

# Construction Traffic Management Plan – Airport Terminal Station

SMWSASSM-PLD-ATL-TF-PLN-000001

Parklife Metro D&C

## Version Control

Version	Author	Date	Comments	Reviewed by	Approved by
<b>A</b>	<b>Wendy Zheng</b> Traffic Manager	26/09/2023	First Issue	<b>Discipline Leads</b>	<b>Jose Sanchez</b> Project Director
<b>B</b>	<b>Wendy Zheng</b> Traffic Manager	30/10/2023	Second Issue	<b>Discipline Leads</b>	<b>Jose Sanchez</b> Project Director
<b>0</b>	<b>Wendy Zheng</b> Traffic Manager	14/11/2023	IFI / Final Issue	<b>Discipline Leads</b>	<b>Jose Sanchez</b> Project Director

**Signature**

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# Glossary

Terms	Definitions
The Act	Airports Act 1996 (Cth) (Airports Act)
AEPR	Airports (Environment Protection) Regulations 1997
AEW	Advanced and Enabling Works
AGRD	Austrroads Guide to Road Design
AGTM	Austrroads Guide to Traffic Management
AGRS	Austrroads Guide to Road Safety
Airport	Western Sydney International (Nancy-Bird Walton) Airport (WSI) located at the Airport Site.
Airport Lease	An airport lease for the Airport granted under section 13 of the Act
Airport Lessee Company	The company that is granted a lease over the Airport Site
Airport Plan	Means the September 2021 approved Airport Plan which includes the Variation for the SM-WSA Rail Development on the WSI Airport and which otherwise means airport plan for the Airport Site as determined by the Infrastructure Minister under section 96B of the Act in December 2016 as varied from time to time in accordance with the Airports Act.
APV	Airport Variation Plan
Ancillary facility	A temporary facility for construction of the CSSI including an office and amenities compound, construction compound, material crushing and screen plant, materials storage compound, maintenance workshop, testing laboratory and material stockpile area and parking facilities
AS	Australian Standard
AWJV	AeroWest JV
CEMF	Construction Environmental Management Framework
CEMP	Construction Environmental Management Plan
CJP	Customer Journey Planning (TfNSW)
CNVS	Construction Noise and Vibration Standard
CTMF	Construction Traffic Management Framework

Terms	Definitions
Cwth	Commonwealth
DoS	Degree of Saturation
DPE	Department of Planning and Environment (formerly Department of Planning, Industry and Environment)
ECM	Environmental Control Map
ECZ	Environmental Conservation Zone
EIS	Environmental Impact statement
EMF	Environmental Management Framework
EMP	Environmental Management Plan
EMS	Environmental Management System
EPA	NSW Environmental Protection Authority
EP&A Act	Environmental Planning and Assessment Act 1979
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EPBC Act	Environment Protection and Conservation Act 1999 (Cwth)
EPL	Environment Protection licence under the POEO Act
ER	Environmental Representative
Evening	The period from 6pm to 10pm
Feasible	Means what is possible and practical in the circumstances
LEP	Local Environmental Plan
LGA	Local Government Area
LoS	Level of Service
IMS	Sydney Metro Integrated Management System
Infrastructure Department	The department responsible for administering the Act, currently the Australian Government Department of Infrastructure, Transport Regional Development and Communications (DITRDC)
Night	The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays.



Terms	Definitions
NSW	New South Wales
NSW RFS	New South Wales Rural Fire Service
NHVR	National Heavy Vehicle Regulator
OCCS	Overarching Community Communication Strategy
OEMP	Operational Environmental Management Plan
OOHW	Out-of-Hour Works
Planning Secretary	The Secretary of the Department of Planning and Environment
POEO Act	Protection of the Environment Operations Act 1997 (NSW)
Preparatory Activities	<p>Preparatory Activities mean the following:</p> <ol style="list-style-type: none"> <li>a. Day to day site and property management activities;</li> <li>b. Site investigations, surveys (including dilapidation surveys), monitoring, and related works e.g. geotechnical or other investigative drilling, excavation, or salvage);</li> <li>c. Establishing construction work sites, site offices, plant and equipment, and related site mobilisation activities (including access points, access tracks and other minor access works and safety and security measures such as fencing but excluding bulk earthworks);</li> <li>d. Enabling preparatory activities such as: <ol style="list-style-type: none"> <li>i. Demolition or relocation of existing structures (including buildings, services, utilities and roads);</li> <li>ii. The disinterment of human remains located in grave sites identified in the European and other heritage technical report in volume 4 of the EIS; and</li> <li>iii. Application of environmental impact mitigation measures; and</li> </ol> </li> <li>e. Any other activities which an Approver determines are Preparatory Activities for this definition</li> </ol>
RCIZ	Rail Construction Impact Zone
REMM	Revised Environmental Mitigation measure
RMS	NSW Roads and Maritime Services
RMS Guide	Transport for NSW (formerly Roads and Traffic Authority), Guide to Traffic Generating Developments, 2002
ROL	Road Occupancy License

Terms	Definitions
SBT	Station Box and Tunnelling Works
SCAW	Surface Civil & Alignment Works
SCO	Sydney Coordination Office
SEMF	Site Environmental Management Framework
SM	Sydney Metro
SM-WSA-EIA	SM-WSA EIS Appendix J: EPBC Act Draft Environmental Impact Assessment of On-airport proposed action (EPBC 2019/8541)
SWMS	Safe Works Method Statement
TACEMP	Traffic and Access Construction Environmental Management Plan
TfNSW	Transport for New South Wales
veh/hr	Vehicle movements per hour (1 vehicle in & out = 2 movements)

# 1 Introduction

This site-specific Construction Traffic Management Plan (CTMP) was created as per the Sydney Metro Construction Traffic Management Framework (CTMF), the general specification management of the Project, the Western Sydney Airport Construction Environmental Management Plans and Overarching Construction Management Plan - Sydney Metro Western Sydney Airport.

The scope of this CTMP is to detail the traffic and transport impacts and management measures associated with the traffic management required to facilitate the construction of the Airport Terminal Station (ATL). The entirety of ATL construction works will take place within Western Sydney Airport (WSA) land where WSA CEMPs apply.

Access to this site will be handed to SSTOM (being Parklife Metro) in three stages:

- Access Portion 01: December 2023
- Tunnel Handover: November 2024
- Access Portion 02: December 2024

As there is a projected eleven months between Access Portion 01 and Tunnel Handover / Access Portion 02 handover with significant construction progress forecasted in between, this CTMP will be updated with details for Access Portion 02 and Tunnel traffic management prior to handover.

This CTMP and the documents referenced in the CTMP have been prepared in accordance with the relevant standards and guidelines listed in the SSTOM Overarching Construction Traffic Management Plan (SMWSASSM-PLD-1NL-PC-PLN-000071), the WSA Traffic and Access CEMP (Rev05), Condition 39(2) of Section 3.11.6 of the Airport Plan for works forming part of the SSTOM package of the Airport Terminal Station.

This plan has been prepared to meet the following requirement including SSI 10051 Planning Approval Condition E103 and will be submitted to the Planning Secretary of the NSW Department of Planning and Environment for information.

- Environmental Impact Statement (EIS) of Sydney Metro Western Sydney Airport – Technical Paper 1 - Transport Mitigation Measures
- EIS Construction Traffic Management Framework
- Conditions of Approval (CoA) for the State Significant Infrastructure (SSI 10051)
- SMWSA Traffic and Access CEMP

This plan has been prepared to also meet the requirements outlined in the WSA plans:

- WSA Construction Environmental Management Plans
- WSA Airport Plan
- WSA Cumulative Impacts Plan

This report has been prepared by the traffic manager who holds a SafeWork NSW Work Health & Safety Traffic Control Work card, accredited for the 'Prepare a Work Zone Traffic Management Plan'. Details of the accredited personnel is provided below:

- Wendy Zheng Ticket No. TCT1015144

This report has been reviewed by personnel who holds a SafeWork NSW Work Health & Safety Traffic Control Work card, accredited for the 'Prepare a Work Zone Traffic Management Plan'. Details of the accredited personnel is provided below:

- Dora Choi Ticket No. TCT0021456

This Construction Traffic Management Plan has been prepared to meet the requirements outlined in Appendix A and Appendix E, Section E.2 of the Transport for NSW Traffic Control at Work Sites Technical Manual (Issue No. 6.1, 2022).

## 2 Executive Summary

Access to the Airport Terminal Station site will be handed over in two stages over a 12-month period. This CTMP covers the temporary traffic management for Access Portion 01 (projected handover in January 2024) and will be updated for the subsequent Access Portion 02 following confirmation of handover information from SBT for Access Portions 02.

## 3 Project Details

### 3.1 Proposed Works

The Airport Terminal Station is to deliver:

- Stage 1 - Site Establishment
- Stage 2 – Enabling Works including piling and construction of base slab
- Stage 3 – Construction Work of Station Structure
- Stage 4 – MEP and Vertical Transport Works
- Stage 5 – Finish Works
- Stage 6 – Station Precinct Works
- Stage 7 – Rail Systems Construction

### 3.2 Site Location

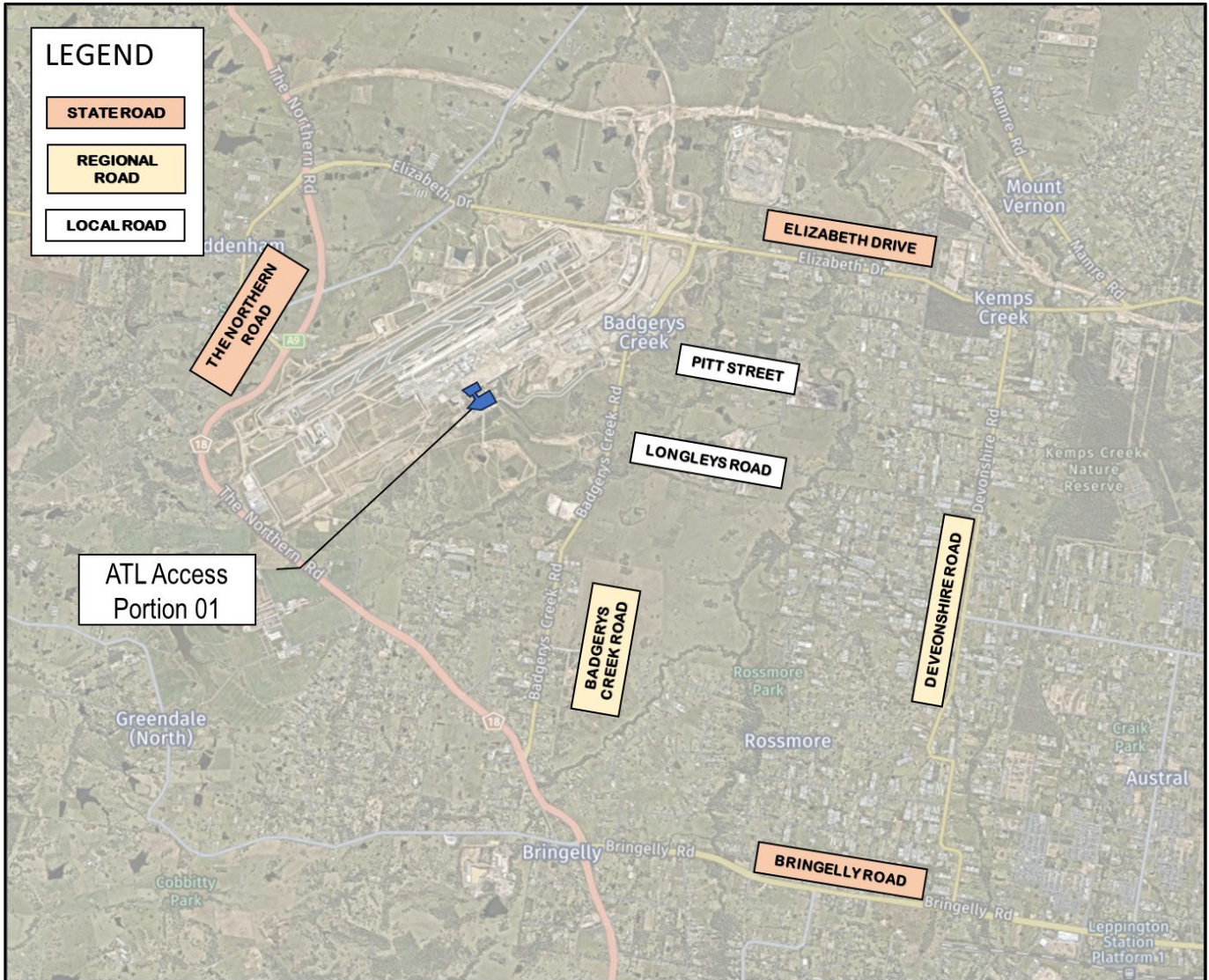


FIGURE 1: SITE LOCATION

The site is located within the Western Sydney Airport site. Access will be via Badgerys Creek Road, Badgerys Creek.

### 3.3 Timing of Works

The site will be handed over to SSTOM on 23<sup>rd</sup> December 2023 (note this is the early handover date) with the site establishment works to commence on 3<sup>rd</sup> January 2024.

TABLE 1: TIMING OF WORKS

Activity	Start Date	Finish Date
<b>Stage 01: Site Establishment</b>	03/01/2024	06/05/2024
<b>Stage 02: Enabling Works</b>	20/03/2024	08/08/2024
<b>Stage 03: Station Structure</b>	11/06/2024	25/08/2025
<b>Stage 04: MEP and Vertical Transportation</b>	03/03/2025	14/03/2026
<b>Stage 05: Finish Works</b>	28/10/2024	06/12/2025
<b>Stage 06: Station Precinct Works</b>	30/10/2024	11/11/2025
<b>Stage 07: Rail Systems</b>	10/07/2025	13/04/2026

### 3.4 Site Related Data

#### 3.4.1 Road Details

The key roads surrounding the Site are identified within Figure 1 and summarised below:

TABLE 2: LOCAL ROAD NETWORK

Road Name	Section	Speed Limit	Parking	Traffic Volume and Peak Times	Urban / Rural
<b>Badgerys Creek Road</b>	Elizabeth Drive to The Northern Road	60km/hr - 80km/hr	No	-	Urban
<b>Pitt Street</b>	Intersection with Badgerys Creek Road	50km/hr	No	-	Rural
<b>Elizabeth Drive</b>	The Northern	80km/hr	No	-	Urban



	Road to Badgerys Creek Road				
<b>The Northern Road / A9</b>	M4 to Badgerys Creek Road	80km/hr	No	-	Urban
<b>Bringelly Road</b>	M7 to The Northern Road	80km/hr	No	-	Urban
<b>Local Roads within the Airport Site</b>	Not open to public, with signage "No Entry Construction Vehicles Only"	Not sign posted	No	-	Construction Road only

Note the AM / PM peaks on the road network is assumed to occur at 7.30am – 8.30am and 4.30pm – 5.30pm per the SSI-10051 EIS documentation.

### 3.4.2 Crash History

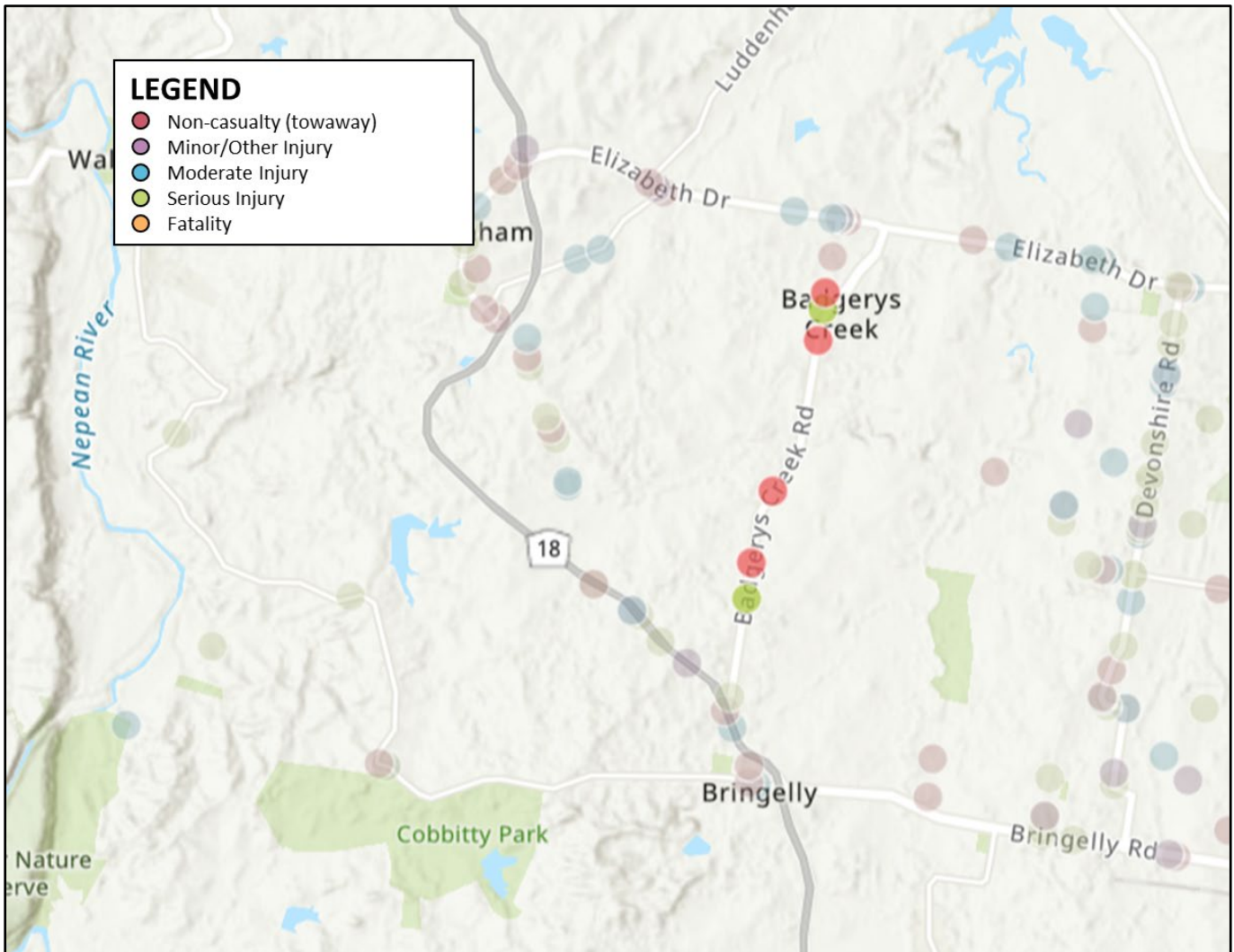


FIGURE 2: CRASH MAP

TABLE 3: CRASH HISTORY

Year	Location	RUM Code	Injury / Death
2018	Badgerys Creek Road near the Northern Road	30 – Rear end	Non-casualty (towaway)
2018	Badgerys Creek Road near the Northern Road	72 – Off road to right	Serious Injury (1)
2019	Badgerys Creek Road near Longleys Road	59 - Overtaking	Non-casualty (towaway)

<b>2020</b>	Badgerys Creek Road near Elizabeth Drive	67 – Struck animal	Non-casualty (towaway)
<b>2021</b>	Badgerys Creek Road near Jagelman Road	67 – Struck animal	Non-casualty (towaway)
<b>2021</b>	Badgerys Creek Road near Pitt Street	85 – Off rt/lft bnd=>obj	Serious Injury (1)
<b>2021</b>	Badgerys Creek Road near the Northern Road	71 – Off rd left => obj	Serious Injury (1)

An analysis of the crash history shows three crashes of the same type at Badgerys Creek Road near The Northern Road, however two of the crashes occurred prior to The Northern Road upgrade. As the Badgerys Creek Road and Elizabeth Drive upgrade is tied to the M12 and Western Sydney Airport construction, traffic conditions are expected to change significantly during this construction project.

### 3.4.3 Vulnerable Road Users

Vulnerable road users (VRU) are road users not in a car, bus or truck. In the event of a crash, VRUs have little to no protection from crash forces, therefore, need to be addressed within this CTMP. Table 4 provides context to VRU's surrounding the Site.

TABLE 4: PUBLIC AND ACTIVE TRANSPORT

Road Name	Pedestrian	Cycling	Public Transport
<b>Badgerys Creek Road</b>	Yes  Footpath on either sides starting south of The Northern Road roundabout and end north of Pitt Street roundabout	Yes – Partial  No on road cycleway.  Wide footpath on either sides of Badgerys Creek Road between Elizabeth Drive roundabout and Pitt Street.  While no dedicated cycle facilities, there is a wide sealed shoulder that provides a safe space for bicycle riders along the northern section of Badgerys Creek Road.	Yes – bus routes 801 (last stop north of Gardiners Road), 1014, 2017, 2053 (first stop south of Longleys Road)  Bus stops along roadway at Longleys Road and Gardiners Road only.
<b>Pitt Street</b>	No	No  No dedicated cycle / shared path	No

# 4 Works Proposed

## 4.1 Access Staging

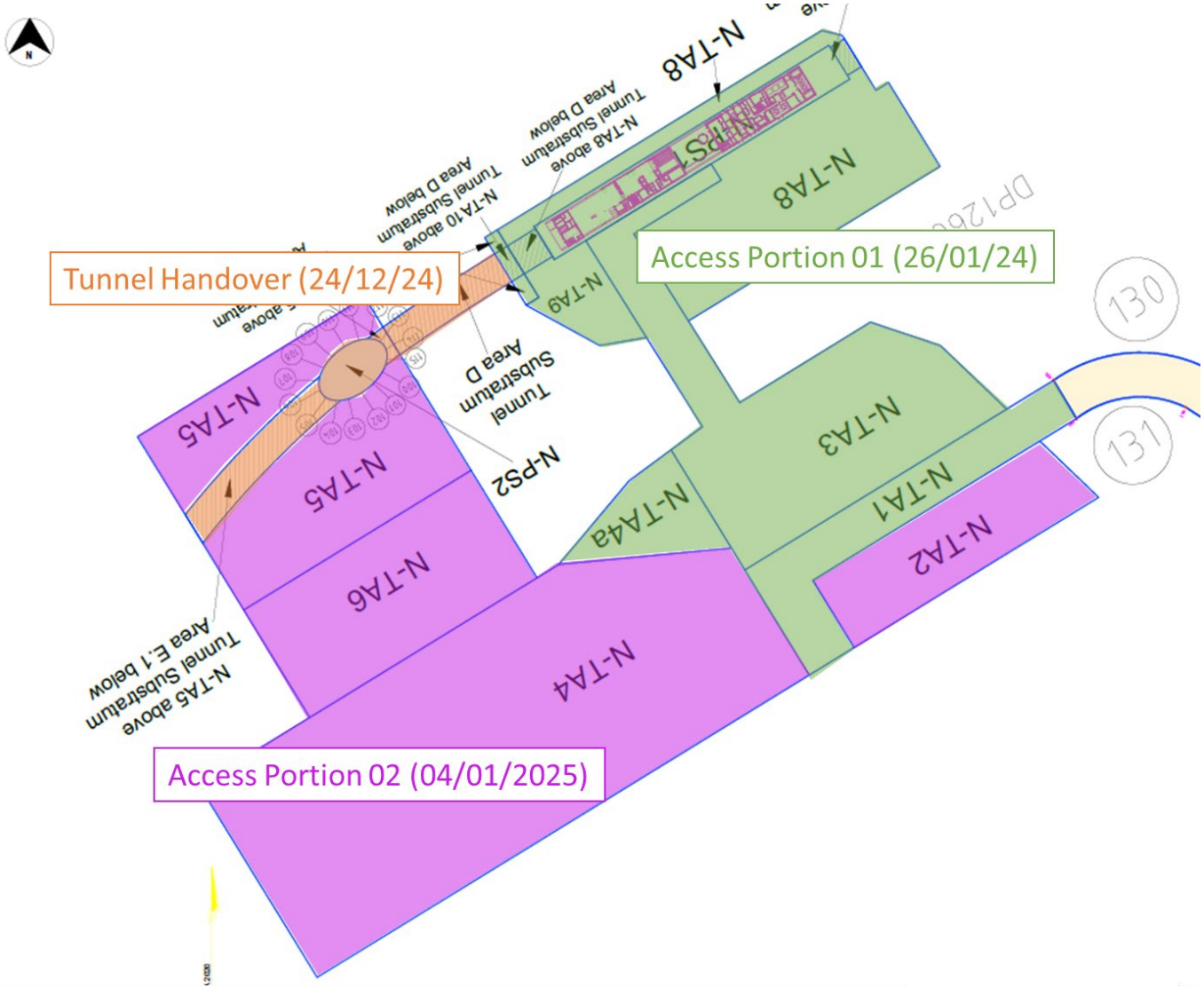


FIGURE 3: ATL ACCESS STAGING PLAN

The ATL Site is projected to be handed over to SSTOM in three stages with the first to be handed over in late January 2024. The second handover being the tunnel is projected to take place eleven months after the first handover in late December 2024 with the second access portion to follow shortly after in January 2025.

## 4.2 Station Construction

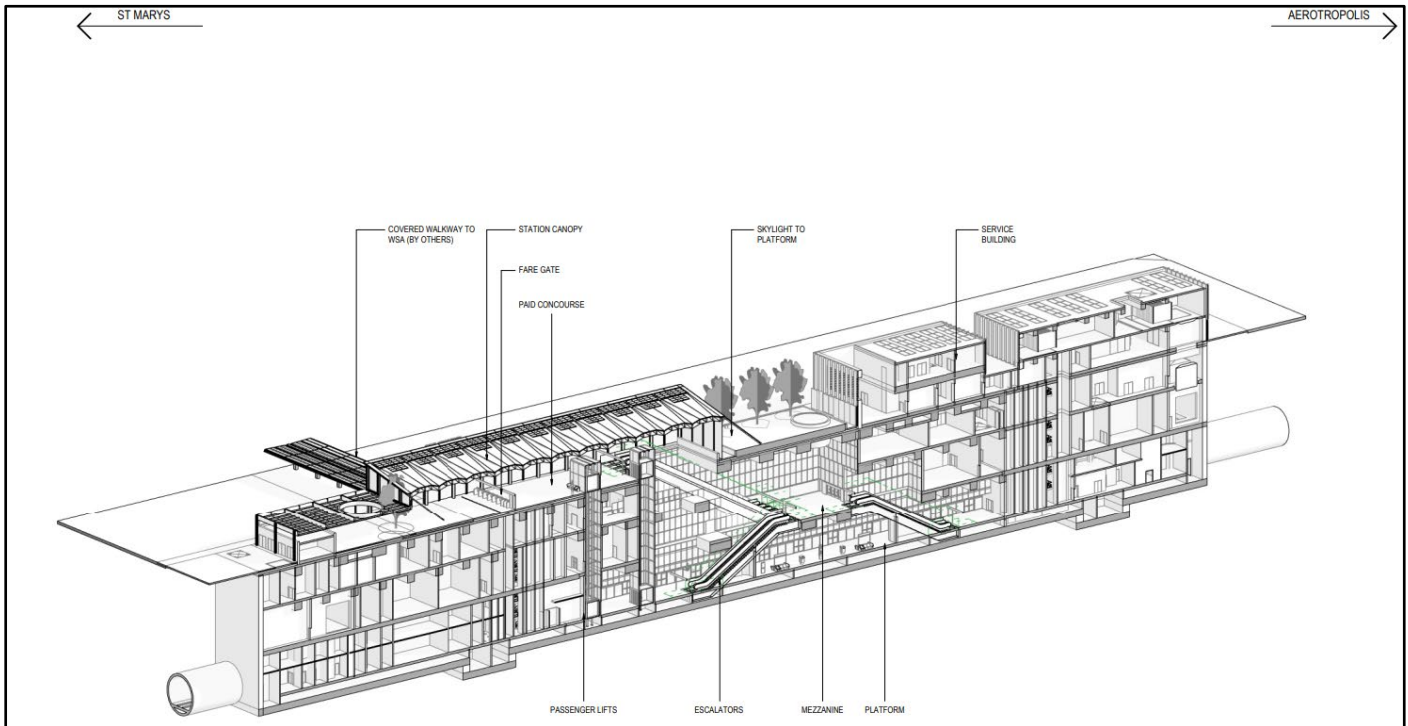


FIGURE 4: ATL STATION ARCHITECTURAL ELEVATIONS (PRELIMINARY)

The following key activities would be undertaken within this package:

- Stage 1 - Site Establishment
  - Site sheds installation
  - Carpark preparation
  - Temporary fencing installation
  - Environmental controls
  - Survey control points installation
  - Tower cranes
- Stage 2 – Enabling Works including piling and construction of base slab
  - Auguring of pile holes
  - Installation of pile cages
  - Concrete pours of piles
  - Trimming of piles
  - Waterproofing
  - FRP for base slab
  - FRP for base walls
- Stage 3 – Construction Work of Station Structure
  - FRP for walls and columns
  - FRP for slabs
  - Installation of canopy structure
- Stage 4 – MEP and Vertical Transport Works

- Electrical works
- Mechanical works
- Plumbing works
- Ventilation
- Fire services
- Lifts and escalators installation
- Stage 5 – Finish Works
  - Floor finishes
  - Walls finishes
  - Ceiling finishes
  - Doors
  - Façade structure
- Stage 6 – Station Precinct Works
  - Earthworks and drainage
  - Public utility and diversion works
  - Street lights and signs
  - Hard and soft landscaping and street furniture
- Stage 7 – Rail Systems Construction
  - Rail electrification
  - Rolling stock
  - Signalling
  - Communication
  - Equipment
  - Security
  - Platform screen doors

## **4.3 Rail Construction**

Rail construction is expected to start in December 2024 following SBT handover so that SSTOM is given access to the tunnel. This CTMP will be updated prior to rail construction package commencement.

## 4.4 Site Access

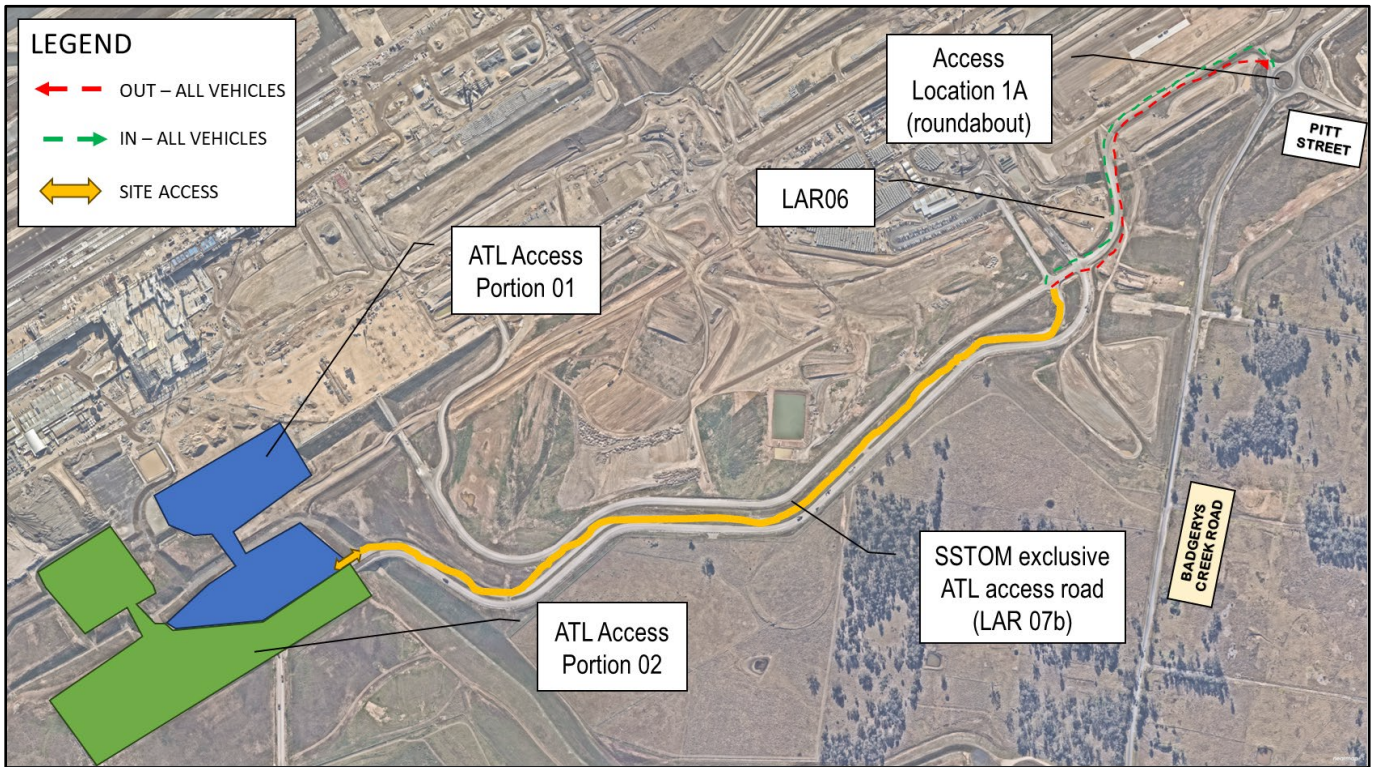


FIGURE 5: ATL SITE ACCESS

Site access for all SMWSA vehicles into WSA land will be off Badgerys Creek Road through either Location 1A (roundabout at intersection with Pitt Street) or Location 1F (left in / left out only access road north of Pitt Street).

### 4.4.1 Access Portion 01 Site Access

Prior to Access Portion 02 handover, the access road from LAR06 to the ATL site (LAR07 and ATL-11 / N-TA1) will be split into two, segregating SBT and SSTOM construction traffic as shown on Figure 6.

SBT will access the site via LAR-07a and ATL-11a.

SSTOM access will be via LAR-07b and ATL-11b.

Once inside WSA land all vehicles will turn left on LAR06 before turning left again onto the SSTOM half of LAR07 (SSTOM exclusive ATL access road) to access the ATL site.

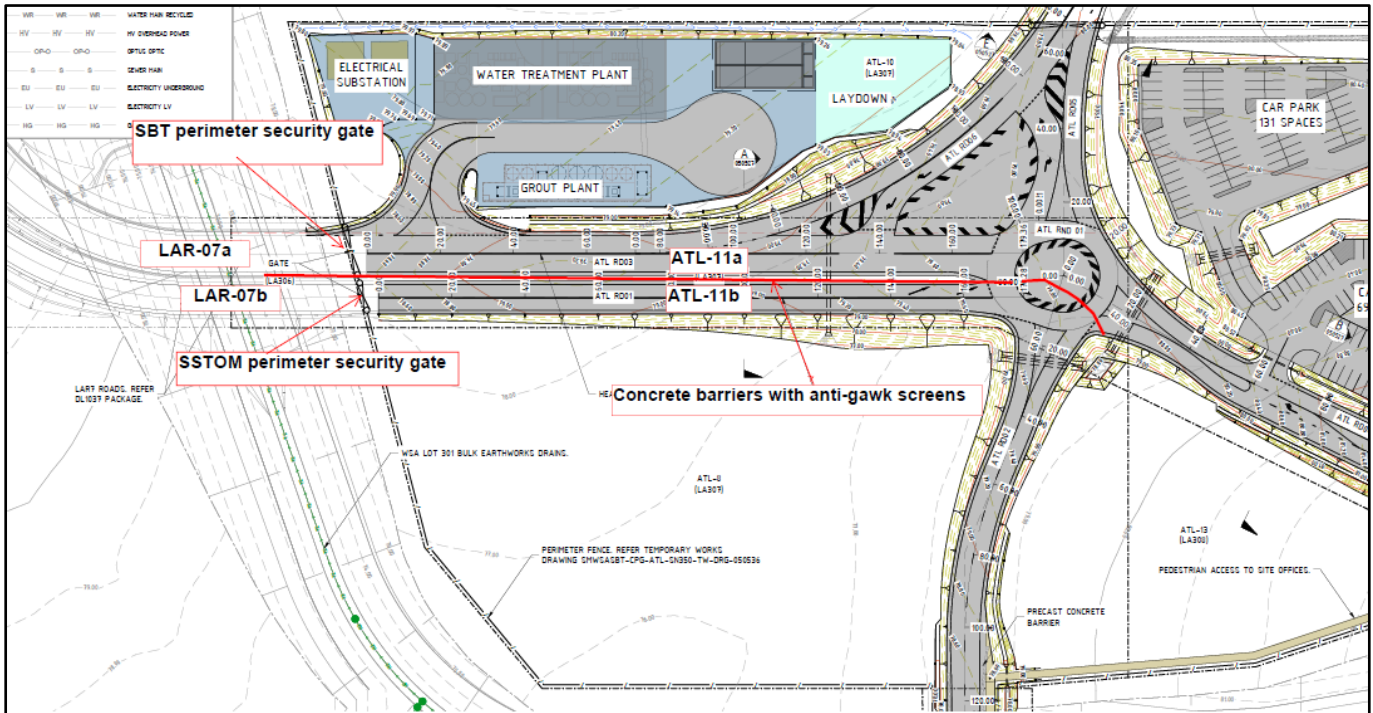


FIGURE 6: ACCESS PORTION 01 SITE ACCESS DESIGN

#### 4.4.2 Access Portion 02 Site Access

Following Access Portion 02 handover the site access haul road from LAR06 to the ATL site (LAR07 and ATL-11 / N-TA1) will remain split with LAR-07a / ATL-11a allocated for heavy vehicle use only and light vehicles allocated to LAR-07b / ATL-11b only.

#### 4.4.3 Construction Hours

Construction hours have been outlined below per WSA00-WSA-00000-CN-PLN-000001 Construction Plan Rev 5 Section 3.3.2:

TABLE 5: CONSTRUCTION HOURS

Activity	Day	Time
<b>Construction Works</b>	Mondays to Fridays	7:00am to 6:00pm
	Saturdays	8:00am to 1:00pm
	Sundays or Public Holidays	At no time

It is not anticipated that construction works will be conducted outside of the hours outlined above. Should out of work hours be required, per Section 10.2 of WSA00-WSA-00400-EN-PLN-000002\_NV CEMP (Rev 4), PLM will submit WSA00-WSA-00400-EN-FRM-000005 to the WSA Environment Team for review and approval by the WSA Environment Manager (or nominated delegate).



## 4.5 Construction Vehicle Movements

### 4.5.1 Truck Vehicle Volume

The projected daily heavy vehicle volume for all stages of ATL construction is shown in Figure 7.

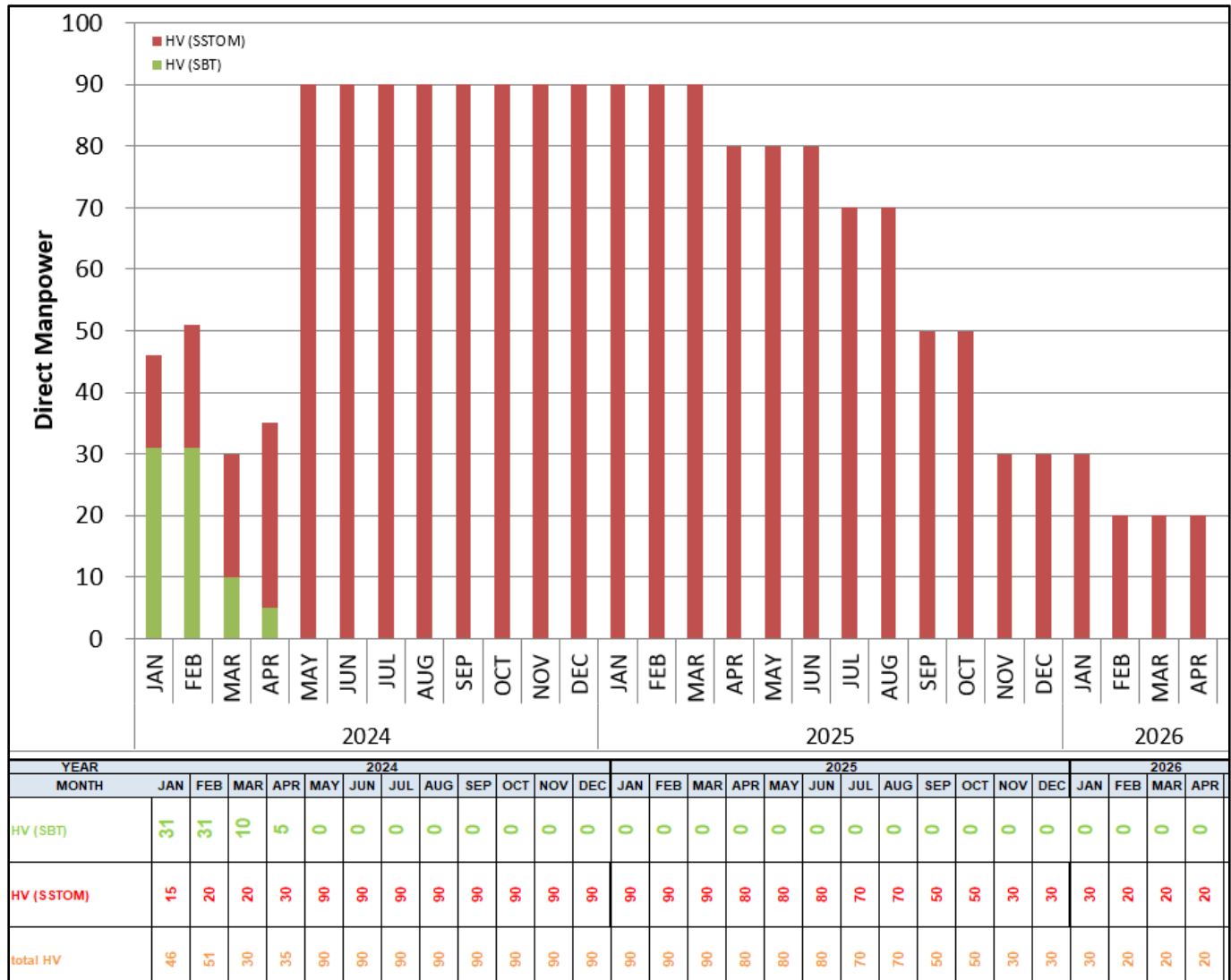


FIGURE 7: PROJECTED ATL HV NUMBERS

The anticipated heavy vehicle volume peak will start in May 2024 and drops off following completion of station finishing works in March 2025.

SBT HVs volume shown are for the SBT team demobilising from the ABP site and the SSTOM HV volume shown is for SSTOM work on the ATL site.

### 4.5.2 Truck Routes

It is proposed that all construction vehicles would enter and exit the Site via the routes shown in Figure 8. The routes shown are compliant with the EIS haul road routes and are to be utilised by all construction vehicles travelling to and from the site and represents the shortest route available from / to a State Road – hence minimising the impacts of the

construction process. A copy of the approved routes will be distributed by PLM D&C to all drivers before their arrival to Site.

The largest truck required for ATL construction will be 19m long Articulated Vehicles (19m AV).

In the event that an oversized vehicles is required to travel to the Site, PLM D&C or its subcontractor will obtain an OSOM permit from the National Heavy Vehicle Regulator (NHVR) and provide additional TGSs when required.

The swept paths (attached in Appendix A) demonstrate all critical turns at along the route shown in Figure 8. All delivery / construction vehicles will drive forward in and out of the Site onto Badgerys Creek Road via the existing WSA construction stage shared access roads.

There is a shared path on either side of Badgerys Creek Road starting south of the Elizabeth Dr intersection and stopping north of the Pitt Street intersection separated from the traffic lane by a wide shoulder. One bus stop is located on Badgerys Creek Road south of the Pitt Street roundabout at Post Office, Badgerys Creek Rd (Stop ID 217183). PLM will be sharing the existing access to AEC site off Badgerys Creek Road with the other WPCA contractors and will be adhering to all existing pedestrian / cyclist / public transport impact management measures.

If any access to existing properties is affected by construction vehicle access to site, traffic controllers or appropriate traffic management would be available on the accesses to direct existing property users while guiding construction vehicles.

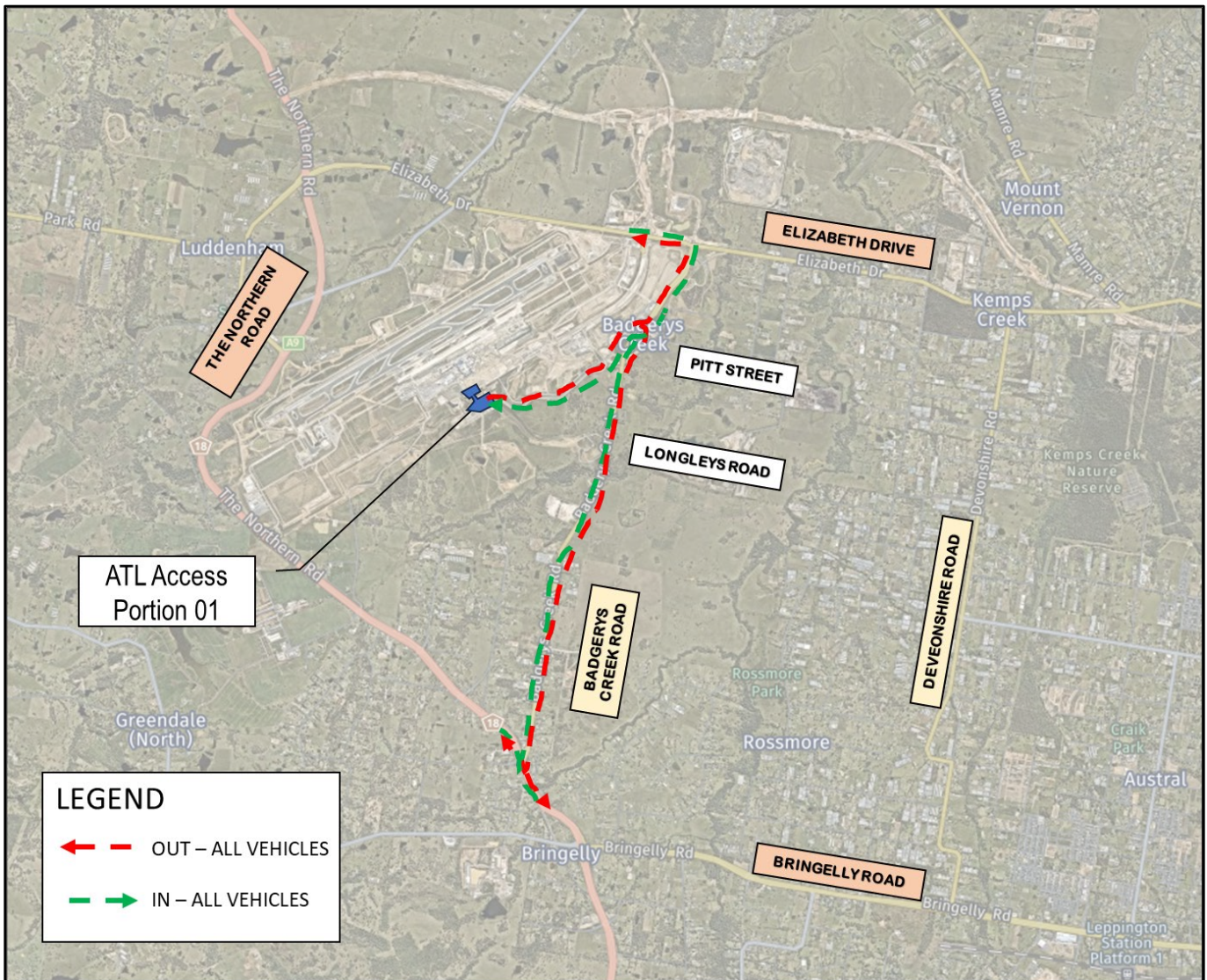


FIGURE 8: CONSTRUCTION VEHICLE ACCESS ROUTE

## 4.6 Temporary Traffic Management Method

All works related to ATL construction will take place within the WSA site and accessed through existing shared access roads in accordance with the sub-Shared Access Road Protocol (sub-SARP) in place for each access road.

Swept path assessments in Figure 9 show that the largest size heavy vehicle can access the site simultaneously without impacting Badgerys Creek Road at Location 1A. Note that the current sub-SARP for this access is that all vehicles entering are to turn left only to access the ATL site.

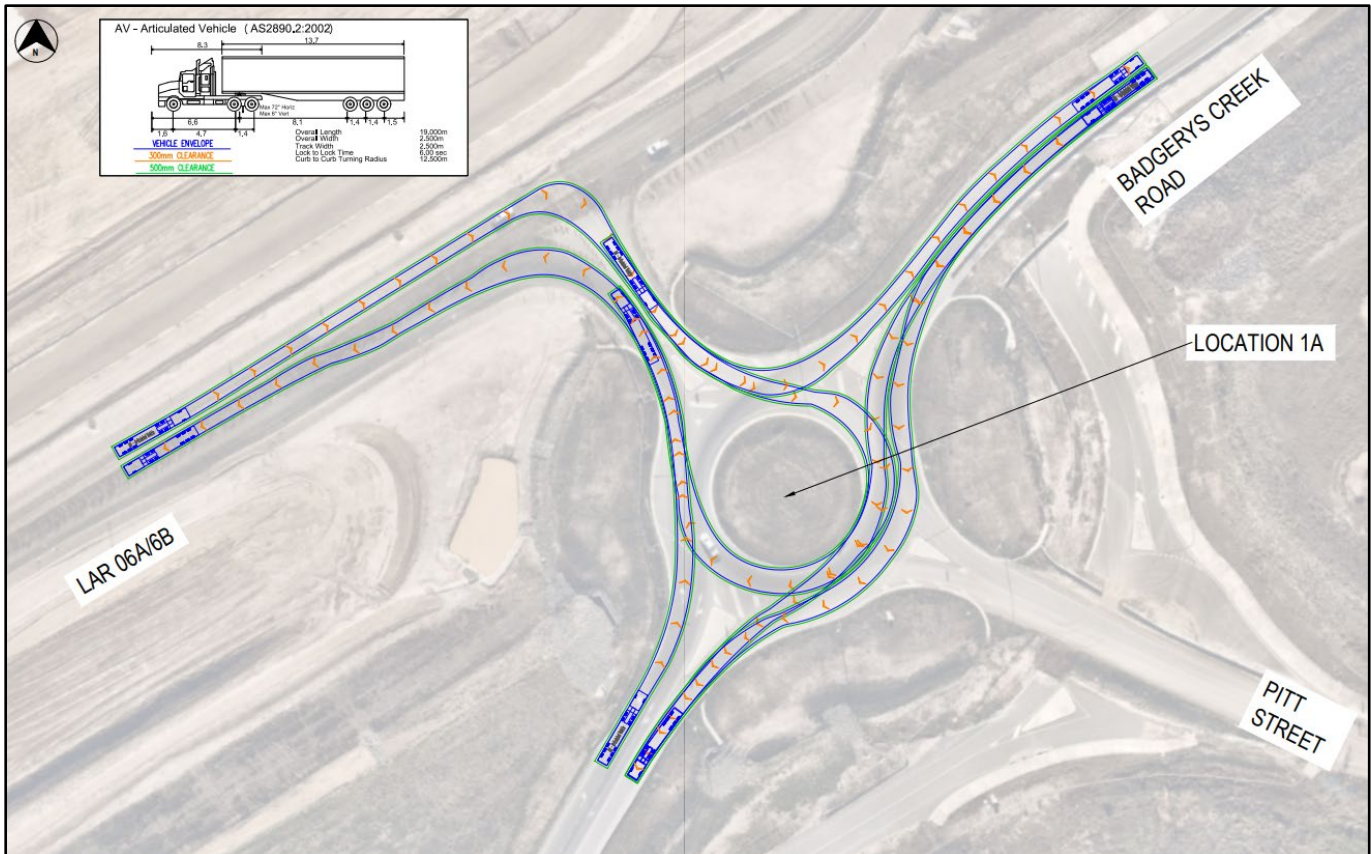


FIGURE 9: 19M AV ACCESS THROUGH LOCATION 1A

Similarly, 19m AV access through LAR 06 to the ATL only haul road will not affect any other road user on the shared access roads per swept paths show in Figure 10.

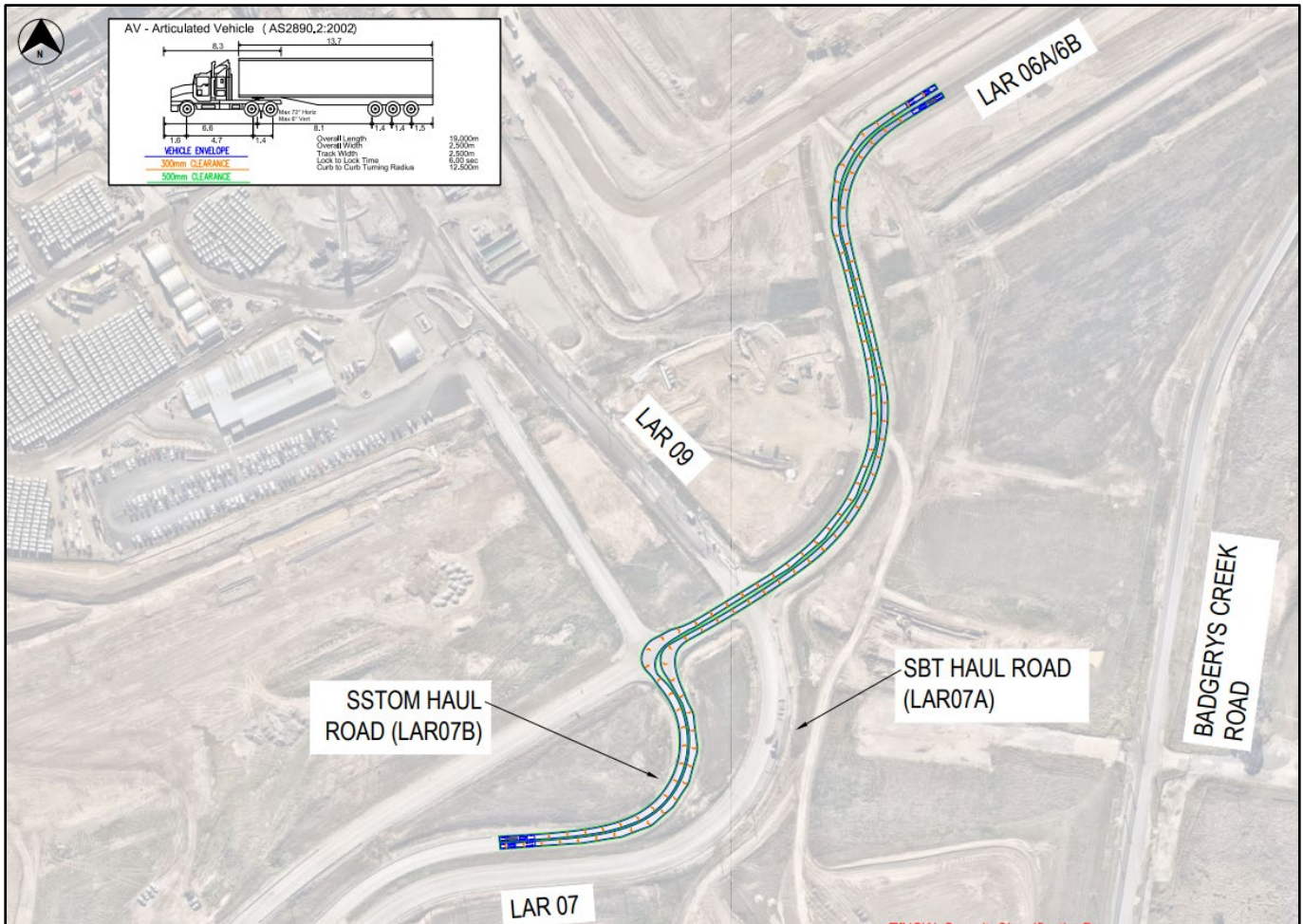


FIGURE 10: 19M AV ACCESS THROUGH LAR 06

Given that SSTOM will be sharing the use of existing access locations along Badgerys Creek Road and the existing construction ongoing at the WSA site, SSTOM is not proposing any additional traffic control at either Location 1A or Location 1F.

SSTOM will be utilising existing shared access roads within the WSA site and will not be proposing any additional traffic control within the site unless requested by adjacent contractors. SSTOM will however request an update of the SBT sign on LAR 06 approach to LAR07 and LAR09 (Figure 11) as the project progresses and the sites are handed over.

Following final ATL handover SSTOM will replace the SBT sign with a new sign with directions to ABP and ATL.



FIGURE 11: ATL / ABP SIGN ON LAR 06

If required, Traffic Guidance Schemes will be prepared to meet the requirements outlined in TfNSW Traffic Control At Work Sites Technical Manual (Issue 6.1, 2022).

## 4.7 Risk Assessment

A risk assessment is aimed to identify the hazards and risks associated with the works. The purpose of this risk assessment is to determine the controls required for the protection of the road workers and road users. A Risk assessment has been completed and is attached in Appendix B.

## 5 Traffic Impact Management

### 5.1 Vehicle Impact Management

SSTOM defines the AM peak as being between 7.30am – 8.30am and PM peak as being 4.30pm – 5.30pm Monday to Friday which is consistent with the EIS defined AM and PM peaks. The EIS construction movement allocation on airport is categorised into the following sites:

- Airport Business Park
- On-airport construction corridor (Western Sydney International to Airport Business Park)
- On-airport construction corridor (Airport Business Park to Airport Terminal)
- On-airport construction corridor (Airport Terminal to Aerotropolis)
- Viaduct and tunnel segment yard

As SSTOM's construction movement requirement for ATL is confined to the construction movement allocation for On-airport construction corridor (Airport Business Park to Airport Terminal). SBT will continue building the tunnel from ABP to ATL in ABP Access Portion 02 utilising the EIS construction movement allocation for On-airport construction corridor (Airport Business Park to Airport Terminal).

However, the SBT requirement for the EIS construction movement allocation for On-airport construction corridor (Airport Business Park to Airport Terminal) will come to an end when SBT demobilise out of ABP in March 2024 and SSTOM will take over this construction movement allocation for ATL station construction use.

Figure 7 shows the heavy vehicle volume (per day in a month) for SBT demobilising from ABP and SSTOM mobilising and constructing at ATL. At no time during the ATL construction will the peak HV volume exceed the On-airport construction corridor (Airport Business Park to Airport Terminal) EIS allocation.

The SSTOM peak construction movements shown in Table 6 is the peak for the entire life of the ATL construction including all works within the scope of works.

TABLE 6: PROJECTED VEHICLE NUMBERS

Vehicle Type	IN	OUT	TOTAL	IN	OUT	TOTAL
	<b>EIS AM Peak Construction Movements</b> (Airport Business Park and On-airport construction corridor, WSA to ABP)			<b>EIS PM Peak Construction Movements</b> (Airport Business Park and On-airport construction corridor, WSA to ABP)		
<b>LV Staff</b>	177	0	<b>177</b>	0	177	<b>177</b>
<b>LV Deliveries</b>	1	1	<b>2</b>	1	1	<b>2</b>
<b>HV</b>	10	10	<b>20</b>	10	10	<b>20</b>
	<b>PLM AM Peak Construction Movements</b> (following complete handover)			<b>PLM PM Peak Construction Movements</b> (following complete handover)		
<b>LV Staff</b>	45	0	45	0	55	55
<b>LV Deliveries</b>	1	1	2	1	1	2



## 5.4 Property and Utility Access Impact Management

Access to the residential properties along Badgerys Creek Road will be maintained at all times and access for utilities providers / maintainers will not be impacted.

## 5.5 Cumulative Impacts

Between December 2023 and December 2024, PLM D&C will be sharing the ATL site with SBT. Weekly coordination meetings between the site superintendents from SBT and SSTOM (PLM D&C) to ensure the vehicular impact of both contractors will not affect Badgerys Creek Road.

SSTOM traffic management will ensure the vehicle generation numbers (heavy and light) will be within the numbers identified in the EIS. All vehicular access to the ATL site will be registered a week in advance on the SSTOM logistics software (Voyage Control) to apply for a loading slot and a time or a parking space. The site superintendent will manage the applications to ensure vehicle generation numbers stay within the identified limits in the EIS. The same software will retain the vehicle data per SSI condition E108.

SSTOM traffic management is an active participant in the TTLG, TCG and the TCWG meetings ensuring ongoing monitoring and discussion will occur over the life of the project. Coordination with Western Sydney Airport and Transport for NSW would be undertaken through the TTLG and to manage potential cumulative construction traffic impacts with M12 Motorway and Elizabeth Drive.

## 5.6 Authorised Traffic Controller

No traffic controller is required at the interface between WSA land and Badgerys Creek Road.

If traffic controllers are required within site, whilst on Site, the responsibilities of the Traffic Controller include:

- Implementation of the Traffic Guidance Scheme.
- Pedestrian and cyclist management, to ensure that adverse conflicts between vehicle movements and pedestrians do not occur.
- Ensure there is no pedestrians or bicycles along the haul roads within WSA.
- Supervision of all loading and unloading of construction materials during the deliveries in the construction phase of the project.



## 6 Parking Management

There will be no contractor parking allowed on Badgerys Creek Road.

Following complete handover of the ATL Site, there will be 280 parking spaces provided on site as shown in Figure 13.

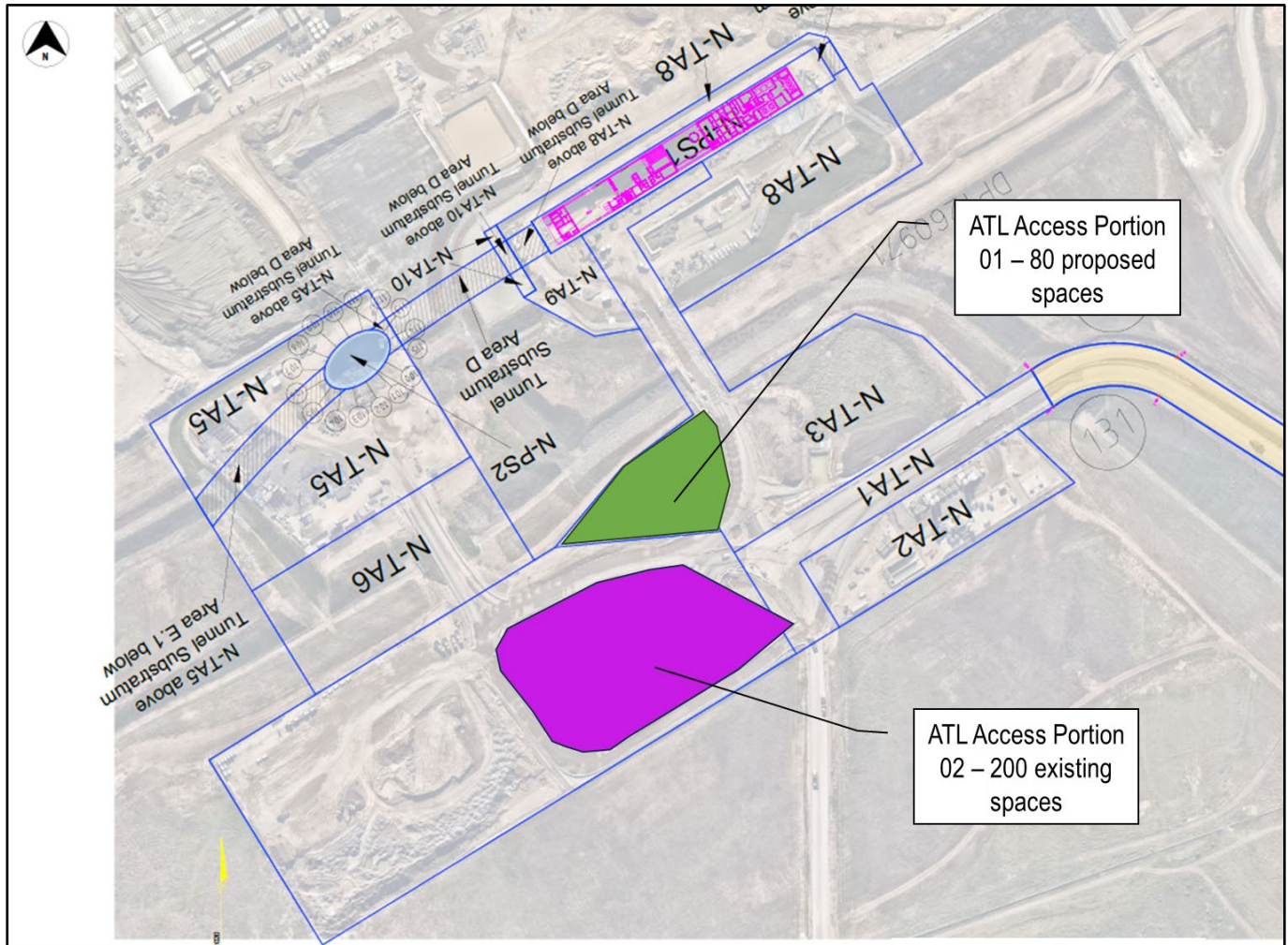


FIGURE 13: ATL PARKING PLAN

All visitors to Site will arrange the visit with SSTOM and be picked up by minibus or pool car from a centralised location (Railway Station or another pre-arranged location) to be transported to Site.

Subcontractors will have to register their carpark requirements with SSTOM prior to starting on-site and will be encouraged to carpool noting that secure tool storage areas and amenities will be available within the Site.

SSTOM will ensure that all personnel, including sub-contractors are aware of the specific requirements of TfNSW customers, general public, residents and businesses, prior to attending site through the induction process and regular updates through tool-box talks.

Due to the location of this site and its distance to either St Marys or Leppington Station, pool bus provision to / from site has been investigated and found not viable due to the long travel distance and limited public transport connectivity and significant travel times in comparison to motor vehicle based travel modes.

While the first service to St Marys start at 4.51am, services are limited to workers / contractors with convenient access to / from St Marys Station, which is generally along the T1 Western Line. As workers will need to arrive on site before

6.45am for pre-start and the drive from St Marys Station to site is 23km and take between 25 to 45 minutes, use of public transport modes for travel to / from site is not practical.

## **6.1 Access Portion 01**

80 parking spaces will be provided within Access Portion 01. If additional parking is required prior to Access Portion 02 handover, it will be provided for at ABP (within Access Portion 03), where a shuttle bus will transport personnel parked at ABP to/from ATL.

## **6.2 Access Portion 02**

SSTOM will be taking over the existing SBT car parking area within Access Portion 02 which will be able to accommodate another 200 cars.

## **7 Agency Permits**

### **7.1 Council Permits**

No Council permits is required for works on WSA land.

### **7.2 Local Traffic Committee**

No works proposed in this CTMP will trigger a Local Traffic Committee referral.

### **7.3 Road Dilapidation Report**

Before any local road, is used by Heavy Vehicles, a Road Dilapidation Report will be prepared. A copy of that report will be provided to Liverpool City Council within three (3) weeks of completion of the survey and no later than one (1) month before the road is used by Heavy Vehicles associated with the project.

If damage to roads occurs as a result of the construction of the project PLM D&C will either (at Liverpool City Council's discretion):

- Compensate Liverpool City Council for the damage so caused or
- Rectify the damage to restore the road to at least the condition it was in pre-work as identified in the Road Dilapidation Report

### **7.4 OSOM Permits**

No OSOM permit is required for the station construction scope within Access Portion 01. However if required PLM or its subcontractor will apply for one through NVHR in consultation with Liverpool Council.

### **7.5 Speed Zone Authorisation Permits**

No SZA permit is required for ATL works.

### **7.6 Western Sydney Airport Building Approval Number**

This CTMP will be submitted as part of PLM's second Western Sydney Airport Building Approval Number (SSTOM BAN 02) submission.

## 8 Community Notification

PLM JV will be responsible for the dissemination of information to the community including affected residents, relevant Councils, businesses and the public.

### 8.1 Site Contact

The current site contact for the works identified in this CTMP is:

Ian Baldwin (Site Superintendent): 0428 085 501

### 8.2 Propose Communications

- Community Notices (Notifications) issued at least 7 days prior to:
  - start of work
  - new work with a new activity that has the potential to impact on stakeholders and the community
  - handover of a construction site to a new contractor
  - activities requiring notification to comply with relevant Environmental Protection Licence (EPL) usually out of hours work.
- Precinct updates/e-update (Newsletters) - published 2x/year and for changes to planning approvals
- Email and internet updates – done with publication and delivery to letterboxes of Notifications and Newsletters.
- Advertisements – published in advance of significant traffic management changes, detours, traffic disruptions
- Advance warning sign – as noted in the CTMP, where required

Table 7 provides the proposed communications to be implemented for this CTMP.

TABLE 7: PROPOSED COMMUNICATIONS

Notification	Stage 01
Community Notice	Yes
Precinct Update / e-updated	Yes
Email	Yes
Internet	Yes
Print Advertising	Yes
Advance Warning Sign	Yes

## 8.3 Travelling Public

Where the SSTOM works will impact on the travelling public, PLM D&C will undertake the following communications:

- Motoring public will be forewarned of any changes including road closures, road changes and lane changes well in advance using appropriate signs including Variable Message Signs (VMS)
- Active transport users will be provided with advance warning signs.

## 8.4 Variable Message Signs

Variable message signs are not required for Stage 01 works.

If they are required at any stage of the project, they will be installed 7 days prior to any change to existing traffic conditions and per TfNSW “Instructions for the use of portable variable message signs: May 2021”.

## 8.5 Stakeholders

PLM D&C will liaise with relevant stakeholders regarding all relevant construction traffic management measures and will raise any potential conflict with stakeholder at the earliest time.

This will be done through the following groups:

- Traffic and Transport Liaison Group (TTLG)
- Traffic Control Group (TCG)
- Luddenham Traffic Working Group

There are a number of stakeholders PLM D&C will consult with during the development of this CTMP:

- Customer Journey Planning (CJP)
- Sydney Metro project team
- Liverpool City Council (LCC)
- Transport for NSW (TfNSW)

A copy of their review comments will be provided in Appendix C.

## 9 Monitoring and Review

### 9.1 Road Safety Audit

Road safety audits will be undertaken during the development and implementation of the CTMP. The audits will be undertaken as noted in the section 10 of the Construction Traffic Management Framework. A copy of the road safety audits is provided in Appendix D.

### 9.2 Monitoring Program

This CTMP shall be subject to ongoing review and will be updated accordingly. Regular reviews will be undertaken by a holder of a SafeWork NSW “Prepare a Work Zone Traffic Management Plan” or equivalent. Review of the CTMP shall occur monthly. All and any reviews undertaken should be documented, however key considerations regarding the review of the CTMP shall be:

- Tracking deliveries against the volumes outlined within report. Deliveries will be tracked against approved volumes and will keep a vehicle log - including Rego & time of entry - for the purpose of assessing the effectiveness of these monitoring programs.
- To identify any shortfalls and develop an updated action plan to address issues that may arise during construction (Parking and access issues)
- To ensure TGS’s are updated (if necessary) by “Prepare a Work Zone Traffic Management Plan” card holders to ensure they remain consistent with the set-up on-site.

The development of a program to monitor the effectiveness of this CTMP shall be established by the Contractor. This process is expected to form part of the monitoring plan required to be included as part of the overarching Construction Environmental Management Plan (CEMP), of which this CTMP forms a part.

The roadway (including footpath) will be kept in a serviceable condition for the duration of construction. At the direction of Council, undertake remedial treatments such as patching at no cost to Council.

### 9.3 Work Site Inspections, Recording and Reporting

Recording and reporting of the monitoring programs shall be done in accordance within the TCAWs Manual. As such, the structure, schedule and frequency of these activities have been considered and identified.

To inspect, review and audit the temporary traffic management (TTM) arrangements implemented on site, the following actions are to be undertaken by suitably qualified personnel in accordance with TCAWS 6.1 requirements during all phases of construction, being:

- TGS Verification
- Shift / Daily
- Weekly
- Post Completion
- Portable VMS / VSLS (when required)

All inspection forms per TCAWS 6.1 Appendix E will be uploaded into the GLAASS safety system for all site inspection purposes and data retained for monitoring.

## 9.4 Environmental Maintenance

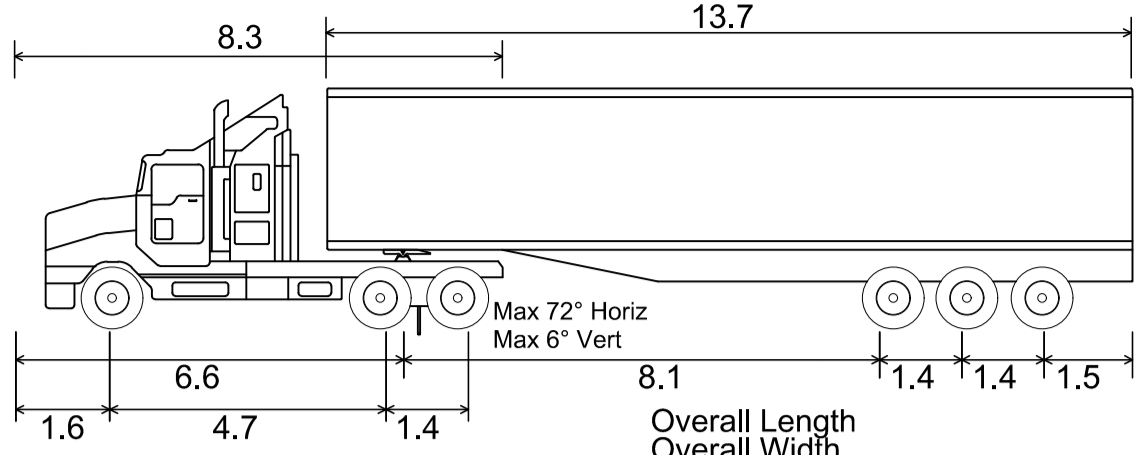
All works will be undertaken in accordance with the SSTOM works Site Establishment Management Plan and associated procedures and the Construction Environmental Management Plan and associated sub plans. The SSTOM works are regulated by the NSW Environment Protection Authority and works to be undertaken outside of standard construction hours will need to comply with the requirements of the Environmental Protection License (EPL).

# Appendix A Swept Path Assessment





AV - Articulated Vehicle (AS2890.2:2002)



- VEHICLE ENVELOPE
- 300mm CLEARANCE
- 500mm CLEARANCE
- Overall Length 19.000m
- Overall Width 2.500m
- Track Width 2.500m
- Lock to Lock Time 6.00 sec
- Curb to Curb Turning Radius 12.500m

100mm AT FULL SIZE Plot Date & Time: Plot Date: 30/10/23 - 10:18 Cad File: C:\Users\WendyZheng\OneDrive - Parklife - \Documents\08\_Airport\_Terminal\08\_SWS\SSM-PLD-SWD-DE-TMP-000005\_ATLv02.dwg

LAR 06A/6B

BADGERYS CREEK ROAD

LOCATION 1A

PITT STREET

TfNSW\_SecurityClassificationDesc

FOR INFORMATION

REV.	AMENDMENT DESCRIPTION	Design by	Verified by	Approved by	Date
Rev7	tbAMDsgt...				
Rev6	tbAMDsgt...				
Rev5	tbAMDsgt...				
Rev4	tbAMDsgt...				
Rev3	tbAMDsgt...				
Rev2	tbAMDsgt...				
Rev1	tbAMDsgt...				

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CLIENT:





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TAO DESIGN COMPANY/CONTRACTOR:

DRAWN	tbDrwnName	tbDrwnDate
DESIGNED	tbDsnName	tbDsnDate
DRG CHECK	tbDrgChkName	tbDrgChkDate
DESIGN CHECK	tbDsnChkName	tbDsnChkDate
APPROVED	tbApprName	tbApprDate

tbDesignCompName

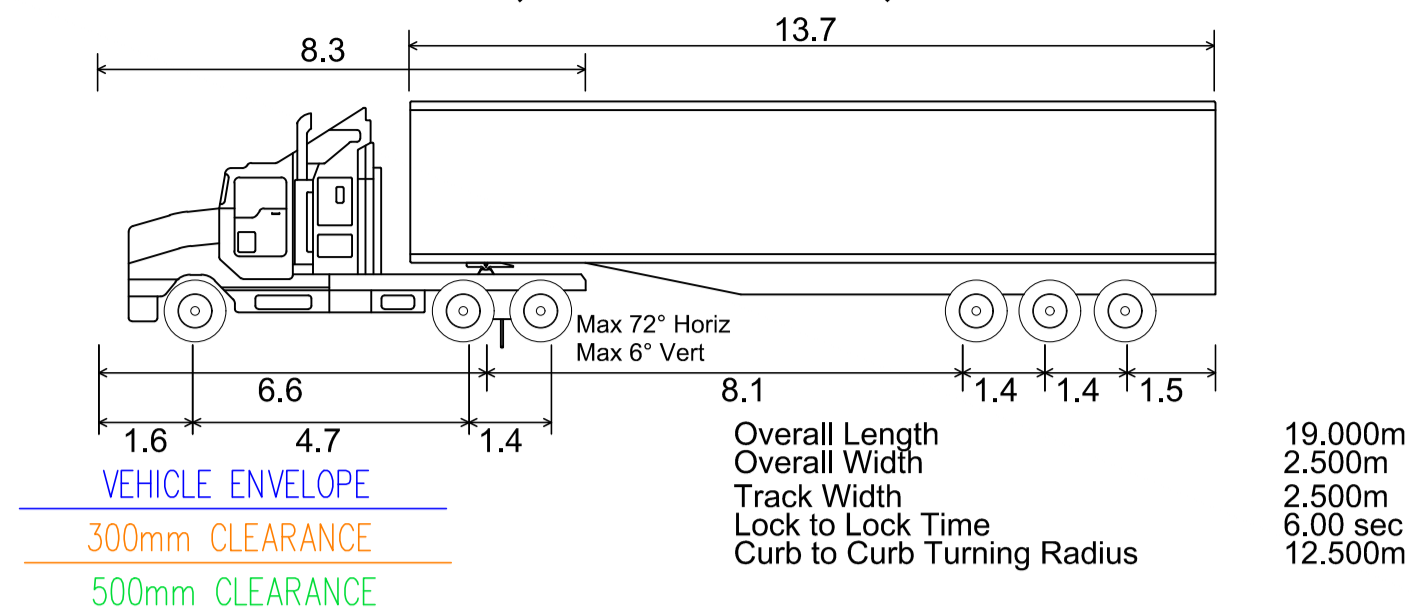
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SYDNEY METRO - WSA - SSTOM

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STATUS: tbStatus	EDMS No: tbEDMS		
DRG No: tbAEODrgNo	REV tRev	VER Ver	



AV - Articulated Vehicle (AS2890.2:2002)



Cad File: C:\Users\WendyZheng\OneDrive - Parklife - J:\Documents\08 - Airport Terminal\cat\SMW\SASSM-PLD-SWD-DE-TMP-000005\_ATT.dwg Plot Date: 15/09/23 - 16:01 100mm AT FULL SIZE Plot Date & Time:



SSTOM HAUL ROAD (LAR07B)

LAR 09

SBT HAUL ROAD (LAR07A)

LAR 06A/6B

BADGERYS CREEK ROAD

LAR 07

TfNSW\_SecurityClassificationDesc

FOR INFORMATION

Rev	AMENDMENT DESCRIPTION	Design by	Verified by	Approved by	Date
Rev7					
Rev6					
Rev5					
Rev4					
Rev3					
Rev2					
Rev1					

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TAO DESIGN COMPANY/CONTRACTOR:

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SYDNEY METRO - WSA - SSTOM

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DRG No: tbAEODrngNo	tRev	tVer	



## **Appendix B     Risk Assessment**

# Sydney Metro WSA – Stabling and Maintenance Facility

## Risk Assessment and Communication Tool

Site Name	Airport Terminal Station		
Site Location	Badgerys Creek Road, Badgerys Creek		
Date of Assessment	18 September 2023		
Revision	Issue I		
<b>Document Control</b>			
Date Issued	Revision	Issued By	Checked By
18/09/2023	Issue I	W. Zheng	D. Odobasa

Risk Matrix		Insignificant	Minor	Moderate	Major	Severe	Catastrophic
Likelihood		C6	C5	C4	C3	C2	C1
Almost certain	L1	8	19	27	29	34	36
Very Likely	L2	7	18	21	28	31	35
Likely	L3	6	11	20	23	30	33
Possible	L4	4	10	13	22	25	32
Very Unlikely	L5	3	9	12	15	24	26
Rare	L6	1	2	5	14	16	17

Risk Consequences						
	Insignificant	Minor	Moderate	Major	Severe	Catastrophic
	C6	C5	C4	C3	C2	C1
Health and Safety	Illness, first aid or injury not requiring medical treatment.	Illness or minor injuries requiring medical treatment.	Single recoverable lost time injury or illness, alternate/restricted	1-10 major injuries requiring hospitalisation and numerous days lost,	Single fatality and/or 10-20 major injuries/permanent	Multiple fatalities and/or >20 major injuries/permanent

			duties injury, or short-term occupational illness.	or medium-term occupational illness.	disabilities/chronic diseases.	disabilities/chronic diseases.
Environment	No appreciable changes to environment and/or highly localised event.	Change from normal conditions within environmental regulatory limits and environmental effects are within site boundaries.	Short-term and/or well-contained environmental effects. Minor remedial actions probably required.	Impacts external ecosystem and considerable remediation is required.	Long-term environmental impairment in neighbouring or valued ecosystems. Extensive remediation required.	Irreversible large-scale environmental impact with loss of valued ecosystems.

Likelihood		One off event (How likely?)		Repeated (How often?)
Almost certain	L1	Expected to occur frequently during time of activity or project.	> 90%	10 times or more every year
Very Likely	L2	Expected to occur occasionally during time of activity or project.	75 - 90 %	1-10 times every year
Likely	L3	More likely to occur than not occur during time of activity or project.	50 - 75 %	Once each year
Possible	L4	More likely not to occur than occur during time of activity or project.	25 - 50 %	Once every 1 to 10 years
Very Unlikely	L5	Not expected to occur during the time of activity or project.	5 - 25 %	Once every 10 to 100 years
Rare	L6	Not expected to ever occur during time of activity or project.	< 5 %	Less than once every 100 years

## Risk Assessment and Communication Tool

ID. Ref	Risk and/ or Hazard	Risk Description	Location	Existing Control	Initial Risk Rating			Design Response to risk and /or hazard	Status of Risk	Assignment of risk or hazard	Residual risk rating		
					L	I	RR				C	L	RR
1	Unauthorized Access to the Site	Site prevents unauthorised access	Entire Site	Nil	L3	C2	High 28	Boundary fence will be provided as part of the main works. The design provides a defined separation between public areas and work area. Admin area is located in front of the site to minimise unauthorised visitor access	Design Solution	Main Contractor	L6	C2	Low 16
2	Interaction between pedestrians / cyclists and vehicles	Vehicles and pedestrians /cyclists to be separates as best possible	Entire Site & Access Roads	Nil	L3	C1	High 33	Dedicated footpath, pedestrian crossings and additional signage shall be provided to separate vehicles and pedestrians as best possible.	Design Solution	Main Contractor	L6	C2	Low 16
3	Potential vehicle conflict points	Vehicles can crash with each other while manoeuvring through the site	Entire Site & Access Roads	Nil	L4	C1	High 32	One-way manoeuvring around the site limits any interaction for oncoming vehicles to the access only, coupled with low speeds throughout the site. In locations	Design / Operational Solution	Main Contractor	L6	C2	Low 16

								where one-way manoeuvring is not available, all drivers will radio on ahead before entering the two way haul road section.						
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--



4	Fatigue	Injury caused by fatigue	Entire Site	Nil	L3	C2	High 30	Toolbox meetings and regular breaks (in line with WHS practices) to minimise fatigue	Design Solution	Main Contractor	L6	C2	Low 16
5	Fall risks	Injury due to falls (in general)	Entire Site	Nil	L4	C1	High 32	Ensuring level changes across the site to be minimised as best possible, with additional black & yellow hazard tape/markings being installed where appropriate. Installation of handrails where level changes / ramps grades are significant.	Design Solution	Main Contractor	L6	C2	Low 16
6	Misdirected access in to neighbouring site	Vehicle in unsafe locations	Entire Site	Nil	L4	C3	Medium 22	Ensuring appropriate directional signage has been provided to ensure vehicles do not access the wrong construction site, which could create potential safety breaches and hazards for all parties	Design Solution	Main Contractor	L5	C4	Low 12
7	Conflicting Traffic Management	Coordinating Traffic Controllers could create misleading and wrong advice	Entire Site	Nil	L4	C3	Medium 22	Toolbox meetings, regular liaison with all construction teams and review of signage plans on site in order to minimise contradicting signage.	Design Solution	Main Contractor	L5	C4	Low 12

## Appendix C Stakeholder Comments

NO.	DATE	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*	LINKED ITEM NO	CLOSED OUT
01	29/09/2023	TFN	LWILBY	SMWSASSM-PLD-ATL-TF-PLN-000001	Table 5 - Public and active transport users	NA	Wording in this table appears incorrect - the wide footpath is between Pitt Street and Elizabeth Drive. Also consider mentioning while no dedicated cycle facilities, there is a wide sealed shoulder that provides a safe space along that northern section of Badgerys Creek Rd.	Observation		N
	27/10/2023	PLD	WZHENG	SMWSASSM-PLD-ATL-TF-PLN-000001	Table 5 - Public and active transport users	NA	Wording in Table 5 updated to reflect comments provided by TfNSW.	Observation		N
02	29/09/2023	TFN	LWILBY	SMWSASSM-PLD-ATL-TF-PLN-000001	5.2 Pedestrian / cyclist management	NA	Consider expanding the second paragraph to also include "be aware of pedestrians and / or cyclists and maintain a safe distance when passing cyclists at all times..."	Observation		N
	27/10/2023	PLD	WZHENG	SMWSASSM-PLD-ATL-TF-PLN-000001	5.2 Pedestrian / cyclist management	NA	Wording in Section 5.2 of the CTMP has been updated to reflect the comments of TfNSW.	Observation		N
03	29/09/2023	TFN	LWILBY	SMWSASSM-PLD-ATL-TF-PLN-000001	5.3 Public transport impact management	NA	Please consider expanding the final sentence to include adhere to reduced speed limits around buses when lights are flashing.	Observation		N
	27/10/2023	PLD	WZHENG	SMWSASSM-PLD-ATL-TF-PLN-000001	5.3 Public transport impact management	NA	Wording in Section 5.3 of the CTMP has been updated to reflect the comments of TfNSW.	Observation		N
04	9/10/2023	TFN	FLARUE	SMWSASSM-PLD-ATL-TF-PLN-000001	2	NA	The document refers to access to Airport Business Park and is mentioned a few times in the document, should this be Airport Terminal Station?	Observation		N
	27/10/2023	PLD	WZHENG	SMWSASSM-PLD-ATL-TF-PLN-000001	2	NA	We have reviewed the report and replaced all incorrect references to ABP with ATL. Reference to ABP in Section 6.1 of the CTMP is correct.	Observation		N
05	9/10/2023	TFN	FLARUE	SMWSASSM-PLD-ATL-TF-PLN-000001	Figure 4	NA	ABP elevatons are shown, this should be changed to ATS	Observation		N
	27/10/2023	PLD	WZHENG	SMWSASSM-PLD-ATL-TF-PLN-000001	Figure 4	NA	The diagram in Figure 4 is the correct elevation for ATL. However, the caption of the diagram is incorrect and this has been updated in the revised CTMP.	Observation		N
06	9/10/2023	TFN	FLARUE	SMWSASSM-PLD-ATL-TF-PLN-000001	Appendix B	NA	There is no Risk Assessment attached	Observation		N
	27/10/2023	PLD	WZHENG	SMWSASSM-PLD-ATL-TF-PLN-000001	Appendix B	NA	We apologise for this error. Please find the updated CTMP with Risk Assessment attached.	Observation		N
07	45211	SMD	LBAKER	SMWSASSM-PLD-ATL-TF-PLN-000001	3.3, 4.1,	Site Access Schedule	At this time, PLM will not receive access to S3 until the 26 Jan 2024. Portion S4 is currently listed as 4 Jan 2025 in the Site Access Schedule.	Observation		N
	27/10/2023	PLD	WZHENG	SMWSASSM-PLD-ATL-TF-PLN-000001	3.3, 4.1,	Site Access Schedule	S3 (access portion 01) and S4 (access portion 02) access dates shown in Figure 3 are the early access dates. Figure 3 and Section 4.1 has been updated to show the access dates instead of the early access dates.	Observation		N
08	12/10/2023	TFN	QMINHLA	SMWSASSM-PLD-LDN-TF-PLN-000001.A.S3.A.01	Section 4.4_Fig. 5	N/A	SP - Beyond the date that handing-over is happening for the Access portion 2, are you still going to use only the SSTOM exclusive ATL access road (LAR07b) or you will have another in and out access road or gate to the site?	Observation		N
	27/10/2023	PLD	WZHENG	SMWSASSM-PLD-LDN-TF-PLN-000001.A.S3.A.01	Section 4.4_Fig. 5	N/A	Once ATL Access Portion 02 is handed over to SSTOM, as outlined in Section 4.4.2 of the report, SSTOM will retain the separated HV and LV access arrangement implemented by SBT (LAR07a HV, LAR07b LV).	Observation		N
09	12/10/2023	TFN	QMINHLA	SMWSASSM-PLD-LDN-TF-PLN-000001.A.S3.A.01	Section 4.5.1_Fig. 7	N/A	SP - In order to understand overall traffic impact on the network, can you please provide/include expected LV (SSTOM) generation for during all the stages of ATL construction?	Observation		N

NO.	DATE	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*	LINKED ITEM NO	CLOSED OUT
	27/10/2023	PLD	WZHENG	SMWSASSM-PLD-LDN-TF-PLN-000001.A.S3.A.01	Section 4.5.1_Fig. 7	N/A	As outlined in Section 5.1 of the CTMP, the projected LV generation during the peak is in accordance with the EIS Construction Movement allocation.	Observation		N
10	12/10/2023	TFN	QMINHLA	SMWSASSM-PLD-ATL-TF-PLN-000001	Turning paths	N/A	BS - Turnpath for left turning 19m AV turning left from Badgery's Creek Road (BCR) into LAR 06A/6B seems to be tracking in the middle of a dual lane roundabout without straddling prior (on approach to the roundabout) - this is a safety concern due to potential (lack of) horizontal clearances between two vehicles on approach to the roundabout. Additional turnpath required showcasing a design vehicle travelling straight through NB on BCR whilst a 19m AV is turning left into 06A/6B road.	Observation		N
	27/10/2023	PLD	WZHENG	SMWSASSM-PLD-ATL-TF-PLN-000001	Turning paths	N/A	Please find revised swept path in Figure 9 and Appendix A of the updated CTMP to reflect comments provided.	Observation		N
11	12/10/2023	TFN	QMINHLA	SMWSASSM-PLD-ATL-TF-PLN-000001	Turning paths	N/A	BS - What are the design speeds of the turning paths?	Observation		N
	27/10/2023	PLD	WZHENG	SMWSASSM-PLD-ATL-TF-PLN-000001	Turning paths	N/A	The speed setting applied to the swept paths are 10km/h.	Observation		N

## Appendix D Road Safety Audit

**Traffic Management Road Safety Audit Report**

# Sydney Metro – Western Sydney Airport

## Airport Terminal Station – Access Portion 1

**Project Number** 220751

**Draft Report** 25/09/2023

**Client** Parklife Metro



## Document control record

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### Document control

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Draft	25/09/2023	Preliminary draft	Aaron Wu	Paul Mihailidis

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# 1 Introduction

The Sydney Metro – Western Sydney Airport project involves the construction and operation of a 23 km new metro rail line between St Marys to the north and the Western Sydney Airport Aerotropolis to the south.



Figure 1: Overview of Sydney Metro – Sydney Airport project

**Parklife Metro** engaged Trafficworks to undertake a road safety audit (RSA) of the site-specific Construction Traffic Management Plan (CTMP) prepared for the Airport Terminal Station. There will be 3 handover stages between Sydney Metro and Stations, systems, trains operations and maintenance (SSTOM), as shown in Table 1.

Table 1: Handover stages

Stage	Estimated start date
Access Portion 1	December 2023
Tunnel Handover	November 2024
Access Portion 2	December 2024

The focus of this RSA will be for Access Portion 1 and the impacts to the public road network.

The CTMP will be updated for Tunnel Handover and Access Portion 2 and will be subject to a separate RSA.

We conducted this RSA in line with the procedures set out in the Austroads Guide to Road Safety Part 6: Road Safety Audits (2022). For more information, see section 2, Road Safety Audit (RSA) overview.

Both the site and the supporting documentation were reviewed to identify issues that impact road user safety – for more information, see:

- section 2.6, Supporting information used in the audit
- section 3, Site Description.

Our findings are presented in section 4.

Note that the auditor cannot guarantee that every issue that impacts road user safety has been identified.

## 2 Road safety audit (RSA) overview

### 2.1 Audit team

The audit was conducted by:

**Paul Mihailidis [BEng (Civil), GradCert Mgt, MIEAust, CPEng, NER]**

RSA-03-0796 – Level 3 road safety auditor (lead auditor)

and

**Aaron Wu [BEng(Civil)(Hons)]**

RSA-03-1713 – Level 2 road safety auditor (team member)

### 2.2 Commencement meeting

A commencement meeting was held at the Parklife offices on the morning of Thursday 29 June 2023.

### 2.3 Inspection

The audit included an inspection of the site during the:

- Morning of 29/06/2023 by Paul Mihailidis and Bernard Chan
- Afternoon of 25/08/2023 by Bernard Chan

The conditions during both daytime inspections were fine and sunny.

### 2.4 Risk ratings

The findings of this audit have been assigned a risk rating based on the likelihood of a crash occurring, together with the potential severity of that crash. For more information about:

- crash severity – see Appendix 1
- the likelihood/severity risk matrix, see Appendix 2.

The risk ratings adopted for this audit are as follows:

- Extreme – must be corrected regardless of cost
- High – should be corrected or the risk significantly reduced, even if the treatment cost is high
- Medium – should be corrected or the risk significantly reduced, if the treatment cost is moderate, but not high

- Low – should be corrected or the risk reduced if the treatment cost is low
- Negligible – no action required.

Trafficworks also denotes a risk rating of 'Note only' for:

- drafting errors, omissions and issues that are outside the scope of works
- items within the scope of works that do not represent a road safety risk.

## 2.5 Safe System approach

The basic principles of the Safe System approach are:

- Humans are fallible, and will inevitably make mistakes when driving, riding, or walking.
- Despite this, road trauma should not be accepted as inevitable. No one should be killed or seriously injured on our roads.
- To prevent serious trauma, the road system must be forgiving, so that the forces of collisions do not exceed the limits that the human body can tolerate.

Therefore, as far as is practically possible, infrastructure should be designed, and travel speeds managed, so that crash impact speeds are below the thresholds outlined in Appendixes 1 and 2.

Each road safety issue has been assessed based on:

- its kinetic energy transfer
- the likelihood of a serious injury or fatality occurring assessed against the thresholds outlined in Appendixes 1 and 2.

## 2.6 Supporting information used in the audit

The following document was used when conducting the audit:

- ‘Construction Traffic Management Plan – Airport Terminal Station’, report prepared by Parklife Metro D&C. Document no. SMWSASSM-PLD-ATL-TF-PLN-000001, Revision A, dated 22/09/2023.

### 3 Site Description

#### 3.1 Existing conditions

The Airport Terminal Station site access is located off Badgerys Creek Road, approximately 300 m south of Elizabeth Drive. The site is accessed from Badgerys Creek Road via an existing roundabout with Pitt Street and a T-intersection to the north of Pitt Street. The subject site is shown in Figure 2 and an aerial photograph of the site accesses are shown in Figure 3.

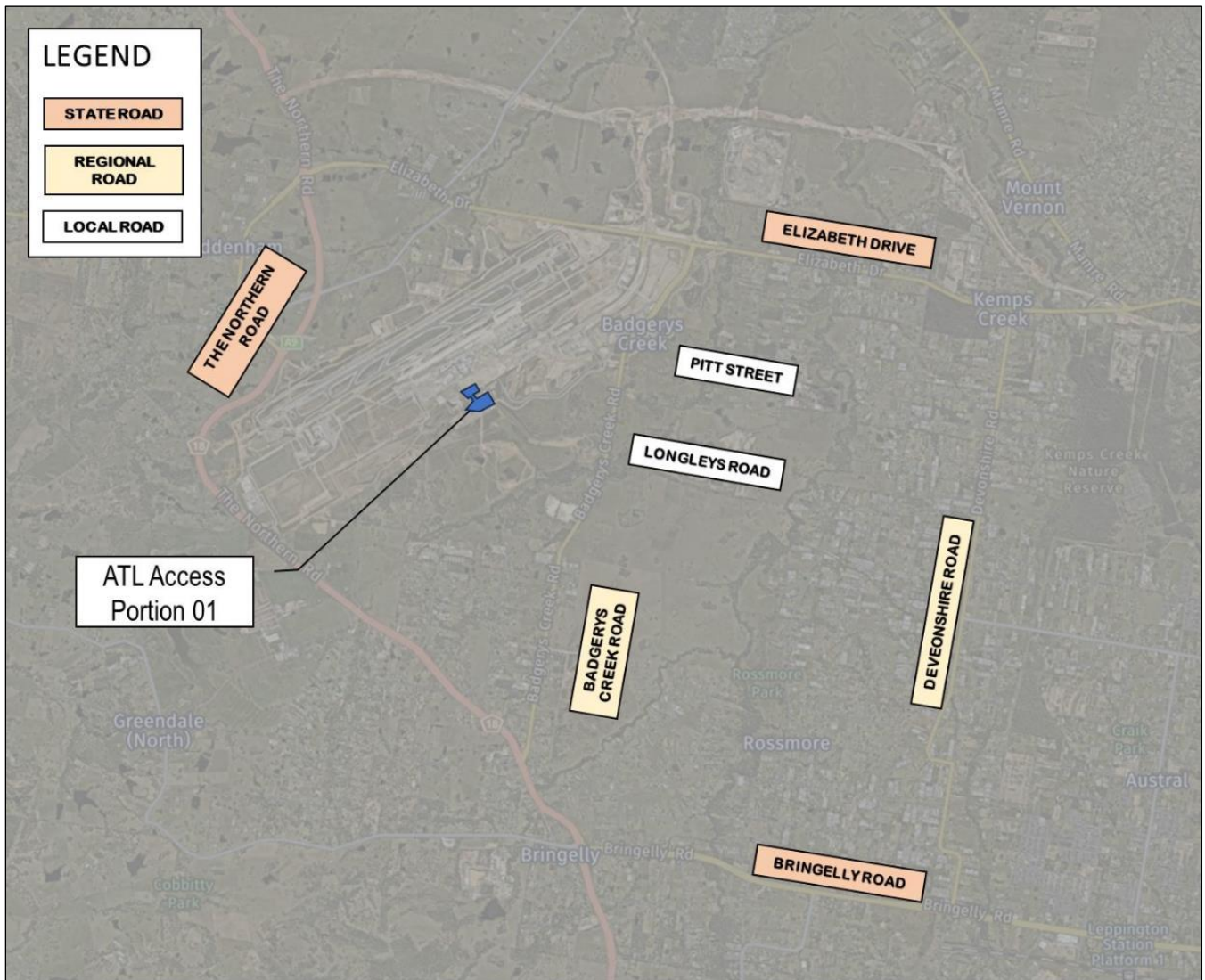


Figure 2: Subject site



Figure 3: Airport Terminal Station site accesses

Badgerys Creek Road is a regional road aligned in a north to south direction, connecting Elizabeth Drive to the north and The Northern Road to the south. Between Pitt Street and The Northern Road, Badgerys Creek Road consists of one traffic lane in each direction. Sealed shoulders exist on both sides of the road at some sections of the road.

The following posted speed limits apply to Badgerys Creek Road:

- 60 km/h between Elizabeth Drive and Jagelman Road
- 80 km/h between Jagelman Road and The Northern Road.

The speed limit on Badgerys Creek Road at the site access is 60 km/h.

### **3.2 Proposed conditions**

The following details the proposed traffic management arrangements:

- during Access Portion 1, the site will be accessed via the Badgerys Creek Road and Pitt Street roundabout (Access Location 1A) or the T-intersection to the north (Access Location 1F).

- there will be no works external to the site during construction (i.e. no works will occur on Badgerys Creek Road)
- no traffic management or controllers are proposed on Badgerys Creek Road nor the site accesses
- the largest vehicle required to access the site will be a 19 m long articulated vehicle
- construction works will occur between 7 am – 6 pm Mon-Fri and 8 am – 1 pm Saturday
- heavy vehicles will travel to and from the site to:
  - Elizabeth Drive to the north, via Badgerys Creek Road
  - The Northern Highway to the south, via Badgerys Creek Road
- the site superintendent will minimise the number of vehicles scheduled to enter and depart the site during peak hours (7:30 am – 8:30 am and 4:30 pm – 5:30 pm)
- all drivers will be briefed to be made aware of pedestrians alighting from buses that operate along Badgerys Creek Road. Buses will always be given priority along Badgerys Creek Road
- no contractors will be permitted to park on Badgerys Creek Road. All staff will park within the site. Parking for up to 360 light vehicles will be provided within the site.





## 4 Findings

Table 2 outlines the findings of this audit, noting the columns to the right of the table will be completed by the client after receiving and reviewing this report.

RSAs are a formal process and the client is required to respond to the audit's findings in writing. A client is under no obligation to accept all of the audit findings and should consider these in conjunction with all other project considerations. If the client does not accept the findings, then reasons should be included within the written response.

It is not the role of the auditor to approve the client's response to the audit.

Table 1: Audit findings

No	Audit findings	Photos	Risk rating	Client response	
				Accept: Yes/No	Reasons/ Comments
<b>1 General issues</b>					
1.1.	<p>On the Badgerys Creek Road south approach to Access Location 1A, there is a sign banning unauthorised vehicles accessing the site. On the north approach, there is no sign indicating that only authorised vehicles may turn right.</p> <p>The general public may accidentally turn into the site access at the roundabout.</p>	 <p>Badgerys Creek Road south approach</p>  <p>Badgerys Creek Road north approach</p>	<b>NOTE ONLY</b>	Yes	SSTOM to refer this finding to Sydney Metro and WSA for consideration and response.

No	Audit findings	Photos	Risk rating	Client response	
				Accept: Yes/No	Reasons/ Comments
1.2.	<p>Section 5.3 (Public Transport Impact Management) has identified that one public bus route (route 801) and school buses operate along Badgerys Creek Road.</p> <p>There are bus stops for bus Route 801 on Badgerys Creek Road near Gardiner Road and Longleys Road. There does not appear to be nearby existing developments that would generate bus patronage near the bus stops for Route 801. Development could occur in the future during construction works and increase pedestrian movements to and from the bus stops.</p> <p>The auditors were unable to ascertain where the school buses stop along the road and if/where students cross roads to access or depart the school bus stops.</p> <p>It is acknowledged that that CTMP indicates that all drivers will be briefed to be made aware of pedestrians alighting from buses.</p>		<b>NOTE ONLY</b>	Yes	SSTOM will continue to monitor bus and pedestrian movements and provide updates to staff and contractors via site briefings / toolbox talks to ensure site personnel and contractors are aware of the presence of vulnerable road users.

Client response completed by:

Name: Dora Choi

A handwritten signature in black ink, appearing to be 'John Marshall', written over a horizontal line.

Signed:

Date: \_\_\_\_\_25/09/2023\_\_\_\_\_

## 5 Conclusion

This Road Safety Audit has been conducted in accordance with the procedures set out in the *Austrroads Guide to Road Safety Part 6: Road Safety Audits (2022)*.

The site was inspected and supporting documentation examined.

The findings presented in the previous section of this document are provided for consideration by the client and any other interested parties.

### Auditors



**Monday, 25 September 2023**

Paul Mihailidis [BEng (Civil), GradCert Mgt, MIEAust, CPEng, NER]

RSA-03-0796 – Level 3 road safety auditor (lead auditor)



**Monday, 25 September 2023**

Aaron Wu [BEng(Civil)(Hons)]

RSA-03-1713 – Level 2 road safety auditor (team member)

## Appendix 1 – Severity guidance sheet

Research has found the chances of surviving a crash decrease markedly above certain speeds, depending on the type of crash. It should be noted that the road user, as well as the angle of impact of a collision are also factors that impact the severity of a crash.

Figure 4 provides a severity guidance sheet.

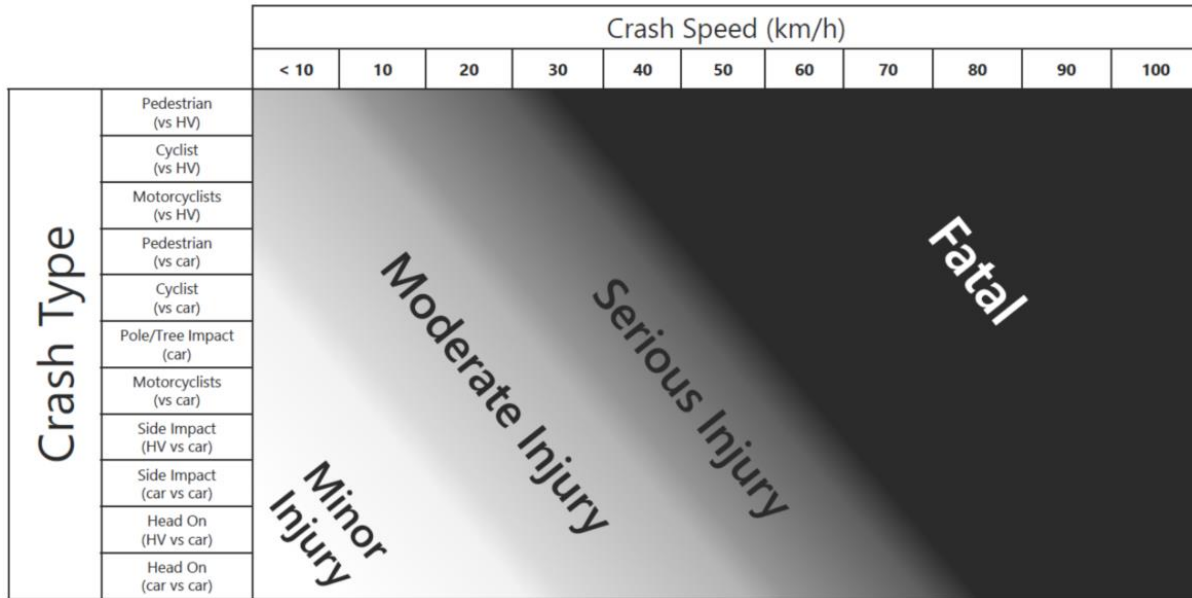


Figure 4: Severity guidance sheet

## Appendix 2 – Likelihood / severity risk matrix

Figure 5 presents the likelihood / severity risk matrix.

			Severity*				
			Insignificant	Minor	Moderate	Serious	Fatal
			Property damage	Minor first aid	Major first aid and/or presents to hospital (not admitted)	Admitted to hospital	Death within 30 days of crash
Likelihood (Includes exposure)	Almost Certain	One per quarter	Medium	High	High	Extreme (FSI)	Extreme (FSI)
	Likely	Quarter to 1 year	Medium	Medium	High	Extreme (FSI)	Extreme (FSI)
	Possible	1 to 3 years	Low	Medium	High	High (FSI)	Extreme (FSI)
	Unlikely	3 to 7 years	Negligible	Low	Medium	High (FSI)	Extreme (FSI)
	Rare	7 years +	Negligible	Negligible	Low	Medium (FSI)	High (FSI)

\*see Severity Guidance Sheet

Safe System crash outcome threshold

Figure 5: Likelihood / severity risk matrix (Source: Austroads Guide to Road Safety Part 6 – Road Safety Audit (2022))

## **Appendix E Drivers Code of Conduct**



# Drivers Code of Conduct

Safe Driving Policy for Construction of Airport Terminal Station

## Objectives of the Drivers Code of conduct

- To minimise the impact of earthworks on the local and regional road network;
- To minimise conflict with other road users, especially pedestrians and cyclists;
- To minimise road traffic noise; and
- To ensure truck drivers use specified heavy vehicles routes between the Site and the sub-regional road network.

## Code of Conduct

The code of conduct requires that while driving any vehicle for work-related purposes.

Drivers are to be issued with a copy of the Drivers Code of Conduct, and must comply with all of the following:

- Demonstrate safe driving and road safety activities.
- Abide by traffic, road and environmental legislations.
- Follow site signage and instructions.
- Drivers must only enter and exit the site via the approved entry and exit points and travel routes.
- Drivers must not use Elizabeth Drive west of Badgerys Creek Road arriving or departing the site.

The below activities in any vehicles will be considered as a breach of conduct and will result in removal from site:

- Reckless or dangerous driving causing injury or death.
- Driving whilst disqualified or not correctly licensed.
- Drinking or being under the influence of drugs while driving
- Failing to stop after an incident.
- Loss of demerit points leading to suspension of licence.
- Any actions that warrant the suspension of a licence
- Exceeding the speed limit in place on any permanent or temporary roads.

## Driver Responsibilities

All Drivers on site must:

- Be responsible and accountable for their actions when operating a company vehicle or driving for the purposes of work.
- Display the highest level of professional conduct when driving a vehicle at all times.
- Ensure they have a current driver licence for the class of vehicle they are driving, and this licence is to be carried at all times.
- Immediately notify their supervisor or manager if their drivers' licence has been suspended, cancelled, or has had limitations applied.
- Comply with all traffic and road legislation when driving.

- Assess hazards while driving.
- Undertake daily pre-start checks of oil, tyre pressures, radiator and battery levels of company vehicles they regularly use.
- Drive within the legal speed limits, including driving to the conditions.
- Not drive outside of the approved heavy vehicle routes. All drivers must obey weight, length and height restrictions imposed by the National Vehicle Regulator, and other Government agencies. Heavy Vehicles shall adhere to the selected routes.
- Heavy vehicle drivers must have completed the Sydney Metro Safe Heavy Vehicle Driver Introduction Programme or equivalent competency
- Be cognisant of the noise and emissions requirements imposed within the NSW/ Australian Road Rules. Works must be constructed with the aim of achieving the construction noise management levels detailed in the Construction Noise Guideline.
- Do not queue on public roads unless a prior approval has been sought.
- Be aware that at no time may a tracked plant be permitted or required on a paved road.
- Never drive under the influence of alcohol or drugs, including prescription and over the counter medication if they cause drowsiness – to do so will merit disciplinary measures.
- All drivers to report to their supervisor if they have been prescribed medication prior to the start of work.
- Wear a safety seat belt at all times when in the vehicle.
- Avoid distraction when driving – the driver will adjust car stereos/mirrors etc. before setting off or pull over safely to do so.
- Report ALL near-misses, crashes and scrapes to their manager,
- Report infringements to a manager at the earliest opportunity.
- Report vehicle defects to a manager prior to the next use of the vehicle.
- Follow the approved site access/egress routes only.
- Follow speed limits as imposed within the estate.
- Keep loads covered at all times.

## The Site Team Responsibilities

The Contractor is responsible to take all steps necessary to ensure company vehicles are as safe as possible and will not require staff to drive under conditions that are unsafe.

This will be achieved by undertaking the following:

- Ensuring all vehicles are well maintained and that the equipment enhances driver, operator and passenger safety by way of:
  - Pre-commencement checks for all new plant arriving on-site and prior to undertaking any work.
  - Daily prestart inspections for all plant, vehicles and equipment currently on-site.
  - All construction plant must be fitted with a flashing light, fire extinguisher and reverse alarms (or squawkers).
  - Ensure all operators onsite have a current driver's licence of the appropriate class.
  - Ensure maintenance requirements are met and recorded.
- Identify driver training needs and arranging appropriate training or re-training. This may include providing the below:
  - Operator VOC assessment as part of all inductions.
  - Regular Toolbox discussions on safety features, managing fatigue, approved heavy routes, driver responsibility and drink-driving.

- Encouraging Safe Driving behaviour by:
  - Ensuring the subcontractor is informed if their staff become unlicensed.
  - Not covering or reimbursing staff speeding or other infringement notices
  - Ensuring Legal use of mobile phones in vehicles while driving only and that illegal use is not undertaken.
- Encouraging better fuel efficiency by:
  - Use of other transport modes or remote conferencing, whenever practical.
  - Providing training on, and circulating information about, travel planning and efficient driving habits.

## Crash or incident Procedure

- Stop your vehicle as close to it as possible to the scene, making sure you are not hindering traffic. Ensure your own safety first, then help any injured people and seek assistance immediately if required.
- Ensure the following information is noted:
  - Details of the other vehicles and registration numbers (photos with time stamps)
  - Names and addresses of the other vehicle drivers.
  - Names and addresses of witnesses.
  - Insurers details
- Give the following information to the involved parties:
  - Name, address and company details
- If the damaged vehicle is not occupied, provide a note with your contact details for the owner to contact the company.
- Ensure that the police are contacted should the following circumstances occur:
  - If there is a disagreement over the cause of the crash.
  - If there are injuries.
  - If you damage property other than your own.
- As soon as reasonably practical, report all details gathered to your manager.

## Environmental Procedures.

A range of measures shall be implemented to ensure the following;

- No dirt or debris from the construction vehicles is tracked on to the public road network.
- Reduce the impacts to sensitive receivers, including, where practicable, starting noisy equipment away from sensitive receivers and implementing respite periods.
- Watering of dusty activities will be undertaken, or activities temporarily halted and then resumed once weather conditions have improved.
- Containment measures for spillages will be provided at appropriate locations and in close proximity to staff car park areas, dangerous goods stores areas and main Project work areas.
- Keep an accurate record which includes the range of measures undertaken to reduce environmental impacts.