



Construction Traffic Management Plan - The Bays Metro Station Construction Site

SMWSTCTP-AFJ TBY TF PLN-000001 Revision 07

Sydney Metro West Central Tunnelling Package



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INTRODUCTION

1.1 CTMP CHANGE SUMMARY

Throughout the duration of the project, updates to CTMPs may be required. These updates may result in changes to the CTMP to cater for changes in regulations, scope of work changes, or for other reasons to maintain the safe and efficient operation of the project. Changes associated with

1. this revision are as detailed below, within Table 1.

TABLE 1: CTMP CHANGE SUMMARY

CTMP Revision	Date of Revision	Summary of changes
07	15/07/2024	<p>This CTMP has been revised to include:</p> <ul style="list-style-type: none"> • Slight relocation of barriers on Port Access Road, to accommodate the construction of a crane pad • To include information and traffic management measures related to installation and operation of the tower crane, for the demobilisation phase of the site.

1.2 PROJECT BACKGROUND

The Sydney Metro West Central Tunnelling Package involves the construction of 11 5km of twin tunnel metro line from The Bays Precinct to Sydney Olympic Park, which will be connected with the Sydney Metro City & Southwest and double the rail capacity to/from Sydney CBD.

FIGURE 1: OVERVIEW OF SYNDEY METRO WEST



The Acciona Ferrovia Joint Venture (AFJV) will deliver the Project in partnership with NSW Government and Sydney Metro (SM).

PURPOSE AND SCOPE

2.1 PURPOSE

AFJV aims to maintain a safe environment for all road users by effectively maintaining traffic flows during the works and managing construction vehicles to/from the work sites. AFJV will also meet the requirements listed in the Port Authority's Access Management Principles (Appendix B)

2. This site-specific Construction Traffic Management Plan (CTMP) has been prepared to meet the following requirements for The Bays metro station site as part of the Sydney Metro West Central Tunnelling Package (the Project):
 - The Project's General Specifications Section 2.11, Section 5.1.11.1)
 - EIS Technical Paper 1 Stage 1 Traffic and Transport Mitigation Measures
 - EIS Construction Traffic Management Framework
 - Minister for Planning and Public Spaces' Concept and Stage 1 Conditions of Approval (COA) for the State Significant Infrastructure (SSI 10038)
 - Port Authority's Access Management Principles (Appendix B).

The scope of this CTMP is to detail the long and short term traffic changes associated with the construction of The Bays metro station site covering the site establishment, piling, excavation, tunnel boring and site demobilisation phases. This CTMP and the documents referenced in the CTMP have been prepared in accordance with the relevant standards and guidelines.

AFJV will provide safety measures to a wide range of stakeholders potentially affected by the works including but not limited to motorists, pedestrians, cyclists, public transport users, local residents and property owners, business owners and workers/staff engaged on the Project

2.2 OBJECTIVES

The primary objectives and principles of this CTMP are:

- Keeping traffic delays to a minimum
- Minimising disruption to businesses, Port Authority tenants and cruise traffic
- Minimising disturbance to the environment
- Ensuring traffic impacts are within the scope permitted by Transport for NSW (TfNSW), SM, Inner West Council and Port Authority of New South Wales (PSNSW)
- Ensure the safety of employees, contractors and road users
- Meet the requirements of the Project brief, project specifications, COA and TfNSW Traffic Control at Work Sites (TCaWS) Manual 2020

EXISTING TRAFFIC CONDITIONS

3.1 EXISTING ROAD NETWORK

The Bays metro station construction site will be accessed utilising the state arterial road network (i.e. City West Link, Victoria Road and The Crescent), including James Craig Road, and port local roads (i.e. Solomons Way, Sommerville Road and Port Access Road). It is noted that James Craig Road is

3. owned and maintained by local council with a right of carriage for Port Authority operations.

3.1.1 CITY WEST LINK

City West Link is a classified state arterial road forming part of the major east-west link between Sydney CBD and western suburbs. City West Link has two eastbound traffic lanes and two westbound traffic lanes separated by a central median. The existing posted speed limit is 60km/h on City West Link and parking is not permitted on either side of the road.

3.1.2 THE CRESCENT

The Crescent is a classified state arterial road between City West Link and Victoria Road. There is a diverge in the eastbound carriageway from City West Link, with two traffic lanes towards Anzac Bridge via the “mousehole” and two traffic lanes towards Victoria Road via the Western Temporary Access Road (WTAR). There are three traffic lanes in the westbound direction.

The existing posted speed limit is 60km/h on The Crescent between Victoria Road and City West Link and parking is not permitted on either side of the road.

3.1.3 JAMES CRAIG ROAD

James Craig Road functions as a two-lane two-way local port road and provides access to White Bay.

James Craig Road generally has one traffic lane in each direction and is designed for B-double vehicle access, with additional lanes provided at the intersection with The Crescent. Parking is not permitted on both sides of the road. No bus stops are located on James Craig Road.

3.1.4 SOLOMONS WAY

Solomons Way functions as a one-way road in the northbound direction providing access from Sommerville Road to Port Access Road. Parking is prohibited along both sides of the road.

3.1.5 SOMMERVILLE ROAD

Sommerville Road is a two-way road between James Craig Road and Solomons Way and functions as a one-way road in the southbound direction between the northern and southern ends of Solomons Way, and as a paired one-way northbound road with Solomons Way. Parking is not permitted on both sides of the road. No bus stops are located on Sommerville Road.

It is noted that a remote car park for WestConnex Rozelle Interchange workforce is located on the eastern side of Sommerville Road. The remote car park accommodates up to 200 light vehicles and will be utilised until completion of the WestConnex Rozelle Interchange project in 2023.

3.1.6 PORT ACCESS ROAD

Port Access Road is a two-way road providing access to White Bay Cruise Terminal and WestConnex 3B Rozelle Railyard site, and functions as a one-way road in eastbound southbound direction between the northern and southern ends of Solomons Way. Port Access Road is owned and regulated by Port Authority of NSW. Parking is prohibited along both sides of the road.

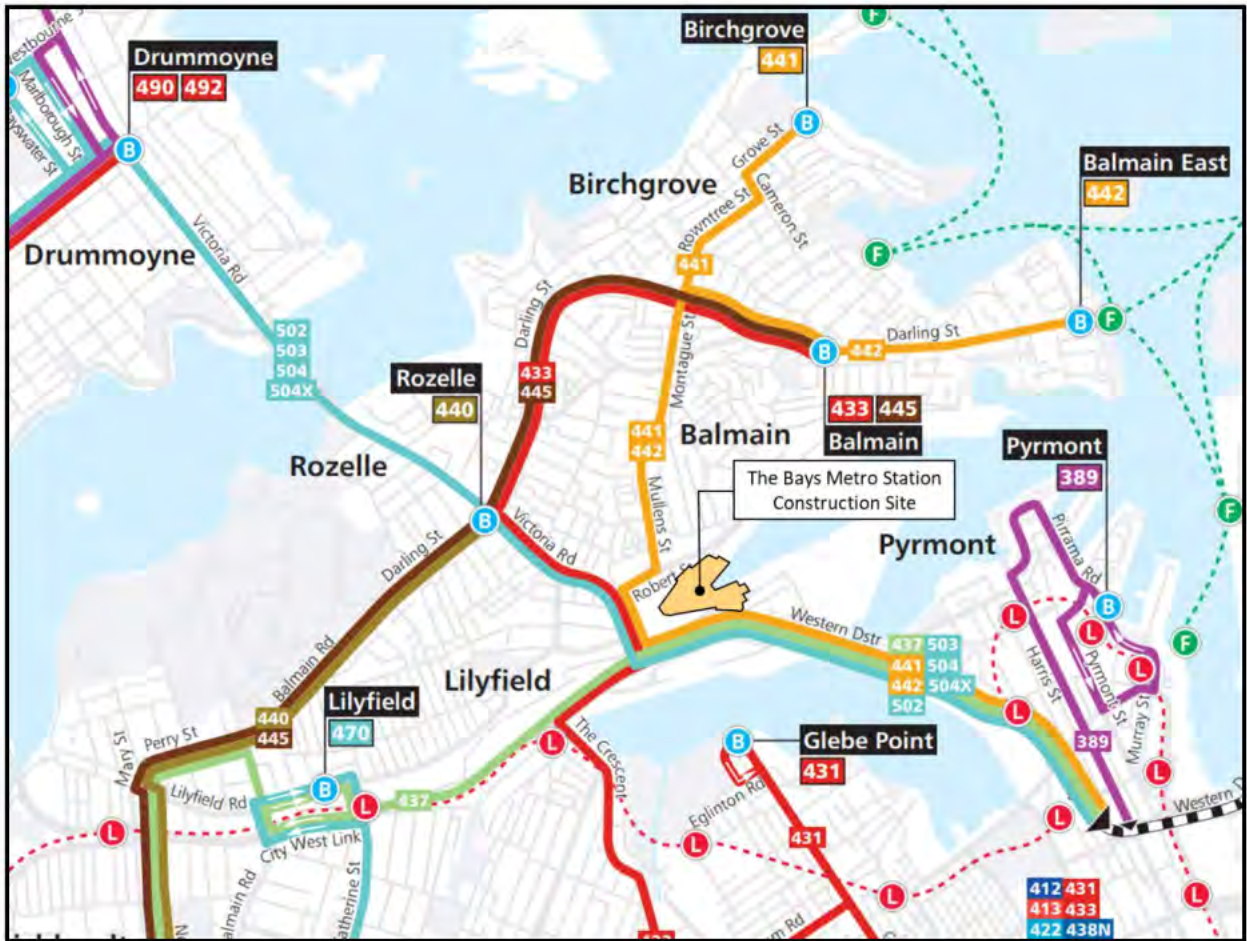
3 2 PUBLIC TRANSPORT NETWORK

The existing bus and light rail services network within the vicinity of the site is shown in Figure 2. The bus route services travelling along Victoria Road, The Crescent and City West Link close to the site and light rail services operating at Rozelle Bay Light Rail Stop are detailed in Table 2

TABLE 2: PUBLIC TRANSPORT SERVICES AND FREQUENCIES

Public Transport	Route No.	Route Description	Typical Weekday Service Frequencies (No. of Services)	
			AM Peak (7:00am 9:00am)	PM Peak (4:00pm 6:00pm)
Light Rail	L1	Dulwich Hill to Central	12 15	12 15
Bus	433	Balmain Gladstone Park to Central Pitt St	6	5
	437	Five Dock to City QVB via City West Link	12	8
	441	Birchgrove to City Art Gallery via QVB (Loop Service)	7	6
	442	Balmain East Wharf to City QVB (Loop Service)	26	14
	500X	West Ryde to City Hyde Park (Express Service)	12	22
	501	Parramatta to Central Pitt St via Victoria Rd	9	15
	502	Cabarita Wharf to Drummoyne and City Town Hall	12	9
	503	Drummoyne to City Town Hall (Loop Service)	13	9
	504	Chiswick to City Domain	6	10
	505	Woolwich to City Town Hall	4	4
	506	Macquarie University to City Domain via East Ryde	15	13
	507	Meadowbank to Gladesville & City Hyde Park	11	12

FIGURE 2: PUBLIC TRANSPORT NETWORK SURROUNDING THE BAYS METRO STATION CONSTRUCTION SITE



3.3 PEDESTRIAN AND CYCLIST NETWORK

Pedestrian footpaths are not available along both sides of the Port Access Road in the immediate vicinity of the site. It is noted that the site is within the land owned under Port Authority of NSW and has restricted access to the public.

An off-road shared path is provided along the southern side of James Craig Road which adjoins to the wider cycling network along Victoria Road, The Crescent and the Anzac Bridge. Cycling infrastructure is not available on Port Access Road in the immediate vicinity of the site.

Following the completion of WestConnex Rozelle Interchange, the shared path was restored on the north side of James Craig Road which connects to the existing shared path on the south side of The Crescent and Victoria Road intersection, west side of the Victoria Road bridge and north side of Anzac Bridge.

GENERAL CONSTRUCTION DETAILS

4.1 OVERVIEW OF CONSTRUCTION ACTIVITIES

Establishment of The Bays metro station construction site commenced in October 2021. AFJV construction works are anticipated to be completed by approximately early 2025.

4. The following construction activities have been undertaken in order to establish The Bays metro station construction site and a site layout plan is shown in Appendix A:

- Construction of the spoil/acoustic shed located on the northern side of Port Access Road
- Installation of workforce car park and elevated office adjacent to the spoil shed.
- Installation of workforce car park south of Robert Road.
- Excavation of the station box located south of the Port Access Road
- Construction of, water treatment plant, high voltage substation, water tank, grout plant and ventilation fans
- Installation of an overhead conveyor belt across Port Access Road between the station box and spoil/ acoustic shed.
- Construction of internal road adjoined from the south side of Port Access Road.
- Construction of a pedestrian footbridge across Port Access Road
- Relocation of the Rozelle Rail Yard access to make way for the construction of the station box. The access was relocated to the northern end of the Port Access Road frontage to enable access to the construction site of the WestConnex Rozelle Interchange.

In addition, it is proposed to maintain the reduced speed in the vicinity of the construction site on Port Access Road from the original 40km/h to 20km/h

Following site establishment works, The Bays metro station construction site mobilised two tunnel boring machines (TBMs) to tunnel from The Bays to Sydney Olympic Park. The TBMs were delivered to the White Bay port area via ship and delivered to site with road vehicles. Spoil removal haulage activities will continue during the tunnelling operation.

Following completion of station box excavation and tunnelling works, the demobilisation phase of the site will commence, this will include:

- Removal of acoustic and spoil sheds
- Removal of various plant items and equipment
- Removal of the overhead pedestrian bridge and conveyor
- Various rectification and finishing work to enable handover of the site to Sydney Metro or Sydney Metro's nominated follow-on contractor.

To facilitate these demobilisation works, a tower-crane will be installed just north of Port Access Road. This crane will be installed operated during four phases of traffic management:

- 1 The long term relocation of road safety barriers
2. Short-term traffic control lane closures during construction of the crane pad
3. Short term traffic control full road closures during installation of the crane's boom
- 4 Short term traffic control performing intermittent traffic stops when lifting over or near Port Access Road

The traffic management measures to be installed are further detailed within Section 6.

4.2 SITE LAYOUT

While The Bays metro station construction site is operational (excluding demobilisation), the site is comprised of the following key features (see construction site layout in Appendix A):

- Station box located at the southern end of the site adjacent to Port Access Road
- Acoustic shed for spoil loading located on northern end of the site adjacent to Port Access Road
- An overhead conveyor belt provided across Port Access Road (min 9m high from pavement to bottom of conveyor belt) to transport spoil from the station box to the acoustic shed
- Elevated workforce office facilities located north of the station box adjacent to Port Access Road
- Pedestrian footbridge across Port Access Road between the elevated workforce office and TBM tunnel site (min 5.7m height clearance)
- Relocation of the Rozelle Rail Yard access to make way for the construction of the station box. The access was relocated to the northern end of the Port Access Road frontage to enable access to the construction site of the WestConnex Rozelle Interchange
- An additional southbound lane provided to facilitate the left in movement from the relocated access road towards spoil loading at the station box. Egress traffic makes a U-turn movement at the roundabout to head back to Port Access Road

4.3 CONSTRUCTION WORKING HOURS

The proposed construction activities occur 24 hours a day, seven days a week.

At times, other activities may occur outside of standard construction times, in this instance the projects out of hours work process will be followed.

4.4 CONSTRUCTION SITE ACCESS ROUTES

The designated access routes to be used by construction vehicles are detailed below and shown within Appendix D. Routes are consistent with those access routes shown in the Environmental Impact Statement (EIS):

- Inbound Routes

Primary Route: City West Link, The Crescent, James Craig Road and Solomons Way and Port Access Road

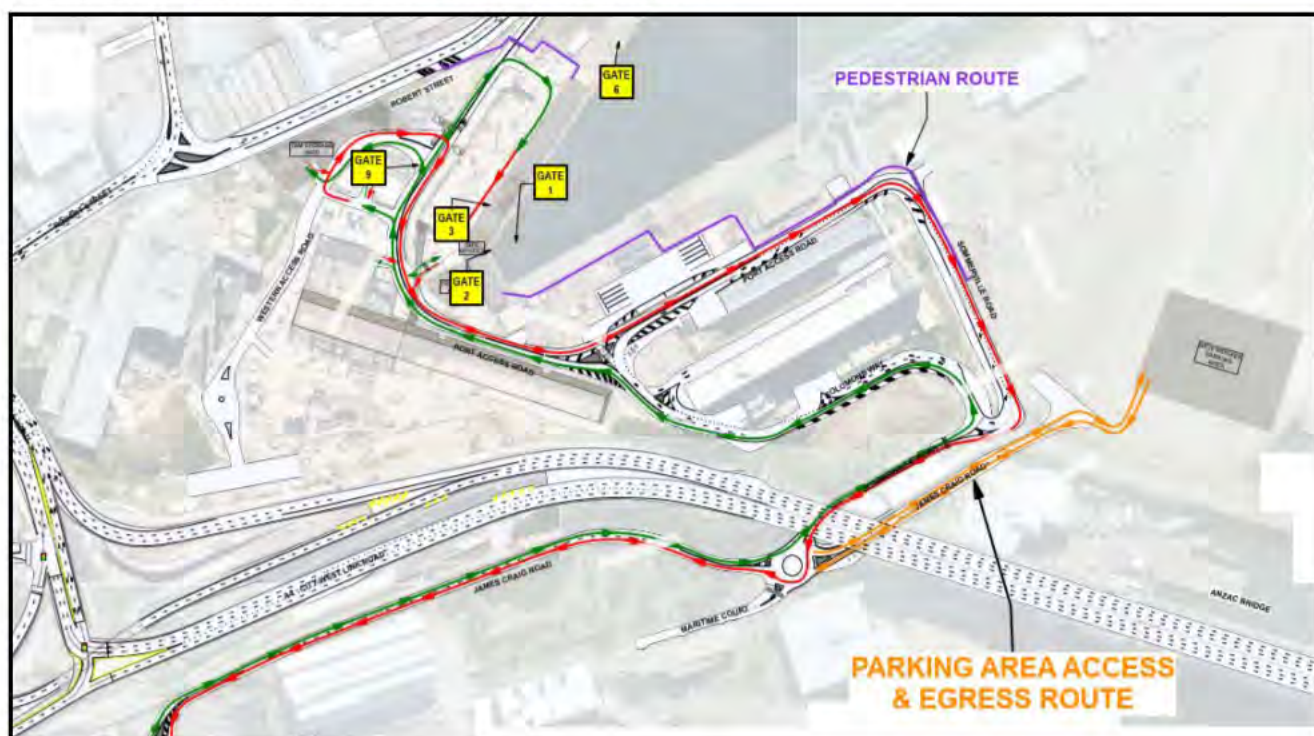
Alternative Route: Victoria Road, The Crescent, James Craig Road, Solomons Way and Port Access Road

- Outbound Routes

Primary Route: Port Access Road, Sommerville Road, James Craig Road, The Crescent and City West Link

Alternative Route: Port Access Road, Sommerville Road, James Craig Road, The Crescent and Victoria Road

FIGURE 3: CONSTRUCTION VEHICLE ACCESS ROUTES



In addition, the proposed site access gates shown in Appendix D are detailed in Table 3

TABLE 3: SITE ACCESS AND EGRESS ARRANGEMENTS

Gate Number	Site Access to	Access and Egress Movements	Largest Vehicle Type
Gate 1	Storage, site facilities and spoil shed egress, eastern side of Port Access Road	Left in & left out only from Port Access Road	Quin dog and semi trailer
Gate 2	Laydown area for rings storage area adjacent station box	Left in only from Port Access Road and exit via the relocated access road	Quin dog and semi trailer
Gate 3	Laydown area for ancillary facilities (water treatment plant, fuel and oil storage and grout plant)	Left in only from Port Access Road and exit via the relocated access road	Quin dog and semi trailer
Gate 6	Spoil/ acoustic shed	Right in only	Quin dog and semi trailer
Gate 9	Laydown area	Right in and left out	12.5m rigid truck

As a tenant in the White Bay area, AFJV has agreed with Port Authority's Access Management Principles in relation to the use of James Craig Road, Sommerville Road and Port Access Road for access to The Bays metro station construction site. AFJV's Access Management Principles are provided in Appendix B.

At times during construction activities, gates may need to be closed or adjusted, this will be communicated to haulage companies and subcontractors. The VMP will be updated accordingly as a

'sub plan' to this CTMP. The haul routes in the 'sub plans' will remain consistent with routes approved within this CTMP.

At times, alternative size vehicles may need to access site, in this instance the vehicle turn paths will be assessed and additional traffic control installed as required, in line with sub plans to this CTMP.

CONSTRUCTION TRAFFIC AND TRANSPORT MANAGEMENT

5.1 CONSTRUCTION TRAFFIC VOLUMES

The proposed construction activities will generate the following heavy vehicle movements (arrival and departure) per day during the peak construction activities between April 2022 to late 2024 with truck movements not exceeding those outlined in Table 4:

5.
 - 880 movements for spoil removal haulage using quad and quin dogs (up to 26m long)
 - 128 movements for delivery of concrete segments using semi trailers
 - 62 movements for delivery of other material using semi-trailers or rigid vehicles

These give a total of 1070 heavy vehicle movements per day during the peak construction activities, with approximately 36 heavy vehicles per hour during the AM and PM peak times. These proposed heavy vehicle volumes are increased from the EIS heavy vehicle volumes predicted at 990 heavy vehicle movements per day and eight heavy vehicle movements per hour during the peak times.

A workforce of up to 200 construction staff and contractors will be required on site (over a 24 hour period), which is less than the EIS figure of 330 at the subject site. It has been assumed that the daily light vehicle traffic generation would be no more than the EIS estimate of 251 vehicles per day for the day and night shifts during the peak of the project.

A comparison of the proposed construction traffic volumes with the EIS is provided in Table 4, an hourly breakdown of the expected movements is also provided below within Table 5.

TABLE 4: DAILY CONSTRUCTION TRAFFIC GENERATION (TWO-WAY)

Trip Type	Peak Daily Traffic Volume		AM Peak Hour Traffic Volume		PM Peak Hour Traffic Volume	
	EIS	AFJV	EIS	AFJV	EIS	AFJV
Haulage		880				
Delivery of Precast Segment	990	128	8	36	8	36
Delivery of Other Material		62				
Worker Light Vehicle	251	251	12	12	60	60
Total	1,241	1,321	20	48	68	96

TABLE 5: SUMMARY OF PEAK HOURLY HEAVY VEHICLE MOVEMENTS

Site:	Expected hourly heavy vehicle volumes							
The Bays	0700-0800	0800-0900	0900-1000	At all other times of site operation		1600-1700	1700-1800	total
		36	36	36	Site movements as required, not exceeding daily total		36	36

Due to the reduction in truck movements by neighbouring projects, the proposed increase to 36 movements per hour during peak times is not expected to have any significant impact to public traffic. A reduction to the overall heavy vehicle movements for the area is still expected despite the proposed increase.

It's further noted that while Table 4 shows specific heavy vehicle volumes for the different types of activities such as haulage, delivery of precast segments and delivery of other material, there will be occasions where volumes associated with any one task may need to be exceeded. If in the event that heavy vehicle volumes associated with an activity need to be exceeded, volumes associated with other activities will be lowered to ensure the overall volume of 1070 is not exceeded for any 24hr period.

5.1.1 MITIGATION MEASURES FOR EXCEEDING THE EIS PEAK HOURLY HEAVY VEHICLE VOLUMES

While it is proposed to increase the peak hourly heavy vehicle volumes, movements would be managed to minimise impacts during peak times through:

- Not exceeding volumes listed within Table 4 and Table 5 of this CTMP
- Operating during weekends where able, to reduce the overall movements required during weekdays.
- Where possible, source night-time spoil dump sites to further reduce the overall movements required during weekdays.
- If the increased volumes are identified to be creating an unacceptable impact to the public, volumes will be further reduced accordingly and within consultation with Port Authority and CJP.
- With the opening of Rozelle Interchange a significant reduction of heavy vehicles associated with the WCX works is expected

Regular consultation with Port Authority will take place where the proposed increase to truck volumes can be reviewed particularly for event days and cruise ship days. If deemed necessary and at Port Authorities' discretion, peak hourly volumes will be lowered during these days to ensure traffic congestion in and around the area does not become an issue

Wherever possible truck bookings will be staggered to ensure an influx of heavy vehicles arriving at any one time is limited

As detailed within section 5.2 of this CTMP if an influx of heavy vehicles is experienced, excess vehicles will be diverted to the marshalling area. It is however noted that this is a last resort, and all other measures will be taken to reduce the likelihood of this being required

5.2 TRUCK MANAGEMENT AND MARSHALLING

Spoil trucks attending the bays tunnel site will be tracked using the Linkedsite GPS tracking system. This requires drivers login at the commencement of their shift and will permit site staff to monitor movements throughout the project areas. Geofence boundaries can be established to monitor the number of trucks at any given time marshalled at sites and can alert for when trucks either use incorrect routes, or exceed certain criteria

Site staff can intervene where the number of trucks is to exceed the capacity at the site and redirect the inbound trucks to a different site or alternative marshalling facility.

A marshalling area has been identified where the previous grout plant was located. Now that the grout plant has been relocated to the Burwood North site, this area will be utilised to marshal up to 2, 19m heavy vehicles.

Additional measures will be taken to limit the impact of the heavy vehicle volumes as further detailed within section 5.1.1 of this CTMP.

5.3 CUMULATIVE PROJECTS

5.3.1 WESTCONNEX ROZELLE INTERCHANGE (2021-2023)

Located adjacent to The Bays metro station construction site, major construction of the WestConnex Rozelle Interchange was completed at the end of 2023. Both projects will utilise the same haulage route via James Craig Road, Sommerville Road, Solomons Way and Port Access Road, however volumes associated with the WCX project would be significantly lower with opening of the interchange occurring in late 2023, with only limited construction works remaining.

WestConnex Rozelle Interchange has undertaken Vissim microsimulation modelling which was built upon the approved EIS model for the anticipated construction traffic volume involving haulage

operation, material delivery and workers arrival and departure trips that would occur during its peak haulage operation in March 2021. The peak month of March 2021 was determined based on the cumulative traffic volumes involving WestConnex Rozelle Interchange, Sydney Metro West and other construction projects in White Bay between 2020 and end of 2023. The peak cumulative traffic volumes adopted in the Vissim modelling were higher than the EIS forecast and was approved by TfNSW, SCO and Port Authority to proceed.

The WestConnex Rozelle Interchange project has passed its peak construction activity period in March 2021 and is currently in a gradual reduction in construction vehicle movements towards the end of the project. Based on the monthly WestConnex construction traffic schedule that AFJV received from JHCPB, it can be seen that:

- Daily truck traffic volume in year 2023 (i.e. 200 to 480 heavy vehicle trips per day) is expected to vary between 13% and 31% of the peak truck traffic volume in March 2021 (i.e. up to 1,552 heavy vehicle trips per day).

These heavy vehicle trips associated with WestConnex Rozelle Interchange are distributed to various access points of the Rozelle Rail Yard site, with a proportion of heavy vehicles entering Rozelle Rail Yard via Port Access Road with the remaining heavy vehicles entering directly from City West Link.

The WestConnex Rozelle Interchange monthly construction traffic schedule also shows the following light vehicles for the construction sites in Rozelle Rail Yard, The Crescent and Iron Cove Link sites located around Rozelle:

- Daily light vehicle traffic volume in year 2023 (i.e. 200 to 627 light vehicle trips per day) is expected to vary between 10% and 30% of the peak light vehicle traffic volume in March 2021 (i.e. up to 2,090 light vehicle trips per day).

While light vehicles are not to enter/leave Rozelle Rail Yard via Port Access Road, there is a temporary car park off James Craig with 200 spaces to accommodate worker vehicles. This has been considered in the approved WestConnex Vissim modelling.

It is noted that the vehicle movements entering and exiting the remote car park on Sommerville Road has also been considered in the WestConnex Vissim modelling.

Clearly, there is notable overall reduction in the WestConnex Rozelle Interchange traffic volumes following its peak in March 2021, with a fraction of traffic occurring on James Craig Road, Sommerville Road, Solomons Way and Port Access Road, and the remaining traffic would access various construction sites off City West Link and Victoria Road. Therefore, the cumulative traffic impact associated with these projects would be much lower than what was anticipated in the approved WestConnex 3B Vissim model. As such, no mitigation measures are required on this basis.

5.3.2 WESTERN HARBOUR TUNNEL PROJECT (2024)

Construction sites of the Western Harbour Tunnel project are located in White Bay and Rozelle. The project has received planning approval with minor construction works starting in late 2023.

The Western Harbour Tunnel EIS construction program showed a peak in year 2023, however it is now expected to be delayed for a year or so until 2025, before reaching peak operations. At this time, heavy vehicle volumes associated with this CTMP are expected to be minor and therefore no significant cumulative impact issues are expected.

Ongoing consultation will occur and if an overlap of peak programmed works is expected, the heavy vehicle volumes listed within Table 4 will be reassessed and if required will be lowered.

5.3.3 WHITE BAY CRUISE TERMINAL

The White Bay Cruise Terminal is located at the eastern end of the White Bay wharves and is one of the two terminals for cruise ships in Sydney.

The Vissim model as mentioned in Section 5.3.1 typical traffic volumes associated with the cruise terminal on the road network. Therefore, the approved model present conservative results with possible further traffic reduction.

Reductions in construction traffic associated with the completion of WestConnex works, would free up capacity in the road network and the opening of the WestConnex M4 M5 Link would further improve road network performance

Ongoing consultation with Ports Authority will occur and options to further limit the impact of construction activities during cruise days will be explored. This may include; limiting construction activities on the days and not installing traffic control measures that restrict road capacity in the area

5.3.4 GLEBE ISLAND WORKER PARKING

Off street worker parking for the project has been secured through a lease agreement with Port Authority, this area will facilitate up to 165 worker parking spaces to service The Bays construction site and tunnelling activities

It is noted that the Eastern Tunnelling Package and the Western Harbour Tunnel Package 2 projects will also use Glebe island for various parking, heavy vehicle movement and storage. The amendments made to the Traffic Staging Plan within Appendix C of this CTMP has been made in consultation with both projects with the aim of reducing potential conflict at Glebe Island. These changes will not affect the public.

5.4 ACCESS TO LOCAL PROPERTIES, BUSINESSES AND UTILITIES

Access to all neighbouring properties and businesses in the vicinity of The Bays metro station construction site will be maintained at all times.

In addition, access to the Rozelle Rail Yard site will be maintained via the relocated site access driveway on Port Access Road. This site access driveway will be shared with AFJV vehicles.

Access to all utilities will be maintained during construction unless agreed with the relevant utility owner, landowner or occupier

5.5 PUBLIC TRANSPORT

The proposed construction activities and operation of the construction site will not impact the existing public transport services on Victoria Road, City West Link and The Crescent

5.6 PEDESTRIAN AND CYCLISTS

Pedestrian and cyclists will not be impacted in close proximity of The Bays metro station construction site as public access to Port Access Road is restricted

Following the completion of WestConnex Rozelle Interchange, the shared path was restored on the north side of James Craig Road and the temporary path removed on the south side of James Craig Road. This provides connectivity to the existing shared path network on south side of The Crescent and Victoria Road intersection, west side of the Victoria Road bridge and north side of Anzac Bridge.

Notwithstanding the above, AFJV workers will be advised to stay alert for any pedestrian and cyclists travelling on roads that are part of the construction site access routes identified in Section 4.4

Construction worker movements will be separated from the vehicle movements on Port Access Road, with direct access between the west and east sides of the construction site via access to a purpose-built pedestrian bridge, crossing Port Access Road. During the site demobilisation phase at conclusion of AFJV works, this pedestrian bridge will be removed. At this time worker crossing movements will need to occur, options for these movements to occur safely will be investigated and may include:

- Additional traffic control

- Reducing crossing movements wherever able
- Nominating designated crossing points
- Installing zebra crossings.

Suppliers, spoil companies, and workforce will be provided with AFJV vehicle movement plan where it highlights routes to use to enter and exit sites, and highlight risk that drivers need to be aware (e.g. cyclists, high pedestrian area) A sample of the vehicle movement plan can be found in Appendix D

5.7 WORKFORCE PARKING

An additional parking area has been leased to support additional parking spaces for workers at Glebe Island. The interface with other projects is further detailed within 5.3.4, with arrangements to be installed shown on the Traffic Staging Plan within Appendix C of this CTMP

Further detail for worker parking arrangements can also be found within the Construction Parking and Access Strategy (CPAS).

5.8 CRUISE SCHEDULE

Cruise schedule is available on the Port Authority website. AFJV will maintain access to the White Bay Cruise Terminal particularly on cruise days and special events/ functions held in White Bay. AFJV will communicate closely with Port Authority to obtain the cruise schedule monthly and to discuss suitable traffic management measures, where required, to maintain access to the cruise terminal and special events/ functions.

As mentioned in Section 4.4, AFJV has agreed with Port Authority's Access Management Principles to adhere to in order to manage the construction traffic along the port roads (i.e. James Craig Road, Solomons Way, Sommerville Road and Port Access Road) and mitigate the impact on cruise operations at White Bay Cruise Terminal and other businesses within White Bay

5.9 SPECIAL EVENTS

A review of websites for Inner West Council, City of Sydney Council, Sydney Olympic Park, Sydney Cricket Ground and Leichhardt Oval for special events near the subject site has found that there are no special events which will be impacted by the works

It is noted that from time to time, events may take place in or around the area. For this reason, close consultation is maintained with Port Authority so that these events can be adequately catered for

CONSTRUCTION TRAFFIC MANAGEMENT

6.1 TRAFFIC STAGING

A traffic staging plan has been developed to detail the long term traffic signage, line marking and other devices to safely guide work vehicles and the public through, past and around the site. A full copy of this staging plan can be found within Appendix C of this CTMP.

6.

6.2 TRAFFIC GUIDANCE SCHEMES (TGS)

A variety of short term TGSs will be required to accommodate work activities that would otherwise be unsafe to occur on or beside traffic lanes. Due to the frequently changing nature of short term works and the associated TGSs, these plans will be drafted as 'sub plans' to this CTMP and be communicated with Port Authority through the weekly processes that have been established between AFJV and Port Authority. This will occur before installation of any TGS.

Short term traffic arrangements anticipated to facilitate the installation, operation, and removal of the tower-crane, during demobilisation, include:

- Short term traffic control lane closures during construction of the crane pad
- Short-term traffic control full road closures during installation of the crane's boom
- Short term traffic control performing intermittent traffic stops when lifting over or near Port Access Road

6.3 TRAFFIC SAFETY BARRIERS

For the purpose of maintaining safe separation between traffic and workers or other roadside hazards, road safety barriers have been installed (in accordance with earlier revisions of this CTMP).

As part of this Revision 07 of the CTMP, a minor relocation of road safety barriers is being proposed. The Traffic Staging Plan provided within Appendix C of this CTMP shows the updated positioning of barriers.

Barriers will maintain a minimum 0.3m offset from the traffic lane, be TfNSW accepted type (JJ Hooks), and have a suitable TfNSW accepted approach end terminal installed.

While the selected barriers typically have a deflection of 1.63m, these barriers will be pinned in accordance with an approved temporary works design (design approved outside of this CTMP). Pinning of these barriers will reduce the typical barrier deflection.

6.4 OVERSIZE AND OVER MASS VEHICLES (OSOM)

All OSOM vehicles utilised for proposed construction activities at The Bays metro station construction site will be procured through specialist haulage contractors. They will abide by the permits obtained from TfNSW's Special Permits Unit "Special permits for oversize and over mass vehicles and loads" (2007) document outlines the various operating restrictions and conditions. Some permits may also require coordination with the NSW Police and will be coordinated by the specialist haulage contractors.

AFJV will liaise with TfNSW regarding oversize and over mass vehicles and access arrangements.

6.5 INSPECTIONS

On site inspections and monitoring the impact of this CTMP and associated TGSs will be undertaken regularly.

All long-term traffic management arrangements will be inspected at regular intervals and in accordance with the projects Overarching Construction Traffic Management Plan. Any minor issues

identified during the inspection will be recorded and rectified immediately. More significant issues will be recorded for rectification.

Where traffic control deficiencies are identified through these inspections, this CTMP and associated plans will be amended, as required, by the Traffic Manager.

All identified issues and status of rectification will be documented in the issues register (Lucidity).

6.6 ROAD SAFETY AUDIT

When required, a road safety audit will be conducted by a suitably qualified and independent auditor with Level 3 certification and another auditor with Level 2 or higher certification.

Where road safety deficiencies are identified through the audit, the relevant design/ implementation will be amended to address the deficiencies, where required.

A Road Safety Audit report has been prepared for the proposed traffic staging plan of The Bays metro station construction site. A copy of the Road Safety Audit report is provided in Appendix E.

6.7 WORKFORCE AND STAFF TRAINING

6.7.1 SITE INDUCTION

All AFJV workers and staff employed on The Bays metro station construction site (including sub-contractors) will be required to undergo a site induction.

The induction will include information of the construction site access routes for site staff and construction vehicles, on-site parking locations, WH&S, driver protocols and emergency procedures.

All personnel employed with the Project will perform their duties in accordance with the requirements of this CTMP.

6.7.2 DRIVER TRAINING

Heavy vehicle drivers shall be made fully aware of the traffic management arrangements within and surrounding the site. All drivers will be informed of all relevant site access gates and the access requirements including specific heavy vehicle driver training to ensure the following:

- Appropriate procedures for accessing the site
- Drivers shall adhere to the nominated site access routes mentioned in Section 4.4
- Drivers shall be aware of the speed restrictions along the site access routes, and
- No queuing and truck marshalling is to be wholly contained within the site.
- AFJV vehicles are prohibited to park on Port Authority owned land that is outside of the exclusive areas.
- Vehicle movement plans will be provided to drivers (or the company) accessing The Bays site. The VMP will cover routes to use to enter and exit sites, and highlight risk that drivers need to be aware (e.g. cyclists, high pedestrian area, etc). A sample of the vehicle movement plan can be found in Appendix D.

6.8 KEY SITE CONTACTS

Key site contact details are listed in Table 6.

TABLE 6: KEY SITE CONTACT DETAILS

Name	Role	Contract Details
[REDACTED]		



Name

Role

Contract Details

Name	Role	Contract Details

PROJECT COMPLETION AND HANDOVER

- At the completion of AFJV related works, portions of the site will be handed over in stages. Any signage and other traffic management devices required for the safe and affective movement of both public and work vehicles within these portions will remain installed and handed over to Sydney Metro or relevant party nominated by Sydney Metro as part of the portion. In the case of any signage or other traffic management devices that are deemed not required, or conflicting; will be removed or changed. Details of any changes are to be agreed with Sydney Metro outside of this CTMP
- 7.

It's noted that once a portion has been handed over, any signage or other Traffic management devices within the portion, will no longer be inspected or maintained by AFJV

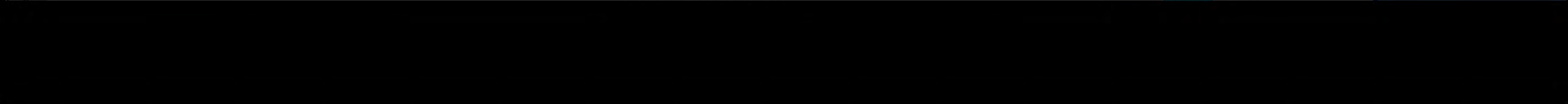
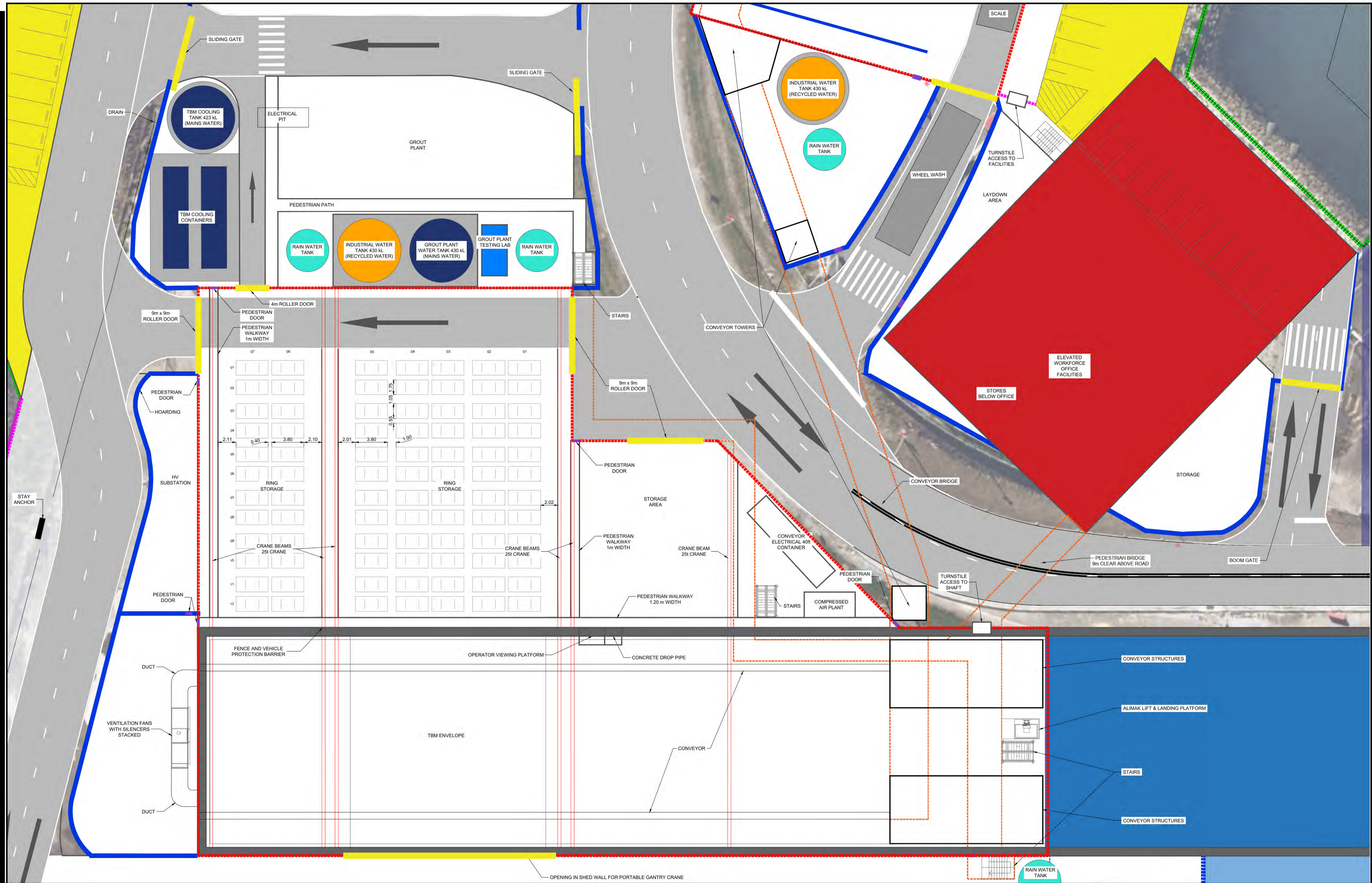
CONCLUSION

This CTMP has been prepared to document the proposed construction activities and associated traffic management measures at The Bays metro station construction site for the construction period between October 2021 and early 2025

Based on the findings of the CTMP, it is concluded that:

8.
 - The construction activities and operations at The Bays metro station construction site will generate heavy vehicle volumes higher than identified within the EIS
 - It is anticipated that up to 251 light vehicle movements per day will be generated in-line with the EIS estimate.
 - The WestConnex 3B project is expected to finish in late 2023, until then; will utilise the same site access routes via the port roads (i.e. James Craig Road, Sommerville Road, Solomons Way and Port Access Road)
 - The proposed construction activities will not impact on pedestrians and cyclists as there are no footpaths or shared paths available along both sides of the Port Access Road.
 - AFJV will conduct regular inspections and monitor the traffic management measures detailed in this CTMP, excluding portions that have been handed over. Any deficiencies identified within AFJV areas will be recorded and rectified accordingly.

APPENDIX A CONSTRUCTION SITE LAYOUT PLAN



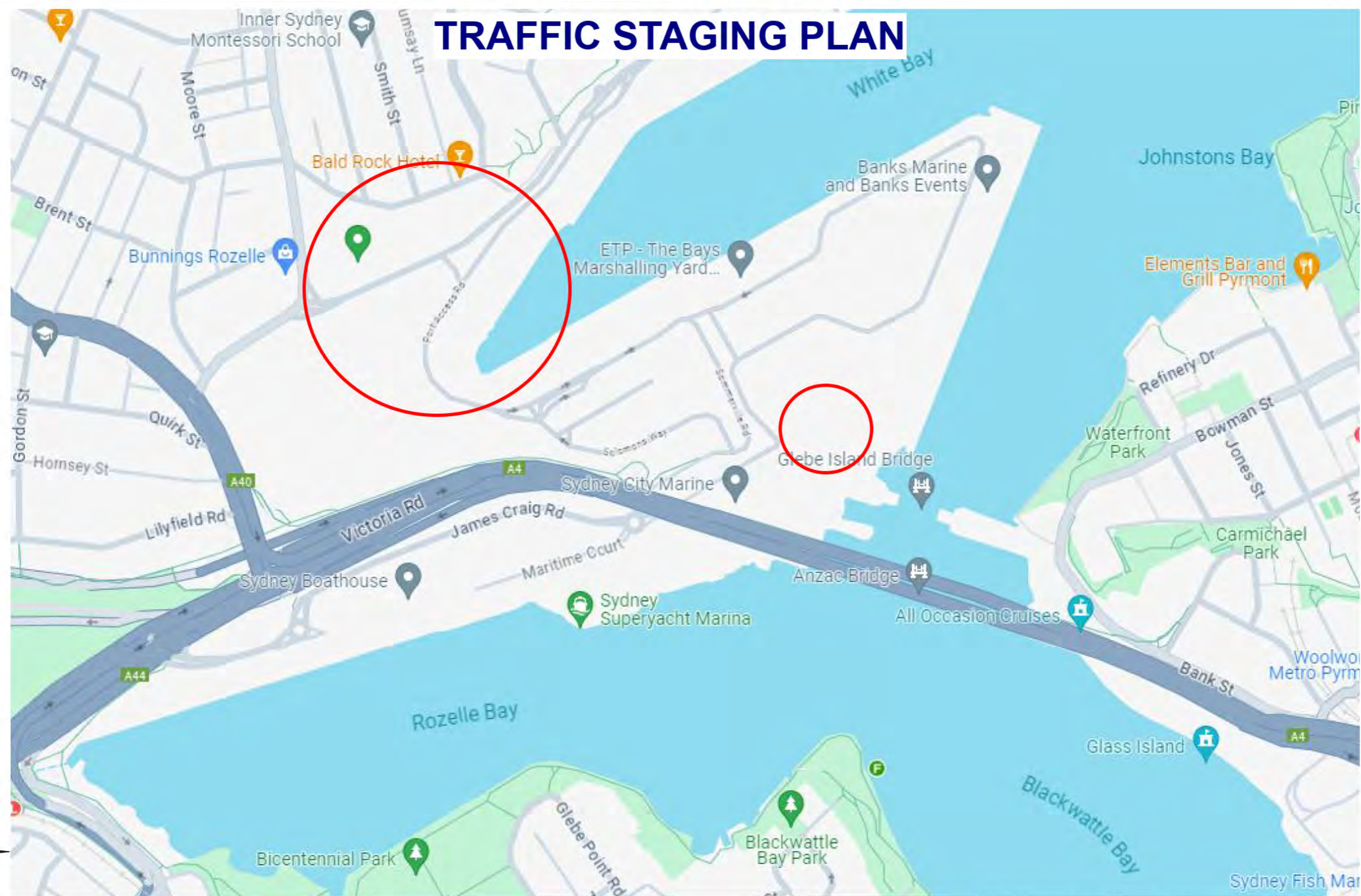
APPENDIX B ACCESS MANAGEMENT PRINCIPLES

Access Management Principles

1. The Licensee acknowledges the importance of the Port Access Road and James Craig Road to Port activities carried out by the Licensor and its tenants.
2. If from time to time the Licensor, acting reasonably, considers that the Licensee's truck movements to and from the Licensed Area via the entry at James Craig Road during the times of 7am to 10am on Ship Days are such that they negatively impact the movements of cruise traffic, then the Licensor may require the Licensee to cease access to and egress from the Licensed Area during such times until either the Licensee has implemented traffic control measures to the reasonable satisfaction of the Licensor or the Licensor has implemented traffic control measures during those times in accordance with clause 4.7(e). A rolling forecast of Ship Days is publicly available, currently . <https://www.portauthoritYnsw.com.au/cruise/cruise-schedule/>
3. Vehicle movements will be managed to limit any increase in congestion on James Craig Road and limit the effects of vehicle movements on the current and future users of the Port, including tenants at Glebe Island.
4. Subject to clause 4.7(e), the Licensee will be responsible for any reasonable traffic management costs associated with the Permitted Use, including in relation to any traffic solutions required on the Port Access Roads.
5. If required from time to time by the Licensor, acting reasonably, and after having given the Licensee reasonable prior notice and reasons for its decision, the Licensee agrees to implement a traffic marshal or other control measures at the Port Access Road interface and James Craig Road intersections (at its own cost) to manage traffic flows relating to the Licensee's truck movements across and along the Port Access Road and James Craig Road. This clause 5 does not apply if the Licensor elects to implement a traffic marshal or other control measures pursuant to clause 6 of this Annexure E.
6. If from time to time the Licensor, acting reasonably and after having given the Licensee reasonable prior notice and reasons for its decision, considers that the use of the Licensed Area by the Licensee and the use of the Land owned by the Licensor is such that it would warrant the implementation of a traffic marshal or other control measures to manage the traffic of all users of the Land, the Licensor may, at its election, chose to provide this traffic control measure, and if the Licensor makes this election, the Licensee must, subject to clause 4.7(e), reimburse the Licensor's costs in doing so on a proportionate basis having regard to the use of the Port Access Road by the Licensee and all other relevant users, on demand.
7. The Licensee acknowledges that the control measures whether implemented by the Licensor or Licensee, including traffic marshal(s), will preference traffic flows of cruise traffic and port operations during the times of 7am to 10am on Ship Days over the Licensee's truck movements. The Licensee will ensure that the directions of the traffic marshal or other control measures are complied with
8. If the processes set out in Items 1 to 7 inclusive above have been implemented and, the Licensor acting reasonably and in good faith, considers that vehicle movements are still not being appropriately managed, the Licensor may require these Access Management Principles to be revised in such a way as to limit the incremental congestion on these roads.

APPENDIX C TRAFFIC STAGING PLAN AND TURN PATHS

TRAFFIC STAGING PLAN



PROJECT: SYDNEY METRO WEST - CENTRAL TUNNEL PACKAGE

LEGEND

- Relocated temporary barrier
- Existing temporary barrier
- Approved barrier end terminal
- Worker pedestrian route
- Sign location
- Turn path assessment
- Line marking code
- Typical construction vehicle movement

Date: 03/06/2024 **Location:** The Bays



Comments:
 - THIS IS A SHORT TERM TGS, NOT TO SCALE
 - THE CONTRACTOR SHALL ENSURE ALL ROL AND SZA REQUIREMENTS ARE SATISFIED DURING IMPLEMENTATION OF THIS TGS
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REV - 02



PROJECT: SYDNEY METRO WEST - CENTRAL TUNNEL PACKAGE

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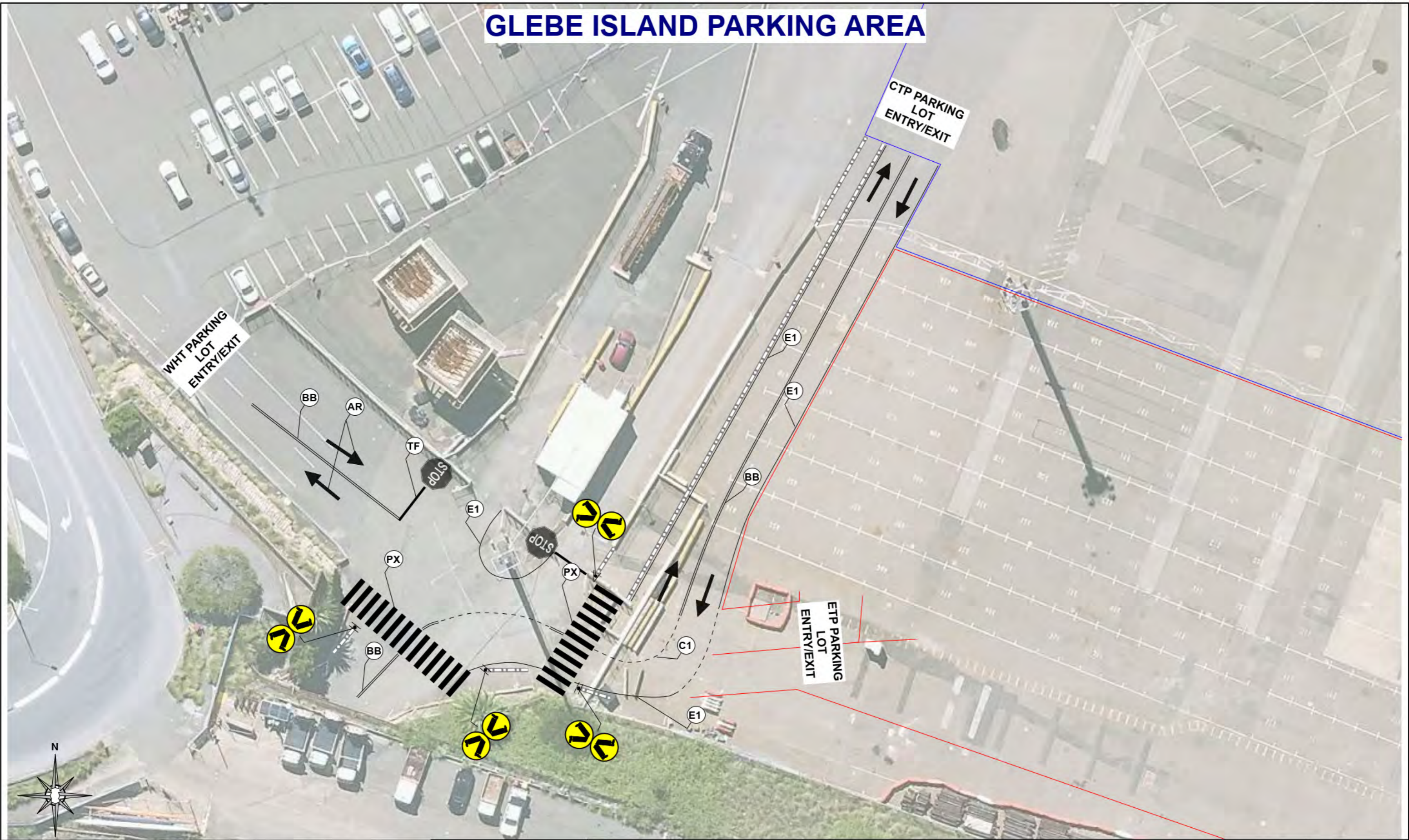


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GLEBE ISLAND PARKING AREA



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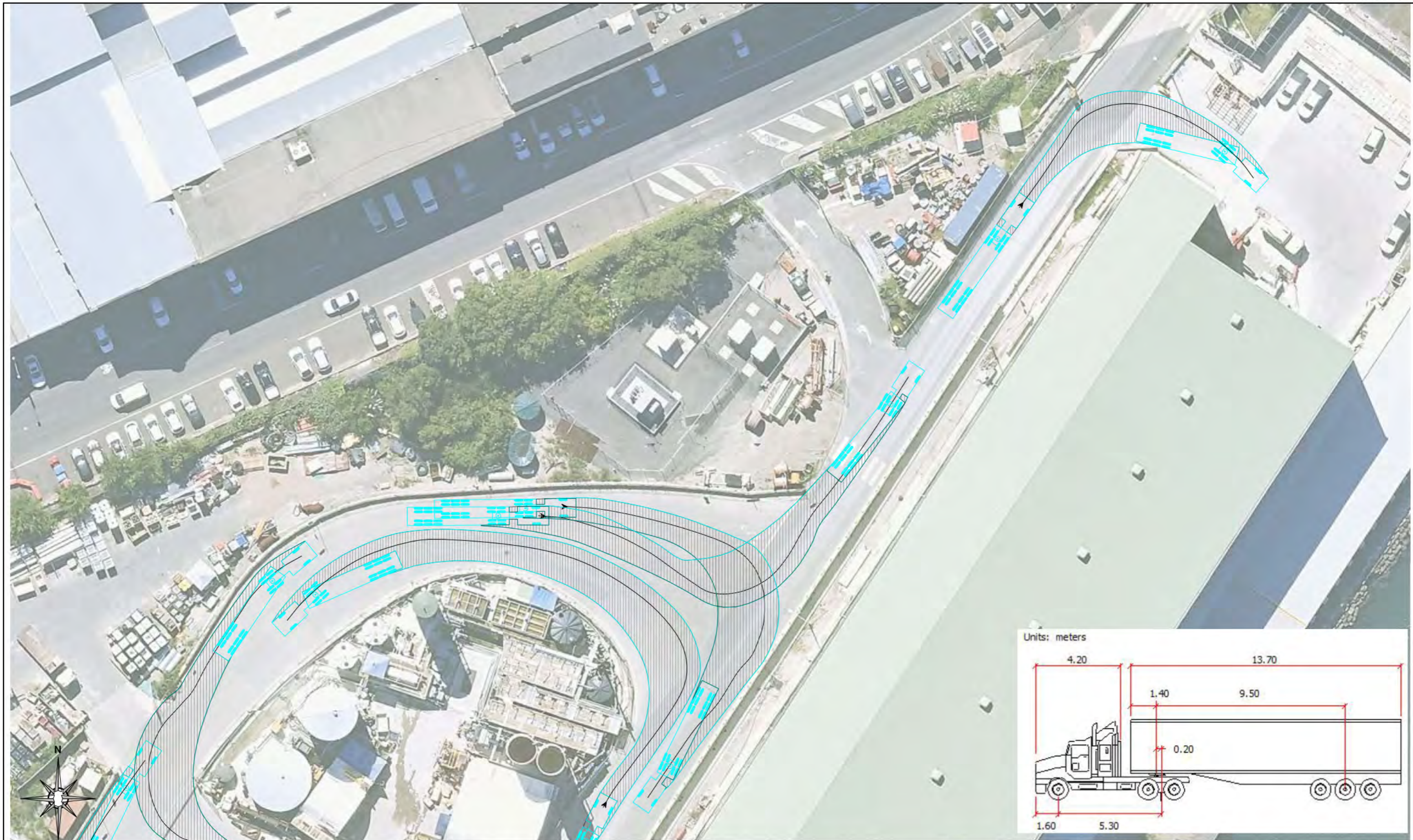
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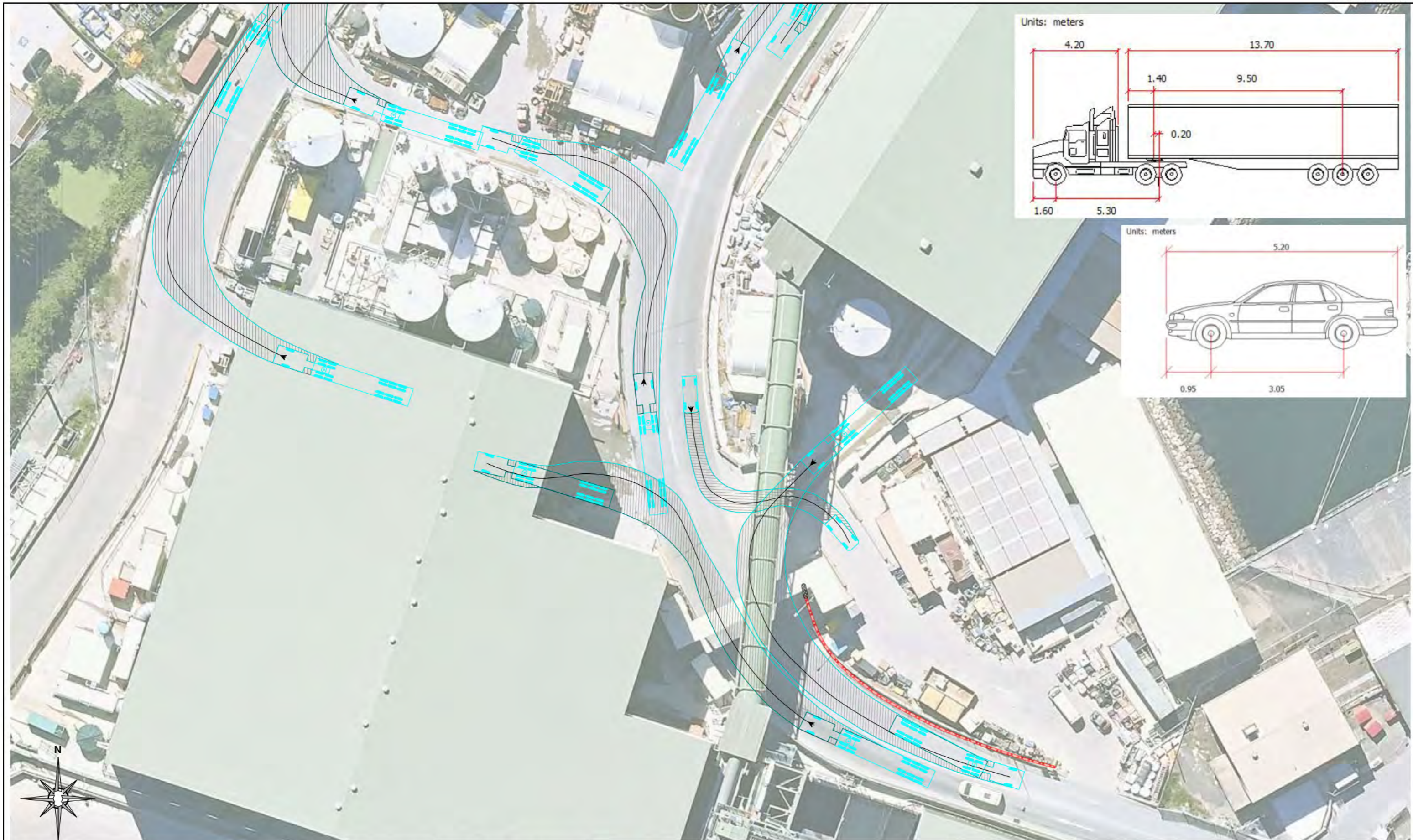
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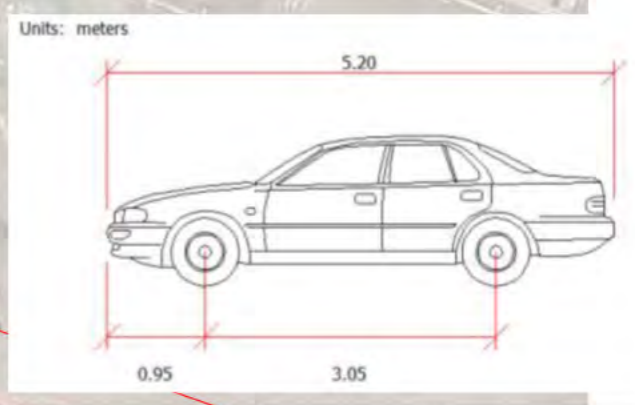
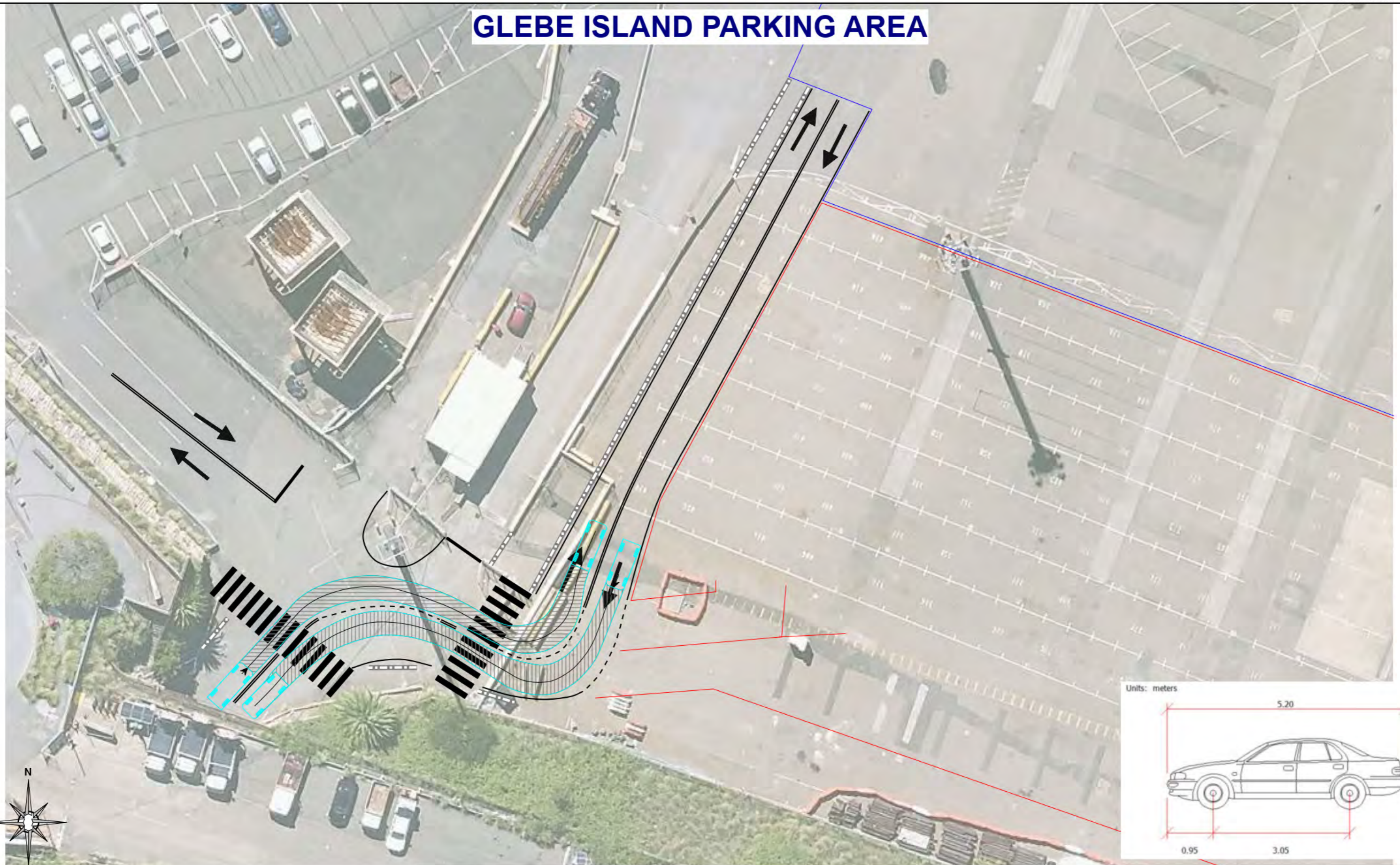


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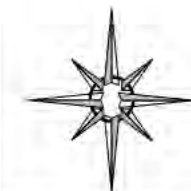
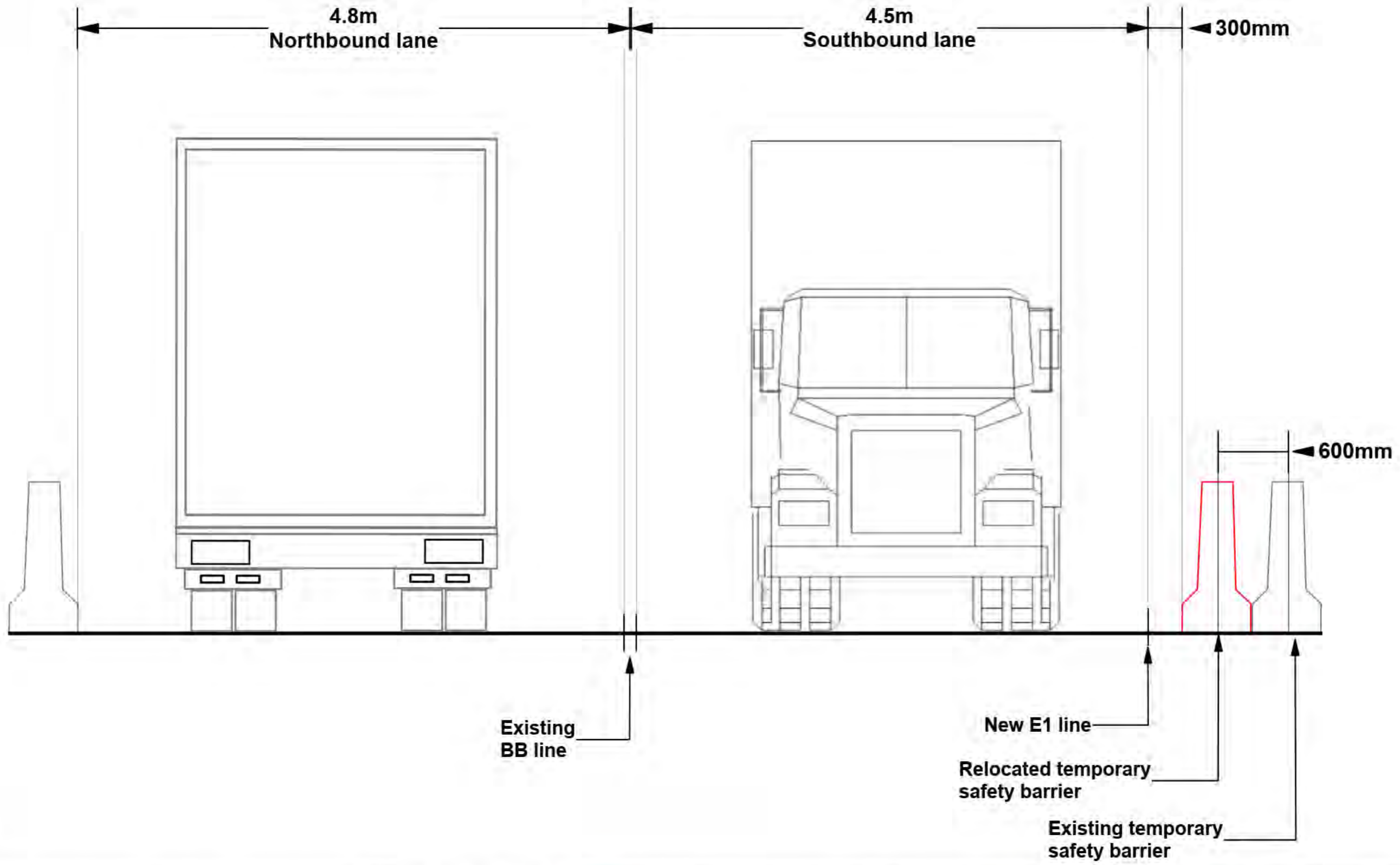


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CROSS SECTION (CS)



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Location Details

Road Various Suburb Rozelle Side Street Various

Direction (N) (E) (S) (W) Speed of road 20 km/h Speed of Side Streets 30 km/h

Options Assessment

Method selected Around (Past) Through

Reason for selection **Traffic can pass while maintaining sufficient worker/traffic offset.**

Risk Assessment

Section 1 - Does the TGS Involve Detours of traffic? YES (NO) (If answered no proceed to section 2) Enter Risk Rating

	YES	NO	Enter description of risks if answered no to any question	Enter Risk Rating
1.1 Are detour routes suitable for all vehicle classes being detoured?	<input type="checkbox"/>	<input type="checkbox"/>		
1.2 Is access to local residence and business maintained?	<input type="checkbox"/>	<input type="checkbox"/>		
1.3 Are detour signs located at decision points, to clearly guide motorists through the detour?	<input type="checkbox"/>	<input type="checkbox"/>		
1.4 Can roads and intersections used as detour routes, accommodate the additional traffic volumes?	<input type="checkbox"/>	<input type="checkbox"/>		
1.5 Is the same level of safety maintained for turn movements? e.g. Traffic using signalized intersections being sent through a detour route that involves turn movements at non-signalized intersections.	<input type="checkbox"/>	<input type="checkbox"/>		

Section 2 - Does the TGS involve Stop/Slow arrangements? YES (NO) (If answered no proceed to section 3) Enter Risk Rating

	YES	NO	Enter description of risks if answered no to any question	Enter Risk Rating
2.1 Are escape routes clearly defined on the TGS, clear and safe to use?	<input type="checkbox"/>	<input type="checkbox"/>		
2.2 Is a PTCO used in place of a manual Traffic Controller where existing speed is greater than 45km/h?	<input type="checkbox"/>	<input type="checkbox"/>	*	
2.3 Is the operating speed of the road 60km/h or less where Traffic Control or PTCO are in use?	<input type="checkbox"/>	<input type="checkbox"/>		
2.4 Are x4 traffic cones placed on the edge or center line, approaching the traffic controller or PTCO?	<input type="checkbox"/>	<input type="checkbox"/>		
2.5 Is prepare to stop and Traffic Control or PTCO symbolic signs installed?	<input type="checkbox"/>	<input type="checkbox"/>		
2.6 Do Traffic Control and PTCO positions have adequate lighting during low light conditions	<input type="checkbox"/>	<input type="checkbox"/>		
2.7 Does sight distance of at least 1.5D exist on approach to Traffic Control or PTCO	<input type="checkbox"/>	<input type="checkbox"/>		

Section 3 - General Enter Risk Rating

	YES	NO	Enter description of risks if answered no to any question	Enter Risk Rating
3.1 Does the TGS define minimum clearances required of workers to live traffic, are distances compliant?	<input type="checkbox"/>	<input type="checkbox"/>	NA	
3.2 Are worker symbolic signs to be placed in advance of areas where workers will be visible to traffic?	<input type="checkbox"/>	<input type="checkbox"/>	NA	
3.3 Are all signs placed at correct distances? i.e. D for multiple signs, 2D for single sign above 60km/h	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
3.4 Are taper lengths compliant and not placed in areas with poor sight distance?	<input type="checkbox"/>	<input type="checkbox"/>	NA	
3.5 Are lane status signs placed in advance of a lane merge?	<input type="checkbox"/>	<input type="checkbox"/>	NA	
3.6 Are the correct tapers being used? i.e. merge taper, traffic control taper, lateral shift taper.	<input type="checkbox"/>	<input type="checkbox"/>	NA	
3.7 Does the TGS clearly define transition zones between tapers on multilane roads, are they compliant?	<input type="checkbox"/>	<input type="checkbox"/>	NA	
3.8 Does the TGS clearly define Buffer areas, are they compliant and at least 30m in length?	<input type="checkbox"/>	<input type="checkbox"/>	NA	
3.9 Does the TGS clearly define site access and egress for work vehicles, is impact to traffic, managed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
3.10 Does the TGS clearly define pedestrian routes, are the routes suitable for all pedestrians?	<input type="checkbox"/>	<input type="checkbox"/>	NA	
3.11 Does the TGS consider Cyclists, can Cyclists transverse the site safely?	<input type="checkbox"/>	<input type="checkbox"/>	NA	

Section 4 - Do the works involve excavations YES (YES) NO (If answered no proceed to section 5) Enter Risk Rating

	YES	NO	Enter description of risks if answered no to any question	Enter Risk Rating
4.1 Are excavations to be less than 200mm in depth?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
4.2 Are excavations to be less than 500mm in depth?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	* Member of public falls into excavation	VH

Section 5 - Other Hazards & Risks

5.1	Reduced lane widths - resulting in side swipe or head on accidents	L
5.2	Reduced offset of barrier to edge line - result in side swipe or impact	L
5.3	Reduced offset of barrier to Works area - result in worker being struck by deflecting barrier	L
5.4		

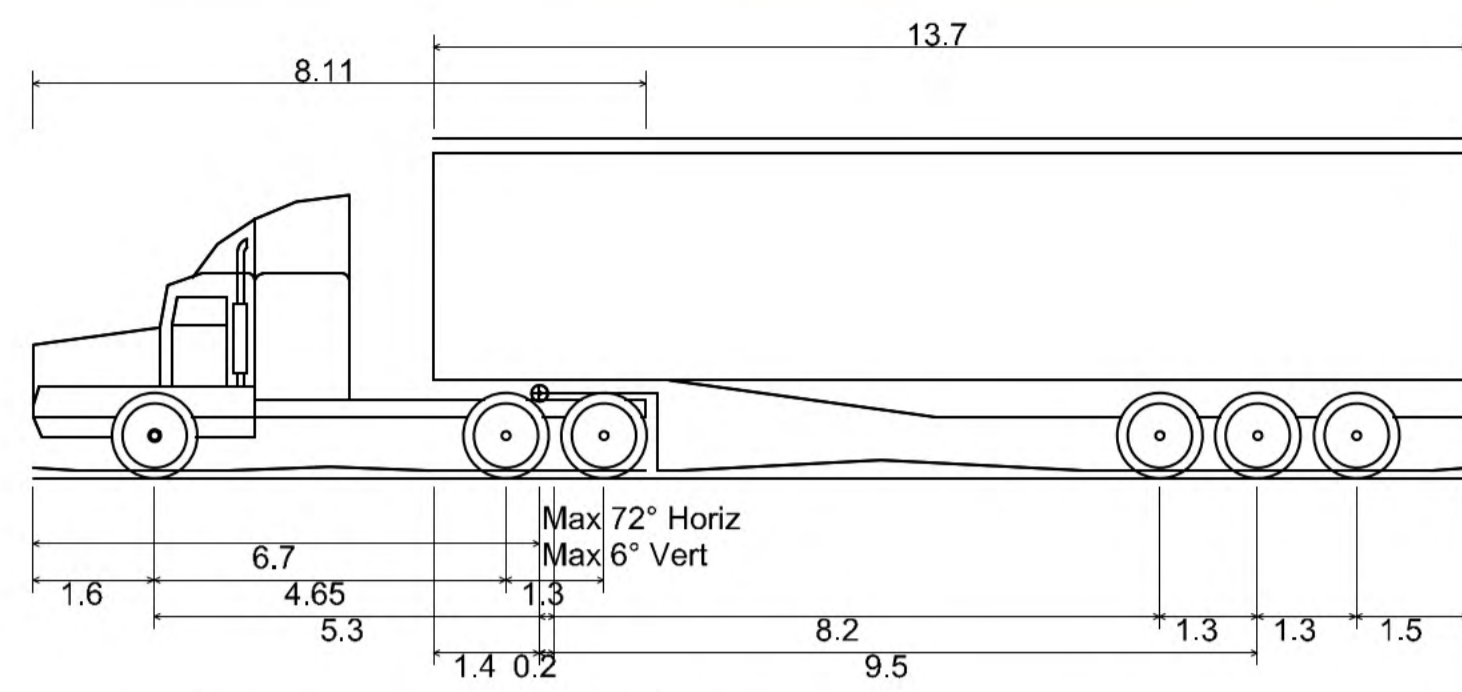
Risk Management Any Risks Identified identified during the above Risk Assessment must be assessed, with control measures listed below. Control measures must meet the WHS Risk Management Hierarchy of controls framework.

Item	Control Measures	Remaining Risk Rating
4.2	All excavation to have suitable fall protection, be sign posted and have road safety barriers to separate live traffic	M
5.1	Lane widths to remain wide enough for 26m b-double trucks to pass each other in opposing directions without needing to leave the roadway. Install edge line, refresh line marking in consultation with PA	L
5.2	Barriers to be delineated in accordance with TfNSW requirements. Edge line to be installed	L
5.3	Speed reduction to 20km/h, barrier pinned to reduce typical deflection	L

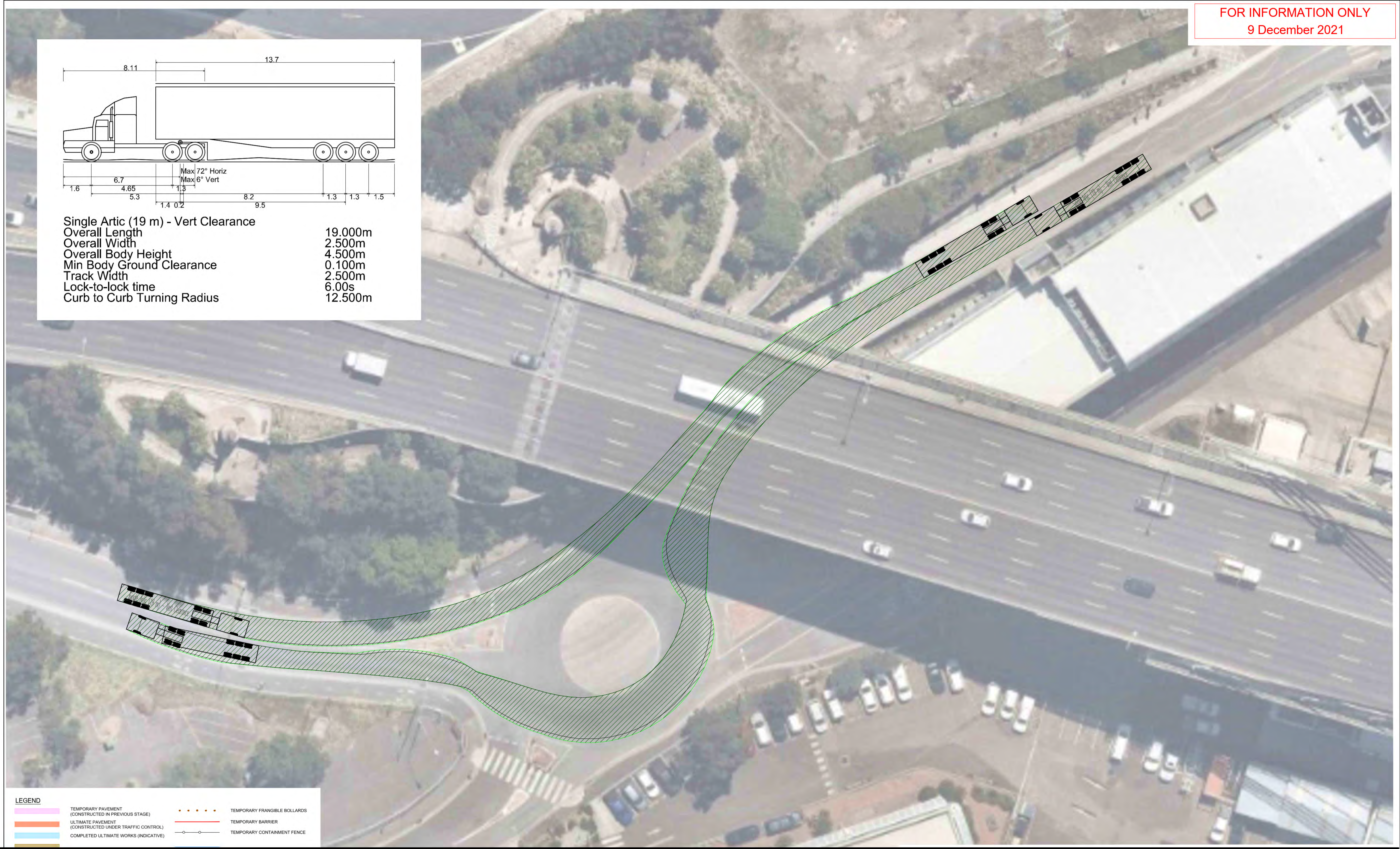
Risk ratings	Likelihood	Consequence					
		Insignificant C6	Minor C5	Moderate C4	Major C3	Severe C2	Catastrophic C1
Very high - VH	Almost certain L1	M	H	H	VH	VH	VH
High - H	Very likely L2	M	M	H	H	VH	VH
Medium - M	Likely L3	L	M	M	H	H	VH
Low - L	Unlikely L4	L	L	M	M	H	H
	Very unlikely L5	L	L	L	M	M	H
	Almost unprecedented L6	L	L	L	L	M	M

Refer to TCAWS Table 3-4 for descriptions of Likelihood and Consequence measures







TGS Designer: Name _____
 TGS Approved by: Name _____
 One up Manager: Name _____

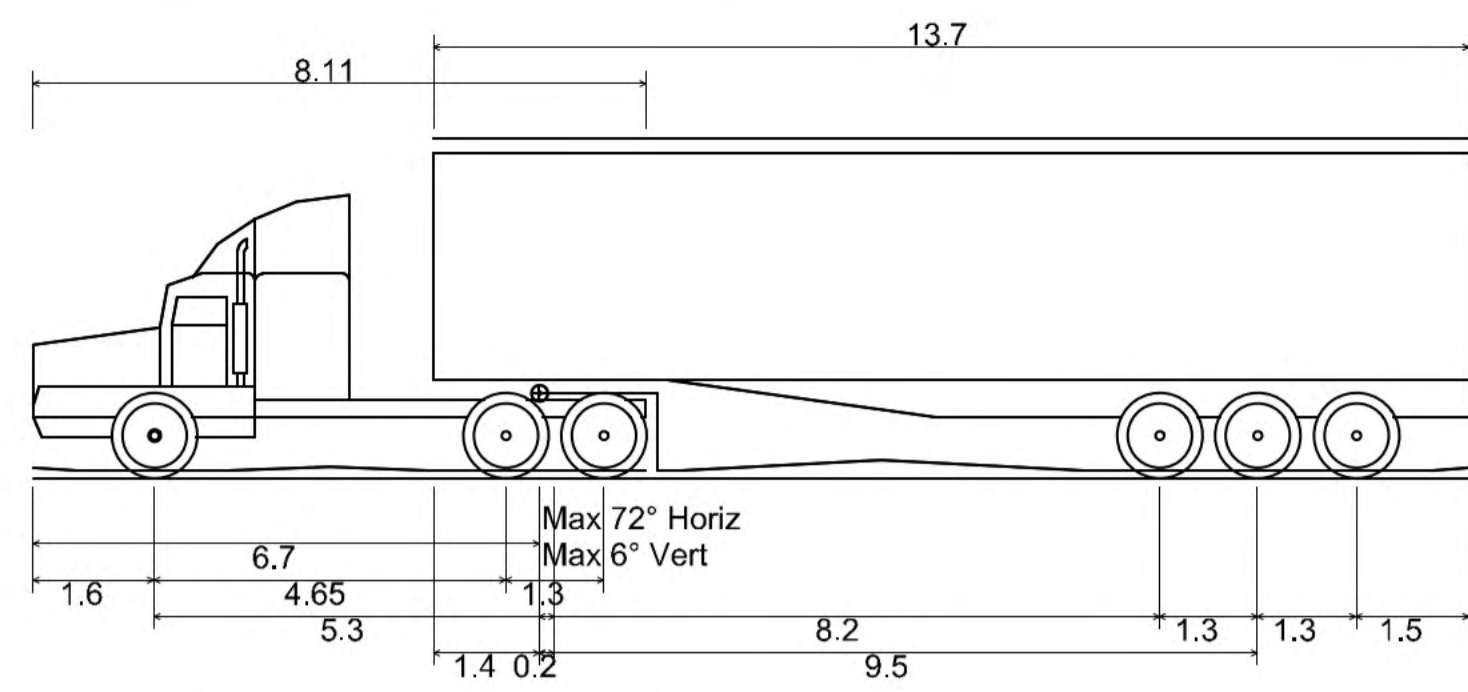


Single Artic (19 m) - Vert Clearance	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	4.500m
Min Body Ground Clearance	0.100m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

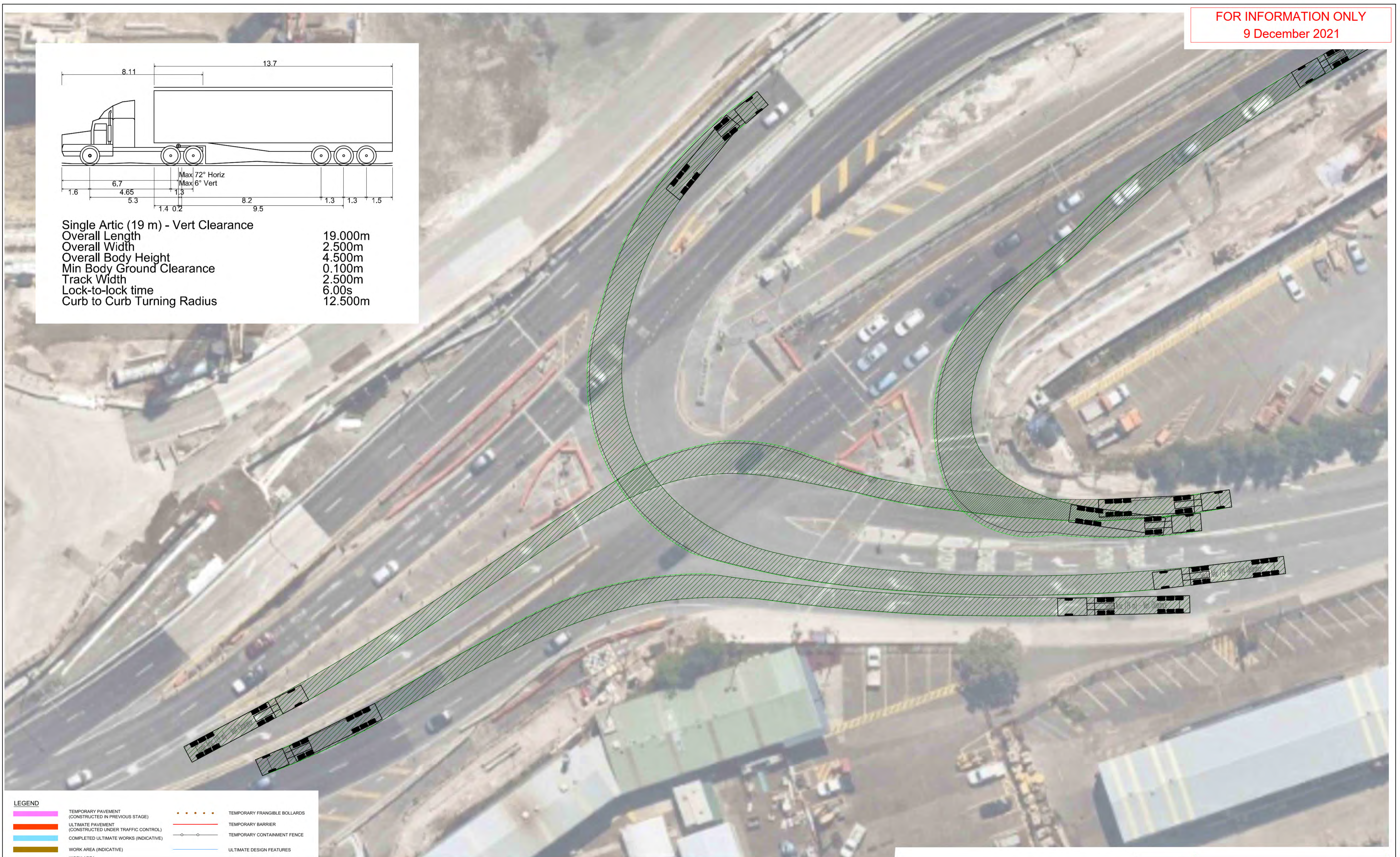


LEGEND

	TEMPORARY PAVEMENT (CONSTRUCTED IN PREVIOUS STAGE)		TEMPORARY FRANGIBLE BOLLARDS
	ULTIMATE PAVEMENT (CONSTRUCTED UNDER TRAFFIC CONTROL)		TEMPORARY BARRIER
	COMPLETED ULTIMATE WORKS (INDICATIVE)		TEMPORARY CONTAINMENT FENCE



Single Artic (19 m) - Vert Clearance
 Overall Length 19.000m
 Overall Width 2.500m
 Overall Body Height 4.500m
 Min Body Ground Clearance 0.100m
 Track Width 2.500m
 Lock-to-lock time 6.00s
 Curb to Curb Turning Radius 12.500m



LEGEND

- █ TEMPORARY PAVEMENT (CONSTRUCTED IN PREVIOUS STAGE)
- █ ULTIMATE PAVEMENT (CONSTRUCTED UNDER TRAFFIC CONTROL)
- █ COMPLETED ULTIMATE WORKS (INDICATIVE)
- █ WORK AREA (INDICATIVE)
- TEMPORARY FRANGIBLE BOLLARDS
- TEMPORARY BARRIER
- TEMPORARY CONTAINMENT FENCE
- ULTIMATE DESIGN FEATURES



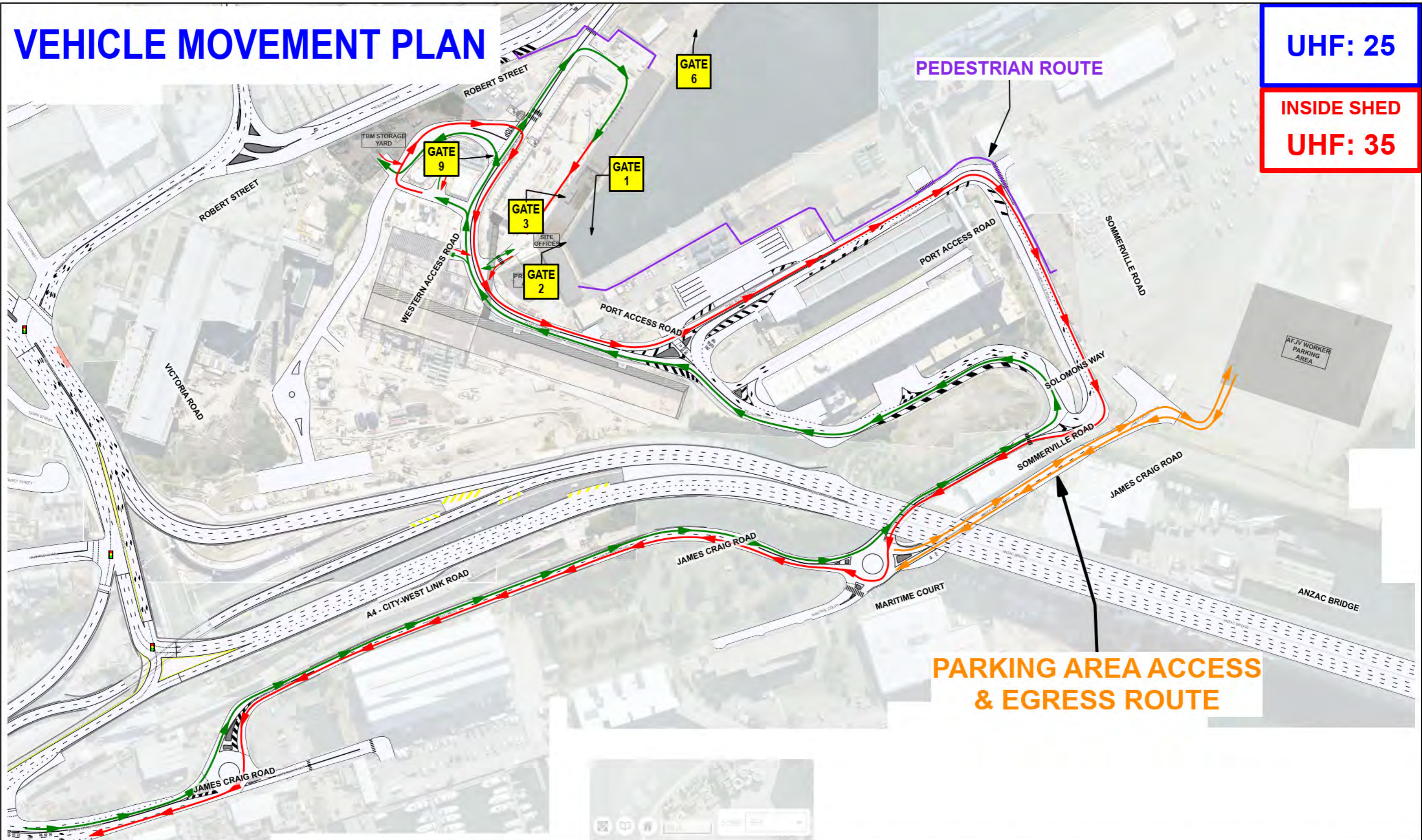
APPENDIX D VEHICLE MOVEMENT PLAN

VEHICLE MOVEMENT PLAN

UHF: 25

INSIDE SHED

UHF: 35



PARKING AREA ACCESS & EGRESS ROUTE

Date: 31/05/2024 Location: The Bay Station

Comments:

- Drivers must be briefed on this VMP
- Gatekeeper/s must be in position when gates are in use and the VMP requires it.
- Drivers must adhere to Gatekeepers directions
- Vehicles entering and exiting site must:
 1. Activate roof mounted beacons on approach
 2. radio intention via UHF
 3. Indicate intentions
 4. Turn into/out of site
 5. Exit with caution, ensuring the safety of pedestrian and other road users
 6. Disable roof mounted beacons after egress and speed has reached normal traffic flow.
 7. follow all road rules and speed limits.
- Use only approved haul routes



PROJECT: SYDNEY METRO WEST - CENTRAL TUNNEL PACKAGE

REV - 00

LEGEND

	Boundaries		Signalised intersection
	Access		Parking Access/Egress
	Egress		Pedestrian Route

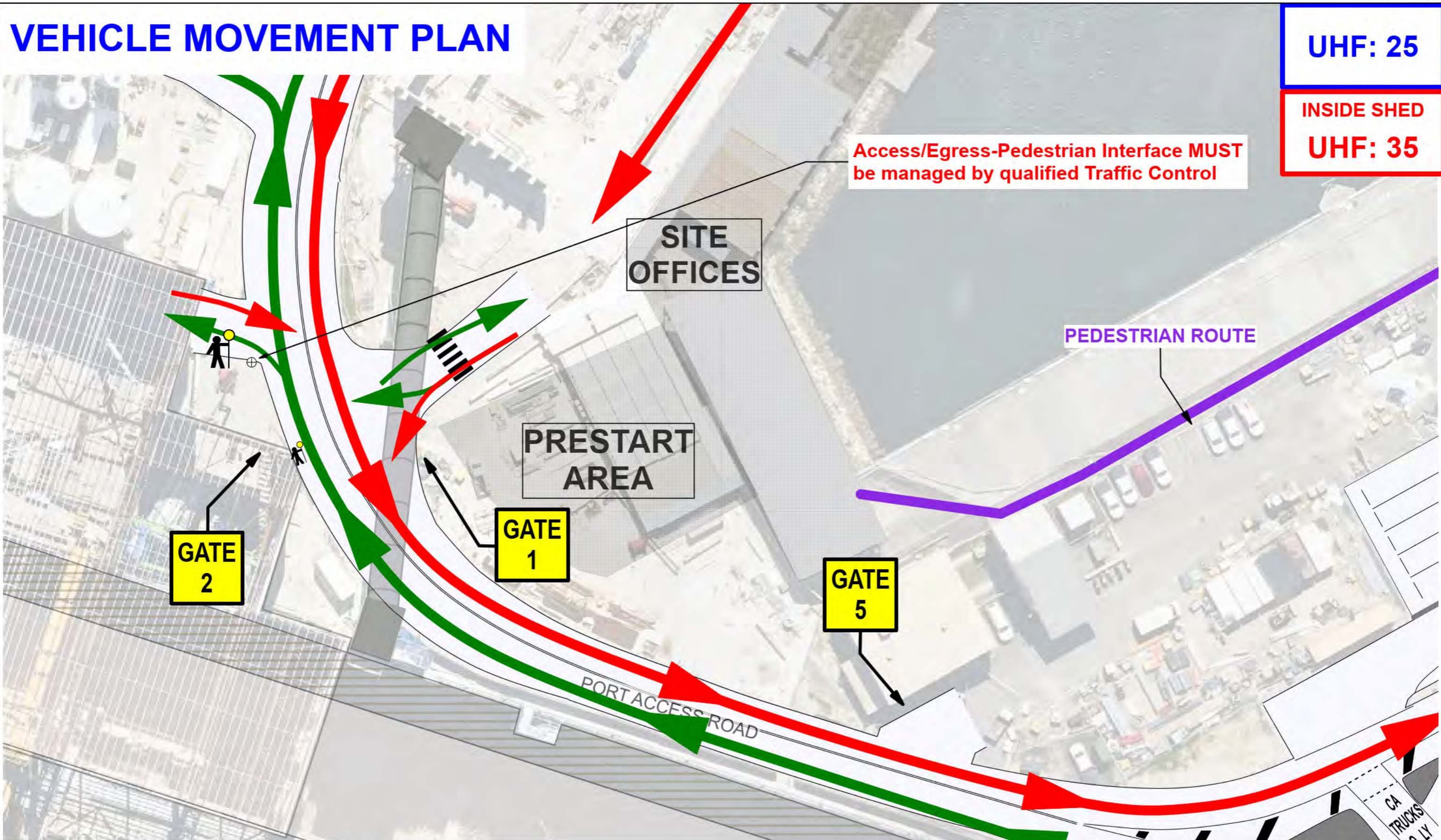


VEHICLE MOVEMENT PLAN

UHF: 25

INSIDE SHED
UHF: 35

Access/Egress-Pedestrian Interface MUST be managed by qualified Traffic Control



Date: 31/05/2024 **Location:** The Bay Station

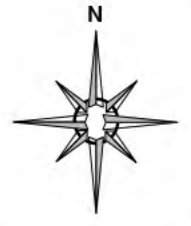
Comments:

- Drivers must be briefed on this VMP
- Gatekeeper/s must be in position when gates are in use and the VMP requires it.
- Drivers must adhere to Gatekeepers directions
- Vehicles entering and exiting site must:
 1. Activate roof mounted beacons on approach
 2. radio intension via UHF
 3. Indicate intensions
 4. Turn into/out of site
 5. Exit with caution, ensuring the safety of pedestrian and other road users
 6. Disable roof mounted beacons after egress and speed has reached normal traffic flow.
 7. follow all road rules and speed limits.
- Use only approved haul routes



PROJECT: SYDNEY METRO WEST - CENTRAL TUNNEL PACKAGE **REV - 00**

LEGEND			
	Boundaries		Signalised intersection
	Access		Parking Access/Egress
	Egress		Pedestrian Route



APPENDIX E ROAD SAFETY AUDIT

PRECONSTRUCTION - DESKTOP ROAD SAFETY AUDIT

ACCIONA/FERROVIAL JOINT VENTURE (AFJV)
CENTRAL TUNNELLING PROJECT – PYRMONT SITE



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PRECONSTRUCTION - DESKTOP ROAD SAFETY AUDIT

ACCIONA FERROVIAL JOINT VENTURE
CENTRAL TUNNELLING PROJECT – PYRMONT SITE



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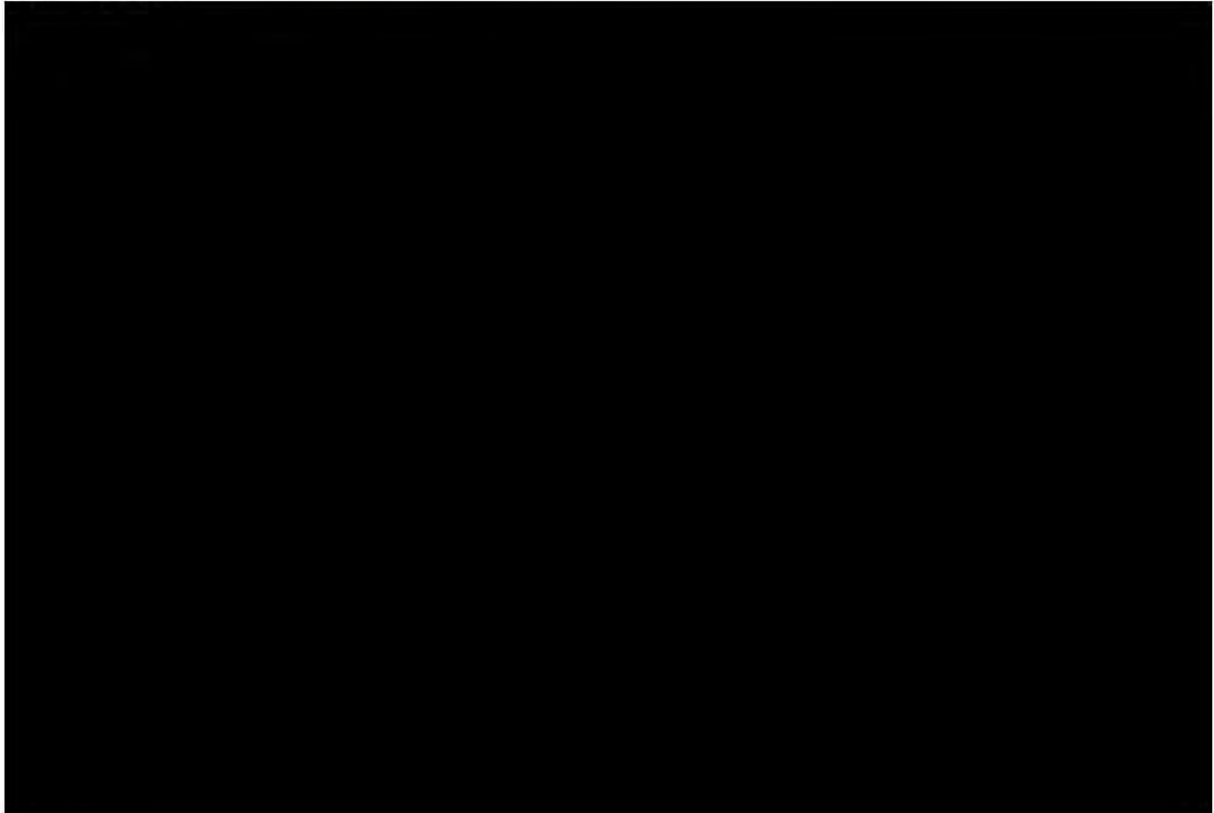
PRECONSTRUCTION - DESKTOP ROAD SAFETY AUDIT

ACCIONA FERROVIAL JOINT VENTURE

CENTRAL TUNNELLING PROJECT – PYRMONT SITE




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Distribution: 



Executive Summary

Audited Project:	
Audit for:	
Email Address:	
Clients Contact:	
Auditors:	
Audit Type:	
Commencement Meeting:	
Site Visit:	
Completion Meeting:	
Previous Audit:	

This Roadworks Road Safety Audit reviewed the proposed long-term TGS at Pyrmont associated with the Central Tunnelling Project as part of the Sydney Metro West Project. The audit checked that the long-term temporary arrangement is suitable for the intended purpose and so conducive to a safe road environment for all types of road users.

This report documents the identified audit findings dated 1st of March 2024.

The road safety audit identified some possible deficiencies, each of which have been listed in Section 4 - Audit Findings.

PRECONSTRUCTION - DESKTOP ROAD SAFETY AUDIT

ACCIONA FERROVIAL JOINT VENTURE

CENTRAL TUNNELLING PROJECT – PYRMONT SITE



1. Introduction

1.1 Purpose of Audit

This report presents findings of a Preconstruction Desktop Road Safety Audit of the proposed long-term traffic strategies at the Pyrmont site as part of the Sydney Metro Central Tunneling Project.

The audit is conducted to verify the manifestation of the documentation and planning for works within road related areas, and within the specified area affected by the project works. The audit scrutinizes the 'safe system' approach to road design and the traffic management planning, targeting roadside hazards including (but not limited to) signage and pavement marking, pedestrian & cyclists' facilities, delineation, sight distances, intersection controls and safety barriers.

The site being audited covers the area affected by the Sydney Metro Central Tunneling project construction area shown in the red circle on the plan below, in Figure 1;

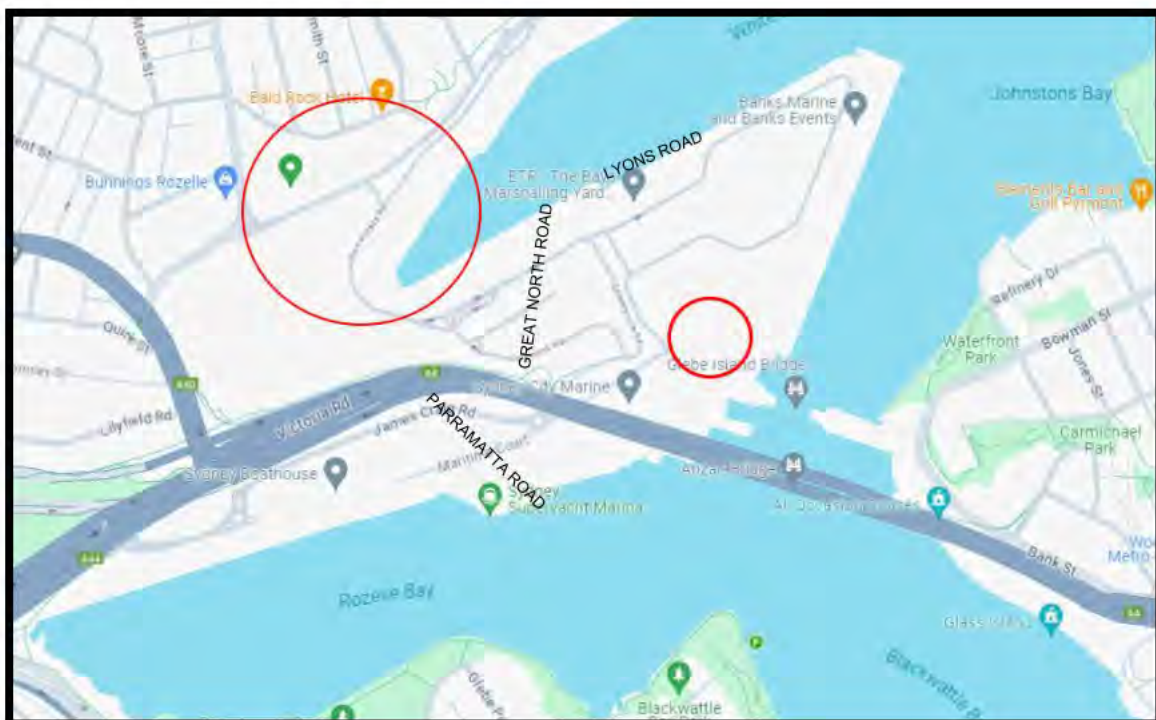


Figure 1: Site Location

[Source: AFJV]

1.2 Audit Objectives

The objective of this road safety audit was to identify relevant road safety deficiencies on site which, if addressed, would improve safety for road users.

The other objectives of this Desktop Road Safety Audit were to:

- Check the compatibility between the traffic management's safety features and the functional classification of the roads
- Identify any feature's that can, either now or with time, create a traffic safety issue.
- identify additional design's features at the site that pose a safety hazard or risk to any of the road users
- Determine the extent of the deficiencies in the design, considering all road user groups.

PRECONSTRUCTION - DESKTOP ROAD SAFETY AUDIT

ACCIONA FERROVIAL JOINT VENTURE
CENTRAL TUNNELLING PROJECT – PYRMONT SITE



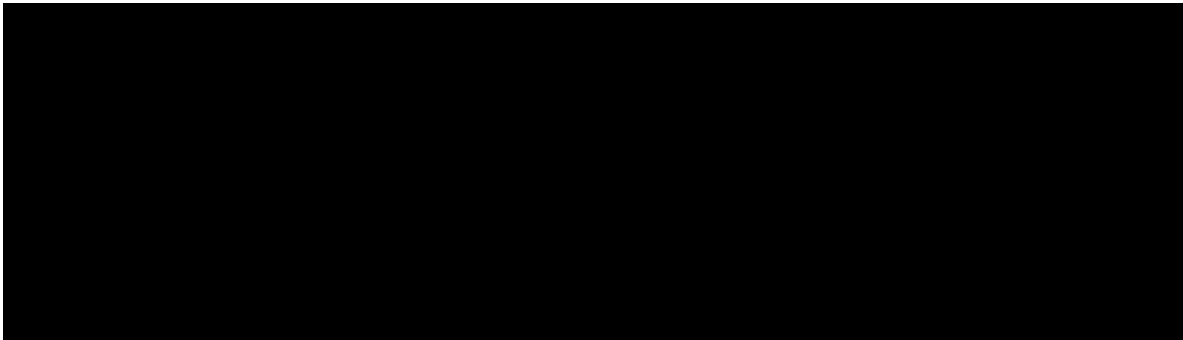
1.3 Procedures and reference material

The procedures used are those in the Austroads Guide to Road Safety Part 6: Road Safety Audit (2022) and RMS Guidelines for Road Safety Audit Practices 2011.

Technical reference documents for Traffic Guidance Schemes is the Traffic Control at Worksites Manual (TCAWS) Version 6.1, 2022.

1.4 Audit Team

This Audit Team consisted of:



2. Road Safety Audit Program

2.1 Commencement Meeting

On Monday 5th of June a commencement email was received from [REDACTED] requesting a field audit be conducted on the arrangement at the Pyrmont site currently in place as part of the Central Tunnelling Project. The audit was to be conducted by [REDACTED]. The audit was to be conducted on the implementation of the existing conditions at the site and the associated impacts and changes introduced by the project.

2.2 Completion meeting

Project representatives are to advise of the need for a Completion meeting.

2.3 Responding to the audit report

The responsibility for the design and implementation of this project rests with the client's project management team, not with the auditors. The project manager is under no obligation to accept the audit findings. Also, it is not the role of the auditor to agree or to approve the project manager's responses to the audit. Rather, the audit provides the opportunity to highlight potential road safety problems and have them formally considered by the project manager or design manager in conjunction with all other project considerations.

2.4 Corrective action response

The road safety audit is a formal process. The road safety audit report is by no means the end of the audit process. The audit report documents the audit teams' identified concerns made to improve the safety of the roads. This report must be responded to by the client with a written response to each audit finding.

2.5 Disclaimer

The findings and opinions in the report are based on the examination of the construction site area outlined in the audit brief. The audit report may not cover all hazards at the time of the audit. The

PRECONSTRUCTION - DESKTOP ROAD SAFETY AUDIT

ACCIONA FERROVIAL JOINT VENTURE
CENTRAL TUNNELLING PROJECT – PYRMONT SITE



auditors have endeavoured to identify features of the arrangement that could be modified or removed in order to improve safety, although it must be recognised that safety cannot be guaranteed since no road can be regarded as safe. The problems identified have been noted in this report and should be considered for improving road safety. Where corrective actions are not taken, this should be reported in writing, providing the reason for the decision. Readers are urged to seek specific advice on matters and not to rely solely on this report. While every effort has been made to ensure the accuracy of this report, it is made available strictly on the basis that everyone relying on it does so at their own risk without any liability to the Auditors



3. Risk Assessment Approach

This audit identified and rated risks per the Austroads recommendation using the assessment process below. Potential safety hazards were identified and categorised based on the frequency of occurrence and severity (consequence of crash). A preliminary risk rating for each identified issue has been assigned in Section 4 which were determined via a subjective judgement by the Auditor guided by the Austroads "Guide to Road Safety, Part 6: Road Safety Audit"

Austroads' provides an indication of the level of risk and what response may be appropriate refer to the tables below.

3.1 Likelihood

Description	
Almost Certain	Occurrence once per quarter
Likely	Occurrence once per quarter to once per year
Possible	Occurrence once per year to once every three years
Unlikely	Occurrence once every three years to once every seven years
Rare	Occurrence less than once every seven years

3.2 Severity

Description	
Insignificant	Property damage
Minor	Minor first aid
Moderate	Major first aid and/or presents to hospital (not admitted)
Serious	Admitted to hospital
Fatal	At scene or within 30 days of the crash

3.3 Risk Rating

		Severity				
		Insignificant	Minor	Moderate	Serious	Fatal
Likelihood	Almost Certain	Medium	High	High	Extreme	Extreme
	Likely	Medium	Medium	High	Extreme	Extreme
	Possible	Low	Medium	High	High	Extreme
	Unlikely	Negligible	Low	Medium	High	Extreme
	Rare	Negligible	Negligible	Low	Medium	High

3.4 Treatment

Risk	Suggested treatment approach
Negligible	No action required
Low	Should be corrected or the risk reduced if the treatment cost is low
Medium	Should be corrected or the risk significantly reduced, if the treatment cost is moderate but not high
High	Should be corrected or the risk significantly reduced, even if the treatment cost is high
Extreme	Must be corrected regardless of cost


ROADWORKS - ROAD SAFETY AUDIT

ACCIONA FERROVIAL JOINT VENTURE

CENTRAL TUNNELLING PROJECT – PYRMONT SITE



4. Audit Findings

No.	Drawing No.	Description of Deficiency / Observation	Risk level
1	Stage 1 - AFJVCTP-TGS-00797 (page 2 of 6)	<p>The audit team observed a single 20km/hr speed zone sign is proposed on the SB approach of Port Access Road. The audit team realise that this road is to be used by authorised motorists (i.e. not open to the general public), however, the TCAWS manual recommends at the start of speed zones, that speed limit signs are to be erected on both sides of the carriageway, where this is not possible a second sign is to be erected 0.5D from the start of the zone. It is not clear if the speed zone is 20km/hr prior to this initial sign, hence this finding has been included. Inadequate advance warning of speed zone changes may increase the likelihood of motorists noncompliance which may increase risk exposure to all road users & the workforce.</p> 	<p>Likelihood – Unlikely Severity – Minor Risk Rating – Low</p>

ROADWORKS - ROAD SAFETY AUDIT

ACCIONA FERROVIAL JOINT VENTURE

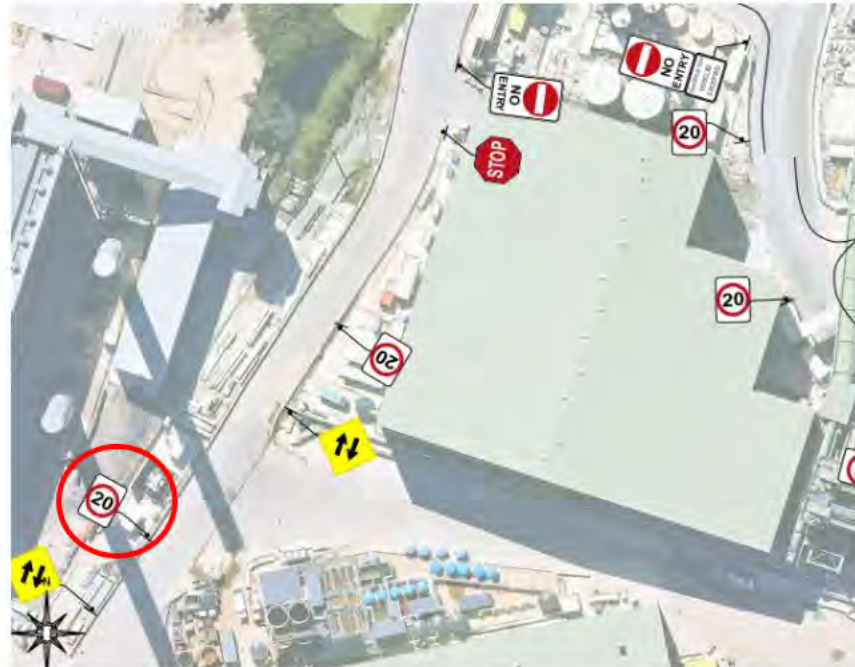
CENTRAL TUNNELLING PROJECT – PYRMONT SITE



2 Stage 1 - AFJVCTP-TGS-00797 (page 3 of 6)

Similar to finding #1, The audit team observed a single 20km/hr speed zone sign is proposed on the NB approach of Western Access Road. The audit team realise that this road is to be used by authorised motorists (i.e. not open to the general public), however, the TCAWS manual recommends at the start of speed zones, that speed limit signs are to be erected on both sides of the carriageway, where this is not possible a second sign is to be erected 0.5D from the start of the zone. It is not clear if the speed zone is 20km/hr prior to this initial sign, hence this finding has been included. Inadequate advance warning of speed zone changes may increase the likelihood of motorists noncompliance which may increase risk exposure to all road users & the workforce.

Likelihood – Unlikely
Severity – Minor
Risk Rating – Low



ROADWORKS - ROAD SAFETY AUDIT

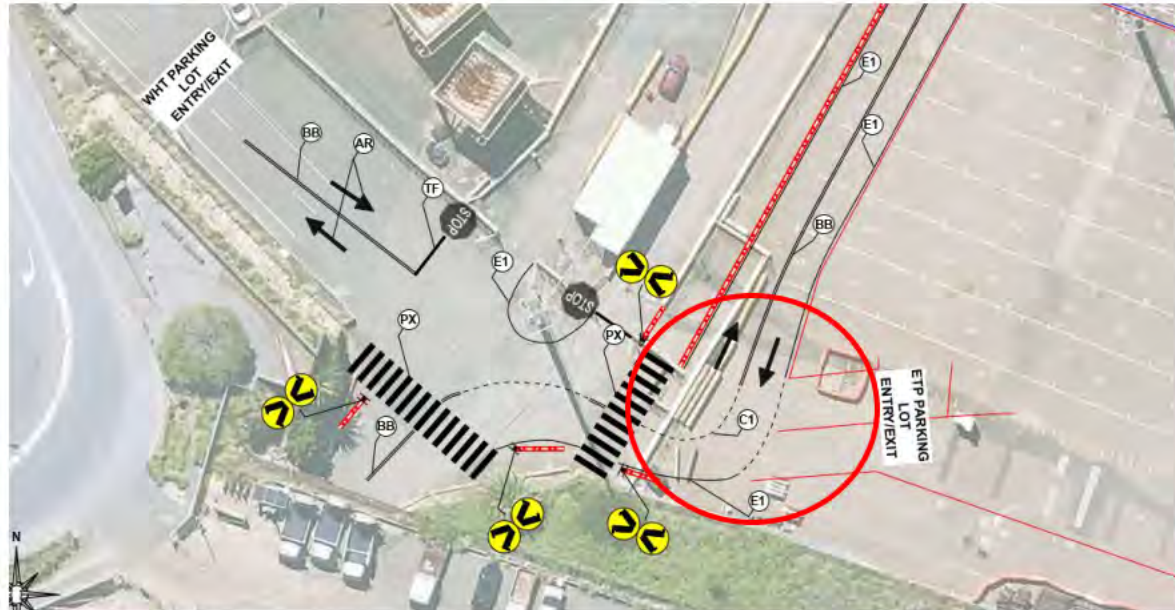
ACCIONA FERROVIAL JOINT VENTURE

CENTRAL TUNNELLING PROJECT – PYRMONT SITE



- 3 Stage 1 - AFJVCTP-TGS-00797 (page 4 of 6) The CTP / ETP car park access interface does not appear to include intersection control where the ETP access intersects with the CTP car park alignment. As such, the risk of T bone type incidents may be increased. It is also not clear if there is sufficient lighting to illuminate the zebra crossings proposed in this area during times of low light (to note only).

Likelihood – Rare
Severity – Moderate
Risk Rating – Low



ROADWORKS - ROAD SAFETY AUDIT

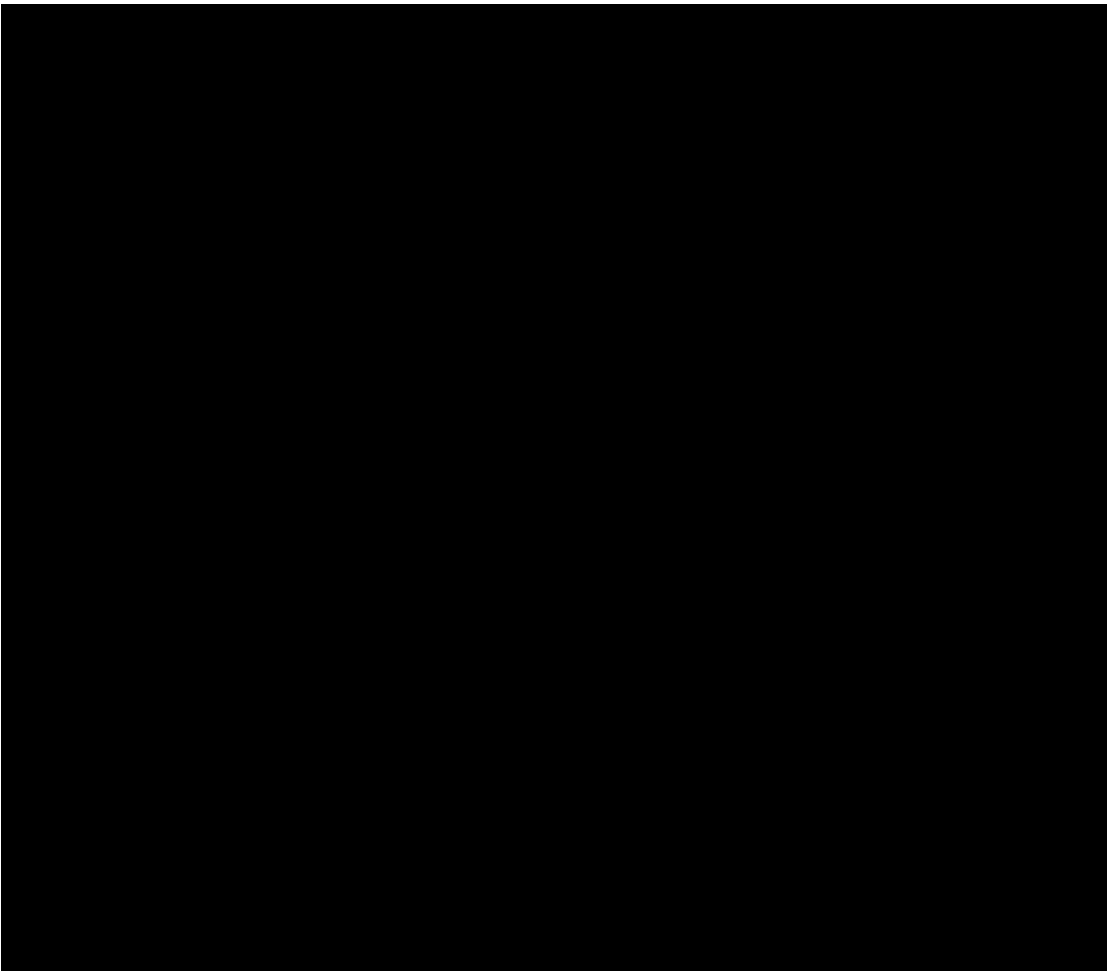
ACCIONA FERROVIAL JOINT VENTURE
CENTRAL TUNNELLING PROJECT – PYRMONT SITE



5. Conclusion

The report outlines where potential deficiencies have been identified for consideration by the project manager, designer and/or engineer.

The findings and opinions in the report are based on the examination of the site areas outlined in the audit brief as part of the Central Tunnelling Project at Pyrmont. The Auditors have endeavoured to identify features of the design that could be modified or removed to improve safety, although it must be recognised that safety cannot be guaranteed since no road can be regarded as safe. While every effort has been made to ensure the accuracy of this report, it is made available strictly on the basis that anyone relying on it does so at their own risk without any liability to the Auditors.



ACCIONA FERROVIAL JV**Project:** Central Tunnelling Project - Pymont**Issued Date:** 04/06/2024

Item	Location	Comment	Client's Response/Action for Resolution
1	Stage 1 - AFJVCTP-TGS-00797 (page 2 of 6)	The audit team observed a single 20km/hr speed zone sign is proposed on the SB approach of Port Access Road. The audit team realise that this road is to be used by authorised motorists (i.e. not opene to the general public), however, the TCAWS manual recomments at the start of speed zones, that speed limit signs are to be erected on both sides of the carraigeway, where this is not possible a second sign is to be erected 0.5D from the start of the zone. It is not clear if the speed zone is 20km/hr prior to this initial sign, hence this finding has been included. Inadequate advance warning of speed zone changes may increase the likelihood of motorists noncompliance which may increase risk exposure to all road users & the workforce.	Noted, traffic is generally only construction or cruise traffic, coming from a low speed environment, speed signs are also repeated at consistent spacings through the site.
2	Stage 1 - AFJVCTP-TGS-00797 (page 3 of 6)	Similar to finding #1, The audit team observed a single 20km/hr speed zone sign is proposed on the NB approach of Western Access Road. The audit team realise that this road is to be used by authorised motorists (i.e. not opene to the general public), however, the TCAWS manual recomments at the start of speed zones, that speed limit signs are to be erected on both sides of the carraigeway, where this is not possible a second sign is to be erected 0.5D from the start of the zone. It is not clear if the speed zone is 20km/hr prior to this initial sign, hence this finding has been included. Inadequate advance warning of speed zone changes may increase the likelihood of motorists noncompliance which may increase risk exposure to all road users & the workforce.	Noted, this road is for construction traffic only.
3	Stage 1 - AFJVCTP-TGS-00797 (page 4 of 6)	The CTP / ETP car park access interface does not appear to include intersection control where the ETP access intersects with the CTP car park alignment. As such, the risk of T bone type incidents may be increased. It is also not clear if there is sufficient lighting to illuminate the zebra crossings proposed in this area during times of low light (to note only).	Noted, intersection control signage for traffic coming from the ETP parking area will be installed by the ETP project.