Jemena

Port Kembla Pipeline Project

CONSTRUCTION TRAFFIC MANAGEMENT PLAN

Document No.: GAS-599-PA-CN-002 | Revision 3

Rev	Description	By	Checked	QA	Nacap Approved	Date
3	Issued for Use	BRO	BPH	GKN	JHE	24-NOV-2022
2	Issued for Use	BRO	BPH	NFU	JHE	10-AUG-2022
1	Issued for Use	ZFR	BPH	NFU	JHE	30-MAY-2022

REVISION HISTORY

This table describes the primary reason for the production of each new revision after Rev 0

Date	Rev	Reason for change
30-MAY-2022	**1**	**Implementation of Jemena comments in returned Rev 0 – CODE 2**
10-AUG-2022	**2**	**Implementation of Jemena and AIE comments for Approvals consultation**
24-NOV-2022	3	**Revised with comments after review from DPE**

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LIST OF EMERGENCY AND KEY CONTACTS

Table 1 – Emergency and Key Contacts

Organisation/Position	Contact Details
Environment Line (EPA Pollution Hotline)	131 555 The Environment Line handles general inquiries about environmental issues and takes reports of pollution for which the EPA has regulatory responsibilities. Environment Line is a one-stop pollution and environmental incident reporting service provided by Environment and Heritage Group (EEG) and EPA.
Fire and Rescue NSW	000 (for pollution incidents that present an immediate threat to human health or property) 1300 729 579 (for pollution incidents that do not present an immediate threat to human health or property)
Wollongong City Council	General Enquiries (02) 4227 7111
NSW Ports	General Enquiries 1300 922 524
Port Authority NSW	24-hour community enquiries and complaints line (02) 9296 4962 enquiries@portauthoritynsw.com.au
Port Kembla Coal Terminal	Administration (02) 4228 0288
BlueScope	Laura Davis Laura.davis@bluescopesteel.com +61 467728547
Transport for NSW	General Enquiries (02) 8202 2200
GrainCorp	Dylan Clarkson +61 409 739 697 dclarkson@graincorp.com.au

Organisation/Position	Contact Details
AIE	Andrew Petch +61 401 175 917 Andrew.petch@ausindenergy.com
Jemena	Community Feedback - 1300 081 989 Justin Anderson 0435 092 889 justin.anderson@zinfra.com.au
Nacap	Jason Heard Nacap Project Manager j.heard@nacap.com.au +61 488 087 393

1 INTRODUCTION

1.1 Background

Australian Industrial Energy (AIE) have approval to build a new Liquid Natural Gas (LNG) import terminal at the Port Kembla inner harbour with the aim to sell gas to the east coast market. The gas is planned to be processed on a Floating Storage and Regasification Unit (FSRU) and imported into the existing gas networks through a new pipeline that will connect the AIE Port Kembla Gas Terminal (PKGT) with the Jemena owned gas transmission network via the Eastern Gas Pipeline (EGP).

In February 2021, Jemena and AIE entered into a Project Development Agreement to enable Jemena to build, own and operate a segment of the pipeline that is approved as part of AIE's SSI 9471 Infrastructure Approval for the PKGT, and build and operate the remainder of the pipeline approved under the same Infrastructure Approval SSI 9471.

The Port Kembla Pipeline Project (PKPP) involves the construction of an approximately 12.1 kilometres long, 18" (DN450) buried steel gas transmission pipeline and a new End of Line (EOL) facility in the vicinity of the Jemena's existing Kembla Grange Metering Station. The proposed PKPP Project is comprised of three sections (refer to Figure 1):

- Segment 1.1 – 4.3 km pipeline from PKGT to Springhill Road to be built by Jemena; owned by AIE with some services provided in operation by Jemena.
- Segment 1.2 – 2.2 km pipeline from Spring Hill Road to Five Islands Road, and
- Segment 2 – 5.6 km pipeline from Five Islands Road to KGMS which includes the Kembla Grange Tie- in Facility to be built, owned and operated by Jemena.

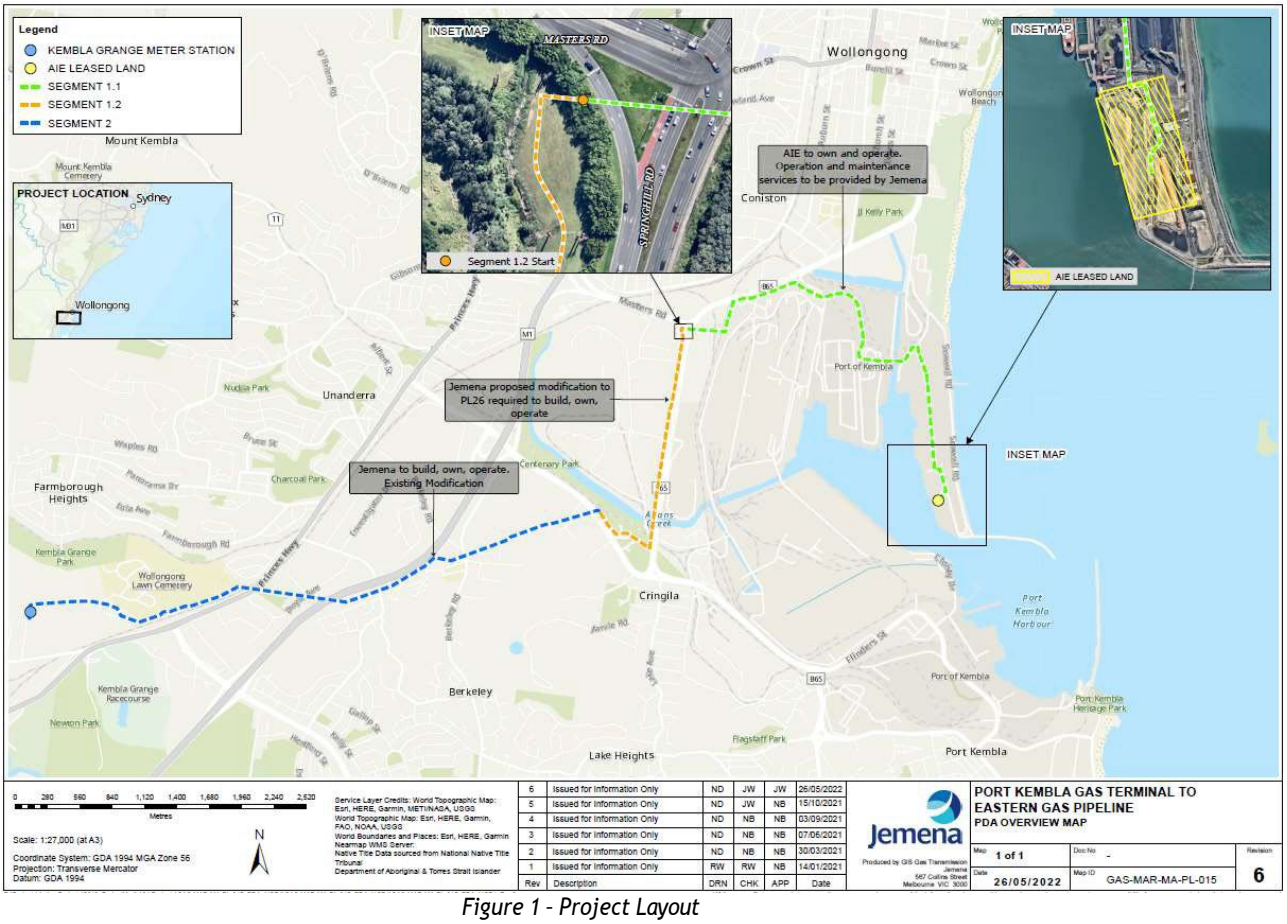


Figure 1 - Project Layout

The project is approved by the Department of Planning and Environment (DPE) under a number of Infrastructure Approvals:

- SSI-9471 Port Kembla Gas Terminal Infrastructure Approval under Section 5.19 of the Environmental Planning and Assessment Act 1979 which incorporates Segment 1.1 and 1.2.
- SSI-9973 Eastern Gas Pipeline Modification 1 - Port Kembla Lateral Pipeline Infrastructure Approval under section 5.25 of the Environmental Planning and Assessment Act 1979 pertains to Segment 2.
- SSI-9973 Eastern Gas Pipeline Modification 2 - Transfer of Pipeline Segment to transfer Segment 1.2 from AIE SSI-9471 PKGT Infrastructure Approval.
- Proposed Modification to the AIE SSI-9471 Port Kembla Gas Terminal to remove segment 1.2 from the Infrastructure Approval in Q2 2022.
- Staging Plan approved by DPE for SSI-9471
    - Stage 1: Early Enabling Works commenced in May 2021
    - Stage 2a: Marine Berth Construction – Land Based commenced January 2022
    - Stage 2b: Marine Berth Construction and Dredging – Land and Marine based commenced March 2022, and
    - Stage 3: Pipeline installation including ties ins, proposed to commence in December 2022.
- Staging Plan approved by DPE for SSI-9973
    - Stage 1: Pipeline installation, and
    - Stage 2: Construction of the tie in facilities including Kembla Grange Metering Station (KGMS).

1.2 Purpose and Scope

This Traffic Management Plan (TMP) has been prepared to ensure construction activities are carried out in accordance with the Conditions of Approval (CoA), relevant regulatory requirements, standards, procedures and current best practice to ensure that all reasonable and practical measures are implemented to minimise the potential for traffic related impacts.

This TMP adopts an integrated approach, considering and identifying management measures overarching the sequencing of construction related activities. All works are to be implemented in accordance with the management measures and strategies contained within this plan.

This TMP has been prepared to satisfy the requirements of both SSI 9471 and SSI 9973, the Project EIS and subsequent modification reports to include the staging of works as described above in Section 1.1 and as presented in the table below. This TMP applies to the Construction phase of the works only and in accordance with the CoA will be implemented during construction.

Table 2 - TMP scope relevant to SS1-9471 and SSI-9973

Infrastructure Approval	Post Consent Stage	Description of Works	Segment of Works As detailed in Sect 1.4 and Figure 1
SSI-9471	Stage 2a	Port Kembla Start of Line Facility on PKGT site	Segment 1.1
SSI-9471	Stage 2a	Pipeline construction on the PKGT site	Segment 1.1
SSI-9471	Stage 3	Pipeline construction from PKGT to KGMS	Segment 1.1
SSI-9973	Stage 1		Segment 1.2
			Segment 2

This applies to construction work in all areas that members of the public (including motorists, motorcyclists, pedestrians, and cyclists) could reasonably expect to be considered a thoroughfare, as well as in private land particularly within Segment 1.1 and 1.2 (including but not limited to NSW Ports / BlueScope / Port Kembla Coal Terminal etc.).

It has application in the following circumstances:

- Where Nacap is self-performing the construction work as Principal Contractor
- Where a subcontractor is performing construction work on behalf of Nacap as Principal Contractor

This procedure should be used for guidance as a minimum standard where Nacap is performing construction work for another principal contractor and needs to engage a Traffic Management Contractor to prepare and implement Traffic Management Plans to support its scope of work.

1.3 References

The following are principal documents referenced in this document:

Table 3 - Reference Documents

Document No.	Title of Document
GAS-554-AC-PM-001	SSI 9471 - Port Kembla Gas Terminal - Infrastructure Approval
GAS-556-AC-PM-001	SSI 9973 Modification 1 - Port Kembla Lateral Looping Pipeline – Infrastructure Approval
GAS-556-SP-PL-007	Construction Specification
GAS-551-SW-PL-001	Pipeline Construction Scope of Work
GAS-599-HSE-004	Environmental Management Plan
GAS-599-PA-RA-001	Joint Post-Approval Strategy - AIE's Port Kembla Gas Terminal to Jemena's Eastern Gas Pipeline
GAS-599-RP-RA-007	Eastern Gas Pipeline - Port Kembla Lateral Looping Modification Report
GAS-599-RP-RA-008	Eastern Gas Pipeline Modification 2 - Modification Report
GAS-556-RP-RA-001	Port Kembla Pipeline Project - Traffic Study
GAS-599-PR-HSE-008	Safe Driving & Light Vehicle Management Procedure
3905-HSE-010-3	Chain of Responsibility
-	Port Kembla Gas Terminal Environmental Impact Statement

1.4 Principal Contractor Details

Table 4 - Principal Contract Details

Nacap Details	
Business name:	Nacap Pty Ltd
Address:	Ground Floor, 599 Doncaster Road, Doncaster Victoria 3108
ABN:	33 006 306 994
Main phone number:	03 8848 1888
Contact person:	Jason Heard Nacap Project Manager
Contact mobile:	+61 488 087 393
Contact email:	j.heard@nacap.com.au

1.5 Definitions and Acronyms

Table 5 – Definitions and Acronyms

Term	Meaning
AIE	Australian Industrial Energy
AQMP	Air Quality Management Plan
CEMP	Construction Environmental Management Plan
CoA	Conditions of Approval
CROW	Construction Right Of Way
DN	Diameter Nominal
DPE	Department of Planning and Environment
EA	Environmental Assessment
ECI	Early Contractor Involvement
EGP	Eastern Gas Pipeline
EIS	Environmental Impact Statement
EOL	End of Line
EPA	Environment Protection Agency
EP&A	Environmental Planning and Assessment Act 1997
ERP	Emergency Response Plan
FSRU	Floating Storage Regasification Unit
HRCW	High Risk Construction Work
KGMS	Kembla Grange Meter Station
LNG	Liquefied Natural Gas
NMP	Noise Management Plan
PKGT	Port Kembla Gas Terminal
PKPP	Port Kembla Pipeline Project
PPE	Personal Protective Equipment
Road Manager	the authority from whom a principal contractor must obtain approval for a TMP to be implemented and to work on a road or in a road reserve
ROL	Road Occupancy Licence
SSI	State Significant Infrastructure
SWMP	Soil and Water Management Plan
SWMS	Safe Work Method Statement
Traffic	Includes motorists, light rail on / in road reserves, motorcyclists, pedestrians, and cyclists
Traffic Guidance Scheme (TGS)	Arrangement of temporary traffic control devices to warn traffic and guide it around, through or past a worksite or temporary hazard; some states / territories may refer to this as a traffic control plan
Traffic Controller	Refer to Section 4.4.4 of this TMP
Traffic Management Contractor	Refer to Section 4.4.1 of this TMP
Traffic Management Designer	refer to Section 4.4.2 of this TMP
Traffic Management Implementer	refer to Section 4.4.3 of this TMP
Traffic Management Plan (TMP)	Documentation describing all essential traffic management matters associated with roadworks or works on roads, including risk assessment, traffic demand and accommodation, TGS, and provision for vulnerable road users (e.g. pedestrians / cyclists / motorcyclists) and special vehicles such as buses, trams or over-dimensional vehicles

TfNSW	Transport for NSW (formally Roads Maritime Services (RMS))
WCC	Wollongong City Council
WHS	Work Health and Safety – has the same meaning as occupational health and safety (OHS)

1.6 Environmental Management System Overview

The environmental management system overview is described in Section 4.1 of the Construction Environmental Management Plan (CEMP) (GAS-599-PA-EV-001). This TMP used together with the CEMP, and subordinate project documents, procedures, resources, and practices will inform and guide Nacap personnel and subcontractors to ensure that all reasonable and practical measures are taken to manage the environmental risks for the Project.

1.7 CEMP Structure and relationship with sub plans

The CEMP comprises three sections:

- PART A: Provides background information and the overarching systems approach to environmental management and mitigation controls for the project
- PART B: Comprising Appendices in support of PART A, and
- PART C: Comprising the required series of environmental management sub-plans outlined in the CoA including:

(a) Noise Management Plan (GAS-599-PA-EV-004)

(b) Air Quality Management Plan (GAS-599-PA-EV-005)

(c) Biodiversity Management Plan (GAS-599-PA-EV-006)

(d) Soil and Water Management Plan (GAS-599-PA-EV-007)

(h) Traffic Management Plan (GAS-599-PA-CN-002) (this plan), and

(i) Waste Management Plan (GAS-599-PA-EV-008).

1.8 Consultation

Consultation on this TMP is required to be undertaken with the following stakeholders:

- NSW EPA
- Transport for NSW (TfNSW)
- Wollongong City Council, and
- NSW Ports.

Comments and feedback received during consultation has been incorporated into the Plan where relevant before being submitted to the DPE for approval.

Details of the Consultation associated with this Plan will be presented in Appendix A.

1.9 Objectives and Targets

The objectives and targets for the PKPP Project to be undertaken in relation to the Traffic Management are listed in Table 6 Objectives and Targets.

Table 6 - Objectives and Targets

Objective	Target

Network connectivity, safety and efficiency of the transport system in the vicinity of the project are managed to minimise impacts. The safety of transport system customers is maintained. Impacts on network capacity and the level of service are effectively managed. Works are compatible with existing infrastructure and transport corridors.	The performance of the local traffic network would not be significantly impacted during construction
	Access to properties will generally be maintained during construction

1.10 Certification and Approval

This TMP is required to be submitted for approval by the Secretary of the DPE prior to commencement of construction or as otherwise agreed by the Secretary.

1.11 Distribution

A controlled hard copy of this TMP and supporting documentation will be maintained and reside at the Project construction site office. Registered copies of this TMP and supporting documentation will be distributed to the Project team, the DPE, all relevant personnel and interested third parties as required. It will also be available to view on the Project website(s)

https://jemena.com.au/pipelines/eastern-gas-pipeline

https://ausindenergy.com/

2 ENVIRONMENTAL PLANNING AND GOVERNANCE

2.1 Legislation and Regulatory Requirements

The following legislation and regulatory requirements provide the primary context for traffic management in NSW:

- Work Health and Safety Regulation 2017
- An approved and valid Road Occupancy Licence (ROL);
- Australian Road Rules form the basis for state and territory road rules; and
- Roads Act 1993 (NSW) sets out rights along a public road, establishes procedures for a public road and provides the classification of roads.
- Heavy Vehicle National Act 2013 and Regulation 2013 (NSW)
- Heavy Vehicle (Adoption of National Law) Act 2013 (NSW)
- Heavy Vehicle (Adoption of National Law) Regulation 2013 (NSW)
- Dangerous Goods (Road and Rail Transport) Act 2008,
- Road and Rail Transport (Dangerous Goods) (Road) Regulation 1998; and
- Australian Code for the Transport of Dangerous Goods by Road and Rail (National Transport Commission 2008).
- Dangerous Goods (Road and Rail Transport) Regulation 2014.
- Australian Code for the Transport of Dangerous Goods by Road and Rail Edition 7.7 (National Transport Commission 2020).

Legislation relevant to traffic management also includes the Environmental Planning and Assessment Act 1979 (EP&A Act), under which the project approvals are granted.

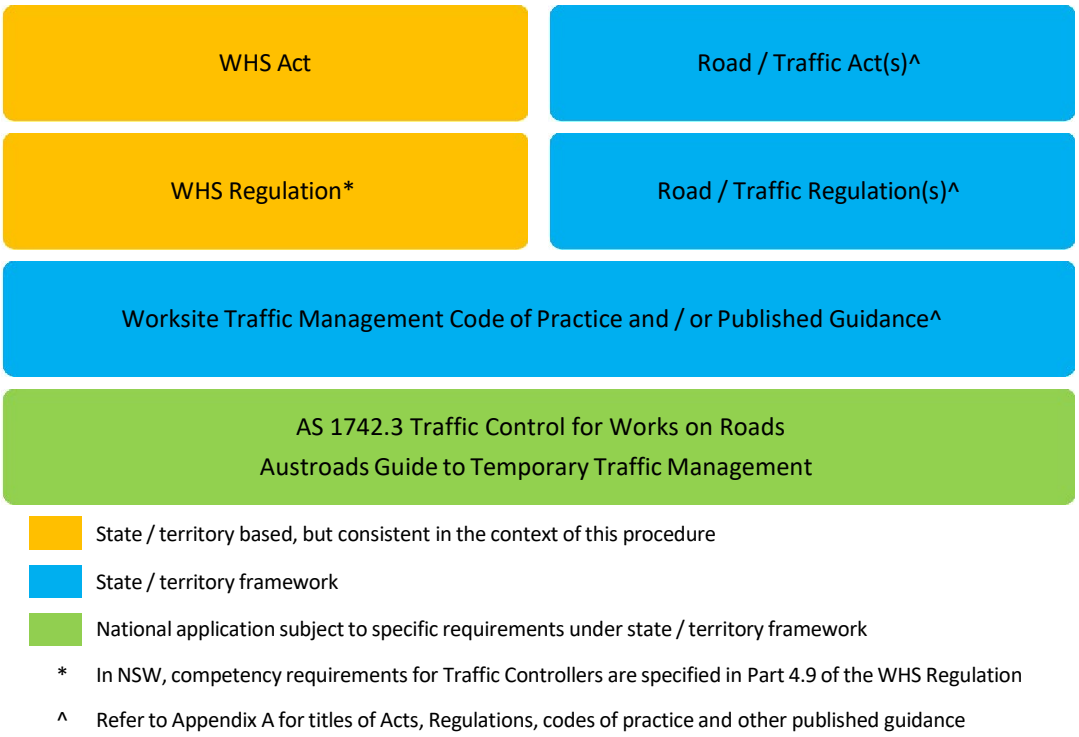
2.2 Guidelines and Codes of Practice

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

- AS 1742.3 Traffic Control for Works on Roads
- AUSTROADS Guide to Temporary Traffic Management;
- Traffic Control at Worksites Technical Manual Issue 6.1 (TfNSW), and
- Road Occupancy Manual (TfNSW)

Figure 2 below illustrates the hierarchical and complementary relationships between legislation, codes of practice, published guidance, AS 1742.3 and Austroads Guide irrespective of the specific framework in each state and territory.

Figure 2 - Hierarchical and complementary relationships between legislation and codes of practice



2.3 Conditions of Approval (CoA) requirements for TMP

This Plan has been prepared to comply with the Joint Post Approval Strategy for SSI-9471 (GAS-554-AC-PM-001) and SSI-9973 (GAS-556-AC-PM-001) and associated consent documents and supporting information and the consolidated conditions of approval as listed in Table 7 Conditions of Approval requirements TMP.

Table 7 - Conditions of Approval requirements TMP

CoA	Description of Works	Refer to Section within This Plan
SSI 9471 - Port Kembla Gas Terminal – Stage 2a and Stage 3 Works		
Schedule 3 15	Prior to the commencement of construction, unless the Planning Secretary agrees otherwise, the Proponent must prepare a Construction Traffic Management Plan for the development to the satisfaction of the Planning Secretary. This plan must: (a) be prepared in consultation with RMS, NSW Ports and Council; (b) include details of the transport route to be used for all construction traffic; (c) include details of the measures that would be implemented to minimise traffic safety issues and disruption to local users of the transport route/s during construction works, including: • facilitating the use of barges to transfer spoil to the disposal site; • temporary traffic controls, including detours and signage; • ensure loaded vehicles entering or leaving the site have their loads covered or contained; • minimise dirt being tracked on the public road network from development-related traffic; (d) includes a driver's code of conduct that addresses: • travelling speeds; • driver fatigue; • procedures to ensure that drivers adhere to the designated transport route/s; and	This Plan Sect 4.14 Sect 4.15 Appendix C Appendix D
	• procedures to ensure that drivers implement safe driving practices;	
Schedule 3 16	The Proponent must implement the approved Construction Traffic Management Plan for the development.	This Plan
SSI 9973 Modification 2 - Port Kembla Lateral Looping Pipeline		
B5	The Proponent must: (a) minimise traffic and pedestrian safety issues and disruption to local users of the transport route/s during construction; (b) maintain all footpaths, roads and utility-related infrastructure in a safe and serviceable condition; and (c) minimise the traffic noise impacts from the construction of the Port Kembla Looping Pipeline.	Sect 4.8 Sect 4.10 Sect 4.11 Sect 4.12 Sect 4.15
B5A	Prior to commencing works within the state classified road reserve, the Proponent must apply for, and obtain, consent from TfNSW for all works in the classified road reserve under Section 138 of the Roads Act 1993. *Notes:* • The works must demonstrate compliance with TfNSW Technical Directions Trenchless Excavation within the Easement of Roads and Maritime Infrastructure and Excavation adjacent to Transport for NSW Infrastructure. • A Road Occupancy Licence from TfNSW is also required prior to commencing works on a State road or any other works that impact a travel lane of a State road or impact the operation of traffic signals of any road. • The design and construction of the pipeline under Five Islands Road and any other works within a classified road is to be prepared generally in accordance with TfNSW and to the satisfaction of TfNSW.	Sect 4.7

CoA	Description of Works	Refer to Section within This Plan
C1	Prior to commencing construction, the Applicant must prepare a Construction Environmental Management Plan (CEMP) for the Port Kembla Lateral Looping Pipeline to the satisfaction of the Secretary. This plan must: (a) be prepared in consultation with Council, Sydney Trains and TfNSW; (b) identify the statutory approvals that apply to the construction and commissioning of the Port Kembla Lateral Looping Pipeline; (c) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the Port Kembla Lateral Looping Pipeline; (d) describe the procedures that would be implemented to: • keep the local community and relevant agencies informed about the construction and commissioning of the Port Kembla Lateral Looping Pipeline; • receive, handle, respond to, and record complaints; • resolve any disputes that may arise; • respond to any non-compliance; and • respond to emergencies; and (e) include: > the following sub-plans: > noise, including an out-of-hours work protocol; > air quality; > biodiversity;	This Plan
	> soil and water management; > water management; > **traffic management; and** > waste > a clear plan depicting monitoring to be carried out in relation to the Port Kembla Lateral Looping Pipeline	
C4	The Traffic Management CEMP sub-plan must: (a) describe the measures that would be implemented to comply with the transport management requirements in condition B5; (b) include details of the transport route to be used for all construction and operational traffic; (c) include details of the likely peak hour vehicle movements including detail of vehicle types and the distribution of the movements on the road network; (d) include a swept path analysis of entry and exit at all construction access points; (e) include sight distance plans for all construction access points; (f) include details of any oversize and over-mass vehicles anticipated for the construction, operation and decommissioning of the Port Kembla Lateral Looping Pipeline; and (g) (g) include a Driver Code of Conduct.	Section 3.2 Appendix B Section 4.16

2.4 Environmental Management Measures

Environmental Management Measures (EMM) derived from the Project Environmental Assessment relevant to this TMP Plan are listed in Table 8.

Table 8 - Environmental Management Measure (EMM) requirements TMP

EMM	Management Measure Category	Commitment	Refer to Section within This Plan
SSI 9471 - Port Kembla Gas Terminal – Stage 2a and Stage 3 Works			
T1	Traffic Management	A Construction Traffic Management Plan be prepared prior to the commencement of works with site induction for construction personnel being undertaken to outline the requirements of the CTMP. The aim of the CTMP is to maintain the safety of all workers and road users within the vicinity site including but not limited to: • site access routes • construction parking arrangement • traffic management • pedestrian and bicycle rider management roadside hazards.	This Plan
T2	Traffic Volumes	A traffic control plan would be developed in accordance with the NSW Roads and Maritime Services Traffic control at work sites and AS1742.3 – Traffic control devices for works on roads.	Appendix C
T3	Traffic Volumes	Traffic management planning would seek to minimise traffic movements where possible during the morning and afternoon peak hours.	Appendix C
NV2	Airborne Noise from Transport	Plan traffic flow, parking and loading/unloading areas to minimise reversing movements within the site.	Appendix C Sect 4,11 Sect 4.15
AQ4	Vehicle Emissions	Control on-site traffic by designating specific routes for haulage and access and limiting vehicle speeds to below 25 km/hr.	Appendix C Sect 4.14 Sect 4.15
SSI 9973 Modification 2 - Port Kembla Lateral Looping Pipeline			
T4	Traffic	Construction workers would be encouraged to car pool or utilise public transport where practicable.	Appendix C Sect 4.12

3 EXISTING ENVIRONMENT

3.1 Site Description and Existing Land use

As stated in Section 1.1 the pipeline will be constructed in three discrete segments:

- Segment 1.1 – 4.3 km section from PKGT to Springhill Road.
- Segment 1.2 – 2.2 km pipeline from Spring Hill Road to Five Islands Road, and
- Segment 2 – 5.6 km pipeline from Five Islands Road to Kembla Grange Metering Station.

The zoned land use across the pipeline alignment includes special use and industrial use at Port Kembla and a mix of primarily residential and commercial uses at the surrounding localities. Major infrastructure in the region of Port Kembla includes the M1 Princes Highway, which is a major state and regional highway connecting Sydney and Wollongong and regional areas further south. Princes Highway provides access to Port Kembla through turnoffs at Masters Road, Five Islands Road and Northcliffe Drive and is broadly utilised including by heavy vehicles from the port.

Springhill Road is one of the main vehicular traffic routes connecting Port Kembla to regional road network including the M1 Princes Highway. Five Islands Road also runs parallel to the Port Kembla branch of the South Coast railway. Similarly, Five Islands Road is a major six-lane road and run parallel to the Unanderra main railway line.

The South Coast railway line runs along the periphery of Port Kembla including the stations Port Kembla, Port Kembla North, Cringila and Kembla Grange. The rail line services commuters and is also used to transport bulk solid goods like coal, grain, copper, and steel from Port Kembla. The environmental features of Port Kembla and the surrounding region are limited given the extensive industrial, commercial, and residential development. Waterways in the region include the Gurungaty Waterway, Allans Creek, American Creek and Byarong Creek**.**

3.2 Construction Traffic Impacts

The Project Environmental Assessment considered traffic impacts associated with construction of the pipeline and associated works.

The assessment considered observed road network AM and PM peak hour traffic volumes with the expected peak construction traffic volumes and identified that:

- During the AM peak, the network peak hour was observed to be between 8.00 am and 9:00 am whereas construction traffic peak hour is expected to be between 6.45 am and 7.45 am; and
- During the PM peak, the network peak hour was observed to be between 3.30 pm and 4.30 pm, whereas the construction traffic peak hour would be between 4.45 pm – 5.45 pm.

The assessment indicated that the majority of key roads in the vicinity of the project are expected to operate well within the acceptable capacity for weekday morning and evening peak periods.

Our vehicle movements within the networks are as follows:

- Light Vehicles – 0600 to 0700 hrs for morning peak and 1700 to 1800 hrs for evening peak. The number of vehicles are expected to be between 15 to 40 on average and not to exceed 70 for the peak of construction (March) and these will be spread across the whole 12.1km alignment.
- Heavy Vehicles - 0600 to 0900 for morning peak and 1400 to 1600 hrs for evening peak. The number of vehicles would average between 10 to 15 on average and not exceed 25 at the peak of construction and these will be spread across the whole alignment.

It is not anticipated that the number of vehicles will impact the local network.

4 TRAFFIC MANAGEMENT

4.1 Roles and Responsibilities

An Organisation Chart will be developed prior to the commencement of construction. Refer to Appendix A of Project Management Plan (GAS-599-PA-PM-015) for Organisation Chart for ECI Phase. Position descriptions describe the responsibilities specific to positions on the Project.

Table below provides a summary of Nacap traffic management responsibilities for relevant roles.

Table 9 – Nacap Traffic Management Responsibilities

Role	Responsibilities
Project Manager	> Provide the necessary resources needed for Nacap to comply with this TMP.
Construction Manager or Superintendent	> Coordinate the worksite hazard identification and risk assessment (including consultation with / participation by all affected workers, the Traffic Management Designer and directly affected stakeholders).

WHS Manager	> Ensure TMPs (including TGS) are implemented effectively, reviewed upon the identification of new hazards or following incidents and near misses > Ensure daily monitoring and damage reparation of traffic control devices is conducted > Ensure the Traffic Management Contractor is performing the monitoring and review activities specified in the TMP (refer Appendix B)
Subcontract Sponsors	> Identify all Road Manager requirements > Coordinate the process of developing and submitting subcontractors' response to the Road Manager requirements including but not limited to Traffic Management Plans and the like for approval by the Road Manager > Ensure subcontractors' SWMS and any other Road Manager requirements are reviewed and approved by Nacap prior to work commencing

4.2 Hazard Identification, Risk Assessment and Control

Hazards will be identified and risk assessed as an input to design of the TMP and development of any other requirements as specified by the Road Manager including permits and approvals. These hazards and subsequent controls will be used in the preparation of the SWMS against the relevant hazards and risks.

The hazard identification and risk assessment for the TMP and any other Road Manager requirements will consider risks to the public due to the construction work as well as risk to construction workers due to traffic.

If legislation or code of practice specifies elements to be included in risk assessment they must be addressed. Similarly, if legislation or code of practice specifies that a risk must be controlled in a specified way, it must be controlled that way.

The hierarchy of control must be applied to manage risks associated with working on roads and in road reserves:

1. Elimination:
    - To the extent reasonably practicable, redesign work so that work on the road or in the road reserve is not required. For example, if reasonably practicable, install new pipes and cables under a road using trenchless installation techniques
2. Substitution, engineering, and isolation control:
    - Substitution:
        - to the extent reasonably practicable:
        - design the construction process to reduce the extent and / or duration of works required on the road or in the road reserve
        - works should be scheduled for the least busy traffic periods (this should be identified as part of the traffic survey which is generally required for design of a TMP) so long as they don't introduce other risks (e.g. working at night may result in less traffic but may introduce other unacceptable risk)
    - Engineering: to the extent reasonably practicable:
        - install physical barriers to separate road users from the work site, such as water filled or concrete barriers compliant to AS 3845 to protect workers from vehicular traffic and para-

webbing or fencing to prevent pedestrians / cyclists encroaching the work area (such engineering controls identified via the risk assessment process must be included in the TMP)

- design the work in a way that reduces risk to the public (e.g. seek to complete works in a single shift to eliminate the risk of expose to hazards after hours)

> Isolation:

- the TGS must be designed in such a way that road users will be directed away from workers using one or more of the following means (listed in order of effectiveness and ranked lowest to highest in terms of residual risk):
  - detours and / or road closures
  - contra flow and / or lane closures
  - Traffic Controllers

3. Administrative control:

> Any approval or permit requirement of the Road Manager

> An approved TMP (including TGS and after-hours arrangements) and SWMS are mandatory administrative controls when working on a road, in a road reserve, or any other public thoroughfare

> Monitoring effectiveness of a TMP (including TGS) and conducting inspections to ensure it is implemented correctly is a mandatory administrative control

> Monitoring traffic control devices for damage, theft and misplacement, and restoring them in accordance with the TGS, is a mandatory administrative control

4. Personal Protective Equipment

> In addition to standard Project PPE (as specified in the Project Safety Management Plan), retroreflective material is required on clothing worn by workers working on roads and in road reserves in low light / dark conditions. The extent and type of retroreflective material must be specified in the TMP.

4.3 Construction Site Traffic Management

Nacap as the Principal Contractor is responsible for coordination of work health and safety for the works. The Principal Contractor, and any other person with capacity to control activity at a construction worksite (e.g. a subcontractor), have an overlapping duty to identify all reasonably foreseeable hazards, risk assess those hazards, and apply controls to manage the risks associated with those hazards.

Hazard identification, risk assessment and control must also consider the potential exposure of members of the public to worksite hazards and potential exposure of workers to hazards originating from outside the workplace, and application of appropriate controls to manage the risk associated with all of those hazards.

Any works on roads, road reserves, or in any other public areas that members of the public could reasonably expect to be considered a traffic thoroughfare, are considered high risk construction works (HRCW) under WHS Regulation.

Construction work on roads and in road reserves and publicly accessible areas will involve excavation work and the use of powered mobile plant, both of which are also considered HRCW.

Nacap will ensure that a SWMS is prepared for HRCW before it commences and will take all reasonable steps to obtain a SWMS from any subcontractor that intends to perform HRCW before the subcontractor commences the HRCW.

Section 2.1 and 2.2 provide the framework for road management legislation, codes of practice and published guidance for worksite traffic management that both complement and support the WHS Act and WHS Regulations by specifying requirements for works on roads and in road reserves, including:

- Road and road reserve worksite risk assessments, including that they be prepared by persons with specific training / competency
- Preparation and content of TMPs (including TGSs), including that they be prepared by persons with specific training / competency
- TMP and TGS approvals by TfNSW and Wollongong City Council (WCC) as the designated Road Manager
- Implementation of TMPs and TGSs, including that they be implemented by persons with specific training / competency
- Competency requirements for Traffic Management Designers, Traffic Management Implementers and Traffic Controllers

AS 1742.3, read in conjunction with Austroads Guide to Temporary Traffic Management ("Austroads Guide"), shall be deemed the "'manual" for planning and implementing worksite traffic management on the project unless legislation or code of practice specifies a departure from these publications or a higher requirement.

4.4 Construction Traffic Management Parties

Nacap, as Principal Contractor, shall seek and incorporate all Road Manager requirements relevant to the hierarchy of road use in the development and securing of all Road Manager approvals unless PKPP already has an agreement with the Road Manager to obtain them on Nacap's behalf. Where such an agreement exists between PKPP and Road Manager, the TMPs and any other subsequent requirements shall be submitted to PKPP.

4.4.2 Traffic Management Contractor:

An incorporated entity that engages Traffic Management Designers and Traffic Management Implementers directly (via employment or contract for services)

- Shall be engaged by Nacap if the construction is work self-performed or by the relevant subcontractor who is performing the construction work

4.4.2 Traffic Management Designers:

- Tasked with development of TMPs (including TGSs) on behalf of the contractor performing the construction work (i.e. Nacap or subcontractor as applicable)
- Must be involved in the worksite risk assessment
- Must ensure that TMPs (including TGSs) are prepared in accordance with the applicable legislation / code of practice / published guidance for the relevant state / territory, AS 1742.3 and Austroads Guide
- Must possess the applicable competency, or have completed applicable training, as specified by the relevant state / territory legislation, code of practice or published guidance for design of a TMP

4.4.3 Traffic Management Implementers:

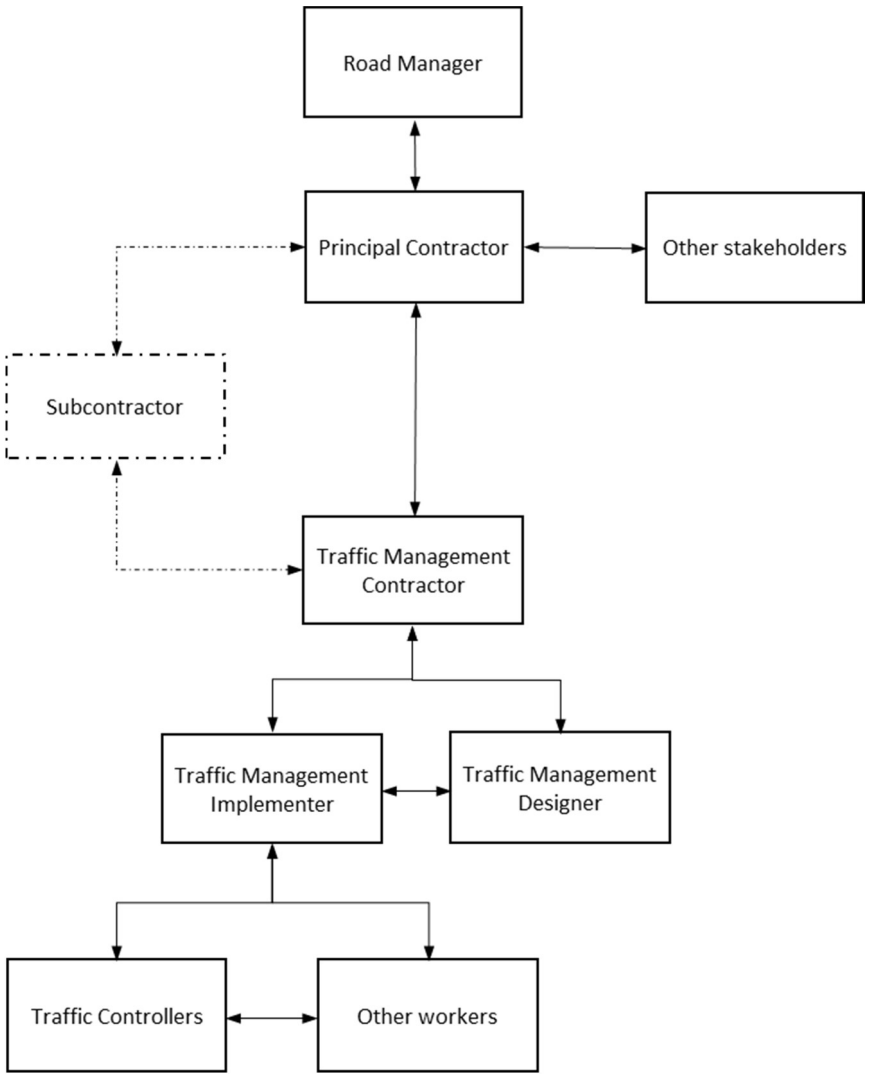
- Tasked with setting up traffic control devices at shift starts and taking them down at shift ends (or setting up after hours care) in accordance with the TGS, and daily monitoring for theft / misplacement / damage of traffic control devices and making them good
- Must possess the applicable competency, or have completed applicable training, as specified by the relevant state / territory legislation, code of practice or published guidance for implementation of a TMP

4.4.4 Traffic Controllers

- May be engaged by the Traffic Management Contractor, or by the contractor performing the construction work (i.e. Nacap or subcontractor as applicable)
- Tasked with guiding traffic safely through worksite according to the TGS
- Must possess the applicable competency, or have completed applicable training, as specified by the relevant state / territory legislation, code of practice or published guidance for a Traffic Controller

Figure 3 outlines the relationships between the parties for traffic management risk assessment, design, approval and implementation.

Figure 3 - Parties involved in TMP development and implementation



4.5 Competency Records

Evidence of competency of Traffic Management Designers, Traffic Management Implementers and Traffic Controllers, that meet the state / territory competency requirements, must be sought from the Traffic Management Contractor before commencement of any traffic management works (including before any work by the Traffic Management Designer) Evidence of competency shall be retained.

4.6 Short Term Low Impact Works

Many of the state / territory legislation and codes of practice contain TGSs that are “deemed to comply”

for short-term low-impact works.

Short-term low-impact works are typically those conducted on roads with low traffic volumes that last no longer than one shift and require only minimal traffic control devices with minimal disruption to road users, for example loading or unloading plant at the roadside, working in the road reserve but not the trafficable lanes (up to one shift), or resurfacing roads (up to one shift) of low traffic volume.
The state / territory legislation or code of practice should be referred to in each case to determine if a short-term low impact works TGS can be used. However, approval and any other requirements shall still be obtained from the Road Manager.

4.7 Road Occupancy

A road occupancy consists of any activity likely to impact on the operational efficiency of the road network. A Road Occupancy Licence (ROL) authorises occupation of a portion of the road that would normally be available to traffic. Except in the case of an unplanned incident, or when directed by the Police or other emergency services, a ROL must be obtained for any works which:

- Slows, stops or otherwise delays or affects the normal flow or traffic
- Diverts traffic from its normal course along the road, including lane closures and detours and
- Occupies any portion of the road related area, including the footpath that is normally available for vehicle, pedestrian or cycle movements.

Nacap will obtain the relevant Road Occupancy Licences (ROL) from either TfNSW as Road Manager of State Roads or Wollongong City Council where occupancy of local roads is required.
These licences will be obtained in advance of the works.

4.8 Pedestrians and Cyclists

Recognising the specific needs and behaviours of pedestrians and cyclists will be integral to the safe delivery of works. Signage will be installed around worksites to alert pedestrians and cyclists of vehicle movements, where documented in the site specific TMP. Disruptions to access will be avoided, where reasonable and practicable.

Safe pedestrian and cyclist access will be maintained around work sites during construction. In circumstances where pedestrian and cyclist access is restricted or removed due to construction activities, an alternate route which complies with the relevant standards will be provided and signposted prior to the restriction or removal of the relevant pedestrian and cyclist access.

Any short-term path closures will be documented in TGS and permits / ROL. Longer term changes will be detailed in the site specific TMP.

4.9 Public Transport

The relocation of bus stops may be needed to allow for safe separation between worksite and bus operations. Closure of bus stops will be identified in TMP and will not occur until relocated bus stops are functioning, have similar capacity and amenity and are relocated within appropriate walking distance of the existing bus stop. Any changes to bus stops will be undertaken in consultation with TfNSW, WCC and bus operators.

Pedestrian access will be provided to any relocated bus stops such that accessibility and safety standards are met.

If bus services need to be rerouted during temporary road closures (partial or full) we will identify these impacts early so that liaison with relevant authorities and bus operators can begin. Consultation with bus service providers will be undertaken on all bus stop relocations or route changes.

At the conclusion of the construction period, all bus stops temporarily closed or relocated will be reinstated.

4.10 Light/Heavy Vehicle Management

The management of all light and heavy vehicles engaged to operate on the project will be managed through their respective procedures, this includes risk identification, process control, competence management and monitoring activities. Refer:

- Appendix D – GAS-599-PR-HSE-008 Safe Driving & Light Vehicle Management Procedure
- Appendix F – 3905-HSE-010-3 Chain of Responsibility

4.11 Site Access Routes

All light and heavy vehicles will use the most direct route connection from local roads to the closest arterial and motorway networks to access the pipeline construction footprint to minimise impacts on local roads, including stakeholders who live and work near the sites. The site access routes are provided in Appendix B.

The pipeline construction right of way (CROW) will be utilised for transport routes wherever practicable and safe, however due to the number of areas that are planned to be Horizontally Directional Drilled (HDD) and the crossings of both state and locally controlled roads, it is anticipated that some local and state roads will also be utilised for transport routes which will be minor and of a short duration.

Construction plant will remain on the CROW where possible, however where required minor uplifts and relocation of plant is expected and again these will be of a minor and short duration.

It is generally noted that:

- Truck movement on the CROW will be one way, with the approved CROW sufficient to allow for construction activities as well as construction vehicle movement.
- Personal will be transported to the Construction Offices and Laydown Area and CROW in shared vehicles from accommodation.
- Line pipe will be trucked via road networks in accordance with state legislation and will be temporarily stockpiled at the Laydown Area near Kembla Grange.
- The pipe will be then transported from the Laydown Area and strung end to end along the prepared CROW.

There are several proposed access points throughout the alignment, which were swept path and sight distance assessed as part of the traffic study undertaken for the EA (Port Kembla Pipeline Project - Traffic Study GAS-556-RP-RA-001).

It was determined in the EA that generally, access via the existing industrial areas of the Port and adjoining industrial areas are suitable for proposed construction access without modification. Swept path analysis of temporary access points determined that driveway access points could be constructed of a size suitable for 19m semi-trailer access and egress.

These access points will be established utilising local controls to allow modification of kerb and provide a suitable access to the CROW.

4.12 Property Access

All reasonable, feasible and practicable measures will be implemented to maintain pedestrian and vehicular access to, and parking in the vicinity of businesses and affected properties. Disruptions to access will be avoided, where reasonable and practicable. Where this is not possible, we will minimise our impact and provide alternative access and parking arrangements as close as practicable to the existing entry

points and parking areas, in consultation and agreement with those directly affected prior to the disruption. We will also minimise local road closures. Adequate signage and directions to businesses will be provided prior to, and for the duration of any disruption. Any access affected by our works will be reinstated to the previous standard as a minimum, unless agreed otherwise by the owner or occupier.

We will maintain access to all utilities during our works, where practicable, unless we have agreement from the relevant utility owner/maintenance provider. We will provide weekly updates to utility providers. Emergency services will be regularly consulted and informed of our works schedule and program and will be provided with weekly updates on any closures that could impact their services.

4.13 Loading and Unloading

Loading and unloading of material**s** and equipment (large or small) will be done within the boundaries of the CROW and approved works areas. There will be no loading or unloading of materials outside the site boundaries. Authorised traffic controllers may be required for major deliveries to ensure motorists, cyclists and pedestrian safety as trucks enter and exit the work site(s). Loading and unloading will be managed to minimise need for reversing where safe and practice to do so.
All large loads, such as import or export of materials will be carried out mainly during day light hours of 0700 hrs to 1800hrs. The exception to this is the approved out of hours activities for the HHD works (see section 4.15 below).
We plan to minimise impacts of loading and un-loading in the following ways:

- For heavy vehicles and large loads – all loading and un-loading will utilise day light working hours when most people are at work.
- Use of soft slings will be employed where possible.
- Not leave vehicles idling in or near residential areas where possible – it's worth noting that most of our works are in industrial areas or next to highways.
- Use only approved traffic routes and try to avoid residential areas if possible.
- Spot noise monitoring will be carried out to ensure that all works are carried out in accordance with the Noise Management Plan (GAS-599-PA-EV-004), and
- Deliveries planned for day time hours.

4.14 On-site Parking

Designated parking areas will be established within the CROW and approved works areas. There will be no access to private vehicles and workers will be encouraged to car share or use public transport to minimise impact on surrounding streets.

4.15 Out of Hours Works

Out of hours works and deliveries will only be permitted in accordance with the Project Approvals and any approved Out of Hours Works Protocol as attached to the Noise Management Plan (GAS-599-PA-EV-004).

At present we have out of hours approval for the Horizontal Drilling Works (HDD), it is not envisaged, at this stage that heavy vehicles will be needed to carry out these works out of hours and only medium (small tool truck or the like) and light vehicles will be needed.

All works will be carried out in accordance with the Noise Management Plan (GAS-599-PA-EV-004) and the conditions of the Out of Hours Works Approval (Appendix E).

4.16 Dust and Mud Control

All sites will implement management measures to control dust and mud as outlined in the Project Soil and Water Management Plan (GAS -599-PA-EV-007) and Air Quality Management Plan (GAS-599-PA-EV- 005).

The following mitigation measures are contained in the AQMP:

- A modern fleet of plant and equipment will be used for pipeline construction works
- All plant will be fitted with manufacturer's standard emissions control equipment and maintained in accordance with the manufacturers' specifications.
- All plant and equipment will be operated in a proper and efficient manner in accordance with the equipment specifications
- Switch off plant and equipment when not in constant use
- All plant and equipment will be serviced and maintained regularly
- Any plant and equipment that is emitting excessive smoke will be assessed and serviced or replaced.

All vehicles (truck or truck and trailer) carrying dusty or friable material (quarry material / unsuitable material) will have fitted tarps to ensure dust is minimised. As part of our fleet, water cart(s) and road sweepers will be utilised to minimise and control the cleanliness of public roads from our activities and regular inspections of the CROW will be carried out. Further local resources will be engaged and can be mobilised quickly should the need arise (wet weather events). Our objective is to minimise risks before they become an issue and we have supervisors and engineers in each area to manage the construction activities. More detail of how we plan to do this, and the controls are in the SWMP and the associated ERSED Control Plans.

4.17 Vehicle Emissions

All construction related vehicles and plant emissions will be managed in accordance with the Air Quality Management Plan (GAS-599-PA-EV-005). Construction noise emissions will be managed in accordance with the Noise Management Plan (GAS-599-PA-EV-004).

The following mitigation measures are contained in the NMP:

- Limit high noise impact activities and works to the mid-morning and mid-afternoon periods, where near to resident receivers.
- Minimise noise disturbance arising from the delivery of plant, equipment and materials to construction sites.
- Undertake haulage, laydown and the loading and unloading of materials/deliveries as far as practicable from resident receivers
- Truck movements will be restricted to identified haulage routes and the routes outlined in this plan and drivers alerted to the limiting of compression braking where safe and practicable

4.18 Over Sized and Over Mass Vehicles

Out-of-hours deliveries will be minimise where possible. Where out of hours deliveries are required, due care will be taken to minimise impacts (i.e. no extended periods of engine idling, use of radios instead of shouting, non-tonal reversing beepers, and where possible, unloading / loading to be undertaken during standard hours).All works, with the exception of the HDD works, will be carried out during daytime hours and noise monitoring will be carried out on a regular basis. Out current fleet of heavy plant consists of the following:

- 24 to 28 tonne excavators – 10 – 15no.
- 10 to 17.5 tonne loaders – 2 to 5no.

This plant will be mobilised under permit and permitted hours from two to three suppliers from as far as Queensland and locally. Whilst the excavators are over sized loads none are over mass and will be moved on low loaders for both initial mobilisation and for re-mobilisation within the project. All re-mobilisations will be carried out during permitted hours (1000 to 1500hrs) and under permit if required. It is not anticipated at this time that out of hours mobilisations will be required considering the distances between sites (alignment is 12.1km long) and the anticipated construction duration of 12 months.

Pipe movements are not classed as oversized loads and movements out of our stock yard in Kembla Grange will be carried out in day time hours with a steady flow to the alignment.

Currently we do not have any over massed loads.

Attached in appendix G is the Traffic Study carried out by Civil Link Consulting for the pipeline project. This report, it has assessed the swept path and sightline requirements for Nolan St, Berkely Road and Five Island Road.

4.19 Working Hours and Fatigue

Our current working hours are 0700 to 1700 hrs, with most of the project team living within 50km of the project. This is a mixture of interstate workers and local personnel. The 50km distance is not excessive and this distance can be cover well within 1 hour.

For personnel travelling from interstate or long distances within NSW then we have a fatigue management procedure as part of our company procedures where any travel over 2 hours must be accompanied by a 20 minute break. We currently have less than 10 people who would need to travel over 2 hours and this is on a weekly basis at the end of the rostered swing. These people are living locally during the week.

Any interstate travel is either via Sydney Airport or Shellharbour. All people traveling to Sydney Airport for interstate travel are currently getting the train and the aim is to have these people home for dinner time at the end of their rostered swing.

5 EMERGENCY PREPAREDNESS AND RESPONSE

Environmental emergency response requirements and communication processes will be detailed in the Project Emergency Response Plan (ERP). The ERP will be developed before the start of construction and will outline project requirements for the management of foreseeable emergency situations that may arise during the course of work as part of the Project.

TMPs will be developed with consideration of identified potential emergencies specific to the site and scope of work, based on risk assessment. Documented plans for responding to such identified emergencies must be included in the TMP.

Refer also to Section 7.3 of the CEMP.

6 RECORD KEEPING AND REPORTING

6.1 Record Keeping

The Project shall maintain a documentation and record system in support of this TMP and monthly Project HSE reporting requirements to enable review and auditing of management systems and procedures.

6.2 Reporting

Daily, Weekly, Monthly and Annual Reporting will include information relevant to this TMP in support of incident and complaint management, regulatory and contractual requirements.

6.2.1 Incident Reporting

Incidents will be reported in accordance with the CEMP Section 7.1. Should it be determined by AIE / Jemena that the incident is reportable to DPE or any other relevant agency or Regulator, the Nacap Project Manager shall liaise with the AIE and or Jemena Representative and provide support to ensure that the incident is reported in the required timeframe and format required.

In accordance with the CoA DPE must be notified in writing via the Department's Major Projects Website immediately after AIE or Jemena becomes aware of an incident on site.

6.2.2 POEO Act Incident Notification

In accordance with the Protection of the Environment Operations Act 1997 (POEO Act) the Environment Protection Authority (EPA) must be notified of pollution incidents that cause or threaten material harm to the environment. POEO Act reporting will be undertaken in accordance with the CEMP Section 7.2.

6.2.3 Non-Compliance Notification

Non-Compliances will be reported in accordance with the CEMP Section 8.4. The Department must be notified in writing via the DPE's Major Projects Website within seven days after the identification of any non-compliance issue. The notification must identify the development, including the application number, set out the condition of approval that the development is noncompliant with, the way in which it does not comply, the reasons for the non-compliance (if known) and what actions have been taken, or will be taken, to address the non-compliance

7 MONITOR AND REVIEW

The Traffic Management Designer, as the subject matter expert, will prepare as part of any Road Manager requirement, including the TMP, a schedule of inspections and inspection tools to be used by the Traffic Management Contractor, including proforma for recording inspections and corrective actions.

Inspection types and frequencies will comply with any such requirements specified by legislation or codes of practice.

Inspections will be done by a person who has one of the following training / competencies:

- Competency of Traffic Management Implementer or Traffic Management Designer
- Work zone traffic control auditor or inspector

Copies of inspection records and corrective action reports shall be provided to Nacap so that Nacap can verify that inspections specified in the TMP by the Traffic Management Contractor are being carried out by persons with one of the above-specified competencies, at the specified intervals using the specified tools.

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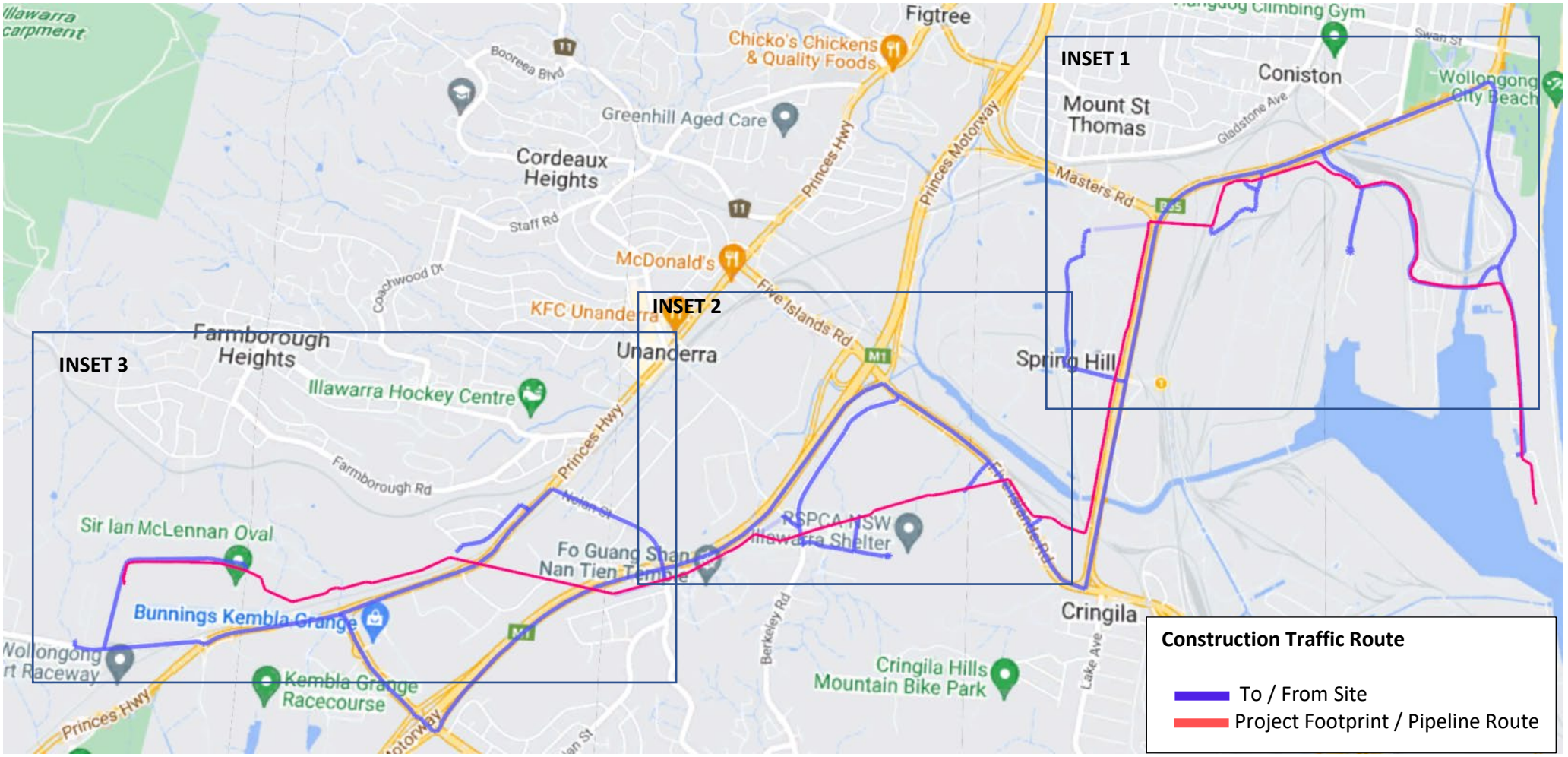
APPENDIX A CONSULTATION RECORD

The following table provides a detailed record of the consultation activities associated with this Plan.

Stakeholder	Date Sent	Send Method	Due Date	Date Received	Comments
Wollongong City Council (WCC)	30/08/2022	Email	13/09/2022	10/11/2022	Completing review, however, note that the deadline has passed.
Sydney Trains	30/08/2022	Email	13/09/2022	15/09/2022	No Comments
Transport for NSW	30/08/2022	Email	13/09/2022	21/09/2022	No Comments
NSW Ports	25/08/2022	Email	9/09/2022	Nil	No feedback received despite follow up

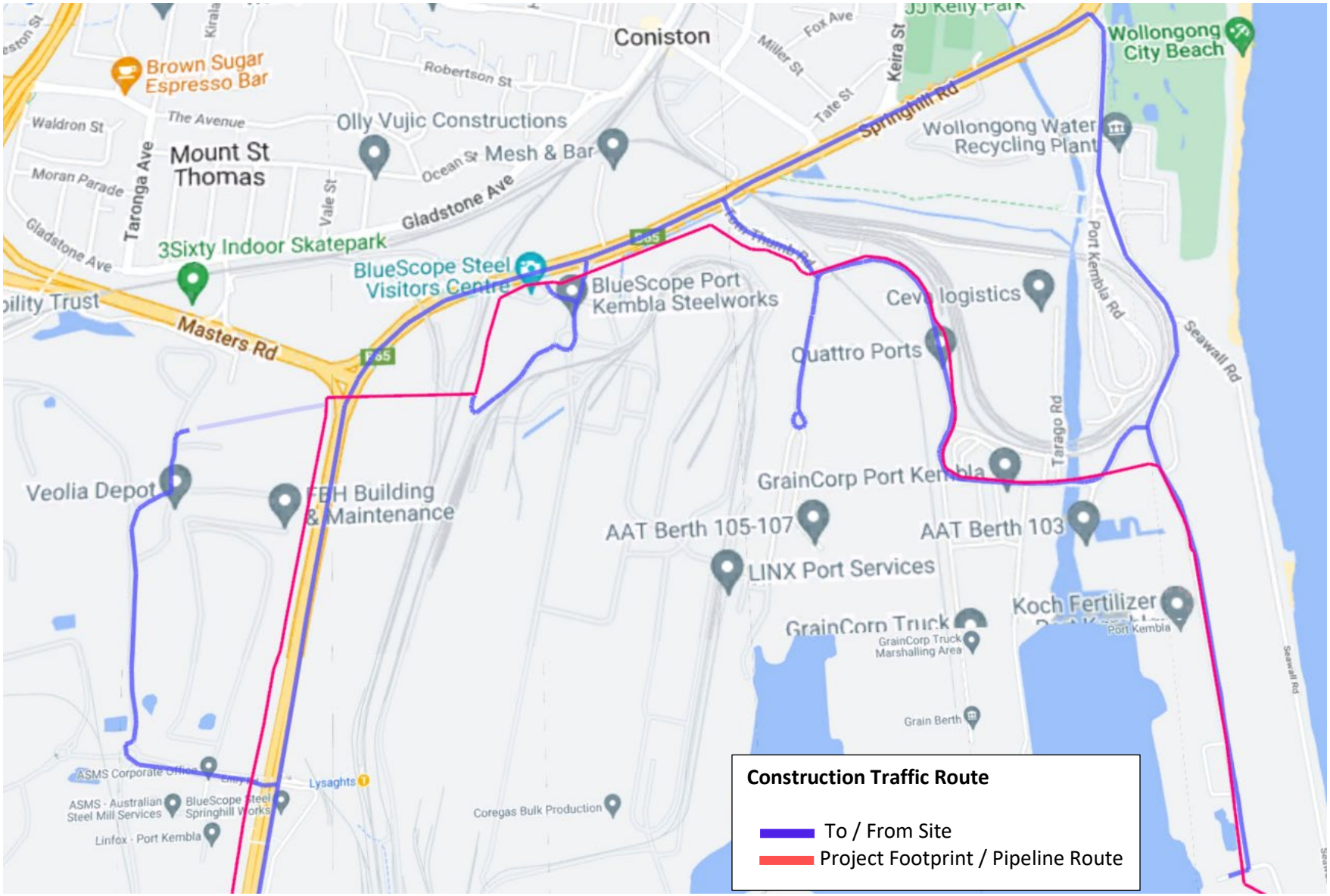
APPENDIX B SITE ACCESS ROUTES

CONSTRUCTION TRAFFIC ROUTES



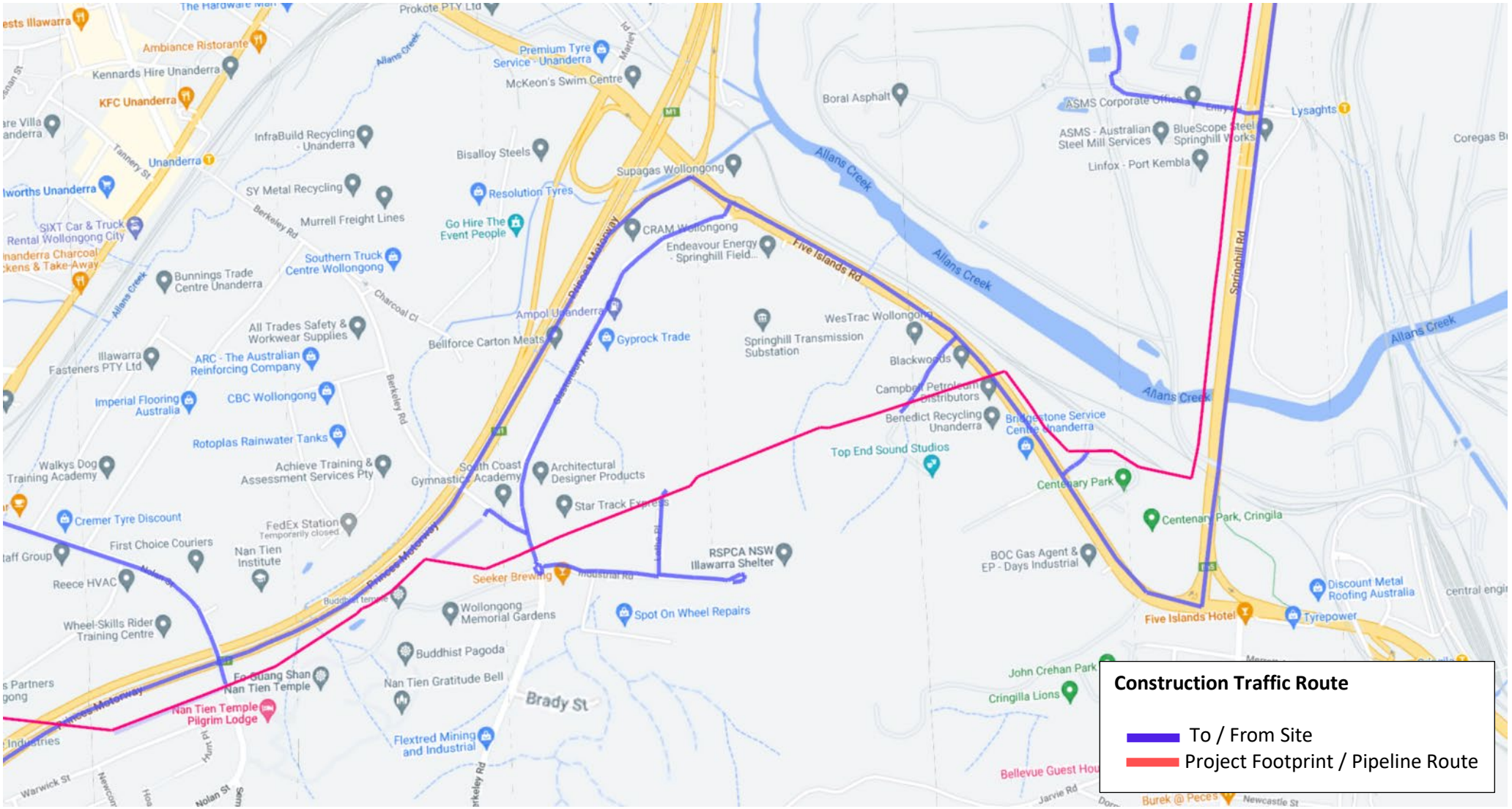
Pipeline Overview Map

CONSTRUCTION TRAFFIC ROUTES



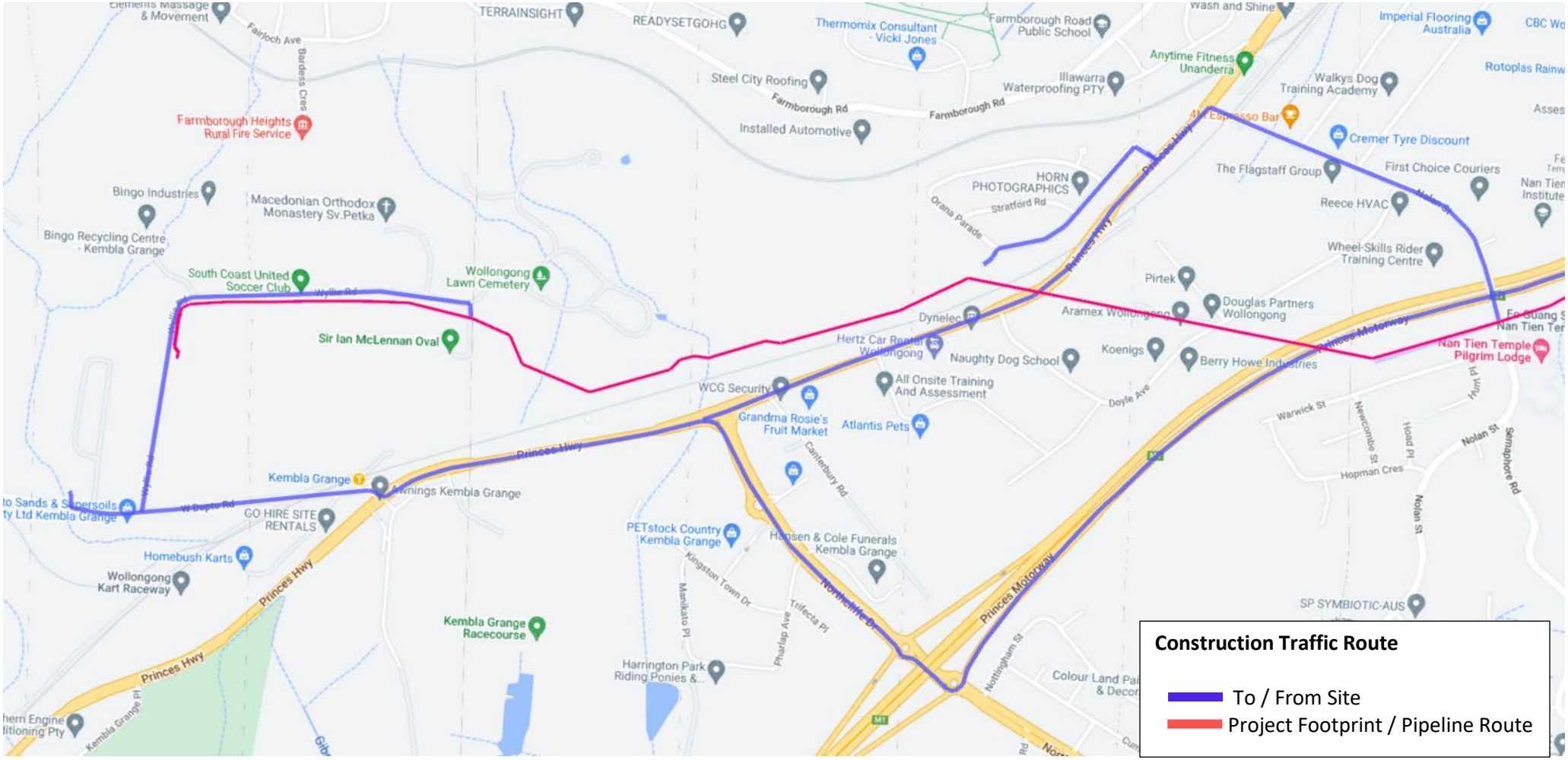
INSET - Figure 1

CONSTRUCTION TRAFFIC ROUTES



INSET - Figure 2

CONSTRUCTION TRAFFIC ROUTES



INSET - Figure 3

CONSTRUCTION TRAFFIC ROUTES

Roads Used for Accessing Pipeline

Port Kembla Road
Tom Thumb Road
BlueScope Northgate access
Entry Road
Five Islands Road
Springhill Road
Waynote Place
Industrial Road
Lathe Place
Berkeley Road
Nolan Street
Orana Place
Princes Highway
Princes Motorway
West Dapto Road
Wyllie Road

APPENDIX C TRAVEL MANAGEMENT PLAN

TRAFFIC MANAGEMENT PLAN

Traffic Management Works and Services provided to
Nacap Pty Ltd under Traffic Logistics Pty Ltd

Site Location: Port Kembla to Unanderra
Various locations for pipeline works

Prepared By: Mark Hayward
Email address: mark.hayward@traffic-logistics.com.au
Contact Number: 1300 001 599
Accreditation: TCT0046634
TMP Number: TLTMP-192160 REV A Port Kembla to Unanderra Pipeline Project.

WOLLONGONG
49 Industrial Road,
Unanderra NSW 2526

SYDNEY
9 Nursery Road,
Campbelltown NSW 2560

NEWCASTLE
35 Yilen Close,
Beresfield NSW 2322

Contents

Purpose

The purpose of this Traffic Management Plan is to ensure the commitment to safety of the traffic management team and the contractor's team, and that the safety processes, procedures, reporting and reviewing processes of each entity are met during the life of this project. This will be accomplished with the effective preparation, implementation and reviewal of the scope of works, development of traffic control strategies, vehicle routing and movement strategies, development of Traffic Guidance Schemes, assessment of on-site traffic controlling conditions, usage and effectiveness of traffic control devices implemented, emergency vehicle requirements and access routes, and the continual training and assessment of accredited Traffic Controllers.

This plan aims to identify the risks to all workers undertaking any works on or adjacent to a road. It shall ensure that appropriate control measures for any identified hazard are assessed, controlled, implemented, monitored and reviewed using the strategies and processes outlined in the Hierarchy of Control.

The legislative and reference documents used in conjunction with this plan include, but are not limited to:

- WH&S Act and Regulations (New South Wales).
- Transport Operations (Road Use Management) Act and Regulations (New South Wales).
- Risk Management Code of Practice (2007).
- Traffic Management for Construction or Maintenance Work Code of Practice (2008).
- Traffic Control at Worksites (TCaWS) Manual (2022).
- Australian Standard 1742.3- Manual of Uniform Traffic Control Devices (2009).

All contractors, subcontractors, employers, workers and other persons on-site shall be held to the standards set out in this Traffic Management Plan.

Risk assessments will be conducted before Traffic Guidance Schemes are implemented and prior to erecting any traffic control devices on site. This will assist in achieving a zero-harm working environment for all people within and around the work area.

Project Summary

Scope of Works

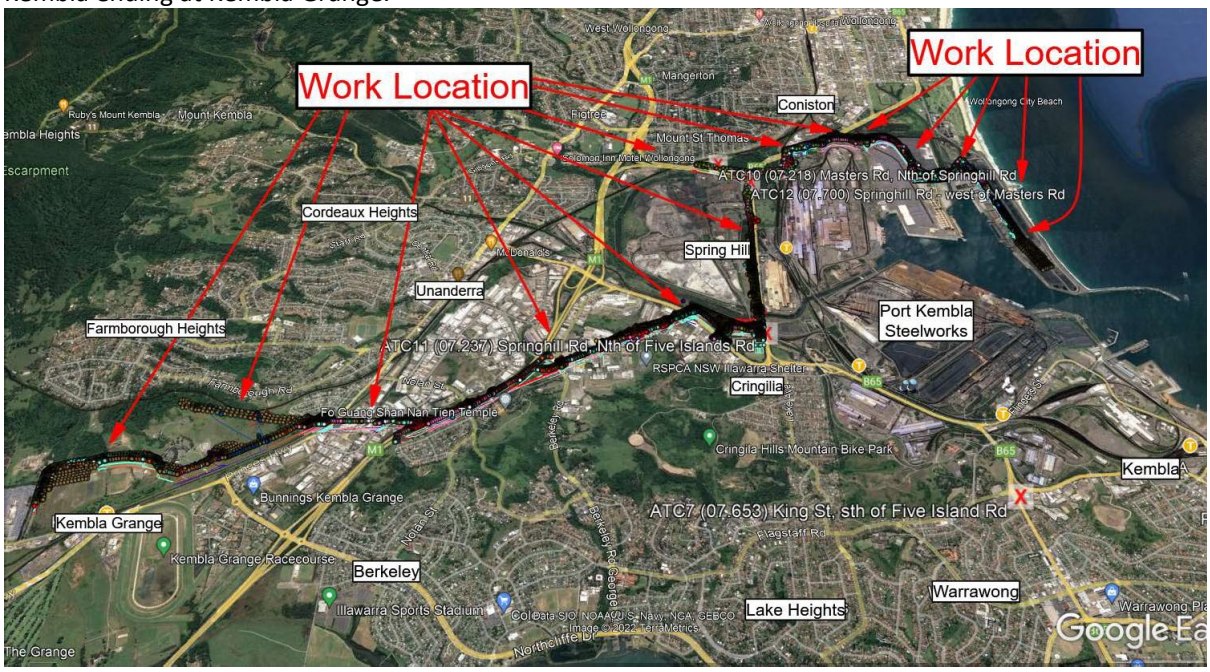
NACAP are undertaking construction of the Port Kembla Pipeline Project which will entail installation of a 12 km gas pipeline that will travel from Port Kembla Coal Terminal to Kembla Grange Wongawilli.

Under boring for the pipeline will be taking place for these works and there are a number of places where traffic control will need to be implemented around these works.

Location of Works

The works will be in various locations from Port Kembla Coal Terminal to Wyllie Rd Kembla Grange.
The majority of the works will not be on the road but on verges where traffic control is not required. There is a list of roads that traffic control will be required to work on for the pipeline works to be undertaken. Road 1, Seawall Dr, Port Kembla Rd, Tomb Thumb Rd, Five Islands Rd, Glastonbury Ave and Nolan's St. Works inside NSW Ports are located on private roads with a 40km/h speed zone.

A markup of the work area start and finish location can be seen in the below image starting from Port Kembla ending at Kembla Grange.



Time and Dates of Work

All works will be completed under standard working areas as per council regulations and Road occupancy licences. No night works will be conducted.

All works will be on:
Monday to Friday 7:00AM till 6PM.
Saturday 8:00AM till 1:00PM.
No Works Sunday or Public holidays.

Deliveries outside these hours where permissible as per SSI 9973 CoA 6.

Road Configuration and Heavy Vehicles

The roads within the steel works are Seawall Dr Port Kembla Rd all 40km/h and a 2 lane 2 way. Stop slow will need to be implemented with advancing warning signs for the traffic controllers to conduct the works. being a private road and with the speed of 40km/h it is deemed safe for the traffic controllers to use stop slow bats instead of Portable traffic signals and devices.

Five Islands Rd is a 6 lane 2 lane divided main road with a posted speed of 80km/h. A slow lane closure is to be implemented around the work area and it is an advised that an advanced warning vehicle and TMA is also to be used with the 2-man crew and vehicle for setting up and packing down the site. This location is also subject to approval of an ROL (Road Occupancy Licence) and the licence conditions must be followed to conduct works on.

Glastonbury Avenue: Is a 2 lane 2 way with a posted speed of 60km/h. However, the work be taking place on the footpath with only pedestrian management taking place at this location.

Nolan Street Unanderra: is 2 lanes two-way Road with a posted speed of 50km/h. this location however will

be on the road and will require Stop slow to be implemented using Portable Traffic Control Devices (E Stops) to be implemented to control the traffic around the work area. The work is area is also situated next to the Nan Tien temple with the gate access to the temple will need to be remain open.

All other locations will be taking place form verges and grassed areas where the work areas are more then 6 metres from live traffic so Traffic Management will not be required in these locations.

Work Areas

Private driveways and side roads to be monitored by traffic control and advance warning signs placed where required. Traffic Controllers must assist and divert local traffic around closures where required.

Speed zones may vary. Adjust taper lengths and signs distances to suit speed zones as per Table 6.2 Recommended Taper Lengths in the Traffic Control at Work Sites Manual 6.0.

Table 6-2. Required maximum spacing of cones and bollards

Purpose and usage	Speed zone of device location km/h	Maximum spacing m
On approach to a traffic controller position (centreline or edge line)	All cases	4
Merge tapers	55 to 75 greater than 76	9 12
Lateral shift tapers	55 to 75 greater than 76	12 18
Protecting freshly painted lines	56 to 75 greater than 75	24 60*
All other purposes	less than or equal to 55 56 to 75 greater than 76	4 12 18

***Note* to Table 6-2:** This spacing should be:*

- *Reduced on curves or crests or if the row of cones is not clearly defined at night.*
- *Extended to 60 m where the length of the line of cones or bollards exceeds 1 km but is not adjacent to locations where there are workers on foot.*

Traffic control cones and bollards must be placed up to a maximum spacing of –

- 12m in areas where approach speeds are above 56 km/h; and
- 4m in areas where approach speeds are less than or equal to 55 km/h.

3m lane widths and 1.5m clearance from passing traffic must be maintained for workers on foot and mobile plant.

Safe clearance zones between Traffic Controller and working plant and equipment shall be maintained at all times.

Exclusion Zones

Exclusion zones shall be defined at the discretion of the Supervisor whilst on-site. This provides the safest and most practical exclusion zones for workers and non-workers to navigate to desired destinations. These exclusion zones shall take into consideration any Traffic Logistics Pty Ltd and Nacap Pty Ltd policies and procedures when defining the area.

Shared Areas

Vehicles, plant and workers shall work harmoniously within the designated work area with the use of effective communication strategies. These strategies will inform all workers when there are any foreseeable conditions or events that may be dangerous to everyone within the work area, and may include verbal communication, positive gestures, sign language and any additional endorsed communication strategies discussed during a pre-start toolbox. Exclusion zones and safe clearance limits shall be observed at all times.

HAZARDS PRESENT

Consequences	Possible Hazards	Possible Causes
• Injury to worker • Injury to vehicle occupants or motorcyclists • Injury to pedestrians or cyclists • Damage to vehicles or equipment • Damage to infrastructure	• Penetration of worksite by a vehicle • Worker straying onto roadway or clear zone • Collision with obstacles on worksite • Failure to navigate through the worksite • End-of-queue collision • Works vehicle impacting with motorists or motorcyclists • Obstacles on worksite • Vehicle approach speed too high • Driver loss of control of the vehicle • Collision between machinery / plant on worksite • Abuse / harassment of workers by the public • Pedestrians entering workspace or attempting to cross road through "hot" works and active mobile plant items.	• Failure to observe work signs • Failure to navigate through the worksite • Inadequate controls • Failure to comply with controls • Inadequate delineation • Inadequate clearance • Inadequate procedures • Untidy worksite • Worksite left unattended • Improper attention given to motorists or motorcyclists • Poor signing • Inappropriate signing • Heavy traffic or delays • Inadequate sight distance • Long traffic queues • Inadequate signing • Inadequate instructions for workers • Improper attention given to the needs of pedestrians / cyclists • Inappropriate route through or past worksite • Inadequate separation from other traffic • Insufficient number of PTCD/traffic controllers • Poor visibility

The following control measures are considered to be applicable to this project:

Around	☐	Past	☒	Through	☐

Control Measure	Details of Measure
• Lane closures adjacent to the work area	Stop/Slow traffic management required
• Speed reduction for traffic travelling through the worksite;	Reduce speed to 40 km/h. Where 1.5m clearances for workers on foot and plant cannot be maintained; implement 30 km/h else initiate other control measures to reduce speed of traffic.
• Use of TfNSW approved Portable Traffic Control Devices (Type 2 automatic portable traffic signals - e-Stop, Porta-Boom, Type 1 manual portable traffic signal etc.)	PTCD's required for Stop/Slow traffic management. Manually controlled Type 1 approved Portable traffic signals
• Use of advanced warning signs;	Traffic control to install required Advance Warning Signs to inform approaching drivers of the roadworks activity as shown in the traffic guidance schemes.
• Use of electronic Variable Message Signs (VMS);	VMS Boards to be strategically positioned around the approaching network providing advanced warning messages to motorists. *Refer to VMS Strategy Plan in Part G*
• High visibility clothing for all workers; and	Mandatory for all personnel
• Various other measures. ○ Lead and/or tail vehicles ○ Pilot vehicles ○ Look out person ○ Traffic cones and temporary bollards	• Spotters to be used to observe traffic flow past workers on foot. • Traffic cones to delineate work zone from vehicle travel path • Use of escort vehicles for traffic under stop/slow management to be assessed prior to and during shifts to manage compliance with posted roadwork speed limits – especially in the proximity of workers on foot and mobile plant.

No-Go-Zones

The No Go Zone will be for all unauthorised personal to be within 1.5 metres of plant or machinery. Live lanes for traffic controllers and pedestrians passing around the works area will also be No GO Zones with pedestrians being passed around work areas in an alternate safe route. The no-go-zones provided on-site shall be listed during the pre-start, along with any additional no-go-zones in compliance with Nacap Pty Ltd and Traffic Logistics Pty Ltd policies.

Environmental Impacts

All noisy works (eg jackhammering, saw cutting) to be completed by 2300 to comply with NSW Environment Protection Authority requirements.

Aspect:	***Risks, Hazards:***	***Risk Rating:*** ***L= Low*** ***M= Medium,*** ***H= High***	***Control Measures:*** *(underline controls required for this site.)*
STORMWATER	Biomatter falling into stormwater drainage systems	M	Sandbagging drainage, collection of biomatter prior to the departure of work area.
	Water used in cleaning of power tools running off into drainage		
DUST CONTROL	Dust arising from profiling and asphalting activities	M	Moistening of surfaces to restrict the creation of airborne particles. Ensure road profilers and street sweepers use water to moisten road services prior to operation of machinery.
NOISE / VIBRATION	Night works disturbing residents	M	Activation of power tools only when necessary.

Aspect:	***Risks, Hazards:***	***Risk Rating:*** ***L= Low*** ***M= Medium,*** ***H= High***	***Control Measures:*** *(underline controls required for this site.)*
			Loud generators not to be used on-site; biomatter to be collected in additional truck and shredded off-site during appropriate hours of work.
WASTE MANAGEMENT	General waste left on work site	L	Access to rubbish bins whilst on-site. Removal of all general waste prior to departure according to SWMS, policies and procedures.
AIR QUALITY	Dust clouds	M	Use of PPE (dust masks, safety glasses). Moistening of surfaces.

Management of the Traffic Management Plan

Site Inspection/Community Landmarks

The sites have been inspected with Traffic controller requirements being address as per inspection. Traffic controller will be required for all works within the steelworks near the Road as per TGS attached in appendixes. The other locations will include five islands Rd Springhill Road Glastonbury Avenue and Nolan Street Unanderra.

Work will be undertaken at night so little impact is foreseen to the community in the area. Additional monitoring of traffic requires to maintain access for Fuel stations and restaurants operations.

Traffic Signal Operations

Traffic signal operations should not be affected by any of these works that are taking place through this project.

Trafficable Lane Restrictions

The only traffic lane restrictions for this project works for traffic control will be found on Five Islands Unanderra with the clearways be in place. With this location the work times will be subject to the Road Occupancy Licence Conditions that will be issued by Road Access Unit. The times and dates o the licence will let the NCAP know what times traffic management can be implement only these sections of the road for their works to be conducted.

Bus Routes and Stops

No Bus Stops or Bus routes will be affected by these works.

Existing Parking

There is ample parking for work vehicles, traffic management work vehicles and convoy vehicles with room to place additional large plant where required within work area for all workers.

Pedestrians

Traffic Controllers to monitor, assist and divert pedestrians and cyclists where required. There is a pedestrian pass on Glastonbury Avenue that will be affected but traffic controllers will have pedestrian management in place to safely divert pedestrians around t the work while these works are being conducted. Traffic Signs and devices will be implemented as per Traffic Guidance Scheme.

Controls for Site Inspection Items and Community Landmarks

As work is being undertaken during the day, many of the community landmarks listed previously are open. Pedestrians and traffic to be monitored, assisted and diverted where required. Traffic control to take particular care with traffic exiting and entering around the Nan Tien Temple.

Emergency Event Procedure and Emergency Vehicle Movement Plan

All emergency service vehicles shall be given priority in an event where their vehicles are required to travel through the site. At least one open trafficable lane shall at all times be kept open to ensure that the emergency service vehicles are not impeded on approach to an emergency event.

Traffic Guidance Scheme

The Traffic Guidance Scheme has been developed in accordance with the Traffic Control at Work Sites Manual (TCaWS, version 6.1, 2022). This Traffic Guidance Scheme must also comply with the national requirements within the Australian Standard 1742.3, and shall only be implemented by accredited Traffic Controllers. If there is a requirement for Traffic Guidance Scheme/s to be modified, the implementer shall consult the Traffic Guidance Scheme developer and discuss the adjustments required with the proposed changes reflected in a risk assessment (in compliance with TCaWS requirements). Any adjustments are to be completed by the developer. Refer Appendix A for Traffic Guidance Schemes.

Vehicle Movement Plan

A Vehicle Movement Plan is not a Traffic Guidance Scheme, but provides the work crew with the direct flow of traffic into and out of the work area. This plan must be complied with to ensure that the risks identified within the site are reduced. Works supervisor on site to confirm the entry and exit strategy due to length of worksites.

Approvals Required before Implementation

Before any delineation devices are implemented on State and council road the correct approvals must be obtained from the regulator bodies for there locations. For all state roads works Transport Management Centre (TMC) must issue a Road Occupancy Licence (ROL) to be able to work on their state roads such as Five Islands Rd Unanderra. A Section 138 road occupancy permit must be obtained by the client by the local council to occupy their roads or footpaths such as the locations on Glastonbury Avenue and Nolan Street Unanderra.

Hold Point: Certificates of Approval

Process Held: Works involving the implementation of traffic control devices on an RMS or TfNSW road that requires a Road Occupancy Licence and/or additional licences/permits.
Submission Details: Evidence of documentation approving the works to be completed, ie Road Occupancy Licence, council permits (if required), accompanied licencing requirements for works.
Release of Hold Point: Activating approved Road Occupancy Licence, along with the compliance of any terms or conditions that accompany the licence.

Implementation of Traffic Management Plan, Traffic Guidance Scheme and Vehicle Movement Plan

The implementation of the Traffic Management Plan, Traffic Guidance Scheme and Vehicle Movement Plan shall, in accordance with local requirements (TCaWS v6.1, 2022), be undertaken by those fully qualified and accredited in the implementation of traffic management devices. No works shall begin prior to the review of all Traffic Controllers on-site displaying copies of accreditation.

Hold Point: Certification of Workers

Process Held: Works involving the implementation of traffic control devices.
Submission Details: Evidence of qualifications held by all traffic controlling parties on the work site.
Release of Hold Point: Documenting the qualification numbers of all workers intending to implement traffic control devices.

Responsibilities

Team Leader

In accordance with TCaWS Manual, the works supervisor or equivalent qualified person shall:

- Ensure that all signs and devices required by the Traffic Guidance Scheme are available, are the correct size and are in good condition.
- Ensure that the locations and types of devices are recorded in the diary.
- Ensure that authorisations have been given for the use of any roadwork speed zones or portable traffic signals.
- Ensure that, where flashing arrow signs are specified, only type–approved equipment complying with Specification TSI-SP-060 is used in accordance with Section 11, illuminated flashing arrow signs.
- Ensure that the Traffic Guidance Scheme is implemented as approved and a copy is available on site.

Traffic Controller

In accordance with TCaWS Manual, the person/s qualified in "Implement Traffic Control Plans" shall implement the approved Traffic Guidance Scheme before physical work commences and ensure that a copy of the Traffic Guidance Scheme is kept on site. The implementer shall also drive through the site before work begins to ensure that the Traffic Guidance Scheme has been implemented correctly and that it will warn, instruct and guide road users as designed. This drive through should also be completed at night if the traffic management will be in place after hours. Any variations made to the plan must be marked on the Traffic Guidance Scheme and initialled by the team leader.

The implementer shall ensure that, in conforming to the approved Traffic Guidance Scheme, by way of initial and regular inspections:

- There are no contradictory signs.
- There are no surplus, obstructing or distracting signs.
- The Traffic Guidance Scheme fits with other traffic control in the area which may or may not be under the control of the one organisation.
- Signs are suitably placed, by considering:
    - Line of sight and sight distances
    - Road user approach speeds
    - Expected queue lengths
    - Visibility, shady or high glare areas
    - The effects of sunrise and sunset
    - Lateral offset to travel lanes
    - Height of signs
- Only trained, certified and authorised Traffic Controllers are used and are suitably positioned.
- Signs and devices are in place at appropriate times, and removed or covered when not needed.
- Covered signs are inspected during windy periods to ensure that the covering has not been disturbed.
- Damaged or defective signs are replaced or repaired as soon as practicable.
- A trafficable travel path for vehicles is maintained and clearly defined.

The team leader shall also report any anomalies or inconsistencies found in the Traffic Guidance Scheme/s being used.

Plant and Equipment

All vehicles used in traffic control operations will be equipped with the appropriate vehicle mounted warning devices in accordance with the TfNSW/RMS Traffic Control at Work Sites (TCaWS) Technical Manual and G10. During poor light conditions or at night, an additional Traffic Controller with an illuminated red wand will direct traffic around such plant and equipment.

In the event night works are required, where traffic is permitted to use the whole or portion of the existing road, all plant items and similar obstructions will be removed from the normal path of vehicles to provide a lateral clearance of at least 6m where practical, with a minimum clearance of 1.5m. Plant and equipment, within 6m of the normal path of vehicles, will be lit by not less than two yellow steady lamps suspended vertically from the point of the obstruction nearest to the traffic lane, and one yellow steady lamp at each end of the obstruction on the side furthest away from the traffic lane.

PTCD (E-STOP)

A portable traffic control device (PTCD) is a device designed to manually control traffic. A PTCD is designed to reduce risk to traffic control personnel by enabling use and control of the device remotely so that the operator can be located outside of the live lane of traffic. PTCDs may include but are not limited to PTS and boom barriers.

For the works being conducted by Traffic Logistics for Nacap Pty Ltd, we will be using E-STOP setup to control the traffic around work area. We have received approval from Transport of NSW to operate Type-1 Portable Traffic Signals (Certificate No: ITS-TAN000122). Transport Approval for using Portable Traffic Signals. This document has been attached in Appendix D.

Time Management

Traffic Logistics Pty Ltd and/or Nacap Pty Ltd must meet all time management requirements including:

- Notifying emergency services and relevant transport industry of significant traffic disruption.
- Notifying residents and businesses affected by any disruption (ie VMS board, letterbox drop).
- An additional letterbox drop/s to residents at least five business days before the proposed commencement date.
- Ensuring works are only carried out during the times and days permitted.
- Lodgement, no less than ten business days before the work, of a Road Occupancy Licence.
- Advise TMC of delays to traffic which are, or are anticipated to be, longer than 15 minutes.

Communication and Consultation

Public Notification

Identified stakeholders (not being limited to residents, public transport services and emergency services) will be consulted and advised by the Nacap Pty Ltd Customer and Community Relations Team of impending works. A notification has been developed by Nacap Pty Ltd Communication Team outlining the traffic impacts. This will be issued to nearby residents and be accompanied by a traffic alert and VMS in place to direct motorists

Disclaimer and Review.

To the knowledge of the developer of this Traffic Management Plan, the details within are accurate reflections of the proposed work area. Any changes made to this work area prior to the commencement of work shall be reported to the developer, to which appropriate adjustments shall be made.

Traffic Logistics Pty Ltd does not hold any responsibility in the on-site implementation of the Traffic Management Plan, Traffic Control Plans or Vehicle Movement Plans if these plans are implemented by any organisation other than Traffic Logistics Pty Ltd. These plans are provided for Traffic Management Service Providers, that take ownership of all traffic management events during the initial implementation of the work site, through to the conclusion of the project.

This Traffic Management Plan requires reviewal prior to the acceptance and implementation by the direct customer, Traffic Logistics Pty Ltd, and any additional notes to be provided with an authoritative signature, confirming the acceptance of the product provided.

Roles, Responsibilities and Approvals

Functional Role	**Name/Company**	**Accreditation**	**Signed**
TMP Designed By	Mark Hayward Traffic Logistics	IMP PWZ TCR TCT0046634	
TMP Reviewed and Approved By	Jorge Fonseca Traffic Logistics	IMP PWZ TCR TCT0036977	
TMP Reviewed By			
TMP Accepted By			
Road Authority Approval (TfNSW CJM or similar as applicable)			

Traffic Management Plan Recommendations and Changes

This Traffic Management Plan has been reviewed by: Jorge Fonseca on 5th July 2022

Changes to be made are listed below:

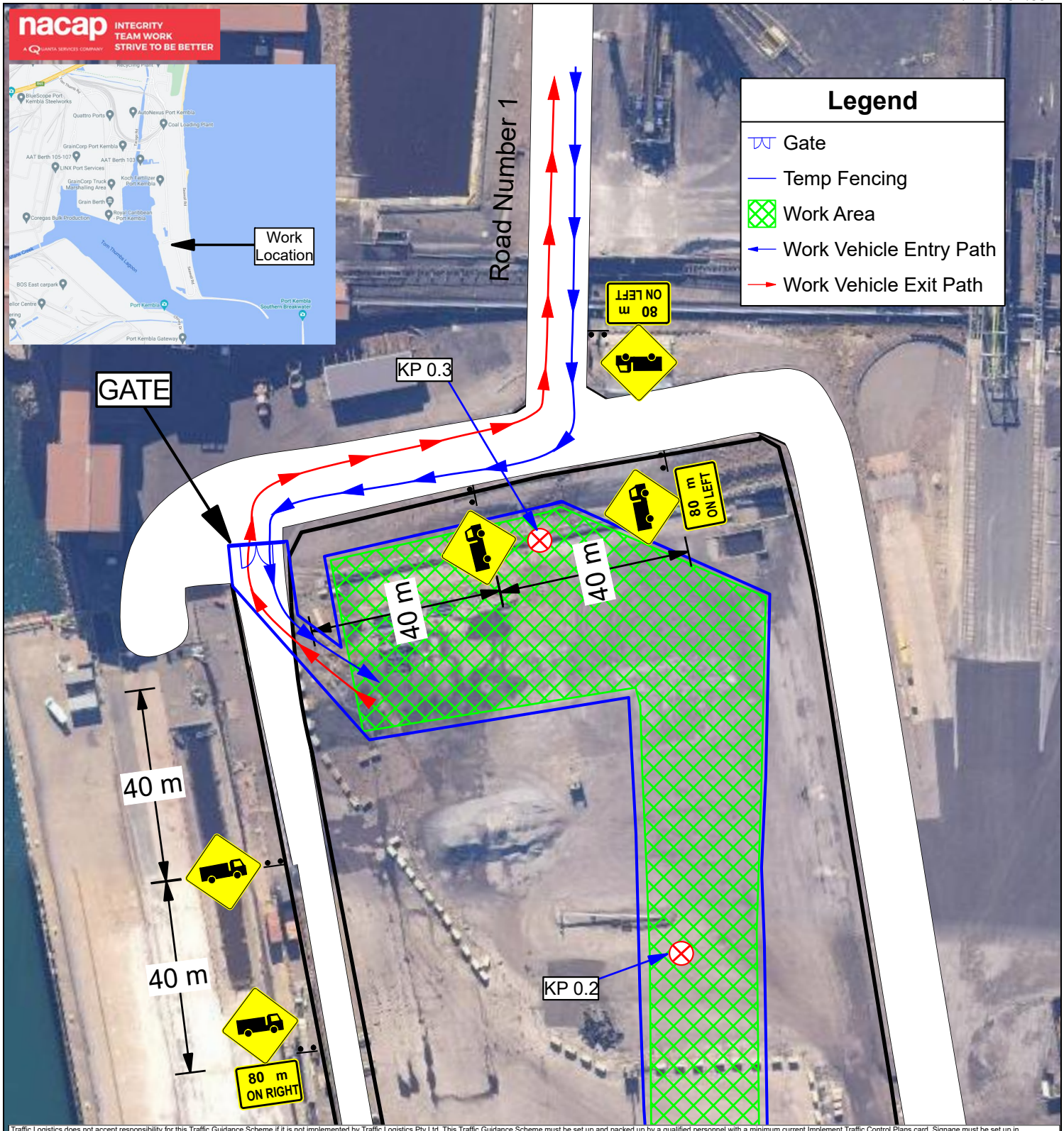
- Road Occupancy Licence/s to be attached to this document once approved by Transport for NSW.
- All other relevant approvals will need to be sent with this document.

Authorised approver of changes: _____, current PWZTMP licence holder.

PWZTMP Licence Number: _____

Signature: _____ Date: _____/_____/_____

nacap INTEGRITY TEAM WORK STRIVE TO BE BETTER
A QUANTA SERVICES COMPANY



Traffic Logistics does not accept responsibility for this Traffic Guidance Scheme if it is not implemented by Traffic Logistics Pty Ltd. This Traffic Guidance Scheme must be set up and packed up by a qualified personnel with a minimum current Implement Traffic Control Plans card. Signage must be set up in accordance with TCAWS Manual 2022 version 6.1 and Australian Standards 1742.3. Any modifications to this Traffic Guidance Scheme must be made by a qualified person with a current PWZTMP card. All modifications to this Traffic Guidance Scheme will need to be signed off by the client, dated and signed by the qualified PWZTMP cardholder and then sent back to the office for amendments.

Approximate speed of traffic	Traffic control beginning of taper	Lateral shift taper	Merge taper
45 or less	15	15	15
46 - 55	15	15	30
56 - 65	30	30	60
66 - 75	N/A	70	115
76 - 85	N/A	80	130
86 - 95	N/A	90	145
96 - 105	N/A	100	160
Greater than 105	N/A	110	180

Purpose and Usage	Speed zone of device location km/h	Maximum spacing m
On approach to a traffic controller position (cautie or stop line)	All cases	4
Merge tapers	55 to 75	9
	greater than 75	12
Lateral shift tapers	55 to 75	12
	greater than 75	18
Protecting freshly painted lines	55 to 75	24
	greater than 75	60*
All other purposes*	less than or equal to 55	4
	55 to 75	12
	greater than 75	18

Signage Size/Types: A and B sizes used: Boxed Edge on metal legs and swing stand signs.
Cone Size/Types: 700mm high orange for delineation and yellow for warning of services or to bring attention to site entries.
C Class Arrow Boards and PTD's should not be towed at more than 80km per hour. Only qualified people are to operate this equipment.
Pedestrian access must be maintained where possible. Adequate provision should be made for pedestrians and mobility aid users at every job site.

Local constraints may not allow signage and devices to be placed in accordance with this TGS. The ITCP qualified person may vary the positioning of signs and devices in accordance with tolerances shown in Section 7.10.3 of the TCAWS Manual V 6.1 2022.

Any departures outside of the tolerances shall be shown on this TGS. The TGS is to be set up and packed up by qualified traffic controllers with minimum current Implement Traffic Control Plans card. Any modifications to this TGS is to be made by qualified personnel. This TGS has no departures from TCAWS V6.1.

N W E S

TRAFFIC LOGISTICS

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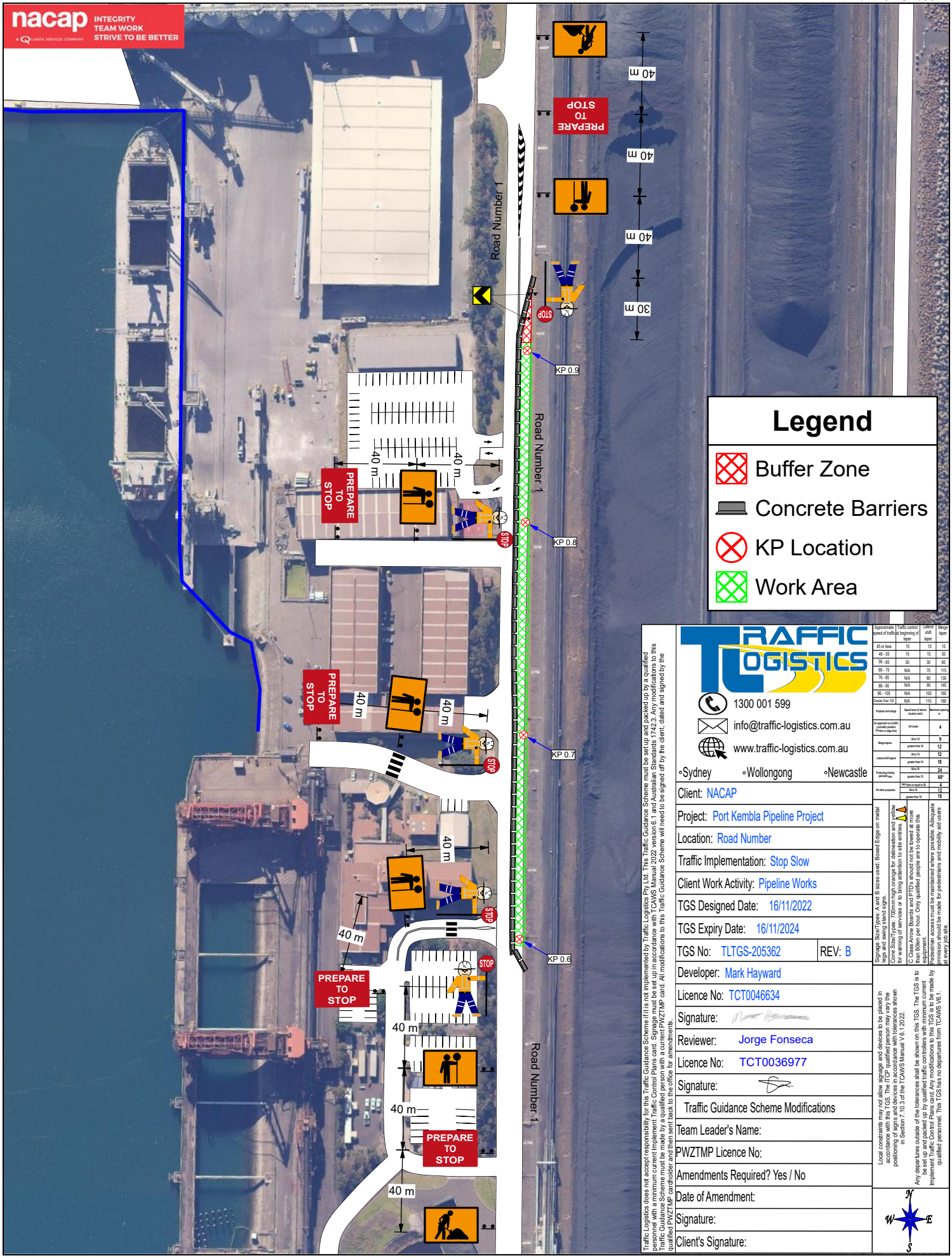
info@traffic-logistics.com.au
www.traffic-logistics.com.au
Sydney Wollongong Newcastle

Client: NACAP	TGS No: TLTGS-205360	REV: E	Traffic Guidance Scheme Modifications
Project: Port Kembla Pipeline Project	Developer: Mark Hayward		Team Leader's Name:
Location: Road Number 1 Coal Terminal	Licence No: TCT0046634		PWZTMP Licence No:
Traffic Implementation: Site Access	Signature:		Amendments Required? Yes / No
Client Work Activity: Port Kembla Pipeline Project	Reviewer: Jorge Fonseca		Date of Amendment:
TGS Designed Date: 23/11/2022	Licence No: TCT0036977		Signature:
TGS Expiry Date: 23/11/2024	Signature:		Client's Signature:



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Client:	NACAP
Project:	Port Kembla Pipeline Project
Location:	Road Number
Traffic Implementation:	Stop Slow
Client Work Activity:	Pipeline Works
TGS Designed Date:	16/11/2022
TGS Expiry Date:	16/11/2024
TGS No:	TLTGS-205362 REV: B
Developer:	Mark Hayward
Licence No:	TCT0046634
Signature:	
Reviewer:	Jorge Fonseca
Licence No:	TCT0036977
Signature:	
Traffic Guidance Scheme Modifications	
Team Leader's Name:	
PWZTMP Licence No:	
Amendments Required? Yes / No	
Date of Amendment:	
Signature:	
Client's Signature:	

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Approximate speed of traffic	Traffic control beginning of taper	Lateral shift taper	Merge taper
45 or less	15	15	15
46 - 55	15	15	30
56 - 65	30	30	60
66 - 75	N/A	70	110
76 - 85	N/A	80	130
86 - 95	N/A	90	145
96 - 105	N/A	100	160
Greater than 105	N/A	110	180

Purpose and Usage	Speed zone of device location km/h	Maximum spacing m
On approach to a traffic controller position (Pilots or edge line)	All zones	4
Merge tapers	50 to 75	9
	greater than 75	12
Lateral shift tapers	50 to 75	12
	greater than 75	18
Protecting freshly painted lines	50 to 75	24
	greater than 75	60*
All other purposes	*** Bias or equal to 50	4
	50 to 75	12
	greater than 75	18

Signage Size/Types: A and B sizes used: Boxed Edge on metal legs and swing stand sights.
Cone Size/Types : 700mm high orange for delineation and yellow for warning of restrictions or to bring attention to site entries.
C Class Arrow Boards and PTD's should not be towed at more than 60 kms per hour. Only qualified people are to operate this equipment.
Pedestrian access must be maintained where possible. Adequate provision should be made for pedestrians and mobility aid users at every job site.

Local constraints may not allow signage and devices to be placed in accordance with this TGS. The ITOP qualified person may vary the positioning of signs and devices in accordance with tolerances shown in Section 7.10.3 of the TCAWS Manual V 6.1 2022.

Any departures outside of the tolerances shall be shown on this TGS. The TGS is to be set up and packed up by qualified traffic controllers with minimum current Implement Traffic Control Plans card. Any modifications to this TGS is to be made by qualified personnel. This TGS has no departures from TCAWS V6.1.

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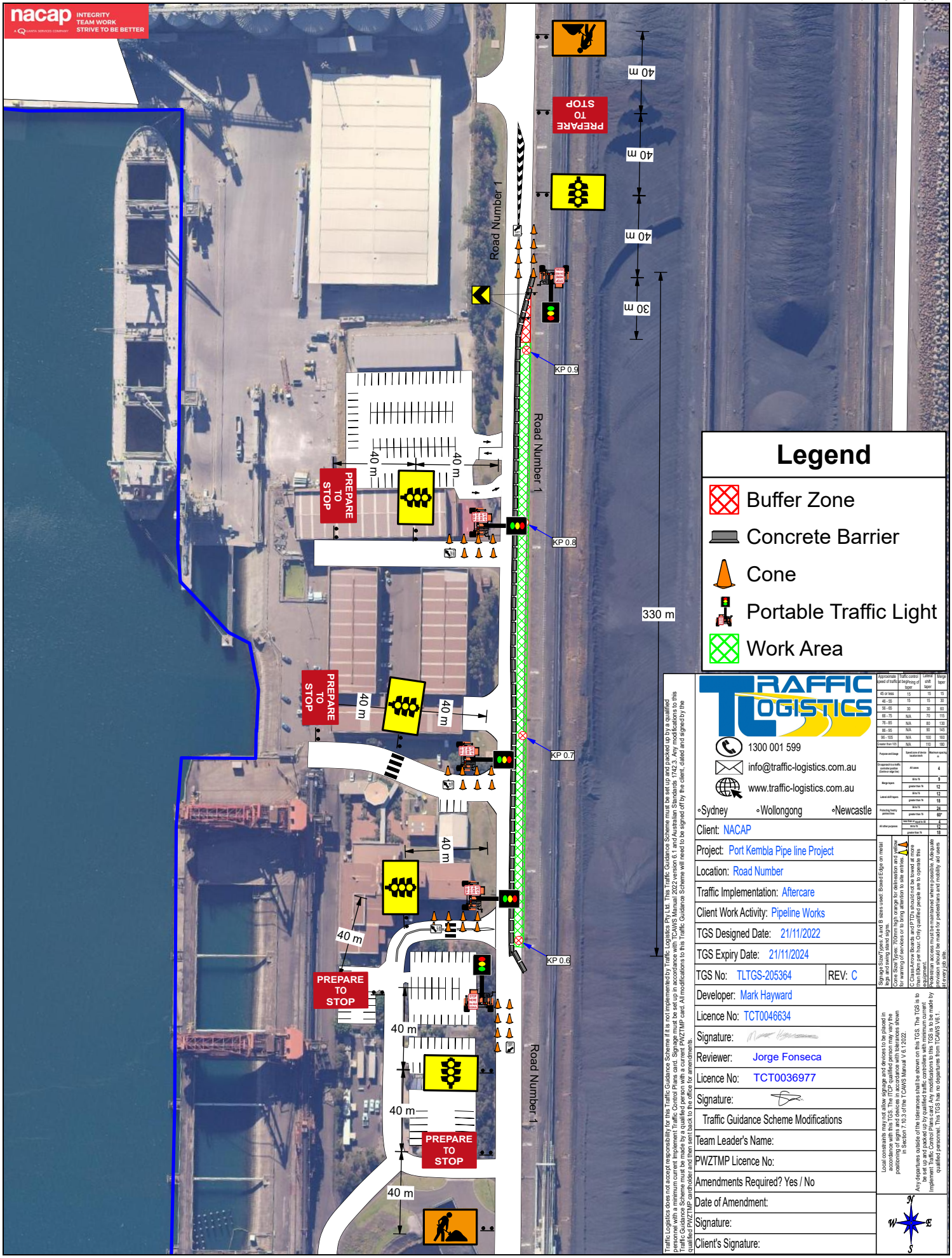

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◦Sydney ◦Wollongong ◦Newcastle

Client:	NACAP
Project:	Port Kembla Pipe line Project
Location:	Road Number
Traffic Implementation:	Aftercare
Client Work Activity:	Pipeline Works
TGS Designed Date:	21/11/2022
TGS Expiry Date:	21/11/2024
TGS No:	TLTGS-205364 REV: C
Developer:	Mark Hayward
Licence No:	TCT0046634
Signature:	
Reviewer:	Jorge Fonseca
Licence No:	TCT0036977
Signature:	
Traffic Guidance Scheme Modifications	
Team Leader's Name:	
PWZTMP Licence No:	
Amendments Required? Yes / No	
Date of Amendment:	
Signature:	
Client's Signature:	

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Approximate speed of traffic at beginning of taper	Traffic control taper	Lateral shift taper	Merge taper
40 or less	15	15	15
45 - 55	15	15	30
56 - 65	30	30	60
66 - 75	N/A	70	115
76 - 85	N/A	85	130
86 - 95	N/A	90	145
96 - 105	N/A	100	160
Greater than 105	N/A	110	180

Purpose and Usage	Spacing zone of device location (m)	Maximum spacing m
On approach to a traffic controller position (minimum edge line)	All cases	4
Merge tapers	60 to 75	9
	greater than 75	12
Lateral shift tapers	60 to 75	12
	greater than 75	16
Protecting hazardous conditions	60 to 75	24
	greater than 75	60*
Mid-Block or equal to 60		4
All other purposes	60 to 75	24
	greater than 75	60

Signage Size/Types: A and B sizes used. Boxed Edge on metal legs and swing stand signs.

Cone Size/Types: 700mm high orange for delineation and yellow for warning of services or to bring attention to site entries.

C Class Arrow Boards and PTD's should not be towed at more than 40km per hour. Only qualified people are to operate this equipment.

Pedestrian access must be maintained where possible. Adequate provision should be made for pedestrians and mobility aid users at every site.

Local constraints may not allow signage and devices to be placed in accordance with this TGS. The TGS is to be modified to suit the positioning of signs and devices in accordance with tolerances shown in Section 7.10.3 of the TCAWS Manual V 6.1:2022.

Any departures outside of the tolerances shall be shown on this TGS. The TGS is to be set up and packed up by qualified traffic controllers with minimum current Implement Traffic Control Plans card. Any modifications to this TGS is to be made by qualified personnel. This TGS has no departures from TCAWS V6.1.

N W E S

Traffic Logistics does not accept responsibility for this Traffic Guidance Scheme if it is not implemented by Traffic Logistics Pty Ltd. This Traffic Guidance Scheme must be set up and packed up by a qualified personnel with a minimum current Implement Traffic Control Plans card. Signage must be set up in accordance with TCAWS Manual 2022 version 6.1 and Australian Standards 1742.3. Any modifications to this Traffic Guidance Scheme must be made by a qualified person with a current PWZTMP card. All modifications to this Traffic Guidance Scheme will need to be signed off by the client, dated and signed by the qualified PWZTMP cardholder and then sent back to the office for amendments.

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Client: NACAP

Project: Port Kembla Pipeline Project

Location: Road Number 1

Traffic Implementation: Stop Slow

Client Work Activity: Pipeline Works

TGS Designed Date: 21/11/2022

TGS Expiry Date: 21/11/2024

TGS No: TLTGS-205365 REV: D

Developer: Mark Hayward

Licence No: TCT0046634

Signature:

Reviewer: Jorge Fonseca

Licence No: TCT0036977

Signature:

Traffic Guidance Scheme Modifications

Team Leader's Name:

PWZTMP Licence No:

Amendments Required? Yes / No

Date of Amendment:

Signature:

Client's Signature:

Approximate speed of traffic	Traffic control at beginning of taper	Lateral shift taper	Merge taper
45 or less	15	15	15
46 - 55	15	15	30
56 - 65	30	30	60
66 - 75	N/A	70	115
76 - 85	N/A	80	130
86 - 95	N/A	90	145
96 - 105	N/A	100	160
Greater than 105	N/A	110	180

Purpose and Usage	Speed zone of device location km/h	Maximum spacing m
On approach to a traffic controller position (Centre or edge line)	All cases	4
Merge tapers	55 to 75	9
	greater than 76	12
Lateral shift tapers	55 to 75	12
	greater than 76	18
Protecting freshly painted lines	56 to 75	24
	greater than 75	60*
All other purposes	less than or equal to 55	4
	56 to 75	12
	greater than 76	18

Signage Size/Types: A and B sizes used: Boxed Edge on metal legs and swing stand signs.

Cone Size/Types: 700mm high orange for delineation and yellow for warning of services or to bring attention to site entries.

C Class Arrow Boards and PTD's should not be towed at more than 80km per hour. Only qualified people are to operate this equipment.

Pedestrian access must be maintained where possible. Adequate provision should be made for pedestrians and mobility aid users at every job site.

Local constraints may not allow signage and devices to be placed in accordance with this TGS. The ITCP qualified person may vary the positioning of signs and devices in accordance with tolerances shown in Section 7.10.3 of the TCAWS Manual V 6.1 2022.

Any departures outside of the tolerances shall be shown on this TGS. The TGS is to be set up and packed up by qualified traffic controllers with minimum current Implement Traffic Control Plans card. Any modifications to this TGS is to be made by qualified personnel. This TGS has no departures from TCAWS V6.1.

N W E S

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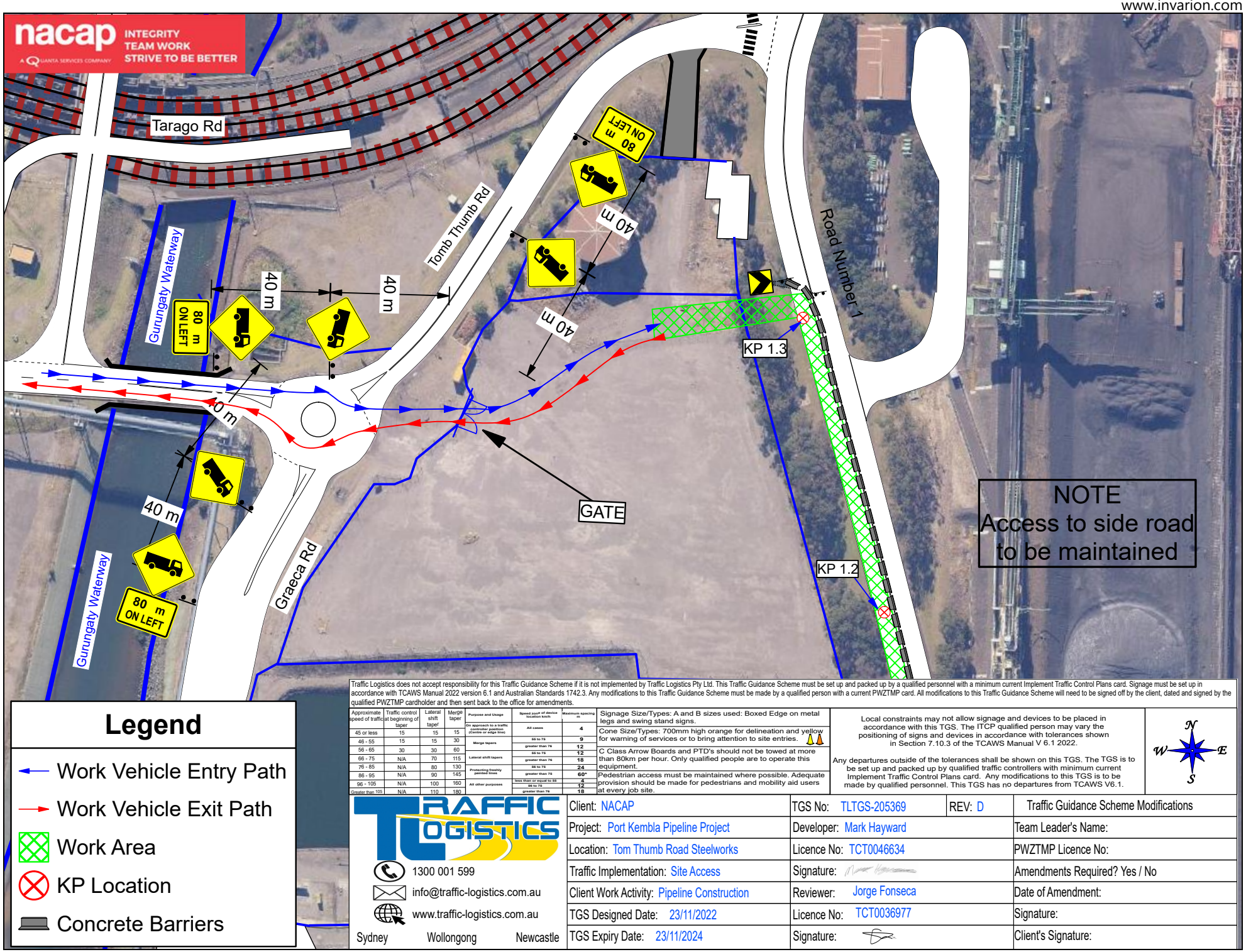

Legend

- Work Vehicle Entry Path
- Work Vehicle Exit Path
- Work Area
- KP Location
- Concrete Barriers

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Approximate speed of traffic	Traffic control at beginning of taper	Lateral shift taper	Merge taper
45 or less	15	15	15
46 - 55	15	15	30
56 - 65	30	30	60
66 - 75	N/A	70	115
76 - 85	N/A	80	130
86 - 95	N/A	90	145
96 - 105	N/A	100	160
Greater than 105	N/A	110	180

Purpose and Usage	Speed zone of device location km/h	Maximum spacing m
On approach to a traffic controller position (Centre or edge line)	All cases	4
Merge tapers	55 to 75	9
	greater than 76	12
Lateral shift tapers	55 to 75	12
	greater than 76	18
Protecting freshly painted lines	55 to 75	24
	greater than 75	60*
All other purposes	less than or equal to 55	4
	56 to 75	12
	greater than 76	18

Signage Size/Types: A and B sizes used: Boxed Edge on metal legs and swing stand signs.

Cone Size/Types: 700mm high orange for delineation and yellow for warning of services or to bring attention to site entries.

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TRAFFIC LOGISTICS
1300 001 599
info@traffic-logistics.com.au
www.traffic-logistics.com.au
Sydney Wollongong Newcastle

Client: NACAP	TGS No: TLTGS-205369	REV: D	Traffic Guidance Scheme Modifications
Project: Port Kembla Pipeline Project	Developer: Mark Hayward		Team Leader's Name:
Location: Tom Thumb Road Steelworks	Licence No: TCT0046634		PWZTMP Licence No:
Traffic Implementation: Site Access	Signature:		Amendments Required? Yes / No
Client Work Activity: Pipeline Construction	Reviewer: Jorge Fonseca		Date of Amendment:
TGS Designed Date: 23/11/2022	Licence No: TCT0036977		Signature:
TGS Expiry Date: 23/11/2024	Signature:		Client's Signature:

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NOTE
At least one of the north or south driveways to be left open for access from grain corp

Legend

- Concrete barriers
- Cone
- Work Area

Tomb Thumb Rd
KP 1.9
KP 1.8
KP 1.7
Targo Rd
Farrer Rd
Morton Rd
Gurungaty Waterway
STOP
PREPARE TO STOP
40 m

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Client:	NACAP
Project:	Pipeline
Location:	Tom Thumb Road
Traffic Implementation:	Stop Slow
Client Work Activity:	Pipeline Construction
TGS Designed Date:	18/11/2022
TGS Expiry Date:	18/11/2024
TGS No:	TLTGS-205370 REV: D
Developer:	Mark Hayward
Licence No:	TCT0046634
Signature:	
Reviewer:	Jorge Fonseca
Licence No:	TCT0036977
Signature:	
Traffic Guidance Scheme Modifications	
Team Leader's Name:	
PWZTMP Licence No:	
Amendments Required? Yes / No	
Date of Amendment:	
Signature:	
Client's Signature:	

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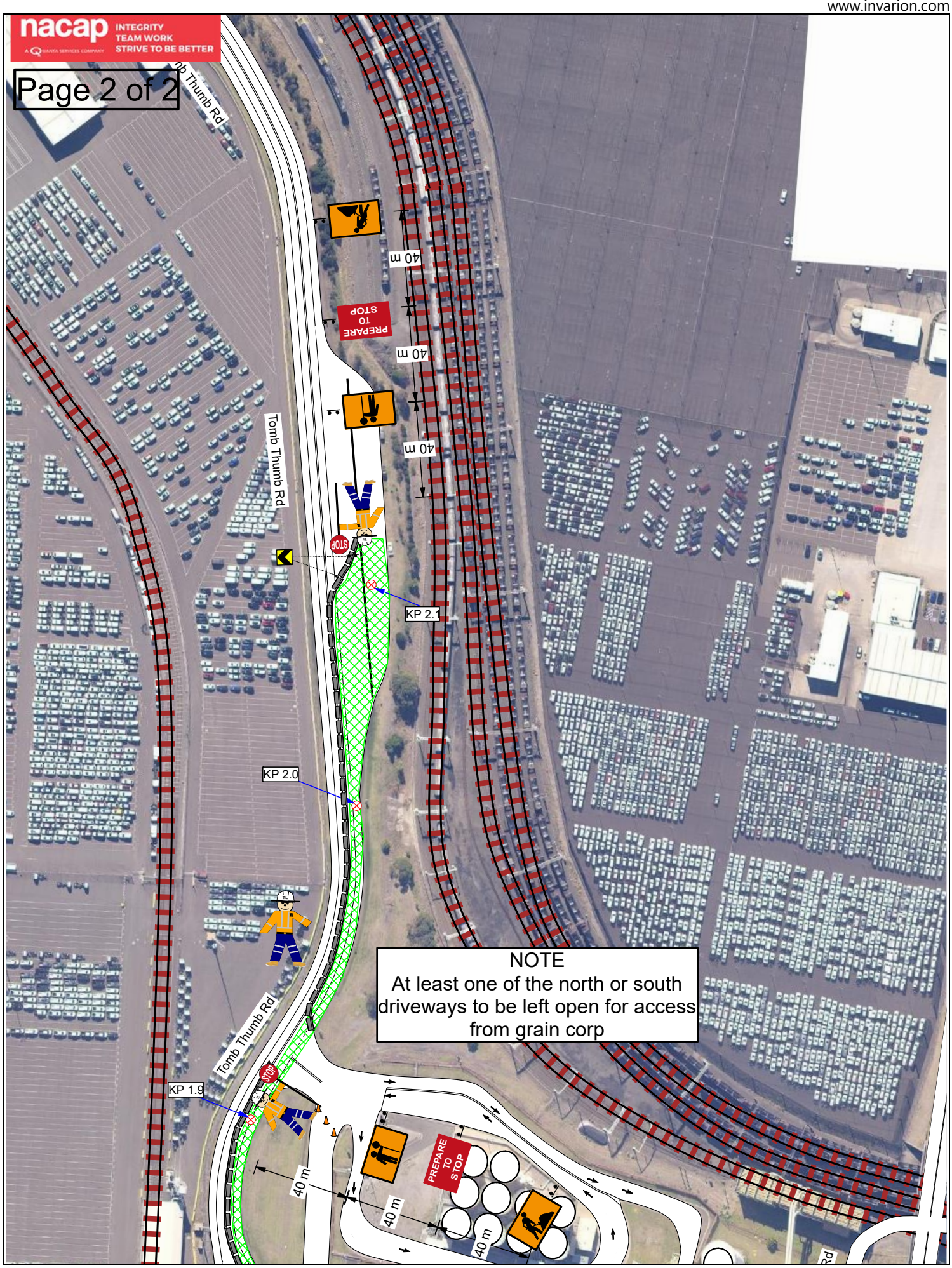

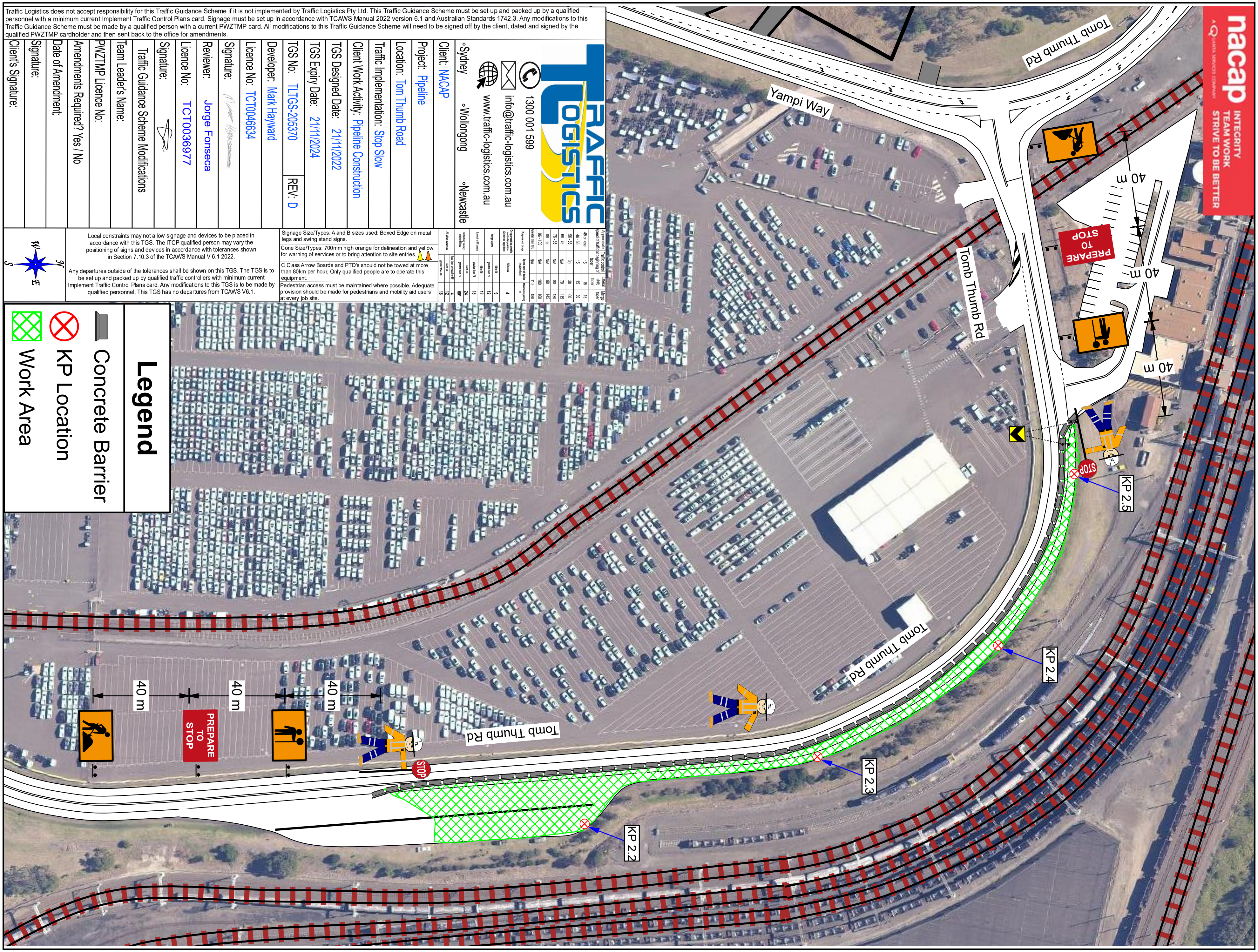

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Client: NACAP
Project: Pipeline
Location: Tom Thumb Road
Traffic Implementation: Stop Slow
Client Work Activity: Pipeline Construction
TGS Designed Date: 21/11/2022
TGS Expiry Date: 21/11/2024
TGS No: TLTGS-205370 REV: D
Developer: Mark Hayward
Licence No: TCT0046634
Signature:
Reviewer: Jorge Fonseca
Licence No: TCT0036977
Signature:

Traffic Guidance Scheme Modifications
Team Leader's Name:
PWZTMP Licence No:
Amendments Required? Yes / No
Date of Amendment:
Signature:
Client's Signature:

Approximate speed of traffic	Traffic control at beginning of taper	Lateral shift taper	Merge taper
45 or less	15	15	15
46 - 55	15	15	30
56 - 65	30	30	60
66 - 75	N/A	70	115
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86 - 95	N/A	90	145
96 - 105	N/A	100	160
Greater than 105	N/A	110	180

Purpose and Usage	Speed zone of device location km/h	Maximum spacing m
On approach to a traffic controller position (Centre or edge line)	All cases	4
Merge tapers	55 to 75	9
	greater than 76	12
Lateral shift tapers	55 to 75	12
	greater than 76	18
Protecting freshly painted lines	56 to 75	24
	greater than 75	60*
All other purposes	less than or equal to 55	4
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Approximate speed of traffic	Traffic control at beginning of taper	Lateral shift taper	Merge taper
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	greater than 76	18
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	greater than 75	60*
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Client:	NACAP
Project:	Pipeline
Location:	Tom Thumb Road
Traffic Implementation:	Aftercare
Client Work Activity:	Pipeline Construction
TGS Designed Date:	21/11/2022
TGS Expiry Date:	21/11/2024
TGS No:	TLTGS-205370 REV: E
Developer:	Mark Hayward
Licence No:	TCT0046634
Signature:	
Reviewer:	Jorge Fonseca
Licence No:	TCT0036977
Signature:	

Traffic Guidance Scheme Modifications

Team Leader's Name:	
PWZTMP Licence No:	
Amendments Required? Yes / No	
Date of Amendment:	
Signature:	
Client's Signature:	

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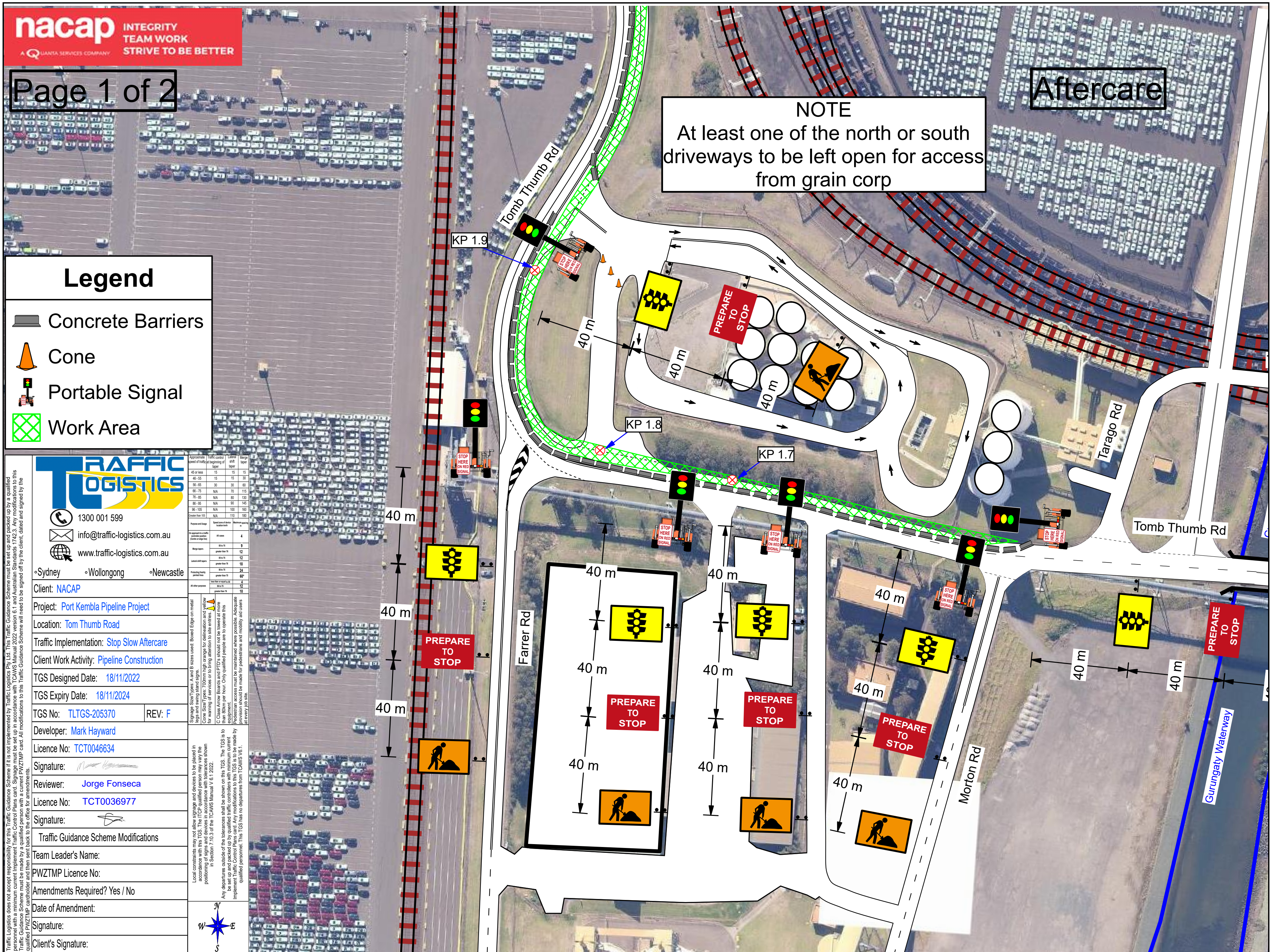

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Client: NACAP	
Project: Port Kembla Pipeline Project	
Location: Tom Thumb Road	
Traffic Implementation: Stop Slow Aftercare	
Client Work Activity: Pipeline Construction	
TGS Designed Date: 18/11/2022	
TGS Expiry Date: 18/11/2024	
TGS No: TLTGS-205370	REV: F
Developer: Mark Hayward	
Licence No: TCT0046634	
Signature:	
Reviewer: Jorge Fonseca	
Licence No: TCT0036977	
Signature:	
Traffic Guidance Scheme Modifications	
Team Leader's Name:	
PWZTMP Licence No:	
Amendments Required? Yes / No	
Date of Amendment:	
Signature:	
Client's Signature:	

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Approximate speed of traffic	Traffic control at beginning of taper	Lateral shift taper	Merge taper
45 or less	15	15	15
46 - 55	15	15	30
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76 - 85	N/A	80	130
86 - 95	N/A	90	145
96 - 105	N/A	100	160
Greater than 105	N/A	110	180

Purpose and Usage	Speed zone of device location km/h	Maximum spacing m
On approach to a traffic controller position (Centre or edge line)	All cases	4
Merge tapers	55 to 75	9
	greater than 76	12
Lateral shift tapers	55 to 75	12
	greater than 76	18
Protecting freshly painted lines	56 to 75	24
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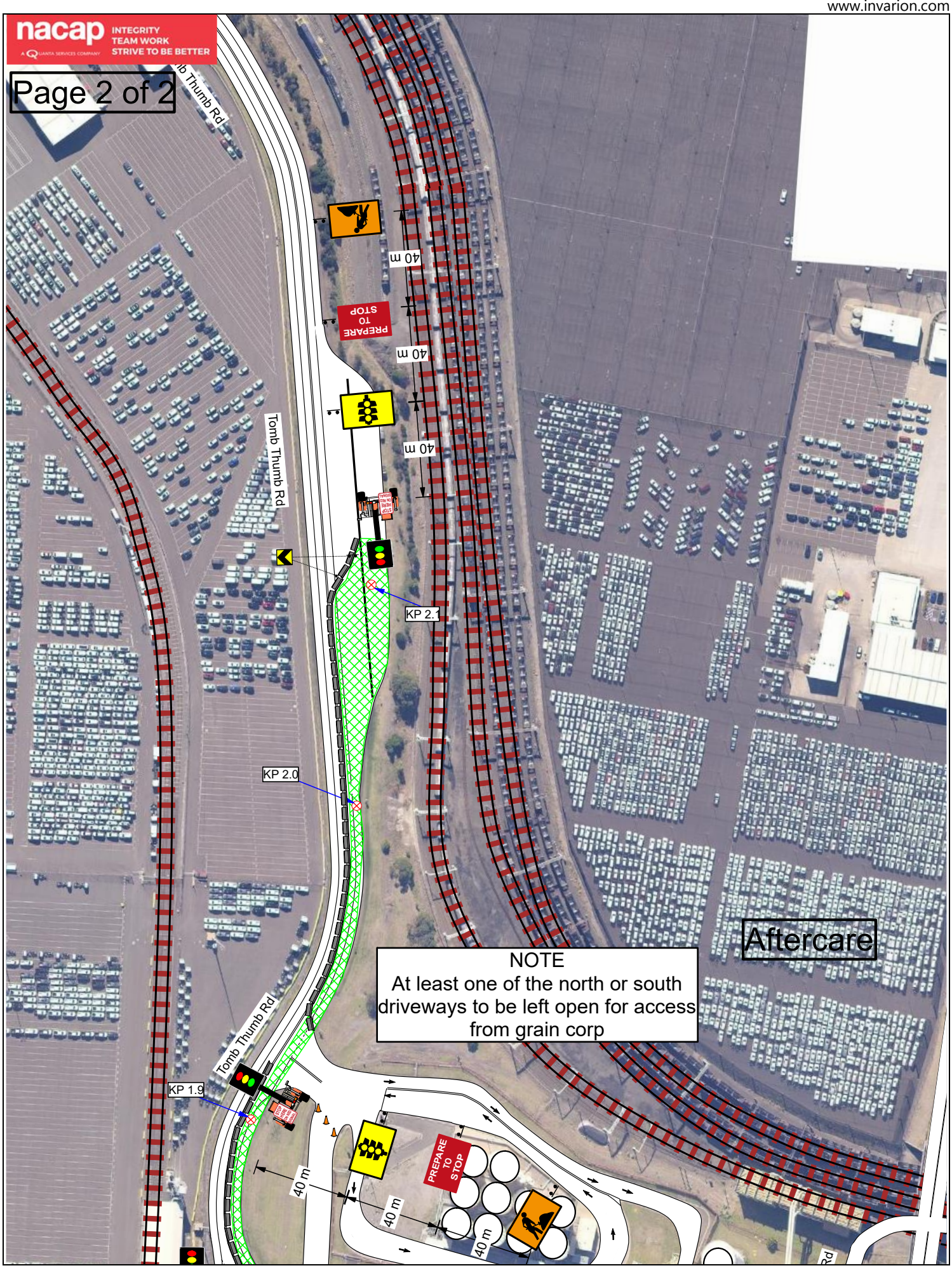

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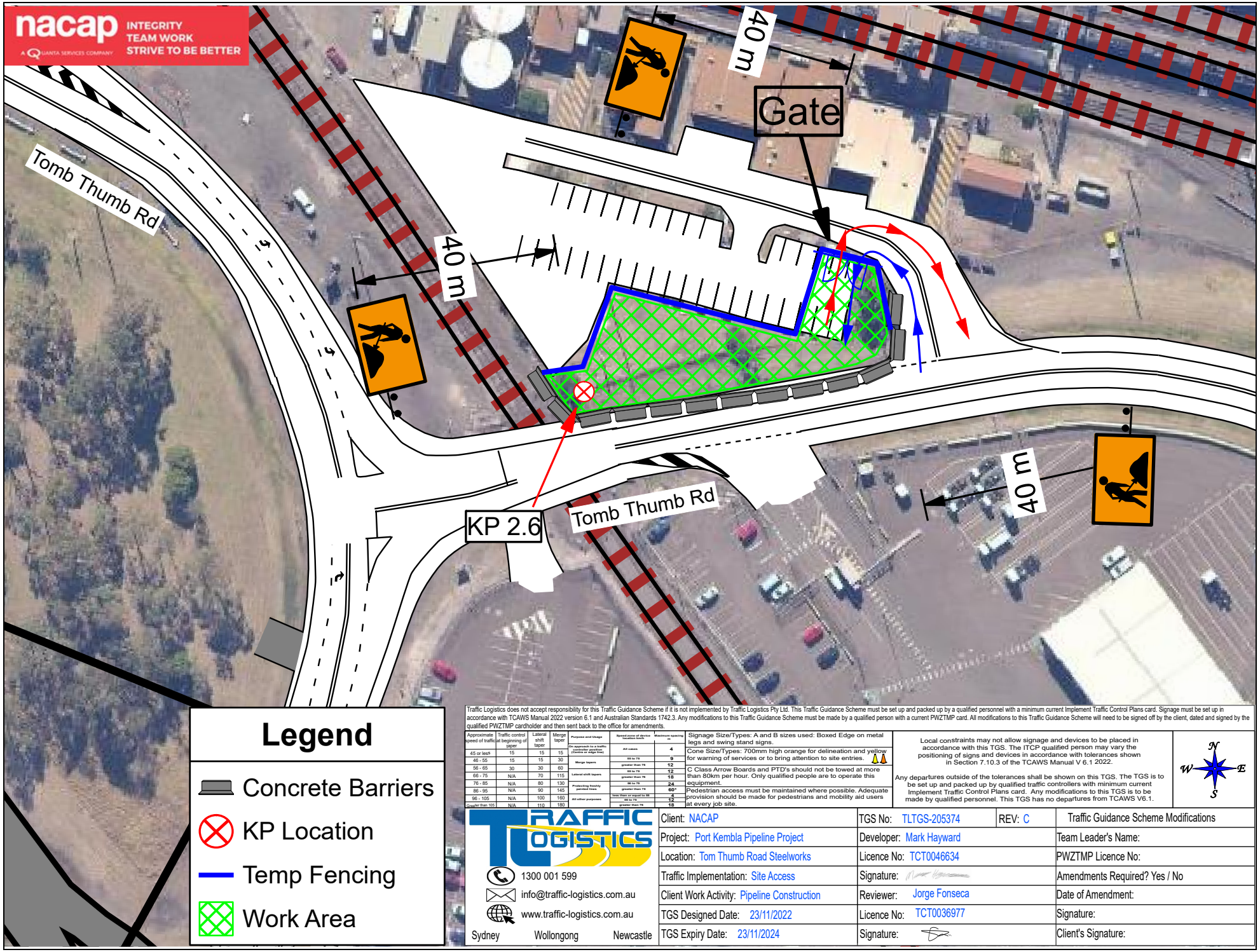

Legend

- Concrete Barriers
- KP Location
- Temp Fencing
- Work Area

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Approximate speed of traffic	Traffic control at beginning of taper	Lateral shift taper	Merge taper
45 or less*	15	15	15
46 - 55	15	15	30
56 - 65	30	30	60
66 - 75	N/A	70	115
76 - 85	N/A	80	130
86 - 95	N/A	90	145
96 - 105	N/A	100	160
Greater than 105	N/A	110	180

Purpose and Usage	Speed zone of device location kmh	Maximum spacing, m
On approach to a traffic controller position (centre or edge line)	All cases	4
Merge tapers	50 to 75	9
	greater than 75	12
Lateral shift tapers	50 to 75	12
	greater than 75	18
Protecting freshly painted lines	50 to 75	24
	greater than 75	60*
All other purposes	less than or equal to 50	4
	50 to 75	12
	greater than 75	18

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www.traffic-logistics.com.au
Sydney Wollongong Newcastle

Client: NACAP	TGS No: TLTGS-205374	REV: C	Traffic Guidance Scheme Modifications
Project: Port Kembla Pipeline Project	Developer: Mark Hayward		Team Leader's Name:
Location: Tom Thumb Road Steelworks	Licence No: TCT0046634		PWZTMP Licence No:
Traffic Implementation: Site Access	Signature:		Amendments Required? Yes / No
Client Work Activity: Pipeline Construction	Reviewer: Jorge Fonseca		Date of Amendment:
TGS Designed Date: 23/11/2022	Licence No: TCT0036977		Signature:
TGS Expiry Date: 23/11/2024	Signature:		Client's Signature:

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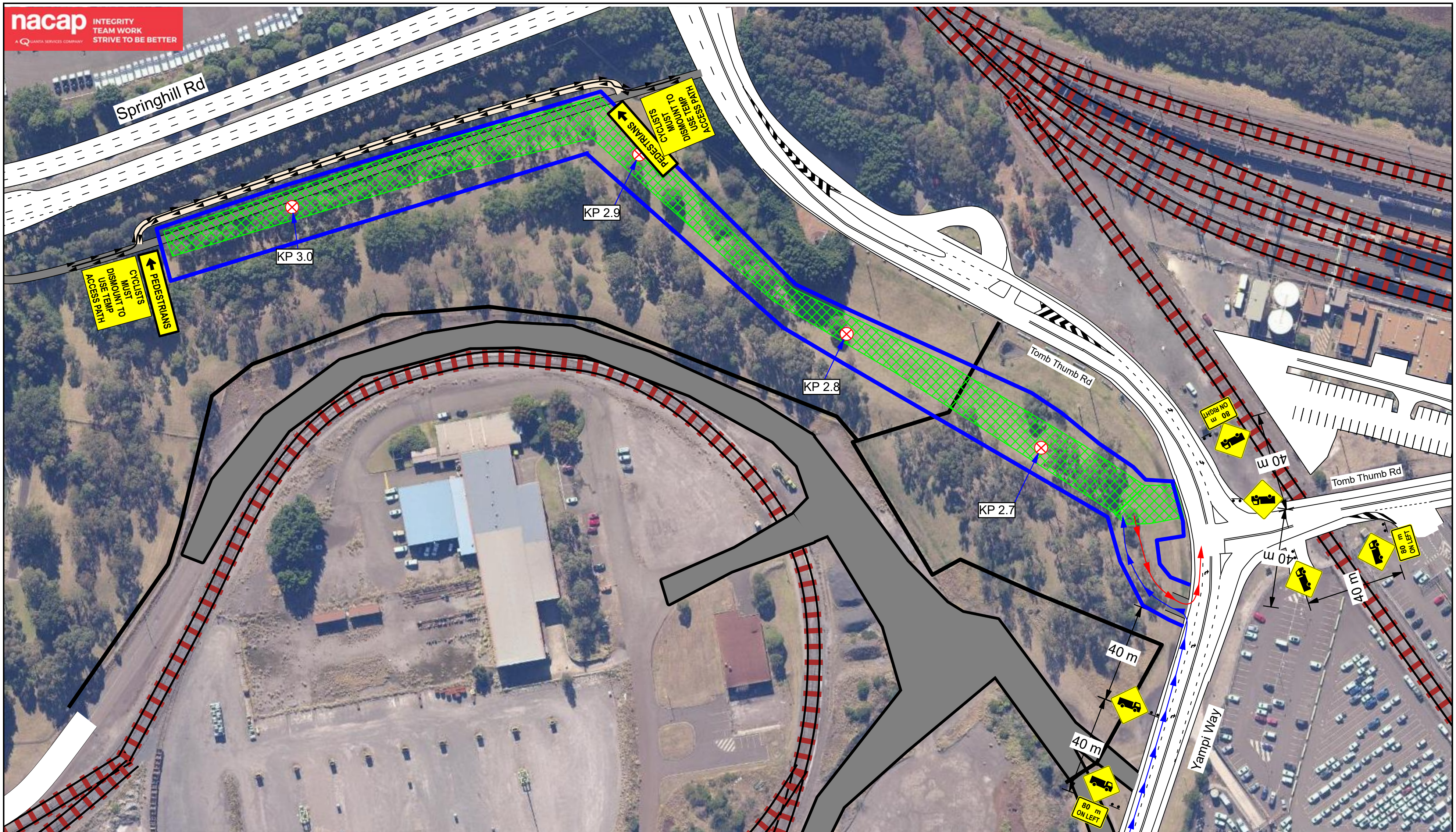

Legend

- KP Locations
- Pedestrian and Cyclist
- Temp Cycleway
- Temp Fencing
- Work Area
- Work Vehicle Entry Path
- Work Vehicle Exit Path

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Approximate speed of traffic	Traffic control at beginning of taper	Lateral shift taper	Merge taper
45 or less	15	15	15
46 - 55	15	15	30
56 - 65	30	30	60
66 - 75	N/A	70	115
76 - 85	N/A	80	130
86 - 95	N/A	90	145
96 - 105	N/A	100	160
Greater than 105	N/A	110	180

Purpose and Usage	Speed zone of device location km/h	Maximum spacing m
On approach to a traffic controller position (Centre or edge line)	All cases	4
Merge tapers	55 to 75	9
	greater than 76	12
Lateral shift tapers	55 to 75	12
	greater than 76	18
Protecting freshly painted lines	56 to 75	24
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All other purposes	less than or equal to 55	4
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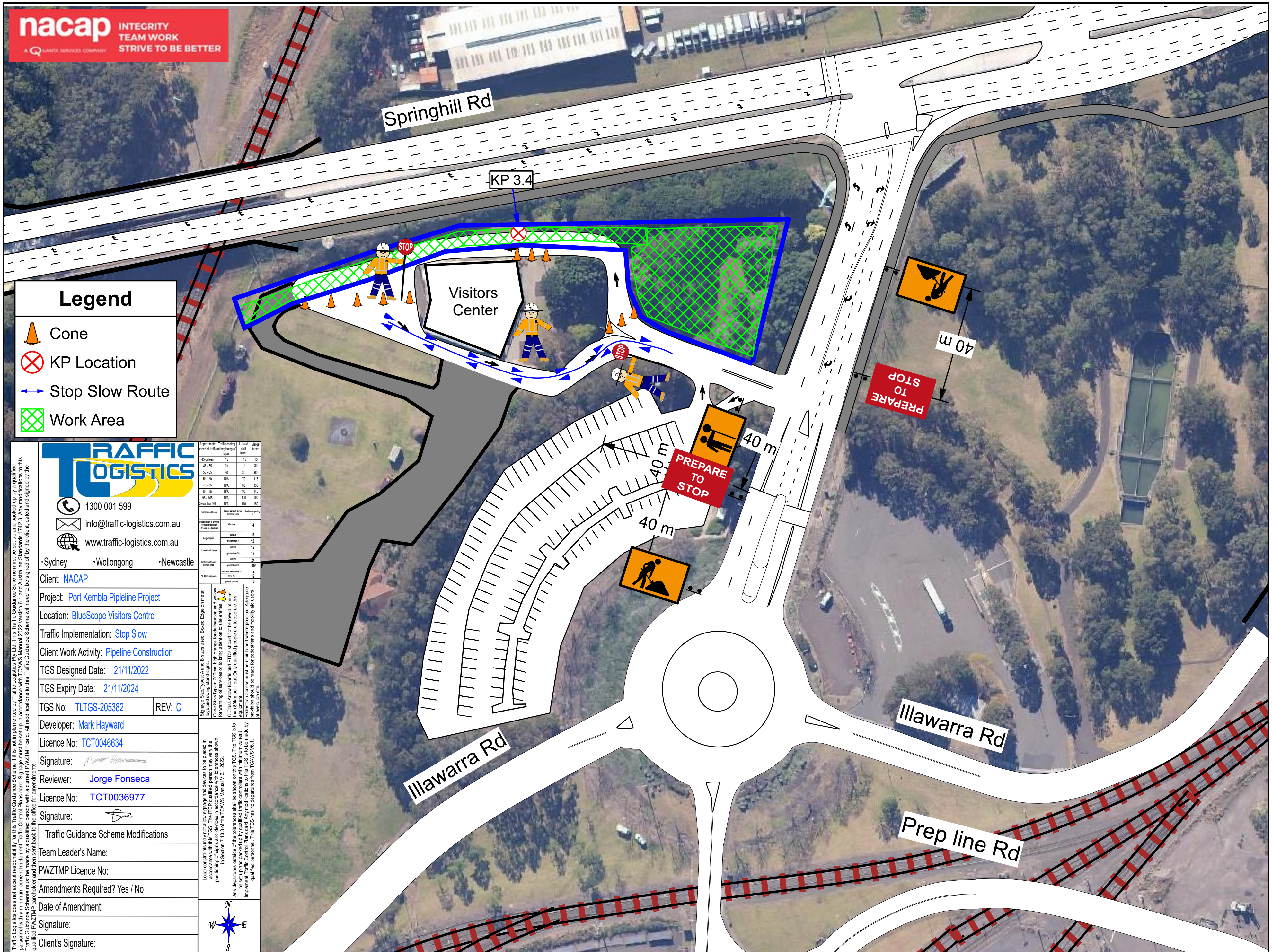
www.traffic-logistics.com.au
Sydney Wollongong Newcastle

Client: NACAP	TGS No: TLTGS-205376 REV: B	Traffic Guidance Scheme Modifications
Project: Port Kembla Pipeline Project	Developer: Mark Hayward	Team Leader's Name:
Location: Tom Thumb Road Steelworks	Licence No: TCT0046634	PWZTMP Licence No:
Traffic Implementation: Site Access	Signature:	Amendments Required? Yes / No
Client Work Activity: Pipeline Construction	Reviewer: Jorge Fonseca	Date of Amendment:
TGS Designed Date: 21/11/2022	Licence No: TCT0036977	Signature:
TGS Expiry Date: 21/11/2024	Signature:	Client's Signature:



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Client: NACAP

Project: Port Kembla Pipleline Project

Location: BlueScope Visitors Centre

Traffic Implementation: Stop Slow

Client Work Activity: Pipeline Construction

TGS Designed Date: 21/11/2022

TGS Expiry Date: 21/11/2024

TGS No: TLTGS-205382 REV: C

Developer: Mark Hayward

Licence No: TCT0046634

Signature:

Reviewer: Jorge Fonseca

Licence No: TCT0036977

Signature:

Traffic Guidance Scheme Modifications

Team Leader's Name:

PWZTMP Licence No:

Amendments Required? Yes / No

Date of Amendment:

Signature:

Client's Signature:

Approximate speed of traffic	Traffic control at beginning of taper	Lateral shift taper	Merge taper
45 or less	15	15	15
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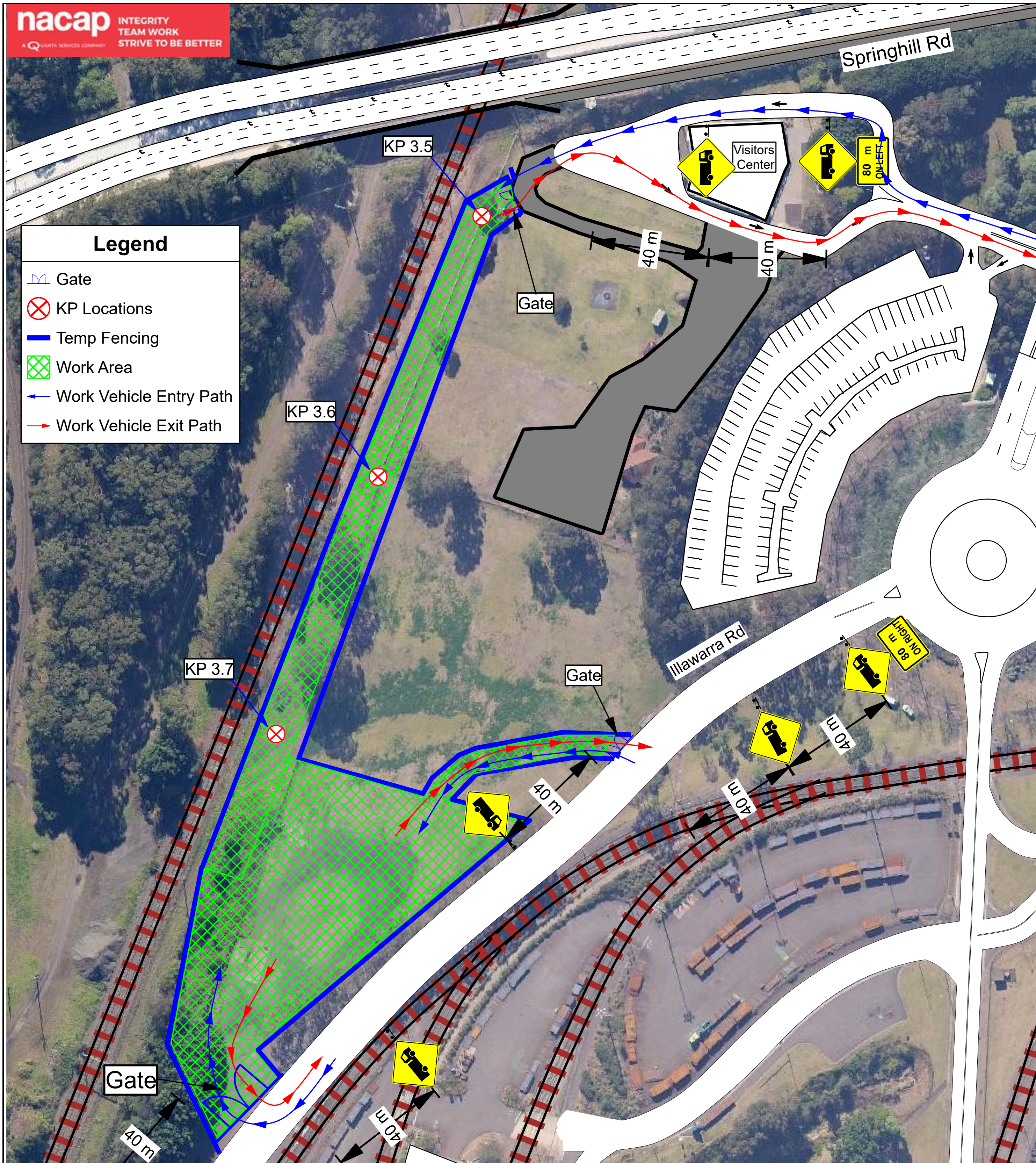

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	greater than 75	60*
All other purposes	less than or equal to 55	4
	56 to 75	12
	greater than 76	18

Signage Size/Types: A and B sizes used: Boxed Edge on metal legs and swing stand signs.

Cone Size/Types: 700mm high orange for delineation and yellow for warning of services or to bring attention to site entries.

C Class Arrow Boards and PTD's should not be towed at more than 80km per hour. Only qualified people are to operate this equipment.

Pedestrian access must be maintained where possible. Adequate provision should be made for pedestrians and mobility aid users at every job site.

Local constraints may not allow signage and devices to be placed in accordance with this TGS. The ITCP qualified person may vary the positioning of signs and devices in accordance with tolerances shown in Section 7.10.3 of the TCAWS Manual V 6.1 2022.

Any departures outside of the tolerances shall be shown on this TGS. The TGS is to be set up and packed up by qualified traffic controllers with minimum current Implement Traffic Control Plans card. Any modifications to this TGS is to be made by qualified personnel. This TGS has no departures from TCAWS V6.1.

N W E S

TRAFFIC LOGISTICS
1300 001 599
info@traffic-logistics.com.au
www.traffic-logistics.com.au
Sydney Wollongong Newcastle

Client: NACAP	TGS No: TLTGS-205410 REV: D	Traffic Guidance Scheme Modifications
Project: Port Kembla Pipeline Project	Developer: Mark Hayward	Team Leader's Name:
Location: Tom Thumb Road Steelworks	Licence No: TCT0046634	PWZTMP Licence No:
Traffic Implementation: Site Access	Signature:	Amendments Required? Yes / No
Client Work Activity: Pipeline Construction	Reviewer: Jorge Fonseca	Date of Amendment:
TGS Designed Date: 23/11/2022	Licence No: TCT0036977	Signature:
TGS Expiry Date: 23/11/2024	Signature:	Client's Signature:

APPENDIX D SAFE DRIVING AND LIGHT VEHICILE MANAGEMENT PROCEDURE

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Document Cover Sheet

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Document Number
GAS-599-PR-HSE-008

Revision 1

Code 1 - Issued with No Comments

Thomas Toleman - Jemena Asset Management
Aug 8, 2022, 12:27 PM GMT+10:00

nacap A QUANTA SERVICES COMPANY	**Supplier PO/Contract No:**	4600009903
	Supplier Item Description:	N/A
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Project Name:	Port Kembla Pipeline Project		
Supplier Document Title:	Port Kembla Pipeline Project – Safe Driving & Light Vehicle Management Procedure		
Supplier Document No:	GAS-599-PR-HSE-008	**Supplier Rev No:**	1
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		Total No of Pages (incl cover page)	24

Document Revision History:

Rev	Issue Date	Key Reason for Issue (as above table)	Approved By/ Signature	Company Name	Notes (if not applicable N/A)
A	1/04/2022	Issued for Review	Jason Heard	Nacap	
0	16/05/2022	Issued for Use	Jason Heard	Nacap	
1	22/06/2022	Issued for Use	Jason Heard	Nacap	

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IFR- Issued for Review	**IFI**- Issued for Information	**IFU**- Issued for Use
IFP- Issued for Purchase	**IFC**- Issued for Construction	**AB**- As Built

Jemena

Port Kembla Pipeline Project

SAFE DRIVING AND LIGHT VEHICLE MANAGEMENT PROCEDURE

Document No.: GAS-599-PR-HSE | Revision 1

Rev	Description	By	Checked	QA	Nacap Approved	Date
1	Issued for Use	JCU	ZFR	BPH	JHE	22-JUNE-2022
0	Issued for Use	JCU	ZFR	BPH	JHE	16-MAY-2022

SIGNATURE BLOCK INFORMATION:

By: Originator of the document as delegated by the head of the sponsoring department, project manager, or discipline lead.

Checked: Checked for process relevance against Company policies and objectives, as well as clarity, correctness, consistency, relevance, applicability and practicality, by the originators' supervisor, another department head or discipline manager; in accordance with the Approval Authority Matrix.

QA: Checked by the Management System Engineer or delegate, for overall compliance to Nacap Management System requirements.

Nacap Approved: Overall approval of the document contents, and commitment to implement; in accordance with the Approval Authority Matrix. Approval is generally not to be delegated.

{NB: Project documents may also be subject to client approval}

Notes:

- There must be at least three different people signing off among the four signature block columns on the title page
- The Approval Date is to be stated by the approver, in the format DD-MMM-YY (e.g., 22-APR-16), on the date actually approved.

REVISION HISTORY

This table describes the primary reason for the production of each new revision after Rev 0

Date	Rev	Reason for change

CONTENTS

LIST OF TABLES

1 GENERAL INFORMATION

1.1 Purpose

This procedure prescribes the minimum requirements for the use of light vehicles on Nacap business. Driving of light vehicles is recognised at Nacap as an inherently risky activity.

Driving at Nacap often includes travelling long distances in remote areas, often alone including off road and on unsealed roads by drivers with varying degrees of experience. Sometimes mobile telephone reception is unavailable or unreliable.

Nacap's objective is to provide safe systems of work that will:

- Moderate driver behaviour
- Define minimum levels of training and experience for authorisation of drivers
- Provide a guaranteed means for communication by drivers or passengers in times of distress, and
- Define vehicle and equipment standards.

More stringent requirements than included in this procedure shall be implemented whenever:

- A risk assessment demonstrates that a higher level of risk control is required, and / or
- A client imposes a higher standard of risk control on a project in accordance with contracted requirements.

1.2 Scope

1.2.1 Inclusions

This procedure applies to:

a) The driving of all light vehicles by Nacap personnel on Nacap business

b) Private use of Nacap vehicles, unless excluded under Section 1.2.2 d) below, and

c) Subcontractors and suppliers to projects, unless excluded under Section 1.2.2 below.

1.2.2 Exclusions

This procedure does not apply to:

a) Heavy vehicles (gross vehicle mass exceeding 4.5 tonnes), covered under separate documentation.

b) Subcontractor or supplier driving which is not related to a Nacap project.

c) Subcontractor or supplier driving on a project where the duration is less than 4 days or the nature of the activity is such that the Project Manager determines that it is not reasonably practicable to impose all the controls prescribed by this procedure.

When this occurs, the Project Manager shall prescribe the controls that are reasonably able to be applied, using the Driving Risk Assessment Form (**3905-HSE-156-F**), or similar risk assessment format to record the assessment. All deviations to be in consultation with Jemena PM and HSE.

d) After-hours use of Company Vehicles by personnel who, by virtue of their contract of employment, have an entitlement to full private use of the vehicle.

1.3 Definitions

Table 1 - Definitions

Term	Meaning
Company Vehicle	Light vehicle (gross vehicle mass less than 4.5 tonnes) owned or hired by Nacap.
Corporate Vehicle	Company Vehicle that is neither a Project Vehicle nor an Equipment Department Vehicle
Equipment Department Vehicle	Company Vehicle that is under operational control of the Equipment Department
Harsh Braking	Pre-determined G-force settings for deceleration of a vehicle, as recommended by the IVMS monitoring provider. For example, >1g for light vehicles.
HAZID	Hazard Identification workshop.
Project Vehicle	Company Vehicle allocated to a Project on a full-time basis.
Private Vehicle	Vehicle owned and insured by an individual.
Remote areas	Areas that are geographically isolated, unlikely to be able to be accessible via public roads and distant from population. Travelling to a populated area from a remote area is likely to be difficult and, should assistance be required, it would be unable to be raised and/or received within 30 minutes. Likely to encounter conditions such as off-road, undulating ground, possible creek and river crossings.
Urban	Relating to, or characteristic of a town or city. "the urban population" *synonyms:* Built up, town, city, inner-city, densely populated, metropolitan, suburban.

1.4 Abbreviations

Table 2 - Abbreviations

Abbreviation	Meaning
4WD	Four Wheel Drive
ABS	Antilock Braking System
BrAC	Breath Alcohol Content

Abbreviation	Meaning
CB	Citizens Band
EPIRB	Emergency Position Indicating Radio Beacon
ESC	Electronic Stability Control
GPS	Global Positioning System
GVM	Gross Vehicle Mass
HR	Human Resource
IVMS	In-Vehicle Monitoring System
KPI	Key Performance Indicator
OHS	Occupational Health and Safety
ROPS	Roll Over Protective Structure
ROW	Right of Way
RTO	A Registered Training Organisation under the Australian Quality Training Framework
SMS	Short Message Service
UHF	Ultra-High Frequency
VHF	Very High Frequency

2 ROLES AND RESPONSIBILITIES

In this document, the roles and responsibilities associated with driving are described in the appropriate section of this document.

3 WHEN TO PERFORM A RISK ASSESSMENT FOR DRIVING AND IVMS

3.1 General

This document covers the controls applicable for the majority of driving situations at Nacap. In some driving cases, the controls specified in this document are inappropriate in that situation.

Where determined by the risk assessment, the additional controls shall be applied.

3.1.1 Driving Risk Assessment

The circumstances below identify when a specific driving risk assessment shall be undertaken to identify and control the risks for that trip. The risk assessment decisions shall be recorded on the

Driving Risk Assessment Form (NAA-TQM-F156), or similar and signed by the Project Manager/Delegate.

Driving risk assessments to be undertaken:

a) During the pre-construction phase of a project (see **Section 3.2**)

b) Where project-based vehicle management resources have not been established or have ceased effective operation (for example, project early works, punch-listing, or defects liability).

c) For single vehicle travel to remote areas (i.e., bid visits).

3.1.2 IVMS Risk Assessment

All projects are required to conduct an IVMS Risk Assessment prior to project commencement. Assessment factors will include:

- Is the project in a metropolitan area?
- Is the Project Remote?
- Culture i.e. workforce known to Nacap?
- Is accommodation expected to be 45 mins from worksite?
- Is there off-road driving?

3.2 Project-specific driving

Once a project is awarded to Nacap, a project-specific driving risk assessment shall be undertaken as a part of the project construction HAZID workshop and shall include:

- Risk assessment of unsealed roads, access tracks and ROW
- Risk assessment associated with vehicle use
- Consideration of risks arising from environmental conditions
- Consideration of subcontractors, visitors and suppliers on the project.

Where the project construction HAZID requires documentation of the risks regarding unsealed roads, access tracks and right-of-way, the **Road Risk Assessment Form (3905-HSE-042-F)** shall be used. As above comment

4 DRIVERS AND PASSENGERS

4.1 Licencing

All drivers shall have a valid Australian driver's licence, or an international licence recognised as valid under the law.

4.2 Training

Drivers required to drive 4WD light vehicles on projects or as determined via risk assessment shall have completed one of the following or equivalent:

a) PMASUP236 - Operate vehicles in the field, or

b) TLIC2025 - Operate four-wheel drive vehicle, or

c) Both of:

i. RIIVEH201 - Operate light vehicle, and

ii. RIIVEH305 - Operate and maintain a 4WD, or

d) Verification of Competency in accordance with the Nacap corporate VOC Procedure (3904-OPS-002-3 Verification of Competency Procedure)

Where 4WD driving training is not a mandatory project requirement or where minimal off-road driving is required a 4WD VOC may be conducted as alternative to driver training. Consultation with the Head of HSEQ is required prior to VOC's for 4WD being approved as an alternative to a Nationally Recognised Training course.

Table 3 - Driving Training Matrix

Description	Minimum Training Required		
	Defensive Driving	4WD	Risk Assessment
Estimating Team		X**	
Office (Doncaster, Brisbane, Dubbo) – Nacap owned vehicle (offsite)	X**		
Projects			x*

*Hazid Workshop or development of a SWMS.

** Team members requiring training to be determined by Head of Department / Line Manager

A list of Registered Training Organisations (RTOs) that Nacap has pre-approved for achieving this training certification is attached at **Appendix A**.

4.3 Training – Defensive Driving

Drivers required to regularly drive Company Vehicles in built up areas should complete a defensive driving course, preferably by the providers listed in **Appendix A**.

4.4 Training – Driver Inductions

On projects, the relevant driver induction is provided by the project induction process and coordinated by the OHS Manager.

4.5 Records of Licencing and Training

4.5.1 Project

On projects, the person tasked with IVMS coordination shall collect and maintain the completed Driver Qualification Form **(3905-HSE-050-F)**.

Where there is no dedicated IVMS Coordinator, the Project OHS or Plant Manager is responsible for the project vehicle training records.

Subcontractors are required to maintain similar records in relation to their nominated drivers. Records of Subcontractor drivers shall also be kept by Nacap, including the Driver Qualification Form **3905-HSE-050-F**, except where excluded as described in **Section 1.2.2 (c)**.

4.5.2 Non-Project

For Nacap permanent staff, the HR Manager maintains records of driver training and licencing within the HR data base of records.

4.6 Project Designated Drivers

4.6.1 Designated Driver Selection

The Project Manager, or their delegate, shall assign driving responsibilities for Nacap personnel based upon:

- Role responsibilities and need to have access to a vehicle
- Age (minimum 25 years) and general driving experience (minimum 7 years)
- Driving experience in similar conditions
- Knowledge of their prior driving behaviour, and
- Fatigue considerations.

For personnel who do not meet the minimum requirements for age or experience, but cannot reasonably perform their duties without driving, approval by the Construction Manager or the Project Manager is required prior to any driving by that worker. In this case, the approval shall be recorded on the Driver Qualification Form (**3905-HSE-050-F)**.

4.6.2 Allocation of Vehicles to Designated Drivers

The Plant Department allocates Project Vehicles to designated drivers by completing the bottom section of the Driver Qualification Form **(3905-HSE-050-F)**, identifying the vehicle allocation details. The completed form is then returned to the person responsible for IVMS coordination.

In the event that a change of vehicle or the vehicle has been assigned to another driver, the designated driver (or Supervisor) must notify the person responsible for IVMS coordination (or the OHS Manager) immediately and update their Driver Qualification Form **(3905-HSE-050-F)**.

4.7 Driver Obligations

Responsibilities of drivers include:

a) Compliance with all road laws.

b) Subject to **Section 6.2** Alcohol and Driving, drivers shall always drive at zero BrAC

c) Drivers using prescription medicines that may impair coordination must request authorisation by the relevant (corporate or project) OHS Manager prior to driving a Company Vehicle, by completing the Driving Risk Assessment Form **(3905-HSE-156-F)** or alternative preferred format of risk assessment.

d) Ensure no consumption of alcohol by vehicle occupants and ensure no open alcohol is in the vehicle at any time.

e) Compliance with Fitness for Work (**3905-HSE-001-3**).

f) Completing basic maintenance obligations described in **Section 5.6.1**.

g) Condition inspection (i.e., 360 degree walk around).

h) Ensuring that the Equipment Department are notified when scheduled servicing and repairs are due.

i) Reporting of motor vehicle incidents to supervisor.

j) Notification of damage or repair required via the Incident or Hazard Card notification process.

k) Taking a break from driving at regular intervals. Australian road authorities recommend a break every 2 hours.

4.8 Passenger Obligations

Passengers in Company Vehicles shall:

a) Not distract the driver from the task of driving the vehicle.

b) Monitor the driver for signs of fatigue and prevent them from driving while fatigued.

c) Remind the driver of the need to take regular breaks.

d) Communicate with the driver, any concerns they have over the driver's performance.

e) Escalate concerns over a driver's performance to their Supervisor, if the driver's performance does not improve.

f) Not consume any alcohol, or carry open alcohol, in Company Vehicles.

g) Not smoke in Company Vehicles.

h) Not travel in the rear of utilities or troop carriers (except patients and paramedic in field ambulances).

5 VEHICLES

5.1 4WD Vehicles

Four-Wheel Drive (4WD) vehicles for use on projects shall, as a minimum, comply with the specification in

APPENDIX B – Minimum Specifications for Project **VEHICLES**. .

Project Vehicles shall be inspected by the Project Plant Superintendent (or Project Managers delegate) for compliance with the Company Vehicle Acceptance Form **(3905-HSE-041-F)**.

5.2 Ad-hoc Hired Vehicles

Ad-hoc hired vehicles shall be selected on the basis of suitability for the planned trip. For general highway travel in non-remote areas and driving in built up areas, 2WD or AWD cars are the preferred vehicle.

All bookings for ad-hoc vehicle hire should be made via the relevant receptionist (Doncaster or Brisbane office) or Project Administration Manager.

Persons requesting a hire vehicle shall ensure that the appropriate vehicle specifications, according to the nature of travel, are included in the request (see Section 5.3and Appendix B). Hire companies may not be able to supply vehicles with special equipment such as additional spare tyres, tubes or split rims, so these must be arranged specially, either via the Plant Department or by prior arrangement with the hire company.

The fuel tank should be refilled before returning the rental car to avoid extra administration charges over and above the cost of fuel replacement.

Most vehicle rental companies automatically provide insurance to cover loss of or damage to the vehicle during the hire period. This should be confirmed with the rental agency.

The excess reduction option should be declined on hire vehicles, as Quanta Services have a policy that covers the deductible.

Warning: Some hire vehicles are fitted with IVMS. Hire companies typically do not monitor the IVMS in these vehicles. IVMS will not be activated by Nacap for short term ad-hoc hire and is of no use for emergency response. Do not rely on this for emergency response. Always ensure you have a mobile phone and / or a portable IVMS if a means of initiating emergency response is required for your journey.

5.3 Minimum Communication and Safety Equipment

The following minimum communication and safety equipment is to be carried in Company Vehicles on Nacap business:

Table 4 - Minimum Communication and Safety Equipment

#	Trip Description	Minimum Equipment Required
1	Driving in built-up areas, or on freeways, and roads with divided carriageways.	Mobile phone (Hands free) and first aid kit
2	Travel on secondary highways and sealed roads with frequent traffic in areas with generally reliable mobile phone coverage. Examples: Euroa or Morwell, Vic; Roma, Qld; Dubbo, NSW.	Mobile phone and in-car or back-up battery charger. First aid kit
3	Travel in areas with infrequent traffic having generally reliable mobile phone coverage, where travel on unsealed roads or off-road travel may be required. Examples: secondary rural roads; i.e., Goldfields W.A., Cooper Basin S.A.	4WD Mobile phone and in-car or back-up battery charger. Satellite Phone or Project two-way radio Portable IVMS unit First aid kit Sufficient water for all vehicle occupants Know location of fuel stations

#	Trip Description	Minimum Equipment Required
4	Remote travel, or significant off-road travel in outback areas or a long way from assistance with no mobile phone or Project radio coverage.	Two 4WD vehicles, or risk assessment (for example Form NAA-TQM-F156) with controls applied if two 4WD vehicles is not viable. Satellite phone Portable IVMS unit First aid kit Sufficient water for all vehicle occupants Additional spare wheels for each vehicle (refer section 5.4) Compressor when driving in areas likely to include sand Recovery Kit Sufficient fuel and awareness of fuel station locations A local emergency contact (where possible) e.g., local police, hotel, etc.

*IVMS at Nacap is used primarily as a means of moderating driver behaviour, not emergency response. Emergency response via the IVMS cannot be relied upon unless it is actively monitored by another party. If it is not confirmed that a reliable party has been engaged to actively monitor the IVMS for the entirety of a journey, IVMS for emergencies shall not be relied upon.

5.4 Spare Wheels

The use of split rim wheels is not permitted, in any event that spilt rims are considered for use approval must be obtained from the Nacap Plant Manager and Head of HSEQ.

5.5 Recovery Kits and Travel in Sand

Vehicle recovery kits shall be supplied to crews as per project risk assessment and to other personnel as determined by the Superintendent or Construction Manager, or on bid inspections where there are two vehicles travelling together.

These personnel shall be trained in the use of the recovery kits. The recovery kit training is to be recorded, for example on the Training Attendance Form (**3903-HR-603-F).**

In sandy country, jack base plates shall be issued to all drivers. Compressors shall also be carried, as travel over sand dunes requires deflation of tyres.

5.6 Vehicle Maintenance and Inspection

5.6.1 Basic Maintenance

Drivers are responsible for basic maintenance of the vehicle assigned to them, including:

- Cleanliness
- Reporting damage
- Maintaining correct tyre pressures

- Maintaining fluid levels (cooling system, motor oil, steering, transmission, window washers)
- Maintaining a clean windscreen, indicators, headlights, and taillights, and
- Checking operation of lights and horn.

Drivers of Project Vehicles and Equipment Department Vehicles are responsible for timely completion of Weekly Vehicle Safety Checklists **(3905-HSE-040-F)** for their vehicle and submitting to their supervisor or the Equipment Department.

6 DRIVING

6.1 Traffic Offences

Speeding fines, parking tickets, toll evasion tickets and the like, incurred while undertaking business travel are the responsibility of the driver and are not reimbursable by Nacap. Refer Section 8 ADDRESSING UNSAFE DRIVING BEHAVIOUR with regards to potential disciplinary consequences that may apply for behaviour that falls into the category of 'unsafe driving behaviour'.

6.2 Alcohol and Driving

Persons driving Company Vehicles must be 0.00% BrAC at all times, with the following exceptions in which case the legal BrAC limit shall apply:

- When using the vehicle for private use and that use is a condition of the person's employment, or
- When on Nacap corporate business.

6.3 Smoking in Company or Project Vehicles

Smoking is not permitted in Company or Project Vehicles. Nacap reserves the right to recover the costs of cleaning vehicles where smoking is evident. Discipline action may apply.

6.4 Speed Limits

The following speed limits shall apply where the posted speed limit is higher or there is no posted speed limit:

- Maximum travel speed of 80km/h on unsealed roads
- Maximum travel speed of 40km/h on construction right-of-way (ROW), access tracks or off-road. (Note: there may be some variation on this in the context of the workplace environment, the assessed risk and any applicable client rules.)
- Maximum travel speed of 10km/h in construction zones within 50m of personnel
- Maximum travel speed of 10km/h within camps, workshop areas and Nacap car parks

Drivers shall ensure they drive at lower speeds appropriate to the road and weather conditions regardless of maximum speed limit where necessary.

6.5 Use of Communications Equipment

The use of communications equipment in Company Vehicles whilst driving is permitted as follows:

- 2-way radios inbuilt into the vehicle, and

- Mobile telephones installed into a compliant hands free kit where permitted by law.

The vehicle shall be stopped when the driver is using any other form of communication device.

6.6 Amber Beacon Lamp Usage

Amber rotating beacon lamps shall be turned on at all times whilst driving on a construction ROW and shall be off at all other times other than in an emergency situation as a static warning device or when required for use as an escort vehicle as prescribed by law.

Queensland requires a permit letter for use of beacons.

Hazard lights may be an acceptable alternative to amber beacons. Project requirements will address this in the induction.

6.7 Driving on unsealed roads, ROW, access tracks and static sites

4WD mode must be engaged at all times when travelling on unsealed roads, on ROW or off-road.

When approaching mobile powered plant in operation, drivers are to stop and await a signal from the plant operator that they are aware of you and they indicate by hand signal or radio that it is safe to pass.

Drivers of light vehicles must give way to all other users in construction areas, ROW and workshop areas.

6.8 Driving in Dust

In dusty conditions drivers shall not proceed when visibility is such that they cannot proceed safely.

In heavy dust conditions drivers must pull over and stop until dusts clears. This includes dust generated by oncoming traffic and traffic being followed.

Never pass a vehicle where dust is obscuring a clear view of oncoming traffic.

6.9 Load Restraint

Motor vehicles are designed with a specific maximum carrying capacity. In the case of light vehicles, this is usually found on the doors of the vehicle. Drivers must ensure that they do not exceed the carrying capacity of the vehicle as this will impact on the safety of the vehicle.

Carrying capacity includes the weight of the driver, passengers, tools / equipment and the vehicle body. This can be checked by weighing (or estimating the weight of) the fully loaded vehicle and ensuring that the total weight does not exceed the Gross Vehicle Mass (GVM).

An improperly loaded vehicle is a safety hazard. Drivers are responsible for ensuring that their load:

- Is carried in a cargo area and not carried on a vehicle seat
- Does not exceed the legal payload of the vehicle or trailer
- Is positioned in a manner that does not affect the vehicle's balance or stability, thereby reducing its steering and braking performance
- Is properly restrained so that it does not move under all driving conditions, including emergency braking, and
- Does not become dislodged and fall from the vehicle or trailer.

Highly elastic systems such as (but not limited to) octopus straps and cargo nets are NOT acceptable methods of load restraint.

Any projecting loads (longer, wider or higher than the vehicle which is carrying it) must:

- Not present a hazard to other road users
- Be obvious for a vehicle immediately following that the load is projecting
- Not extend past the front of a vehicle by more than 1.2 metres, and
- Not extend past the rear of a vehicle by more than 1.2 metres unless a warning device is attached to the rear of the load (a 300mm x 300mm red and yellow flag during the day, or a red light at night).

6.10 Trailers

Prior to towing, drivers shall view the trailer training procedure video, available on the OHS Portal under Safe Operation Videos.

Drivers shall also ensure that:

- The trailer is securely coupled to the towing vehicle and that safety chains are securely fastened
- Safety chains must be checked for any apparent wear or damage
- The trailer is loaded within the legal limits and the load is properly restrained
- Where fitted, the parking brake is released and reversing brake lockout lever disengaged
- Load mass does not exceed rated load weight of trailer
- Lights are functioning correctly
- Tyre pressures are correct, and
- Jockey wheel is fitted and functioning correctly.

Further guidance on towing is also provided in the Towing Safety Guidelines **(3905-HSE-015).**

Check with the Plant Manager regarding trailer load capacity.

6.11 Use of Company Vehicles for Private Purposes

6.11.1 Projects – Non-Camp

Driving a Company Vehicle after hours is a privilege and a responsibility, not a right. Limited use of Company Vehicles for private purposes on projects is allowed where accommodation is not in a camp, subject to meeting the following additional requirements:

a) Driving of the Company Vehicle is only to be by the driver allocated to that vehicle, and

b) No after-hours driving outside the town limits in which the driver is resident; or, where the driver is resident outside a town, no driving after-hours other than directly between the residence and the nearest town.

6.11.2 Projects – Camp

It is not permitted to drive Company Vehicles outside working hours when accommodated in a camp without approval from the Construction Manager, Project Manager, or Project OHS Manager.

6.11.3 Non-Project Private Use

Driving of Company Vehicles for private purposes shall be subject to the approval of the responsible department head. This shall only be given in exceptional circumstances.

This requirement does not apply to personnel who have entitlement to full private use of a motor vehicle as a condition of employment.

6.12 Use of Private Vehicles for Business Purposes

Private Vehicles may be used for non-project purposes, or for travel to / from project or equipment yard sites, where it is not reasonably practicable to use a hire or pool vehicle, subject to the approval of the driver's department head. Compensation for kilometres travelled will be at the prevailing Australian Taxation Office rate for the vehicle being used upon submission of an expense claim.

Private Vehicles may be used as Project Vehicles only if all of the following are met:

a) Approval by the Construction Manager

b) Vehicle meets Project Vehicle specification and inspection requirements

c) Vehicle is hired by Nacap under a purchase order or hire agreement at a rate and with terms and conditions no more favourable to the owner of the vehicle than Nacap's commercial hire agreement, and

d) Vehicle is registered and comprehensively insured by the owner for business purposes including off-road usage.

7 VEHICLE MONITORING

7.1 "IVMS" System Overview

In-Vehicle Monitoring Systems (IVMS) are an active monitoring system that operates via satellite communication. The system provides for:

- Monitoring of driving parameters including speed, time, distance, location and seatbelt use
- Tracking vehicle location, and
- Where actively monitored in real-time, the ability for the driver or passengers to initiate an emergency response through activating the distress button.

Monitoring of driver performance has delivered:

- A significant reduction in motor vehicle incidents
- A greater awareness of driving behaviour through counselling of poor driving behaviour and reward of good driving behaviour
- A reduction in motor vehicle incidental damage repair costs, and
- A reduction in unauthorised use of Project Vehicles.

Company Vehicles that are not allocated to a project may be fitted with IVMS however this may not be monitored unless it is connected to a project. The emergency response facility is not available and will not work these circumstances. This also applies to ad-hoc hired vehicles fitted with IVMS as described in section 5.2 Ad-Hoc Vehicles.

On projects, IVMS monitoring and emergency response will be formally established by the project and will be communicated to the designated drivers upon induction and via toolbox talks.

7.1.1 Application

IVMS shall be fitted to Company Vehicle in accordance with section **3.1.2 IVMS Risk Assessment** of this procedure.

7.1.2 Driver Behaviour Monitoring Parameters

IVMS driver monitoring is achieved through the review of reports generated that list each exception of driving that is outside the range of acceptable parameters nominated by Nacap. For best results, monitoring is to be performed daily to ensure early response to unacceptable behaviours.

Speed monitoring relative to posted legal limits require that all roads being used are geo-fenced, that is, the locations of all speed limit changes are logged into a GPS model against which the IVMS reports. The extent of geo-fencing to be undertaken will be determined during the driving HAZID on the basis of what is considered reasonably practicable.

As a minimum, IVMS exception reports will be generated based on the following parameters, or as risk-assessed by the project PMT and OHS Manager:

a) Speeds above 110km/hr, 115km/hr, 120km/hr, or 10km/hr, 15km/hr and 20km/hr over posted limits where geo-fenced

b) Exceeding 80km/hr on unsealed roads

c) 4WD not engaged on unsealed roads

d) Harsh braking

e) Impact sensor activation

f) Duress button usage

g) After hours' travel (as determined by project or department head))

h) IVMS units disengaged, and

i) Total driving time including driving breaks taken.

7.1.3 Vehicle Location Monitoring

Location monitoring is historic and occurs:

- In response to an emergency communicated by a driver via IVMS emergency response or other means
- To monitor unauthorised after hours use
- In an incident investigation, and
- For monitoring use in areas off-limits to project vehicles.

7.1.4 Subcontractor IVMS Monitoring

Subject to **Section 1.2.2 Exclusions,** the person responsible for IVMS coordination on the Project shall collect and review IVMS data from subcontractors, and the same management process for this data shall apply as applies to Nacap's workers.

This applies equally when the Subcontractor is using their IVMS reporting system.

8 ADDRESSING UNSAFE DRIVING BEHAVIOUR

When unsafe driver behaviours are identified any of the following may occur:

a) Immediate informal personal feedback by the driver's immediate supervisor, or by the person responsible for IVMS Coordination.

b) Counselling processes (formal or informal).

c) Formal notifications to offenders.

d) Reassessment of driving competencies.

e) Driver retraining.

f) Suspension of driving privileges.

Gross safety breaches may be dealt with via summary dismissal in accordance with Performance Improvement Procedure **(3903-HR-005-3)**.

Each case shall be assessed on its merits. The table below details the disciplinary regime to be implemented which shall be in accordance with the Performance Improvement Procedure **(3903-HR-005-3)**.

Please note: All exception reports must be validated before any discussion or actions take place.

9 PROJECT KEY PERFORMANCE INDICATORS AND REPORTING

The Project OHS Manager, with reference to contractual requirements, shall develop KPIs with respect to vehicle management and driving safety for each project.

Project driver behaviour shall be monitored and all vehicle-related incidents and near misses shall be reported.

The following statistics are considered for reporting in Project OHS Weekly Reports:

a) Near Miss Event

b) Inspection-related findings

c) 3rd Party involvement

d) Reversing

e) Fatigue

f) Wildlife Strike

g) Distraction

h) Road Condition

i) Vehicle Fault

j) Kilometres travelled for the week

k) Cumulative kilometres travelled

l) Incident frequency

m) Incidents resulting in injuries

n) Low speed impacts excluding wildlife strikes (parking or incidental contacts)

o) High speed impacts excluding wildlife strikes

p) IVMS speeding breaches exceeding 20km/h above the speed limit

q) IVMS breaches for unauthorised use of vehicles after hours

r) Total incidents for period and the project to date

10 JOURNEY MANAGEMENT

Journey management may be deemed necessary by risk assessment or may apply via project-specific contractual requirements. Where it is determined that journey management is required, the driver shall log the journey with the IVMS Coordinator (where one exists), or with the identified journey manager.

Journey management is a controlled, administrative procedure with a call-in protocol to monitor a specific journey from commencement to arrival.

It provides a means of emergency response to a vehicle if it is overdue on a logged journey. Given the means of communication provided by Nacap including 2-way radio, satellite telephone, mobile telephone, IVMS devices, journey management is only of practical use where:

- The means of communication are not provided or available, or
- The vehicle occupants are incapacitated or the communication equipment is inoperable.

Journeys may be logged manually using the Journey Management Plan Form **(3905-HSE-128-F)**. Alternatively, there is a web-based and mobile telephone app available - this should only be used where there is a dedicated IVMS Coordinator or someone monitoring the app.

11 INSURANCE

Nacap's motor vehicle insurance policies cover cost of damage caused by (and to) the Company's owned and hired vehicles driven by Company nominated drivers subject to a number of exclusions. These exclusions are typical of most motor vehicle insurance policies.

The Company's motor vehicle insurance policy may not cover cost of damage caused by (or to) Company Vehicles involved in a collision if, at the time of the incident:

- The BrAC of the driver was over the prescribed legal limit, or
- The driver was under the influence of, or has their judgement affected by any drug or medication at the time of the accident, or
- The driver refuses to submit to testing as required by law.

The cost of damages in vehicle incidents may be for more than damage to the vehicle itself – a catastrophic incident can result in serious injury or death that may result in significant financial damages and may also result in imprisonment.

Nacap will NOT indemnify drivers where insurance is denied as a result of the driver being under the influence of drugs or alcohol, or who refuses to submit to testing as required by law.

This means that if you are involved in a motor vehicle collision whilst driving a Company Vehicle and the insurer refuses to cover the cost of damages for one of the above reasons, Nacap may seek to recover the cost of damages arising from the incident from the driver.

Even if the insurer indemnifies Nacap and pays the cost of damage, if the driver was under the influence of drugs or alcohol at the time of the collision, the insurer may seek to recover the cost of the damage from the driver.

12 WHAT TO DO IN THE CASE OF AN ACCIDENT

a) Stop immediately. Determine the extent of injuries and / or damage and give assistance to the injured.

b) If there are injuries or fatalities, call the police and an ambulance immediately.

c) Do not move the vehicle unless it is causing a safety hazard or it is certain there are no injuries. If you do move the vehicle, mark its position prior to moving it.

d) If a third party is involved, obtain full details such as name, address, contact details, vehicle model and registration, employer, insurer, etc. This will assist in recovering damages should the third party be responsible for the incident.

e) Obtain details from witnesses to the extent possible.

f) Do not make statements acknowledging responsibility.

g) Do provide name and addresses and vehicle ownership and registration information to any person who has reasonable grounds for requesting this information.

h) If there are no injuries or deaths, report the incident to the police within 24 hours and obtain a police reference number.

i) Following an incident, do not take any drugs, except on instruction from a medical practitioner.

j) Do not consume any alcohol after the incident until you have been tested, even if it is after work hours.

k) Report the incident to your Supervisor and the Project OHS Manager if you are on a Project or the Corporate HSE Manager otherwise.

Note: Details of the accident may be recorded using the Nacap online Hazard Report form which allows for photos and recording of location by GPS. Go to hse.nacap.com.au

APPENDIX A – NACAP PRE-APPROVED DRIVER TRAINING PROVIDERS

Nacap has pre-approved the following driver training providers to meet the requirements for project designated driver training:

Training Location	*Provider*	*Contact Details*
Western Australia	*Drive Safe Australia Pty Ltd*	*Phone: (08) 9525 2252*
Western Australia	*SafeRight PTY LTD*	*Email: bookings@saferight.com.au Phone: 1800 352 335*
Queensland	*Harness Energy*	*Email: training@harnessenergy.com.au*

Nacap has pre-approved the following driver training providers to meet the requirements for office-based workers requiring defensive driver training (refer **Section 4.2**)

Training Location	*Provider*	*Contact Details*
Victoria and NSW	*Murcotts Driving Excellence Pty Ltd*	*Phone: 1300 555 576*

APPENDIX B – MINIMUM SPECIFICATIONS FOR PROJECT VEHICLES

The following are Nacap's minimum specifications for Project Vehicles:

- 4WD and ABS
- Road Registered
- ESC – Electronic Stability Control
- Spare Tyre
- Air conditioning
- Wagons must be fitted with cargo barriers
- IVMS (Subject to Section 7)
- Bull bar
- Fully charged fire extinguisher (1kg minimum)
- First aid kit
- Project dedicated radio
- Roof mounted amber revolving light
- Reversing alarm
- Jacking plate and suitable jack
- Map of project access routes
- Project emergency response plan

APPENDIX E OUT OF HOURS WORKS APPROVAL

Department of Planning and Environment

Our ref: SSI-9471-PA-89

Mrs Alexandra Lovell
HSE Manager
PO Box 1070
Wollongong NSW 2500

11/11/2022

Subject: Out of Hours Works

Dear Mrs Lovell,

I refer to your letter dated 8 November 2022 requesting confirmation that the out of hours works approval granted on 20 November 2020 extends to line pullback activities.

The Department agrees that line pullback activities may be undertaken at the Garangaty and North Gate locations under the out of hours works approval granted on 20 November 2020.

If you wish to discuss the matter further, please contact the undersigned on 9274 6324.

Yours sincerely

Rose-Anne Hawkeswood
Team Leader
Resource Assessments

Alexandra LOVELL
HSE Manager – Australian Industrial Energy (AIE)
PO Box 1070 Wollongong DC NSW 2550
P: 0413 250 961
E: Alex.Lovell@ausindenergy.com

8 November 2022

Georgia Dragicevic
Department of Planning and Environment – Wollongong Office
Level 2, 84 Crown Street
WOLLONGONG NSW 2520

Dear Georgia

Subject: Out of Hours Work Clarification

As discussed, AIE has a current Out of Hours Work approval for Horizontal Directional Drilling associated with the upcoming pipeline works. The approval is based on as assessment by Hutchison and Weller.

The approval and assessment are contained in the links to our public website below:

https://ausindenergy.com/file/2020/11/20020-NV-RP-1-5-PKGT-OOHW-CNVIS.pdf

https://ausindenergy.com/file/2020/11/Out-of-Hours-Works-Approval.pdf

The current approval allows for under boring using horizontal directional drilling (HDD) along new pipeline route, 7am to 6pm 7 days when running with possible extension outside standard hours where needed.

As part of the pipeline construction activities, line pullback activities using the same equipment as HDD is required at the Garangaty and North Gate locations (refer appendix A for figure showing these locations). The equipment would be used in a different manner for the line pull (as opposed for HDD) and result in less noise and vibration being emitted.

These pull back activities require 24-hour operations to prevent the drill fluid into the borehole from going “off”. There is a risk that if the pipe remains stationary too long the fluid sets around it and the pipe is held up.

For the two locations, it is expected that the pull back will take 36 hours each with only one night time period required for each. The nights will not be consecutive nights.

GHD (AIE’s current environmental consultant) has reviewed the proposed activities and the Hutchison and Weller report and have confirmed:

- The noise and vibration expected to be generated from the line pull activities is likely to be less than that generated when the equipment is used for HDD activities
- Noise generated by the line pullback is expected to fall within the construction noise management levels for the nearest residential receivers
- The line pull activities are consistent with the approval (albeit with some interpretation required)

AIE believes the pull back activities are consistent with the existing out of hours work approval and intend to proceed with the work accordingly. We would appreciate if DPE could advise if they have any concerns with this approach.

With thanks

Your sincerely

Alexandra LOVELL

Appendix A - Figure showing Garangaty and North Gate locations

APPENDIX F CHAIN OF RESPONSIBILITY PROCEDURE – HEAVY VEHICLE MANAGEMENT

A QUANTA SERVICES COMPANY

NACAP PTY LTD

CHAIN OF RESPONSIBILTY

Document No.: 3905-HSE-010-3

Revision 0

Revision Description	By	Checked	QA	Nacap Approved	Approval Date
Issued for Use	PWH	CKE	RCA	MOC	

This document is considered uncontrolled when printed.

SIGNATURE BLOCK INFORMATION:

By: Originator of the document as delegated by the head of the sponsoring department, project manager, or discipline lead.

Checked: Checked for process relevance against Company policies and objectives, as well as clarity, correctness, consistency, relevance, applicability and practicality, by the originators' supervisor, another department head or discipline manager; in accordance with the Approval Authority Matrix.

QA: Checked by the Management System Engineer or delegate, for overall compliance to Nacap Management System requirements.

Nacap Approved: Overall approval of the document contents, and commitment to implement; in accordance with the Approval Authority Matrix. Approval is generally not to be delegated.

{NB: Project documents may also be subject to client approval}

Notes:

- There must be at least three different people signing off among the four signature block columns on the title page
- Documents without inked signatures cannot be considered approved
- The Approval Date is to be handwritten by the approver, in the format DD-MMM-YY (e.g. 22-APR-16), on the date actually approved.

REVISION HISTORY

This table describes the primary reason for the production of each new revision after Rev 0

Date	Rev	Reason for change

CONTENTS

1 GENERAL INFORMATION

1.1 Purpose

The purpose of this procedure is to provide an overview of Heavy Vehicle National Law and associated regulations, including Chain of Responsibility ("CoR"), and communicate compliance strategies.

Nacap commits to compliance with HVNL and commits to safety from those within Nacap who manage and control Transport Activities. The aim of this commitment is to minimise harm to drivers and passengers, other road users and property associated with heavy vehicle incidents.

1.2 Scope

This procedure should be applied as explained in Appendix D.

1.3 References

Legislative references:

- Refer to Appendix D

Relevant codes of practice and standards:

- Master Code of the Heavy Vehicle National Law
- National Heavy Vehicle Inspection Manual
- National Transport Commission Load Restraint Guide 2018
- Australian Code for the Transport of Dangerous Goods by Road & Rail ("ADG Transport Code")
- ISO 45001 Occupational Health and Safety Management Systems
- Managing Risks of Plant in the Workplace Code of Practice

Nacap Procedures:

- **3904-OPS-003-3** Heavy Vehicle Operations
- **3904-OPS-006-3** Dangerous Goods Transport

1.4 Definitions

Terms used in this document have meanings as follows:

Term	Meaning
chain of responsibility (COR)	the allocation of responsibility to personnel within the supply chain by HVNL
fatigue-regulated heavy vehicle	includes any of the following • a motorised heavy vehicle with a GVM of more than 12 tonne; or • a combination of heavy vehicles with a GCM of more than 12 tonne; or • a bus for more than 12 adults (including the driver)
freight	transport of goods
heavy vehicle	a vehicle with a GVM of 4.5 tonnes or more
record keeper	a person having responsibility to keep records relating to work and rest hours of drivers of FRHVs

Term	Meaning
supply chain	the transport logistics chain, encompassing packing, loading, weighing, measuring, securing, restraining, declaring, consigning (or being a consignee), scheduling, carrying, driving, receiving and unloading freight

1.5 Abbreviations and Acronyms

Abbreviations used in this document shall be interpreted as follows:

Acronym	Meaningful Wording
FRHV	fatigue-regulated heavy vehicle
GCM	gross combination mass
GVM	gross vehicle mass
HVNL	Heavy Vehicle National Law
IVMS	in-vehicle monitoring system
NHVR	National Heavy Vehicle Regulator
SWMS	safe work method statement

2 WHAT IS CHAIN OF RESPONSIBILITY (COR)

Our road laws generally address the actions of drivers, but breaches of these laws are often caused by other parties in the transport supply chain.

The aim of COR for a heavy vehicle is to make sure everyone in the supply chain actively prevents breaches of the Heavy Vehicle National Law (HVNL). The COR law also extends to preventing or reducing potential harm or loss (risks) to yourself and others. Managing (controlling) these risks ensures that you always recognise and carefully consider all potential dangers and satisfactorily reduce or avoid them before they occur.

2.1 Parties in the COR

If you undertake specified functions that exercise, or have the capability of exercising, control or influence over any transport task, you are part of the COR and have a safety duty under HVNL.

The following are parties in the COR:

- Employers of heavy vehicle drivers
- Prime contractors of heavy vehicle drivers (entities that engage drivers under contract for services, other than through employment)
- Operators:

  A person or legal entity (e.g. company, partnership, sole trader) is generally classified as an operator of a heavy vehicle they are responsible for controlling or directing the use of the heavy vehicle, whether or not they are actually present for any of the transport tasks.

  An operator may also include such persons or entities known as an owner, carrier, transporter, conveyer, shipper, etc.

- Consignors:

You are generally classified as a consignor of goods when you arrange for transport of freight and / or engage a heavy vehicle operator (including internally within Nacap or through an agent or other party) to transport goods to a consignee (such as a buyer receiving your goods or another Nacap site) by road for commercial purposes.

- Schedulers:

  You are classified as a scheduler if you plan the transport of any goods or passengers or schedule the work and rest times of a driver.

- Packers:

  You are generally classified as a packer of goods when you engage in the process of placing goods into packaging or assemble goods in packaging for a heavy vehicle load or any container that is part of its load.

  If you supervise, manage or control these actions you are also considered as a packer.

  Packaging means anything that contains, holds, protects or encloses goods to enable them to be received, held for transport, or be transported.

  Note— it may be that a container constitutes the whole of the packaging, as in the case of a drum in which goods are directly placed.

  A packer may also include such persons also known as a storeperson, wholesaler, labourer etc.

- Loaders and unloaders:

  You are generally classified as a loader/ unloader of goods or plant when you engage in the process of loading or unloading a heavy vehicle or any container that is part of its load.

- Loading managers:

  You are a loading manager if you are in charge of premises where there is regular loading or unloading.

  A loading manager may also include such persons also known as a controller, administrator, organiser, supervisor, conductor, etc.

- Consignees:

  You are generally classified as a consignee of goods when you are intended to receive goods after completion of their road transport. However, this does not necessarily include a person who merely unloads the goods. You will usually be named and identified as the consignee in the formal documentation for the road transport of the goods. If no consignee is named, then it could be the person who unloads the goods.

  A consignee may also include such persons known as a customer, receiver, addressee, collector, payee, etc.

Your role(s) in the COR and influence on others in the COR are *based on the things that you do*. They are not determined by your job title or job description.

Appendix A contains a checklist from the NHVR to help you identify if you are a party in the COR.

Appendix B provides real Nacap examples of who can be a party in the chain of responsibility depending on the circumstances.

3 DUTIES

3.1 General safety duty for *all* parties in the COR

All parties in the COR have a general safety duty. So far as reasonably practical, if you are a party in the COR, you must ensure you do not contribute to unsafe freight by your actions or inactions. This includes but is not limited to:

- ensuring, so far as it is within your reasonable control, the safety of transport activities relating to the vehicle
- ensuring your conduct does not directly or indirectly cause or encourage the driver of a heavy vehicle, or any other party in the COR, to break *any* law (including but not limited to HVNL and associated regulations, or any road laws generally), and not entering into any contracts or arrangements, or place pressure on any person, that could have similar effects

You can be a party in the COR in more than one capacity. There can also be more than one party with the same duty. All parties must exercise all of their duties.

3.2 Nacap duties, senior management responsibility, and executive due diligence

As a heavy vehicle operator, an employer and prime contractor of heavy vehicle drivers, and an entity that employs and contracts people who are parties in the chain of responsibility, Nacap has many safety duties under HVNL.

These duties include but are not limited to ensuring:

- its workers who are parties in the COR are provided appropriate training
- its employed and contracted drivers of fatigue-regulated heavy vehicles understand how to complete their National Driver Work Diary
- appropriate, serviceable and well-maintained loading and restraining equipment is provided and used to restrain loads
- training on load restraint is provided for loaders and unloaders
- suitable and appropriate vehicles and/or combinations are utilised for all loads
- heavy vehicles operated by Nacap are in serviceable condition (as per ***National Heavy Vehicle Inspection Manual***; available at www.nhvr.gov.au)
- work records are maintained and retained for drivers of fatigue-regulated heavy vehicles
- heavy vehicles and their loads comply with relevant mass and dimension requirements
- Nacap-operated vehicles only use approved routes (approved by permit or exemption) based on their mass and dimensions
- sufficient operational staff training is provided so that there is adequate coverage of understanding about how to plan heavy vehicle journeys, when permits are required, and how to obtain them
- drivers are provided with relevant documentation including:
  - a complying Container Weight Declaration before commencing a journey
  - copies of gazette notices and permits in their vehicle for oversize / overmass freight
- pilot and escort vehicles are arranged for Nacap-operated vehicles where required by regulations or relevant road authorities (based on mass, dimensions and route)
- business practices do not cause, require or encourage drivers to:

- drive with an over mass or over dimension load that is not covered by regulation, permit or exemption
- drive on a route that is not permitted by regulation, permit or exemption
- drive with a load that is not properly secured
- exceed speed limits
- exceed regulated driving hours
- fail to meet the minimum rest requirements
- drive while impaired by fatigue

Nacap has assigned specific responsibility for the above duties to the Operations Directors, with support from the Head of HSE. It is up to responsible managers to effectively delegate these tasks to competent people.

The Executive Management Team and Directors of Nacap must exercise the following due diligence:

a) acquire, and keep up to date, knowledge about the safe conduct of transport activities; and

b) gain an understanding of—

   i. the nature of Nacap's transport activities; and

   ii. the hazards and risks, including the public risk, associated with those activities; and

c) ensure Nacap has, and uses, appropriate resources to eliminate or minimise those hazards and risks; and

d) ensure Nacap has, and implements, processes—

   iii. to eliminate or minimise those hazards and risks; and

   iv. for receiving, considering, and responding in a timely way to, information about those hazards and risks and any incidents; and

   v. for complying with Nacap's safety duties; and

e) verify the resources and processes mentioned in paragraphs (c) and (d) are being provided, used and implemented.

3.3 Prohibited contracts, requests and arrangements

A person must not ask, direct or require (directly or indirectly) the driver of a heavy vehicle or a party in the COR to do or not do something the person knows, or ought reasonably to know, would have the effect of causing the driver, to break any law (including but not limited to HVNL and associated regulations, any road laws generally, and work health and safety laws).

A person must not enter into a contract with the driver of a heavy vehicle or a party in the COR that the person knows, or ought reasonably to know, would have the effect of causing the driver, or would encourage the driver, or would encourage a party in the COR to cause the driver, to break any law (including but not limited to HVNL and associated regulations, any road laws generally, and work health and safety laws).

4 HOW CAN ***YOU*** EXERCISE ***YOUR*** SAFETY DUTY?

The following guidance for exercising safety duties are considered minimum requirements. Depending on the circumstances, more actions may be required to ensure safety duties are met. But in the majority of cases, if you follow the guidance in this section you would be considered to have done all that you could practicably do to minimise the risks of the transport task

4.1 Consignor

Any person who is a consignor of freight must:

- so far as reasonably practicable, provide the vehicle scheduler and operator with accurate information about the freight so that an appropriate vehicle can be arranged
- so far as reasonably practicable, ensure freight containers are accompanied by a complying Container Weight Declaration
- ensure their delivery requirements do not require, cause or encourage drivers to:
  - drive with an over mass or over dimension load that is not covered by regulation, permit or exemption
  - drive on a route that is not permitted by regulation, permit or exemption
  - drive with a load that is not properly secured
  - exceed speed limits
  - exceed regulated driving hours
  - fail to meet the minimum rest requirements
  - drive while impaired by fatigue

4.2 Scheduler

Schedulers of drivers and vehicles must ensure that:

- journeys and routes are suitably planned with consideration of potential traffic issues and other unexpected delays
- drivers' activities including work and rest times are planned and regularly reviewed
- there is appropriate consultation with operators, managers, contractors and drivers concerning rosters, schedules and routes
- all necessary scheduling, journey and route information is accessible
- delivery requirements do not require or encourage drivers to:
  - exceed the speed limits
  - exceed regulated driving hours
  - fail to meet the minimum rest requirements
  - drive while impaired by fatigue

4.3 Packer

Any person who is a packer of goods intended for freight must ensure that:

- goods are marked correctly and documentation is accurate, and not false or misleading (they are not considered to be misleading if they overstate weight)
- goods packed are appropriately secured within their packaging
- dangerous goods (if any) are packed and marked in accordance with the ADG Transport Code
- goods packed in a freight container are secured within the container against movement during transport (which can destabilise the vehicle), and do not cause the container's gross weight or safety approval rating to be exceeded

- goods are packed in a timely manner so as not to delay loading or loading, which can impact schedules and cause drivers to drive while fatigued, or speed, or not comply with work and rest limits
- loading managers are notified of any delays to packing beyond agreed timeframes

4.4 Loader

A person who is a loader or unloader must ensure that:

- safe conduct of loading activity, including establishment and enforcement of traffic management / pedestrian exclusion zones
- loads do not exceed vehicle mass or dimension limits (this includes limits applicable to the route to be taken by the driver as arranged)
- dangerous goods are identified and loaded in accordance with the ADG Transport Code, and appropriate dangerous goods documentation is provided to the driver (if applicable – refer to **3904-OPS-006-3** Dangerous Goods Transport)
- goods loaded are safely placed, secured and restrained

  NB: freight is considered to be placed, secured and restrained appropriately if performance standards in the National Transport Commission Load Restraint Guide 2018 are met. If there is no performance standard in the guide that is appropriate for the load, the person loading must determine how to safely place, secure and restrain it.
- reliable weight information is provided to driver and operator
- complying Container Weight Declaration is given to the driver (if applicable)
- load documentation is accurate
- prevent loading delays (which can affect schedules and cause drivers to speed or drive while fatigued)

NB: in many cases the driver will be the loader and will therefore have these responsibilities.

4.5 Unloader

A person who is an unloader must:

- ensure safe conduct of unloading activity, including establishment and enforcement of traffic management / pedestrian exclusion zones
- prevent unloading delays (which can affect schedules and cause drivers to speed or drive while fatigued)

NB: in many cases the driver will be the unloader and will therefore have these responsibilities.

4.6 Loading manager

A person who is a loading manager must ensure that:

- loads do not exceed vehicle mass or dimension limits (this includes limits applicable to the route to be taken by the driver as arranged)
- appropriate, serviceable and well-maintained loading and restraining equipment is used
- potential and actual loading and unloading congestion is identified in consultation with drivers and other parties in the chain of responsibility

- drivers, schedulers and operators are advised if loading / unloading times will be 30 minutes or more either late or early, so they can manage work / rest times
- rest facilities are provided for drivers who are waiting for loading / unloading
- reasonable arrangements are made to manage loading / unloading time slots so as not to cause delays that may cause, require or encourage drivers to:
  - exceed speed limits
  - exceed regulated driving hours
  - fail to meet the minimum rest requirements
  - drive while impaired by fatigue

4.7 Driver

Refer Heavy Vehicle Operations Procedure **3904-OPS-003-3** (Appendix D Heavy Vehicle Driving Responsibilities).

4.8 Consignee

Any person who is a consignee of freight must ensure their delivery requirements do not require, cause or encourage drivers to:

- drive with an over mass or over dimension load that is not covered by regulation, permit or exemption
- transport a freight container without a complying container weight declaration
- drive on a route that is not permitted by regulation, permit or exemption
- drive with a load that is not properly secured
- exceed speed limits
- exceed regulated driving hours
- fail to meet the minimum rest requirements
- drive while impaired by fatigue

4.9 Person who calls for tenders or enters into or manages freight arrangements or contracts

Apply the principles of the chain if responsibility to ensure calls for tender, and ultimately contracts, contain terms and conditions that are fair, reasonable and able to be achieved while complying with the law.

Consult with parties in the chain of responsibility to understand the constraints of the freight task(s) and come up with a mutually agreeable arrangement or contract.

5 RISK MANAGEMENT

A COR Risk Register shall be developed to identify risks and subsequent controls relevant and applicable to the management of COR for Nacap.

The Chain of Responsibility Risk Register should be reviewed annually corporately and as required for new projects.

Appendix C is an example of a COR risk register.

In addition to the COR Risk Register a SWMS / JSA shall be developed for any manual / physical tasks to be undertaken, such as:

- Driving
- Loading / Unloading, or
- Packing

6 SUBCONTRACTOR / THIRD PARTY ENGAGEMENT

Transport activities often involve interactions with third parties who have a shared responsibility for the safety associated with the use of a heavy vehicle on a road. Capacity, in general, means the ability to have an effect on something or the behaviour of someone. A safety duty under the Heavy Vehicle National Law (HVNL) may not be transferred to another person, so it's essential that all parties in the COR cooperate to control, eliminate or minimise transport risks.

When a third party is performing transport activities on Nacap's behalf or at Nacap request, it's important that you can explain how you expect the work to be done. This will help each party identify and assess any new risks that arise, so they can ensure the work can be done safely. When engaging a third party the following should be considered:

- Formalise any contractual arrangements to confirm a clear understanding of each party's activities.
- Identify any new risks and undertake a formal risk assessment, if not previously identified and assessed.
- Use a third-party engagement checklist wherever possible to identify and document which business or individual is responsible for each activity. This will assist you to determine the suitability of the other party you plan to engage with. Refer Appendix D Third Party Engagement Checklist.
- Ensure any requests or contractual arrangements don't require, encourage or place pressure on you or your third parties to breach the HVNL in context of the COR hazards for Speed, Fatigue, Mass, Dimension, Loading and Vehicle Specifications. For example:
  - Has enough time been allowed to complete the task safely within agreed work and rest hour limits? – Is there suitable equipment to move, load and unload the freight safely?
  - Are there additional considerations, such as road access permits or specific routes?
- Consider a review process or having regular catch-ups to ensure the activities are being performed according to your agreed or contractual arrangements.
- Ensure where a third party requires a permit that a copy of the permit is sighted prior to transport – refer to the NHVR website to determine permit types required https://www.nhvr.gov.au/road-access/access-management/applications

Subcontractors engaged to perform HV transport activities are required to complete the Subcontractor Supplier Questionnaire **3904-OPS-015-F** also complete the Third-Party Engagement Checklist **3904-OPS-024-F**.

7 FATIGUE MANAGEMENT

7.1 Fatigue related heavy vehicles

National heavy vehicle driver fatigue laws apply to fatigue-regulated heavy vehicles, which are:

- a vehicle with a Gross Vehicle Mass (GVM) of over 12t
- a combination when the total of gross combination mass is over 12t

- buses with a GVM over 4.5t fitted to carry more than 12 adults (including the driver)
- a truck, or a combination including a truck, with a gross mass of over 12t with a machine or implement attached.

A driver of a fatigue-regulated heave vehicle must not, and not be caused, required or asked to, drive a fatigue-regulated heavy vehicle on a road while impaired by fatigue or beyond their work and rest limits (refer to Section 7.2).

7.2 Work and rest limits

Maximum work and minimum rest hours apply to all drivers of fatigue-regulated heavy vehicles.

"Work" is not limited to driving. It includes but is not limited to loading / unloading, tending to the vehicle or anything on the vehicle, refuelling, repairs, maintenance, filling out a National Driver Work Diary (refer to Section 7.3), and making arrangements for freight.

The table below is referred to as "standard hours for solo drivers", and applies to solo drivers who are not working for an operator that has accreditation for fatigue management. Different arrangements apply to "two-up" driving arrangements – refer to the Heavy Vehicle (Fatigue Management) National Regulation.

Solo drivers

TIME	WORK	REST
In any period of...	A driver must not work for more than a **maximum** of...	And must have the rest of that period off work with at least a **minimum** rest break of...
5 ½ hours	5 ¼ hours work time	15 continuous minutes rest time
8 hours	7 ½ hours work time	30 minutes rest time in blocks of 15 continuous minutes
11 hours	10 hours work time	60 minutes rest time in blocks of 15 continuous minutes
24 hours	12 hours work time	7 continuous hours stationary rest time*
7 days	72 hours work time	24 continuous hours stationary rest time
14 days	144 hours work time	2 x night rest breaks# **and** 2 x night rest breaks taken on consecutive day

**Stationary rest time is the time a driver spends out of a heavy vehicle or in an approved sleeper berth of a stationary heavy vehicle. #Night rest breaks are 7 continuous hours stationary rest time taken between the hours of 10pm on a day and 8am on the next day (using the time zone of the base of the driver) or a 24 continuous hours stationary rest break.*

7.3 National Driver Work Diary

Any time the driver of a fatigue-regulated heavy vehicle works on a freight task outside a 100km radius from their vehicle's base, they must maintain work records in the form of a National Driver Work Diary (NDWD).

NDWDs booklets are available for purchase at selected locations (https://www.nhvr.gov.au/safety-accreditation-compliance/fatigue-management/work-diary/locations-to-purchase).

To ensure integrity of record keeping, each booklet is given a security number when it is issued, and drivers must carry NDWD sheets from at least the last 28 days of work. Pages in each booklet are in triplicate (one for the driver's record keeper, one spare in the event it needs to be seized by an authorised officer, and one for the driver which remains in the diary).

Drivers must fill out their NDWD each day, on the day, they are working on a freight task more than 100km from the vehicle's base. Each daily record from must be given to the driver's record keeper (refer to Section 7.4) as soon as practicable, and not longer than 21 days, after the record is made.

More information about work diary requirements, and some instructional videos on how to complete them, are on the HHVR website (https://www.nhvr.gov.au/safety-accreditation-compliance/fatigue-management/work-diary).

7.4 Record keeping

Record keepers must keep a record of specific information for drivers of fatigue regulated heavy vehicles. A record keeper may be the:

- employer, if the driver is employed
- accredited operator, if the driver is working under Basic Fatigue Management or Advanced Fatigue Management accreditation
- driver (as a self-employed or owner driver)

For each driver, the record keeper must keep:

- the driver's name, licence number and contact details
- the dates fatigue regulated heavy vehicles were driven
- the registration number of the vehicle(s) driven
- the total of each driver's work and rest times for each day and each week
- duplicate copies of NDWD daily sheets (if applicable)
- driver's rosters and trip schedules (including changeovers)
- driver timesheets and pay records
- any other information as required as a condition of an accreditation or exemption (such as driver training and health assessments).
- Drivers must provide their record keeper with their relevant work and rest hours totals and any other relevant vehicle information the record keeper may not reasonably have access to (registration numbers, dates the driver worked, etc.).
- The record location is determined by the record keeper and notified to the driver. The record location is usually the driver's base.

All records must be:

- kept for three years after they are created
- kept at a location accessible to an authorised officer for audit or investigation purposes
- in a format that is readable and reasonably assumed it will be readable in at least three years from the date of its creation.

8 CONTAINER WEIGHT DECLARATIONS (CWD)

A freight container is a re-usable container that is designed for the transport of goods by one or more modes of transport.

8.1 When is a CWD required?

A complying CWD is required when transporting a consigned freight container on a road using a heavy vehicle. The requirement for a complying CWD is not dependent on whether the freight container is empty or loaded.

A complying container weight declaration is not required for a freight container that has been modified so it is no longer fit for use in multi-modal transport or its primary use would no longer be for the transport of freight (e.g. modified for use as a storage shed, portable office, portable plant equipment, etc.).

8.2 Information required on a CWD

CWD is a written declaration of the weight of a container and its contents. It may be either in hard copy or electronic form, or a placard attached to the freight container. It may consist of one or more documents in different formats – for example, documents may be in the form of a sheet of paper, an email, on an electronic device, or in otherwise electronic form – but in any case, it must be able to be produced in its entirety, to an authorised officer, upon request.

Although there is no specific form for a CWD, it must include the following information:

- gross weight of the container including its contents (it must not understate the gross weight, but it is allowed to overstate the gross weight)
- container number and other details necessary to identify the container
- name and registered address or business name and address in Australia of the responsible entity for the freight container
- date of declaration

Nacap utilise a Field Movement Order Container Weight Declaration Form **3907-PLA-020-F** that shall be used for all containers that are dispatched from Nacap controlled sites.

9 TRAINING AND COMPETENCE

Personnel who are part of the COR require training that informs them of their role, responsibilities and legislative requirements, such as a Consignee, Consignor or Employee Receiver, a Packer, or Loader/Unloader, a Scheduler or Operator, or a Driver.

In addition to the role specific awareness training the following COR training is also be required:

Role / Position	Training Required	Provider
Nacap Management Team Nacap Operations Leadership Team Nacap Plant Manager	Chain of Responsibility for Leaders	Tap into Safety - Online
Nacap Management Team Nacap Operations Leadership Team Nacap Plant Manager Nacap Operations staff Nacap Field Services – HV Drivers	Transport Chain of Responsibility	Tap into Safety - Online

Role / Position	Training Required	Provider
Nacap HV Drivers	TLID004 Load and unload cargo/goods and, TLIA1001 Secure cargo	DTC Training Pty Ltd – train@dtctraining.com.au Applied Training Solutions https://www.appliedtrainingsolutions.com.au/courses/tlid2004-tlia1001-load-unload-goods-cargo-secure-cargo/

10 SPEEDING

Speeding is a high-risk behaviour. Speeding is not just driving faster than the sign-posted speed limit. It is also driving too fast for the weather, light, traffic and road conditions based on vehicle condition, vehicle class, driver skills and experience.

Each party in the chain of responsibility for a heavy vehicle must ensure, so far as is reasonably practicable, the safety of the party's transport activities relating to the vehicle.

Each party must, so far as is reasonably practicable:

- eliminate public risks and, to the extent it is not reasonably practicable to eliminate public risks, minimise the public risks; and
- ensure the party's conduct does not directly or indirectly cause or encourage the driver of the heavy vehicle to contravene this Law or the driver of the heavy vehicle to exceed a speed limit applying to the driver or another person, including another party in the chain of responsibility, to contravene this Law.

A driver must not drive at a speed over the speed limit applying to the driver for the length of road where the driver is driving.

11 MASS, DIMENSION AND LOADING

The main purpose of the mass, dimension and loading requirements in the HVNL is to decrease risks from excessively loaded or excessively large heavy vehicles. Decreasing these risks improves public safety and minimises any adverse impact from excessively loaded or excessively large heavy vehicles on road infrastructure or to public amenity.

A person who drives, or permits another person to drive, a heavy vehicle on a road must ensure the vehicle, and the vehicle's components and load, comply with the mass, dimension and loading requirements applying to the vehicle, unless the person has a reasonable excuse.

A risk-based approach to manage safety and ensure compliance with all requirements of the HVNL including mass, dimension and loading. A dedicated risk assessment of your mass, dimension and loading hazards and requirements can identify where risks might arise.

Consider any unique or different circumstances that relate to your transport activities in your risk assessment and control the risks accordingly.

For example, risk factors relating to mass, dimension and loading may include but are not limited to:

- uniformly dense and heavy loads
- large indivisible loads including over-size and over-mass loads

- non-specific or specialised load types such as awkwardly shaped items or
- prefabricated components or
- loads with a high centre of gravity

12 ASSURANCE

Internal reviews for compliance should be conducted on a periodic basis in line with **3902-CORP-002-3 Internal Audit Procedure** to assess the effectiveness of business practices.

The objective of Nacap's internal audit program is to improve the management system by identifying actual and potential nonconformities and communicating these to management so they can be acted upon.

APPENDIX A – CHAIN OF RESPONSIBILITY CHECKLIST

Chain of Responsibility check list

All parties that have control or influence over the transport task are responsible for complying with the Heavy Vehicle National Law (HVNL). A person may be a party in the supply chain in more than one way and legal liability can apply to their actions, inactions and demands.

This checklist will help you identify what role or roles you may play in the transport operation.

If you select (yes) in ANY of the following checkboxes for a specific role/s, you are a party in the transport supply chain under the HVNL.

Are you a loading manager?

1. An average of five heavy vehicles are loaded or unloaded at the premises each day the premises are operated for loading/unloading heavy vehicles ☐

   AND you do the following tasks:

2. Goods are loaded or unloaded onto or from a heavy vehicle **AND** ☐

3a) You are responsible for the operation of the regular loading or unloading premises **OR** ☐

b) You have been assigned by the manager or the person responsible for supervising, managing or controlling activities carried out by the loader ☐

Are you a consignee?

1. You have agreed to and been named as a consignee in the documentation for the road transport of the goods **OR** ☐
2. You receive the goods after road transport (but not merely the unloader) ☐

Note: In some circumstances, this also applies when acting through an agent or intermediary ☐

Are you an operator?

1. You control or direct the use of a heavy vehicle ☐

Are you a consignor?

1. You have agreed to and been named as a consignor in the documentation for the road transport of the goods ☐
2. You request an operator of the heavy transport vehicle (directly, indirectly or through their representative) to transport the goods by road ☐
3. You load a vehicle with the goods (and the goods are in your possession or control) immediately before the operator transports them ☐
4. You load a vehicle with the goods for road transport at an unattended storage/collection location. The goods are stored, or temporarily held waiting for collection ☐

   Note: This storage/collection location would be unattended, other than by the vehicle's driver or someone else necessary for the normal use of the vehicle, during loading ☐

5. The goods are imported into Australia and you are the importer ☐

Are you a scheduler?

1. You schedule the transport of goods or passengers **OR** ☐
2. You schedule the work/rest times of a heavy vehicle driver ☐

Are you a packer?

1. You pack goods **AND**

   a) You put goods into packaging ☐

   b) You assemble goods in an outer packaging (e.g. mixed products bundled on a pallet) ☐

   c) You supervise, manage or control packaging ☐

Are you a loader and unloader?

1. You load or unload goods in or from a heavy vehicle ☐
2. You load or unload the vehicle or any container that is in or part of the vehicle ☐
3. You load or unload the vehicle with a freight container (whether or not it contains goods for road transport) ☐

What is a heavy vehicle load?

- All the goods, passengers, drivers and other persons in the vehicle
- All fuel, water, lubricants and readily removable equipment carried in the vehicle and required for its normal use
- Personal items used by the vehicle's driver or someone else necessary for the normal use of the vehicle
- Anything that is normally removed from the vehicle when not in use

Are you an employer?

1. You employ someone to drive a heavy vehicle (including casual, permanent, part time, contract driving and labour hire) ☐

Are you an executive officer?

1. You are the Director of the corporation ☐
2. You are a person who is concerned or takes part in the management of the corporation ☐

Are you a prime contractor?

1. You engage driver/s to drive a heavy vehicle under a contract for services ☐

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Heavy vehicle safety. It's your business.

APPENDIX B – CHAIN OF RESPONSIBILITY MATRIX

Note: this table is a summary of typical transport scenarios that are encountered on Nacap sites, and for each of those scenarios examples are provided to highlight situations in which a person could be in the Chain of Responsibility. The scenarios and examples are not exhaustive. If you in doubt about whether you are in the Chain of Responsibility, consult management personnel (e.g. Project Manager / Construction Manager / Plant Manager).

Scenario	Examples of scenario	Examples of typical consignors ("orderers") and schedulers among NACAP	Examples of typical packers among NACAP	Examples of typical loading / unloading managers among NACAP	Examples of typical loaders among NACAP	Examples of typical unloaders / receivers among NACAP	Examples of typical consignees among NACAP
Direct hired drivers – for dedicated transport services (projects and Plant Department)	• Fuel runs • Water carts • Servicing / lube • Crane trucks / flatbeds • Floats • Skid trucks	• Plant Manager (or deputy) • Project Plant Manager (or deputy) • Construction Superintendent (or deputy) • Construction Manager (or deputy) • Field Services Supervisor • Site / Project Engineer	• Storeman or labourer (general goods) • Driver • Mechanic (lube) • Skid throwers	Typically, the driver as there is often no designated, fixed location for loading and unloading Construction Manager, Superintendent, Storeman or Yard Supervisor could be considered loading / unloading manager in a project or plant yard situation	• Driver (most often) • Plant operator • Storeman or labourer (general goods) • Mechanic (lube)	• Storeman or labourer (general goods) • Driver • Mechanic (lube) • Plant Operator	• Plant Manager (or deputy) • Project Plant Manager (or deputy) • Construction Superintendent (or deputy) • Construction Supervisor • Foreman
Direct hired drivers – for activities involving incidental driving on projects	• Welder who drives a tie-in truck • Driver of blast or coating rig • Driver of a crew bus	• Construction Superintendent (or deputy) • Supervisor • Foreman • Site / Project Engineer	• Driver • Storeman • Labourer	Typically, the driver as there is often no designated, fixed location for loading and unloading Construction Manager, Superintendent, Storeman or Yard Supervisor could be considered loading / unloading manager in a project or plant yard situation	• Driver • Storeman • Labourer	• The driver of the vehicle • Members of the crew that use the equipment or materials	• Construction Superintendent (or deputy) • Construction Supervisor • Foreman

Scenario	Examples of scenario	Examples of typical consignors ("orderers") and schedulers among NACAP	Examples of typical packers among NACAP	Examples of typical loading / unloading managers among NACAP	Examples of typical loaders among NACAP	Examples of typical unloaders / receivers among NACAP	Examples of typical consignees among NACAP
Subcontracts with heavy vehicle driving incidental to scope of work	• HDD / boring subcontractor • Tree Clearing	N/A (performed by subcontractor) Note: scheduling and consigning performed by subcontractor in accordance with day to day subcontract requirements as advised by NACAP	N/A (performed by subcontractor)	N/A (performed by subcontractor)	N/A (performed by subcontractor)	N/A (performed by subcontractor)	N/A (subcontractor personnel)
Subcontracts with substantial incidental heavy vehicle driving	Camps	N/A (performed by subcontractor) Note: scheduling and consigning performed by subcontractor in accordance with day to day subcontract requirements as advised by NACAP	N/A (performed by subcontractor)	N/A (performed by subcontractor)	N/A (performed by subcontractor)	N/A (performed by subcontractor)	N/A (subcontractor personnel)
	Pipe transport	• Superintendent (or deputy) • Construction Manager (or deputy) • Site / Project Engineer	N/A (loaded directly onto vehicles)	• If Nacap manages pipe load-out, the Nacap pipe load-out / stockpile manager would be considered the loading manager • If subcontractor manages pipe load-out, the subcontractor's pipe load-out / stockpile manager would be considered the loading manager • Pipe stringing supervisor on RoW would be considered the unloading manager	• If Nacap performs loading onto trucks, loader is Nacap's stockpile vac lift operator • If subcontractor performs loading onto trucks, loader is subcontractor's stockpile vac lift operator	RoW vac lift operator	• Stringing Foreman • Construction Superintendent (or deputy)

Scenario	Examples of scenario	Examples of typical consignors ("orderers") and schedulers among NACAP	Examples of typical packers among NACAP	Examples of typical loading / unloading managers among NACAP	Examples of typical loaders among NACAP	Examples of typical unloaders / receivers among NACAP	Examples of typical consignees among NACAP
	Subcontract Fleet (e.g. tip trucks, water carts)		• Driver • Storeman • Labourer	Typically the driver as there is usually no designated, fixed location for loading and unloading Construction Manager, Superintendent, Storeman or Yard Supervisor could be considered loading / unloading manager in a project or plant yard situation	• Driver • Storeman • Labourer	• Driver • Storeman • Labourer	• Construction Superintendent (or deputy) • Construction Supervisor • Foreman
Purchase orders for ad-hoc heavy vehicle transport services	• Mobilisation of plant to or from a project • Ad-hoc general freight	• Plant Manager • Plant Superintendent • Project Plant Manager • Project Plant Superintendent	Anyone who packs goods for general freight	• Plant Manager (or deputy) • Project Plant Manager (or deputy)	Usually performed by driver of the vehicle, but includes anyone involved in the loading	Usually performed by driver of the vehicle, but includes anyone involved in the loading	• Plant Manager (or deputy) • Project Plant Manager (or deputy) • Construction Superintendent (or deputy)
Subcontractor-organised freight where Nacapassists with loading or unloading, or partially receives the freight	Camp catering services	N/A (done by subcontractor or the subcontractor's supplier)	N/A (done by subcontractor or the subcontractor's supplier)	Camp Manager or Construction Manager (both limited potential, will depend on agreed scope of loading / unloading by NACAP in the subcontract)	Any Nacap person who assists with loading of subcontractor's outbound freight	Any Nacap person who assists with unloading of subcontractor's inbound freight	N/A (subcontractor personnel)
Purchase Orders where supplier arranges the freight	• bulk materials such as welding electrodes / coating materials / garnet • a load of flanges and fittings or pipe spools • chemicals, general stores supplies, etc.	N/A (done by supplier)	N/A (done by supplier)	Loading manager • N/A (supplier responsibility) Unloading manager • Storeman • Yard supervisor • Construction Manager (or deputy)	N/A	• Storeman • Yard supervisor	• Storeman • Project / Site Engineer • Construction Manager (or deputy) • Plant Manager (or deputy)

APPENDIX C – CHAIN OF RESPONSIBILITY RISK REGISTER (ALSO REFER PROJECT HAZID)

Step 1. Identify hazards	Step 2. Assess risk	Step 3. Identify existing controls	Step 4. Treat risk	Step 5. Monitor and review
Identify anything that could potentially cause **harm** or **loss**.	Consider how the hazard or risk could cause **harm** or **loss**.	Look at your existing controls to **eliminate** or **minimise** the risk so far as is reasonably practicable.	Try to eliminate the risk first but, if that's not possible, put **additional controls** in place to minimise the risk so far as is reasonably practicable.	**Regularly** monitor and review the controls you've put in place to make sure they're working as planned.
Instructions				
< Identify hazards and record them in this column. >	< Record the risk(s) created by the hazard in this column. You can also make notes of how much of a risk you think something is. >	< It's likely you already have some controls in place for the different risks you've identified. If so, detail them here. >	< You may consider the risk unacceptable with the existing controls, so you need to put in place some additional controls. Detail them here. >	< When you've decided on the methods you'll use to monitor and review the effectiveness of your controls, record them in this column. With this information you can create a checklist or review schedule to document the results when you actually undertake the monitoring or review activity. >
Transport activities				
Fatigue				
Driver fatigue	Injury or death of a driver, passenger or member of the public could occur from an accident.	Fitness for Work procedure adherence (Sign onto daily prestart) Heavy Vehicle Procedure adherence	Opportunity – Develop targeted regular communications / training at inductions & toolboxes to suit the applicable individuals or work group in regards managing fatigue, work and rest limits and record keeping.	*Opportunity - Tool box records retained as evidence of training / information sharing.*

	Vehicle, Plant or property damage because of an accident.	Drug & Alcohol Policy adherence	Update current heavy vehicle procedure to bring in line with 2018 standards (Document dated 2016)	*Opportunity – Formally Check annually to ensure driver medicals up to date as well as inductions.*
	The environment could be negatively affected via leaking of oil resulting from an accident.	Transport trip properly planned and communicated and within work / rest limits and contingency in place should unknowns occur so drivers are not pressured to drive while fatigued.	Opportunity – Discuss benefit of a journey management on pager to return consistent approach to capturing the perimeters of safe journey plan.	*Opportunity - Review a trip records to check whether they are consistent with company procedures (scheduling and compliant with work / rest limits)*
				Opportunity – Formalise Journey Management plans as they are only verbal
	Complacency resulting in driver forgetting to properly restrain loads, not follow the journey management plan, Not complete vehicle prestart form.	Driver can stop and rest whenever they need to without fear of getting into trouble.	Reinforce at Prestart and Toolbox meetings	*Opportunity – Check annually to make sure all driver inductions & training are up to date*
Speed				
Drivers exceeding the speed limits.	Injury or death of a driver, passenger or member of the public could occur from an accident due to speeding	Transport trip plan allows for delays and do not encourage drivers to speed. (Trip plan only verbal at this stage)	*Opportunity- Ensure Subcontract agreements do not encourage drivers to speed to make a gain.*	*Opportunity - Check trip records monthly and make sure they provide enough provide time for the journey to be completed safely*

	Vehicle, Plant or property damage because of an accident due to speeding	IVMS installed on vehicles on selected projects (Only selected vehicles as encouraged by clients)	*Opportunity – training for drivers in respect to maintaining speeds.*	*Opportunity – Check annually to make sure all driver inductions & training are up to date*
			Opportunity – IVMS installed and provides automatic speeding alerts to assist in policing poor behaviours.	
Mass				
A Vehicle could be overloaded or load not positioned properly	This could have an adverse effect on truck / Trailer combination to stop in time resulting in an accident	Vehicle Mass limits are identified before loading and actual mass are determined before each journey	*Opportunity – All equipment has a weigh bridge certificate advising actual weight of the load of plant when purchasing &/or change configuration*	Review sample of weigh bridge certificate to verify mass &/or mass calculations are accurate
	Damage could occur to trailer and tyres as a result of overloading and cause an accident	*Opportunity – Drivers and Loaders are training in calculating and recording gross and axle weights*		*Opportunity – Check annually to make sure all driver inductions & training are up to date*
		Opportunity – Drivers & Clients are advised that the company policy is not to pick up over-mass loads		Weights & Dimensions of plant stored in Plant Data base
Dimension				
Vehicle is over dimension	The load could hit another road user, member of the public or infrastructure	Load are carried on appropriate vehicles with necessary permits	Drivers & loaders are trained in dimensional limits	*Opportunity – Check annually to make sure all driver inductions & training are up to date*

		Load Dimensions are inspected before the journey departure		Opportunity – Investigate any instances where a vehicle or load is over dimensional
Loading				
Incorrect load restraint	The load could fall from the vehicle and hit another road user or pedestrian or fall on the driver or person unloading	Opportunity – The Load restraint procedure reflects standards in the load restraint guide.	Opportunity – Load restraints are checked prior to departure and during the journey	*Opportunity – Check annually to make sure all driver inductions & training are up to date*
		Opportunity – Drivers are trained in correct load restraint procedure at induction and at regular toolbox talks		Opportunity – Check a sample of loads regularly to make sure they are properly restrained
Vehicle standards				
Operating an unroadworthy vehicle	The vehicle could cause an accident or be unable to avoid an accident	Vehicles are serviced & maintenance as per manufacturers recommendation and fault rectified in an appropriate time frame according to the reason for the fault	Drivers to complete a formal prestart check before starting the journey	Check maintenance records frequently to ensure they are being maintained & communicate service reminders via a plant data base send out report monthly
	Mechanical failure may result in not being able to stop vehicle and could hit another road user, pedestrian or infrastructure		Driver fault reports identified the issue on the vehicle prior to the journey and reported to the supervisor	Check prestart records to ensure they are being filled out properly and filed
Third party interactions				

A third-party provider doesn't believe they are a party in the chain of responsibility (COR) and therefore the safety duties in the legislation don't apply to them	The third party could operate in a lower standard and put NACAP workers and members of the public and their own drivers at risk	*Opportunity – Third parties are vetted formally to assess their compliance and understanding of COR obligation*	Nacap supervision at safety critical parts of the process.	*Opportunity – Create a Vetting checklist or use the NHVR checklist to assess & record the third party's compliance with their obligations to COR at all stages of construction (Tender to Delivery)*
			Share relevant lessons learned and safety alerts with third parties	Check records to make sure there have been no contraventions of the safety legislation / HVNL
				Nacap monitoring at safety critical parts of the process
Driver distraction				
Driver distracted by mobile device	A driver could cause an accident while bring distracted by a mobile device	Company documentation referring to acceptable use of mobile phones	*Opportunity - All employees are given training regarding the hazards of using a mobile device while driving and familiarisation with the company mobile device policy*	Perform spot checks on mobile device usage. Take disciplinary action for breaches in line with mobile device policy
		Regular breaks to allow drivers to make and return calls		
Other hazards				
Employees and machines are operating together in a yard In adequate loading and unload yard	An employee could be hit by a vehicle or piece of plant	The yard has designated pedestrian walkways and exclusion zones Appropriate PPE worn in the yard	All employees are given training in using walkways, exclusion zones and hi-vis clothing in the yard	Perform spot checks in the yard to see whether employees are using pedestrian walkways, observing exclusion zones and wearing hi-vis clothing

Prohibited request causing the driver to : a) to exceed a speed limit applying to the driver; or (b) to drive a fatigue-regulated heavy vehicle while impaired by fatigue; or (c) to drive a fatigue-regulated heavy vehicle while in breach of the driver's work and rest hours option; or (d) to drive a fatigue-regulated heavy vehicle in breach of another law in order to avoid driving while impaired by fatigue or while in breach of the driver's work and rest hours option.	Less than adequate COR safety and compliance	An active system in place to manage the risk and to minimise the chances of road transport law being breached	Work with relevant parties to get their systems up to standard; or choose not to engage that contractor on the basis of their less than adequate standards Include COR safety and compliance conditions in all supply chain contracts monitoring the compliance of contractors and third parties within the supply chain	Spot checks, inspections, auditing, reporting

APPENDIX D – APPLICATION OF HVNL

At the time of publication of this procedure, HVNL has been enacted in all Australian states and territories except Western Australia and Northern Territory.

The states (and ACT) that have enacted HVNL have each passed their own legislation that give effect, in each of their jurisdictions, to the *Schedule to Heavy Vehicle National Law of Queensland,* and its associated regulations (called the Heavy Vehicle National Regulations).

Therefore, whilst there is a substantial list of legislation across the states and territories, the principal HVNL and its regulations for jurisdictions *other than* Western Australia and Northern Territory are as follows:

- Schedule to *Heavy Vehicle National Law (Qld) 2012*
- Heavy Vehicle (General) National Regulation
- Heavy Vehicle (Registration) National Regulation
- Heavy Vehicle (Vehicle Standards) National Regulation
- Heavy Vehicle (Mass, Dimension and Loading) National Regulation
- Heavy Vehicle (Fatigue Management) National Regulation

At the time of publication of this procedure, the above can be found on the NHVR website at: https://www.nhvr.gov.au/law-policies/heavy-vehicle-national-law-and-regulations

Western Australia's heavy vehicle laws including provisions for COR, mass, dimensions, loading, vehicle use, and fatigue management are contained in the following legislation:

- Road Traffic (Administration) Act 2008
- Road Traffic (Vehicles) Act 2012

Northern Territory does not have specific COR laws or specific heavy vehicle fatigue management provisions; it relies on the general duty enshrined in its Work Health and Safety Act for risk management including for fatigue management. Standard mass, dimension and loading provisions are as per all other jurisdictions.

When crossing from Western Australia to another jurisdiction, or vice versa, compliance with the fatigue management regulations of the jurisdiction the driver is exiting, *and* the jurisdiction the driver is entering, is required.

APPENDIX G TRAFFIC STUDY

Document Cover Sheet

CIVLINK CONSULTING	**Supplier PO/Contract No:**	4100325085
	Supplier Item Description:	Port Kembla Pipeline Project – Traffic Study
	Equipment/Tag No:	N/A

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Supplier Document Title:	Traffic Study		
Supplier Document No:	JEM-TS-0001	**Supplier Rev No:**	1
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Key Reason for Issue:

IFR- Issued for Review	**IFI**- Issued for Information	**IFU**- Issued for Use
IFP- Issued for Purchase	**IFC**- Issued for Construction	**AB**- As Built

TRAFFIC STUDY

PORK KEMBLA PIPELINE PROJECT

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CONTENTS

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1. Introduction

1.1 Project

The Australian Industrial Energy (AIE) plan to build a new Liquid Natural Gas (LNG) import terminal to Port Kembla inner harbour with the aim to sell gas to the east coast market. The gas is planned to be processed on a Floating Storage and Regasification Unit (FSRU) and imported into the existing gas networks through a new pipeline that will connect the AIE Port Kembla Gast Terminal (PKGT) with the Jemena owned gas transmission network via the Eastern Gas Pipeline (EGP).

The proposed pipeline is comprised of approximately 13 km of steel pipe 18" in diameter. The new pipeline consists of three segments including the Port Kembla Pipeline, the Cringila Lateral Pipeline and the Kembla Grange Meter Station (KGMS) to EGP Connection pipe run.

1.2 Purpose

The purpose of this report is to document the results of the assessment of the potential traffic and transport impacts as part of the construction and operation of the proposed gas pipeline on state controlled and TfNSW land. The report incorporates assessments of several key elements that may potentially impact the local traffic network, safety and amenity of road users as residents as well as likely required temporary works and other implications of the proposed works on state-controlled roads.

Elements assessed as part of the study include a design assessment of the proposed access and egress points as provided by Jemena, and in line with the proposed pipeline alignment and to provide practical access to the alignment and site during construction.

The design component includes:

- Driveway positions and sizes
- Swept path analysis for 19m semi-trailer
- Sight distance checks in either direction from the driveway

From review of the design elements and incorporating information provided by Jemena or sourced from other stakeholders a further assessment will be conducted to further assess the likely traffic generation, the parking demand during construction, the available parking in the area as well as any implications (safety or otherwise) relating to the development which may need to be addressed as part of the proposal.

1.3 Scope and limitations

Jemena have engaged with TfNSW to commence approvals for a proposed pipeline.

This study relates to the impact of the construction traffic on the nominated state controlled roads and TfNSW land along the proposed pipeline route. Specifically the section between Five Islands Road and just north-west of the Princes Highway as shown by the blue dashed line in Figure 1, below.

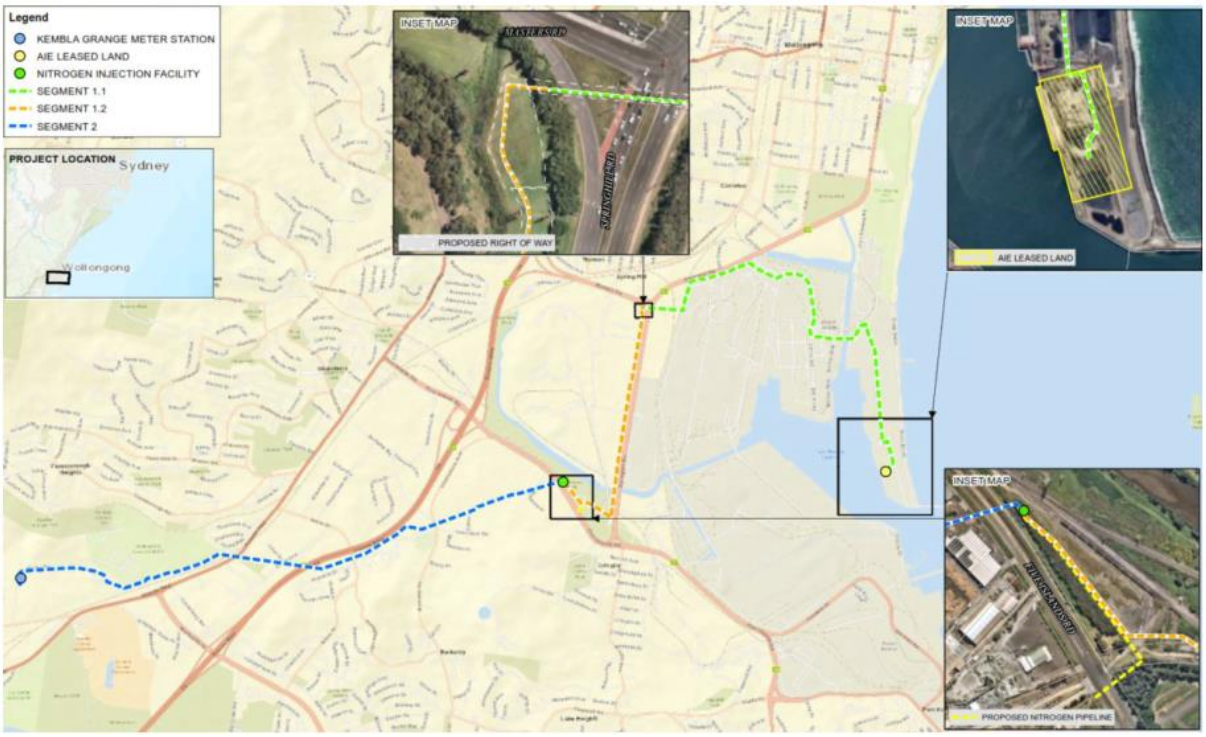


Figure 1 Port Kembla Pipeline Project Overview Map [source: Jemena Scope of Works - Traffic Study]

The scope of works specifically includes the following key items specific to TfNSW land and state controlled roads:

- Review of existing conditions in the area, including traffic and safety issues, crash statistics and available public transport connections to the project
- Determine traffic generation for the project
- Identify any potential traffic or safety implications by the project
- Review parking availability and potential impact by the project in relation to TfNSW parking guidelines
- Provide strategic designs for the access/egress of construction vehicles throughout the alignment

1.4 Reference Material

Reference materials used in the development of this study are listed below.

- Austroads Guide to Road Design (2021)
- TfNSW Supplements to Austroads Guides
- Austroads Guide to Traffic Management (2020)
- TfNSW Traffic Control at Worksites Manual – Version 6 (2020)

2. Existing road and traffic conditions

This section outlines the existing conditions of the site and land area. The information provided is based on publicly available information sourced from either council or TfNSW websites.

2.1 Land Use

The land uses are primarily light and heavy industrial adjacent the project works for most of Segment 2, with the area south of the alignment especially around Nolan Street being zoned light-density residential and recreational area (denoted by the pink and green areas shown in greater detail in Figure 3). The red dashed line presented in the following figures represents the Segment 2 alignment.

Figure 2 Legend for Figures 3 & 4 (https://www.wollongong.nsw.gov.au/about/maps)

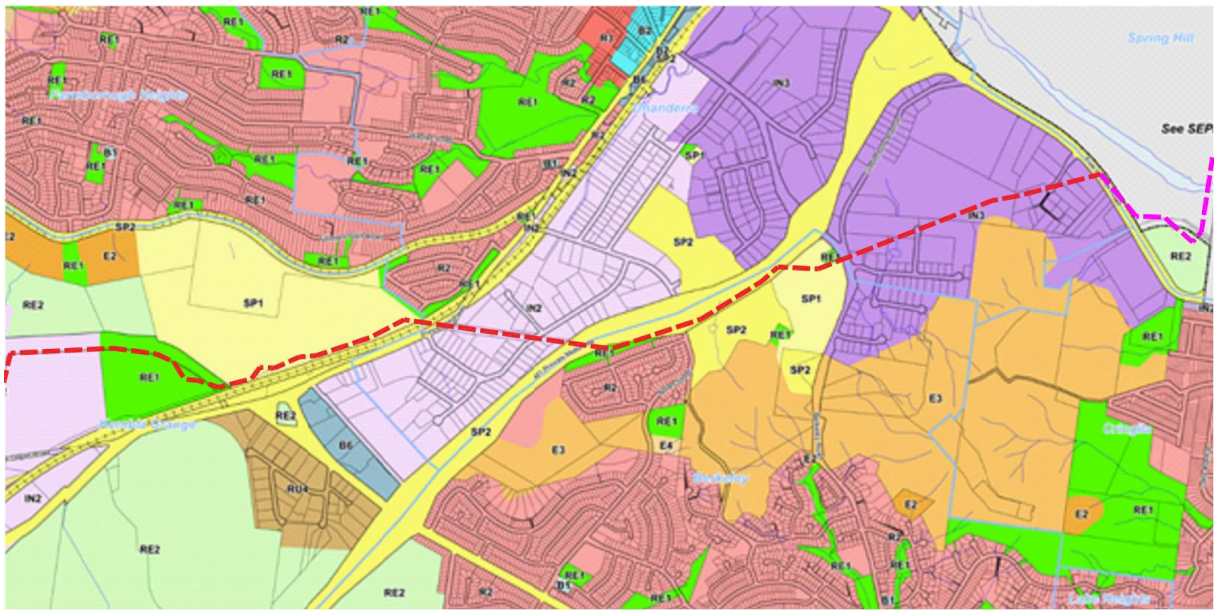


Figure 3 Wollongong zoning map (https://www.wollongong.nsw.gov.au/about/maps)

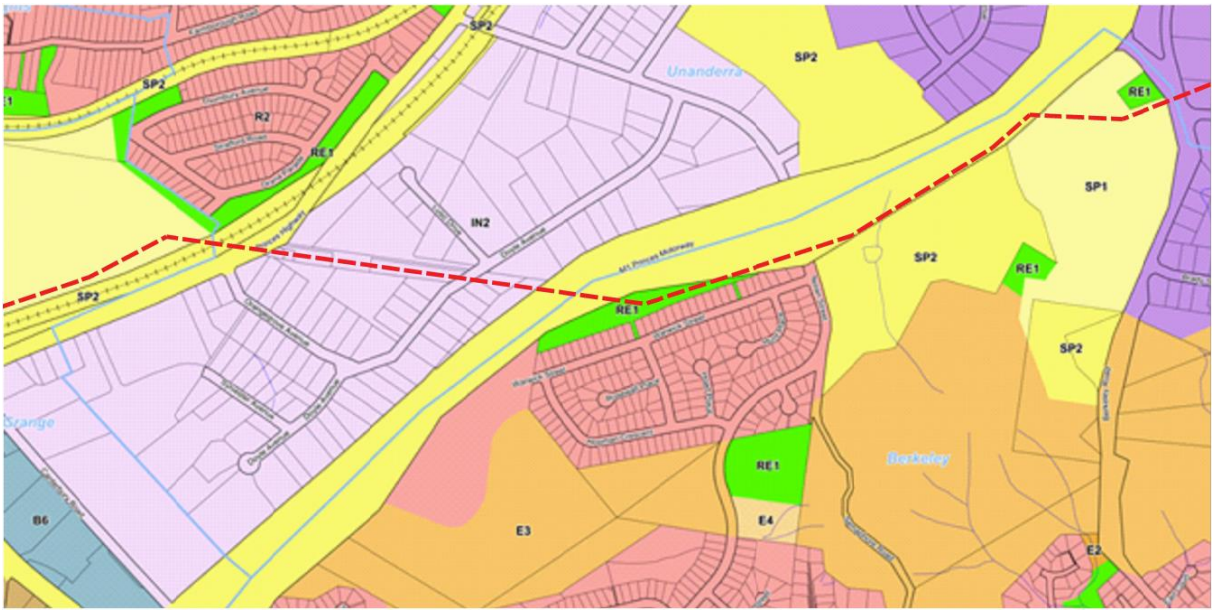


Figure 4 Wollongong zoning map - increased detail Nolan Street (https://www.wollongong.nsw.gov.au/about/maps)

2.2 Road network characteristics

The roads in the vicinity of the proposed pipeline alignment are a mix of State, Regional and local roads. The figure below (Figure 5) shows the breakdown of the road classifications from Port Kembla through to the west, past Nolan Street and the strategic design site access locations.

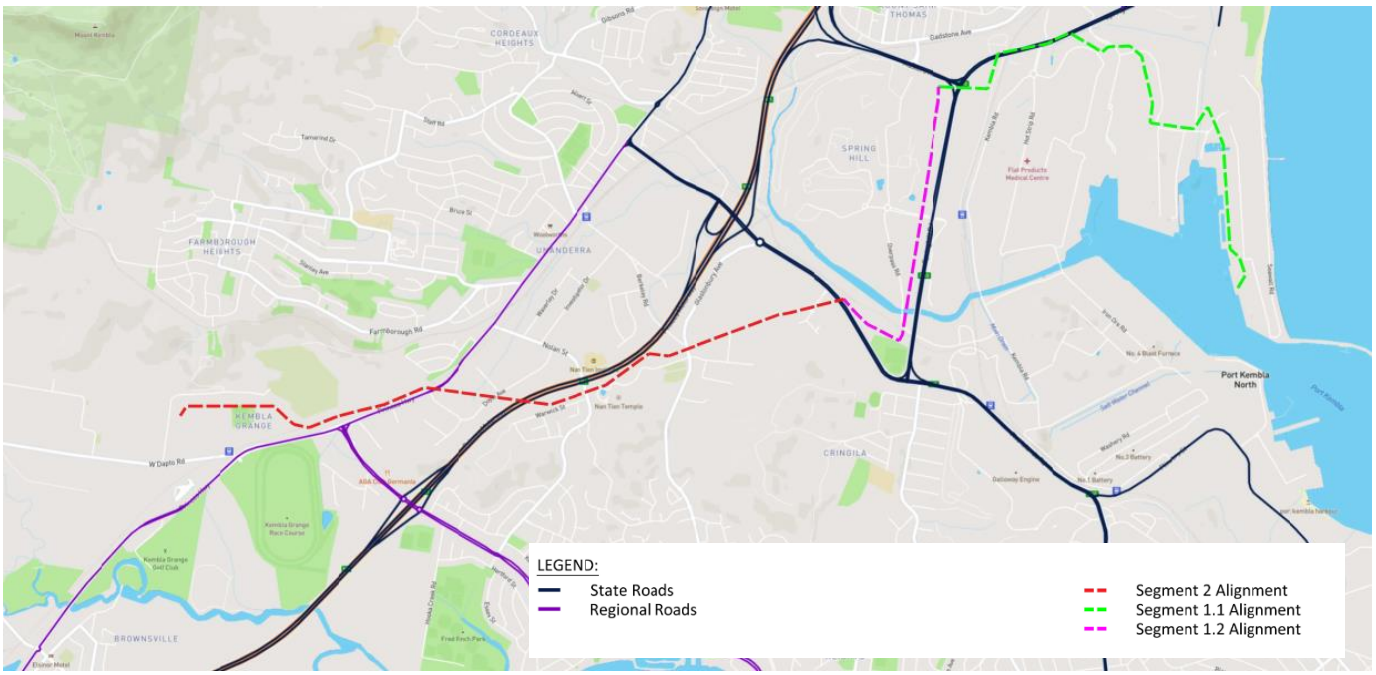


Figure 5 TfNSW NSW Road Network Classifications Map (https://roads-waterways.transport.nsw.gov.au/classification/map/cartomap)

The map shows that the key roads impacted (Nolan Street, Berkeley Road) are local roads with Five Islands Road being a State Road with the remaining roads likely to be used for access falling into the regional road category denoted by purple in the map above.

2.3 Crash analysis

The TfNSW crash statistics website was consulted, and a review of the crashes in the areas impacted by the project delivered the following map (Figure 6) and subsequent results.

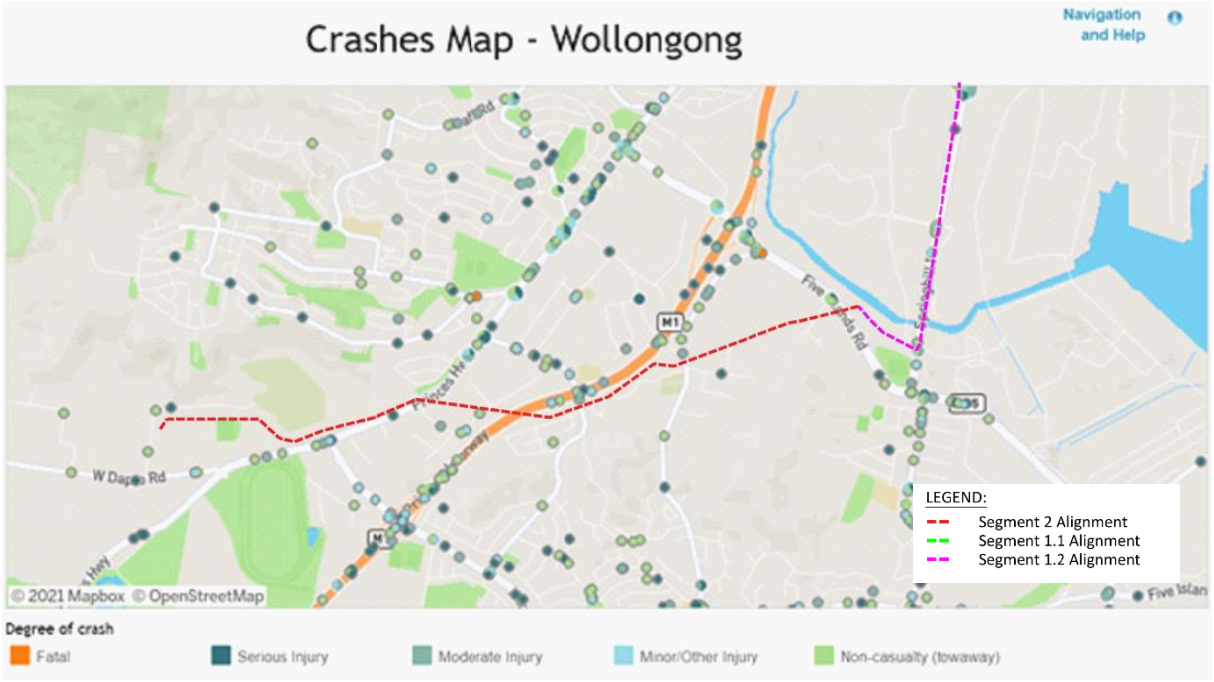


Figure 6 Crashes map - Wollongong (https://roadsafety.transport.nsw.gov.au/statistics/interactivecrashstats/lga_stats.html?tablga=4)

Nolan Street there was a total of 12 incidents reported in the period between 2015 and 2019 with most incidents resulting in no injury, some with one person being injured and no fatalities. The incidents were typically vehicles running off the road into objects. There were several additional incidents at the intersection of Nolan Street and Northcliffe Drive resulting in some more serious injuries where vehicles crossed traffic, or one instance of a pedestrian being struck with a vehicle.

Five islands road crash statistics were reviewed specifically for the area between the Princes Motorway and the proposed site access toward Springhill Road to the south-east. It experienced 21 incidents with causes like above, run-off road incidents and impacting objects and are concentrated around the intersections.

2.4 Existing traffic volumes

2.4.1 Data collection

There was limited current traffic data available for the traffic study for the project however an analysis of proposed movements compared to estimated roadway capacities has been conducted, and due to low volumes of traffic to deliver the works the traffic impacts are anticipated to be minimal. Refer Section 3.2.1, below.

2.5 Traffic modelling

No traffic modelling has been conducted as part of this traffic study.

2.6 Alternative transport

2.6.1 Cycle access

The construction site laydown area has access to existing shared and dedicated cycle access on the Princes Highway as well as Five Islands Road. Nolan Street appears to have no dedicated cycle connectivity, however riding on Nolan Street itself would be permitted.

The map in Figure 7, below outlines the available cycle connectivity that is dedicated or shared by the green lines.

Figure 7 Map showing shared or dedicated cycle access and bus stops (Source TfNSW)

2.6.2 Bus stops

There are a number of bus stops in the vicinity of the proposed access points on Nolan Street as well as on Princes Highway and Northcliffe Drive. The bus routes provide connectivity locally but due to the travel time to and from Sydney being over 2 hrs it's unlikely the daily commute for workers from Sydney is viable. Alternatively, workers may be local or stay in local accommodation in which case buses may be an option to attend site.

2.6.3 Pedestrian access

The primary laydown has limited defined pedestrian access via West Dapto Road as shown below in Figure 8, below.

Figure 8 West Dapto Road, street view (Source Google)

The pedestrian access to the other site access points is defined and available to Nolan Street accesses from the Princes Highway to the north-east. Five Islands Road also has defined pedestrian access for the section from Princes Highway to the north-east to the proposed site access.

Pedestrian access is possible to and from the site access points however it's unlikely it will be a viable means of accessing site by workers due to the distance between the access points and the laydown and their likely accommodation and its proximity to the project (assumed to be either central Wollongong or Sydney).

3. Traffic impacts

3.1 Construction impacts

3.1.1 Construction traffic access points

There are several proposed access points throughout the alignment, which have had swept path and sight distance assessments conducted as part of this traffic study. The sight distance checks along with swept path analysis with regard to state-controlled roads and land owned by TfNSW, are included in Appendix A.

The access points proposed to deliver the pipeline are:

- Nolan Street (both east and west)
- Berkeley (western side near sub-station)
- Five Islands Road (existing access to the east)

These access points would likely be established utilising localised traffic controls to allow modification of kerb and provide a suitable access to the boundary of the land parcels where the pipeline is to be constructed.

The current designs of the site access points is intended to be temporary however long-term solutions are expected to be provided for maintenance and inspections of the pipeline for a long-term solution.

The access points may require occupation of some kerbside parking spaces on Nolan Street but also potentially cause localised impacts to existing bus stops on Nolan Street.

The number of parks impacted is expected to be limited. Bus stops are utilised according to the TfNSW website (refer Figure 7 Map showing shared or dedicated cycle access and bus stops).

3.1.2 Construction traffic generation

The construction of the pipeline is anticipated to generate the following movements on the road network as outlined in

Table 1, below. Noting that the proposed site compound at Wyllie Road would see the greatest volume of movements (accessed via Princes Highway and West Dapto Road).

From the primary site compound, it's anticipated workers will carpool to their respective construction sites along with any supplies. Supplies will be stored at the primary compound and transported to site as needed.

Heavy vehicle movements would include pipe deliveries, plant movements, and backfill material. Light vehicles would primarily include construction support vehicles and worker movements around site.

Table 1 Indicative traffic movements from construction activities (Source: Jemena)

State Road Network	Types of vehicles	Daily Peak Hour Movements (Indicative)		Maximum Daily Movements (Indicative)
		7.30am – 9.00am	3.30pm – 6.00pm	
Princes Motorway, Unanderra	Light vehicles	<1	20	40
	Heavy vehicles	<1	<1	12
Nolan Street, Unanderra (Bridge)	Light vehicles	6	20	40
	Heavy vehicles	<1	<1	4
Five Islands Road, Unanderra	Light vehicles	6	20	40
	Heavy vehicles	<1	<1	4

3.1.3 Construction duration

It is anticipated that the project construction timeline will see the proposed access locations to the State controlled Roads broken into five separate parcels as listed below:

- Five Islands Road, Unanderra
- Lot 31 in DP241455
- Lot 30 in DP241455
- Nolan Street, Unanderra
- Princes Motorway, Unanderra

Each proposed access location will mean that the parcels above will be impacted by construction traffic movements for the duration of approximately 5 months. The parcels are shown on the aerial map below for reference.

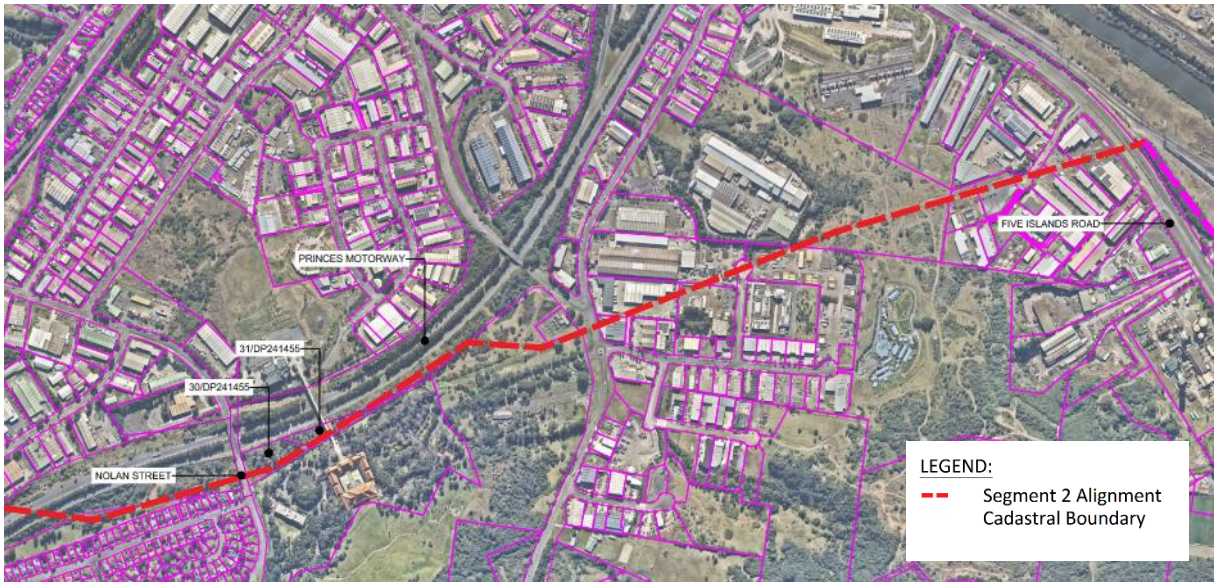


Figure 9 Cadastral map showing pipeline alignment

3.2 Construction traffic implications

3.2.1 Network capacity

To assess impacts of construction traffic on the network capacity an assessment has been conducted which compares the planned construction traffic to the assumed lane mid-block capacity to calculate a percentage utilisation of the available lanes during construction. Best efforts were made to assess the impact based on the limited traffic data available.

The volume of traffic accessing the project are expected to be a very small percentage of total capacity on the adjacent roads. The likelihood of any adverse network impact from the works will be unlikely.

The table below outlines expected lane capacities as defined in Austroads Guide to Traffic Management Part 3: Traffic Studies and Analysis:

Table 2 Typical mid-block capacities for urban roads with uninterrupted flow (Austroads Guide to Traffic Management Part 3: Traffic Studies and Analysis)

Type of lane	One-way mid-block capacity (pc/h)
Median or inner lane	
• Divided Road	1000
• Undivided road	900
Middle lane (of a 3 lane carriageway)	
• Divided road	900
• Undivided road	1000
Kerb lane	
• Adjacent to parking lane	900
• Occasional parked vehicles	600
• Clearway conditions	900

The proposed vehicles expected to utilise the site access points daily are as outlined in the table above, in

Table 1. If we take a conservative approach and adopt the peak daily movements and compare this to the lane capacity, we will determine the worst case % age utilisation of the capacity by the construction traffic.

Table 3 Construction vehicle utilisation of available capacity

State Road Network	Lane capacity per Austroads (two-way total)	Types of vehicles	Daily Peak Hour Movements (Indicative)	% utilisation of available capacity by construction traffic
			3.30pm – 6.00pm	
Princes Motorway, Unanderra	5600	Light vehicles	20	0.35%
	5600	Heavy vehicles	<1	0.017%
Nolan Street, Unanderra (Bridge)	1800	Light vehicles	20	1.11%
	1800	Heavy vehicles	<1	0.055%
Five Islands Road, Unanderra	5600	Light vehicles	20	0.35%
	5600	Heavy vehicles	<1	0.017%

3.3 Safety

This section outlines the safety considerations in relation to primarily the construction of the pipeline. Key considerations for this segment have been drawn from the Austroads Guide to Road Safety Part 6A: Implementing Road Safety Audits, specifically elements of Checklist 5: Roadwork Traffic Scheme Audit. It is noted however that the project is not a road upgrade, some elements are still relevant for consideration.

The alignment of the road and potential changes are limited, and constraints from an alignment perspective for through traffic and public traffic are anticipated to be limited. Turning radii for trucks entering and exiting the compounds on Nolan Street are tight and is likely to impact the pedestrian refuge.

Turn movements at the other compounds appear to be suitable and would have limited impact on public traffic. No neighbouring property accesses appear to be impacted by the proposed works, and temporary accesses within the study scope.
It is not anticipated that Safety barriers or other non-frangible hazards will need to be introduced within the clear zone for the proposed access roads. The Project's Construction Contractor shall develop specific Traffic Management Plans for each section of the works using findings from this Traffic Study for approval by the relevant authorities prior to commencement of work.

3.3.1 Accesses

The access points sight distances should be compliant for the speed (to be confirmed with further site investigation). Safe intersection sight distance (SISD) has been shown indicatively on the plans included in Appendix A and demonstrate the likelihood of a compliant sight distance for exiting construction vehicles when exiting the proposed site access points.

Heavy vehicle movements are planned to be limited so supporting signage is not anticipated to be necessary for the access points. Due to the delivery sizes localised traffic control may be necessary for any reversing movements of trucks wishing to access the site driveways.

Due to the locations, the volumes of the impacted roads and the infrequent trips proposed to access the sites the safety implications of the site accesses during normal operation are expected to be limited.

3.3.2 Pedestrians and cyclists

Pedestrian paths are impacted with the proposed temporary access points at Nolan Street and there is an existing pedestrian interface at Five Islands Road. The anticipated pedestrian volumes are light with only a few movements expected a day, so interface of site traffic impacting pedestrians should be limited.

The potential removal of the pedestrian refuge on Nolan is likely to have an impact on pedestrian desire lines, causing them to still have a need to cross at the location, however, will have to achieve the crossing in a single movement. Measures to maintain access and safe crossing are anticipated to be incorporated into pipeline construction delivery and the Traffic Management Plan should the refuge be impacted.

Cyclist connectivity is expected to remain unchanged with construction debris being dragged onto the road likely to be the only implication the works may have on cyclists.

The volume of vehicles on roads in the area will increase during works, and an increase of vehicular traffic past the school on Nolan Street (Berkeley West Public School) will increase the amount of traffic the school crossing will be interacting with, however the volumes of vehicles proposed during the project delivery is relatively low.

3.4 Parking

This section will outline the anticipated parking demand during the project delivery and the anticipated available parking as well as any local or kerbside parking impacts anticipated during delivery.

3.4.1 Parking demand

The workers demand outlined in the documents provided by Jemena suggest daily peak workers of around 50 per day during the five-month duration with lighter demand in the early and late stages of the project. The intent is that workers will travel daily to the laydown area and travel to site in a car-pooling arrangement to ensure minimal disruption to neighbours.

3.4.2 Available parking

Parking availability at the primary site compound will have to account for at least 50 light vehicles as well as pool vehicles for the peak period. The primary site compound is anticipated to have adequate space to provide a hardstand for parking demand.

Parking on site is anticipated to be provided internally for the pool vehicles and heavy vehicles with no workers planned to be parking on the public road, except for where works are conducted for site establishment and installation of site access arrangements.

3.5 Mitigations

The proposed construction of the pipeline has some potential impacts which may be mitigated through a variety of measures, some of which are listed below for consideration.

- To avoid adverse impacts on the school restricting heavy vehicle movements to utilise the other access roads or avoid school pick-up and drop-off periods.
- Provide signage / detour for pedestrians to avoid any impacts because of modification or removal to the pedestrian refuge on Nolan Street.
- Provide signage for truck movements where they are high in volume or would otherwise impact opposing traffic (or where reverse movements are required on the road)

- Planning and designation of permitted parking for construction staff to avoid impacts on residents and businesses.

4. Strategic Designs – Design Reports

4.1 Nolan Street

Project	Port Kembla Pipeline Project
Stage / location	Nolan Street Site Access
Client	Jemena
Date	06.09.2021
Revision	01

Item	Activity	Comments
1	Access design criteria	Design speeds – 60km/h Posted speed – 50km/h
2	Visibility SISD	SISD checked for 2D alignment and distance. Additional survey information required for a comprehensive sight distance analysis to be conducted. From the SISD checks conducted it appears they will be achieved for a 60km/h design speed.
3	Swept paths	Swept paths have been completed for 19m Semi-trailer accessing and egressing from the access points on Nolan Street. Driveway access points can be constructed to a size suitable for 19m semi-trailer access for turn movements in all directions however will impact the existing pedestrian refuge on Nolan Street (south of Princes Motorway).
4	Jemena comments	Driveway locations have been adjusted to address feedback from Jemena project team. Driveway construction simplified due to temporary nature of the access.
5	Non-conformances	No non-conformances have been identified with the development of the strategic designs for temporary site accesses.

4.2 Berkely Road

5. Project	Port Kembla Pipeline Project
Stage / location	Berkeley Road
Client	Jemena
Date	06.09.2021
Revision	01

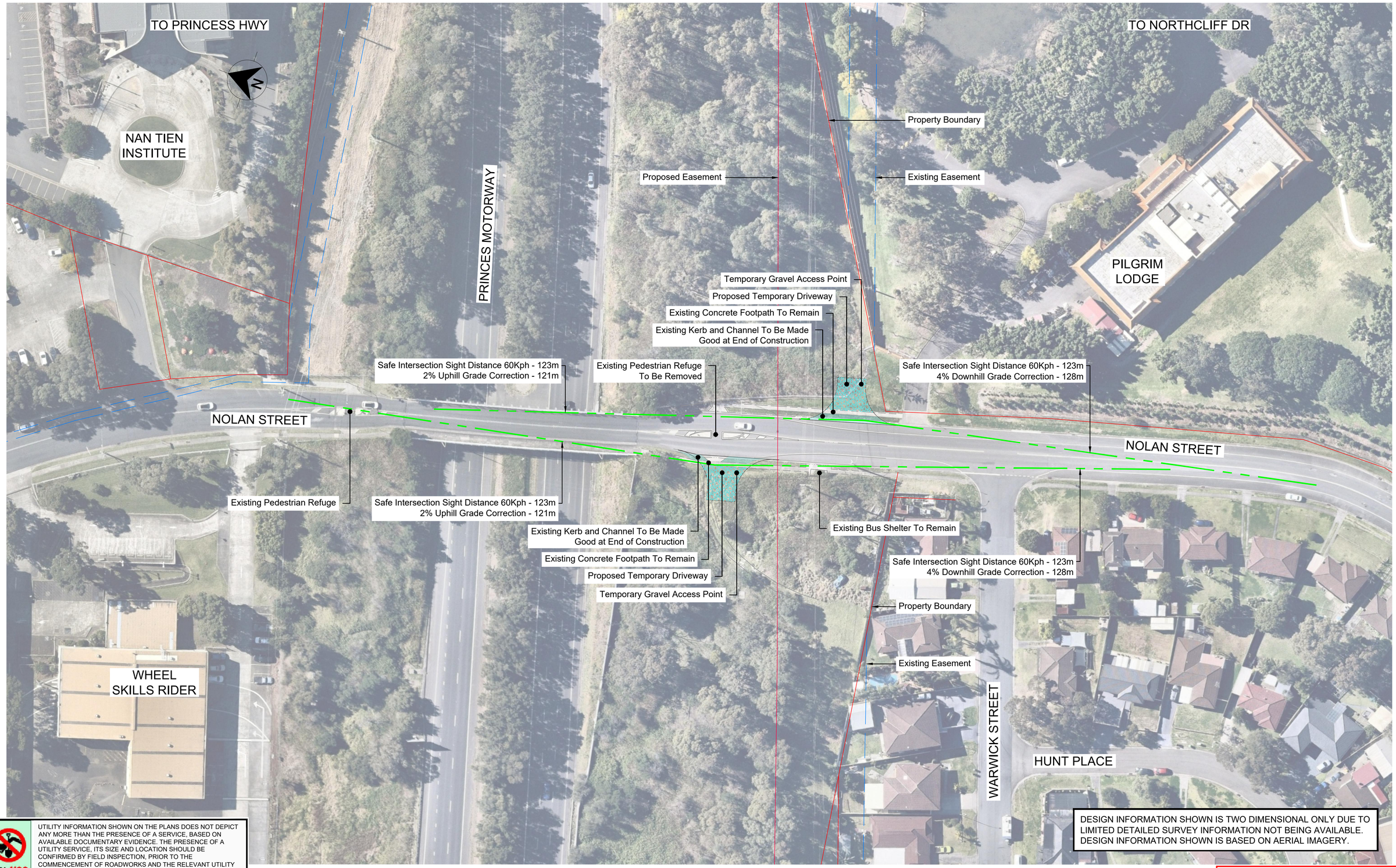
Item	Activity	Comments
1	Access design criteria	Design speeds – 60km/h Posted speed – 50km/h
2	Visibility SISD	SISD checked for 2D alignment and distance. Additional survey information required for a comprehensive sight distance analysis to be conducted. From the SISD checks conducted it appears they will be achieved for a 60km/h design speed.
3	Swept paths	Swept paths have been completed for 19m Semi-trailer accessing and egressing from the access point on Berkeley Road. Driveway access can be constructed to a size suitable for 19m semi-trailer access for turn movements in all directions.
4	Jemena comments	Driveway construction simplified due to temporary nature of the access.
5	Non-conformances	No non-conformances have been identified with the development of the strategic designs for temporary site accesses.

5.1 Five Island Road

Project	Port Kembla Pipeline Project
Stage / location	Nolan Street Site Access
Client	Jemena
Date	06.09.2021
Revision	01

Item	Activity	Comments
1	Access design criteria	Design speeds – 90km/h Posted speed – 80km/h
2	Visibility SISD	SISD checked for 2D alignment and distance. Additional survey information required for a comprehensive sight distance analysis to be conducted. From the SISD checks conducted it appears they will be achieved for a 90km/h design speed.
3	Swept paths	Swept paths have been completed for 19m Semi-trailer accessing and egressing from the access points on Nolan Street. Driveway access points can be constructed to a size suitable for 19m semi-trailer access and egress.
4	Jemena comments	No comments were received for Five Islands Road access point.
5	Non-conformances	No non-conformances have been identified with the development of the strategic designs for temporary site accesses.

6. APPENDIX A – Strategic Designs



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	TRAFFIC MANAGER	A.GOSPER		19/10/2021

CIVLINK CONSULTING

CLIENT: NSW GOVERNMENT Transport Roads & Maritime Services

CONSULTANT: Jemena bringing energy to life

PROJECT
JEMENA TRAFFIC STUDY
NOLAN STREET
JEMENA ACCESS POINT
SHEET 1 OF 1

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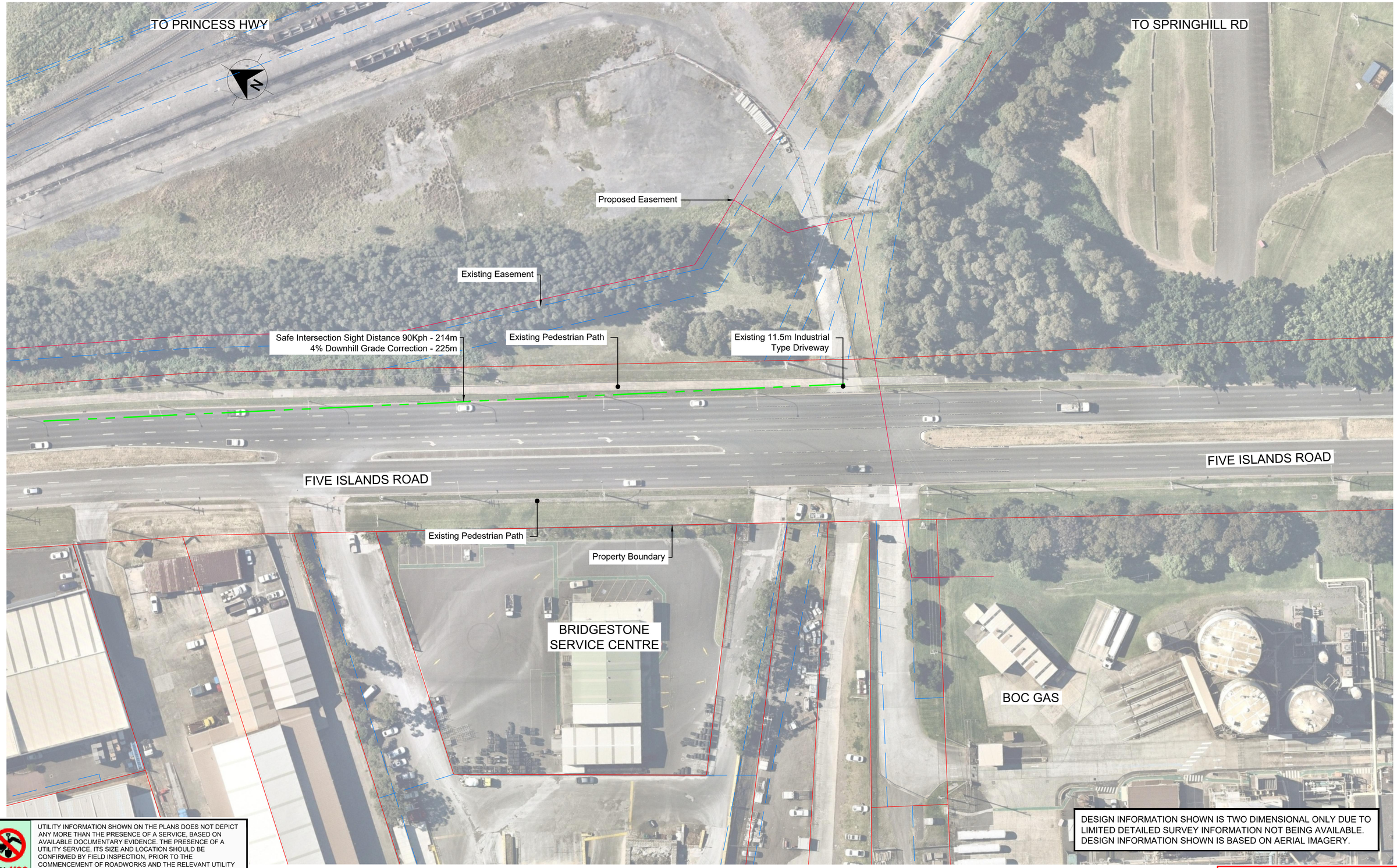

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	TRAFFIC MANAGER	A.GOSPER		19/10/2021

CIVLINK CONSULTING

CLIENT: NSW Government Transport Roads & Maritime Services

CONSULTANT: Jemena bringing energy to life

PROJECT
JEMENA TRAFFIC STUDY
FIVE ISLANDS ROAD
JEMENA ACCESS POINT
SHEET 1 OF 1

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7. APPENDIX B – Swept path analysis

Prime mover and semi-trailer (19 m)	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

DESIGN VEHICLE - 19.0m SEMI TRAILER

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	DESIGN MANAGER	A.GOSPER		19/10/2021
	TRAFFIC MANAGER	A.GOSPER		19/10/2021

CIVLINK CONSULTING

CLIENT: NSW GOVERNMENT Transport Roads & Maritime Services

CONSULTANT: Jemena bringing energy to life

PROJECT
JEMENA TRAFFIC STUDY
NORTHCLIFFE DRIVE
DESIGN VEHICLE SWEPT PATHS
SHEET 1 OF 6

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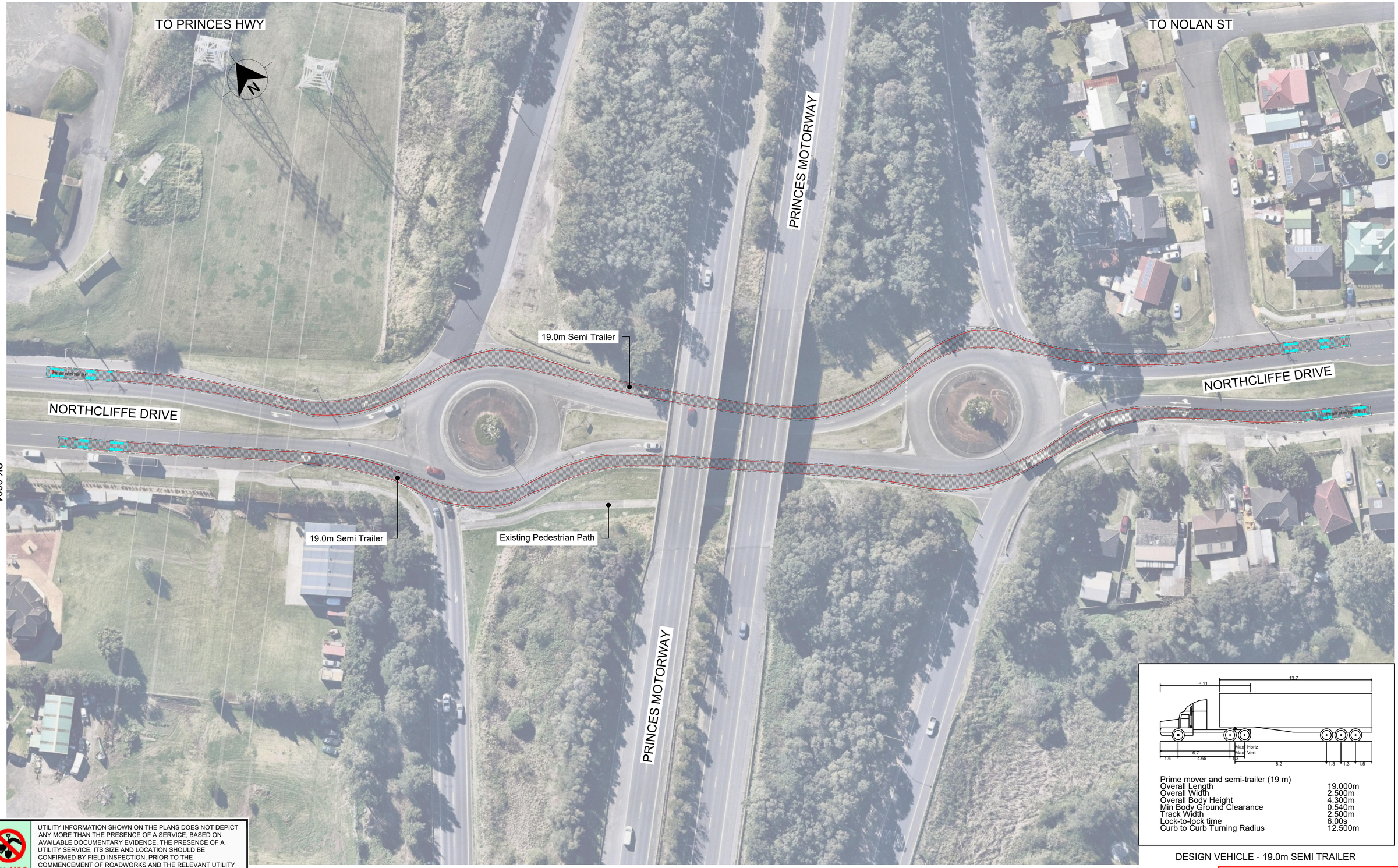

Prime mover and semi-trailer (19 m)	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

DESIGN VEHICLE - 19.0m SEMI TRAILER

NOT FOR CONSTRUCTION

DIAL 1100 BEFORE YOU DIG

UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF ROADWORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALING 1100 OR FAX 1300 652 077 (DIAL BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.

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1	19/10/2021	ISSUED FOR INFORMATION	KM	AG	AG

0 | 10 | 20 | 30 | 40 | 50 mm ON A3 SIZE ORIGINAL

This Drawing may have been prepared using colour and may be incomplete if copied
DO NOT SCALE DIMENSIONS FROM DRAWING

	TITLE	NAME	TICKET #	DATE
HEIGHT DATUM	DRAWN	CIVLINK		19/10/2021
	DRAWING CHECK	CIVLINK		19/10/2021
CO-ORDINATE SYSTEM	DESIGN	CIVLINK		19/10/2021
	DESIGN CHECK	A.GOSPER		19/10/2021
	DESIGN MANAGER	A.GOSPER		19/10/2021
	TRAFFIC MANAGER	A.GOSPER		19/10/2021

CIVLINK CONSULTING

CLIENT: NSW GOVERNMENT Transport Roads & Maritime Services

CONSULTANT: Jemena bringing energy to life

PROJECT
JEMENA TRAFFIC STUDY
NORTHCLIFFE DRIVE
DESIGN VEHICLE SWEPT PATHS
SHEET 2 OF 6

STATUS: ISSUED FOR INFORMATION

SCALE: 0 5 10 15 20m

SHEET

DRAWING No: SK-0002

REVISION: 1

SK-0002

TO PRINCES MWY

TO LAKE HEIGHTS

BERKELEY KEBABS

NOLAN STREET

MOVE YOURSELF TRAILER

Existing Pedestrian Path

19.0m Semi Trailer

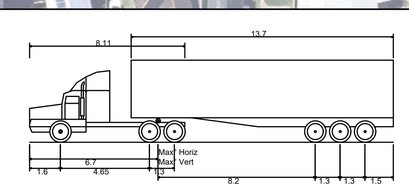
NORTHCLIFFE DRIVE

NORTHCLIFFE DRIVE

19.0m Semi Trailer

BEDFORD STREET

HERTFORD STREET



Prime mover and semi-trailer (19 m)	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

DESIGN VEHICLE - 19.0m SEMI TRAILER

NOT FOR CONSTRUCTION

DIAL 1100 BEFORE YOU DIG

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CIVLINK CONSULTING

CLIENT: NSW GOVERNMENT Transport Roads & Maritime Services

CONSULTANT: Jemena bringing energy to life

PROJECT
JEMENA TRAFFIC STUDY
NORTHCLIFFE DRIVE
DESIGN VEHICLE SWEPT PATHS
SHEET 3 OF 6

STATUS: ISSUED FOR INFORMATION

SCALE: 0 5 10 15 20m

SHEET

DRAWING No: SK-0003

REVISION: 1

0 | 10 | 20 | 30 | 40 | 50 mm ON A3 SIZE ORIGINAL

This Drawing may have been prepared using colour and may be incomplete if copied
DO NOT SCALE DIMENSIONS FROM DRAWING

SK-0005

Prime mover and long semi-trailer (25 m)

Overall Length	25.000m
Overall Width	3.000m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Max Track Width	3.000m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m

DESIGN VEHICLE - 25.0m SEMI TRAILER

NOT FOR CONSTRUCTION

DIAL 1100 BEFORE YOU DIG

UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF ROADWORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALING 1100 OR FAX 1300 652 077 (DIAL BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.

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	DESIGN CHECK	A.GOSPER		19/10/2021
	DESIGN MANAGER	A.GOSPER		19/10/2021
CO-ORDINATE SYSTEM	TRAFFIC MANAGER	A.GOSPER		19/10/2021

CIVLINK CONSULTING

CLIENT: NSW GOVERNMENT Transport Roads & Maritime Services

CONSULTANT: Jemena bringing energy to life

PROJECT
JEMENA TRAFFIC STUDY
NORTHCLIFFE DRIVE
DESIGN VEHICLE SWEPT PATHS
SHEET 4 OF 6

STATUS: ISSUED FOR INFORMATION

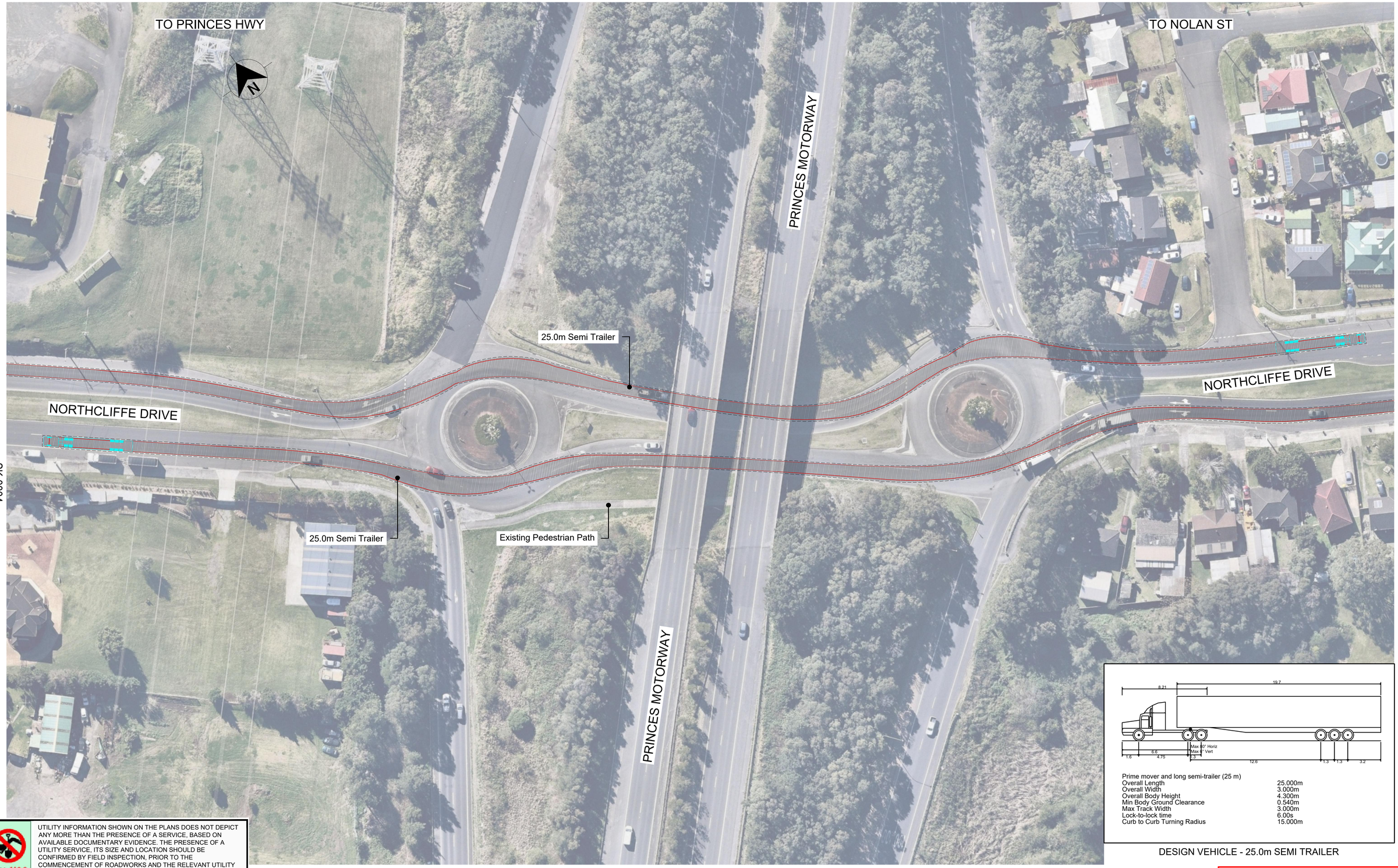
SCALE: 0 5 10 15 20m

SHEET

DRAWING No: SK-0004

REVISION: 1

0 | 10 | 20 | 30 | 40 | 50 mm ON A3 SIZE ORIGINAL



SK-0004

SK-0006

Prime mover and long semi-trailer (25 m)

Overall Length	25.000m
Overall Width	3.000m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Max Track Width	3.000m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m

DESIGN VEHICLE - 25.0m SEMI TRAILER

DIAL 1100 BEFORE YOU DIG

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CIVLINK CONSULTING

CLIENT: NSW GOVERNMENT Transport Roads & Maritime Services

CONSULTANT: Jemena bringing energy to life

PROJECT
JEMENA TRAFFIC STUDY
NORTHCLIFFE DRIVE
DESIGN VEHICLE SWEPT PATHS
SHEET 5 OF 6

STATUS: ISSUED FOR INFORMATION

SCALE: 0 5 10 15 20m

SHEET

DRAWING No: SK-0005

REVISION: 1

SK-0005

Prime mover and long semi-trailer (25 m)

Overall Length	25.000m
Overall Width	3.000m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Max Track Width	3.000m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m

DESIGN VEHICLE - 25.0m SEMI TRAILER

NOT FOR CONSTRUCTION

DIAL 1100 BEFORE YOU DIG

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CIVLINK CONSULTING

CLIENT: NSW Government — Transport Roads & Maritime Services

CONSULTANT: Jemena — bringing energy to life

PROJECT
JEMENA TRAFFIC STUDY
NORTHCLIFFE DRIVE
DESIGN VEHICLE SWEPT PATHS
SHEET 6 OF 6

STATUS: ISSUED FOR INFORMATION

SCALE: 0 5 10 15 20m

SHEET

DRAWING No: SK-0006

REVISION: 1

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TO PRINCESS HWY

N

NAN TIEN INSTITUTE

PRINCES MOTORWAY

TO NORTHCLIFF DR

PILGRIM LODGE

Proposed Temporary Driveway

Existing Pedestrian Refuge To Be Removed

NOLAN STREET

NOLAN STREET

Existing Pedestrian Refuge

19.0m Semi Trailer

19.0m Semi Trailer

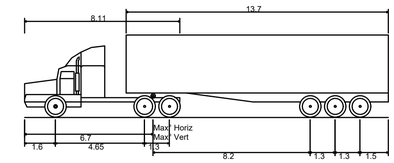
Proposed Temporary Driveway

Existing Bus Shelter To Remain

WHEEL SKILLS RIDER

WARWICK STREET

HUNT PLACE



Prime mover and semi-trailer (19 m)	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

DESIGN VEHICLE - 19.0m SEMI TRAILER

NOT FOR CONSTRUCTION

DIAL 1100 BEFORE YOU DIG

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CO-ORDINATE SYSTEM	DESIGN	CIVLINK		19/10/2021
	DESIGN CHECK	A.GOSPER		19/10/2021
	DESIGN MANAGER	A.GOSPER		19/10/2021
	TRAFFIC MANAGER	A.GOSPER		19/10/2021

CIVLINK CONSULTING

CLIENT: NSW Government — Transport Roads & Maritime Services

CONSULTANT: Jemena — bringing energy to life

PROJECT
JEMENA TRAFFIC STUDY
NOLAN STREET
DESIGN VEHICLE SWEPT PATHS
SHEET 1 OF 2

STATUS: ISSUED FOR INFORMATION

SCALE: 0 5 10 15 20m

SHEET

DRAWING No: SK-1001

REVISION: 1

Single Unit Truck/Bus (12.5 m)	
Overall Length	12.500m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.490m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

SINGLE UNIT TRUCK - 12.5m

DIAL 1100 BEFORE YOU DIG

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CIVLINK CONSULTING

CLIENT: NSW GOVERNMENT Transport Roads & Maritime Services

CONSULTANT: Jemena bringing energy to life

PROJECT
JEMENA TRAFFIC STUDY
NOLAN STREET
DESIGN VEHICLE SWEPT PATHS
SHEET 2 OF 2

STATUS: ISSUED FOR INFORMATION

SCALE: 0 5 10 15 20m

SHEET

DRAWING No: SK-1002

REVISION: 1

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This Drawing may have been prepared using colour and may be incomplete if copied
DO NOT SCALE DIMENSIONS FROM DRAWING

SK-3003

Prime mover and semi-trailer (19 m)

Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

DESIGN VEHICLE - 19.0m SEMI TRAILER

NOT FOR CONSTRUCTION

DIAL 1100 BEFORE YOU DIG

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CO-ORDINATE SYSTEM

TITLE	NAME	TICKET #	DATE
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CIVLINK CONSULTING

CLIENT: NSW Government — Transport Roads & Maritime Services

CONSULTANT: Jemena — bringing energy to life

PROJECT
JEMENA TRAFFIC STUDY
FIVE ISLANDS ROAD
DESIGN VEHICLE SWEPT PATHS
SHEET 1 OF 5

STATUS: ISSUED FOR INFORMATION

SCALE: 0 5 10 15 20m

SHEET

DRAWING No: SK-3001

REVISION: 1

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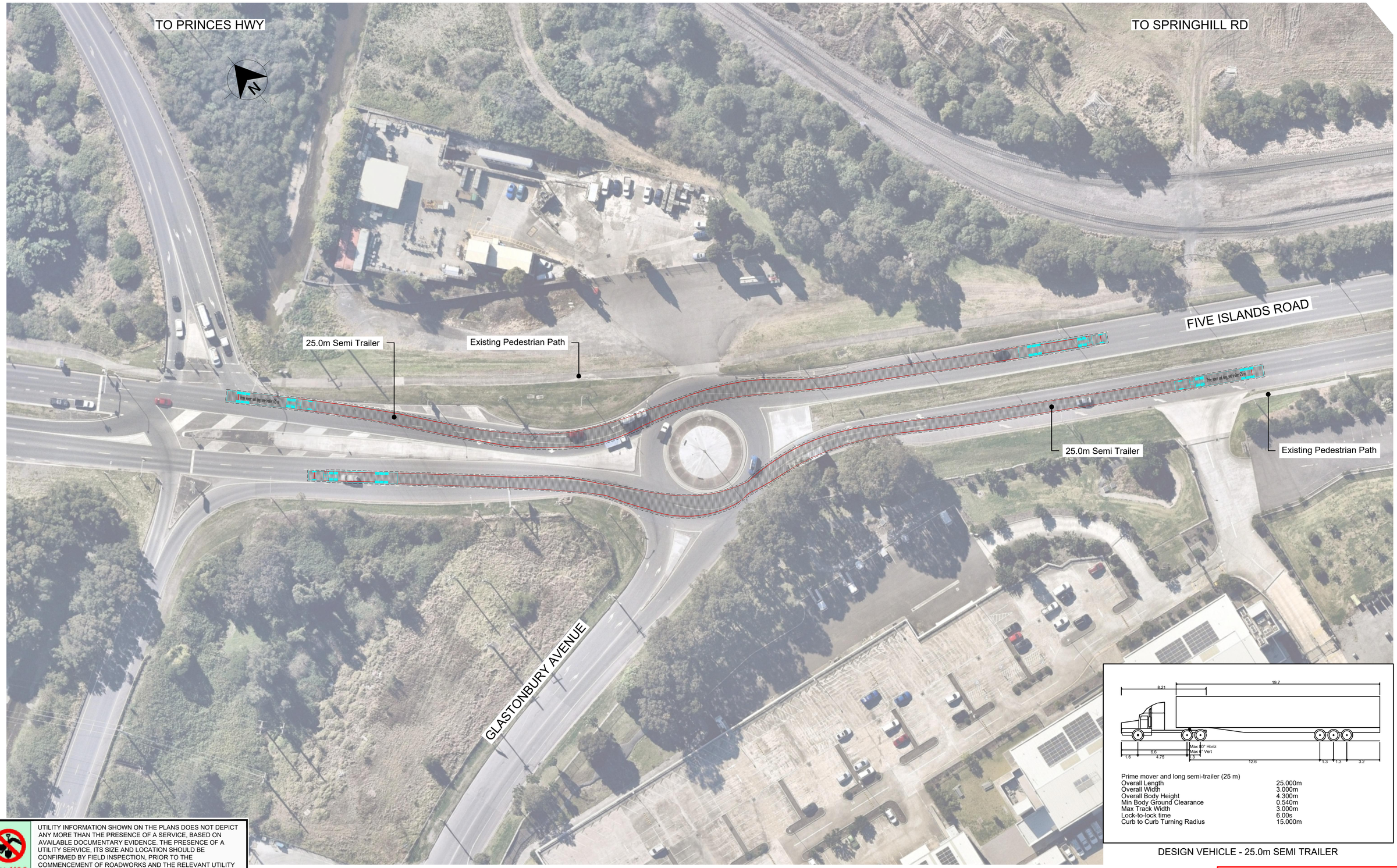

SK-3003

Prime mover and long semi-trailer (25 m)

Overall Length	25.000m
Overall Width	3.000m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Max Track Width	3.000m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m

DESIGN VEHICLE - 25.0m SEMI TRAILER

DIAL 1100 BEFORE YOU DIG

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NOT FOR CONSTRUCTION

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HEIGHT DATUM

CO-ORDINATE SYSTEM

TITLE	NAME	TICKET #	DATE
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DESIGN	CIVLINK		19/10/2021
DESIGN CHECK	A.GOSPER		19/10/2021
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CIVLINK CONSULTING

CLIENT: NSW Government — Transport Roads & Maritime Services

CONSULTANT: Jemena — bringing energy to life

PROJECT
JEMENA TRAFFIC STUDY
FIVE ISLANDS ROAD
DESIGN VEHICLE SWEPT PATHS
SHEET 2 OF 5

STATUS: ISSUED FOR INFORMATION

SCALE: 0 5 10 15 20m

SHEET

DRAWING No: SK-3002

REVISION: 1

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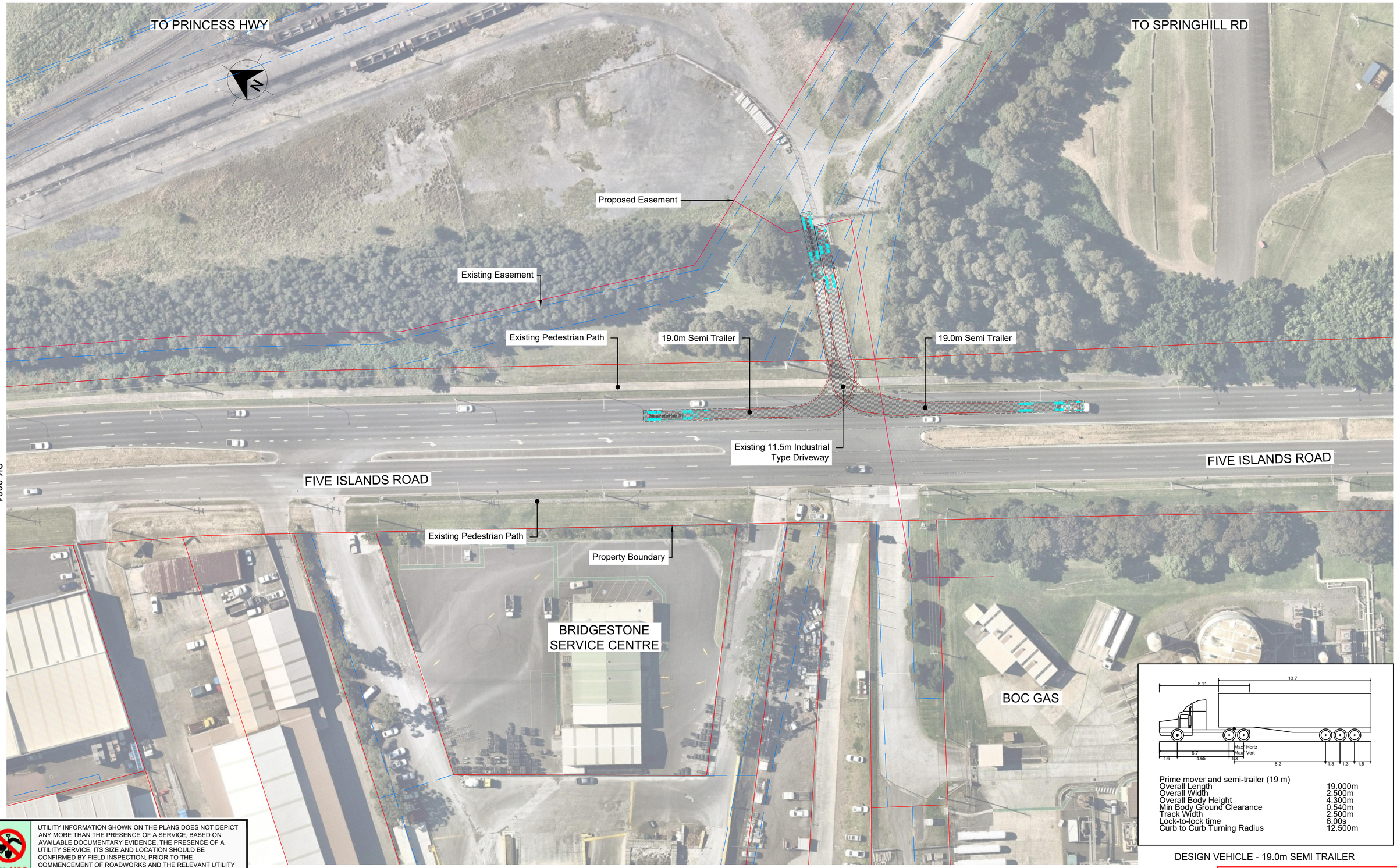

SK-3001

Prime mover and semi-trailer (19 m)	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

DESIGN VEHICLE - 19.0m SEMI TRAILER

NOT FOR CONSTRUCTION

DIAL 1100 BEFORE YOU DIG

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CO-ORDINATE SYSTEM	DESIGN	CIVLINK		19/10/2021
	DESIGN CHECK	A.GOSPER		19/10/2021
	DESIGN MANAGER	A.GOSPER		19/10/2021
	TRAFFIC MANAGER	A.GOSPER		19/10/2021

CIVLINK CONSULTING

CLIENT: NSW GOVERNMENT Transport Roads & Maritime Services

CONSULTANT: Jemena bringing energy to life

PROJECT
JEMENA TRAFFIC STUDY
FIVE ISLANDS ROAD
DESIGN VEHICLE SWEPT PATHS
SHEET 3 OF 5

STATUS: ISSUED FOR INFORMATION

SCALE: 0 5 10 15 20m

SHEET

DRAWING No: SK-3003

REVISION: 1

SK-3001

TO PRINCESS HWY

TO SPRINGHILL RD

Proposed Easement

Existing Easement

Existing Pedestrian Path

12.5m Single Unit Truck

12.5m Single Unit Truck

Existing 11.5m Industrial Type Driveway

FIVE ISLANDS ROAD

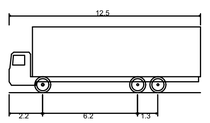
FIVE ISLANDS ROAD

Existing Pedestrian Path

Property Boundary

BRIDGESTONE SERVICE CENTRE

BOC GAS



Single Unit Truck/Bus (12.5 m)	
Overall Length	12.500m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.490m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

SINGLE UNIT TRUCK - 12.5m

DIAL 1100 BEFORE YOU DIG

UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF ROADWORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALING 1100 OR FAX 1300 652 077 (DIAL BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.

NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	DRAWN	REVIEWED	APPROVAL
1	19/10/2021	ISSUED FOR INFORMATION	KM	AG	AG

0 | 10 | 20 | 30 | 40 | 50 mm ON A3 SIZE ORIGINAL

This Drawing may have been prepared using colour and may be incomplete if copied
DO NOT SCALE DIMENSIONS FROM DRAWING

	TITLE	NAME	TICKET #	DATE
HEIGHT DATUM	DRAWN	CIVLINK		19/10/2021
	DRAWING CHECK	CIVLINK		19/10/2021
CO-ORDINATE SYSTEM	DESIGN	CIVLINK		19/10/2021
	DESIGN CHECK	A.GOSPER		19/10/2021
	DESIGN MANAGER	A.GOSPER		19/10/2021
	TRAFFIC MANAGER	A.GOSPER		19/10/2021

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PROJECT
JEMENA TRAFFIC STUDY
FIVE ISLANDS ROAD
DESIGN VEHICLE SWEPT PATHS
SHEET 4 OF 5

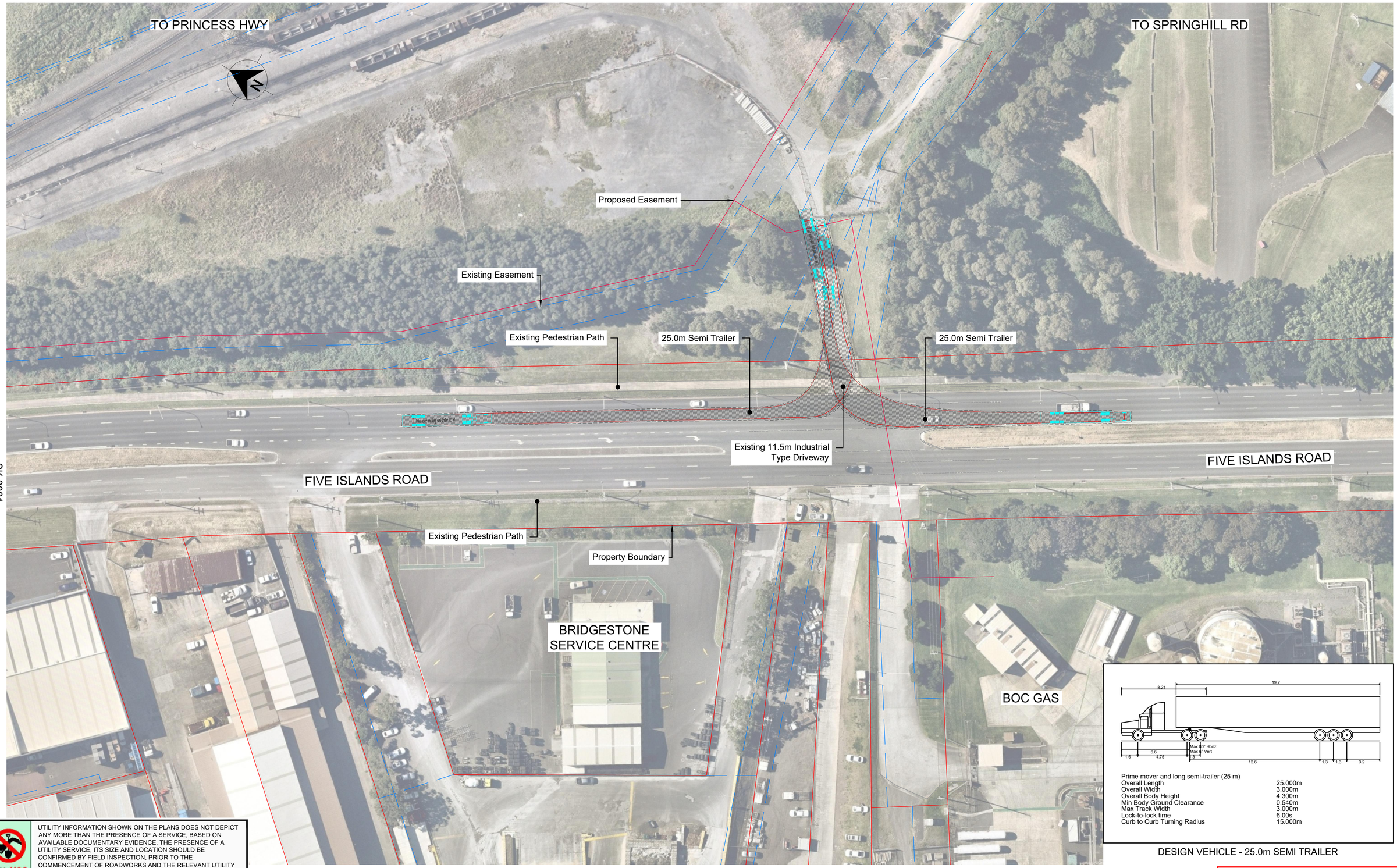
STATUS: ISSUED FOR INFORMATION

SCALE: 0 5 10 15 20m

SHEET

DRAWING No: SK-3004

REVISION: 1



SK-3001

Prime mover and long semi-trailer (25 m)

Overall Length	25.000m
Overall Width	3.000m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Max Track Width	3.000m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m

DESIGN VEHICLE - 25.0m SEMI TRAILER

NOT FOR CONSTRUCTION

DIAL 1100 BEFORE YOU DIG

UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF ROADWORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALING 1100 OR FAX 1300 652 077 (DIAL BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.

REV	DATE	DESCRIPTION	DRAWN	REVIEWED	APPROVAL
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
1	19/10/2021	ISSUED FOR INFORMATION	KM	AG	AG

0 | 10 | 20 | 30 | 40 | 50 mm ON A3 SIZE ORIGINAL

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CIVLINK CONSULTING

CLIENT: NSW GOVERNMENT Transport Roads & Maritime Services

CONSULTANT: Jemena bringing energy to life

PROJECT
JEMENA TRAFFIC STUDY
FIVE ISLANDS ROAD
DESIGN VEHICLE SWEPT PATHS
SHEET 5 OF 5

STATUS: ISSUED FOR INFORMATION

SCALE: 0 5 10 15 20m

SHEET

DRAWING No: SK-3005

REVISION: 1

CIVLINK
CONSULTING

APPENDIX H TRAFFIC MANAGEMENT PLAN REVIEW TAB

Planning, Industry & Environment

Document: Traffic Management Plan
Revision: Version 2 Dated 10 August 2022
Reviewed: Rachelle Abou Saleh and Wayne Jones on "17 Nov 2022"

SSI 9973				
Construction Traffic Management Requirements, Condition B5	**Sufficient (Yes/No/Partial)**	**Document reference and comment**	**Action Required**	**Company Response**
The Proponent must:	-	-	-	
(a) minimise traffic and pedestrian safety issues and disruption to local users of the transport route/s during construction;	Yes	Sect 4.8 recognises the safe access of pedestrians and cyclists. Will be maintained around work sites. Appendix B	-	N/A
(b) maintain all footpaths, roads and utility-related infrastructure in a safe and serviceable condition; and	Yes	Sect 4.8 recognises the safe access of pedestrians and cyclists. 4.10 reference to the maintenance of access to utility-related infrastructure. Will be maintained around work sites. Appendix B	-	N/A
(c) minimise the traffic noise impacts from the construction of the Port Kembla Looping Pipeline.	Partial	Sect 4.11 Loading and unloading Sect 4.13 Out of hours works Sect 4.15 Vehicle Emissions Will be managed in accordance with the Noise Management Plan – See 3.5.4 NMP assessment - Sect 4.6 of NMP outlines construction noise management measures.	Include a reference and a paragraph of text summary or 5-6 dot points on the mitigation measures to minimise traffic noise impacts	Section 4.13, 4.15 and 4.17 Updated
Works in Road Reserve, Condition B5A	**Sufficient (Yes/No/Partial)**	**Document reference and comment**	**Action Required**	**Company Response**
Prior to commencing works within the state classified road reserve, the Proponent must apply for, and obtain, consent from TfNSW for all works in the classified road reserve under Section 138 of the Roads Act 1993.	Yes	Sect 4.7 Road Occupancy must be obtained in advance of works.	-	N/A
Notes: • *The works must demonstrate compliance with TfNSW Technical Directions Trenchless Excavation within the Easement of Roads and Maritime*	-	-	-	-

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Infrastructure and Excavation adjacent to Transport for NSW Infrastructure. • *A Road Occupancy Licence from TfNSW is also required prior to commencing works on a State road or any other works that impact a travel lane of a State road or impact the operation of traffic signals of any road.* • *The design and construction of the pipeline under Five Islands Road and any other works within a classified road is to be prepared generally in accordance with TfNSW and to the satisfaction of TfNSW.*				
Dust, Condition B8	**Sufficient (Yes/No/Partial)**	**Document reference and comment**	**Action Required**	**Company Response**
The Proponent must minimise the dust generated during construction of the Port Kembla Lateral Looping Pipeline, including wind-blown and traffic generated dust..	Partial	Section 4.14 refers to Soil and Water Management Plan and Air Quality Management Plan	Include a reference and a paragraph of text summary or 5-6 dot points on the mitigation measures to minimise traffic dust impacts	Section 4.16 Updated
CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN, Condition C1	**Sufficient (Yes/No/Partial)**	**Document reference and comment**	**Action Required**	**Company Response**
Construction Environmental Management Plan Prior to commencing construction, the Applicant must prepare a Construction Environmental Management Plan (CEMP) for the Port Kembla Lateral Looping Pipeline to the satisfaction of the Secretary. This plan must:	-	-	-	N/A
be prepared in consultation with Council, Sydney Trains and TfNSW;	Yes	Evidence of consultation provided for CEMP Task. No feedback from Wollongong City Council	-	Appendix A Updated
identify the statutory approvals that apply to the construction and commissioning of the Port Kembla Lateral Looping Pipeline;	NA	Outlined in the CEMP	-	N/A

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describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the Port Kembla Lateral Looping Pipeline;	Yes	Section 4.1 Describes the role and responsibility of key personnel.	-	N/A
(a) describe the procedures that would be implemented to: • keep the local community and relevant agencies informed about the construction and commissioning of the Port Kembla Lateral Looping Pipeline; • receive, handle, respond to, and record complaints; • resolve any disputes that may arise; • respond to any non-compliance; and respond to emergencies; and	NA	NA	-	N/A
(b) include: • the following sub-plans: ○ noise, including an out-of-hours work protocol; ○ air quality; ○ biodiversity; ○ soil and water management; ○ water management; ○ traffic management; and ○ waste. a clear plan depicting monitoring to be carried out in relation to the Port Kembla Lateral Looping Pipeline.	Yes	Whole of document – Traffic Management Plan	-	N/A
CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN, Condition C4	**Sufficient (Yes/No/Partial)**	**Document reference and comment**	**Action Required**	**Company Response**

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The Traffic Management CEMP sub-plan must:	-	-	-	-
(a) describe the measures that would be implemented to comply with the transport management requirements in condition B5;	Partial	See parts (a) – (f) of Condition C4 below.	See part (b) – (g) of Condition C4 below.	See Below
(b) include details of the transport route to be used for all construction and operational traffic;	No	No details of transport route have been identified within the TMP.	Include details of the transport route to be used for all construction traffic	Section 4.11 and Appendix B Updated (added)
(c) include details of the likely peak hour vehicle movements including detail of vehicle types and the distribution of the movements on the road network;	Partial	Section 3.2 During the AM peak, the network peak hour was observed to be between 8.00 am and 9:00 am whereas construction traffic peak hour is expected to be between 6.45 am and 7.45 am; and During the PM peak, the network peak hour was observed to be between 3.30 pm and 4.30 pm, whereas the construction traffic peak hour would be between 4.45 pm – 5.45 pm.	Include detail of vehicle types and the distribution of the movements on the road network	Section 3.2 Updated.
(d) include a swept path analysis of entry and exit at all construction access points;	No	No details of swept path analysis have been identified within the TMP.	Include a swept path analysis of entry and exit at all construction access points.	Section 4.10 Updated Appendix G details the Swept Path Analysis.
(e) include sight distance plans for all construction access points;	Partial	No details of sight distance plans have been identified within the TMP. Appendix A of Appendix B contains figures?	Include sight distance plans for all construction access points.	Section 4.10 Updated Appendix G -Civil Link Consulting Report details the site distance requirements.
(f) include details of any oversize and over-mass vehicles anticipated for the construction, operation and	No	No details of OSOM vehicles have been identified within the TMP.	Include details of any oversize and over-mass vehicles anticipated for the	New section added Section 4.18

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decommissioning of the Port Kembla Lateral Looping Pipeline; and			construction of the lateral looping pipeline.	
(g) include a Driver Code of Conduct.	Yes	Appendix C – Safe driving and light vehicle management procedure	-	N/A
Incident Notification, Condition C6	**Sufficient (Yes/No/Partial)**	**Document reference and comment**	**Action Required**	**Company Response**
The Proponent must immediately notify the Department and any other relevant agencies immediately after it becomes aware of an incident. The notification must be in writing via the Major Projects Website and identify the development (including the development application number and name) and set out the location and nature of the incident.	Partial	List of emergency contacts and Section 5 provide some details during incident.	Include commitment for immediate notification of DPE in case of an incident.	Section 6 Updated
Non-Compliance Notification, Condition C7	**Sufficient (Yes/No/Partial)**	**Document reference and comment**	**Action Required**	**Company Response**
Within seven days of becoming aware of a non-compliance, the Proponent must notify the Department of the non-compliance. The notification must be in writing via the Major Projects Website and identify the development (including the infrastructure approval number and name), set out the condition of this consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the noncompliance. Note: A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.	No	No details of noncompliance notifications have been identified within the TMP	Include commitment for notification of DPE within seven days of becoming aware of a non-compliance.	Section 6 Updated .
SSI 9471				

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Construction Traffic Management Plan, Schedule 3, Condition 15	**Sufficient (Yes/No/Partial)**	**Document reference and comment**	**Action Required**	**Company Response**
Prior to the commencement of construction, unless the Planning Secretary agrees otherwise, the Proponent must prepare a Construction Traffic Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:	-	-	-	
(a) be prepared in consultation with RMS, NSW Ports and Council;				Appendix A updated
(b) include details of the transport route to be used for all construction traffic;	No	No details of transport route have been identified within the TMP.	Include details of the transport route to be used for all construction traffic	Appendix B Updated (Added)
(c) include details of the measures that would be implemented to minimise traffic safety issues and disruption to local users of the transport route/s during construction works, including:	-	-	-	
• facilitating the use of barges to transfer spoil to the disposal site	N/A	-	-	N/A
• temporary traffic controls, including detours and signage	Yes	Details of temporary traffic controls, including detours and signage have been included in Appendix B	-	N/A
• ensure loaded vehicles entering or leaving the site have their loads covered or contained	No	No details of covering loads have been identified within the TMP.	Include details of the covering all loads of friable or dusty materials.	Section 4.16 Updated
• minimise dirt being tracked on the public road network from development-related traffic	Partial	Section 4.14 refers to Soil and Water Management Plan and Air Quality Management Plan	Include a reference and a paragraph of text summary or 5-6 dot points on the mitigation measures to minimise dirt being tracked onto public roads	Section 4.16 and 4.17 Updated
(d) includes a driver's code of conduct that addresses::	Yes	Appendix C	-	

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• travelling speeds;	Yes	Appendix C Section 7.1.2 discusses speeding and the IVMS breaches	-	
• driver fatigue;	Partial	Appendix C Section 4.6.1 considers fatigue in driver selection.	Include details of management of fatigue including working hours and distance from home to work mitigation measures	Section 4.19 Updated (Added)
• procedures to ensure that drivers adhere to the designated transport route/s; and	No	No details of transport route have been identified within the TMP.	Include details of the transport route to be used for all construction traffic	Section 4.11 Appendix B Updated Appendix G also details the transport routes
• procedures to ensure that drivers implement safe driving practices;	Partial	Appendix C – Safe driving and light vehicle management procedure. Appendix C is for light vehicles. Code of Conduct should also consider heavy vehicle drivers	Include CoC for Heavy vehicle drivers.	See Appendix F for CoC Procedure
Construction Traffic Management Plan, Schedule 3, Condition 16	**Sufficient (Yes/No/Partial)**	**Document reference and comment**	**Action Required**	**Company Response**
The Proponent must implement the approved Construction Traffic Management Plan for the development.	Yes	Section 1.2 ……are implemented to minimise the potential for traffic related impacts.	-	N/A
Noise and Vibration, Schedule 3, Condition 28	**Sufficient (Yes/No/Partial)**	**Document reference and comment**	**Action Required**	**Company Response**
The Proponent must: (a) minimise the noise of the development, including any associated traffic noise;	Partial	Sect 4.11 Loading and unloading Sect 4.13 Out of hours works Sect 4.15 Vehicle Emissions Will be managed in accordance with the Noise Management Plan – See 3.5.4 NMP assessment - Sect 4.6 of NMP outlines construction noise management measures.	Include a reference and a paragraph of text summary or 5-6 dot points on the mitigation measures to minimise traffic noise impacts	Section 4.13, 4.16 and 4.17 Updated
Air, Schedule 3, Condition 31	**Sufficient**	**Document reference and comment**	**Action Required**	**Company Response**

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	(Yes/No/Partial)			
The Proponent must minimise and/or prevent the: (a) dust emissions of the development, including wind-blown and traffic generated dust;	Partial	Section 4.14 refers to Soil and Water Management Plan and Air Quality Management Plan	Include a reference and paragraph of text summary or 5-6 dot points on the mitigation measures to minimise traffic dust impacts	Section 4.16 updated
General Comments			**Action Required**	**Company Response**
Traffic Management Plan in Appendix B				
Reference to camp in Appendix C			Remove reference to accommodation camps if not relevant to this project	Appendix C Updated
Appendix C is for light vehicles. Code of Conduct should also consider heavy vehicle drivers.			Include CoC for Heavy vehicle drivers.	Appendix F details CoC for Heavy Vehicals
Location of works map is not labelled clearly and low quality. In Appendix A: Traffic Guidance Schemes are unlabelled, with hard to read legends/ lack of description.			Refer to TMP in Appendix B and explain its purpose/context/relevance.	New TGS's to be issued as an addemum to the CEMP in advance of the works . Appendix B is a summary from Traffic Logistics to complement the main TMP.

TMP referred to one management plan for two approvals- This review table assesses management plan against Consent for SSI 9973 and SSI 9471.