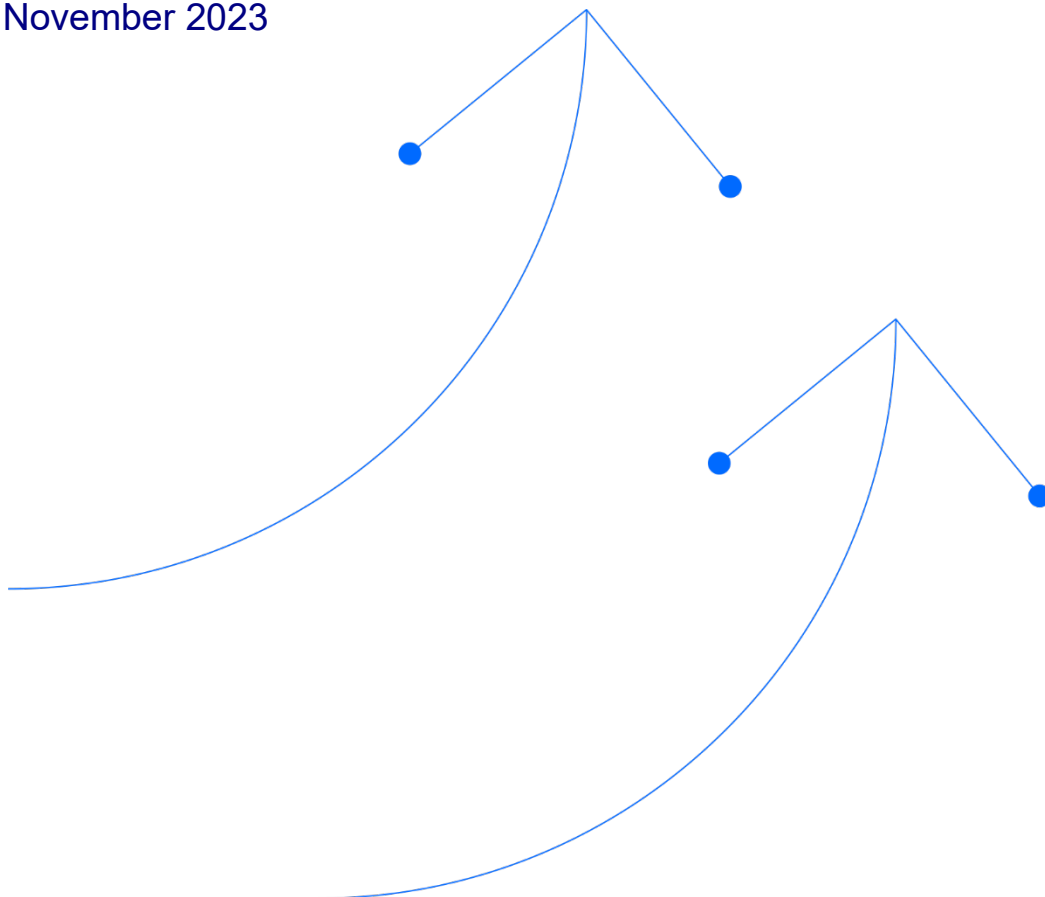


# **STAGE 1 – PRELIMINARY WORKS CONSTRUCTION TRAFFIC MANAGEMENT PLAN**

November 2023



<b>Project name</b>		Hunter Gas Pipeline					
<b>Document title</b>		Stage 1 – Preliminary Works Construction Traffic Management Plan					
Status Code	Revision	Author	Reviewer		Approved for issue		
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# Terms and abbreviations

Abbreviations	Terms
AS	Australian Standard
CEMP	Construction Environmental Management Plan
CoA	Conditions of approval for the HGP MP 06_0286
CSSI	Critical State Significant Infrastructure
CTMP	Construction Traffic Management Plan
EA	Queensland Hunter Gas Pipeline Environmental Assessment (Manidis Roberts, 2008)
HGP	Hunter Gas Pipeline
HML	Higher mass limits
HSE	health safety and environment
ITCP	Implement Traffic Control Plan
IVMS	In Vehicle Monitoring Systems
km/h	kilometres per hour
km	kilometres
NHVR	National Heavy Vehicle Regulator
OSOM	oversize or over mass
PTCD	Portable Traffic Control Device
PWZTMP	Prepare Work Zone Traffic Management Plan
QHGP	Queensland Hunter Gas Pipeline
RAV	Restricted Access Vehicle
RMS	The former Roads and Maritime Services
SoC	statement of commitments
TCAWS	TfNSW Traffic Control at Work Sites Manual v6.1 (2022)
TfNSW	Transport for New South Wales
TGS	Traffic Guidance Scheme
TTM	Temporary traffic management
VMPs	Vehicle Movement Plans
VMS	Variable Message Sign

# 1 Introduction

## 1.1 Purpose and scope of the CTMP

This Construction Traffic Management Plan (CTMP) has been prepared as a sub-plan to the Hunter Gas Pipeline (HGP) Stage 1 – Preliminary Works Construction Environmental Management Plan (CEMP) and must be read in conjunction with the CEMP. The CTMP has been prepared considering the following approval documents, traffic management guidelines and other relevant Project documents:

- Conditions of Project Approval MP 06\_0286 (CoA) as modified (Mod 1)
- Guide to Temporary Traffic Management (Austroads, 2021)
- Traffic Control at Work Site Manual (Transport for NSW, 2022) (TCAWS)
- The Environmental Assessment (EA) (as defined by the CoA) –Queensland Hunter Gas Pipeline Environmental Assessment (Manidis Roberts 2008) as modified by the:
  - Submissions Report for the Queensland Hunter Gas Pipeline (November 2008); and
  - Request to modify the approved project, dated 18 October 2018, including the associated *Response to Submissions* dated 27 December 2018 and *Additional Information* provided to the Department dated May 2019.

This CTMP provides details on the management and mitigation of traffic generated during construction and use of the Preliminary Works Site 1 to provide safe and efficient management of staff and vehicle access.

## 1.2 Objectives

The objectives of this CTMP are to:

- Provide a description of:
  - The expected type and number of vehicles to be used in the construction and use of Preliminary Works Site 1
  - The activities and the duration of the Stage 1 activities
  - Access arrangements and proposed routes for vehicles entering and egressing the site.
- Outline strategies to:
  - Manage vehicular traffic movement associated with the establishment and use of the site
  - Minimise the impact of site-generated vehicle traffic on the operation of the adjoining road network, including impacts to other road users (including pedestrians)
  - Facilitate the continuous, safe, and efficient travel of workers, contractors, and the general public.

## 1.3 Assumptions

The following are assumed in the preparation of this document:

- The expected traffic volume of the site has been estimated considering the project size and scope as projected by Santos.
- The assessment of existing conditions of the surrounding road network is based on a desktop review utilising the following data sources:
  - Aerial photography by Google Maps / MetroMap
  - Street view images by Google Maps
- No intersection or mid-block assessment of construction traffic impacts was undertaken.

## 1.4 Structure of this CTMP

The CTMP sets out the details required by CoA 6.3 and provides additional traffic management requirements to address the objectives in section 1.2. The structure of this CTMP is as follows:

- Section 1: Outlines the context, scope, purpose and objectives of this CTMP
- Section 2: Provides an introduction to the project and the proposed Stage 1 activities
- Section 3: Outlines the requirements for the preparation of a traffic management plan as set out by Transport for New South Wales (TfNSW)
- Section 4: Describes the existing road network and transport facilities servicing the site
- Section 5: Describes the detailed CTMP, outlining the proposed access and parking arrangements and measures to manage vehicles, pedestrians, and any impacts to the surrounding road network
- Section 6: Describes the monitoring and review of the CTMP.

## 1.5 CTMP author qualifications

Qualifications of staff involved in the preparation of this management plan are detailed in Table 1.1

**Table 1.1 – Author qualifications**

Name	Position / Role	Qualifications	Relevant experience
John Yoo	Graduate Traffic Engineer / Primary author	B.Eng (Civil) (Hons)	1.5 years of experience in traffic engineering and transport planning
Mark Leigh-Lucas	Technical Director – Transport Planner / Reviewer	Bachelor of Applied Science (Geography Major). University of NSW, 2005.	17 years experience in transport planning

## 1.6 Consultation

The CoA 6.3 b) requires that the CTMP must address the requirements of relevant councils, Transport for NSW Crown Lands and any other relevant roads authority. The CTMP was provided to Council as the relevant road authority on 20 September 2023. Feedback was received as identified in Table 1.2.

**Table 1.2 – Consultation for CTMP**

Agency/stakeholder	Feedback	Where addressed
Liverpool Plains Shire Council	Identified approval is needed, a S138 application needs to be applied for through the NSW Planning Portal	Section 3.3
	The truck suggested, 25m <50t, would appear to be a restricted access vehicle (RAV). Permits will be needed through NHVR for any RAV. This is referred to in other documents as well	Requirement for an exemption notice is incorporated into Section 3.3 and Table 5.1
	No commentary on ensuring no damage to Council's road infrastructure in line with CoA 3.11. Particularly as Nicholson's Lagoon Road is unsealed, with deliveries there is a risk of increased damage to the road compared to normal usage.	Requirements for pre and post works dilapidation surveys are included in Table 5.1 and Appendix C

## 1.7 Distribution

A copy of the approved CTMP will be made available to all Santos personnel and contractors via the Santos intranet.

## 2 Works description

Stage 1 works involve the establishment and use of Preliminary Works Site 1. The Preliminary Works Site 1 will be used primarily for temporary equipment and machinery storage, pipe storage and will house a site office. Refer to Figure 2.1 for the proposed layout of the Preliminary Works Site 1. Further details of construction and use of Preliminary Works Site 1 including work activities, work program, workforce and traffic generation, are provided in section 1 and 2 of the CEMP.

The site is located at lot on plan 1/596894, 40 Nicholsons Lagoon Rd, Quipolly, NSW 2343, about 65 km southwest of Tamworth in the Liverpool Plains Local Government Area (Figure 2.2). The site is situated approximately 20 km northwest of the township of Quirindi. The land is classified as RU1 and has been cleared for the purpose of primary production, being dominated by highly disturbed pastures. Land surrounding the site is also used for primary production.

The Preliminary Works Site 1 is dominated by disturbed, non-native pasture. The site has been located to avoid crossing or disturbing watercourses, clearing of native vegetation, flora and fauna habitat, as well as maximising the distance to sensitive receptors. The site has been located so that it is in close proximity to the approved HGP corridor as well as major transportation routes, including existing major highways and rail yards.

### 2.1 Traffic impact from Stage 1 activities

Construction of the preliminary works site will involve:

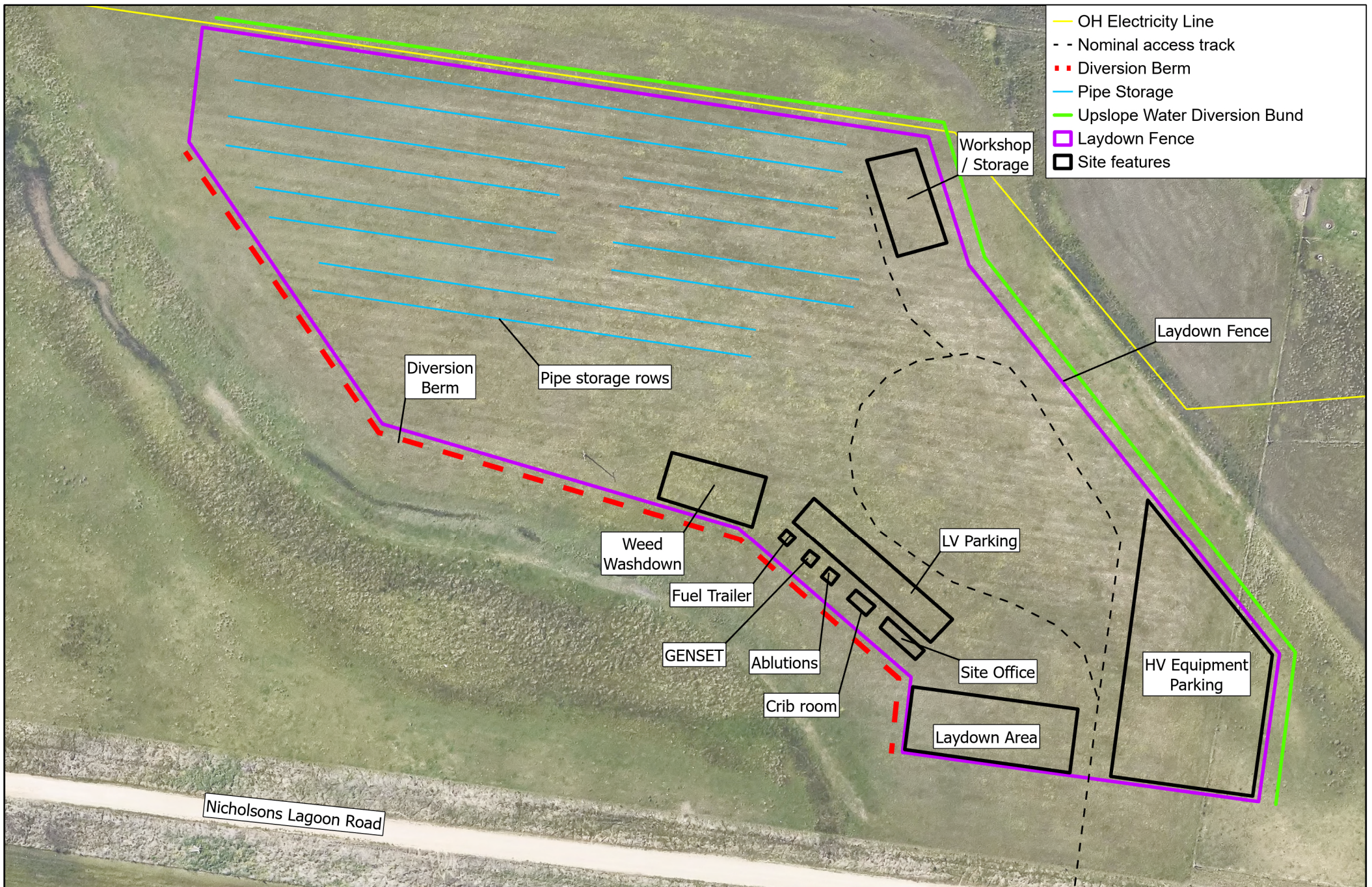
- Initial delivery of construction plant and equipment (e.g., graders, excavators, bulldozers)
- Delivery of materials required for bulk earthworks (e.g., water, rock, gravel)
- Delivery of site facilities
- Removal of construction plant from site
- Daily movements associated with construction workers and deliveries to site.

During construction of Preliminary Works Site 1, up to six (6) light vehicles and 10 heavy vehicles are expected to access the site per day. The largest vehicle that is expected to be utilised is 25 metre semi-trailer (less than 50 tonnes).

During the use of Preliminary Works Site 1, up to six (6) light vehicles would visit the site per day. It is expected no more than three (3) heavy vehicles per day and 10 per month will visit the site for delivery of pipe sections, materials, plant and equipment. The largest vehicle that is expected to be utilised is 25 metre semi-trailer (less than 50 tonnes).

The additional traffic associated with Stage 1 activities is expected to have a minor impact on local traffic.





- OH Electricity Line
- - Nominal access track
- Diversion Berm
- Pipe Storage
- Upslope Water Diversion Bund
- Laydown Fence
- Site features

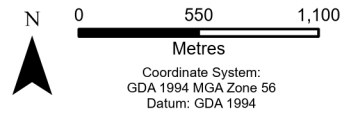
**Figure 2.1**  
**Indicative Preliminary Works Site 1 Layout**





- ▭ Preliminary works site 1
- ▭ HGP Corridor
- Road, DTDB
- ▭ Cadastre

**Figure 2.2**  
**Site locality in relation to local townships**



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## 3 Regulatory requirements

The project was approved under the *Environmental Planning and Assessment Act 1979* and subsequently declared a Critical State Significant Infrastructure (CSSI) project.

Stage 1 activities will be carried out in accordance with the:

- Relevant CoA
- Statement of commitments (SoC), and
- The EA.

Temporary Traffic Management (TTM) is the organisation, arrangement, guidance, and control of both stationary and moving traffic, including pedestrians and all types of vehicles, around a hazard or work site for the safety of other workers and road users. The CTMP is a TTM instrument that will assist in providing a safe work environment while maintaining a safe and efficient journey for all road users.

### 3.1 Conditions of approval

Table 3.1 provides a summary of the relevant CoA and where these are addressed in the CTMP.

**Table 3.1 – Relevant conditions of approval**

Condition Number	Condition	Where addressed
CoA-3.9	The Proponent shall ensure that any measures to restore or reinstate roads affected by the project are undertaken in a timely manner, in accordance with the requirements and to the satisfaction of the relevant road authority, including the Crown Lands and at the full expense of the Proponent	Section 5.2
CoA-6.3 b)	a Construction Traffic Management Plan to minimise the construction traffic impacts of the project. The Plan must address the requirements of the relevant Councils, RMS, Crown Lands, and any other relevant road authority and shall include, but not necessarily be limited to:	This Plan Section 1.5
CoA-6.3 b) i)	details of how construction of project infrastructure will be managed in proximity to local and regional roads;	Section 5
CoA-6.3 b) ii)	the measures that would be implemented to minimise the traffic impacts of the project on road users and the capacity and safety of the road network, including:	-
	<ul style="list-style-type: none"> <li>• imposing restrictions on the use of heavy or over-dimensional vehicles;</li> </ul>	Section 5.1 and 5.2
	<ul style="list-style-type: none"> <li>• a driver’s code of conduct for workers associated with the project;</li> </ul>	Appendix A
	<ul style="list-style-type: none"> <li>• notifying the local community about project-related traffic impacts;</li> </ul>	Section 5.2
	<ul style="list-style-type: none"> <li>• ensuring vehicles enter and leave the site in a forward direction and have their loads covered or contained;</li> </ul>	Section 5.2
	<ul style="list-style-type: none"> <li>• minimising dirt being tracked onto the public road network from project-related traffic;</li> </ul>	Section 5.2
	<ul style="list-style-type: none"> <li>• providing sufficient parking on site for project-related traffic;</li> </ul>	Section 5.2
CoA-6.3 b) iii)	include a program to monitor and report on the effectiveness of these measures;	Section 5.2 and 6.1
CoA-6.3 b) iv)	evidence to demonstrate that all statutory responsibilities with regard to road traffic impacts have been complied with.	Section 3.3



### 3.2 Statement of commitments

The Submissions Report (QHGP 2008) outlines the commitment to the objectives and actions that must be taken for managing the environmental impacts of the Project to minimise or avoid adverse outcomes. The SoC relevant to this traffic and access arrangement have been provided below in Table 3.2.

**Table 3.2 – Statement of commitments relevant to traffic management**

Condition Number	Condition	Where addressed
SoC-T2	Any oversized or overweight loads will be transported in accordance with Transport for NSW requirements.	Section 5.2
SoC-T3	Specific localised traffic impacts will be assessed following the determination of the location of construction camps, pipeline storage areas, vehicle depots and ROW access points. If there are significant impacts identified, then specific transport arrangements associated with pipe transport and storage and construction vehicle movements will be developed to minimise localised impacts on other road users.	Section 5.2
SoC-AM2-4c	Understanding of localised traffic impacts and road crossing impacts.	Section 5.1 and 5.2

### 3.3 Regulatory requirements

The CEMP includes the complete overview of regulatory requirements for the Project. The legal and other requirements specific to the CTMP are listed in Table 3.3. Note that all regulations listed in Table 3.3 apply to the proposed Stage 1 activities.

**Table 3.3 – Regulatory requirements**

Act / Regulation / Guideline / Approvals / Notice	Description	Applicability to the project
NSW Roads Act 1993	<p>The <i>Roads Act 1993</i> (the Roads Act) is the overarching legislation regarding the roads in NSW. The objectives of the Roads Act include:</p> <ul style="list-style-type: none"> <li>Defining the rights of the public to access public roads</li> <li>Defining the rights of owners of land adjacent a public road</li> <li>Establishing the procedures of opening and closing a road</li> <li>Providing road classifications</li> <li>Allow for declaration of road authorities over particular roads.</li> </ul> <p>Conferring the function (including carrying out road works) to TfNSW.</p>	<p>In accordance with Section 138 of the Roads Act, Santos will obtain consent of the appropriate roads authority prior to undertaking any of the following:</p> <ul style="list-style-type: none"> <li>Erect a structure or carry out work in, on or over a public road</li> <li>Dig up or disturb the surface of a public road</li> <li>Remove or interfere with a structure, work or tree on a public road</li> <li>Pump water into a public road from any land adjoining the road</li> <li>Connect a road (whether public or private) to be classified road.</li> </ul> <p>Section 138 approval is required from Liverpool Plains Shire Council to connect the site access road to Nicholson's Lagoon Rd.</p>

Act / Regulation / Guideline / Approvals / Notice	Description	Applicability to the project
Australian Standards	<p>The Australian Standards are developed by Standards Australia, a non-government, not-for-profit who work to promote the adoption of uniform standards across the nation. The Australian Standards seek to maintain high levels of occupational health and safety and minimise risks in the building and construction industry.</p>	<p>If required, signage and traffic control should be undertaken in accordance with the Australian Standards Manual of uniform traffic control devices. In particular, the following sections will assist with the development of the site layout plan and Vehicle Movement Plans (VMPs):</p> <ul style="list-style-type: none"> <li>• Traffic control devices for works on roads</li> <li>• Pedestrian control and protection.</li> </ul>
Austroads Guide to Temporary Traffic Management	<p>The Austroads Guides have been developed to guide the design, construction, maintenance and operation of the road network in Australia and New Zealand. All road agencies across Australia have adopted the Austroads Guides.</p>	<p>Sections of the Austroads Guide to Temporary Traffic Management should be consulted during the preparation of VMPs to assist with the planning, design and implementation of a safe, economical, and efficient traffic management set up.</p>
TfNSW Traffic Control at Work Sites Manual v6.1 (2022)	<p>This Manual provides a comprehensive summary of the steps and requirements to ensure appropriate traffic management is employed during any construction works. It is noted that the TfNSW Manual summarises the key requirements of the Australian Standards and Austroads Guides listed above (amongst other documentation) and as such, should be used as a first point of reference.</p>	<p>This CTMP has been prepared in accordance with the guidelines listed within the TfNSW Manual to ensure that:</p> <ul style="list-style-type: none"> <li>• Road workers are able to work safely</li> <li>• Road users are able to travel around, past or through the work site safely</li> <li>• Road workers and road users are separated wherever possible</li> <li>• The construction works do not impact or cause delay to road users or, if not reasonably practicable, any impact is minimised.</li> </ul>
Road Occupancy Approvals	<p>The lead contractor shall obtain the necessary approvals, as required by the <i>Roads Act 1993</i> and NSW Traffic Acts and regulations, prior to conducting any works. The contractor is required to seek the concurrence of the relevant road authority prior to undertaking works.</p>	<p>Whilst not assessed as required for the Project at this time, approvals may need to be obtained for items such as but not limited to:</p> <ul style="list-style-type: none"> <li>• Roadwork Speed Zone</li> <li>• Road opening permits.</li> <li>• Road occupancy approvals</li> <li>• Hoarding/fencing approvals</li> <li>• Crane and barricades</li> <li>• Oversize and Articulated Vehicle use on local roads.</li> </ul>
Heavy Vehicle National Law (NSW)	<p>The Heavy Vehicle National Law (NSW) provides a national scheme for facilitating and regulating the use of heavy vehicles on roads. The objective of this law includes:</p> <ul style="list-style-type: none"> <li>• Promotes public safety</li> <li>• Manages the impact of heavy vehicles on the environment, road infrastructure and public amenity</li> </ul>	<p>A Restricted Access Vehicle (RAV) requires a heavy vehicle road access permit to operate on Australian roads. These permits allow a RAV to travel on a planned road network that is outside of the approved road network.</p> <p>This applies to Stage 1 where an exemption notice (Multi-State Class 1 Load Carrying Vehicle Dimension Exemption Notice 2023 (No.2)) is required to be obtained through the National Heavy</p>

Act / Regulation / Guideline / Approvals / Notice	Description	Applicability to the project
	<ul style="list-style-type: none"> <li>Promotes industry productivity and efficiency in the road transport of goods and passengers by heavy vehicles</li> <li>Encourage and promote productive, efficient, innovative, and safe business practices.</li> </ul>	Vehicle Regulator for use of 25 metre semi-trailers on Nicholson's Lagoon Rd.

# 4 Existing Environment

## 4.1 Subject site

The locality of the Preliminary Works Site 1 is shown in Figure 2.1. The site falls within the local government area of Liverpool Plains Shire Council.

Vehicle access to the site is expected to be provided via Nicholsons Lagoon Road, which is connected to Kamilaroi Highway.

## 4.2 Road Network

Roads are classified (as defined by the *Roads Act 1993*) based on their importance to the movement of people and goods within NSW.

The classification of a road allows TfNSW to exercise authority of all or part of the road. Classified roads include Main Roads, State Highways, Tourist Roads, Secondary Roads, Tollways, Freeways, and Transitways. For management purposes, TfNSW has three administrative classes of roads:

- **State Roads** – Major arterial links through NSW and within major urban areas. They are the principal traffic-carrying roads and are fully controlled and maintained by TfNSW. State Roads include all Tollways, Freeways and Transitways; and all or part of a Main Road, Tourist Road or State Highway.
- **Regional Roads** – Roads of secondary importance between State Roads and Local Roads which, along with State Roads, provide the main connections to and between smaller towns and perform a sub arterial function in major urban areas. Regional roads are the responsibility of councils for maintenance funding, though TfNSW funds some maintenance based on traffic and infrastructure. Traffic management on Regional Roads is controlled under the delegations to local government from TfNSW. Regional Roads may own all or part of a Main Road, Secondary Road, Tourist Road or State Highway; or other roads as determined by TfNSW.
- **Local Roads** – The remainder of the council-controlled roads, Local Roads are the responsibility of councils for maintenance funding. TfNSW may fund some maintenance and improvements based on specific programs (e.g., urban bus routes, road safety programs). Traffic management on Local Roads is controlled under the delegations to local government from TfNSW.

A map of the road classifications of the road network surrounding the site is shown in Figure 4.1. As shown in the figure, connectivity to the broader road network is provided by the Kamilaroi Highway (a state road), while other forms of access are provided by the local roads (i.e. Nicholsons Lagoon Road). If there is any planned works or any planned major infrastructure changes, a communication with TfNSW will be completed accordingly. With the current estimated traffic volumes as detailed in Section 2.1, consultation with TfNSW is not required. Any changes in traffic volumes will require reevaluation in consultation with TfNSW and relevant authorities.





**Figure 4.1**  
**Road Classification of surrounding road network**



### 4.2.1 Road Characteristics

The following roads in proximity to the site will be utilised during construction and use of the site. Primary access will be via Nicholsons Lagoon Road.

#### 4.2.1.1.1 Kamilaroi Highway

Kamilaroi Highway is a state highway located in the north-western region of New South Wales and links Bourke via Walgett and Narrabri to Willow Tree. Access to the site will primarily be through Nicholsons Lagoon Road from the Kamilaroi Highway. From Nicholsons Lagoon Road, project vehicles would enter the site parking area and exit through the same gate as the entrance. The key features of Kamilaroi Highway are summarised in Table 4.1.

**Table 4.1 – Kamilaroi Highway key features**


Feature	Description	Key Map
Carriageway	Sealed carriageway with travel widths of approximately 7 metres (3.5 metres per lane)	
Parking	On-street parking not permitted	
Speed limit	100 km/h	
Pedestrian Facilities	No pedestrian facilities such as sidewalks or crossings	
Bicycle Facilities	No cycling facilities	
Public Transport	No access to public transport	



Image source: Google Street View (View facing north)

**Figure 4.2 – Kamilaroi Highway**



**4.2.1.1.2 Nicholsons Lagoon Road**

Nicholsons Lagoon Road is a local road that runs through the Quipolly area in New South Wales. It connects the Kamilaroi Highway to various properties and rural areas in the region. This road is unsealed and a direct road to access the Preliminary Works Site 1. All heavy vehicles and light vehicles will access the site via this road. As such, the road condition is required to be maintained at all times to accommodate all vehicles (refer to section 5.1). The key features of Nicholsons Lagoon Road are summarised in Table 4.2.

**Table 4.2 – Nicholsons Lagoon Road key features**


Feature	Description	Key Map
Carriageway	Rural local road with travel width of approximately 7 metres (3.5 metres per lane). The road is unsealed.	
Parking	On-street parking not permitted	
Speed limit	50 km/h	
Pedestrian Facilities	No pedestrian facilities such as sidewalks or crossings	
Bicycle Facilities	No cycling facilities	
Public Transport	No access to public transport	



Image Source: Google Street View (View facing west)

**Figure 4.3 – Nicholsons Lagoon Road**

## 4.2.2 Heavy Vehicle Routes

A description of the heavy vehicle types relevant to the site establishment works are provided in the following sub-sections. These descriptions have been taken from the TfNSW website<sup>1</sup>.

### General access to heavy vehicles

Under the national mass and loading arrangements, these are vehicles with unrestricted access to the road system, except where a road or bridge is signposted otherwise. Provided these vehicles have current registration appropriate to the vehicle configuration, no specific access restrictions apply, and no additional permits are required. Vehicles that fall within the limits described in Table 4.3 **Error! Reference source not found.** do not exceed prescribed mass and dimension limits and are therefore considered as general access heavy vehicles.

**Table 4.3 – General access vehicle – prescribed dimension limits**

Vehicle Type	Dimension limits (metres)		
	Length	Height	Width
Truck	12.5	4.3 (all vehicles)	2.5 (all vehicles)
Bus	12.5		
Truck and trailer	25.0		

<sup>1</sup> Heavy Vehicle Road Access: <https://roads-waterways.transport.nsw.gov.au/business-industry/heavy-vehicles/road-access/index.html>

### Restricted access heavy vehicles map

The TfNSW interactive Restricted Access Vehicle (RAV) map identifies a network of routes that are approved to accommodate heavy vehicles of various sizes. Figure 4.4 provides the RAV map for 26 metre B-double routes in proximity to the Preliminary Works Site 1. Kamilaroi Highway is an approved route for vehicles up to a 26 metre B-double. The interactive RAV map shows that vehicles larger than a 19 metre B-double (over 50 tonnes) are not an approved vehicle to access Nicholson's Lagoon Road.

## 4.3 Public Transport

There are currently no public transport services operating along roads near the proposed site. The nearest bus stop is around 8.3 km away from the site.

## 4.4 Active Transport

There are no dedicated footpaths or cycling lanes in the vicinity of the proposed site.





**Figure 4.4**  
**Combined Higher Mass Limits (HML) and**  
**Restricted Access Vehicle (RAV) routes**

# 5 Traffic Management Plan

## 5.1 Site access and route

Access to the site will be provided off Nicholsons Lagoon Road via access displayed in Figure 5.1. Vehicles used for the construction and use of the site would be travelling to and from various areas using the Kamilaroi Highway. The Kamilaroi Highway is expected to be used as the main haulage route for heavy vehicles and workers. Figure 4.4 provides a map of 'Combined Higher Mass Limits (HML) and Restricted Access Vehicle (RAV) routes'.

The largest vehicle proposed to be utilised is a 25 metre semi-trailer (less than 50 tonnes). Therefore, oversize or overmass (OSOM) vehicle trips would not be required. As such, no OSOM routes have been considered. However, according to the TfNSW interactive Restricted Access Vehicle (RAV) map as described in Section 4.2.2, Nicholsons Lagoon Road is not approved to accommodate the proposed largest vehicle. Hence an exemption notice (Multi-State Class 1 Load Carrying Vehicle Dimension Exemption Notice 2023 (No.2)) through the National Heavy Vehicle Regulator (NHVR) is required to access the site. Refer to Section 3.3 and Table 5.1 for further information.

As Nicholsons Lagoon Road is an unsealed road, road maintenance services and associated costs will be provided for by Santos in consultation with Liverpool Plains Shire Council. A dilapidation survey will be undertaken in accordance with the specifications requested by the relevant road authority, if required. A Section 138 will be applied for prior to the commencement of works. Refer to Table 5.1 and Appendix C for further details.

Heavy vehicle drivers shall be directed to follow the predetermined haulage routes and adhere to the Drivers' Code of Conduct shown in Appendix A.

## 5.2 Traffic and access management measures

Traffic and access management measures are proposed to minimise the number of traffic movements to/from the site and to minimise traffic impact on the residential road network.

Table 5.1 shows the traffic and access management measures based on the CoA, SoC and EA mitigation measures which are to be implemented. All measures shall be monitored by the relevant responsible person as provided in Table 5.1. Appendix A of the CEMP includes a compliance matrix which aligns with the DPIE 2020 Environmental Management Plan Guideline. The 'reference' columns in Table 5.1 refers to commitments in the compliance matrix, please refer to Appendix A of the CEMP for further information.

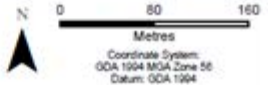


- ▶ Inbound
- ▶ Outbound
- Works Site 1
- Site features
- Cadastre



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**Figure 5.1**  
**Approved site access route**  
**of the Preliminary Works Site 1**



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**Table 5.1 – Traffic and access management measures**

Reference	Action	Timing	Frequency	Records	Responsibility
CoA-6.3.b. ii) EA-11.13-A EA-11.13-D EA/AJ-5.2.3	Notify local community groups, landowners and government agencies (e.g. council, TfNSW, etc.) regarding changes to road and/or access conditions.	Prior to commencing work and construction	As required	Correspondence	Team Lead – Community
CoA-6.3.b. ii)	Induct all personnel in traffic management considerations of the CTMP including: <ul style="list-style-type: none"> <li>• site access routes</li> <li>• environmental and occupational health and safety responsibilities</li> <li>• emergency procedures</li> <li>• potential carpooling opportunities</li> <li>• vehicle height restriction under the power lines.</li> </ul>	Prior to commencing work	Once	Induction records	Construction Supervisor
CoA-1.8 a) CoA-6.3.b. ii) MA/A2-4.1.9D	Only suitably trained and competent workers to operate plant and equipment on site.	Prior to commencing work	Ongoing	Training records	Construction Manager
EA-11.13-N EA/AI-5B EA/AI-5F	All traffic control workers will hold TfNSW accreditation in accordance with TfNSW Traffic Control at Worksites Manual.	Prior to commencing work	Ongoing	Copies of accreditation	Construction Manager
N/A	Obtain a n exemption through the National Heavy Vehicle Regulator (NHVR) to use 25 metre semi-trailers on Nicholsons Lagoon Road.	Prior to commencing work	Once	Copies of NHVR exemptions	Construction Manager
CoA-3.9	Conduct a pre-dilapidation survey of Nicholsons Lagoon Road from the unsealed part of the road to the proposed site access	Prior to commencing work	Once	Dilapidation report	Construction Manager
CoA-6.3.b. i) & ii) EA/AH-6.1C	Schedule deliveries of equipment and materials to site to ensure there is space for parking and queuing of vehicles within the site and avoid congestion and queuing on public roads.	Construction and use	Ongoing	Correspondence	Construction Supervisor

Reference	Action	Timing	Frequency	Records	Responsibility
CoA-6.3.b. i) & ii)	Cover all loads of spoil and ensure tailgates are sealed prior to leaving site.	Construction and use	Ongoing	Site inspection records	All personnel
CoA-6.3.b. iii)	Discuss traffic requirements regularly as a part of toolbox talks/toolbox meetings e.g. changed conditions due to fog, dust, wet weather or flooding and associated hazard control measures, changes to the CTMP, scheduled activities, HSE issues.	Construction	Ongoing	Toolbox record	Construction Supervisor
CoA-6.3.b. ii) SoC-T2 EA-11.13-B EA-11.13-E EA-11.13-F EA-11.13-G	Consult with TfNSW regarding any oversized or overweight loads, where required. Any oversized or overweight loads would be transported in accordance with TfNSW requirements. Avoid convoys of heavy vehicles.	Construction and use	As required	Correspondence	Construction Manager
CoA-6.3.b. i) & ii)	Direct truck drivers to follow the predetermined haulage routes and adhere to the Driver's Code of Conduct.	Construction and use	Ongoing	Site layout plans	Construction Manager
CoA-6.3.b. ii)	Provide a designated parking area for heavy vehicles and mobile equipment and for site personnel vehicles if applicable.	Construction	Ongoing	Site layout plans	Construction Supervisor
CoA-6.3.b. i)	Notify emergency services of construction traffic incident on the public road network.	Construction and use	As required	Correspondence	Construction Supervisor
CoA-6.3.b. i)	Advise emergency services of any restrictions to vehicular access to the public and private areas.	One week before restriction implemented	As required	Correspondence	Construction Manager
CoA-6.3.b. i) & ii)	Do not obstruct public roads and access points with any materials, vehicles, refuse skips etc.	Construction and use	Ongoing	Site inspection records	Construction Supervisor
EA-16.2-E	Ensure no major roads are permanently impassable.	Construction and use	Ongoing	Site inspection records	Construction Supervisor
CoA-6.3.b. iii)	Monitor the roads leading to and from the site and take all necessary steps to rectify any road	Construction	Ongoing	Site inspection records	Construction Supervisor

Reference	Action	Timing	Frequency	Records	Responsibility
	deposits caused by site vehicles to maintain the safety of all road users.				
CoA-6.3.b. ii)	Install and maintain a shaker grid at the entrance to site to avoid tracking mud onto local roads.	Construction	Once	Site layout plans	Construction Supervisor
CoA-6.3.b. i)	Use only vehicles suited to the local road conditions. Conduct pre-mobilisation inspection check on all vehicles to confirm suitability to the expected conditions.	Construction and use	Ongoing	Pre-mobilisation inspection check	Construction Supervisor
CoA-6.3 b. ii)	Entry and exit to the site in a forward direction only (no reverse-in movements to the site would be permitted).	Construction and use	Ongoing	Site layout plans	Construction Manager
CoA-6.3 b. iii)	Erect and maintain call-up signage.	Construction and use	Ongoing	Photos	Construction Manager
N/A	Only authorised vehicles to enter the work site.	Construction and use	Ongoing	Sign on register	Construction Supervisor
CoA-6.3 b. ii) EA-11.13-I	If applicable, inform staff of school bus, waste collection vehicles and other schedule times such that impact on the public network is minimised e.g., avoiding peak times and school zones during the hours 7am–9am and 2pm–4pm.	Construction and use	As required	Correspondence	Construction Supervisor
CoA-6.3 b. ii)	Comply with road traffic rules, particularly for any local traffic rules.	Construction and use	Ongoing	Nil	All staff
EA-11.13-N EA/AI-5B EA/AI-5F	Install traffic management devices in compliance with AS1742.3 Part 3 - Traffic Control Devices for Works on Roads or TCAWS ver.6.1 for roads under the jurisdiction of TfNSW.	Construction	As required	Correspondence	Construction Supervisor
EA-11.13-Q EA-17.13-A EA/AH-6.1D	Carpool, where possible to transport construction crews to/from the Preliminary Works Site 1.	Construction	Ongoing	Site inspection records	All staff
CoA-1.8 a) EA/AH-6.1B	Turn off plant and vehicles when not in use.	Construction and use	Ongoing	Site inspection records	All project personnel

Reference	Action	Timing	Frequency	Records	Responsibility
MA/A2-4.1.16D					
EA/AH-6.2A	Remain on constructed roads and tracks at all times.	Construction	Ongoing	Site inspection records	All staff
CoA-6.3.b. i)	Maintain property access for private landholders at all times.	Construction	Ongoing	Site inspection records	Construction Supervisor
EA/AJ-5.2.3	Install access barriers, warning signs at construction areas and access points and/ or separation distances between construction areas and roadways.	Construction	Ongoing	Site inspection records	Construction Supervisor
CoA-3.9	Conduct a post-dilapidation survey of Nicholsons Lagoon Road from the unsealed part of the road to the proposed site access	Post construction	Once	Dilapidation report	Construction Manager
CoA-3.9	Restore or reinstate roads affected by the project in a timely manner, in accordance with the requirements and to the satisfaction of the relevant road authority and at the full expense of Santos.	Construction and use	Ongoing	Site inspection records	Construction Supervisor

# 6 Monitoring and review

## 6.1 Monitoring

The CTMP must be monitored and reviewed in an ongoing manner to ensure that it remains current and addresses all risks at the site for the duration of the activity.

Section 8 of *TCAWS v6.1 (2022)* states the type of monitoring activities to be implemented for the duration of the TTM works. Monitoring activities during TTM are classified into two categories:

- Mandatory monitoring activities, which are required for all TTM arrangements (refer to TCAWS Table 8-1)
- Additional monitoring activities, undertaken to assist the TTM application (refer to *TCAWS Table 8-2*).

An overview of the timing of these monitoring activities is provided in Table 6.1 and the checklists for each mandatory monitoring activity can be found in Appendix B.

**Table 6.1 – Monitoring activities during TTM**

Stage	Monitoring activities		
	Mandatory	Additional	Tools and checklists for mandatory monitoring activities
Planning	Traffic Guidance Scheme (TGS) verification	NA	TGS verification checklist
During TTM	<ul style="list-style-type: none"> <li>• Weekly TTM inspections (includes preopening inspection) for long term works</li> <li>• Shift TTM inspections</li> <li>• CTMP Review</li> </ul>	<ul style="list-style-type: none"> <li>• Road Safety Audit (where road safety concerns are identified)</li> <li>• Client inspections (if applicable)</li> </ul>	<ul style="list-style-type: none"> <li>• Weekly TTM inspection checklist</li> <li>• Shift / Daily TTM inspection checklist</li> </ul>
Post Completion	Post-completion inspection	NA	Post-completion inspection checklist

Note: Additional items to be carried out under direction of the client in line with project conditions of consent.

The structure, schedule and frequency of the monitoring activities must be considered, and these aspects will vary depending on the size, complexity and duration of works.

## 6.2 Review

The CTMP must be reviewed in accordance with the requirements outlined in section 6.3 of the CEMP.



# Appendix A – Driver’s Code of Conduct

## Operating hours

Heavy vehicles are not to arrive or leave the Preliminary Works Site 1 outside of the approved operating hours of:

- Weekdays – 07:00 am to 06:00 pm
- Saturday – 8:00 am to 1:00 pm

No heavy vehicles are to enter or leave the Preliminary Works Site 1 on a Sunday or a public holiday.

## Designated routes

Delivery vehicles travelling from and to the Preliminary Works Site 1 (Lot 1/596894, 40 Nicholsons Lagoon Rd, Quipolly, NSW 2343) must only use the routes from “*Combined Higher Mass Limits (HML) and Restricted Access Vehicle (RAV) routes*” map (refer to Figure 4.4) and the approved site access route indicated in Figure 5.1.

## Speed limits

- All speed limits on the designated routes are to be observed.
- Heavy vehicles are to abide by the on-site speed limit of 20 km/h.
- Drivers will use two-way radios in order to establish the position of heavy vehicles entering or leaving the construction sites on the access road to ensure the safety of all heavy vehicle drivers and reduce queuing along the access road or designated route.
- Drivers of heavy vehicles will comply with any instructions given by site staff in relation to speed, position, entry and exiting of the construction sites.
- Drivers of heavy vehicles should drive at a speed appropriate to the conditions and always observe speed restrictions relevant to the vehicle configuration.
- The speed of construction project vehicles is to be monitored to ensure vehicles do not exceed the maximum permitted speed limit using Santos’ In Vehicle Monitoring Systems (IVMS). Vehicles completing one-off tasks for the project (e.g. deliveries to site) will not be monitored by the Santos IVMS.

## No convoying

- Heavy vehicles are to leave at least 200 metres between the rear of each heavy vehicle and the front of each other heavy vehicle, whilst on the designated route.
- If on the designated route a heavy vehicle is placed in a situation where the distance between heavy vehicles is less than 200 metres, the heavy vehicle at the rear will slow down, or pull off the road at a safe place to allow the vehicle in front to proceed without convoying taking place.

## Loads to be covered

- All loads that have the potential to generate dust or spill material are to be covered so that material/dust is not lost from the load.
- Drivers are to avoid any action that may cause pollution of the environment, over and above that created by works under normal circumstances.

## The use of exhaust brakes

While heavy vehicles are on designated routes, the use of exhaust brakes will be avoided wherever practicable.

## Heavy vehicles and the public

Drivers of heavy vehicles must be:

- Conscious of the safety of others on the designated route
- Obedient to road rules
- Courteous towards other road users and pedestrians
- Consider the level of noise being made by their vehicles and keep noise to a minimum
- Conscious of actions that may cause pollution and avoid such actions.

## Rest stops

- Where it is reasonably practicable, sleep and breaks shall be taken where there is access to amenities such as toilets, showers and facilities for meals.
- Rests shall be taken in accordance with Table A.1.

**Table A.1 – Rest stops**

In any period of...	A driver must not work for more than a total of	And must have at least...
5 hrs 30 mins	5 hrs 15 mins	15 continuous mins rest
8 hrs	7 hrs 30 mins	30 mins rest, in blocks of 15 continuous mins
11 hrs	10 hrs	60 mins rest, in blocks of 15 continuous mins
24 hrs	12 hrs	7 continuous hrs stationary rest
7 days (168 hrs)	72 hrs	24 continuous hrs stationary rest
14 days (336 hrs)	144 hrs	4 nights rest (includes 2 consecutive nights rest)

Source: Heavy Vehicle National Law Regulation (HVNLR), Heavy Vehicle National Law (Queensland) – Queensland Legislation – Queensland Government

Notes: Stationary rest is rest time that the driver spends out of the heavy vehicle or in an approved sleeper berth of a stationary regulated heavy vehicle.

A night’s rest is 7 hours continuous rest taken between 10pm and 8am or 24 hours continuous stationary rest.

## Emergency response

In the event of an emergency:

- Stop your vehicle immediately and secure it
- Ensure the safety of those around you and yourself
- Dial 000 and seek support from Police, Ambulance or Fire Brigade as required
- Contact the Site Manager and advise of the emergency
- Await further instructions from the Emergency Services, Construction Supervisor or your supervisor.

If a heavy vehicle driver becomes aware of a hazard or a circumstance that the driver considers dangerous, the driver must immediately inform the Construction Supervisor and if necessary, must deal with the hazard.

Report all hazards and incidents to the Construction Supervisor.

## Driver responsibilities and safety

The safety of heavy vehicle drivers and the public is a priority. As a result, drivers of heavy vehicles must be responsible for the following:

- Ensuring that they are fit, not suffering from fatigue, nor under the influence of drugs or alcohol and will cooperate in the undertaking of random drug and alcohol testing if required.
- They are rested and alert prior to and during the time they are driving heavy vehicles.
- Monitor their own performance and take regular breaks and rest times as required by road safety legislation and requirements.
- Inspect their vehicle prior to start up and report any issues before proceeding with work.
- Use the designated routes when servicing the construction sites.
- Inform the Construction Supervisor of any matter that may affect the ability of the driver to undertake the tasks of driving a heavy vehicle.
- Stop driving the heavy vehicle and inform the Construction Supervisor should the driver become aware of any issue that might endanger himself/herself or a member of the public.
- Ensure the load is appropriately covered.
- Ensure the heavy vehicle is appropriate for the load to be carried in it.
- Ensure that all safety equipment fitted to the vehicle works properly.
- Do not operate the vehicle unless the two-way radio attached to the vehicle is working properly.
- Listen carefully and abide by instructions on the two-way radio, particularly advice from the Construction Supervisor.
- Use good road manners and operate the heavy vehicle safely and responsibly while considering the safety of himself/herself and the general public, in particular school children on the designated route.
- Complete all work diaries and timesheets properly and accurately and supply all necessary and appropriate paperwork to the Construction Supervisor if required.
- Ensure they are wearing the appropriate personal and protective equipment, including steel capped safety boots, high visibility clothing/vests, hard hats and hearing protection when exiting the vehicle on Preliminary Works Site 1.
- Understand and abide by all road rules, including speed limits, road signs, use of seatbelts, avoiding taking unnecessary risks, avoiding overhead obstructions, not driving in a convoy and always parking well off the road.

## Complaint resolution and discipline procedure

The following outlines the procedure for when a traffic related complaint is received.

Santos will deal with all complaints in a fair, timely and transparent manner and all complaints will be treated seriously. The complaint will be referred to the responsible manager in accordance with the complaints procedure provided in Section 7 of the Environmental Management Strategy (EMS).

Santos will maintain confidentiality as far as possible and ensure that no one is disadvantaged for making, supporting or providing information about a complaint.



# Appendix B – Tools and checklists for mandatory monitoring activities from TfNSW

## Scope

This Appendix is from Technical Manual TCAWS v6.1 (2022) Appendix E – Inspection checklists and tools and provides a number of checklists that may be used by project teams in relation to inspections. While every attempt has been made to align these checklists with the requirements of this Technical Manual, the checklists are examples only. Completion of these checklists might not necessarily fulfil all of the relevant requirements of this Technical Manual. And thus, pertaining to each work site, it remains the obligation of project teams to ensure all relevant requirements of this Technical Manual have been met regardless of the content of these example checklists.

## TGS verification checklist

TGS Verification must be undertaken after selecting or designing a TGS as a confirmation of appropriateness prior to approval for use. A Prepare work zone traffic management plan (PWZTMP) or Implement Traffic Control Plan (ITCP) qualified person must undertake this verification.

Completed by:				
Name:		Signature:		
Qualification:				
TGS details:				
TMP Reference:		TGS Reference:		
Date:		Review type:	<input type="checkbox"/> Site Inspection	<input type="checkbox"/> Desktop review
Sources used for desktop review				
Site details:				
Street name:		Confirmed posted speed limits:		
Street name:		Confirmed posted speed limits:		
Street name:		Confirmed posted speed limits:		
List unique site-specific Hazards / Risks identified on site <i>e.g. utilities, infrastructure, vegetation, schools,</i>				

## Weekly TTM inspection checklist

Completed by:			
Name:		Signature:	
TMP Reference:		TGS Reference:	
Date:		Inspection type	<input type="checkbox"/> Pre-opening <input type="checkbox"/> Weekly
Desktop review			
<b>Is a copy of the location CTMP and relevant TGS available?</b> <i>If no inspection must not be undertaken until documents are obtained</i>			<input type="checkbox"/> Yes <input type="checkbox"/> No
Details of TMP and TGS:			
<b>Are the location CTMP and relevant TGS approved?</b> <i>If no, work must be stopped until documents are approved</i>			<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:			
Site Inspection			
Inspection completed:	<input type="checkbox"/> During the day <input type="checkbox"/> During the night		
<b>Signs and devices positioned as prescribed and commanding attention?</b> <i>If no provide details and rectify signs</i>			<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:			

<b>Site Inspection</b>		
	<b>Sign sizes as prescribed?</b> <i>If no provide details and rectify signs</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:		
	<b>Signs are mounted level and suitably clear of travel lanes?</b> <i>If no provide details and rectify signs</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:		
	<b>Has temporary delineation been applied as prescribed, with permanent markings obliterated?</b> <i>If no provide details of action required to rectify delineation</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:		
	<b>Are registered trailers i.e. Variable Message Sign (VMS) / light towers; suitably clear of travel lanes and delineated?</b> <i>If no provide details and rectify location</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:		
	<b>Are temporary speed zones operating as prescribed?</b> <i>If no provide details and discuss with work supervisor</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:		
	<b>Are Portable Traffic Control Devices (PTCD) positioned as prescribed in TGS?</b> <i>If no provide details of action required to rectify</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:		



Site Inspection	
<b>Are manual traffic controllers clear of travel lane, have suitable escape route?</b> <i>If no provide details of action required to rectify</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:	
<b>Are site accesses and egresses well defined and safe for work vehicles?</b> <i>If no provide details of action required to rectify</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:	
<b>Termination signs are suitably located? i.e. D downstream of last activity.</b> <i>If no provide details of action required to rectify</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:	

<b>Post site inspection confirmation</b>		
<b>Is worksite layout operating safely as intended?</b> <i>If no provide details and implement controls to rectify</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:		
<b>Has TMP identified and addressed key TTM risks?</b> <i>If no provide details and implement controls to rectify</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:		
<b>Have key TTM risks been addressed on site?</b> <i>If no provide details of additional hazards and controls required</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:		
<b>Have copies of Shift Inspections been sighted as completed as required?</b> <i>If no provide details and discuss with nominated rep completing Shift Inspections</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:		

## Shift / Daily TTM inspection checklist

Shift inspections must be undertaken by a person holding the PWZTMP or ITCP qualification when a TGS is installed, changed or updated, to ensure the TGS is implemented as designed. This includes at a minimum, twice per shift (recommended every 2 hours). This form can also be used for inspecting 'Aftercare' arrangements.

Completed by:					
Name:		Signature:			
TMP Reference:		TGS Reference:			
Date:		Time/s	Inspection 1	Inspection 2	Inspection 3
			00-00	00-00	00-00
Drive through TGS inspection			Inspection 1	Inspection 2	Inspection 3
Have any adjustments been made to the approved TGS?			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
If yes, provide details:	<b>Are changes within tolerances?</b> <i>If no, TGS must be reviewed by a PWZTMP</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<b>Have changes been approved?</b> <i>If no, TGS must be approved</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:					
<b>Have all signs and devices been installed in accordance with approved TGS?</b> <i>If no, provide detail of action taken</i>			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:					
<b>Are PTCD positioned as prescribed in TGS?</b> <i>If no, provide detail of action taken</i>			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Comments or details of action taken:					

Drive through TGS inspection		Inspection 1	Inspection 2	Inspection 3
<b>Are manual traffic controllers clear of travel lane, have suitable escape route?</b> <i>If no, provide detail and reposition manual traffic controllers</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Comments or details of action taken:				
<b>Are sign and devices in good condition, clearly visible to road users?</b> <i>If no, provide detail of action taken</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:				
<b>Are all signs mounted level and suitably clear of travel lanes?</b> <i>If no, provide detail of action taken</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:				
<b>Are conflicting or non-applicable signs covered or removed?</b> <i>If no, provide detail and remove or cover signs</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Comments or details of action taken:				
<b>Is temporary delineation installed as prescribed i.e. straight line forming taper?</b> <i>If no provide details and rectify delineation</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:				

<b>Drive through TGS inspection</b>		<i>Inspection 1</i>	<i>Inspection 2</i>	<i>Inspection 3</i>
<b>Have site conditions changed due to shade, park vehicles, glare etc.</b> <i>If yes provide details and note if action is required</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:				
<b>Are registered trailers i.e. VMS / light towers; suitably clear of travel lanes and delineated?</b> <i>If no provide details and rectify location</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Comments or details of action taken:				
<b>Are temporary speed zones operating as prescribed?</b> <i>If no provide details and discuss with work supervisor</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Comments or details of action taken:				
<b>Are workers on foot / plant clearances been applied / observed?</b> <i>If no provide details and implement controls to rectify</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Comments or details of action taken:				



<b>Post drive through confirmation</b>		<i>Inspection 1</i>	<i>Inspection 2</i>	<i>Inspection 3</i>
<b>Is TGS valid for the site activity and operating safely as intended?</b>  <i>If no provide details and implement controls to rectify</i>		<input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No
Comments or details of action taken:				
<b>Is TGS is appropriate for the current traffic conditions?</b>  <i>If no provide details and implement controls to rectify</i>		<input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No
Comments or details of action taken:				
<b>Have potential hazards identified in TGS been addressed? i.e. end- of-queue management</b>  <i>If no provide details of additional hazards and controls required</i>		<input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No
Comments or details of action taken:				

## Post-completion inspection checklist

Completed by:			
Name:		Road name/Staging Plan number:	
Signature:		Date / time:	
ITCP or PWZTMP card number			
Drive through post completed inspection			
Item		Comments / Action	
Have all work activities been completed?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Has all plant and equipment been removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Have all TTM signs and devices been removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Has all TTM linemarking been obliterated?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Have existing permanent speed limits been reinstated?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Have all TTM site hazards been removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Other	<input type="checkbox"/> Yes <input type="checkbox"/> No		

<b>Desktop post completion inspection</b>		
Have all TGSs for completed tasks been retained?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Have all TMP required documents been placed in relevant folders?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Has TMP/TGS designer requested addition information post TTM removal?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Is the road safe for opening to road users?	<input type="checkbox"/> Yes <input type="checkbox"/> No	

## Appendix C – Dilapidation Protocols

Dilapidation surveys consist of visual inspection of a road network undertaken to assess the condition of the pavements and associated infrastructure across the area. The inspections are to be undertaken generally in accordance with the Austroads publication Guide to Pavement Technology Part 6 Unsealed Pavements (Austroads Guide). The Guide provides a common reference system for describing the condition of road pavements by an observer, relying on visual observation and lists the various functional and structural modes of failure that can occur in wearing surfaces and pavements.

Dilapidation surveys will be undertaken in accordance with the specifications requested by Liverpool Plains Shire Council. All pre and post-dilapidation reports will be provided to Liverpool Plains Shire Council following their finalisation to determine any remediation works that may be required as a result of damage caused by construction and use of Preliminary Works Site 1.

The extent and timing requirements for dilapidation surveys to be undertaken are summarised in Table C.1 below. The final requirements for the dilapidation surveys would be defined in consultation with Liverpool Plains Shire Council, as the relevant Roads Authority, prior to the commencement of the surveys.

The aim of the dilapidation surveys is to establish the increase in traffic load and the change in pavement condition due to construction-related traffic. The dilapidation surveys will involve:

- Undertaking a visual condition assessment by a suitably qualified person prior to the commencement of Stage 1 works, and within one month of the completion of use of Preliminary Works Site 1, via a vehicle using video logs which is acceptable under the Austroads Guide and industry practice.
- The road condition will be assessed using defined characteristics for each individual defect to indicate the severity of the pavement defect and given a rating between 1 and 5 for the overall condition.
- A pavement engineer would review the video logs (both before and after) construction to:
  - Identify evidence of dilapidation.
  - Assess if the dilapidation could be attributed to the construction related vehicles.
- Each defect would be recorded with reference to date/time, description, location, quantities, photographs and general comments. Sufficient location information for each defect would be recorded so that the area of concern could easily be found in the event of a post-construction survey.
- Results will be exported into a Microsoft Excel spreadsheet (or other agreed format) with hyperlinked photographs. Inspection data can then be validated and checked for accuracy and integrity.
- Measures required to repair the dilapidation of the road and the indicative costs of these repairs will be prepared and presented to Liverpool Plains Shire Council for discussion. Additional investigation measures to identify the causes of the dilapidation will also be undertaken (if required).

**Table C.1 – Dilapidation Survey Timing and Extent**

Objective	Applicable Roads	Timing
Santos will prepare a pre-dilapidation survey of the road transport routes	Nicholsons Lagoon Road from the unsealed part of the road to the proposed site access	Prior to construction
Santos will prepare a post-dilapidation survey of the road transport routes		Within one month of the completion of use of Preliminary Works Site 1, or other timeframe agreed by the applicable road authority
Santos will rehabilitate and/or make good any construction related damage identified in the post-dilapidation survey identified above	Where identified in the post-dilapidation survey	Within two months of completing the post-dilapidation survey, or other timeframe agreed by the applicable road authority