C20(c)(vi) SoC T2	GTPL Assistant Project Director Project Manager
T17	JHPL should identify opportunities to maximise vehicle use efficiency to reduce the number of vehicle trips, eg through car pooling. Fuel efficient and low emission vehicles will be utilised where practicable.	Construction	SoC T1	Project Manager

6 Compliance management

6.1 Roles and responsibilities

The project team's roles and responsibilities are outlined in Section 4.1 of the CEMP. Specific responsibilities for the implementation of environmental controls are detailed in Section 5 of this Protocol.

6.2 Training

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

- Construction haul routes.
- Approved work hours.
- Maintenance of property access.
- Appropriate driver behaviour.

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

6.3 Inspections

The Environment Manager will undertake weekly inspections including an evaluation of traffic and access management and mitigation measures. This will include auditing of construction activities to ensure property access and pedestrian/cyclist access is maintained. These inspections will be documented on the weekly checklist.

The Environmental Representative will inspect the site regularly to inspect traffic controls.

Requirements and responsibilities in relation to inspections are documented in Section 8.1 of the CEMP.

6.4 Auditing

Audits (both internal and external) will be undertaken to assess the effectiveness of environmental controls, compliance with this Protocol, CoA and other relevant approvals, licenses and guidelines.

Audit requirements are detailed in Section 8.4 of the CEMP.

6.5 Reporting

Results and outcomes of inspections, monitoring and auditing will be reported internally on a monthly basis. Six-monthly construction compliance reports will be prepared to report on compliance with the IWC Project Approval. Reporting requirements and responsibilities are documented in Section 8.5 of the CEMP.

7 Review and improvement

7.1 Non-conformity, corrective and preventative actions

A non-conformance is an action or omission that does not conform with the requirements of this TMP or any legal and other requirements. Any member of the project team or the Environmental Representative can identify a non-conformance or opportunity for improvement. Section 8.3 of the CEMP identifies the process for identifying, reporting, recoding and reviewing non-conformances. This will ensure continual improvement.

7.2 Management plan update and amendment

The processes described in Section 7 and Section 8 of the CEMP (relating to incidents, inspections, monitoring and auditing) may result in the need to update this TMP. This will occur as needed.

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