Construction Traffic Management Plan – Orchard Hills Station

SMWSASSM-PLD-OHE-TF-PLN-000001

Parklife Metro D&C

Version Control

Version	Author	Date	Comments	Reviewed by	Approved by
A	**Wendy Zheng** Traffic Manager	17/07/2023	First Issue	**Discipline Leads**	**Jose Sanchez** Project Director
B	**Wendy Zheng** Traffic Manager	15/08/2023	First Issue	**Discipline Leads**	**Jose Sanchez** Project Director
0	**Wendy Zheng** Traffic Manager	27/09/2023	Final Issue / IFI	**Discipline Leads**	**Jose Sanchez** Project Director
Signature					

Contents

Table of figures

Table of tables

Glossary

Acronym	Description
AGRD	Austroads Guide to Road Design
AGTM	Austroads Guide to Traffic Management
AGTTM	Austroads Guide to Temporary Traffic Management
Council	Penrith and / or Liverpool Council
CTMF	Sydney Metro Construction Traffic Management Framework
CTMP	Construction Traffic Management Plan
DA	Development Application
DCP	Development Control Plan
DoS	Degree of Saturation
DPE	Department of Planning and Environment
HRV	Heavy Rigid Vehicle (as defined by AS2890.2:2018)
LEP	Local Environmental Plan
LGA	Local Government Area
LoS	Level of Service
MOD	Section 4.55 Modification (also referred as a S4.55)
MRV	Medium Rigid Vehicle (as defined by AS2890.2:2018)
NHVR	National Heavy Vehicle Regulator
ONRSR	Office of the National Rail Safety Regulator
OSOM	Oversize and/or overmass (OSOM) vehicles
RMS Guide	Transport for NSW (formerly Roads and Traffic Authority), Guide to Traffic Generating Developments, 2002
RIM	Rail Infrastructure Manager
RRV	Road Rail Vehicles
RSO	Rolling Stock Operator
SCAW	Surface and Civil Alignment Work
SBT	Station Boxes and Tunnelling

SMF	Stabling and Maintenance Facilities
SMSWA	Sydney Metro Western Sydney Airport
SRV	Small Rigid Vehicle (as defined by AS2890.2:2018)
SSTOM	Stations, Systems, Trains, Operations and Maintenance
TCAWS	Traffic control at work sites Technical Manual (version 6.1:2022 or the latest)
TGS (TCP)	Traffic Guidance Scheme (formerly known as Traffic Control Plan)
TDT 2013/04a	TfNSW Technical Direction, Guide to Traffic Generating Developments – Updated traffic surveys, August 2013
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 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 stages required to facilitate the construction of the Orchard Hills Station.

This site will be handed to SSTOM in four stages from SBT and SCAW contractors where construction of the station buildings will take place initially within Access Portions 02 and rail construction will take place within Access Portions 01, 03 and 04.

This CTMP will be updated following rail design finalisation, for the development of traffic management associated with the rail construction. This will occur prior to works starting onsite following Access Portion 03 and 04 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-PLN-000071).

This plan has been prepared to meet the following requirements 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)

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

The Orchard Hills Station (OHE) site following Access Portion 01 and 02 handovers will have one combined light and heavy vehicle access on Kent Road and two heavy vehicle accesses and one light vehicle access on Lansdowne Road. SBT will retain Access Portion 03 until November 2024 and will have one light vehicle access and one heavy vehicle access on Kent Road. SCAW will retain Access Portion 04 until January 2025 and will have a heavy vehicle access on Lansdowne Road.

Accesses on Kent Road will be managed through speed zone reduction and signage on the road with traffic controllers at the heavy vehicle access gates noting the station construction will not require traffic controllers to manage regular heavy vehicle access.

Due to the width of Lansdowne Road during construction and the number of site accesses in close proximity, heavy vehicle access will be managed by traffic controllers within each site to give priority to entering vehicle to minimise queuing.

3 Project Details

3.1 Proposed Works

The Orchard Hills Station is to be delivered in 7 stages:

- Stage 1 - Site Preparation Works
- Stage 2 - Enabling Works
- Stage 3 - Structural Works
- Stage 4 – MEP and Vertical Transport Works
- Stage 5 - Finishes and Above Ground Structures
- Stage 6 - Precinct works including landscaping and external works
- Stage 7 – Rail Systems Construction

3.2 Site Location

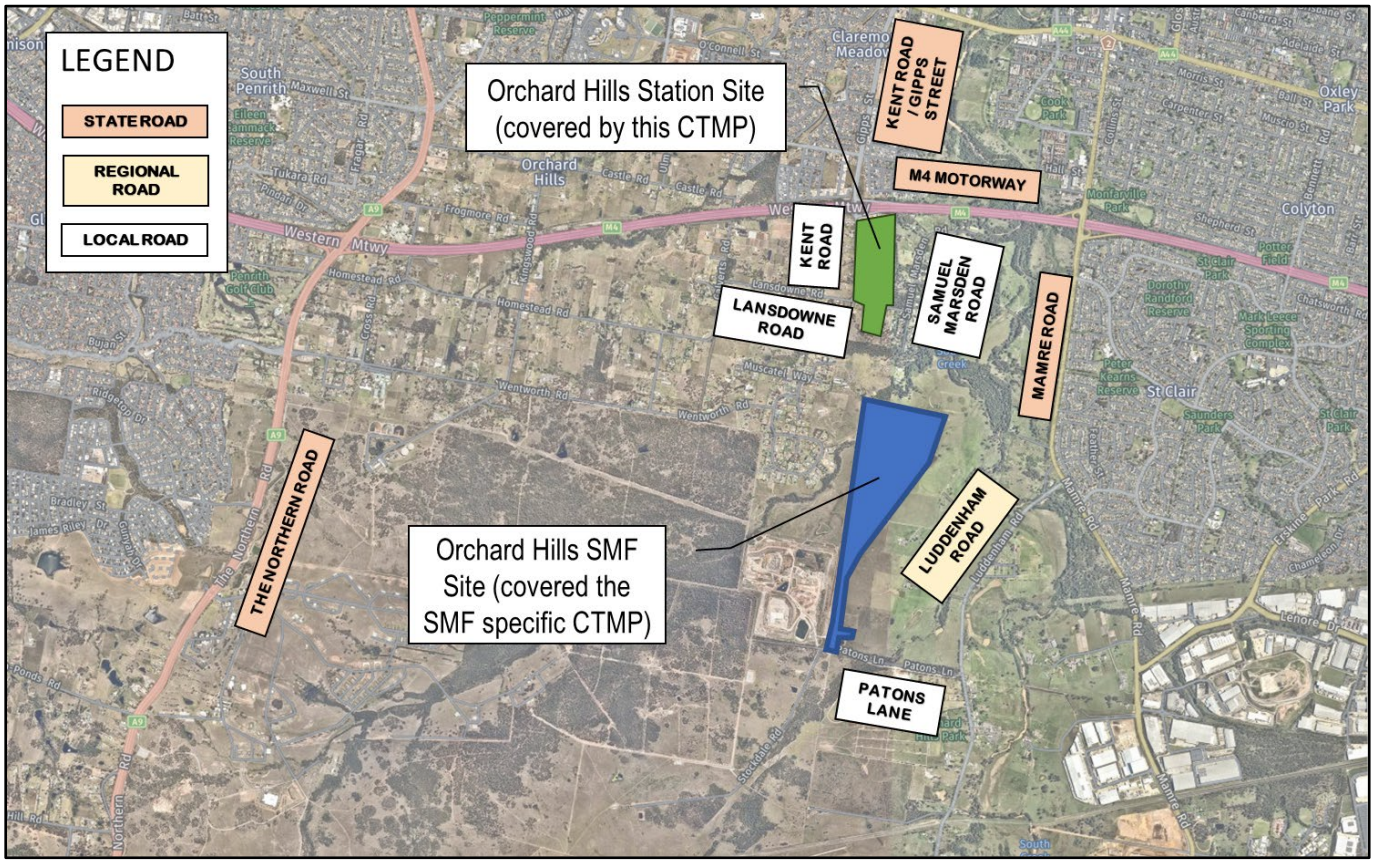


FIGURE 1: SITE LOCATION

The site is located to the south of M4, east of Kent Road, on either sides of Lansdowne Road, west of Samuel Marsden Road and north of South Gully. Access will be via either Kent Road or Lansdown Road, Orchard Hills.

3.3 Timing of Works

There will be 4 handovers to SSTOM dates, as shown in Figure 2:

- Access Portion 01 – N7 (SBT): 26 August 2023
- Access Portion 02 – N5 (SBT): 15 September 2023
- Access Portion 03 – N4 (SBT):15 November 2024
- Access Portion 04 – Area 1 (SCAW): 20 January 2025

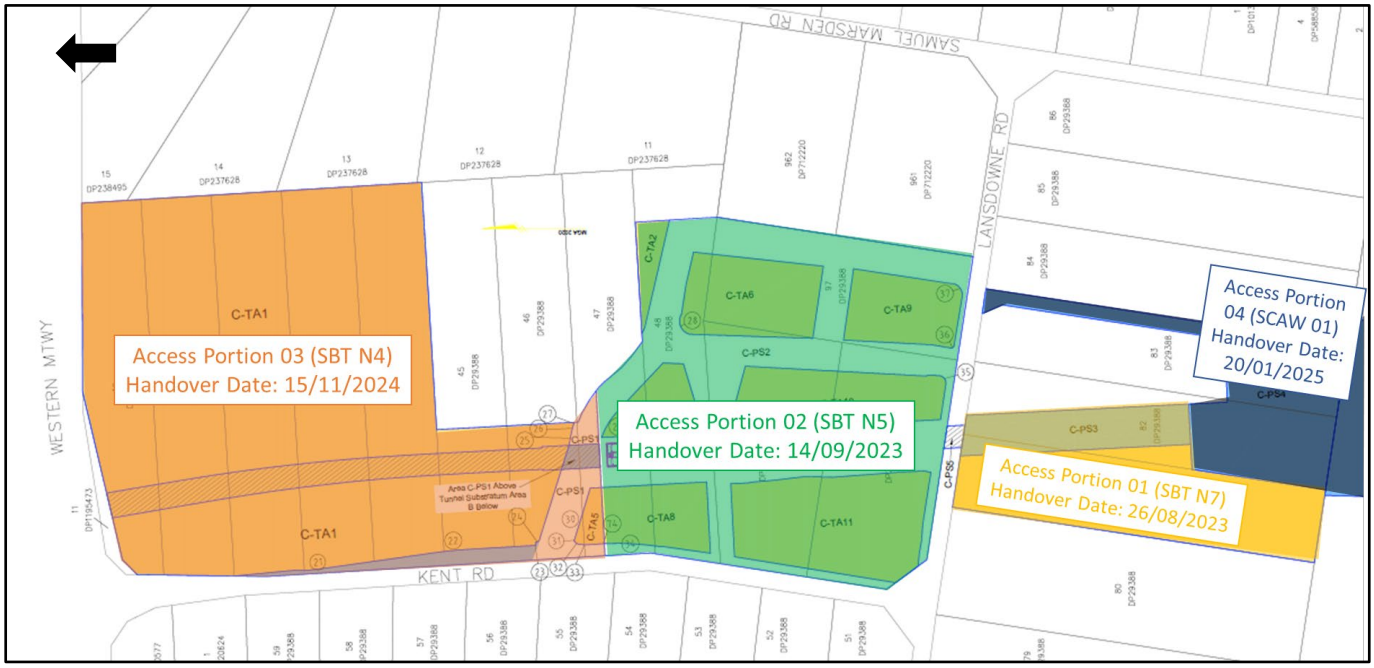


FIGURE 2: OHE STATION HANDOVER TIMING

Access Portion 01 (N7) will be used for Station construction works overflow parking only until the Access Portion 04 is handed over at the beginning of 2025 so the at grade Linewide works can start. Site establishment for Station construction will start on 14th September 2023 with the Access Portion 02 handover as the station box is within Access Portion 02 only.

Station construction works timing as outlined in Table 1.

TABLE 1: TIMING OF WORKS

Activity	Access Portion	Start Date	Finish Date
Stage 1 - Site Preparation Works	Access Portion 02	14-Sep-23	11-Dec-23
Stage 2 - Enabling works	Access Portion 02	29-Sep-23	14-Feb-24
Stage 3 - Structural Works	Access Portion 02	13-Jan-24	26-Aug-24
Stage 4 - MEP and VT Works	All portions	03-Dec-24	20-May-25
Stage 5 - Finishes and Above Ground Structures	Access Portion 02	13-May-24	26-Sep-24

Stage 6 - Precinct works including landscaping and external works	All portions	09-Aug-24	27-Feb-26
Stage 7 - Rail System Construction	Access Portions 01, 03, 04	14-Mar-25	13-Apr-26

3.4 Site Related Data

3.4.1 Road Details

The key roads surrounding the Site are identified within Figure 1 and summarised below noting Samuel Marsden Road is not part of the haul route:

TABLE 2: LOCAL ROAD NETWORK

Road Name	Section	Speed Limit	Parking	Traffic Volume and Peak Times	Urban / Rural
Kent Road	M4 to Lansdowne Road	70km/hr (reduced speed authorisation of 40km/hr)	No	-	Rural
Lansdowne Road	Kent Road to Samuel Marsden Road	70km/hr (reduced speed authorisation of 40km/hr)	No	-	Rural
Mamre Road	M4 Interchange	60km/hr – 80km/hr	No	-	Urban
M4	Turn off south onto Mamre Road	Up to 110km/hr	No	-	Urban

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

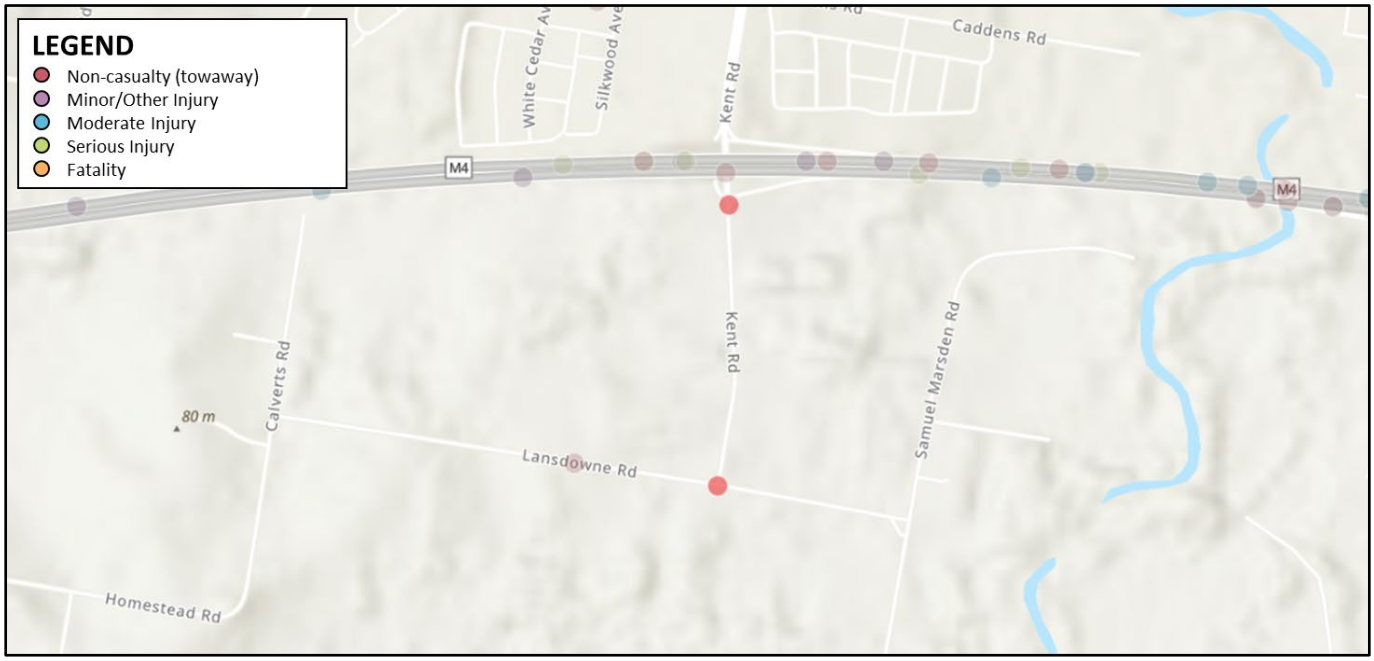


FIGURE 3: CRASH MAP

TABLE 3: CRASH HISTORY

Year	Location	RUM Code	Injury / Death
2017	M4 Westbound Off-Ramp at Kent Road	73 - Right off carriageway into object, parked vehicle	Non-casualty (towaway)
2018	Lansdowne Rd at Kent Road	13 - Right near	Non-casualty (towaway)

An analysis of the crash history shows two crashes only on the frontages roads both resulting in non-casualties. Note that both Kent Road and Lansdowne Roads will be rebuilt as part of the SMWSA delivery programme prior to SMWSA coming online in 2027.

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
Kent Road	M4 to Lansdowne Road	No (except near the interchange)	No No dedicated cycle / shared path along

			(except near interchange)
Lansdowne Road	Kent Road to Samuel Marsden Road	No	No No dedicated cycle / shared path

There is an existing shared path along the west side of Kent Road, connecting north along Gipps Street and the Great Western Highway, and across the M4 via a shared pedestrian / bicycle bridge, which terminates approximately 40m south of the Kent Road / M4 motorway off ramp, as shown in Figure 4.

There is no existing formalised pedestrian or off-road bicycle facility along Kent Road, between the M4 Motorway off ramp and Lansdowne Road.

FIGURE 4: SHARED PATH ON KENT ROAD LEADING TO THE M4 PEDESTRIAN OVERPASS

Samuel Marsden Road is not part of the haul road for this Site nor can the Site be accessed off Samuel Marsden Road.

4 Works Proposed

4.1 Site Access (Access Portions 01 and 02)

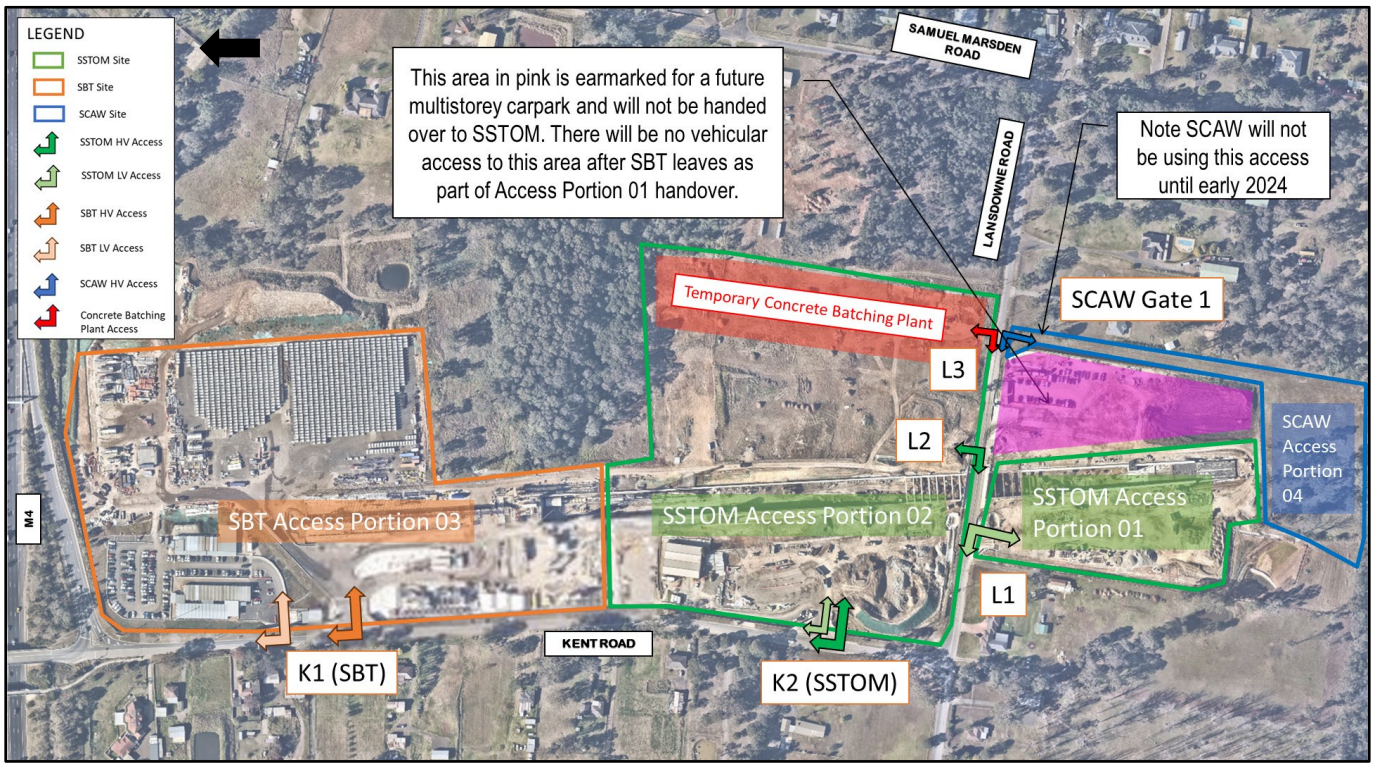


FIGURE 5: OHE SITE ACCESS

Site access for all vehicles into OHE Station Site will be off either Kent Road or Lansdowne Road from the M4 per directional arrows shown in Figure 5.

Prior to handover of Access Portions 03 and 04, HV access to the site will be either left turning off Kent Road (K2) or left turning off Lansdowne Road (L2). LV access to site will be left turning off Kent Road (sharing the HV access at K2) or right turning off Lansdowne Road (L1) to the overflow carpark in Access Portion 01.

All vehicles accessing the temporary concrete batching plant on the eastern side of Access Portion 02 will be right turning off Kent Road (L3).

No HVs are to access Samuel Marsden Road.

HVs exiting the Site will turn right onto Kent Road / Lansdowne Road only from Access Portion 02 to go back onto the M4 or continue onto Kent Road / Gipps Street.

LVs exiting the Site will turn right onto Kent Road or left onto Lansdowne Road to go back onto the M4 or continue onto Kent Road / Gipps Street.

4.2 Site Access (Post Access Portions 03 and 04 Handover)

Following Access Portions 03 and 04 handover, rail construction will commence in early 2025 with the associated rail deliveries to OHE site to start at the same time. SSTOM will take over the existing SBT and SCAW site accesses shown in Figure 5 for HV and LV access. The overflow carpark LV access off Lansdowne Road into Access Portion 01 will change to HV access to support the rail deliveries.

Following finalisation of the rail design this CTMP will be updated for construction traffic management requirements for rail construction.

4.3 Station Construction Works Proposed

FIGURE 6: OHE STATION ARCHITECTURAL (PRELIMINARY)

The following key activities would be undertaken for the station construction:

- Stage 1. Site Preparation Works
  - Site Survey and Set Out
  - Temporary Batch Plant Relocation (shown below in CTA6)
  - Mobilisation to Commence Works
  - Site Clearing and Grubbing
  - Earthworks & Drainage for Site Compound Areas
  - Temporary Buildings
  - Temporary Building Fitout and Furniture
  - Utility Temporary Connections
  - Access Roads, Hard Stand Areas, piling pad and Carparks
- Stage 2. Enabling works
  - Piling
  - Temporary dewatering system
  - Waterproofing
  - Tower crane/hoist installation
  - Base Slab Construction
  - Perimeter Wall Construction
- Stage 3. Structural Works
  - Internal Walls Construction
  - Perimeter Wall Construction
  - Headwall Construction

    - Precast Beams and Planks Installation
    - Masonry and Blockwork
    - Structural Steel Work
- Stage 4. MEP Works
    - Mech Services
    - Elec/Comm Services
    - Fire Services
    - Earthing & Bonding Testing & Certification
- Stage 5. Finishes and Above Ground Structures
    - FRP Structures
    - Fire Rated Painting
    - Metal Roofing
    - Metalwork
    - Roof Safety Systems
    - Ceilings
    - Wall Linings & Wall Finishes
    - Roofing
    - Façade
    - Louvres & Screens
    - Doors & Hardware
    - Floor Finishes
    - FF&E & Joinery
- Stage 6. Precinct Works
    - Landscaping
    - Footpaths
    - Pavements
    - Urban design and street furniture
- Stage 7. Rail System
    - Rail installation
    - Earthing and Bonding
    - Rail signalling

4.4 Temporary Concrete Batching Plant

A temporary concrete batching plant is proposed to be installed within Access Portion 02 in the location marked in red (refer to Figure 5).

Access to the plant will be via Lansdowne Road and there will be an internal access between the plant and the OHE station build in the western side of Access Portion 02.

This concrete batching plant will supply the SSTOM works at Orchard Hills Station (OHE), St Marys Station (STM), Orchard Hills Stabling and Maintenance Facility (SMF) and northern Linewide works (tunnel from OHE and at grade from OHE to the Warramgamba pipeline).

There will be an internal road from the batching plant to Orchard Hills Station construction area to the west within Access Porton 02.

SSTOM is negotiating access with SCAW to the Access Portion 04 Lansdowne Road access to supply SMF off the public road network.

Supply to STM will be via the M4 and Linewide works is through the tunnel in Access Portion 03 or through SMF on the handed over alignment.

4.5 Construction Hours

Construction hours have been outlined below per Condition E38:

TABLE 5: CONSTRUCTION HOURS

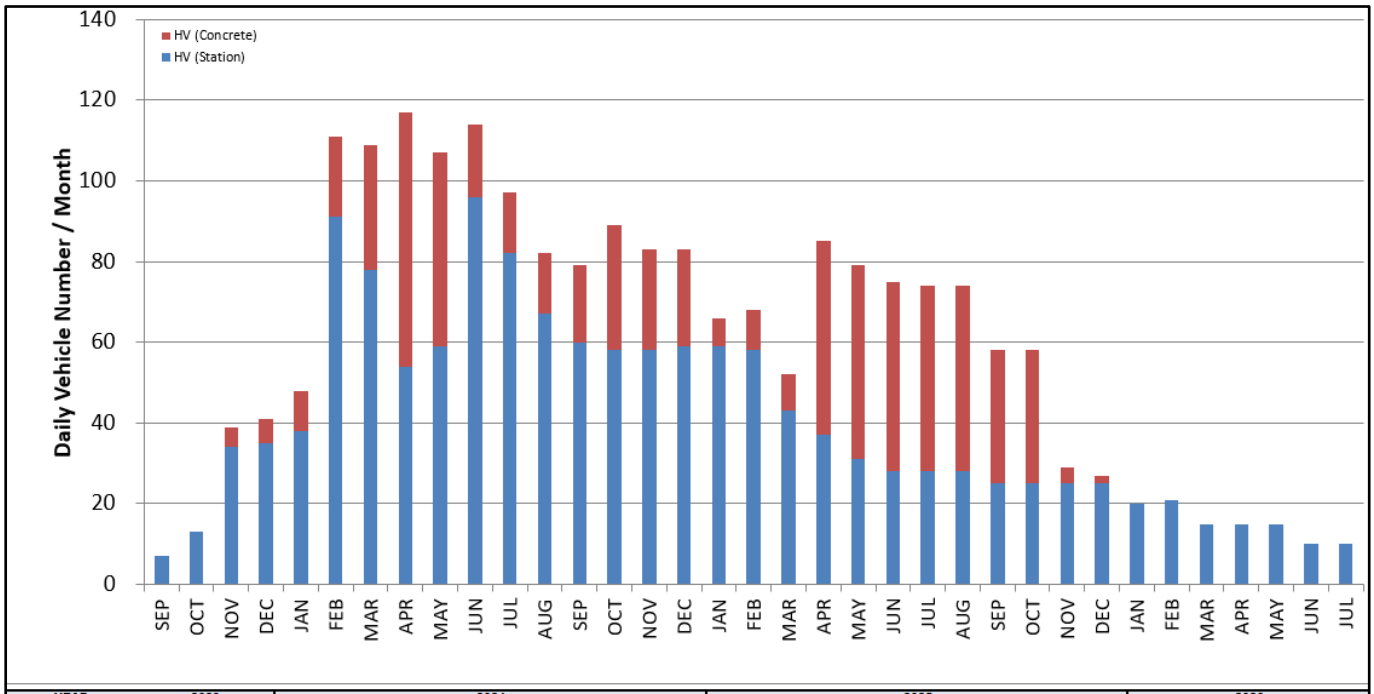
Activity	Day	Time
Construction Works	Mondays to Fridays	7:00am to 6:00pm
	Saturdays	8:00am to 1:00pm
	Sundays or Public Holidays	At no time

It is anticipated that construction works may be conducted outside of the hours outlined above. Should out of work hours be required, per Conditions E41 and E42, PLM D&C will lodge an application with DPE to seek approval for these works.

4.6 Construction Vehicle Movements

4.6.1 Truck Vehicle Volume

The projected daily heavy vehicle volume for all stages of OHE construction (indicated in blue, HV (Station)) and the temporary concrete batching plant (indicated in red, (HV (Concrete)) is shown in Figure 7.



YEAR	2023				2024											2025												2026						
MONTH	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
HV (Station)	7	13	34	35	38	91	78	54	59	96	82	67	60	58	58	59	59	58	43	37	31	28	28	28	25	25	25	25	20	21	15	15	15	10	10
HV (Concrete)	0	0	5	6	10	20	31	63	48	18	15	15	19	31	25	24	7	10	9	48	48	47	46	46	33	33	4	2	0	0	0	0	0	0	0

FIGURE 7: PROJECTED OHE HV NUMBERS

The anticipated heavy vehicle volume peak will start in February 2024 and come to a close following April 2025.

4.6.2 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 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 Station construction will be 19m long Articulated Vehicles (19m AVs) so no over-size over mass (OSOM) permit will be required for heavy vehicle access to site through Kent Road and Lansdowne Road. However, in the event that an oversized or over-mass vehicles is required to travel to the Site, PLM D&C will obtain an OSOM permit from the National Heavy Vehicle Register (NHVR).

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

There is no pedestrian or cyclist path available along the route from M4 to Site noting the existing shared path bridge parallel to the Kent Road bridge does not connect to any pedestrian / cyclist facilities north and south of the M4.

FIGURE 8: CONSTRUCTION VEHICLE ACCESS ROUTE

Note that following Access Portion 03 and 04 handover construction vehicles for rail segment delivery will be required to follow the same route when utilizing the public road network to access the site. However, as the rail segment lengths have not been finalised, maximum vehicle size will be determined in the subsequent CTMP update.

4.7 Temporary Traffic Management Method

4.7.1 Station Construction (Access Portion 01 and 02 Handover)

No works external to the Site will take place during Station construction and all deliveries will be undertaken by heavy vehicles 19m AV sized or smaller.

PLM will be maintaining the existing SBT site accesses on Kent Road (K2) and Lansdowne Road (L1, L2) for station construction. A third PLM site access on Lansdowne Road (L3) will be constructed for temporary concrete batching plant use. Traffic controllers will manage all site accesses when HV access is required. When the SCAW access gate is in use, SSTOM and SCAW traffic management will coordinate for HV access off Lansdowne Road.

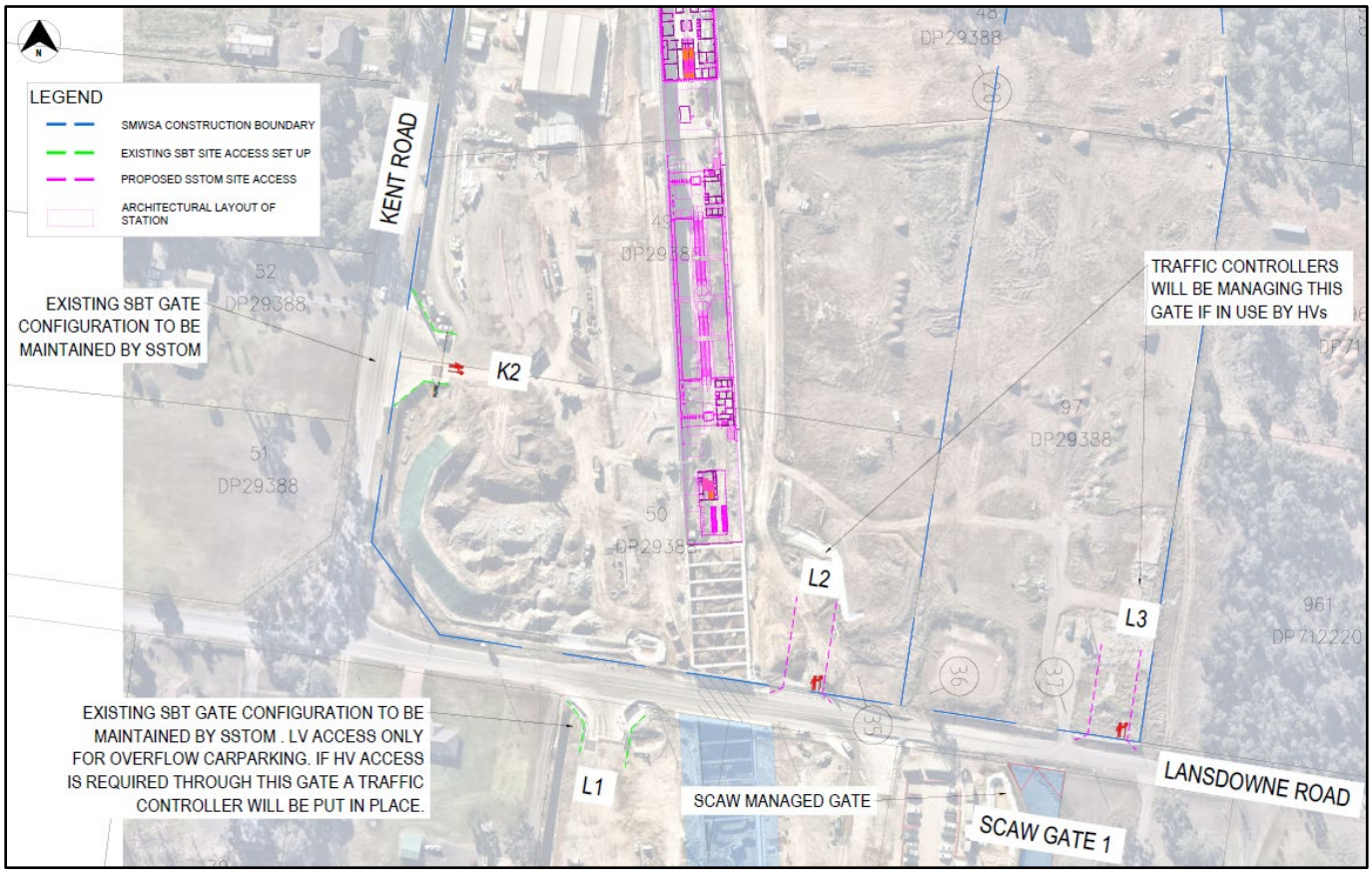


FIGURE 9: SSTOM OHE SITE ACCESS MANAGEMENT

PLM will be maintaining the SBT access gate configuration at the Kent Road Access Portion 01 site access. This site access is wide enough to accommodate simultaneous two-way movement between two 19m AVs as shown in Figure 10. A traffic controller will be managing traffic at this gate as light vehicles will be sharing this gate with the heavy vehicles to access the two on-site parking areas north and south of the site access. However, given the width of the gate and width of Kent Road, the traffic controller will be managing traffic inside of the site boundary only with no need to stop / slow traffic on Kent Road.

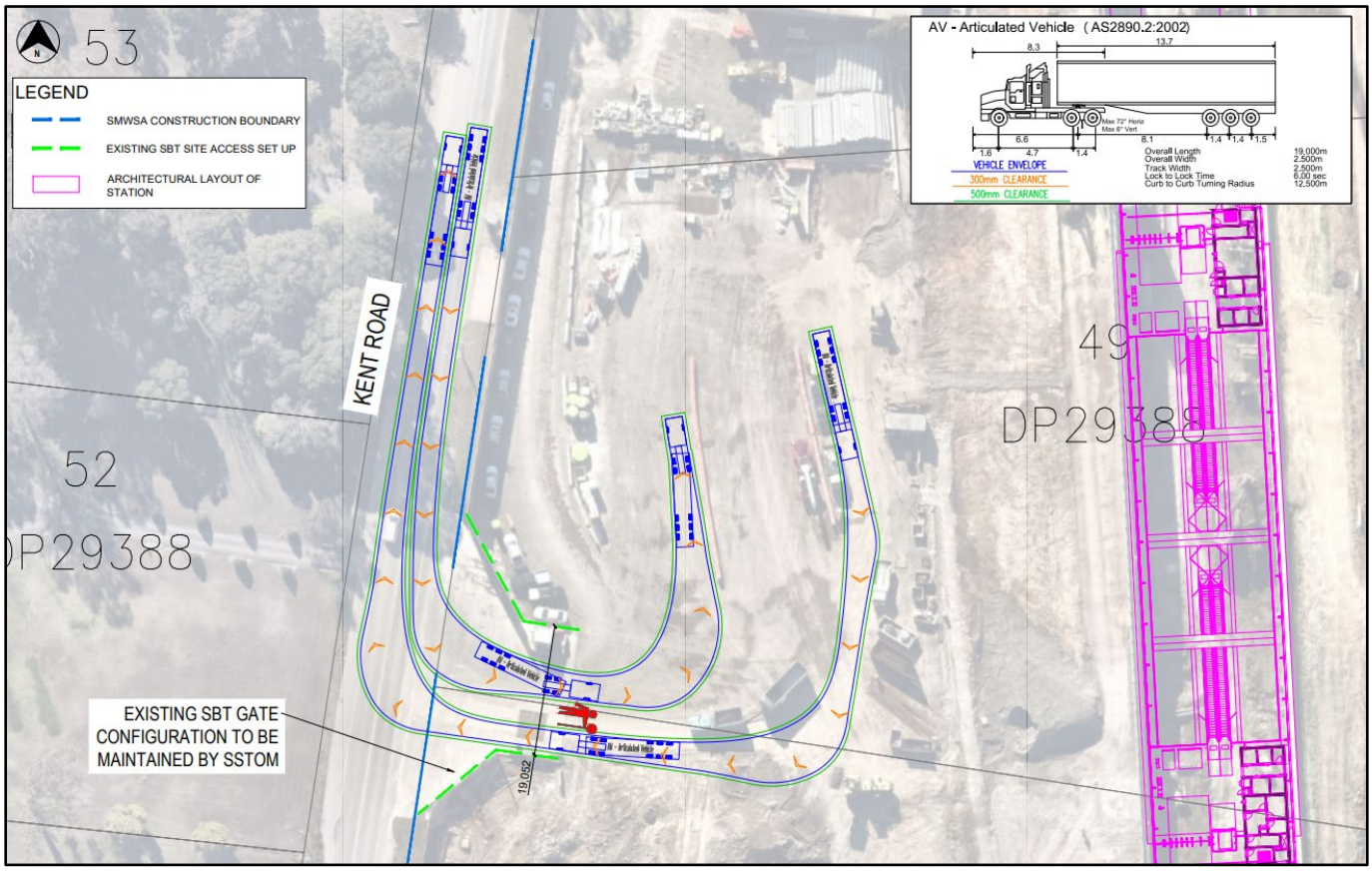


FIGURE 10: KENT ROAD SHARED HV / LV ACCESS (K2)

19m Avs can achieve simultaneous two-way access at the Lansdowne Road / Kent Road priority intersection as shown in Figure 11. No additional traffic management measure is required.

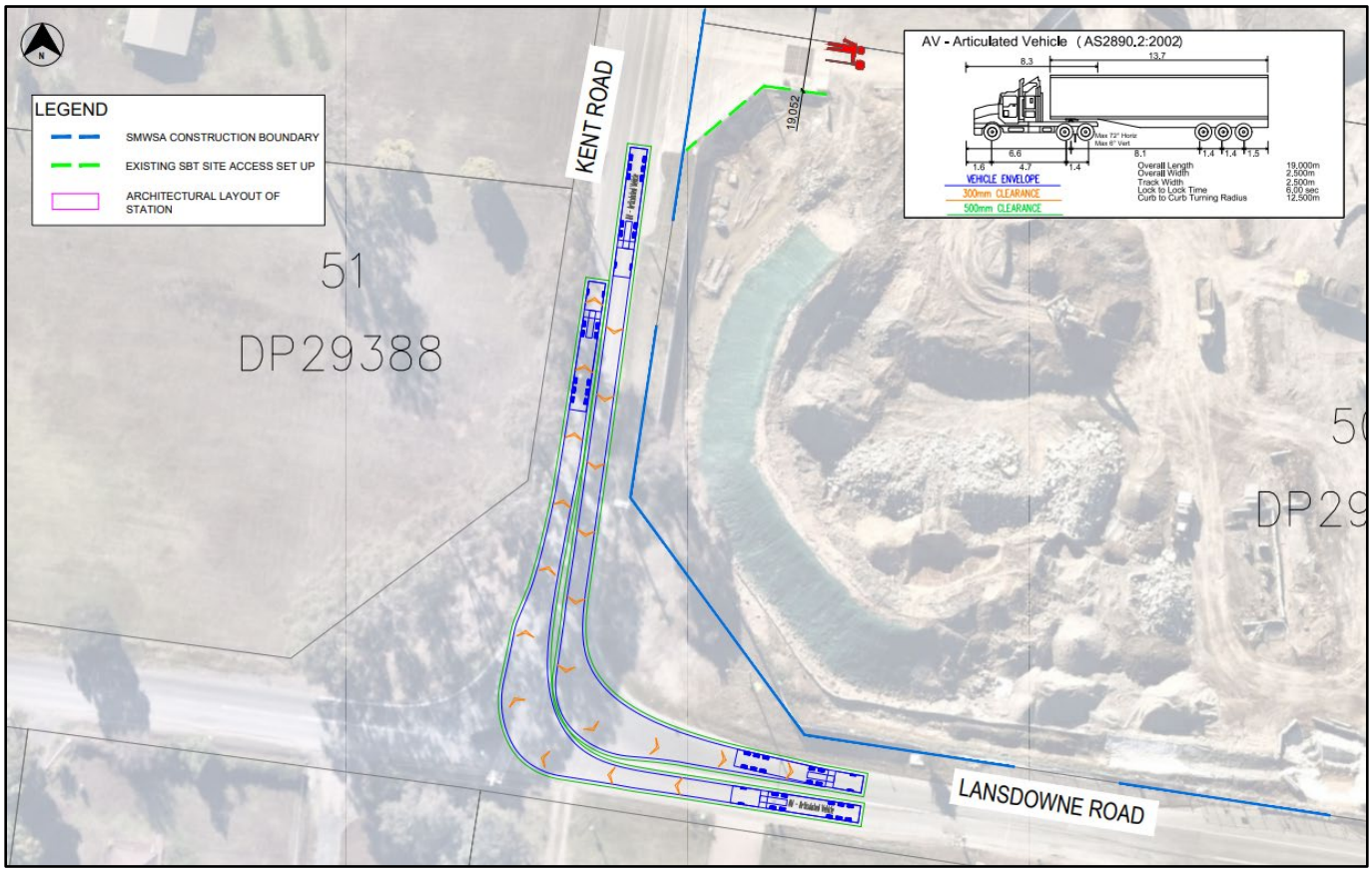


FIGURE 11: KENT ROAD / LANSDOWNE ROAD INTERSECTION SWEPT PATH

PLM will be retaining the Permanent Lansdowne Road Bridge Traffic Guidance Scheme SBT currently has for the site shown in Figure 12. Note that the arrangement shown in Figure 12 does not include the combined Variable Message Signs (VMSs) and Radar Activated Speed Signs (RASSs) signs required to manage the reduced speed zone granted for Kent Road and Lansdowne Road and the directional signs for the LV only / HV only gates.

PLM has negotiated with SBT for the retention of the combined VMS / RASS signboards to enforce the 40km/hr speed zone and to maintain the roadworks speed zone authorisation for Kent Road and Lansdowne Road.

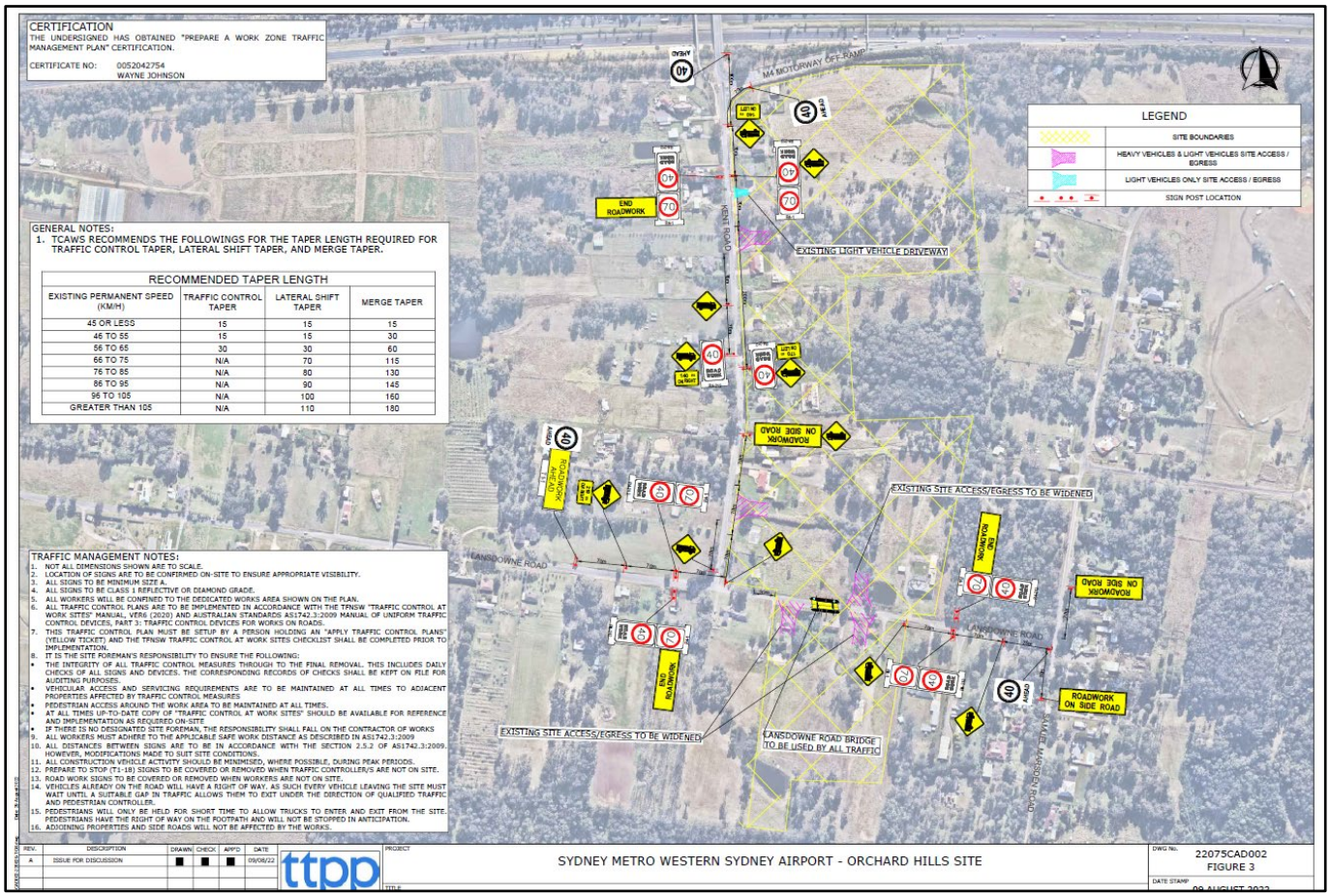


FIGURE 12: SBT CURRENT TGS (EXTRACTED FROM SMWSASBT-CPG-OHE-SN150-TF-PLN-202038 REV 00)

PLM will have a secondary heavy vehicle only site access on Lansdowne Road. Due to the width restraints on Lansdowne Road, heavy vehicles will not be able to achieve simultaneous two-way access per Figure 13.

All drivers of heavy vehicles requiring access to this site access will be briefed to radio ahead to the traffic controller managing this site access while on Kent Road so the traffic controller can hold all exiting vehicles within the site so to minimise any queuing on Lansdowne Road.

This site access will be utilised on the occasional heavy traffic day only and closed when not required for use.

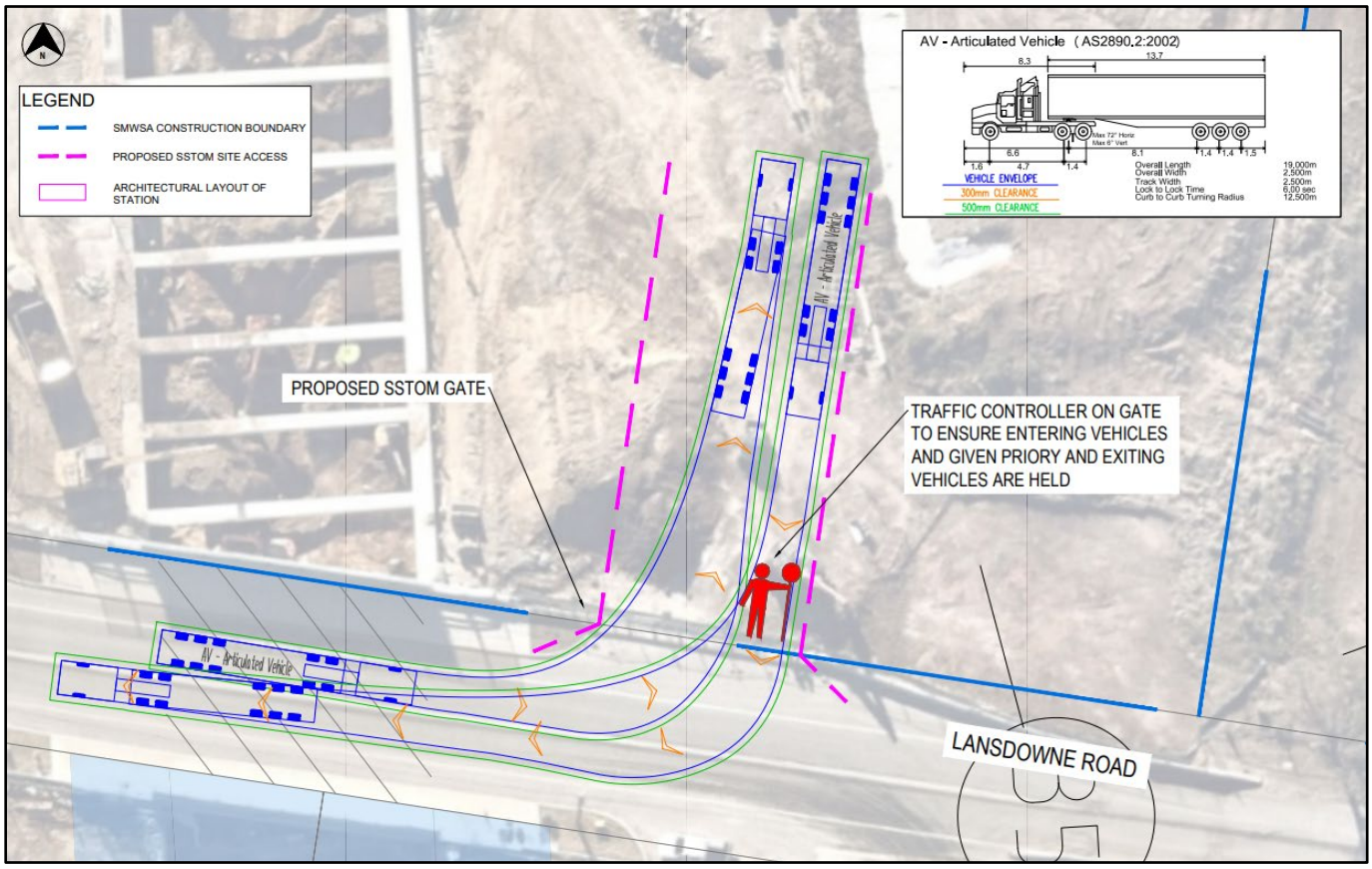


FIGURE 13: LANSDOWNE ROAD HV ONLY ACCESS (L2)

Aggregate delivery to the temporary concrete batching plant will be undertaken by 19m AVs once or twice a day depending on concrete demand. Concrete from the batching plant will be delivered using 12.5m long agitator vehicles (12.5m HRV equivalent). Notwithstanding, due to the width of Lansdowne Road, the site access to the temporary concrete batching plant cannot accommodate simultaneous two-way access for either 19m AVs or 12.5m HRVs.

Access to the temporary concrete batching plant off Lansdowne Road utilising the largest vehicle required (19m AVs) is shown in Figure 14.

All drivers of heavy vehicles requiring access to this site access will be briefed to radio ahead to the traffic controller managing this site access while on Kent Road so the traffic controller can hold all exiting vehicles within the site so to minimise any queuing on Lansdowne Road.

The driveway shown indicatively in Figure 14 will be constructed by PLM. PLM will apply through Council's Driveway Application process for this temporary construction driveway.

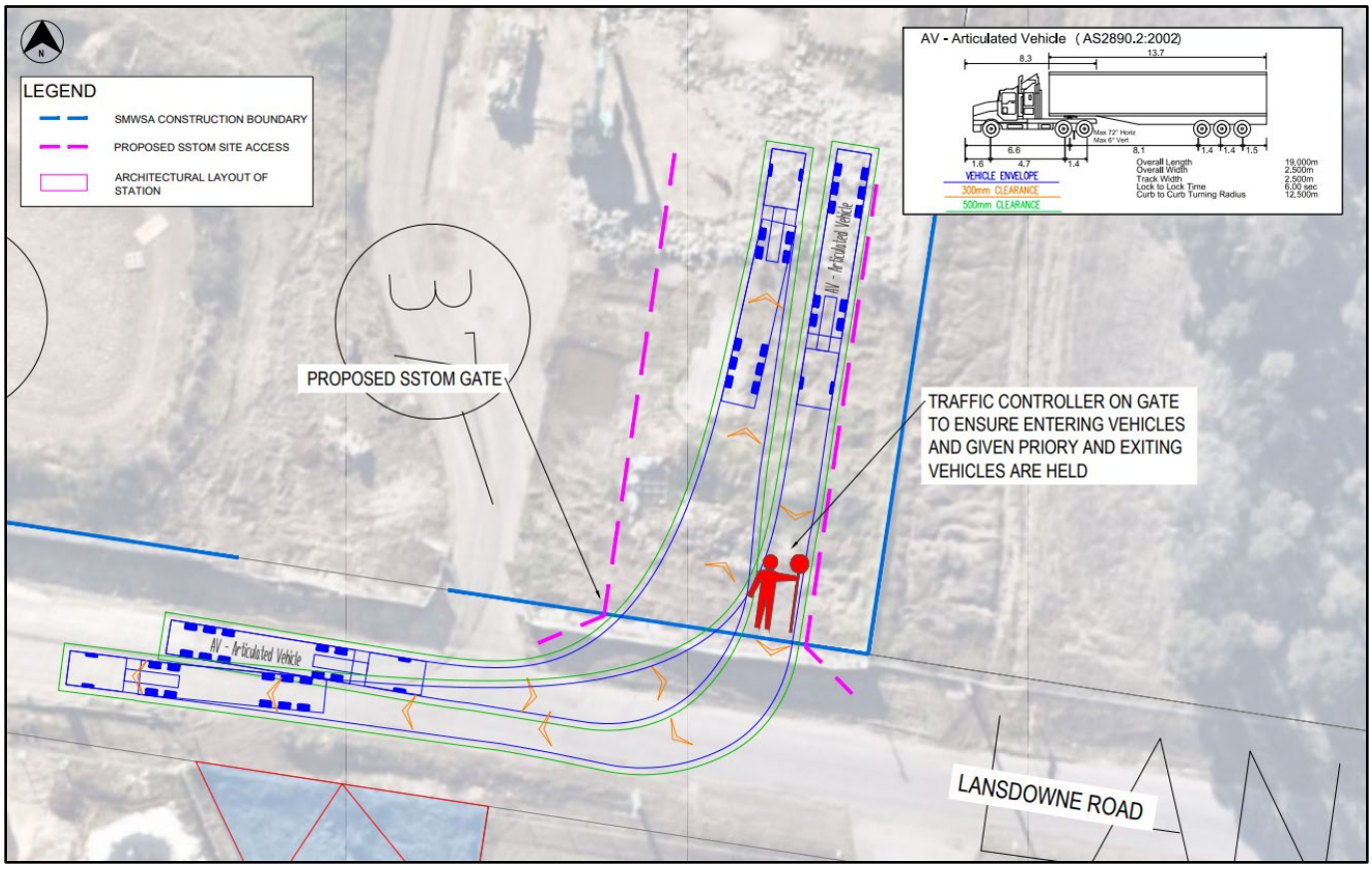


FIGURE 14: TEMPORARY BATCHING PLANT ONLY ACCESS (L3)

There is a lack of any pedestrian or cyclist facilities at the site accesses on either Kent Road or Lansdowne Road. The traffic controller on duty (one hour before and one hour after construction hours) will facilitate access and to direct any general traffic if required.

PLM will be retaining the existing SBT Permanent Lansdowne Road Bridge Traffic Guidance Scheme and provide two additional roadwork speed zone repeater signs on Lansdowne Road east of Kent Road to reinforce the speed zone authorisation. Directional signage will be provided at the K2, L1, L2 and L3 gates for PLM site operations as shown in Figure 15.

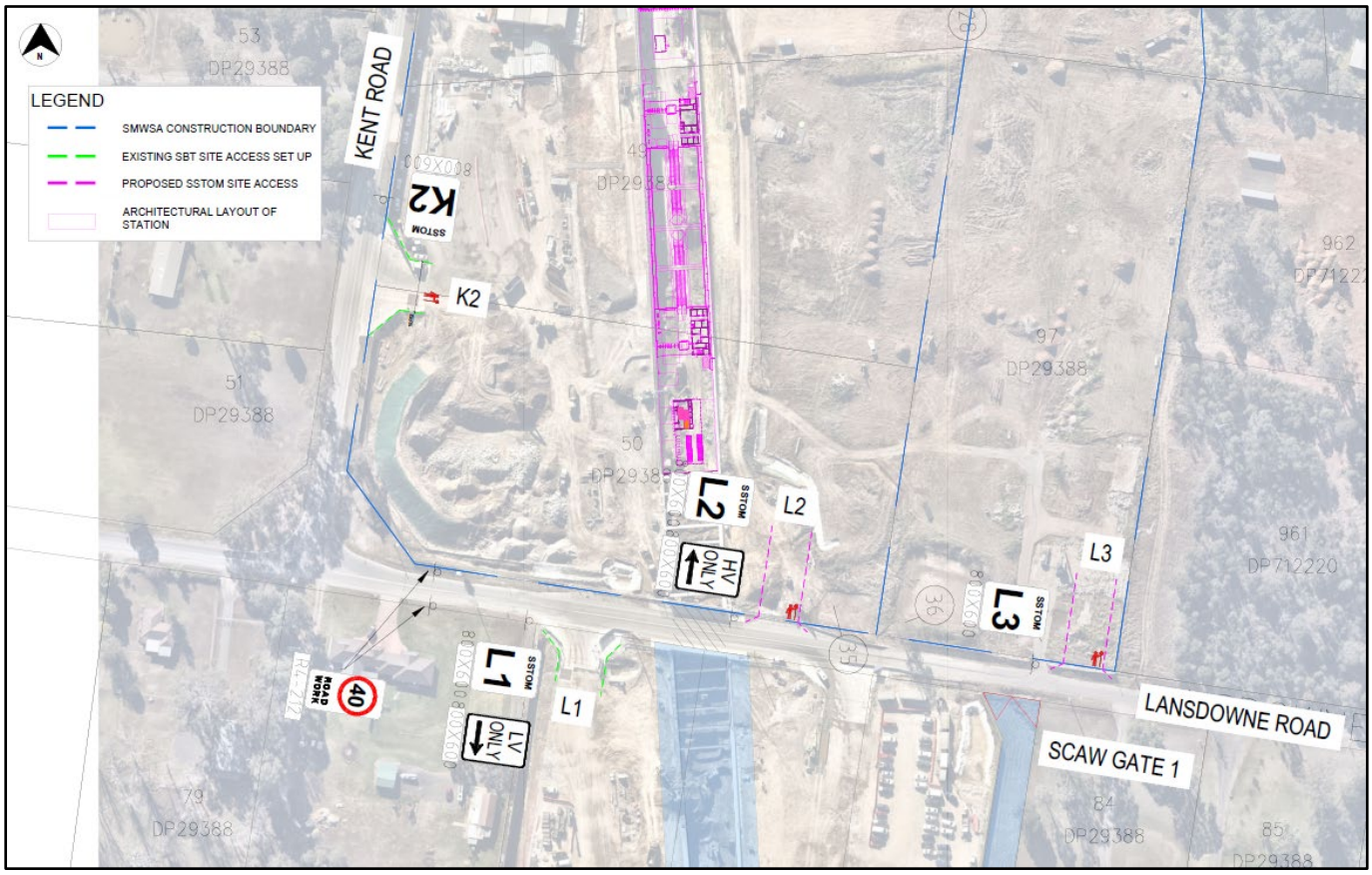


FIGURE 15: SSTOM DIRECTIONAL SIGNAGE PLAN

SCAW has informed PLM that the SCAW Gate 1 access off Lansdowne Road will likely be completed by the end of September 2023. However due to the access road's proximity to the residential property immediately to the east, SCAW intends to minimise the use of this gate as much as possible in order to mitigate impact.

Per the SCAW Lansdowne Road Gate 1 CTMP (SMWSASCA-CPU-1NL-NL000-TF-PLN-000002, approved Feb 2023), SCAW intends to use stop / slow to manage HV access through this gate with entering vehicles given priority. The closest SSTOM site access to SCAW Gate 1 is L3 which is offset clear of the SCAW Gate 1. PLM traffic controller on L3 gate will if required coordinate with the SCAW Gate 1 traffic controller to manage vehicle access.

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

4.7.2 Rail Construction (Access Portion 03 and 04 Handover)

Deliveries of rail segments for construction of the rail infrastructure is expected to start in early 2025 which will necessitate deliveries utilizing Class 01 or 03 heavy vehicles. Temporary traffic management arrangements will change to accommodate the deliveries and this CTMP will be updated following finalisation of rail design.

4.8 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 C.

5 Traffic Impact Management

5.1 Vehicle Impact Management

There will be minimal impact on the surrounding road network as the vehicle numbers are significantly less for Stage 01 works before Stage 02 starts. The project vehicle number at peak is shown in Table 6 noting that PLM D&C 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.

TABLE 6: PROJECTED VEHICLE NUMBERS

Vehicle Type	IN	OUT	TOTAL	IN	OUT	TOTAL
	EIS AM Peak Construction Movements			**EIS** PM Peak Construction Movements		
LV Staff	178	0	178	0	178	178
LV Deliveries	2	2	4	2	2	4
HV	20	20	40	20	20	40
	PLM AM Peak Construction Movements (OHE construction and concrete batching plant combined peak)			**PLM** PM Peak Construction Movements (OHE construction and concrete batching plant combined peak)		
LV Staff	60	0	60	0	120	120
LV Deliveries	1	1	2	1	1	2
HV	11	11	22	9	9	18

No queuing will be permitted on either Kent Road or Lansdowne at any time. Heavy vehicle access to the Site will be managed and monitored by PLM D&C with all subcontractors to register for a delivery timeslot and location on the construction logistic software prior being granted access to Site.

The site superintendent will ensure that the minimum number of vehicles possible is scheduled to come in during the EIS peak hours and given that there is a kilometre of vehicle storage area on site, release the minimum number of vehicles possible from site during the EIS peak hours to minimise impact on the surrounding road network.

5.2 Pedestrian / Cyclist Impact Management

There is a lack of pedestrian and cyclist facilities and negligible foot traffic / cyclists in the area.

Works proposed in this CTMP will not change or impact the operations of the cycle path. Trained on-site personnel will assist pedestrians and pedestrians past the work site access along Kent Road as required.

PLM delivery drivers will be made aware of the access to / from the Kent Road shared path connection and potential presence of pedestrian and bicycle movements. The access point to the shared path is approximately 40m south of the Kent Road exit ramp from the M4, located on the west side of Kent Road, on the south approach to the Kent Road / M4 Off Ramp intersection.

In addition, all PLM delivery drivers will always be made aware of existing road conditions and pedestrians and cyclists (at the interchange) around Site and instructed through site inductions and toolbox talks of site-specific traffic

risks and the requirement to allow safe passage to vulnerable road users at site access/ egress locations. This is also enforced in the Drivers Code of Conduct in Appendix F.

5.3 Public Transport Impact Management

There is no impact on public transport during these works as there are no public transport services that operate within the immediate frontages of the site and the immediate surrounding area.

However, all delivery drivers will be briefed that buses are always given priority along the haul route. This is also enforced in the Drivers Code of Conduct in Appendix F.

5.4 Property and Utility Access Impact Management

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

The height of powerlines over gates is a minimum of 7m high.

The traffic controller on the Site access gate will be briefed to direct general traffic when necessary.

5.5 Cumulative Impacts

SSTOM, SBT and SCAW will be sharing Kent Road and Lansdowne Road to access the OHE site between September 2023 and end of 2024.

SSTOM projected heavy vehicle traffic generation is well within the EIS peak construction movements for all phases of construction even accounting for the temporary concrete batching plant.

SCAW has indicated that they will have minimal heavy vehicle traffic generation during the EIS peak times and will refrain from using the Lansdowne Road Gate 1 when possible to mitigate impact to residents.

SSTOM has liaised with SBT to determine SBT traffic generation requirements and due to the unknown nature of the timing surrounding the TBM launch, SBT was not able to provide projected vehicle numbers with any certainty to add to SSTOM projected HV numbers.

Therefore, to mitigate the impact on the public road network, SSTOM and SBT's senior project management team for OHE will meet every week starting 2 weeks prior to Portion N5 handover to discuss HV deliveries and timing to coordinate the use of Kent Rd.

Similarly, the SSTOM interface team will have regular meetings with the SCAW interface team to coordinate the use of Lansdowne Road when required.

Additionally, SSTOM traffic management is an active participant in the TTLG, TCG and the Luddenham Transport Working Group meetings ensuring ongoing monitoring and discussion will occur over the life of the project.

5.6 Authorised Traffic Controller

K2 site access will have one traffic controller to manage delivery traffic and contractor access at the Site access and be responsible for opening the site gate on Kent Road starting one hour before construction hours and ending one hour after. The traffic controller will coordinate with the traffic controllers within site via radios to manage parking on site and will direct general traffic when required within the site boundary.

Two more traffic controller will float within Access Portion 02 to coordinate the parking within the site with the traffic controller on gate via radio and if necessary, manage the unloading and loading of heavy vehicles.

When L2 site access is open or HVs require access through L1, one traffic controller will manage delivery traffic and contractor access at the Site access and be responsible for opening the site gate on Lansdowne Road starting one hour before construction hours and ending one hour after or as required.

The L3 access to the temporary concrete batching plant will have one traffic controller managing delivery traffic and contractor access at the Site access and be responsible for opening the site gate on Lansdowne Road starting one hour before concrete batching plant operating hours and ending one hour after. This traffic controller will be in contact via radio with the site manager of the concrete batching plant to ensure queuing within the site is managed and if necessary, turn away heavy vehicles at the gate.

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.
- Supervision of all loading and unloading of construction materials during the deliveries in the construction phase of the project.

6 Parking Management

PLM D&C will ensure the OHE construction works will have minimal impact on parking in the area.

There will be no contractor parking allowed on the surrounding road network including Kent Road, Lansdowne Road or Samuel Marsden Road.

The on-site parking area within the OHE site can accommodate the projected 320 light vehicle parking requirement within four parking areas as shown in Figure 16.

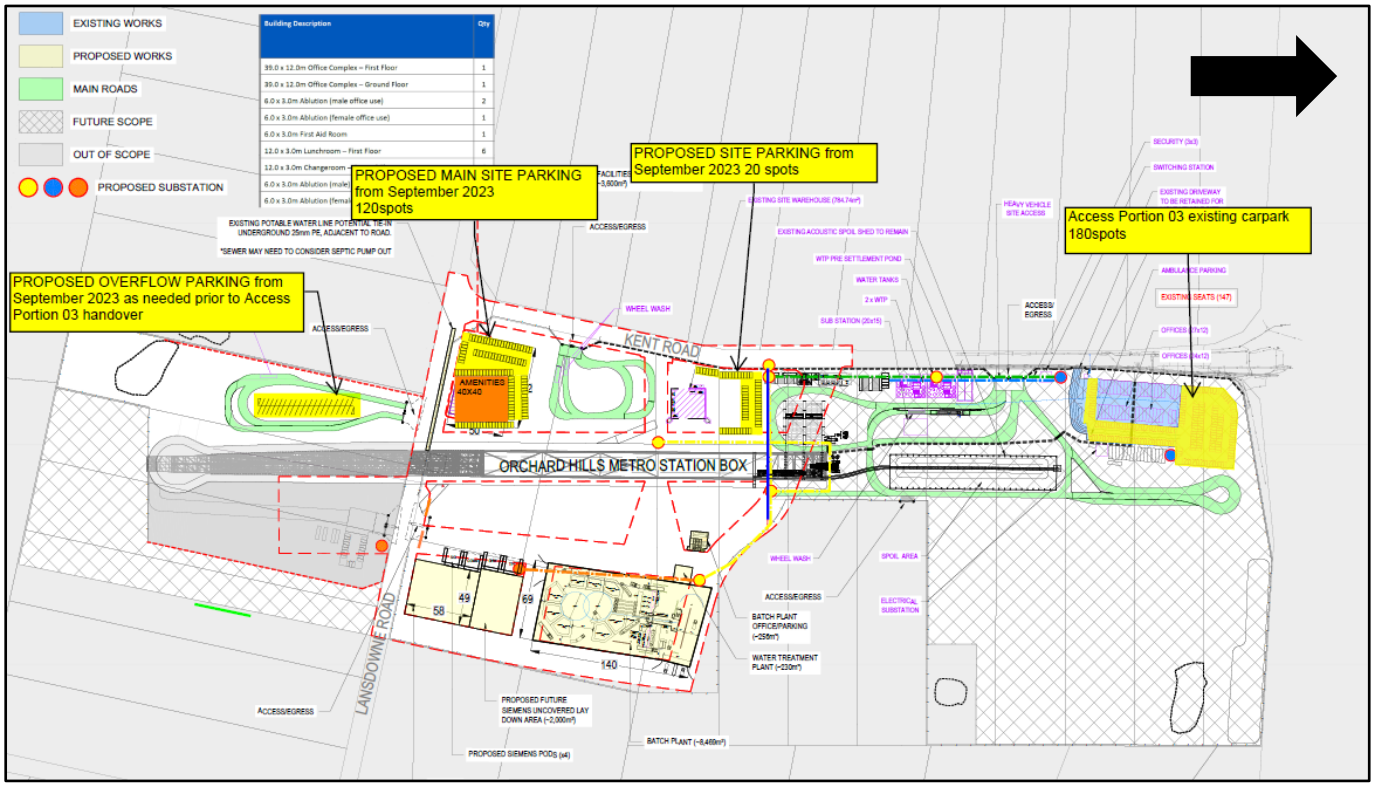


FIGURE 16: PROPOSED SITE ESTABLISHEMENT PLAN

All visitors to Site will arrange the visit with PLM D&C and be provided with guidance on the exact location of the on-site visitor parking area and ensure vehicle license plate is provided in advance with visitation timeline to the traffic controllers on-site to provide guidance and be supplied with a visitor permit to display on the dashboard. The capturing of visitation timeframe is to ensure that visitor access timeframes and demand for parking can be adequately managed and do not exceed approved traffic volumes and on-site parking availability.

Subcontractors will have to register their car parking requirements with PLM D&C 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.

Traffic controllers will be stationed at each parking area to coordinate parking and communicate with the traffic controller at the gate to direct car parking traffic between parking areas from one hour before construction hours to end of construction hours.

PLM D&C 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.

PLM D&C will implement a booking system to enable scheduling of shuttle bus services between St Marys Railway Station and the Site. All contractors going to site will be able to sign up for shuttle bus service going to and from site a week before their start date to allow PLM D&C to schedule shuttle buses at set times between St Marys Railway Station and the Site. The shuttle buses will be operated using the one 12-seater minibus.

7 Agency Permits

7.1 Council Permits

No Council permits is required for Station construction.

PLM will apply for a Driveway Construction permit with Penrith Council for the construction of the temporary driveway for the temporary concrete batching plant.

However, it is noted that PLM D&C is required to apply for the following permits with Council for the following activities which affect Council assets:

- Driveway Construction: Construction of driveways and footpath connections over the Council road reserve including kerb and gutter modifications.
- Road Reserve Occupancy: Temporary occupation or closure of a road reserve for construction or events.
- Road Reserve Opening / Excavation: Surface or deep excavation of the road reserve.
- Construction Work Zone: Dedicated right of access and parking allocation on a local road outside a development.

The proposed works and associated construction traffic management measures covered in this CTMP does not result in any changes or additional regulatory signage, line marking or traffic facilities along Kent Road or Lansdowne Road frontages of the site. Therefore, there is no known elements of works covered in this CTMP that requires referral to the Local Traffic Committee.

7.2 Road Dilapidation Report

Before any local road, i.e. Kent Road and Lansdowne Road, is used by Heavy Vehicles, a Road Dilapidation Report will be prepared. A copy of that report will be provided to Penrith 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 Penrith City Council's discretion):

- Compensate Penrith City Council for the damage 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.

7.3 OSOM Permits

No OSOM permit is needed for station construction.

7.4 Speed Zone Authorisation Permits

PLM will be taking over the Speed Zone Authorisation Permits for Kent Road and Lansdowne Road from SBT prior to Access Portion 03 handover.

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:

Juan Gomez de Lucas (Project Manager): +61 457 457 848

Sherville Hall (Site Superintendent): +61 474 204 047

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).
- Public transport interruptions will be communicated via on site signage.
- Active transport users will be provided with advance warning signs.

8.4 Variable Message Signs

Variable messages signs are required for taking over the Speed Zone Authorisation Permit. PLM will confirm the VMS strategy on site with CJP prior to SZA takeover. If any additional VMSs are required for OSOM deliveries to this site in, the VMS strategy and messages will be forwarded to CJP for comment prior to installation.

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
- Penrith City Council (PCC)
- Transport for NSW (TfNSW)

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

9 Monitoring and Review

9.1 Road Safety Audit

Road safety audits will be undertaken on this CTMP as noted in the section 10 of the Construction Traffic Management Framework. A copy of the road safety audits will be provided in Appendix E in Revision B.

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

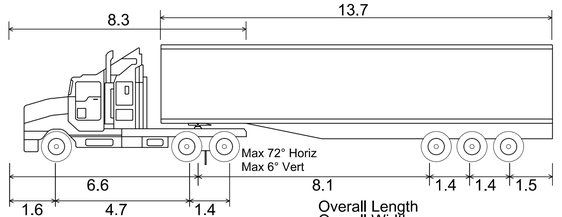
N

53

LEGEND

- SMWSA CONSTRUCTION BOUNDARY
- EXISTING SBT SITE ACCESS SET UP
- ARCHITECTURAL LAYOUT OF STATION

AV - Articulated Vehicle (AS2890.2:2002)



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Track Width	2.500m
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Curb to Curb Turning Radius	12.500m

KENT ROAD

52

DP29388

49

DP29388

AV - Articulated Vehicle

19.052

STOP

R1-1

EXISTING SBT GATE CONFIGURATION TO BE MAINTAINED BY SSTOM

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LEGEND

- SMWSA CONSTRUCTION BOUNDARY
- EXISTING SBT SITE ACCESS SET UP
- ARCHITECTURAL LAYOUT OF STATION

KENT ROAD

19.052

AV - Articulated Vehicle

51

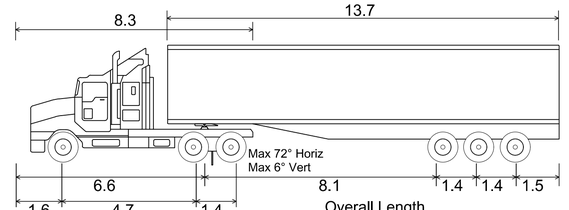
DP29388

50

DP29

LANSDOWNE ROAD

AV - Articulated Vehicle (AS2890.2:2002)



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LEGEND

- SMWSA CONSTRUCTION BOUNDARY
- PROPOSED SSTOM SITE ACCESS
- ARCHITECTURAL LAYOUT OF STATION

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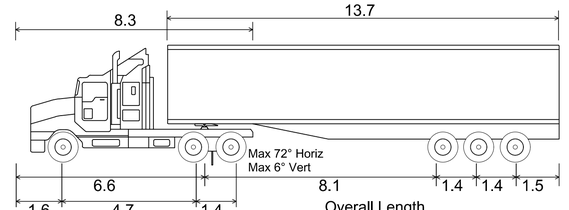

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PROPOSED SSTOM GATE

TRAFFIC CONTROLLER ON GATE TO ENSURE ENTERING VEHICLES AND GIVEN PRIORY AND EXITING VEHICLES ARE HELD

AV - Articulated Vehicle

AV - Articulated Vehicle

R1-1

STOP

LANSDOWNE ROAD

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LEGEND

- SMWSA CONSTRUCTION BOUNDARY
- PROPOSED SSTOM SITE ACCESS
- ARCHITECTURAL LAYOUT OF STATION

PROPOSED SSTOM GATE

AV - Articulated Vehicle

AV - Articulated Vehicle

TRAFFIC CONTROLLER ON GATE TO ENSURE ENTERING VEHICLES AND GIVEN PRIORY AND EXITING VEHICLES ARE HELD

R1-1

STOP

LANSDOWNE ROAD

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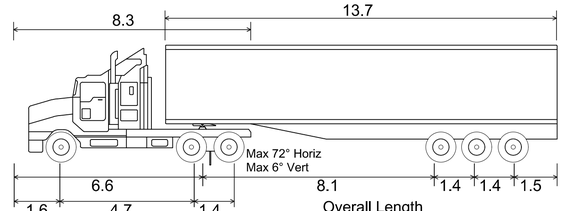

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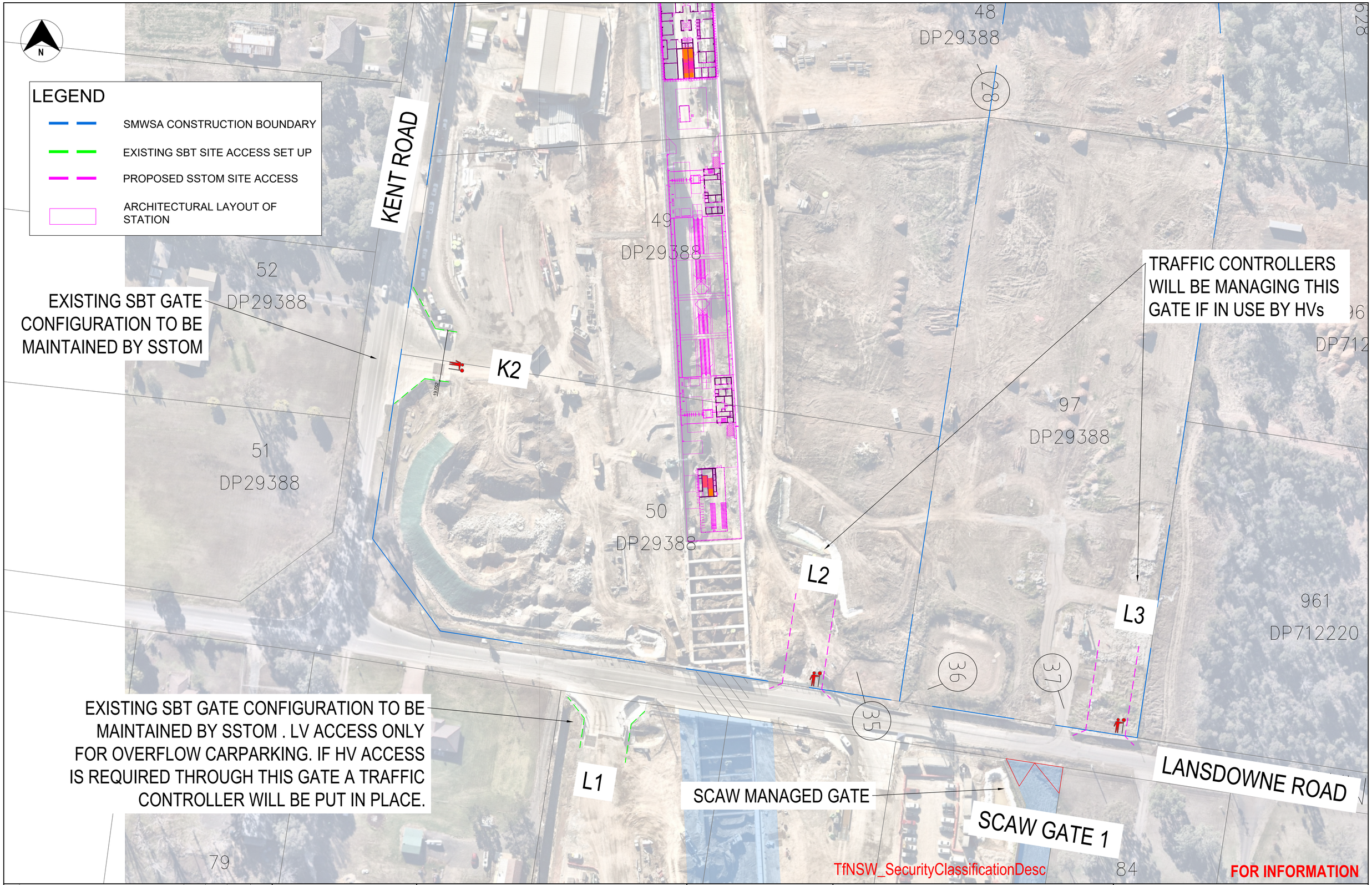

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CLIENT: NSW GOVERNMENT | sydney METRO

Parklife Metro D&C

tbAEOSuppName

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tbDesignCompName

tbAEODisciplineDesc

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DRG CHECK	tbDrgChkName	tbDrgChkDate
DESIGN CHECK	tbDsnChkName	tbDsnChkDate
APPROVED	tbApprName	tbApprDate

SYDNEY METRO - WSA - SSTOM

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tbDetail3

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STATUS: tbStatus | EDMS No: tbEDMS

DRG No: tbAEODrgNo | REV tRev | VER Ver

N

LEGEND

- SMWSA CONSTRUCTION BOUNDARY
- EXISTING SBT SITE ACCESS SET UP
- PROPOSED SSTOM SITE ACCESS
- ARCHITECTURAL LAYOUT OF STATION

53
DP29388

KENT ROAD

009X008
K2 SSTOM
K2
10.05m

49
DP29388

50
DP29388

008X008
L2 SSTOM
L2
800X600
HV ONLY

L3
800X600
L3 SSTOM

36
35

962
DP71222

97
DP29388

961
DP712220

LANSDOWNE ROAD

SCAW GATE 1

84
DP29388

85
DP29388

800X600
L1 SSTOM
L1
800X600
LV ONLY

R4-212
ROAD WORK
40

79
DP29388

51
DP29388

TfNSW_SecurityClassificationDesc

FOR INFORMATION

REV.	AMENDMENT DESCRIPTION	Design by	Verified by	Approved by	Date
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tbAMDRevNo	tbAMDDescREV5	tbAMDDsgnREV5	tbAMDVerREV5	tbAMDAprREV5	tbAMDDateREV5
tbAMDRevNo	tbAMDDescREV4	tbAMDDsgnREV4	tbAMDVerREV4	tbAMDAprREV4	tbAMDDateREV4
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tbAEOSuppName

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TAO DESIGN COMPANY/CONTRACTOR:

tbDesignCompName

tbAEODisciplineDesc

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

SYDNEY METRO - WSA - SSTOM

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Appendix B Risk Assessment

Sydney Metro WSA – Stabling and Maintenance Facility

Risk Assessment and Communication Tool

Site Name	Orchard Hills Station
Site Location	Kent Road / Lansdowne Road, Orchard Hills
Date of Assessment	17 July 2023
Revision	Issue I

Document Control			
Date Issued	Revision	Issued By	Checked By
10/07/2023	Issue I	W. Zheng	D. Odobasa

Risk Matrix							
Impact / Likelihood		Insignificant	Minor	Moderate	Major	Severe	Catastrophic
		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	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	Operational 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/marking 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 partied	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.	Operational 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	19/07/2023	TFN	LWILBY	SMWSASSM-PLD-OHE-TF-PLN-000001	5.2 Pedestrian/cyclist management	NA	Please consider calling out the cycle lane on the off ramp within the opening sentence - this movement right from the shoulder to the on road cycle lane occurs at the same point HVs exiting the M4 will be merging left into the left turn lane, increasing the risk of conflict between HVs and cyclists. This should also be captured in the third paragraph in site specific training and awareness for drivers.	Observation		N
	11/08/2023	PLD	WZHENG	SMWSASSM-PLD-OHE-TF-PLN-000001	5.2 Pedestrian/cyclist management	NA	Sections 3.4.3 of the CTMP has been updated to accurately reflect pedestrian and bicycle access. There is no existing on-road cycle lane on the M4 off ramp, which was removed as part of the M4 Smart Motorways project and replaced with the shared path bridge across M4 located on the west side of Kent Road. There is an access to the shared path that is not connected to any on-road cycle lane. Section 5.2 of the CTMP updated to provide additional awareness to SSTOM delivery drivers of the presence of the shared path access west side of Kent Road, on approach to the M4 off ramp / Kent Road intersection.	Observation		N
02	19/07/2023	TFN	LWILBY	SMWSASSM-PLD-OHE-TF-PLN-000001	Appendix E - Road safety audit	CTMF requirements	Please attach a completed road safety audit as per the CTMF requirements. Thank you.	Actual Non-Compliance		N
	11/08/2023	PLD	WZHENG	SMWSASSM-PLD-OHE-TF-PLN-000001	Appendix E - Road safety audit	CTMF requirements	Please find updated CTMP now including the completed Road Safety Audit in Appendix E.	Actual Non-Compliance		N
03	19/07/2023	TFN	LWILBY	SMWSASSM-PLD-OHE-TF-PLN-000001	Appendix F - Driver code of conduct	NA	Please consider expanding the second dot point - 'to minimise conflict with other road users, especially pedestrians and cyclists'. As vulnerable road users in particular are the most exposed to severe injuries in the event of a collision. Thanks.	Observation		N
	11/08/2023	PLD	WZHENG	SMWSASSM-PLD-OHE-TF-PLN-000001	Appendix F - Driver code of conduct	NA	Second dot point of the Driver Code of Conduct expanded to explicitly include the words 'especially pedestrians and cyclists'.	Observation		N
04	19/07/2023	PCC	LVALLEJO	SMWSASSM-PLD-OHE-TF-PLN-000001	General	NA	Heavy vehicles entering/exiting the site are to be contained wholly within the site at all times and are not to overhang the property boundary or queue on surrounding roads.	Observation		N
	11/08/2023	PLD	WZHENG	SMWSASSM-PLD-OHE-TF-PLN-000001	General	NA	As outlined in Section 4.7.1 of the CTMP, traffic controller will be managing traffic inside the site boundary to ensure there are no impact or queue on surrounding roads.	Observation		N
05	19/07/2023	PCC	LVALLEJO	SMWSASSM-PLD-OHE-TF-PLN-000001	General	NA	Formalised driveway access is to be provided on Lansdowne Road to enter and exit the temporary concrete batching plant.	Observation		N
	11/08/2023	PLD	WZHENG	SMWSASSM-PLD-OHE-TF-PLN-000001	General	NA	PLM will provide a formalised driveway access off Lansdowne Road for access to the temporary concrete batching plant. This will involve short term works and Council ROL and a S138 application with Penrith City Council. This has been acknowledged in Sections 4.7.1 and 7.1 of the CTMP	Observation		N
06	24/07/2023	SMD	PBROGAN	SMWSASSM-OHE-TF-PLN-000001	General	CTMF	Please make it clear in the document whether any aspects of the work covered under this CTMP requires referral via the local traffic committee.	Observation		N
	11/08/2023	PLD	WZHENG	SMWSASSM-OHE-TF-PLN-000001	General	CTMF	Additional text included in Section 7.1 of the CTMP outlining no aspets of the work covered under this CTMP requires referral to the local traffic committee.	Observation		N
07	31/07/2023	TFN	JHODDER	SMWSASSM-PLD-OHE-TF-PLN-000001	3.3	NA	Are there any specific works required for Access Portion 01? Or is this area already established / suitable for use as a parking area?	Observation		N

NO.	DATE	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*	LINKED ITEM NO	CLOSED OUT
	11/08/2023	PLD	WZHENG	SMWSASSM-PLD-OHE-TF-PLN-000001	3.3	NA	Access Portion 01 was used by SBT prior to handover as an overflow area for parking and laydown do it has been established with a sealed surface and an existing driveway connecting to Lansdowne Road following the bridge construction.	Observation		N
08	31/07/2023	TFN	JHODDER	SMWSASSM-PLD-OHE-TF-PLN-000001	3.3, Table 2	NA	What stages are applicable to each access portion area?	Observation		N
	11/08/2023	PLD	WZHENG	SMWSASSM-PLD-OHE-TF-PLN-000001	3.3, Table 2	NA	Table 2 of Section 3.3 updated to provide clarity concerning stages of works and applicable access portion area.	Observation		N
09	31/07/2023	TFN	JHODDER	SMWSASSM-PLD-OHE-TF-PLN-000001	3.4.1	NA	The speed reduction on Kent Rd is currently managed by SBT. Will SSTOM look after this come the handover of Access Portion 02, and later 03? Part of the arrangement was to have RASS to assist with speed compliance in the area. Handover arrangements (from both SBT and SCAW) need to either be discussed here or as part of a CTMP addendum.	Observation		N
	11/08/2023	PLD	WZHENG	SMWSASSM-PLD-OHE-TF-PLN-000001	3.4.1	NA	The speed zone reduction along Kent Road is expected to be maintained by SBT until mid-2024 and being coordinated between SSTOM and SBT Traffic Managers. Handover arrangements will be documented in a CTMP addendum to be submitted prior to Access Portion 03 handover.	Observation		N
10	31/07/2023	TFN	JHODDER	SMWSASSM-PLD-OHE-TF-PLN-000001	Appendix A, B, C and E	NA	There is no information provided in any of these appendices. Please update and provide.	Observation		N
	11/08/2023	PLD	WZHENG	SMWSASSM-PLD-OHE-TF-PLN-000001	Appendix A, B, C and E	NA	We apologise for the error in the previous edition. Please find appendices are now provided in the revised report.	Observation		N
11	31/07/2023	TFN	FLARUE	SMWSASSM-PLD-OHE-TF-PLN-000001	General	NA	There needs to be some discussion about the TBMs and when these are expected to be completed, plus relevant contingencies in the event the site cannot be handed over to SSTOM in time.	Observation		N
	11/08/2023	PLD	WZHENG	SMWSASSM-PLD-OHE-TF-PLN-000001	General	NA	This issue has been discussed between SSTOM and SBT. There is a delay due to TBM launch timing and Access Portion 02 (SBT N5) will be partially handed over to SSTOM with a delay. SSTOM and SBT traffic and project management team has met to discuss the implications of this delay on 27/07/23. Due to the unknown nature of the timing surrounding the TBM launch, SBT was not able to provide projected vehicle numbers with any certainty to add to SSTOM projected HV numbers. Therefore, to mitigate the impact on the public road network, SSTOM and SBT's senior project management team for OHE will meet every week starting 2 weeks prior to Portion N5 handover to discuss HV deliveries and timing to coordinate the use of Kent Rd.	Observation		N
12	1/08/2023	TFN	TNG	SMWSASSM-OHE-TF-PLN-000001	Section 3.4.2	NA	Will the Kent Rd upgrade include road widening as part of the SMWSA delivery programme?	Observation		N
	11/08/2023	PLD	WZHENG	SMWSASSM-OHE-TF-PLN-000001	Section 3.4.2	NA	Kent Road upgrade is not part of the scope of Orchard Hills Station works considered in this CTMP report. Please refer to Sydney Metro for clarification on whether the Kent Road upgrade including road widening forms part of the SMWSA delivery programme.	Observation		N
13	1/08/2023	TFN	TNG	SMWSASSM-OHE-TF-PLN-000001	Table 7	NA	The CTMP needs an update to show the combined trip generation of the SSTOM, SBT, and SCAW works for stakeholders' understanding of project impacts, and please ensuring compliance with the EIS allowance.Regarding the proposed LV volumes (120 veh/h) during the PM peak, can they be spread off-peak as much as practical to minimise traffic impacts?	Potential Non-Compliance		N

NO.	DATE	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*	LINKED ITEM NO	CLOSED OUT
	11/08/2023	PLD	WZHENG	SMWSASSM-OHE-TF-PLN-000001	Table 7	NA	SSTOM has consulted with SBT and SCAW traffic management to understand the cumulative traffic movements from the OHE site. SCAW traffic movements on Lansdowne Road will be negligible (up to 2 HV in the peak hour) to minimise resident impact. Due to the unknown nature of the timing surrounding the TBM launch, SBT was not able to provide projected vehicle numbers with any certainty to add to SSTOM projected HV numbers. Therefore, to mitigate the impact on the public road network, SSTOM and SBT's senior project management team for OHE will meet every week starting 2 weeks prior to Portion N5 handover to discuss HV deliveries and timing to coordinate the use of Kent Rd. See updated Section 5.5. In relation to the PM peak LV volumes exiting the site, please note that the volume is within the EIS PM peak volumes.	Potential Non-Compliance		N
14	1/08/2023	TFN	TNG	SMWSASSM-OHE-TF-PLN-000001	Section 6	NA	Please advise when the projected 320 LV parking spaces will be required? Can the 180 spaces in Portion 03 be used by the SSTOM team? It is noted Portion 03 will be processed by SBT until the end of 2024.Please advise the number of parking spaces in Portion 01.	Potential Non-Compliance		N
	11/08/2023	PLD	WZHENG	SMWSASSM-OHE-TF-PLN-000001	Section 6	NA	The projected 320 LV parking spaces will be required once rail construction commences on site in early 2025. At that point SSTOM will have full possession of all Access Portions and would be able to use the 180 additional LV parking spaces in Access Portion 03. Note that 140 carparking spaces supplied in Portion 02 per Figure 15 which together with Access Portion 03 existing parking will accomodate the peak LV parking demand. Approximate Access Portion 01 area is 11,531m2 which can accommodate approximately 230 LVs if required.	Potential Non-Compliance		N
15	1/08/2023	TFN	TNG	SMWSASSM-OHE-TF-PLN-000001	Appendix	NA	Please share the contents of Appendix A, B & E for consideration.	Observation		N
	11/08/2023	PLD	WZHENG	SMWSASSM-OHE-TF-PLN-000001	Appendix	NA	We apologise for the error in the previous edition. Please find appendices are now provided in the revised report.	Observation		N

Appendix D Road Safety Audit

TRAFFICWORKS™

Traffic Management Road Safety Audit Report

Sydney Metro – Western Sydney Airport

Orchard Hills Station – Access Portion 01 and 02

Project Number 220751
Final Report 27/07/2023

Client Parklife Metro

Document control record

Document prepared by:

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Document control	
Report title	Sydney Metro – Western Sydney Airport Orchard Hills Station – Access Portion 01 and 02
Project number	220751
Client	Parklife Metro
Client contact	Wendy Zheng (0401 969 768)

Revision	**Date issued**	**Revision details / status**	**Prepared by**	**Authorised by**
Draft	26/07/2023	Preliminary draft	Bernard Chan	Paul Mihailidis
Final	27/07/2023	Final	Bernard Chan	Paul Mihailidis

Table of Contents

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 Orchard Hills Station. There will be 4 handovers to SSTOM, as outlined below:

- Access Portion 01 – N7 (SBT): 26 August 2023
- Access Portion 02 – N5 (SBT): 15 September 2023
- Access Portion 03 – N4 (SBT): 15 November 2024
- Access Portion 04 – Area 1 (SCAW): 20 January 2025.

The focus of this RSA will be for the Access Portion 01 and 02.

The CTMP will be updated for Access Portions 03 and 04 following finalisation of the rail design 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:

- 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

Bernard Chan [BEng(Civil)(Hons), CPEng, NER]

RSA-03-1649 – Level 3 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

The audited sections were inspected in both directions of travel. Video footage was captured and has been referenced in the audit findings.

The conditions during the daytime inspection 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:

- SSTOM – Orchard Hills Station – Construction Traffic Management Plan, prepared by Parklife Metro D&C. Document no. SMWSASSM-OHE-TF-PLN-000001, Rev A, dated 17/07/2023

3 Site Description

3.1 Existing conditions

Kent Road is a rural local road aligned in a north to south direction, connecting Lansdowne Road to the south and Gipps Street to the north. South of the Western Motorway, it consists of one traffic lane in each direction with no shoulders and no footpaths on either side of the road. The speed limit on Kent Road is 70 km/h. Through the subject site, a reduced speed limit of 40 km/h has been implemented.

Lansdowne Road is a rural local road aligned in an east to west direction, connecting Samuel Marsden Road to the east and Calverts Road to the west. It provides a carriageway width varying between 6.4 – 8 m, accommodating two-way traffic. The speed limit on Lansdowne Road is 70 km/h. Through the subject site, a reduced speed limit of 40 km/h has been implemented.

The site of the Orchard Hills Station (OHE) is located to the south of the M4 Western Motorway, east of Kent Road and on both sides of Lansdowne Road, Orchard Hills. See Figure 1 below.

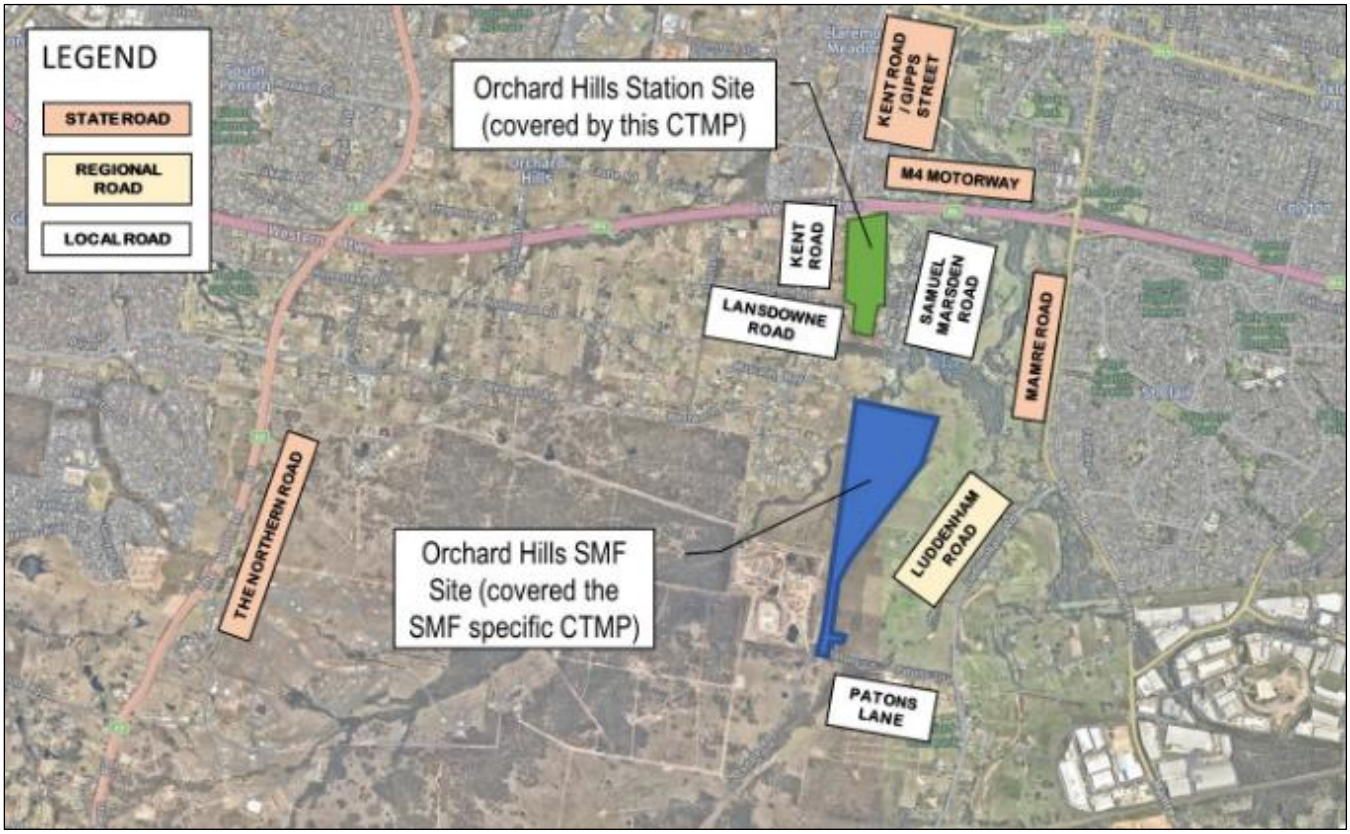


Figure 1: Subject site

At the time of this audit, the site is occupied by Station Boxes and Tunnelling (SBT) and Surface and Civil Alignment Works (SCAW) contractors, and the following traffic management has been implemented:

Kent Road

- 40 km/h road work speed limit
- a light vehicle only access to the north (Gate K1)
- two separate heavy vehicle entry / exit points (Gates K3 and K11)
- truck warning signs
- variable message signs (VMS).

Lansdowne Road

- two separate vehicle accesses on the south side of Lansdowne Road
- one vehicle access on the north side of Lansdowne Road
- 40 km/h road work speed limit.

3.2 Proposed conditions

The following details the traffic management arrangements proposed as part of the Access Portion 01 and 02 handover:

- one combined light and heavy vehicle access on Kent Road. This will be utilising the existing SBT access gate configuration
- one light vehicle access on the south side of Lansdowne Road for overflow parking access
- two heavy vehicle accesses on Lansdowne Road
- largest vehicle required will be the 19 m semi-trailer
- all construction vehicles will be arriving from and departing to the M4
- the current traffic guidance scheme (TGS) on Kent Road will be maintained
- traffic controllers will be stationed at each of the access points, with an additional two traffic controllers to manage parking within the site
- construction works will occur between 7 am – 6 pm Mon-Fri and 8 am – 1 pm Saturday
- heavy vehicle access will be monitored with all subcontractors to register for a delivery timeslot before being granted access to the site

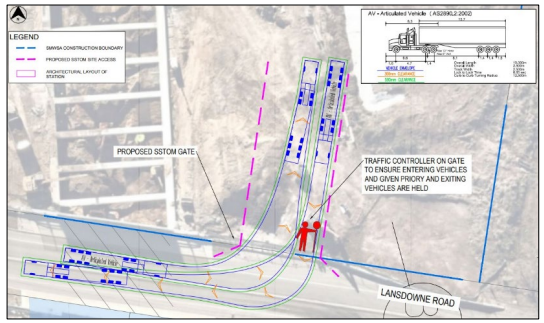
4 Findings

Table 1 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.

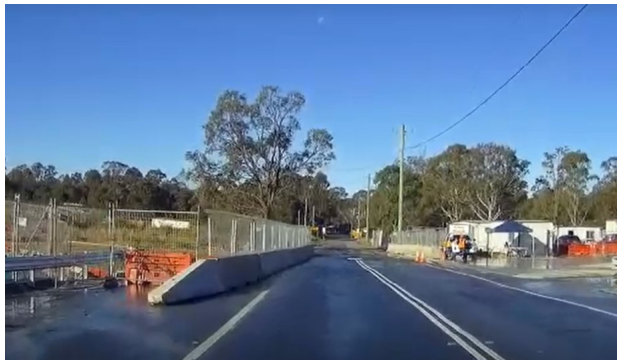
It is not the role of the auditor to approve the client's response to the audit.

Table 1: Audit findings

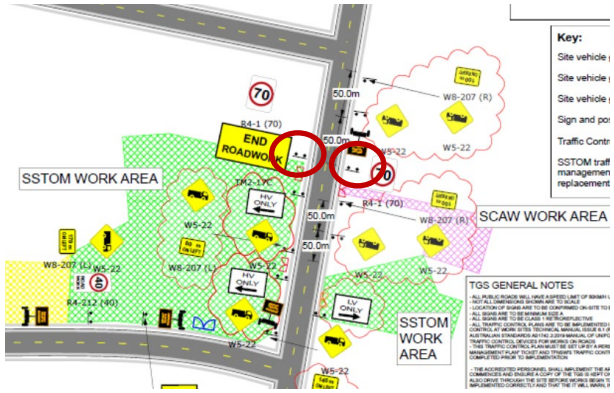
No	Audit findings	Photos	Risk rating	Client response	
				Accept: Yes/No	Reasons/ Comments
1	**General issues**				
1.1.	Due to the width constraints on Lansdowne Road, the two heavy vehicle access points cannot accommodate simultaneous two-way access, and a traffic controller will be stationed to manage access and provide entering vehicles with priority. The swept paths show that the exiting vehicle will need to be propped back a distance from the gate to allow sufficient space for the entering vehicle. The responsibility will be on the traffic controller to advise the exiting driver on where to stop. However, this may be difficult to judge on site without any visual cues such as linemarking, and could lead to minor collisions or reversing manoeuvres.		Likelihood: Rare Severity: Minor Risk rating: **NEGLIGIBLE**	Yes	Additional signage will be provided to indicate the stopping location to minimise the reliance on the traffic controller to guide where existing trucks stop.

No	Audit findings	Photos	Risk rating	Client response	
				Accept: Yes/No	Reasons/ Comments
1.2.	On Lansdowne Road, 40 km/h speed limit signs have been implemented for the westbound direction, however, no 40 km/h signs were observed in the eastbound direction when turning onto Lansdowne Road from Kent Road. This could result in eastbound motorists travelling at a higher speed along Lansdowne Road. This increases the risk of a crash involving trucks.		Likelihood: Unlikely Severity: Moderate Risk rating: **LOW**	Yes	The existing traffic management arrangement implemented by others had 40km/h signage displayed on the west approach, west of the Lansdowne Road / Kent Road intersection. An additional 40km/h speed zone signage will be provided along Lansdowne Road, east of Kent Road.

No	Audit findings	Photos	Risk rating	Client response	
				Accept: Yes/No	Reasons/ Comments
1.3.	The pavement on Lansdowne Road is in poor condition. Large potholes have developed within the traffic lane. This presents a hazard to motorists, particularly motorcyclists.		Likelihood: Unlikely Severity: Moderate Risk rating: **MEDIUM**	Yes	A dilapidation report has been prepared for Lansdowne Road. The most recent inspection on 26 July 2023 noted that the section of pavement concerned has been repaired and now in good condition. On-going monitoring of pavement conditions will be undertaken by PLM in accordance with TCAWS requirements.

No	Audit findings	Photos	Risk rating	Client response	
				Accept: Yes/No	Reasons/ Comments
1.4.	There are existing concrete barriers that have been installed on both sides of Lansdowne Road, east of the recently constructed bridge. It is uncertain whether these will remain following the handover. A sloped end concrete terminal has been installed. A vehicle impacting the nose or start of the sloped end terminal will vault over the terminal and behind the barrier, resulting in injury to the occupants of the vehicle.		Likelihood: Unlikely Severity: Moderate Risk rating: **MEDIUM**	Yes	PLM will review the need for the barriers along Lansdowne Road and replace the sloped end concrete terminal if required with a different terminal system selected from the TfNSW Accepted Road Safety barrier Systems and Devices Technical Information (TS 00028:4.0).

No	Audit findings	Photos	Risk rating	Client response	
				Accept: Yes/No	Reasons/ Comments
1.5.	The intersection of Lansdowne Road and Kent Road currently provides a Give Way condition on both Lansdowne Road approaches and priority to Kent Road through traffic. However, Kent Road terminates at this point. The centreline on Kent Road is aligned straight into the intersection, which may create a false impression that the road continues through. Additionally, the hazard board on the south side of the road is aligned with the centre of the road and not towards an approaching vehicle. This configuration creates a risk of motorists on Kent Road overshooting the intersection and driving into the private property on the south side of Lansdowne Road. This is an existing condition, however, this issue can be exacerbated with the additional volume of trucks travelling through the intersection, required by the project.	 	NOTE ONLY	Yes	PLM will provide a copy of this RSA to the relevant road authority, being Penrith City Council for their consideration of a suitable mitigation measure.

No	Audit findings	Photos	Risk rating	Client response	
				Accept: Yes/No	Reasons/ Comments
1.6.	40 km/h road work signs have been installed for the westbound direction on Lansdowne Road, however, these have not been shown in the TGS.	 	NOTE ONLY	Yes	SBT Permanent Lansdowne Road TGS will be adopted by PLM and all existing signs and traffic devices will be retained.

Client response completed by:

Name: Wendy Zheng_____

Signed: _____ Date: 15/08/2023_____

Appendix E Drivers Code of Conduct

Drivers Code of Conduct

Safe Driving Policy for Construction of Orchard Hills 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 register with the PLM logistics software and receive a delivery slot before proceeding to site.
- Drivers must radio ahead whilst on Kent Road if Lansdowne Road access is required.
- Drivers must not use Lansdowne Road east of Samuel Marsden Road nor west of Kent Road.

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.