



Transport  
Roads & Maritime  
Services

# APPENDIX B1

## Construction Traffic Management Sub Plan

### Toolijooa Road Fill Works stage of Foxground and Berry bypass

JANUARY 2014



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## Glossary / Abbreviations

AADT	Annual average daily traffic
CEMP	Construction Environmental Management Plan
CoA	Condition of Approval
EA	Environmental Assessment
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EPBC Act	<i>Environmental Protection and Biodiversity Conservation Act 1999</i>
EWMS	Environmental Work Method Statements
LoS	Level of service
NPW Act	<i>National Parks and Wildlife Act 1974</i>
OEH	Office of Environment and Heritage
Project, the	The Princes Highway Upgrade - Foxground and Berry Bypass Project, defined as <i>“The construction and operation of approximately 11.6 kilometres of two lane divided carriageways (with the exception of the cutting through Toolijooa Ridge which comprises two lanes plus a climbing lane in each direction), with provisions for the possible future widening to three lanes within the road corridor (if required in the future).”</i>
RMS	Roads and Maritime Services
ROL	Road Occupancy Licence
SoC	Revised Statement of Commitments included in the Submissions Report
SZA	Speed Zone Authorisation
TCWM	RMS Traffic Control at Worksites Manual (2010)
TMC	NSW Transport Management Centre
TMP	Construction Traffic Management Sub Plan

# 1 Introduction

## 1.1 Context

This Construction Traffic Management Sub Plan (TMP or Plan) forms part of the Construction Environmental Management Plan (CEMP) for the Toolijooa Road Fill Works stage of the Foxground and Berry bypass Project (the Project).

This TMP has been prepared to address the requirements of the Minister's Conditions of Approval (CoA), RMS' Statement of Commitments (SoC), the safeguards listed in the Foxground and Berry bypass Environmental Assessment (EA) and all applicable legislation.

## 1.2 Background

The *Princes Highway upgrade – Foxground and Berry Bypass Environmental Assessment* (AECOM, 2012) considered the potential traffic impacts during the construction of the Project.

As part of the EA development, a detailed traffic and transport assessment was prepared to address the Director-General's requirements issued by the then Department of Planning. The traffic and transport assessment was included in the EA as *Volume 2 Appendix D Technical paper: traffic and transport*.

## 1.3 Environmental management document system

The Project Environmental Management document system is described in the CEMP.

The TMP is part of Fulton Hogan's environmental management framework for the Toolijooa Road Fill Works stage of the Project, as described in Section 4.1 of the CEMP. In accordance with the requirements of CoA B36(a), this Plan has been developed in consultation with Shoalhaven City Council and Kiama Municipal Council (for details refer Section 4).

Management measures identified in this TMP will be incorporated into the Contractor's site or activity specific Environmental Work Method Statements (EWMS).

EWMSs 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 safeguards.

Used together, the CEMP, sub-plans, strategies, procedures and EWMS form management guides that clearly identify required environmental management actions for reference by Fulton Hogan's personnel and contractors.

The review and document control processes for this TMP are described in Section 10 of the CEMP.

## **2 Purpose and objectives**

### **2.1 Purpose**

The purpose of this TMP is to describe how Fulton Hogan proposes to manage traffic during construction of the Toolijooa Road Fill Works stage of the Project.

### **2.2 Objectives**

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

To achieve these objectives, Fulton Hogan will undertake the following:

- ensure appropriate controls and procedures are implemented during construction activities to address potential traffic impacts at and in the vicinity of the Toolijooa Road Fill Works;
- ensure appropriate measures are implemented to address the relevant CoA and SoC outlined in Table 3.1 and Table 3.2, and the safeguards detailed in the EA; and
- ensure appropriate measures are implemented to comply with all relevant legislation and other requirements as described in Section 3.1 of this TMP.

## 3 Environmental requirements

### 3.1 Relevant legislation and guidelines

#### 3.1.1 Legislation and regulatory requirements

Legislation relevant to traffic management includes the *Environmental Planning and Assessment Act 1979* (EP&A Act), under which the Project Approval was granted. Relevant provisions of the EP&A Act are explained in the register of legal and other requirements included in Appendix A1 of the CEMP.

Identified regulatory requirements relevant to traffic management include:

- an approved and valid Road Occupancy Licence (ROL);
- an approved relevant Speed Zone Authorisation (SZA); and
- Australian Road Rules.

#### 3.1.2 Guidelines

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

- RMS QA Specification G10 – Traffic Management;
- RMS Traffic Control at Worksites Manual (2010);
- Austroads Road Safety Audit Second Edition 2002: Checklist 4. Pre-opening scheme audit;
- Austroads Road Safety Audit Second Edition 2002: Checklist 5: Roadwork traffic scheme audit;
- Austroads Road Safety Audit Second Edition 2002: Checklist 6: Existing roads: road safety audit,
- RMS Road Design Guide;
- RMS NSW Bicycle Guidelines;
- Austroads Traffic Engineering Practice – Part 14;
- Austroads Guide to Road Design Part 3 – Geometric Design;
- Austroads Guide to Road Design Part 4B – Roundabouts (2009);
- Guide: Signposting (RTA, July 2007); and
- Tourist Signposting guide (RMS and Destination NSW, 2012).



## 3.2 Minister's Conditions of Approval

The CoAs relevant to this TMP are listed Table 3-1 below. A cross reference is also included to indicate where the condition is addressed in this Plan or other Project management documents.

**Table 3-1 Conditions of Approval relevant to the TMP**

CoA No.	Condition Requirements	Document Reference
CoA B36	As part of the Construction Environment Management Plan for the Project required under condition B35, the Proponent shall prepare and implement the following sub plan(s):	
	(a) <b>a Construction Traffic Management Sub-plan</b> prepared in accordance with the Roads and Maritime Service's QA Specification <i>G10 - Control of Traffic and Traffic Control at Work Sites Manual (2003)</i> to manage disruptions to traffic movements as a result of construction traffic associated with the Project. The sub-plan shall be developed in consultation with the relevant council and shall include, but not necessarily be limited to:	This TMP
	(i) identification of construction traffic routes and quantification of construction traffic volumes (including heavy vehicle/ spoil haulage) on these routes;	Section 7.2
	(ii) details of vehicle movements for construction sites and site compounds including parking, dedicated vehicle turning areas, and ingress and egress points;	Section 7.2
	(iii) details of potential impacts to traffic on the existing highway, the 'Sandtrack', and associated local roads, including, intersection level of service and potential disruptions to pedestrians, public transport, parking, cyclists and property access;	Chapter 6
	(iv) details of temporary and interim traffic arrangements to address potential impacts;	Chapter 7
	(v) details of evidence based mitigation measures to address potential impacts on the 'Sandtrack'.	Not relevant to the Toolijooa Road Fill Works stage.
	(vi) a response procedure for dealing with traffic incidents; and	Section 7.9 Emergency Preparedness and Response Sub-Plan.
(vii) mechanism for the monitoring, review and amendment of this sub-plan.	Chapter 8, Chapter 9	
CoA C27	The roads likely to be used by the Project's heavy construction vehicles shall be identified in the Construction Traffic Management Sub-plan required under condition B36(a).	
	(a) Road dilapidation reports shall be prepared for local roads likely to be used by the Project's construction traffic, and a copy of the report(s) shall be provided to the relevant council, prior to use by the Project's heavy construction vehicles. Any damage resulting from the use of the identified local roads by the Project's heavy construction vehicles, aside from that resulting from normal wear and tear, shall be repaired at the cost of the Proponent, unless otherwise agreed by the relevant council.	Road Dilapidation Report – Local Roads (provided separately)

CoA No.	Condition Requirements	Document Reference
	(b) A road dilapidation report shall be prepared for the 'Sandtrack' and a copy of the report shall be provided to the relevant council, prior to commencement of construction. Should monitoring in accordance with Condition B36(a) reveal higher than anticipated volumes of traffic (as defined in the document referred to in Condition A1(b)) resulting in a higher rate of deterioration in the condition of local road infrastructure, consultation with the relevant Council shall be undertaken to determine mitigation measures in accordance with Condition B36(a). A report shall be prepared and submitted to the Director General at 12 months and 24 months after commencement of construction, and prior to operation, unless otherwise agreed by the Director General.	Condition C27(b) refers to the preparation of a road dilapidation report for 'Sandtrack' which will not be used for the construction of the Toolijooa Road Fill Works stage and therefore this component of the condition is not considered relevant.

### 3.3 Statement of commitments

Relevant SoC are listed Table 3-2 below. This includes reference to required outcomes, the timing of when the commitment applies, relevant documents or sections of the EA influencing the outcome and implementation.

**Table 3-2 Statements of commitment relevant to this TMP**

Outcome	Ref #	Commitment	Timing	Document Reference
Minimise traffic and road safety impacts on the highway and local roads	TT1	Construction vehicle movements and works programs will incorporate traffic control measures to minimise traffic and transport impacts on local roads and the existing highway.	Pre-construction and construction	TMP Chapter 7
	TT2	Not relevant to the Toolijooa Road Fill Works stage.		

## **4 Consultation**

### **4.1 Consultation requirements under the Project Approval**

**CoA B36(a):** This TMP has been developed in consultation with both the Kiama Municipal Council and the Shoalhaven City Council. A summary of consultation undertaken during the preparation of this TMP is provided in Appendix A2 of the CEMP.

### **4.2 Consultation requirements under the SoC**

No consultation requirements under the SoC are relevant to the Toolijooa Road Fill Works stage of the Project.

## 5 Existing environment

### 5.1 Existing traffic and transport environment

The Princes Highway is the main north-south regional road corridor between Sydney, the Illawarra and through the NSW south coast to Victoria. Within the project area, the highway serves as a:

- commuter route between Sydney, Wollongong and Nowra;
- local route for residents travelling within Berry and between Berry and surrounding towns and rural residences;
- major tourist route for key destinations including Berry, Nowra and the NSW south coast;
- freight and bus route, particularly for the NSW south coast and far South Coast.

In the Project area, the Princes Highway is a two lane single carriageway between Toolijooa Road and Schofields Lane, with two short overtaking lanes for southbound traffic only. The existing highway does not meet current road design safety and traffic efficiency requirements.

The project commences at the junction of the existing highway and Toolijooa Road and extends for 11.6 kilometres to Schofields Lane south of Berry. The Toolijooa Road Fill Works stage of the Project is located on the western side of Toolijooa Road, at its intersection with the Princes Highway as shown in Figure 5-1.

Toolijooa Road is a local road which eventually provides a connection to Beach Road and Crooked River Road. This road only carries small volumes of traffic (less than 500 vehicles per day), and is primarily used by traffic accessing properties to the south of the Princes Highway.



Source: Toolijooa Road Fill Works Staging Report (Element Environment, 2013)

**Figure 5-1 Road network in the vicinity of the Toolijooa Road Fill Works stage**

## 5.2 Existing road network performance

Level of service (LoS) is a qualitative measure describing operational conditions within a traffic stream. The desirable maximum capacity of each road section is determined from the 'Guide to Traffic Management, Part 3: Traffic Studies and Analysis' (AUSTROADS, 2009).

The Princes Highway within the Project area and within the vicinity of the Toolijooa Road – Princes Highway intersection, currently operates with a LoS D during typical AM peak and PM peak periods. The analysis indicates that during the 100th highest hour (e.g. holiday periods or morning and afternoon peak periods), the operational performance of the Princes Highway deteriorates to an unacceptable LoS E at most locations.

LoS D is described as *Close to the limit of stable flow and approaching unstable flow. All drivers are severely restricted in their freedom to select their desired speed and to manoeuvre within the traffic stream. The general level of comfort and convenience is poor, and small increases in traffic flow will generally cause operational problems.*

LoS E is described as *Traffic volumes are at or close to capacity, and there is virtually no freedom to select desired speeds or to manoeuvre within the traffic stream. Flow is unstable and minor disturbances within the traffic stream will cause breakdown.*

The section of the Princes Highway between Toolijooa Road and Schofields Lane also has a poor crash record in comparison to connecting sections of the Princes Highway and other major highways in NSW.

## 6 Construction traffic impacts

The following information on potential impacts on traffic due to the construction of the Toolijooa Road Fill works stage of the Project was obtained from the EA.

The performance analysis for the worst-case construction scenario indicates that midblock locations on the Princes Highway would operate at LoS E during both the 100th highest hour northbound and southbound scenarios. Average travel speeds on the Princes Highway would be expected to drop to around 50 km/h or less. Key factors contributing to this deterioration include the expected increase in traffic, speed restrictions, and the prevention of overtaking through construction zones in the Project area. The analysis indicates that despite a poor LoS and low travel speeds during peak hours, the Princes Highway has the capacity to accommodate worst-case traffic volumes during construction.

In summary, due largely to the offline construction of the Project, the local road network and intersections would perform adequately during both the most-likely and worst-case construction scenarios without the provision of additional temporary traffic management measures.

### 6.1 Construction traffic

The construction of the Toolijooa Road Fill Works would create an increase in construction vehicles travelling along the existing Princes Highway between Gerringong and Toolijooa Road. Additional traffic demand would be expected to be generated through:

- the movement of excess cut material from the Gerringong upgrade project to the Toolijooa Road Fill Works site; and
- the delivery of heavy vehicles and machinery, and other equipment required for construction.

Based on construction material estimates, approximately 5500 heavy vehicle loads would be generated during construction (or 11000 vehicle movements) across the four month construction period. This would equate to an average of around 63 heavy vehicle loads per day or 126 heavy vehicle movements per day. It is assumed that average heavy vehicle capacity is 13 m<sup>3</sup>.

### 6.2 Traffic delays and disruptions

The entire Toolijooa Road Fill Works stage would be completed offline from the existing alignment of the Princes Highway. The offline location of the earthworks fill, should ensure that construction can be carried out with minimal impacts to traffic efficiency on the current road network.

During construction, traffic management measures are employed to maintain road safety for all users. Some temporary disruptions and delays to local and highway traffic would be experienced during construction of the Toolijooa Road Fill Works stage of the Project due to temporary speed reductions and heavy vehicles slowing down to turn left directly off the Princes Highway, into the construction site. There would also be potential delays to local traffic using Toolijooa Road to access the Princes Highway as a result of heavy vehicles queuing at the Toolijooa Road – Princes Highway intersection.

### 6.3 Public transport

The Toolijooa Road Fill Works stage of the Project is unlikely to result in disruptions to existing public transport bus services as the only bus stop that exists in the vicinity of the proposed works is on the northbound shoulder of the Princes Highway. Heavy vehicles heading south along the Princes Highway and turning left into the Toolijooa Road Fill Works site as well as those entering and exiting the construction site off Toolijooa Road (280m

south of the Toolijooa Road - Princes Highway intersection), will not disrupt the existing bus services pick up and set down.

The Toolijooa Road Fill Works stage of the Project is unlikely to result in disruptions to pedestrians, parking, cyclists and property access as the proposed construction access locations and traffic are not in high pedestrian and cyclist areas and will not block or interfere with private property access or public/private parking.

## **6.4 Emergency services**

The offline location of the earthworks fill, should ensure that construction can be carried out with minimal impacts to traffic efficiency including emergency services response times. However there is still the potential for delays due to queuing traffic and reduced speed limits, which may disrupt emergency services. Procedures to minimise the impacts to emergency services during construction are incorporated into this TMP.



## 7 Traffic management

### 7.1 Traffic management and mitigation measures

A range of environmental requirements and control measures are identified in the EA, Statement of Commitments, Conditions of Approval and other RMS documents. Mitigation and management measures will be implemented to avoid, minimise or manage impacts to traffic. Specific measures and requirements to address impacts on traffic are outlined in Table 7-1. Further details on the key issues relating to traffic management are provided in this chapter.

The measures have been prepared in accordance with RMS *QA Specification G10 - Control of Traffic and Traffic Control at Work Sites Manual (2003)*.

**Table 7-1 Traffic management and mitigation measures (EA Section 7.1.4)**

<b>ID</b>	<b>Measure / Requirement</b>	<b>When to implement</b>	<b>Responsibility</b>	<b>Further Detail</b>
TMMM1	<p>Prepare and implement a detailed traffic management plan (TMP) as part of the CEMP. The TMP is to include appropriate guidelines and procedures required to ensure the continuous, safe and efficient movement of construction and non-construction traffic in and around the Toolijooa Road Fill Works stage of the Project during construction. The TMP would detail:</p> <ul style="list-style-type: none"> <li>• Signage requirements.</li> <li>• Road occupancy requirements and procedures</li> <li>• Speed management.</li> <li>• Incident management and response</li> </ul>	Pre-construction Construction	Traffic Manager	<p>TMP Section 7</p> <p>TMP S7.5</p> <p>TMP S7.3</p> <p>TMP S7.4</p> <p>TMP S7.9</p>
TMMM2	Not used.			
TMMM3	Where feasible, program deliveries of materials along the existing road network outside of holiday peak periods.	Pre-construction Construction	Construction Manager	TMP S7.2
TMMM4	Not used.			
TMMM5	Design the works to minimise the number of construction site entry and exit points and provide traffic control to avoid traffic conflicts and minimise delays.	Pre-construction	Traffic Control Site Manager	<p>TMP S7.2</p> <p>Figure 5-1</p> <p>TMP App A - Traffic Control Plans</p>
TMMM6	Make provision for emergency services vehicles to pass through construction zones and update the local emergency services on the staging and progress of works that would affect their movement.	Construction	Traffic Manager	TMP S7.7
TMMM7	Provide timely, accurate, relevant and accessible information about changed traffic arrangements and potential delays to road users and local communities with provision for feedback through a complaints line during construction.	Pre-construction Construction	Communications Manager	Section 8.3 Community Communication Strategy (provided separately)

## **7.2 Construction traffic management**

### **7.2.1 Construction staging**

The Toolijooa Road Fill Works will be constructed by Fulton Hogan as the first stage of the Project, to create an engineered platform for the realigned Princes Highway. Excess cut material will be transported by truck from the Gerringong upgrade project, over a period of approximately four months between November 2013 and March 2014. The entire Toolijooa Road Fill Works stage will be constructed offline from the existing alignment of the Princes Highway. The offline location of the earthworks fill should ensure that construction can be carried out with minimal impacts to traffic efficiency on the current road network.

### **7.2.2 Construction traffic routes**

Trucks will transport excess cut material along the Princes Highway, from the Gerringong upgrade project in the north, to the Toolijooa Road Fill Works site. Trucks will enter the construction site either directly from the southbound carriageway of the Princes Highway via a dedicated left turn only access or from Toolijooa Road. Trucks will exit the site onto Toolijooa Road, turning right at the Toolijooa Road / Princes Highway intersection and then travel north along the Princes Highway towards the material loading areas.

Trucks will not be permitted to enter the site by turning right from the northbound carriageway of the Princes Highway.

Trucks will not be permitted to travel south of the Toolijooa Road entrance to the site. No construction vehicles will be permitted to use Toolijooa Road to travel between the Princes Highway and Beach and Crooked River Roads.

Figure 5-1 and the TCP (Appendix A) presents the proposed site access and egress.

As discussed in section 6.1, it is estimated 63 trucks will deliver approximately 819 m<sup>3</sup> of fill material for the Toolijooa Road Fill Works daily totalling approximately 126 heavy vehicle movements per day.

The proposed Toolijooa Road Fill Works stage will generate very few additional light vehicles as truck drivers will park at the main Gerringong upgrade project site offices and light vehicles will be limited to those used by site supervisory and engineering staff and plant operators.

### **7.2.3 Construction site traffic management**

A dedicated left turn only site access will be established off the southbound lane of the Princes Highway, approximately 240 m west of the Toolijooa Road - Prince Highway intersection.

A site access and egress will be established off the northbound side of Toolijooa Road, approximately 280 m south of the Toolijooa Road - Prince Highway intersection.

Traffic will be managed in accordance with the Traffic Control Plan (Appendix A).

As the proposed construction access locations and traffic will not conflict with public transport pick up and drop off points, are not in high pedestrian and cyclist areas and will not block or interfere with private property access, no specific temporary and interim traffic arrangements are required (in addition to those presented in this Plan) to accommodate these potential impacts during the construction of the Toolijooa Road Fill Works stage.

## **7.3 Road occupancy**

A dedicated Road Occupancy Licence (ROL) does not need to be obtained for the Toolijooa Road Fill Works stage of the Project. The Toolijooa Road Fill Works stage will be constructed

under the existing approved ROL already obtained as part of the Gerringong upgrade project.

## **7.4 Speed management**

A dedicated Speed Zoning Authorisation (SZA) does not need to be obtained for the Toolijooa Road Fill Works stage of the Project. The Toolijooa Road Fill Works stage will be constructed under the existing approved SZA already obtained as part of the Gerringong upgrade project.

## **7.5 Signposting and delineation**

Proposed construction signage within the vicinity of the Toolijooa Road Fill Works, along both the Princes Highway and Toolijooa Road is shown in the Traffic Control Plan (Appendix A).

## **7.6 Queue Length Management and Intersection Level of Service**

A queue length management strategy is not required for the Toolijooa Road Fill Works stage of the Project as heavy vehicles will have a dedicated and unobstructed site entry from the Princes Highway. Vehicles will not be permitted to exit the site from this entry point, eliminating potential vehicle movement conflicts and associated vehicle queuing requiring specific management.

Heavy vehicles that enter and exit the site from Toolijooa Road are unlikely to cause vehicle queuing along Toolijooa Road requiring specific management. It is unlikely there will be a significant impact on intersection level of service, as Toolijooa Road supports low vehicle numbers (less than 500 vehicles per day) and the site access / egress is located approximately 280 m south of the Princes Highway / Toolijooa Road intersection.

## **7.7 Emergency services**

As the Toolijooa Road Fill Works will be constructed offline, it is unlikely to impact on emergency services vehicle access along the Princes Highway or Toolijooa Road and therefore no specific temporary and interim traffic arrangements are required (in addition to those included in this Plan) to accommodate emergency services vehicle access during the construction of the Toolijooa Road Fill Works stage.

## **7.8 Special events**

As the Toolijooa Road Fill Works will be constructed offline and generally outside of peak holiday periods (November 2013 - March 2014 excluding the Christmas holiday), it is unlikely to impact on vehicle access / movement along the Princes Highway or Toolijooa Road during special events and therefore no specific temporary and interim traffic arrangements are required (in addition to those included in this Plan) to accommodate special event vehicle access during the construction of the Toolijooa Road Fill Works stage. Traffic on special event days will be managed in accordance with the approved ROL.

## **7.9 Incident Management and response**

Any traffic incidents along the Princes Highway or Toolijooa Road associated with construction of the Toolijooa Road Fill Works stage will be responded to and managed in accordance with the Emergency Preparedness and Response Sub Plan.

Fulton Hogan will provide traffic control by qualified traffic controllers for emergencies such as crashes and spillages along the work corridor. Traffic management for these events will not require a hold point release to be submitted to the RMS.

Despite any other provision of the Project Deed, where the New South Wales Police Force, Emergency Services, RMS and NSW Transport Management Centre (TMC) is controlling an incident, the project team:

- shall comply with any instruction or direction by the New South Wales Police Force, Emergency Services, RMS and TMC in relation to any proposed closure to a lane or shoulder;
- shall not restrict, close, interfere with or obstruct the free flow of traffic on any lane or shoulder of the existing highway, the works or a local road contrary to the instructions of the New South Wales Police Force, Emergency Services, RMS and TMC; and
- if permitted to restrict, close, interfere with or obstruct the free flow of traffic on any lane or shoulder of the existing highway, the works or a local road, shall act in accordance with any instructions of the New South Wales Police Force, Emergency Services, RMS and TMC including to suspend any of the contractor's work and to re-open the lane or shoulder. Except to the extent that compliance with any instructions of the New South Wales Police Force, Emergency Services, RMS and TMC makes it impossible to do otherwise, this clause shall not relieve the project team from its obligations under the Project Deed.

The types of emergencies / unplanned incidents that may occur include, but are not limited to:

- motor vehicle crashes;
- bush fires;
- environmental spills;
- terrorist attacks;
- bomb threats;
- construction type incidents;
- structural catastrophic failures;
- inclement weather conditions;
- flooding; and
- anti-social behaviour.

Relevant Acts identify agencies primarily responsible for controlling particular hazards / emergencies. Such agencies are detailed in the table below.

**Table 7-2 Relevant agencies controlling hazards / emergencies**

<b>Event</b>	<b>Agency</b>
Law Enforcement / Emergencies	Police
Fire	Fire Brigades / (e.g.)Rural Fire Service
Hazardous Materials	Fire Brigades
Flood	State Emergency Service
Storm and Tempest	State Emergency Service

The project team will adopt the operating procedures for managing emergencies and unplanned incidents that are addressed in the Emergency Preparedness and Response Sub Plan.

In the event of a traffic accident occurring within the construction site or at other locations affected by the works, the project team is required to record the facts and photograph the

approach to the accident site including the location of all safety devices and signs as soon as possible after the accident. A report with this information must be forwarded to RMS within two days of the occurrence of the accident.

In addition, the project team will use an appropriate standard plan from the TCWM, adjusting it as needed to suit the site conditions.

# 8 Compliance management

## 8.1 Roles and responsibilities

Fulton Hogan's Project Team organisational structure and overall roles and responsibilities are outlined in Section 4.2 of the CEMP. Specific responsibilities for the implementation of construction traffic management are detailed below.

### Project Director

- Ensures the Project's road safety and traffic management objectives (listed under section 2 of this Plan) are achieved;
- Ensures that all the incidents caused by site activity, and incidents on public roadway that are unrelated to the construction activity are reported to the RMS;
- Co-ordinating incidents to the RMS Incident Manager for Southern Region and Police.

### Project Managers

The Project Managers are responsible for ensuring traffic management:

- Is properly planned, organised, directed and controlled;
- Is properly resourced with people, equipment, facilities and systems;
- Meets the requirements of the contract including the Project Deed, SWTC and RMS Specifications D&C G10;
- Complies with all other legislation;
- Is achieving its objectives.

### Project Superintendent(s)

- Co-ordinates the field resources;
- Supports the delivery of the road safety and traffic management objectives;
- Assists with the implementation of this TMP
- Provides direction and support to enable effective planning of temporary traffic management arrangements;
- Ensures all field team members receive the appropriate training;
- Managing all Emergency Controls as depicted in the Emergency Preparedness and Response Sub-Plan.

### Traffic Manager

The Traffic Manager is the Traffic Control Site Manager (TCSM) who will be required to have attended RMS's Select/Modify Traffic Control Plan course (Red Card) and will be required to have the delegated authority from, and responsibility to, the Project Managers for continuously monitoring the implementation and operation of all road occupancies to ensure that they are compliant with the ROLs and TCPs including, but not limited to:

- Monitoring and quantifying the durations of delays to the free flow of traffic;
- Monitoring, measuring and recording traffic queue lengths, including the maximum traffic queue lengths in each direction and the total occupancy or stoppage time;
- Maintaining and adjusting traffic control measures and devices to assist prevailing traffic flows, minimise lane and shoulder occupancies and any lost traffic flow capacity and minimise traffic flow delay durations and queuing;

- Monitoring of over-dimension heavy vehicle movements;
- Prepare and keep records of all road occupancies and records of all traffic flow delays and durations, traffic queue lengths and other ROL related matters and submit a report including copies of those records to RMS by 9.00am on the Thursday following the week being recorded;
- The selection of any Traffic Control subcontractors;
- Ensuring that processes and control systems needed are established, implemented and maintained;
- Approving TCPs (where required) for individual tasks including those of subcontractors;
- Arranging and approving training;
- Ensuring that the requirements of all the plans are properly implemented;
- Regularly reviewing the continuing suitability, adequacy, and effectiveness, of all the plans;
- Preparing and submitting Hold Point Forms, SZA applications and Directions to Restrict applications at least 10 working days before the works are scheduled to begin;
- Allocation of all resources required for the implementation of all the plans;
- Ensuring that control measures are maintained and that work-in-progress is inspected;
- Identifying training needs and arranging for employees and subcontractors to attend the training;
- Ensuring subcontractors/suppliers have suitable qualifications and experience;
- Carrying out and recording weekly inspections and verifications to demonstrate compliance of the Services;
- Facilitating traffic awareness and giving toolbox talks to the site personnel; and
- Reporting traffic incidents to the Project Director.

The Traffic Manager will be contactable at all times (7 days per week and 24 hrs per day) during the construction phase of the works to receive and answer traffic/incident related inquiries from the RMS and the Police. Site Emergency contact list shall be located in the Fulton Hogan Incident and Emergency Response Handbook that will be displayed in the site office and the crib room.

The Traffic manager will have the authority to stop work on any activity if it is considered to be necessary to prevent traffic incidents, or to comply with the directions of RMS or Police.

### **Traffic Officer**

The Traffic Officer is the traffic subcontractor's supervisor, and will be required to be qualified to the "Traffic Control Worksite Manual (TCWM)" course (i.e. holds a current Select /Modify Traffic Control Plans course (Red Card)) and will have delegated authority from, and responsibility to, the Traffic Manager for:

- Implementing the Traffic Management Plan and the Traffic Control Plan on site;
- Maintaining the TCP;
- Assessing and monitoring subcontractor's capabilities and performance in respect of site activities;
- Ensuring the safe passage of traffic at all times;
- Ensuring everyone on site is inducted and wears the appropriate approved clothing; and



- Driving through the site to inspect the traffic control layout, recording any deficiencies and the action taken to rectify them;
- Ensure that First Aiders are available on site all the times; and
- Report incidents including those that are unrelated to the construction activity, including near misses to Traffic Manager/ OHS Manager.

#### **Engineer(s) Responsible for the Work Activity**

- Assists in the delivery of the road safety and traffic management objectives outlined in the TMSP;
- Plans all work activities and identify the required traffic management arrangements to facilitate the works;
- Liaises with the Traffic Crews in the planning and implementation of the required traffic management arrangements;
- Prepares TCP(s) to facilitate the works and obtains approval from the Traffic Manager;
- Conducts regular inspections (including pre-starts) of traffic controls and where necessary instructs the rectification of deficiencies;
- Allocates plant, equipment and human resources for the works including the provision of the temporary traffic control arrangements; and
- Conducts and keeps records of daily and weekly (day and night) inspections of the traffic control arrangements, assist audits and where necessary rectifies deficiencies.

#### **Foreman**

- Ensures compliance with the approved TCP(s);
- Issues the required TCP(s) and where relevant road occupancy approvals and speed zone authorizations to the traffic control crew / or subcontractor;
- Ensures adequate plant, equipment and human resources are made available for the installation and maintenance of temporary control devices;
- Conducts pre-start inspections and regular night / weekly inspections of traffic control arrangements, and ensures all deficiencies are rectified;
- Assists with the implementation of mitigation measures to address unsafe road conditions, and unusual traffic congestion;
- Assists with the management of unplanned incidents, providing initial response to make the site safe; and
- Records unplanned incident details, and when traffic controls are in operation, including the installation and removal of regulatory signage.

#### **Community Relations Manager**

- Liaises with the community for all aspects of community and stakeholder issues;
- Represents the Project for all community and stakeholders issues;
- Conducts consultation with stakeholders for traffic planning, and provides an on-going liaison role;
- Prepares and distributes changed traffic condition information to the community; and
- Community relations including addressing complaints.

## 8.2 Training

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

- existence and requirements of this TMP;
- relevant legislation;
- roles and responsibilities for traffic management;
- temporary and interim traffic arrangements; and
- response procedure for dealing with traffic incidents.

## 8.3 Communication

Traffic management information will be communicated to the community as detailed in the Community Communications Strategy.

## 8.4 Monitoring and Inspections

Requirements and responsibilities in relation to monitoring and inspections are documented in Sections 8.1 and 8.2 of the CEMP.

In addition to the inspections conducted by the Project Verifier, a nominated member of the Project team, holding appropriate Traffic Control tickets (Yellow, Red or Orange Card), is required to inspect the temporary traffic controls during the construction phase, focusing on monitoring compliance against the TCP and identifying safety hazards, to enable implementation of corrective solutions.

The Traffic Manager, or delegate, will be required to conduct four main types of inspections on projects:

- Daily Pre-start and pre-close down inspections of short-term traffic control;
- Weekly inspections of long-term traffic control;
- Night inspections of long-term traffic control; and
- Pre-opening inspections of minor temporary traffic switches.

These inspections will be required to be carried out in accordance with the RMS TCWM. That is:

Daily Inspections:

- “TCP” - Traffic Team Leader (holding a Yellow Card) will check and record that all traffic control devices have been implemented and sign off / date the record. The record of these inspections will be done on the actual TCP by ticking each sign, safety barrier etc. to verify that the inspections are done. This will also be inspected by the Traffic Subcontractor’s supervisor and co-signed on the TCP for acceptance after review;
- “Daily Traffic Management Risk Assessment Checklist” - This identifies information regarding “Checks”, Start / Finish Times, etc. using the subcontractor’s checklist. The Traffic Team Leader (holding a Yellow Card) will fill in information stipulated in the checklist and will sign off / date the checklist. This will also be inspected by the Traffic Subcontractor’s supervisor and co-signed on the checklist for acceptance after review;
- In addition, the Fulton Hogan team will inspect relevant TCPs and note any actions on the Traffic Management Monitoring Checklist.

Weekly Inspections (Random TCP setup):

- “Traffic Control at Work Sites Safety Inspection Checklist” will be utilised by Fulton Hogan’s Traffic Manager and Traffic Subcontractor’s Supervisor and both will sign off / date the checklist.

The Traffic Manager, or delegate, will also be required to monitor traffic management and traffic controls to assess compliance with the conditions of ROLs, including:

- As-built layouts for compliance with approved traffic control plans, including sign maintenance and delineation (Daily);
- Timing and duration of road occupancies (Weekly);
- Qualifications of traffic control personnel (Weekly);

Other inspection checklists contained in the RMS TCWM, or equivalent will be utilised (or modified to suite local requirements) for recoding the inspections.

Records of inspections of road conditions and traffic control measures will be maintained by Fulton Hogan’s Traffic Manager.

## **8.5 Auditing**

Audits (both internal and external) will be undertaken to assess the effectiveness of traffic management measures, compliance with this TMP, CoA, SoC and other relevant approvals, licenses and guidelines.

Audit requirements are detailed in Section 8.4 of the CEMP.

## **8.6 Reporting**

Reporting requirements and responsibilities are documented in Section 8.5 of the CEMP.

## **9 Review and improvement**

### **9.1 Continuous improvement**

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

The continuous improvement process will be designed to:

- identify areas of opportunity for improvement of traffic management;
- 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; and
- make comparisons with objectives and targets.

### **9.2 TMP update and amendment**

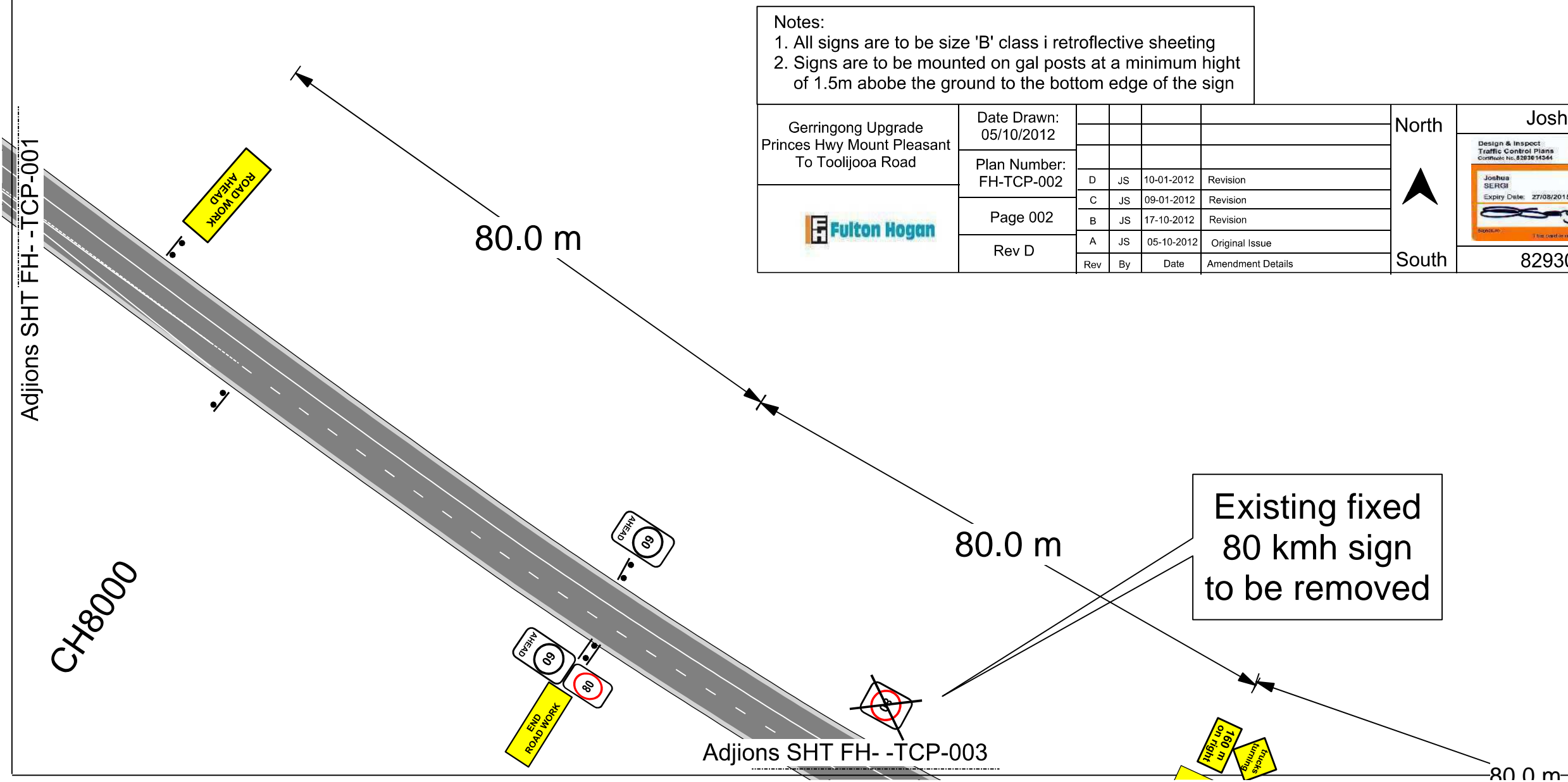
The processes described in Chapters 8 and 9 of the CEMP may result in the need to update or revise this TMP. This will occur as needed.

Only the Construction Traffic Manager (in consultation with the Environment Manager) can amend this TMP.

A copy of the updated TMP and changes will be distributed to all relevant stakeholders in accordance with the approved document control procedure – refer to Section 10.2 of the CEMP.

# **Appendix A**

## Traffic Control Plans



Notes:  
 1. All signs are to be size 'B' class i retroreflective sheeting  
 2. Signs are to be mounted on gal posts at a minimum height of 1.5m above the ground to the bottom edge of the sign

Gerringong Upgrade Princes Hwy Mount Pleasant To Toolijooa Road  	Date Drawn: 05/10/2012				
	Plan Number: FH-TCP-002	D	JS	10-01-2012	Revision
	Page 002	C	JS	09-01-2012	Revision
	Rev D	B	JS	17-10-2012	Revision
		A	JS	05-10-2012	Original Issue
	Rev	By	Date	Amendment Details	

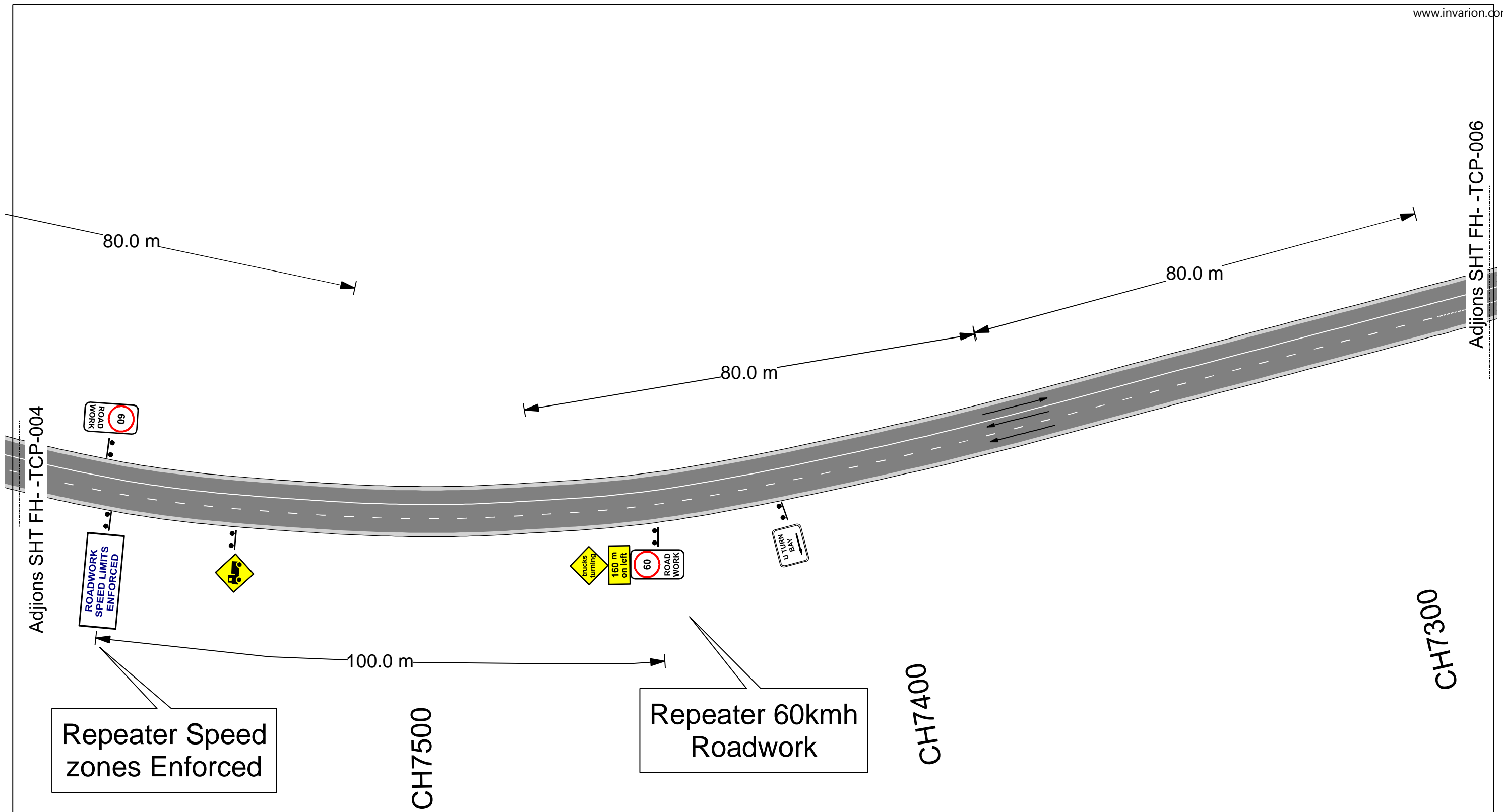
North  South	Josh Sergi Design & Inspect Traffic Control Plans Continue No. 82930 14344 NSW Transport Roads & Maritime Services Expiry Date: 27/08/2015 	35 Montague St North Wollongong (02) 4229 7000  
	8293014344	

CONSTRUCTION ACCESS GATE X  
These signs to be covered up until gate access is created

Adjions SHT FH- -TCP-001

CH8000

Adjions SHT FH- -TCP-003



Notes:  
 1. All signs are to be size 'B' class i retroreflective sheeting  
 2. Signs are to be mounted on gal posts at a minimum height of 1.5m above the ground to the bottom edge of the sign

Gerrigong Upgrade  
 Princes Hwy Mount Pleasant  
 To Toolijooa Road

Date Drawn: 05/10/2012				
Plan Number: FH-TCP-005				
Page 005	C	JS	07-02-2013	Revision
Rev C	B	JS	17-10-2012	Revision
	A	JS	05-10-2012	Original Issue
	Rev	By	Date	Amendment Details

North  
  
 South

Josh Sergi

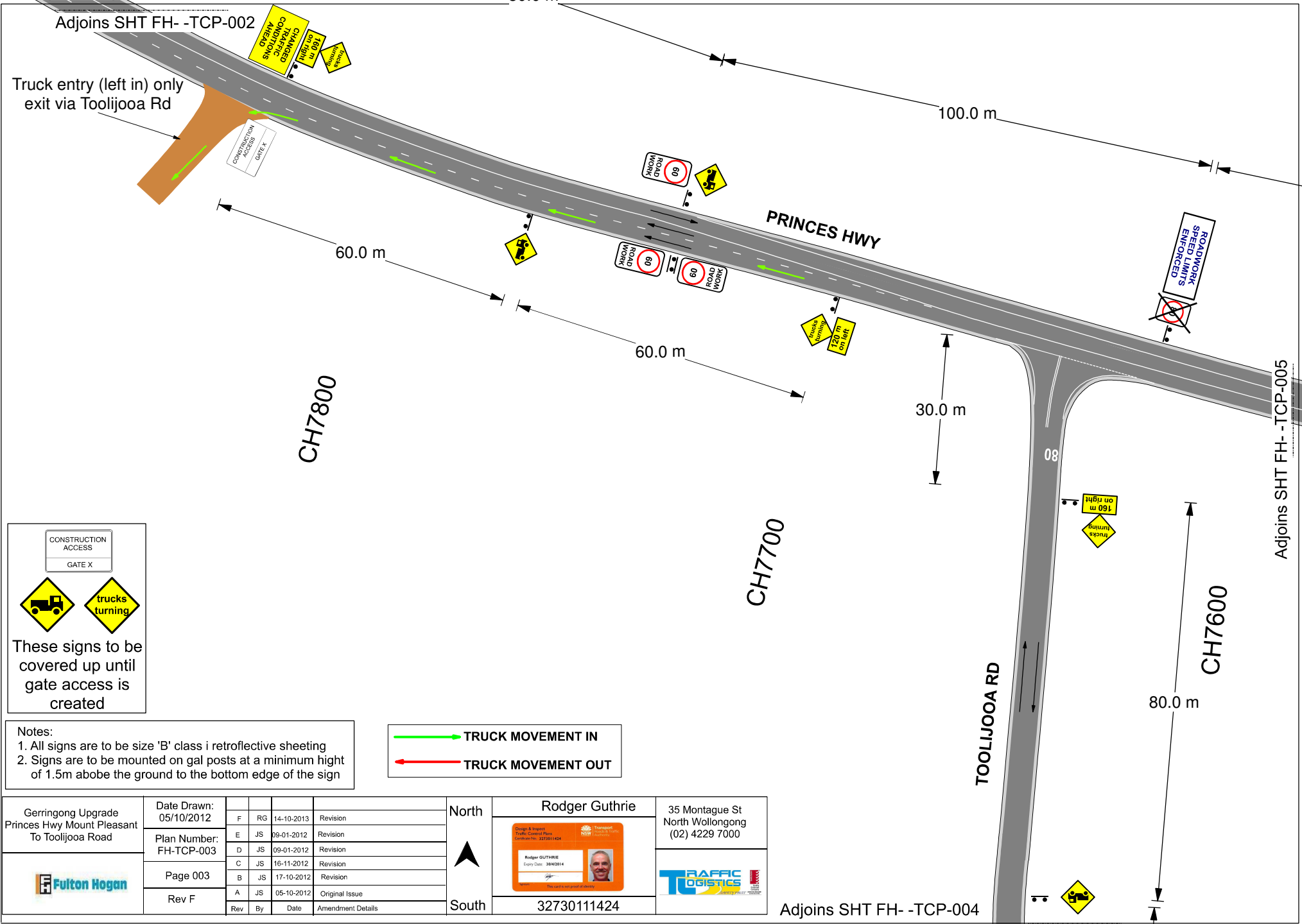
Design & inspect  
 Traffic Control Plans  
 Certificate No. 8293014344

Transport  
 Roads & Maritime  
 Services



8293014344

35 Montague St  
 North Wollongong  
 (02) 4229 7000

These signs to be covered up until gate access is created

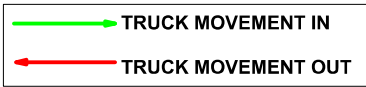


CONSTRUCTION ACCESS GATE X

These signs to be covered up until gate access is created

Notes:  
 1. All signs are to be size 'B' class i retroreflective sheeting  
 2. Signs are to be mounted on gal posts at a minimum height of 1.5m above the ground to the bottom edge of the sign



Gerringong Upgrade Princes Hwy Mount Pleasant To Toolijooa Road	Date Drawn: 05/10/2012	F	RG	14-10-2013	Revision
	Plan Number: FH-TCP-003	E	JS	09-01-2012	Revision
		D	JS	09-01-2012	Revision
		C	JS	16-11-2012	Revision
		B	JS	17-10-2012	Revision
	Page 003	A	JS	05-10-2012	Original Issue
Rev F	Rev	By	Date	Amendment Details	



Rodger Guthrie

35 Montague St  
North Wollongong  
(02) 4229 7000



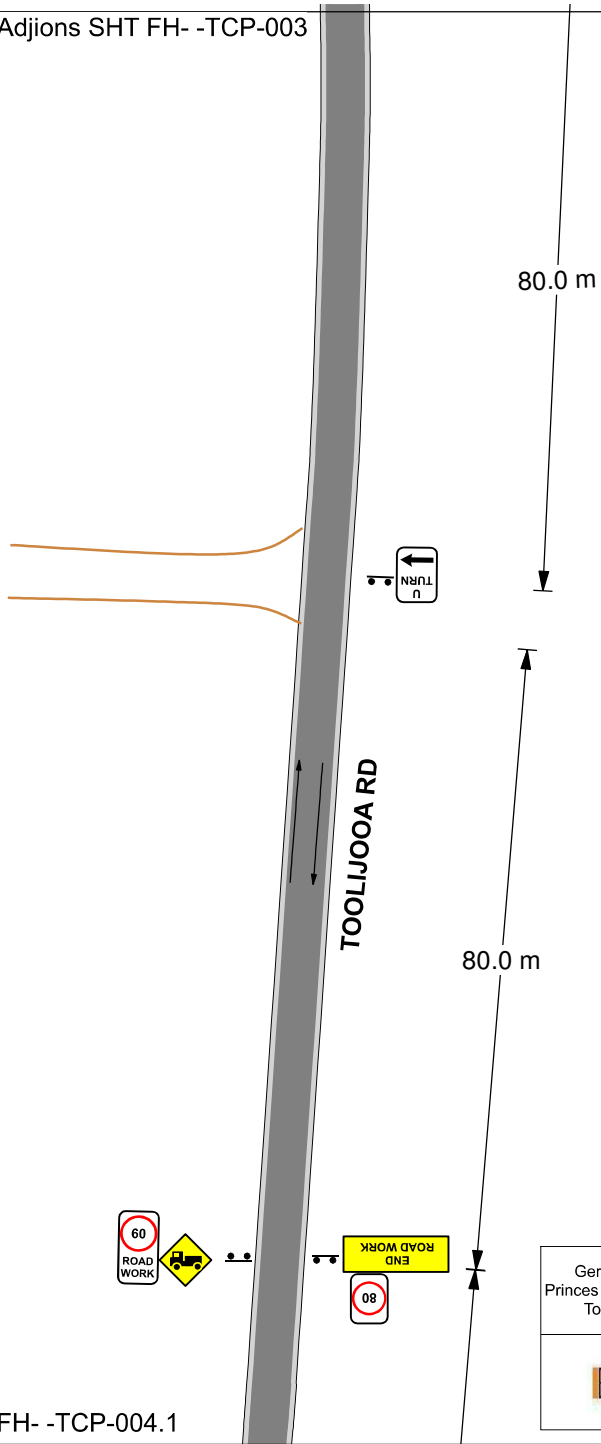
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Adjoins SHT FH- -TCP-004



Adjions SHT FH- -TCP-003




CONSTRUCTION ACCESS  
GATE X





These signs to be covered up until gate access is created

Notes:  
 1. All signs are to be size 'B' class i retroreflective sheeting  
 2. Signs are to be mounted on gal posts at a minimum height of 1.5m above the ground to the bottom edge of the sign

Adjions SHT FH- -TCP-004.1

Gerringong Upgrade Princes Hwy Mount Pleasant To Toolijooa Road  	Date Drawn:		05/10/2012		
	Plan Number:		FH-TCP-004		
	Rev	By	Date	Amendment Details	
	D	JS	06-09-2013	Revision	
	C	JS	16-11-2012	Revision	
Page 004		B	JS	17-10-2012	Revision
Rev D		A	JS	05-10-2012	Original Issue

North  
  
 South

Josh Sergi

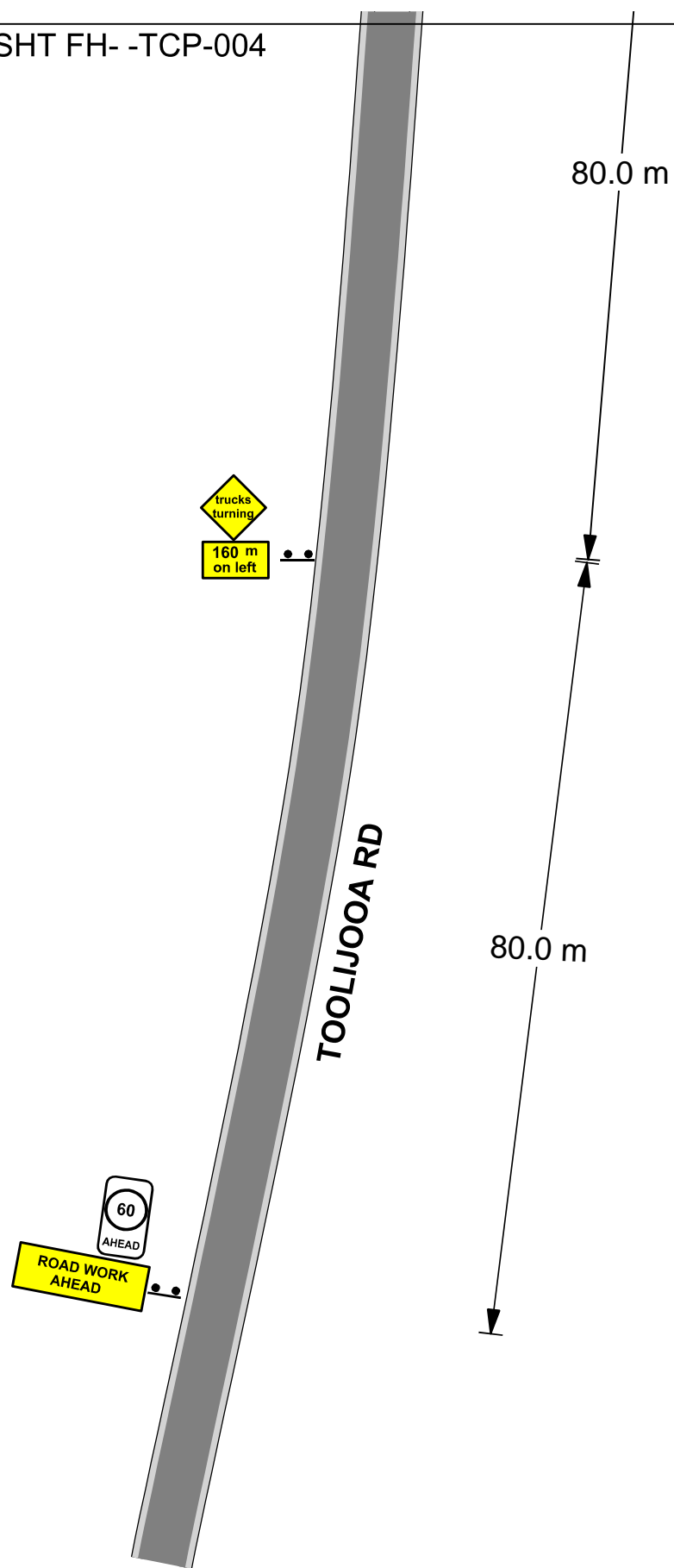
Design & Transport Traffic Control Plans  
 NSW Transport  
 8293014344

Joshua SERGI  
 Expires Date: 27/03/2015

8293014344

35 Montague St  
 North Wollongong  
 (02) 4229 7000





CONSTRUCTION ACCESS  
GATE X

These signs to be covered up until gate access is created

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  2. Signs are to be mounted on gal posts at a minimum height of 1.5m above the ground to the bottom edge of the sign

Gerringong Upgrade Princes Hwy Mount Pleasant To Toolijooa Road	Date Drawn: 16/11/2012				North	Josh Sergi <small>Design &amp; Inspect Traffic Control Plans Contract No. 8293014344</small>	35 Montague St North Wollongong (02) 4229 7000
	Plan Number: FH-TCP-004.1						
	Page 004.1				South	8293014344	
Rev A	A	JS	16-11-2012	Original Issue			
	Rev	By	Date	Amendment Details			