

Construction Traffic Management Plan – Luddenham Station

SMWSASSM-PLD-LDN-TF-PLN-000001

Parklife Metro D&C

Version Control

Version	Author	Date	Comments	Reviewed by	Approved by
A	Wendy Zheng Traffic Manager	07/08/2023	First Issue	Discipline Leads	Jose Sanchez Project Director
B	Wendy Zheng Traffic Manager	28/08/2023	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

Version Control	2
1 Introduction	9
2 Executive Summary	10
3 Project Details	11
3.1 Proposed Works.....	11
3.2 Site Location	11
3.3 Timing of Works	12
3.4 Site Related Data	13
3.4.1 Road Details.....	13
3.4.2 Crash History.....	14
3.4.3 Vulnerable Road Users	15
4 Works Proposed	16
4.1 Site Access (Access Portion 01)	16
4.2 Site Access (Access Portions 01 and 02).....	17
4.3 Station Construction Works Proposed.....	19
4.4 Construction Hours.....	20
4.5 Construction Vehicle Movements	21
4.5.1 Truck Vehicle Volume	21
4.5.2 Truck Routes	21
4.6 Temporary Traffic Management Method	23
4.6.1 Luddenham Road Site Access	23
4.6.2 Access Portion 01 Handover	24
4.6.3 Access Portion 02 Handover (SCAW shared access).....	26
4.6.4 Access Portion 02 Handover (SSTOM only access)	28
4.6.5 Access Portion 03 Handover	29
4.7 Risk Assessment.....	29
5 Traffic Impact Management	30
5.1 Vehicle Impact Management.....	30
5.2 Pedestrian / Cyclist Impact Management	32
5.3 Public Transport Impact Management.....	33
5.4 Property and Utility Access Impact Management.....	33
5.5 Cumulative Impacts.....	33
5.6 Authorised Traffic Controller.....	33

6	Parking Management	35
7	Agency Permits	36
7.1	Council Permits	36
7.2	Road Dilapidation Report	36
7.3	OSOM Permits	36
7.4	Speed Zone Authorisation Permits	36
8	Community Notification	37
8.1	Site Contact	37
8.2	Propose Communications	37
8.3	Travelling Public	38
8.4	Variable Message Signs	38
8.5	Stakeholders	38
9	Monitoring and Review	39
9.1	Road Safety Audit	39
9.2	Monitoring Program	39
9.3	Work Site Inspections, Recording and Reporting	39
9.4	Environmental Maintenance	40
Appendix A	Swept Path Assessment	41
Appendix B	Risk Assessment	42
Appendix C	Stakeholder Comments	43
Appendix D	Road Safety Audit	44
Appendix E	Drivers Code of Conduct	45

Table of figures

FIGURE 1: SITE LOCATION	11
FIGURE 2: LDN STATION HANDOVER TIMING	12
FIGURE 3: CRASH MAP	14
FIGURE 4: LDN ACCESS PORTION 01 SITE ACCESS	16
FIGURE 5: LDN ACCESS PORTION 01 AND 02 SITE ACCESS (SHARED WITH SCAW)	17
FIGURE 6: LDN ACCESS PORTION 01 AND 02 SITE ACCESS (SSTOM ACCESS ONLY)	18
FIGURE 7: LDN STATION ARCHITECTURAL (PRELIMINARY)	19
FIGURE 8: PROJECTED LDN HV NUMBERS	21
FIGURE 9: CONSTRUCTION VEHICLE ACCESS ROUTE	22
FIGURE 10: LUDDENHAM ROAD SITE ACCESS ARRANGEMENT	23

FIGURE 11: ACCESS PORTION 01 ACCESS ARRANGEMENT	24
FIGURE 12: ACCESS PORTION 01 SWEEP PATH ASSESSMENT	25
FIGURE 13: ACCESS PORTION 02 SHARED ACCESS ARRANGEMENT	26
FIGURE 14: ACCESS PORTION 02 SHARED ACCESS SWEEP PATH ASSESSMENT	27
FIGURE 15: ACCESS PORTION 02 SSTOM ONLY ACCESS ARRANGEMENT.....	28
FIGURE 16: ACCESS PORTION 02 SSTOM ONLY ACCESS SWEEP PATH ASSESSMENT	29
FIGURE 17: SSTOM OFF-AIRPORT CONSTRUCTION TRAFFIC VOLUME.....	32
FIGURE 18: PROPOSED SITE ESTABLISHMENT PLAN.....	35

Table of tables

TABLE 1: DOCUMENT CHANGES / UPDATES ..	ERROR! BOOKMARK NOT DEFINED.
TABLE 2: TIMING OF WORKS.....	12
TABLE 3: LOCAL ROAD NETWORK	13
TABLE 4: CRASH HISTORY	14
TABLE 5: PUBLIC AND ACTIVE TRANSPORT	15
TABLE 6: CONSTRUCTION HOURS	20
TABLE 7: PROJECTED VEHICLE NUMBERS.....	30
TABLE 8: PROPOSED COMMUNICATIONS	37

Glossary

Acronym	Description
AGRD	Austrroads Guide to Road Design
AGTM	Austrroads Guide to Traffic Management
AGTTM	Austrroads 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
S96	Section 96 Modification (former process terminology for an S4.55)
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 Luddenham Station.

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

Access Portion 03 traffic management will be addressed in the at grade and viaduct Linewide CTMP.

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 Luddenham Station (LDN) site following Access Portion 01 and 02 handovers will have one combined light and heavy vehicle access on Luddenham Road. SCAW will retain Access Portion 03 until April 2023 and will have one shared light and heavy vehicle access and another one heavy vehicle access on Luddenham Road.

SSTOM access off Luddenham Road will be via the T-intersection with seagull treatment and managed through signage on the road with traffic controllers within the main access road heavy vehicle access gates.

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 Works
- Stage 5 – Rail System
- Stage 6 – Fit Out
- Stage 7 – Precinct Works

3.2 Site Location

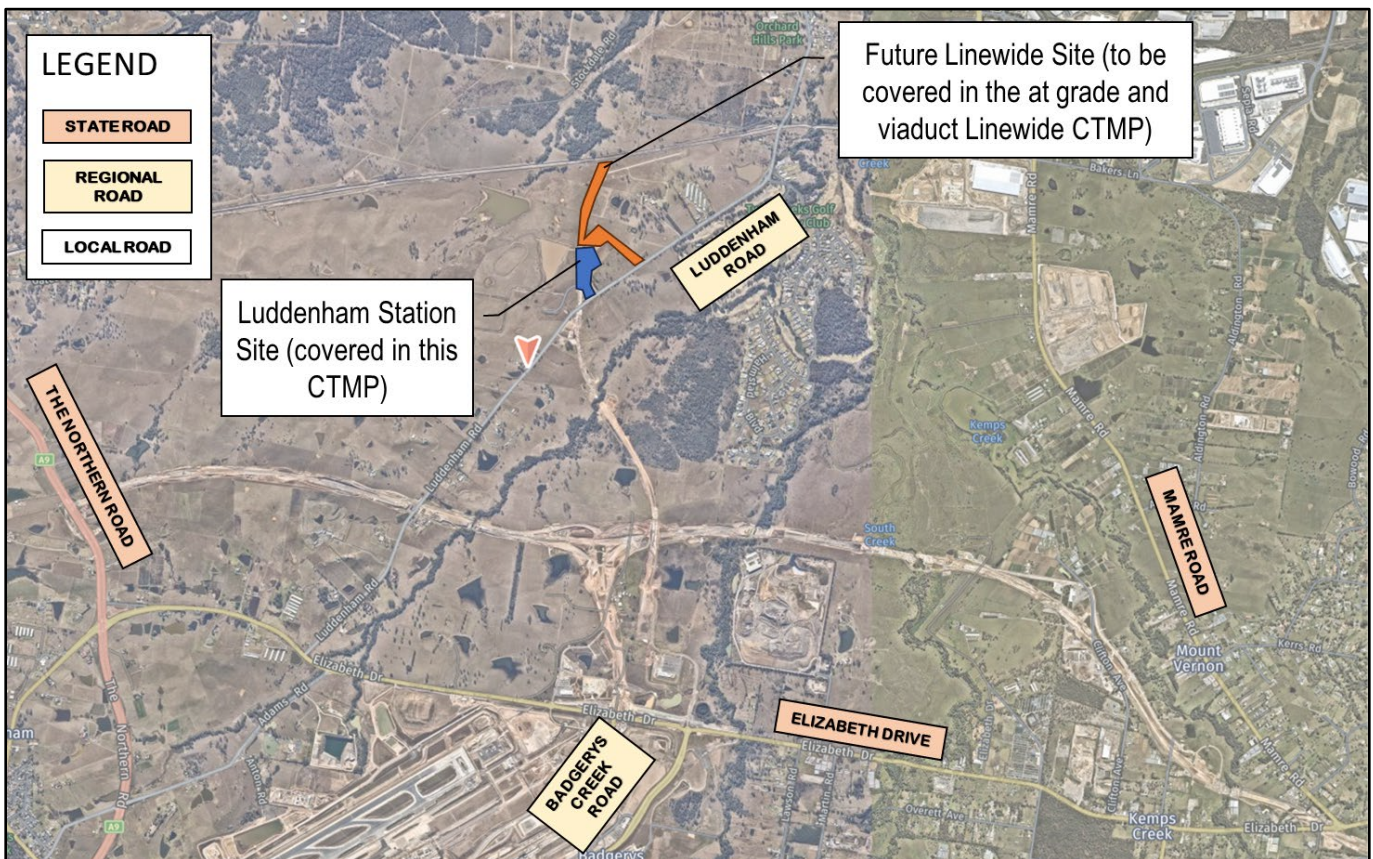


FIGURE 1: SITE LOCATION

The site is located to the west of Luddenham Road north of Elizabeth Drive. Access will be via Luddenham Road, Luddenham.

3.3 Timing of Works

The station site will be handed over to SSTOM in two stages as shown in Figure 2:

- Access Portion 01: 02/10/2023
- Access Portion 02: 26/11/2023

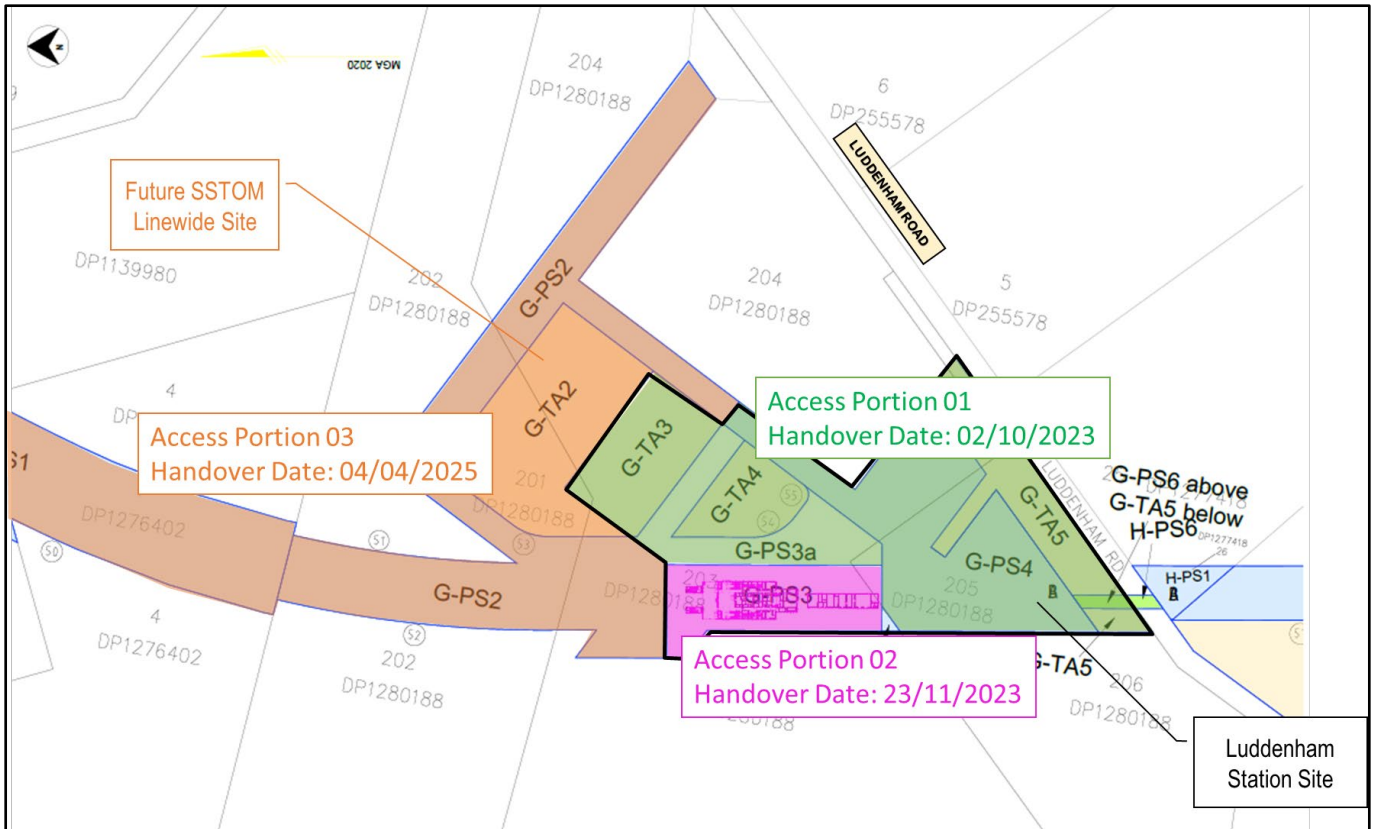


FIGURE 2: LDN STATION HANDOVER TIMING

Access Portion 03 will become part of Linewide works which will start after handover on 04/04/2025. Construction traffic management for Access Portion 03 will be covered in the at grade and viaduct Linewide CTMP.

Station construction works timing as outlined in Table 2.

TABLE 1: TIMING OF WORKS

Activity	Start Date	Finish Date
Stage 1 - Site Preparation Works	2 October 2023	15 January 2024
Stage 2 - Enabling Works	1 December 2023	15 June 2024
Stage 3 - Structural Works	15 June 2024	15 December 2024
Stage 4 – MEP Works	15 October 2024	15 February 2026
Stage 5 – Rail System	15 February 2025	15 December 2025

Stage 6 – Fit Out

15 March 2025

15 January 2026

Stage 7 – Precinct Works

15 August 2025

15 February 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 noting Luddenham Road north of the site access 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
Luddenham Road	Elizabeth Drive to Site Access	80km/hr – 60km/hr (roadwork dependent)	No	-	Urban
Elizabeth Drive	The Northern Road to Badgerys Creek Road	80km/hr	No	-	Urban
The Northern Road / A9	M4 to Badgerys Creek Road	80km/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	Luddenham Road near the Elizabeth Drive	67 – Struck Animal	Non-casualty (towaway)
2021	Luddenham Road near the Elizabeth Drive	87 – Off lft/lft bnd => obj	Non-casualty (towaway)
2021	Luddenham Road near the Elizabeth Drive	71 – Off-road left => obj	Serious Injury (1)

An analysis of the crash history shows three crashes only on Luddenham Road south of the site access. All three crashes are of different types and occurred in different sections of Luddenham Road.

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 5 provides context to VRU's surrounding the Site.

TABLE 4: PUBLIC AND ACTIVE TRANSPORT

Road Name	Pedestrian	Cycling	Public Transport
Luddenham Road	No	Dedicated cycle path along Luddenham Road between G-TA5 and G-PS2 in northbound direction.	<p>None south of the site access on the haul route.</p> <p>School route 4040 runs one service in AM peak from Twin Creeks Dr to Mamre Road.</p>

4 Works Proposed

4.1 Site Access (Access Portion 01)

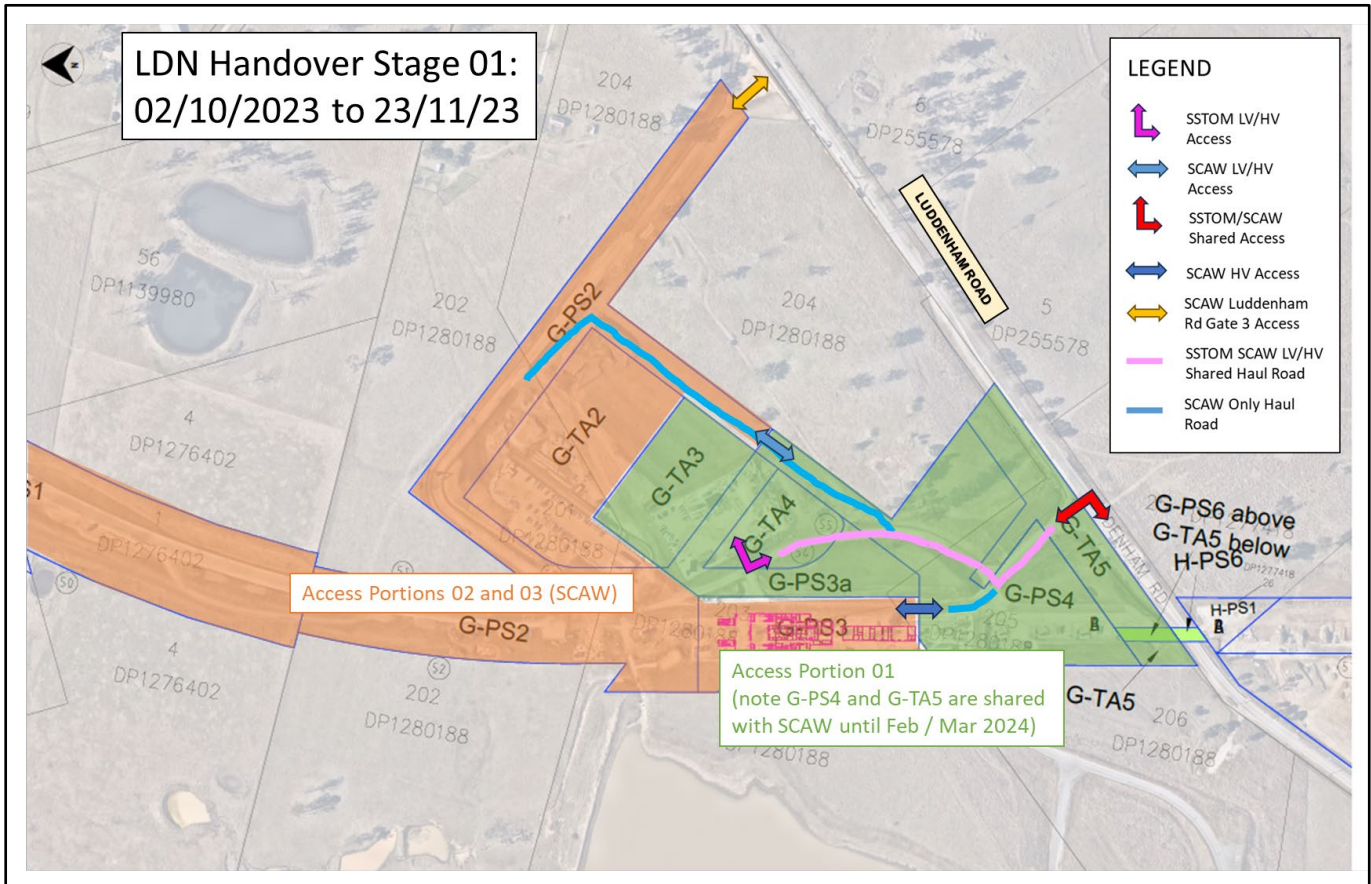


FIGURE 4: LDN ACCESS PORTION 01 SITE ACCESS

Site access for all SSTOM and some SCAW vehicles into LDN Station Site will be off Luddenham Road as shown on Figure 4. SCAW will have an additional HV only access off Luddenham Road south of the main shared access. Another SCAW access is located north of the main shared access on Luddenham Road to be used for the roundabout construction at SCAW Gate 3.

Areas G-PS4 and G-TA5 in Access Portion 01 will be shared between SSTOM, SCAW, other contractors and third parties (including their contractors) in accordance with the SSTOM Project Deed.

Before Access Portion 02 handover, PLM will be undertaking site establishment activities in Areas G-TA3, G-PS3a and G-TA4 only. Access to Areas G-TA3, G-PS3a and G-TA4 will via the shared access haul road from Luddenham Road through Areas G-PS4 and G-TA5. SSTOM and SCAW will have one shared access road through this shared area connecting north to either G-TA4 or G-TA2. SCAW will have a secondary HV only access road from the southern SCAW HV only access to Area G-PS3 (Access Portion 02) through the shared area.

4.2 Site Access (Access Portions 01 and 02)

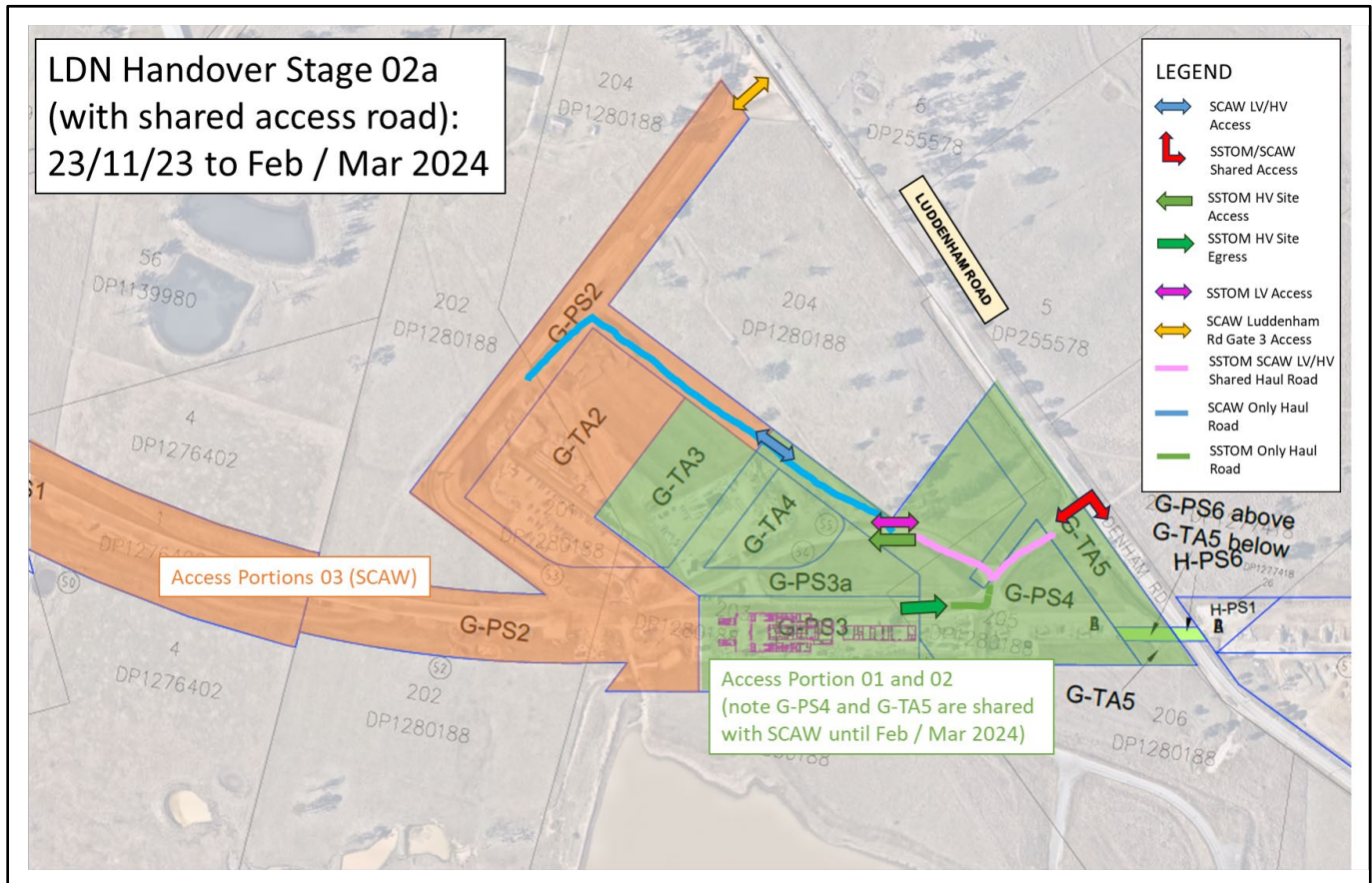


FIGURE 5: LDN ACCESS PORTION 01 AND 02 SITE ACCESS (SHARED WITH SCAW)

Following Access Portion 02 handover and before Luddenham Road roundabout completion, all SCAW and SSTOM vehicles will use the Luddenham Road shared access haul road to enter the site before diverging into the exclusive haul roads to access G-TA2 (SCAW) or G-PS3 (SSTOM). SSTOM LV traffic will enter and exit the site through G-PS3a portion while the SSTOM HVs will enter through G-PS3a and exit through G-PS3 in a one-way loop as shown in Figure 5.

SCAW has notified SSTOM that their shared access requirements will extend to February / March 2024. The shared access haul road in the shared area (G-PS4 and G-TA5) will be shared between PLM and SCAW until SCAW completes the Luddenham Road roundabout and can use SCAW Gate 3 for continuation of their works in Access Portion 03. Following the switch the SSTOM accesses on site will remain the same per Figure 6.

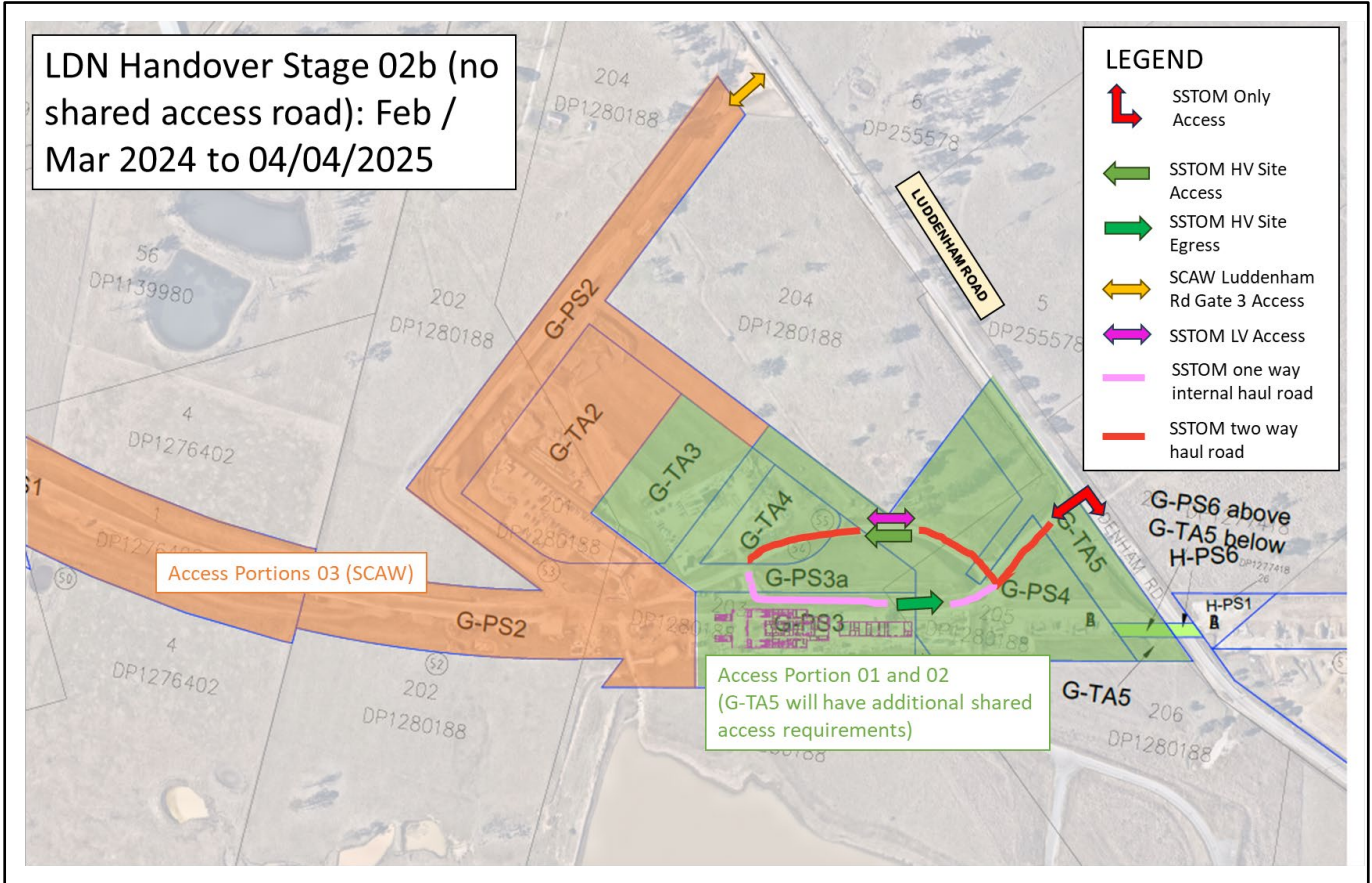


FIGURE 6: LDN ACCESS PORTION 01 AND 02 SITE ACCESS (SSTOM ACCESS ONLY)

SSTOM site access to Access Portion 03 will be covered in a separate SSTOM Linewide CTMP.

4.3 Station Construction Works Proposed

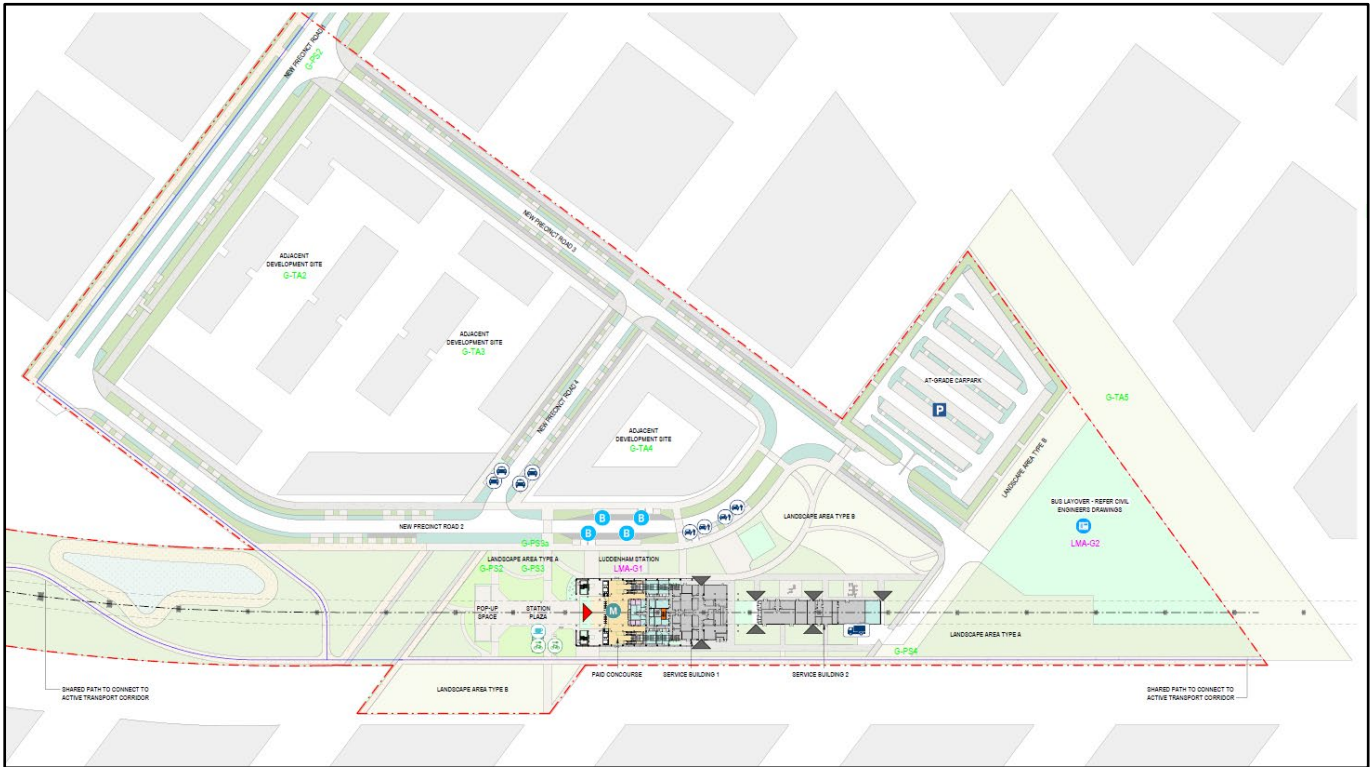


FIGURE 7: LDN STATION ARCHITECTURAL (PRELIMINARY)

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

- Stage 1: Site Preparation Works
 - Site survey
 - Minor civil works
 - Temporary power and water connections
 - Setup of site facilities including sheds and ablution blocks
 - Installation of temporary fence and access control system
 - Access roads and laydown areas
- Stage 2: Enabling Works
 - Crane and piling pads
 - Bored piles
 - Detailed excavation
 - In-ground services
 - Waterproofing membrane
 - Substructure concrete works
- Stage 3: Structural Works
 - Reinforced concrete walls and stairs

- Reinforced concrete suspended slabs and roofs
- Structural steel frame
- Topping slab for platforms
- Station canopy and roof
- Stage 4: MEP Works
 - Building services - mechanical
 - Electrical, lighting and cabling reticulation
 - Vertical transportation
 - Fire and security services
- Stage 5: Rail System
 - Track works
 - Overhead wire installation
 - Traction power
 - Signalling
 - Earthing and bonding
- Stage 6: Fit Out
 - Ceilings
 - Wall and floor finishes
 - Façade
 - Louvres and screens
 - Doors and hardware
 - FF&E and joinery
- Stage 7: Precinct Works
 - Utilities
 - Public lighting
 - Roads and drainage
 - Landscaping and public spaces

4.4 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.

4.5 Construction Vehicle Movements

4.5.1 Truck Vehicle Volume

The projected daily heavy vehicle volume for all stages of LDN construction is shown in Figure 8.

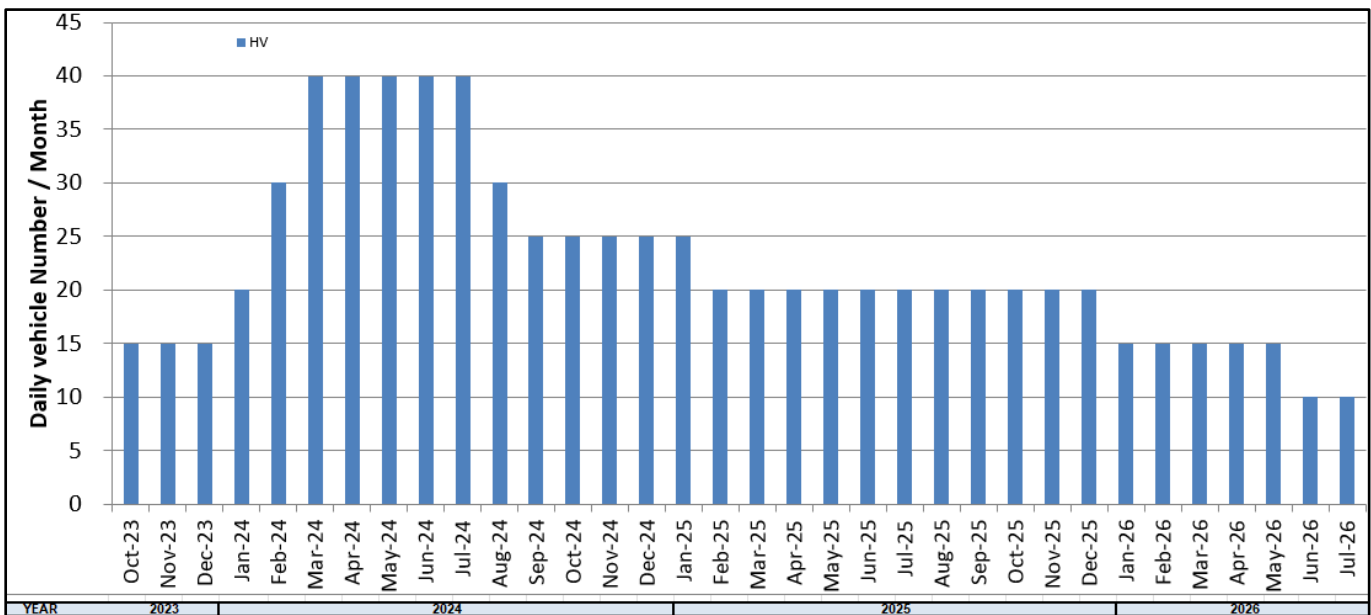


FIGURE 8: PROJECTED LDN HV NUMBERS

The anticipated heavy vehicle volume peak will start in March 2024 and will reduce after July 2024.

4.5.2 Truck Routes

It is proposed that all construction vehicles would enter and exit the Site via the routes shown in Figure 9. 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 –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. All drivers will be advised that vehicles exiting the site must turn right out and travel south along Luddenham Road towards Elizabeth Drive.

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 Luddenham 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 Regulator (NHVR).

Largest truck required for regular access will be 12.5m long Heavy Rigid Vehicles (12.5m HRVs) as this site has limited structural element for the station and heavy vehicle requirements for the precinct works is limited.

The section of haulage route along Elizabeth Drive, between Luddenham Road and Badgerys Creek Road is for use by concrete trucks only to access the SSTOM concrete batching plant in Airport Business Park Station, accessed via Badgerys Creek Road.

The swept paths (attached in Appendix A) demonstrate all critical turns at along the route shown in Figure 9. All PLM construction vehicles will drive forward in and out of the Site onto Luddenham Road via the existing Site access.

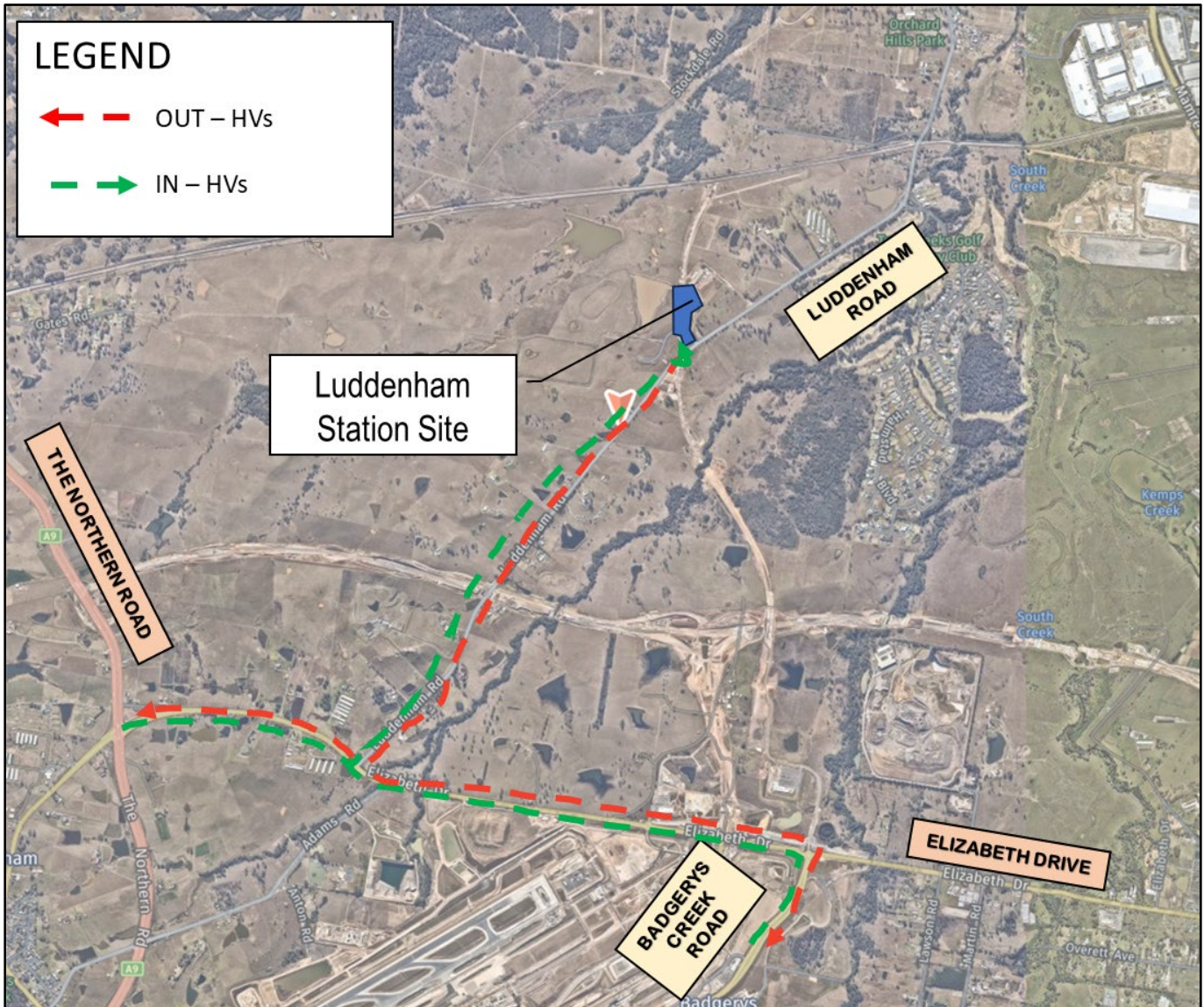


FIGURE 9: CONSTRUCTION VEHICLE ACCESS ROUTE

There is no pedestrian path available along the route from Elizabeth Drive to Site. Forming part of the road widening along Luddenham Road between G-TA5 and G-PS2, a bicycle lane was installed where cyclists can be expected.

However, in the case that an adjacent landowner’s personnel, livestock, farm equipment requires access through the construction site to the landowner’s property, all construction vehicles would be held within the site to facilitate this access.

Consultation with the adjacent landowner has been undertaken whereby livestock access in particular, will be either scheduled or pre-arranged to ensure construction vehicle access is not impacted during peak periods and adequate on-site queuing is available.

4.6 Temporary Traffic Management Method

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.

The swept path assessments internal to the site and associated signage plans outlined in Appendix A has been prepared to meet the requirements outlined in TfNSW Traffic Control At Work Sites Technical Manual (Issue 6.1, 2022).

4.6.1 Luddenham Road Site Access

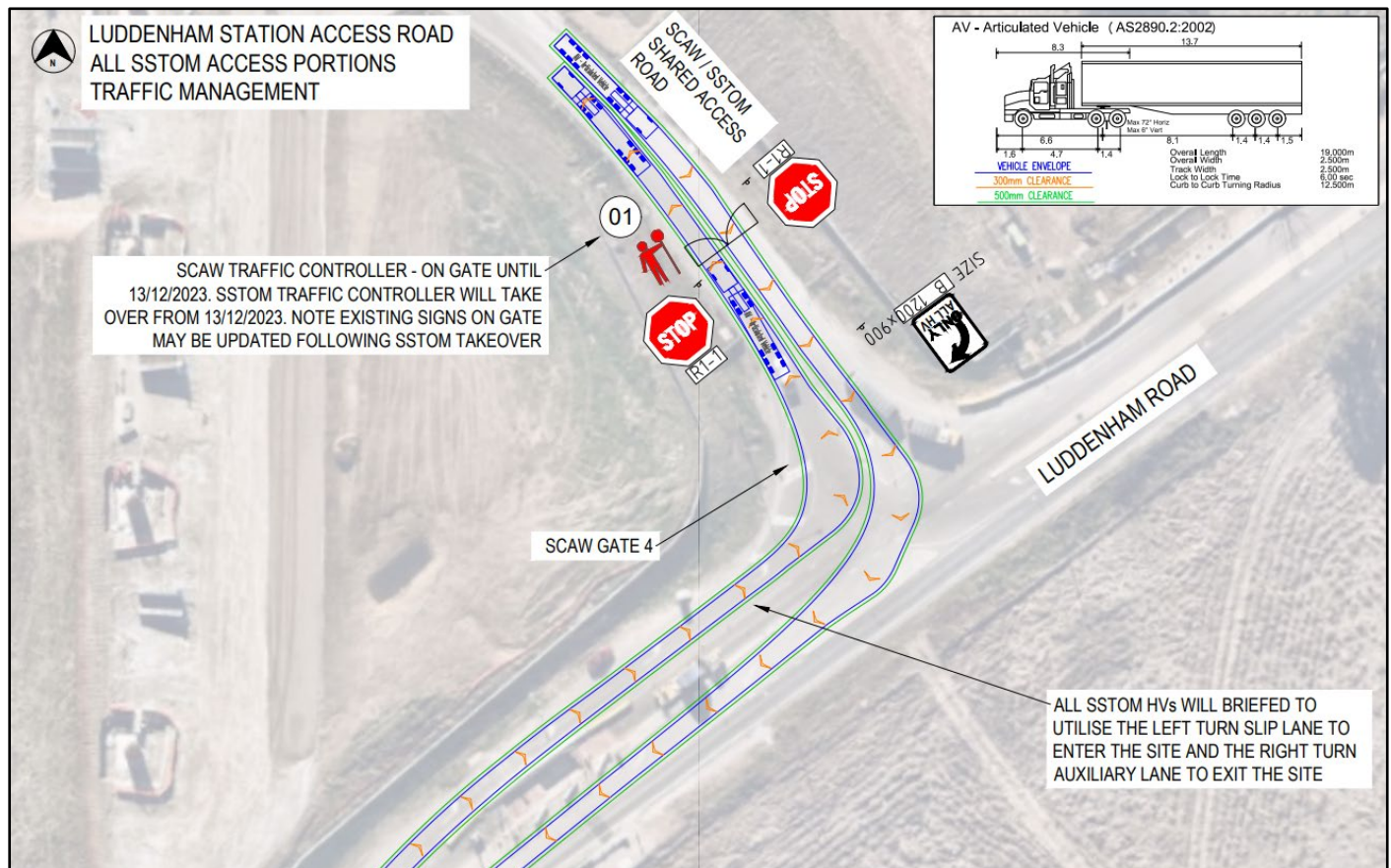


FIGURE 10: LUDDENHAM ROAD SITE ACCESS ARRANGEMENT

This site access off Luddenham Road will be used for all stages of Luddenham Station construction works and will be managed by SCAW before being handed over to SSTOM on 13 December 2023. It 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 and direct traffic to either SSTOM or SCAW works area and will be in place for all stages of station construction.

4.6.2 Access Portion 01 Handover

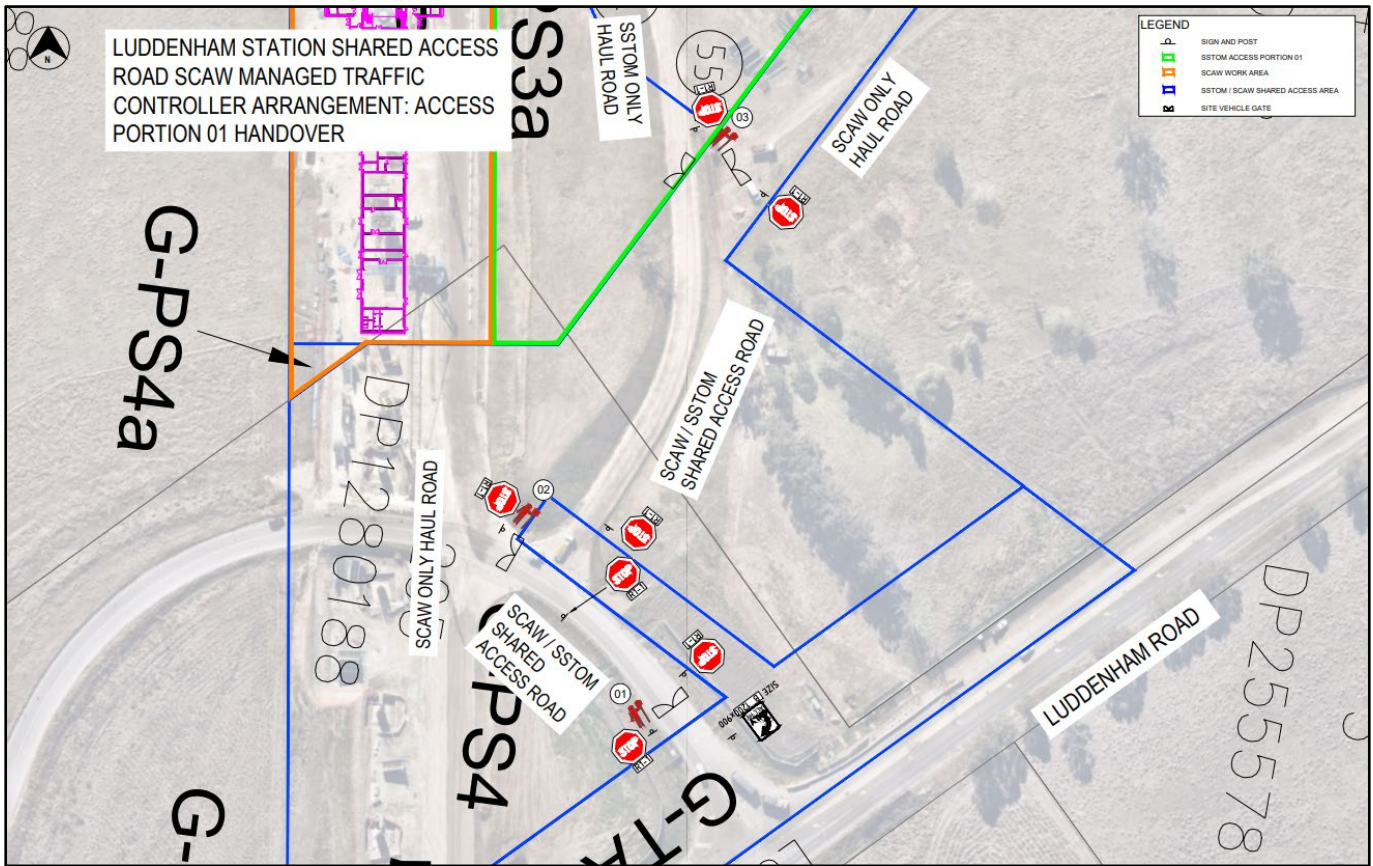


FIGURE 11: ACCESS PORTION 01 ACCESS ARRANGEMENT

Traffic control of the shared internal haul roads will be managed by SCAW in this stage until 13 December 2023. SCAW will move one of their traffic controllers to location 03 (shown in Figure 11) to manage the SCAW and SSTOM only haul road interaction with the shared access haul road.

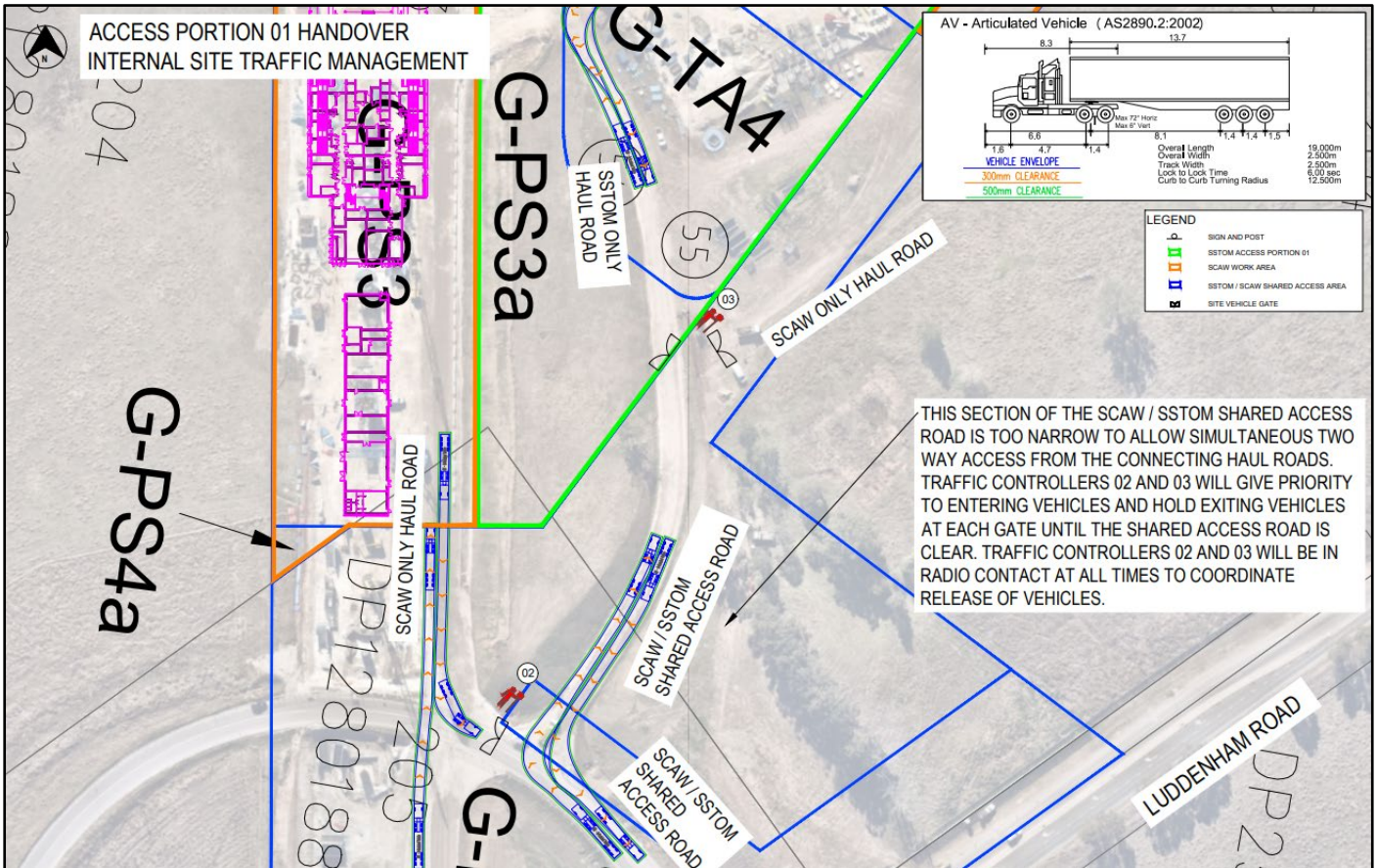


FIGURE 12: ACCESS PORTION 01 SWEEP PATH ASSESSMENT

All internal haul roads will operate with two way traffic in this stage and due to the width of the haul roads, two way simultaneous access will not be possible at the intersections per Figure 12 so traffic controllers 02 and 03 will be in constant radio contact at all times to manage access to the shared access roads once vehicles are past traffic controller 01.

Traffic controllers will be instructed to give priority to incoming vehicles and to hold exiting vehicles at the respective gates when necessary.

4.6.3 Access Portion 02 Handover (SCAW shared access)

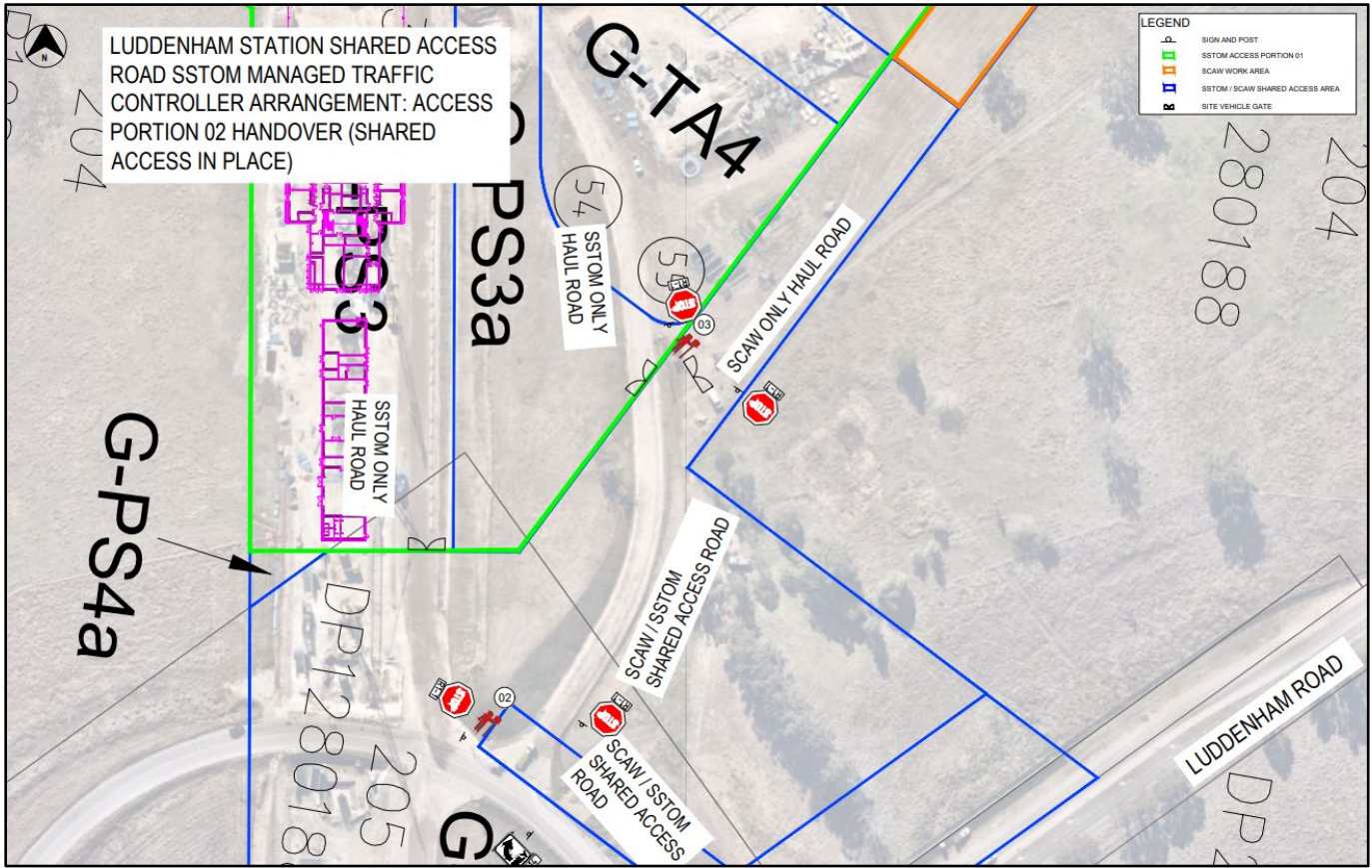


FIGURE 13: ACCESS PORTION 02 SHARED ACCESS ARRANGEMENT

Traffic control of the shared internal haul roads will be managed by SCAW in this stage until 13 December 2023 when SSTM will take over. SSTM will maintain the Access Portion 01 traffic management arrangement while SCAW still has shared access to the site per Figure 13. Signage will be updated on the shared access haul road to reflect the Access Portion 02 handover.

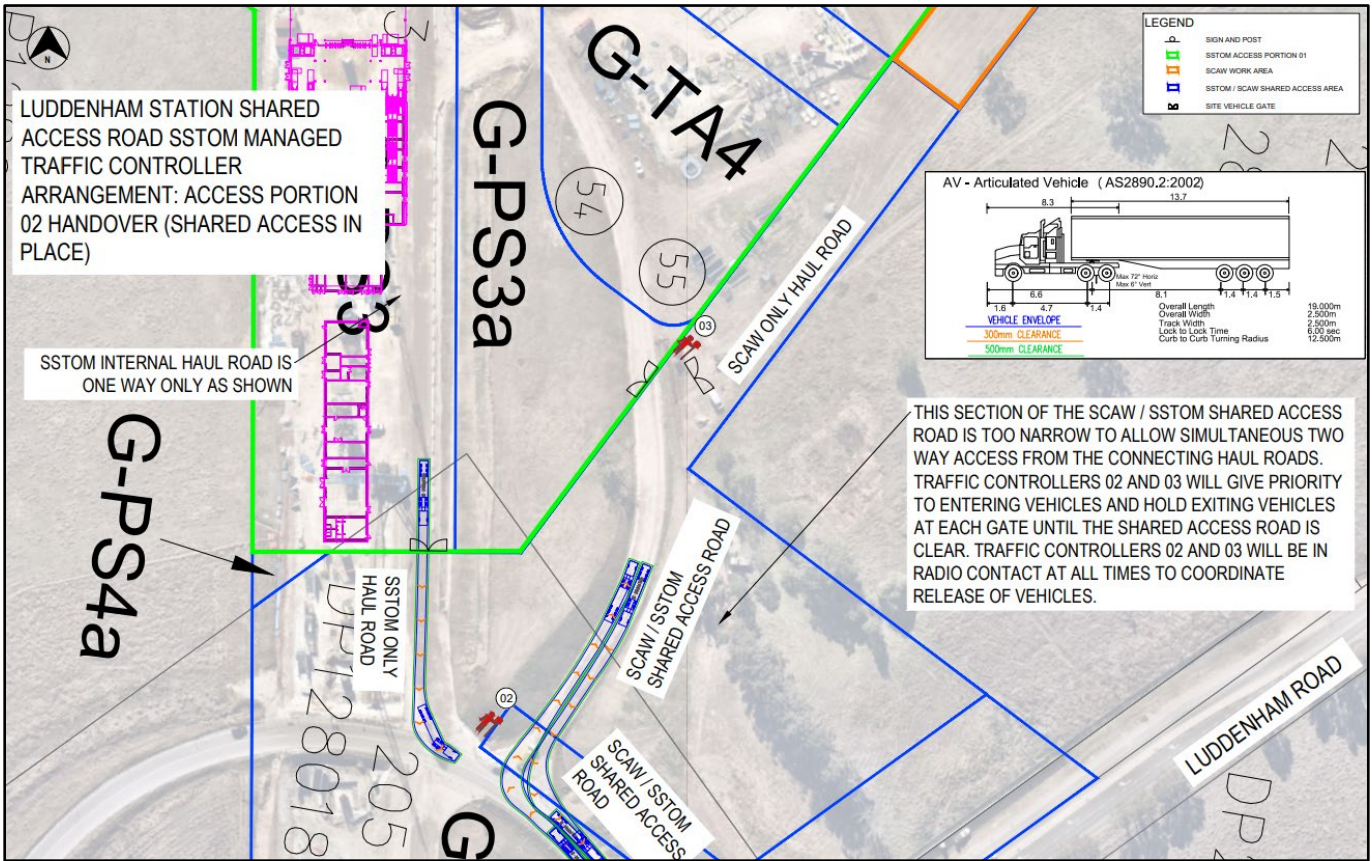


FIGURE 14: ACCESS PORTION 02 SHARED ACCESS SWEEP PATH ASSESSMENT

All shared access roads will operate with two way traffic in this stage and due to the width of the haul roads, two way simultaneous access will not be possible at the intersections per Figure 12 so traffic controllers 02 and 03 will be in constant radio contact at all times to manage access to the shared access roads once vehicles are past traffic controller 01. SSTOM internal haul roads will operate as a one way loop entering from the eastern gate and exiting from the western gate.

Traffic controllers will be instructed to give priority to incoming vehicles and to hold exiting vehicles at the respective gates when necessary.

4.6.4 Access Portion 02 Handover (SSTOM only access)

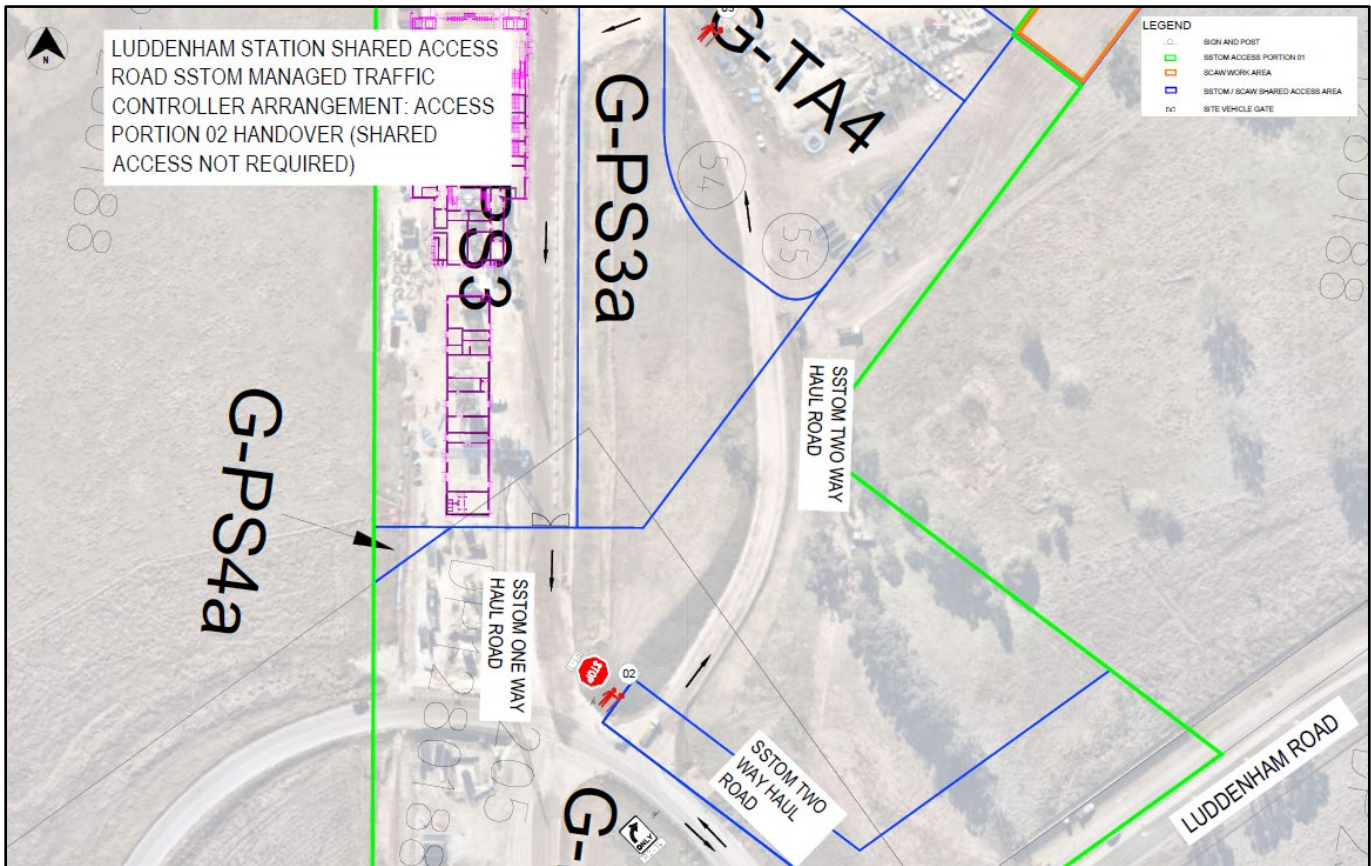


FIGURE 15: ACCESS PORTION 02 SSTOM ONLY ACCESS ARRANGEMENT

Following the SCAW access switch in February / March 2024, SSTOM will have sole access to the site. Internal haul roads will operate as one way only within Areas G-PS3a and G-PS3 (per Figure 15) with the two-way haul road section connecting Area G-TA4 through G-PS4 and G-TA5 to Luddenham Road.

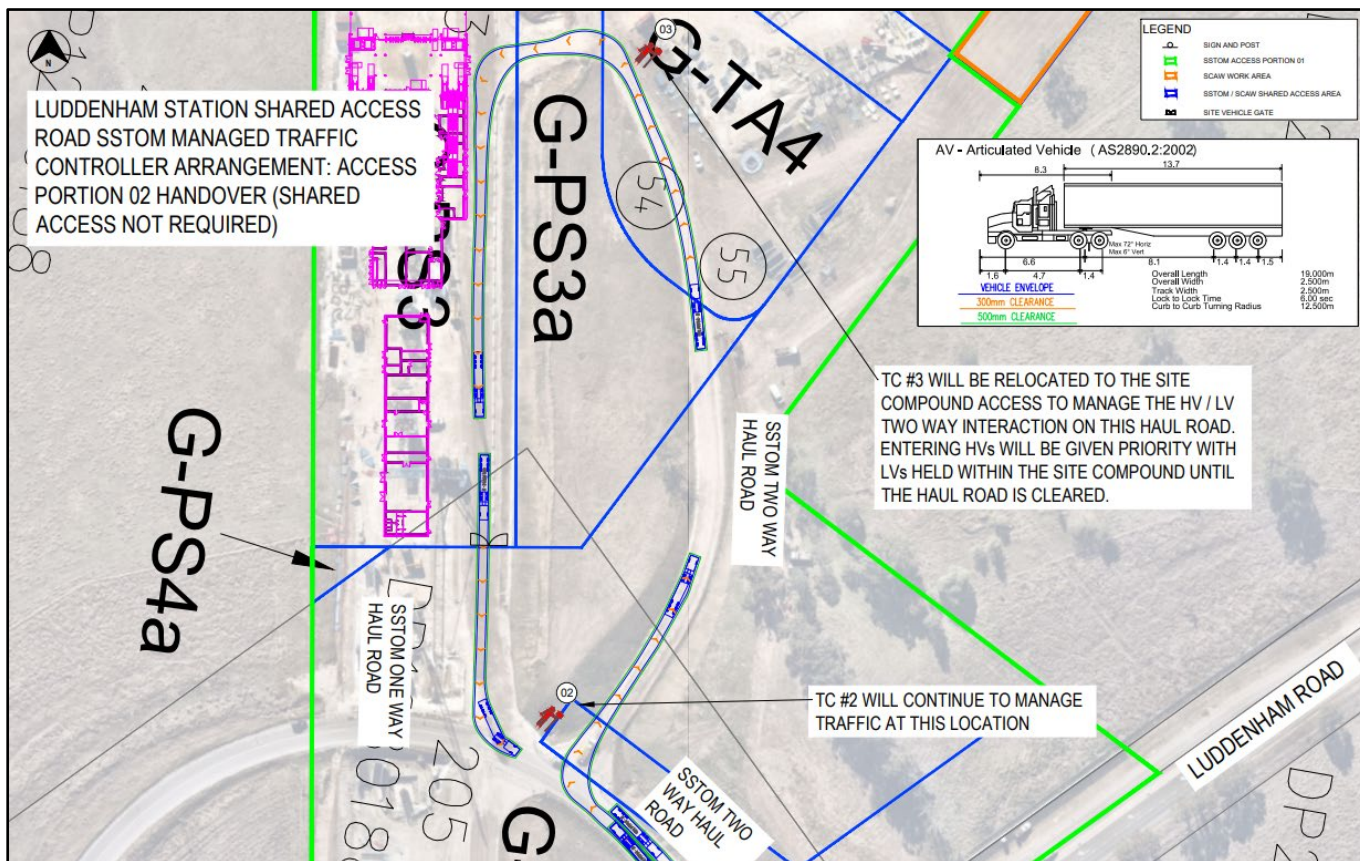


FIGURE 16: ACCESS PORTION 02 SSTOM ONLY ACCESS SWEEP PATH ASSESSMENT

Traffic controller 02 will be retained where the haul roads split east and west bound to manage traffic and associated signage will be updated on the shared access haul road to reflect the Access Portion 02 complete handover. Traffic controller 03 will be relocated to the site compound to manage LV traffic southbound on the two-way haul road.

Traffic controllers will be instructed to give priority to incoming vehicles and to hold exiting vehicles at the respective gates when necessary.

4.6.5 Access Portion 03 Handover

Access Portion 03 is part of the at grade and viaduct Linewide construction and as such, will be covered in a separate Linewide CTMP.

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 C.

5 Traffic Impact Management

5.1 Vehicle Impact Management

The project vehicle number at peak is shown in Table 7 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.

However, no construction traffic volume was provided for the Luddenham Station site in the EIS. An analysis of the SSTOM projected construction traffic volumes against the EIS construction traffic volumes and the projected vehicle numbers for the construction of Luddenham Station has been found to fit within the overall off-airport stations (STM, OHE, AEC) and stabling yard (SMF) construction traffic volumes per Table 7.

TABLE 6: PROJECTED VEHICLE NUMBERS

Site ID	Vehicle Type	IN	OUT	TOTAL	IN	OUT	TOTAL
		EIS AM Peak Construction Movements			EIS PM Peak Construction Movements		
St Marys Station	LV Staff	212	0	212	0	212	212
	LV Deliveries	2	2	4	2	2	4
	HV	8	8	16	8	8	16
Orchard Hills Station	LV Staff	178	0	178	0	178	178
	LV Deliveries	2	2	4	2	2	4
	HV	20	20	40	20	20	40
Orchard Hills SMF	LV Staff	56	0	56	0	56	56
	LV Deliveries	1	1	2	1	1	2
	HV	11	11	22	11	11	22
Aerotropolis Station	LV Staff	110	0	110	0	110	110
	LV Deliveries	1	1	2	1	1	2
	HV	13	13	26	13	13	26
Luddenham Station	LV Staff	no traffic volumes for this station were provided in the EIS					
	LV Deliveries	no traffic volumes for this station were provided in the EIS					
	HV	no traffic volumes for this station were provided in the EIS					
	LV Staff	556	0	556	0	556	556

Stations and SMF Total Volume	LV Deliveries	6	6	12	6	6	12
	HV	52	52	104	52	52	104

		SSTOM AM Peak Construction Movements			SSTOM PM Peak Construction Movements		
St Marys Station	LV Staff	20	0	20	0	30	30
	LV Deliveries	1	1	2	1	1	2
	HV	8	8	16	8	8	16

Note: This is the SBT / SSTOM combined total volumes during TBM retrieval

Orchard Hills Station	LV Staff	178	0	178	0	178	178
	LV Deliveries	2	2	4	2	2	4
	HV	20	20	40	20	20	40

Note: This is the SBT / SCAW / SSTOM combined total volumes inclusive of the concrete batching plant

Orchard Hills SMF	LV Staff	30	0	30	0	50	50
	LV Deliveries	1	1	2	1	1	2
	HV	8	8	16	8	8	16

Note: SSTOM will have sole possession of this site following SCAW handover

Aerotropolis Station	LV Staff	55	0	55	0	65	65
	LV Deliveries	1	1	2	1	1	2
	HV	11	11	22	11	11	22

Note: SSTOM will have sole possession of this site from SBT handover

Luddenham Station	LV Staff	45	0	45	0	55	55
	LV Deliveries	1	1	2	1	1	2
	HV	4	4	8	4	4	8

Note: SSTOM has sole possession of this site following the second SCAW handover in Nov 23

Stations and SMF	LV Staff	328	0	328	0	378	378
	LV Deliveries	6	6	12	6	6	12

Total Volume	HV	51	51	102	51	51	102
---------------------	-----------	-----------	-----------	------------	-----------	-----------	------------

Note that the SSTOM peak construction movements shown in Table 7 will not be occurring at the same time as the construction traffic volume for each site occurs at slightly different times per Figure 17.

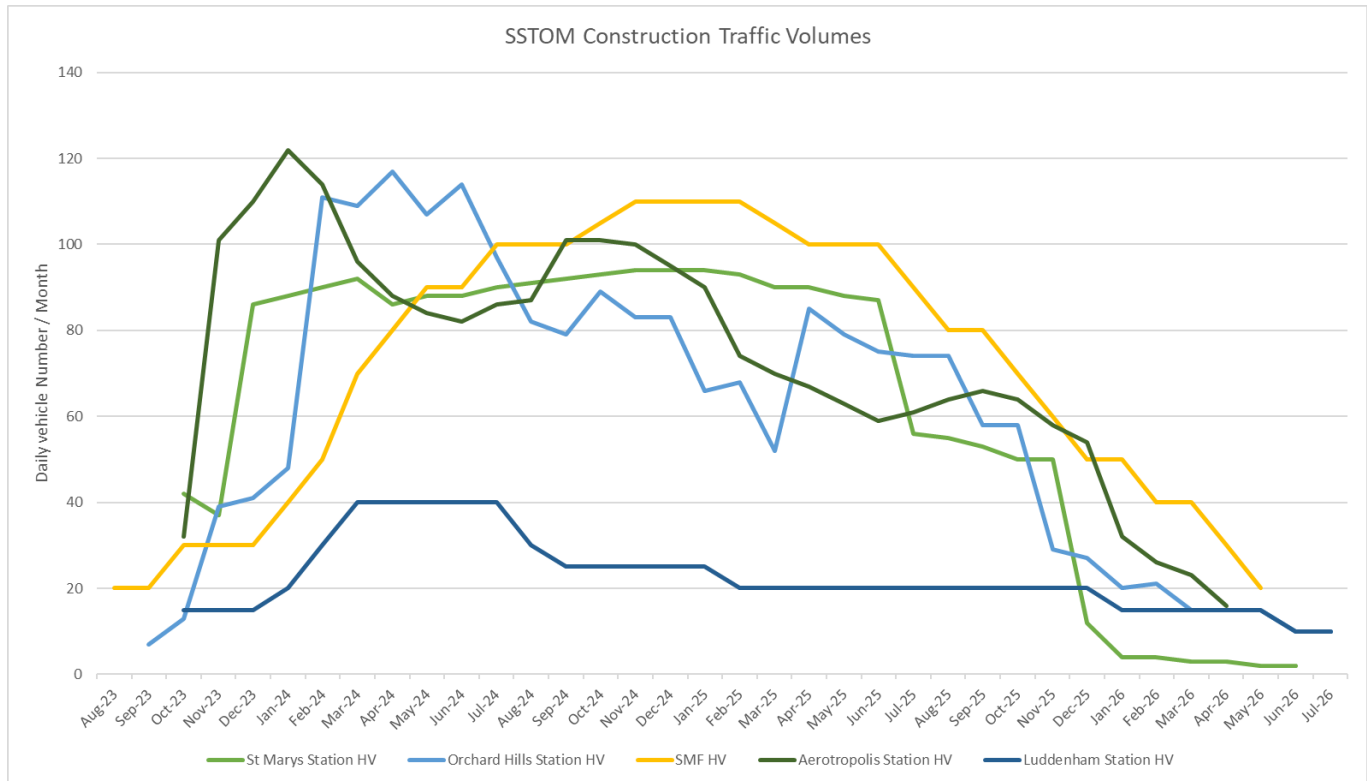


FIGURE 17: SSTOM OFF-AIRPORT CONSTRUCTION TRAFFIC VOLUME

No queuing will be permitted on Luddenham Road 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 significant amount 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 no formalised pedestrian facilities and negligible foot traffic in the area.

Forming part of the road widening works within the immediate section of Luddenham Road between G-TA5 and G-PS2, a dedicated bicycle lane has been installed on northbound lane of Luddenham Road.

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. There is a bus service operating on Luddenham Road north of the site into Twin Creeks Drive but none of PLM's heavy vehicles will be permitted to use Luddenham Road north of the site access.

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 Luddenham Road will be maintained at all times and access for utilities providers/maintainers will not be impacted.

However, in the case that an adjacent landowner's personnel, livestock, farm equipment requires access through the construction site to the landowner's property, all construction vehicles would be held within the site to facilitate this access.

A traffic controller will be provided to walk the adjacent landowner's personnel, livestock, farm equipment through the construction site and to hold all construction traffic.

5.5 Cumulative Impacts

SSTOM and SCAW will be sharing Luddenham Road access to the LDN site between October 2023 and February / March of 2024.

SSTOM projected heavy vehicle traffic generation is well within the cumulative EIS peak construction movements for all phases of construction for the six stations forming part of the SSTOM package of works.

SCAW is working within the Off-airport construction corridor EIS peak construction movements for this site.

To manage heavy vehicle traffic as well as the shared access roads, SSTOM site superintendent for LDN will have weekly meetings with the SCAW site superintendents to coordinate heavy delivery dates and use of Luddenham Road.

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

The Luddenham Road shared site access will have one traffic controller for all stages of station construction at the intersection to manage delivery traffic and contractor access at the Site access and be responsible for opening the site gate on Luddenham Road starting one hour before construction hours and ending one hour after. This traffic controller will coordinate with the other traffic controllers within site via radios to manage traffic within the site and will direct general traffic when required within the site boundary.

When the shared access road arrangement between SSTOM and SCAW is in place, two more traffic controller will be located at key intersections within the shared access road to coordinate the provision of direction to SSTOM and SCAW works areas, parking within the site with the traffic controller on gate via radio and if necessary, manage the unloading and loading of heavy vehicles.

When SSTOM has sole possession of Access Portions 01 and 02, one traffic controller will manage delivery traffic and contractor access at the end of the two-way portion of the haul road to give priority to entering vehicles at all times.

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 LDN construction works will have minimal impact on parking in the area.

There will be no contractor parking allowed on the surrounding road network including Luddenham Road.

The on-site parking area within the LDN compound can accommodate the projected 180 light vehicle parking requirement.

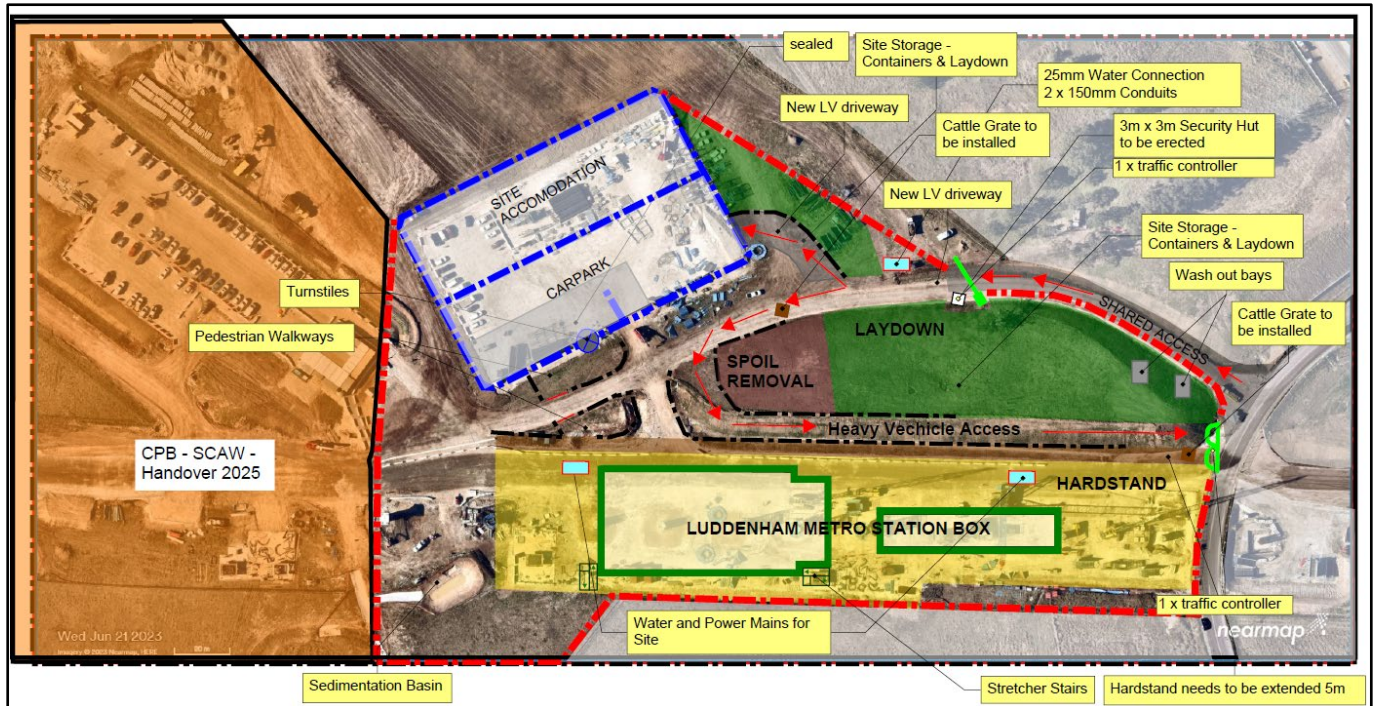


FIGURE 18: PROPOSED SITE ESTABLISHMENT PLAN

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.

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 given that the first service arriving at Leppington Station is after 7pm which is after pre-start on site. While the first service to St Marys start at 4.51am, it is from Granville with only 3 viable services as workers will need to arrive on site before 6.45am for pre-start and the drive from St Marys to site is 35min.

7 Agency Permits

7.1 Council Permits

No Council permits is required for Station construction. 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.

There is no element of works or traffic management requirements outlined in this CTMP that triggers the Penrith Local Traffic Committee approval process.

7.2 Road Dilapidation Report

Before any local road, i.e. Luddenham 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

No SZA Permit is needed for station construction.

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:

Carlos Escruceria (Project Manager): +61 436 968 159

Jimmy Filladites (Site Engineer): +61 439 659 465

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 8 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 footpaths) 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).

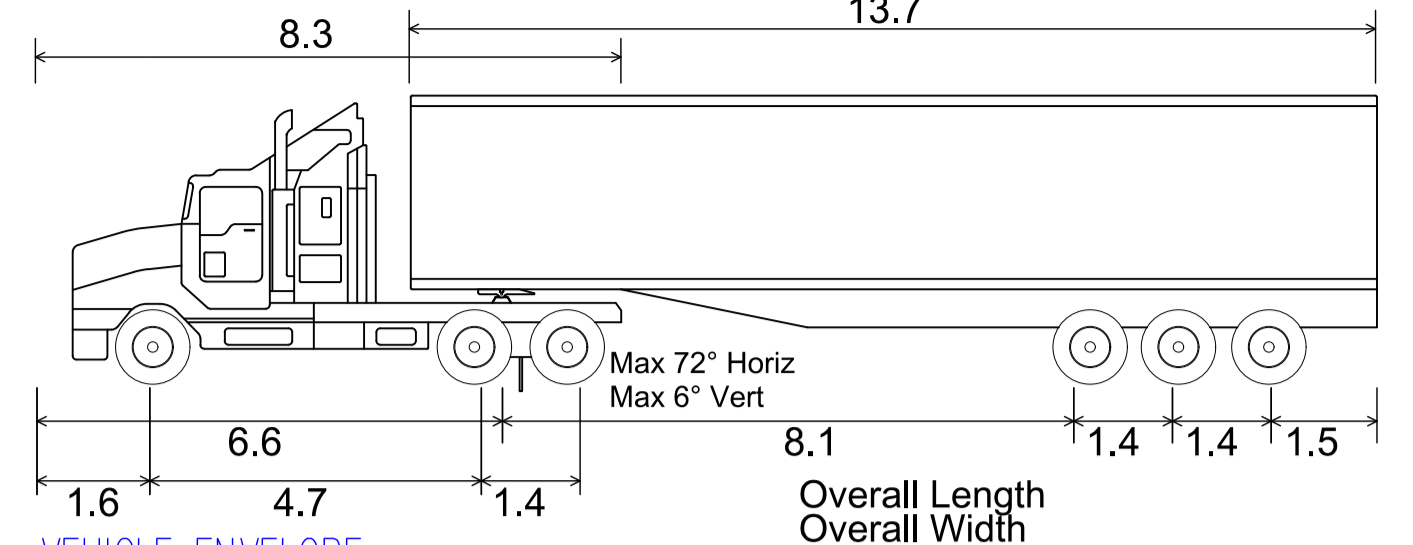
Appendix A Swept Path Assessment



**LUDDENHAM STATION ACCESS ROAD
ALL SSTOM ACCESS PORTIONS
TRAFFIC MANAGEMENT**

**SCAW / SSTOM
SHARED ACCESS
ROAD**

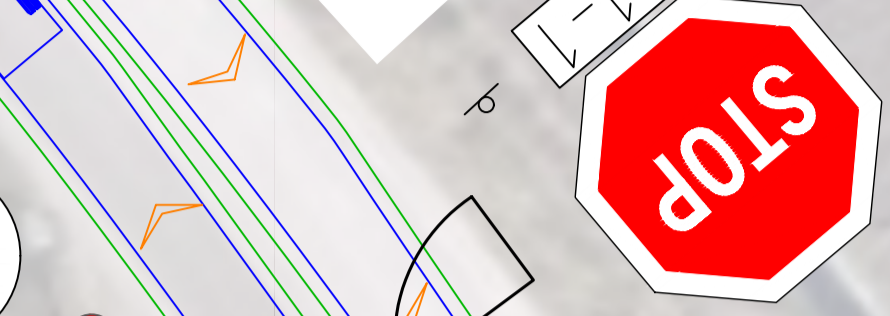
AV - Articulated Vehicle (AS2890.2:2002)



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

**SCAW TRAFFIC CONTROLLER - ON GATE UNTIL
13/12/2023. SSTOM TRAFFIC CONTROLLER WILL TAKE
OVER FROM 13/12/2023. NOTE EXISTING SIGNS ON GATE
MAY BE UPDATED FOLLOWING SSTOM TAKEOVER**

01



LUDDENHAM ROAD

SCAW GATE 4

**ALL SSTOM HVs WILL BRIEFED TO
UTILISE THE LEFT TURN SLIP LANE TO
ENTER THE SITE AND THE RIGHT TURN
AUXILIARY LANE TO EXIT THE SITE**

TfNSW_SecurityClassificationDesc

FOR INFORMATION

Cad File: C:\Users\WendyZheng\OneDrive - Parklife - My Documents\07_Luddenham (RC)\cad\SMW\SASSM\PLD-SVD-DE-TMP-000002_LDN.dwg Plot Date: 03/08/23 - 17:00 Plot Date & Time: 100mm AT FULL SIZE

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

NOTE: Do not scale from this drawing.

CLIENT:




Parklife Metro D&C

The information shown on this drawing is for the purposes of the Sydney Metro Project only. No warranty is given or implied as to its suitability for any other purpose. The Service Providers accept no liability arising from the use of this drawing and the information shown thereon for any purpose other than the Sydney Metro Project.

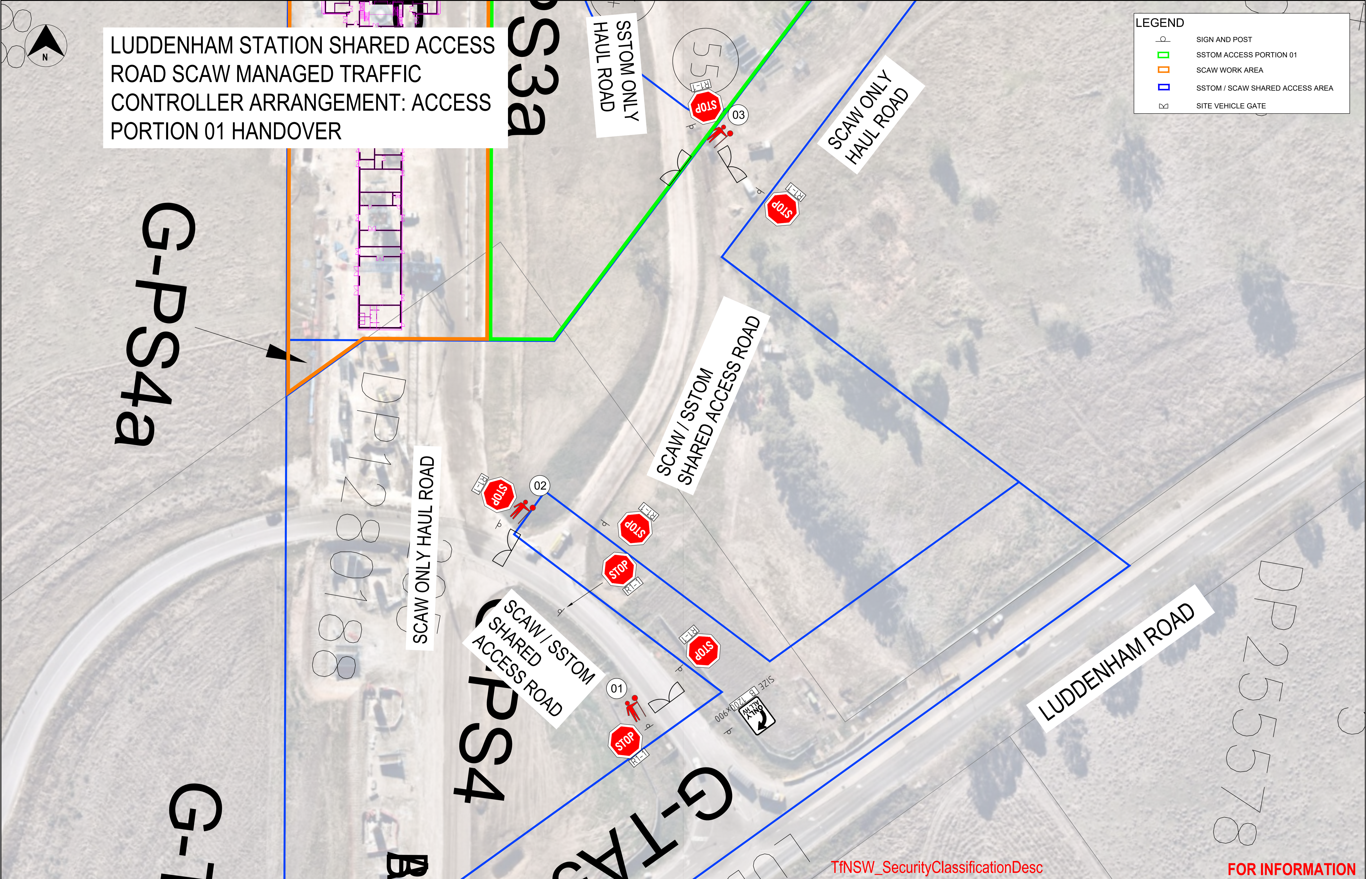
TAO DESIGN COMPANY/CONTRACTOR:

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

SYDNEY METRO - WSA - SSTOM

tbLine	tbDetail1	tbDetail2	tbDetail3
FILE No:	tbFileNo	SHEET	tbOfSheets
STATUS:	tbStatus	EDMS No:	tbEDMS
DRG No:	tbAEOrgNo	REV	VER
		tRev	tVer

100mm AT FULL SIZE Plot Date & Time: Plot Date: 03/08/23 - 17:00 Cad File: C:\Users\WendyZheng\OneDrive - Parklife - \Documents\07_Luddenham (RC)\act\SMW\SASSM\PLD-SVD-DE-TMP-000002_LDN.dwg



LUDDENHAM STATION SHARED ACCESS ROAD SCAW MANAGED TRAFFIC CONTROLLER ARRANGEMENT: ACCESS PORTION 01 HANDOVER

LEGEND

- SIGN AND POST
- SSTOM ACCESS PORTION 01
- SCAW WORK AREA
- SSTOM / SCAW SHARED ACCESS AREA
- SITE VEHICLE GATE

G-PS4a

DP1280188

DP255578

SCAW ONLY HAUL ROAD

SSTOM ONLY HAUL ROAD

SCAW ONLY HAUL ROAD

SCAW / SSTOM SHARED ACCESS ROAD

SCAW / SSTOM SHARED ACCESS ROAD

LUDDENHAM ROAD

G-PS4

G-TA

G-7

TfNSW_SecurityClassificationDesc

FOR INFORMATION

Rev No	Rev Desc	Rev Date	Rev By
Rev7	tbAMDsgt...	...	...
Rev6	tbAMDsgt...	...	...
Rev5	tbAMDsgt...	...	...
Rev4	tbAMDsgt...	...	...
Rev3	tbAMDsgt...	...	...
Rev2	tbAMDsgt...	...	...
Rev1	tbAMDsgt...	...	...
REV.	AMENDMENT DESCRIPTION	Design by	Verified by
		Approved by	Date

NOTE: Do not scale from this drawing.

CLIENT:

Parklife Metro D&C

The information shown on this drawing is for the purposes of the Sydney Metro Project only. No warranty is given or implied as to its suitability for any other purpose. The Service Providers accept no liability arising from the use of this drawing and the information shown thereon for any purpose other than the Sydney Metro Project.

TAO DESIGN COMPANY/CONTRACTOR:

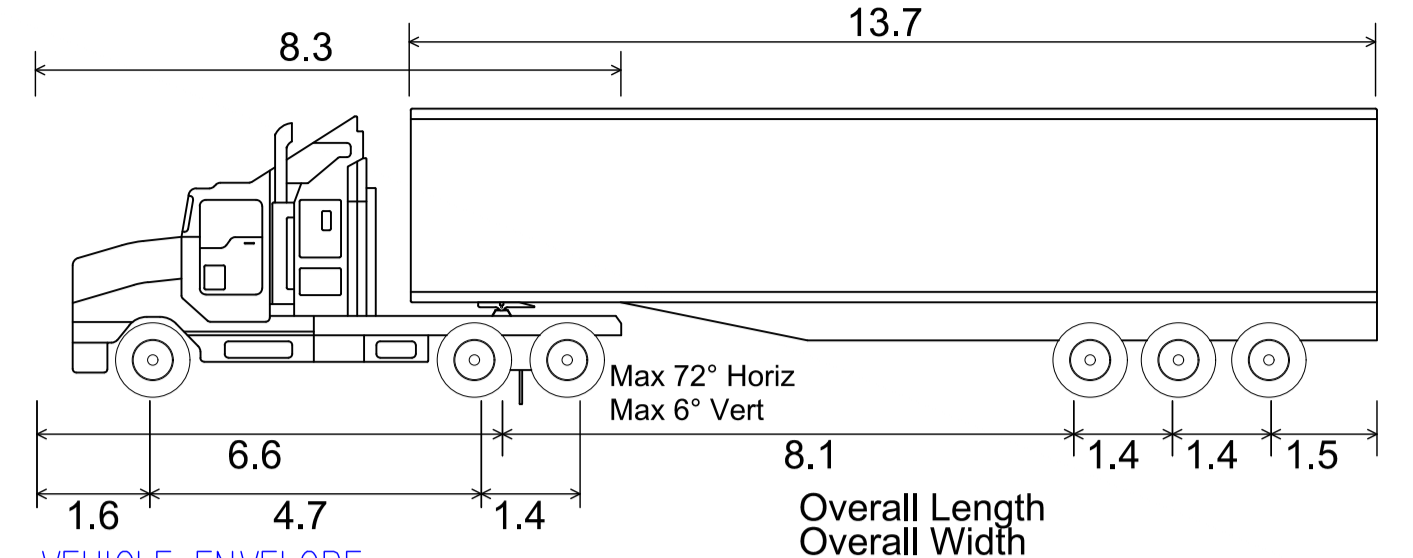
DRAWN	tbDrwnName	tbDrwnDate
DESIGNED	tbDsnName	tbDsnDate
DRG CHECK	tbDrgChkName	tbDrgChkDate
DESIGN CHECK	tbDsnChkName	tbDsnChkDate
APPROVED	tbApprName	tbApprDate

SYDNEY METRO - WSA - SSTOM

tbLine	tbDetail1	tbDetail2	tbDetail3
FILE No:	tbFileNo	SHEET No:	tbOfSheets
STATUS:	tbStatus	EDMS No:	tbEDMS
DRG No:	tbAEOrgNo	REV	VER
		tRev	tVer

ACCESS PORTION 01 HANDOVER
INTERNAL SITE TRAFFIC MANAGEMENT

AV - Articulated Vehicle (AS2890.2:2002)



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

LEGEND

	SIGN AND POST
	SSTOM ACCESS PORTION 01
	SCAW WORK AREA
	SSTOM / SCAW SHARED ACCESS AREA
	SITE VEHICLE GATE

THIS SECTION OF THE SCAW / SSTOM SHARED ACCESS ROAD IS TOO NARROW TO ALLOW SIMULTANEOUS TWO WAY ACCESS FROM THE CONNECTING HAUL ROADS. TRAFFIC CONTROLLERS 02 AND 03 WILL GIVE PRIORITY TO ENTERING VEHICLES AND HOLD EXITING VEHICLES AT EACH GATE UNTIL THE SHARED ACCESS ROAD IS CLEAR. TRAFFIC CONTROLLERS 02 AND 03 WILL BE IN RADIO CONTACT AT ALL TIMES TO COORDINATE RELEASE OF VEHICLES.

100mm AT FULL SIZE Plot Date & Time: Plot Date: 03/08/23 - 17:00 Cad File: C:\Users\WendyZheng\OneDrive - Parklife - \Documents\07_Luddenham (RC)\act\SMW\SASSM\PLD-SVD-DE-TMP-000002_LDN.dwg

REV.	AMENDMENT DESCRIPTION	Design by	Verified by	Approved by	Date

tbAMDDescREV7	tbAMDDsgts	tbAMDDDateREV7	tbAMDDScaleREV7
tbAMDDDescREV6	tbAMDDsgts	tbAMDDDateREV6	tbAMDDScaleREV6
tbAMDDDescREV5	tbAMDDsgts	tbAMDDDateREV5	tbAMDDScaleREV5
tbAMDDDescREV4	tbAMDDsgts	tbAMDDDateREV4	tbAMDDScaleREV4
tbAMDDDescREV3	tbAMDDsgts	tbAMDDDateREV3	tbAMDDScaleREV3
tbAMDDDescREV2	tbAMDDsgts	tbAMDDDateREV2	tbAMDDScaleREV2
tbAMDDDescREV1	tbAMDDsgts	tbAMDDDateREV1	tbAMDDScaleREV1

CLIENT:

Parklife Metro D&C

TfNSW_SecurityClassificationDesc

TAO DESIGN COMPANY/CONTRACTOR:

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

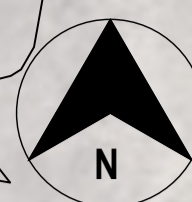
SYDNEY METRO - WSA - SSTOM

tbLine	tbDetail1	tbDetail2	tbDetail3
FILE No:	tbFileNo	SHEET No:	tbOfSheets
STATUS:	tbStatus	EDMS No:	tbEDMS
DRG No:	tbAEODrngNo	REV	VER
		tRev	tVer

FOR INFORMATION

NOTE: Do not scale from this drawing.

tbSheetSize Co-ordinate System: tbCoordSys Height Datum: tbHghtDat



LUDDENHAM STATION SHARED ACCESS
ROAD SSTOM MANAGED TRAFFIC
CONTROLLER ARRANGEMENT: ACCESS
PORTION 02 HANDOVER (SHARED
ACCESS IN PLACE)

LEGEND	
	SIGN AND POST
	SSTOM ACCESS PORTION 01
	SCAW WORK AREA
	SSTOM / SCAW SHARED ACCESS AREA
	SITE VEHICLE GATE

204

280188

204

G-PS4a

DP1280188

PS3

PS3a

G-TA4

54
SSTOM ONLY
HAUL ROAD

SCAW ONLY HAUL ROAD

SCAW / SSTOM
SHARED ACCESS ROAD

SCAW / SSTOM
SHARED ACCESS
ROAD

LUDDENHAM ROAD

DP1280188



TfNSW_SecurityClassificationDesc

FOR INFORMATION

100mm AT FULL SIZE Plot Date & Time: Plot Date: 03/08/23 - 17:00 Cad File: C:\Users\WendyZheng\OneDrive - Parklife - My Documents\07_Luddenham (RC)\act\SMW\SASSM\PLD-SVD-DE-TMP-000002_LDN.dwg

REV.	AMENDMENT DESCRIPTION	Design by	Verified by	Approved by	Date

RevNo	RevDesc	RevDate	RevScale

CLIENT:




Parklife Metro D&C

The information shown on this drawing is for the purposes of the Sydney Metro Project only. No warranty is given or implied as to its suitability for any other purpose. The Service Providers accept no liability arising from the use of this drawing and the information shown thereon for any purpose other than the Sydney Metro Project.

TAO DESIGN COMPANY/CONTRACTOR:

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

SYDNEY METRO - WSA - SSTOM	
tbLine	
tbDetail1	
tbDetail2	
tbDetail3	
FILE No:	tbFileNo
STATUS:	tbStatus
DRG No:	tbAEODrNo

NOTE: Do not scale from this drawing.

REV	VER



LUDDENHAM STATION SHARED ACCESS ROAD SSTOM MANAGED TRAFFIC CONTROLLER ARRANGEMENT: ACCESS PORTION 02 HANDOVER (SHARED ACCESS IN PLACE)

SSTOM INTERNAL HAUL ROAD IS ONE WAY ONLY AS SHOWN

G-PS4a

G-PS3a

G-TA4

SCAW ONLY HAUL ROAD

SSTOM ONLY HAUL ROAD

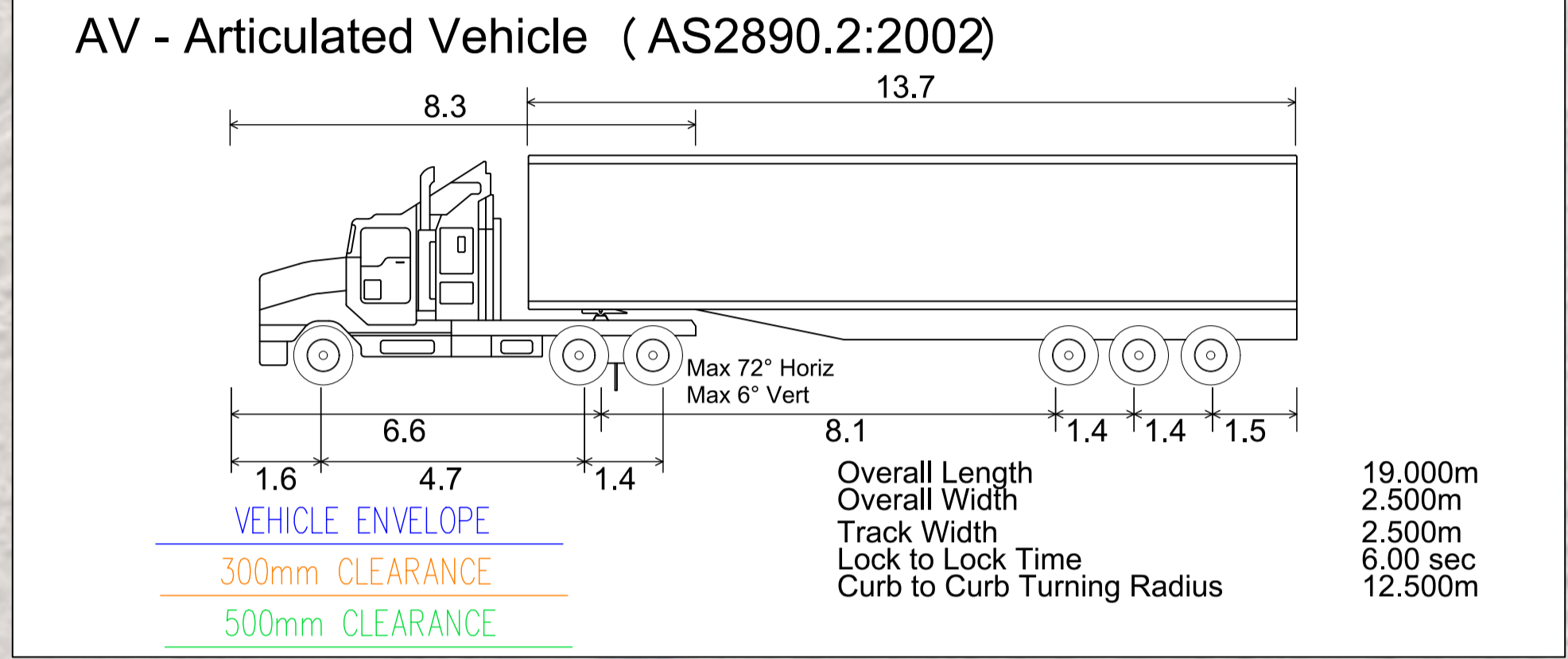
SCAW / SSTOM SHARED ACCESS ROAD

SCAW / SSTOM SHARED ACCESS ROAD

LUDDENHAM ROAD

LEGEND

- SIGN AND POST
- SSTOM ACCESS PORTION 01
- SCAW WORK AREA
- SSTOM / SCAW SHARED ACCESS AREA
- SITE VEHICLE GATE



THIS SECTION OF THE SCAW / SSTOM SHARED ACCESS ROAD IS TOO NARROW TO ALLOW SIMULTANEOUS TWO WAY ACCESS FROM THE CONNECTING HAUL ROADS. TRAFFIC CONTROLLERS 02 AND 03 WILL GIVE PRIORITY TO ENTERING VEHICLES AND HOLD EXITING VEHICLES AT EACH GATE UNTIL THE SHARED ACCESS ROAD IS CLEAR. TRAFFIC CONTROLLERS 02 AND 03 WILL BE IN RADIO CONTACT AT ALL TIMES TO COORDINATE RELEASE OF VEHICLES.

TfNSW_SecurityClassificationDesc

FOR INFORMATION

Cad File: C:\Users\WendyZheng\OneDrive - Parklife - My Documents\07_Luddenham (RC)\cad\SMW\SASSM\PLD-SVP-DE-TMP-000002_LDN.dwg Plot Date: 03/08/23 - 17:00 Plot Date & Time: 100mm AT FULL SIZE

REV.	AMENDMENT DESCRIPTION	Design by	Verified by	Approved by	Date

Rev No	Rev Desc	Rev Date	Rev Scale

CLIENT:

Parklife Metro D&C

The information shown on this drawing is for the purposes of the Sydney Metro Project only. No warranty is given or implied as to its suitability for any other purpose. The Service Providers accept no liability arising from the use of this drawing and the information shown thereon for any purpose other than the Sydney Metro Project.

TAO DESIGN COMPANY/CONTRACTOR:

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

tbDesignCompName
tbAEO Discipline Desc

SYDNEY METRO - WSA - SSTOM






tbLine	tbDetail1	tbDetail2	tbDetail3
FILE No:	tbFileName	SHEET No:	tbOfSheets
STATUS:	tbStatus	EDMS No:	tbEDMS
DRG No:	tbAEO DrgNo	REV	VER
		tRev	tVer

NOTE: Do not scale from this drawing.



**LUDDENHAM STATION SHARED ACCESS
ROAD SSTOM MANAGED TRAFFIC
CONTROLLER ARRANGEMENT: ACCESS
PORTION 02 HANDOVER (SHARED
ACCESS NOT REQUIRED)**

LEGEND

-  SIGN AND POST
-  SSTOM ACCESS PORTION 01
-  SCAW WORK AREA
-  SSTOM / SCAW SHARED ACCESS AREA
-  SITE VEHICLE GATE

G-P S4a

PS3

G-P S3a

G-T A4

**SSTOM TWO WAY
HAUL ROAD**

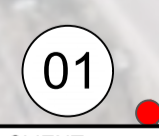
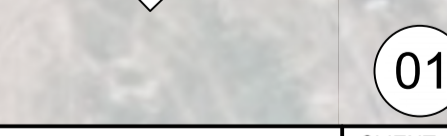
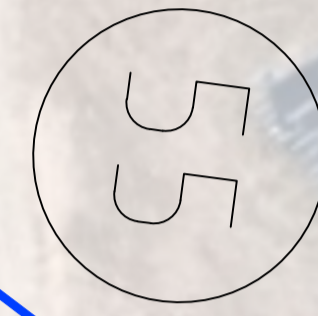
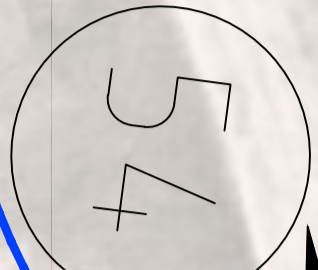
**SSTOM ONE WAY
HAUL ROAD**

**SSTOM TWO
WAY HAUL
ROAD**

LUDDENHAM ROAD

DP1280188
205

G-F



80188

80188

TfNSW_SecurityClassificationDesc




FOR INFORMATION

Cad File: C:\Users\WendyZheng\OneDrive - Parklife - J:\Documents\07_Luddenham (RC)\act\SMW\SASSM\PLD-SVD-DE-TMP-000002_LDN.dwg Plot Date: 07/08/23 - 17:50 Plot Date & Time: 100mm AT FULL SIZE Plot Date & Time:

REV.	AMENDMENT DESCRIPTION	Design by	Verified by	Approved by	Date

tbAMDDescREV7	tbAMDDsgtREV7	tbAMDDgDateREV7	tbAMDDScaleREV7

CLIENT:

tbAEOCompName
tbAEODisciplineDesc
tbAEOSuppName

The information shown on this drawing is for the purposes of the Sydney Metro Project only. No warranty is given or implied as to its suitability for any other purpose. The Service Providers accept no liability arising from the use of this drawing and the information shown thereon for any purpose other than the Sydney Metro Project.

TAO DESIGN COMPANY/CONTRACTOR:

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

tbDesignCompName
tbAEODisciplineDesc
tbAEOSuppName

SYDNEY METRO - WSA - SSTOM			
tbLine	tbDetail1	FILE No: tbFileNo	SHEET No: tbSheetNo
tbDetail2	tbDetail3	STATUS: tbStatus	EDMS No: tbEDMS
DRG No: tbAEODrNo		REV tRev	VER Ver

tbSheetSize Co-ordinate System: tbCoordSys Height Datum: tbHghtDat

This sheet may be prepared using colour and may be incomplete if copied

NOTE: Do not scale from this drawing.

tbAEOSuppName

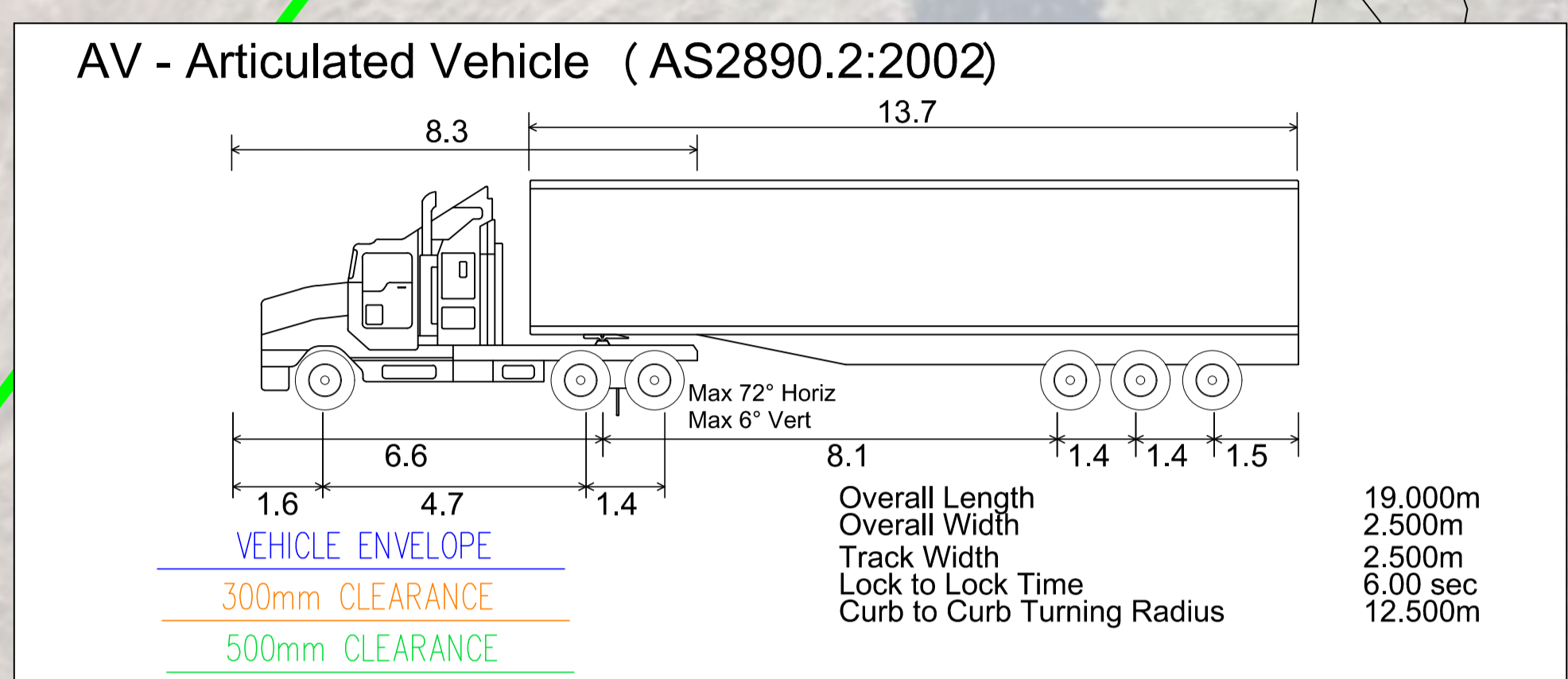
tbDesignCompName
tbAEODisciplineDesc
tbAEOSuppName

DRG No: tbAEODrNo
REV tRev
VER Ver



LUDDENHAM STATION SHARED ACCESS ROAD SSTOM MANAGED TRAFFIC CONTROLLER ARRANGEMENT: ACCESS PORTION 02 HANDOVER (SHARED ACCESS NOT REQUIRED)

LEGEND	
	SIGN AND POST
	SSTOM ACCESS PORTION 01
	SCAW WORK AREA
	SSTOM / SCAW SHARED ACCESS AREA
	SITE VEHICLE GATE



G-P S4a

SSTOM ONE WAY HAUL ROAD

G-P S3a

SSTOM TWO WAY HAUL ROAD

SSTOM TWO WAY HAUL ROAD

G-T A4

TC #3 WILL BE RELOCATED TO THE SITE COMPOUND ACCESS TO MANAGE THE HV / LV TWO WAY INTERACTION ON THIS HAUL ROAD. ENTERING HVs WILL BE GIVEN PRIORITY WITH LVs HELD WITHIN THE SITE COMPOUND UNTIL THE HAUL ROAD IS CLEARED.

TC #2 WILL CONTINUE TO MANAGE TRAFFIC AT THIS LOCATION

LUDDENHAM ROAD

100mm AT FULL SIZE Plot Date & Time: Plot Date: 07/08/23 - 17:59

REV.	AMENDMENT DESCRIPTION	Design by	Verified by	Approved by	Date

REV.	AMENDMENT DESCRIPTION	Design by	Verified by	Approved by	Date

CLIENT:

Parklife Metro D&C

The information shown on this drawing is for the purposes of the Sydney Metro Project only. No warranty is given or implied as to its suitability for any other purpose. The Service Providers accept no liability arising from the use of this drawing and the information shown thereon for any purpose other than the Sydney Metro Project.

TAO DESIGN COMPANY/CONTRACTOR:

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

SYDNEY METRO - WSA - SSTOM	
tbLine	tbDetail1
tbDetail1	tbDetail2
tbDetail2	tbDetail3
FILE No:	tbFileNo
STATUS:	tbStatus
DRG No:	tbAEOrgNo
SHEET No:	tbOfSheets
EDMS No:	tbEDMS
REV	VER
tRev	tVer

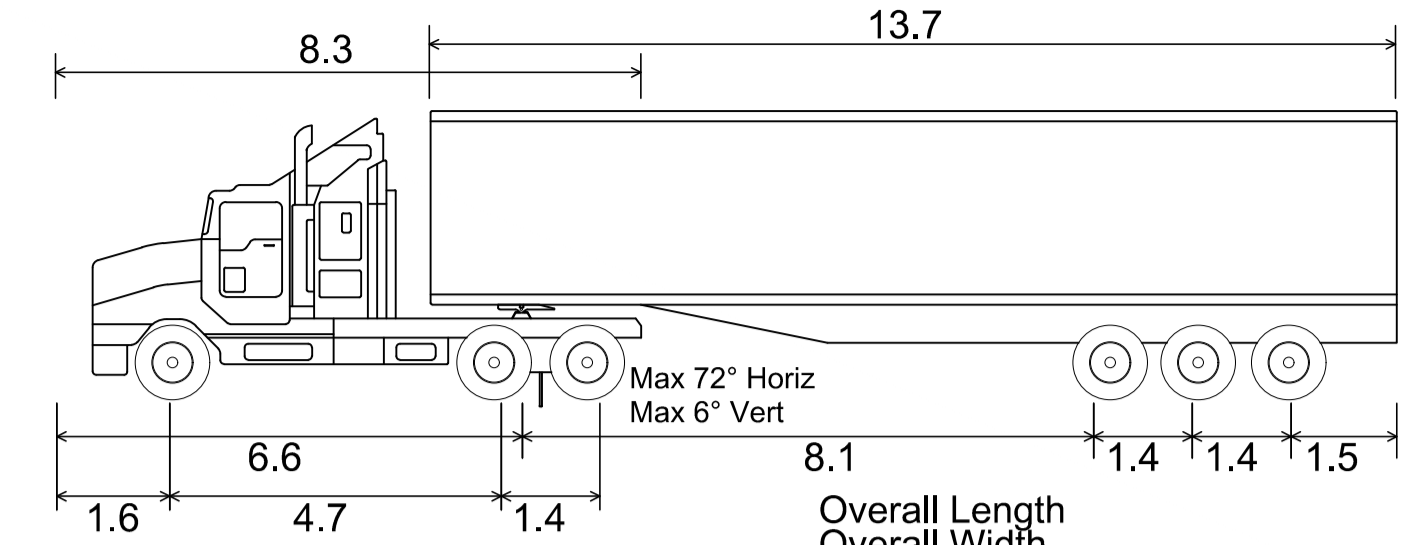
NOTE: Do not scale from this drawing.

TfNSW_SecurityClassificationDesc

FOR INFORMATION



AV - Articulated Vehicle (AS2890.2:2002)



VEHICLE ENVELOPE

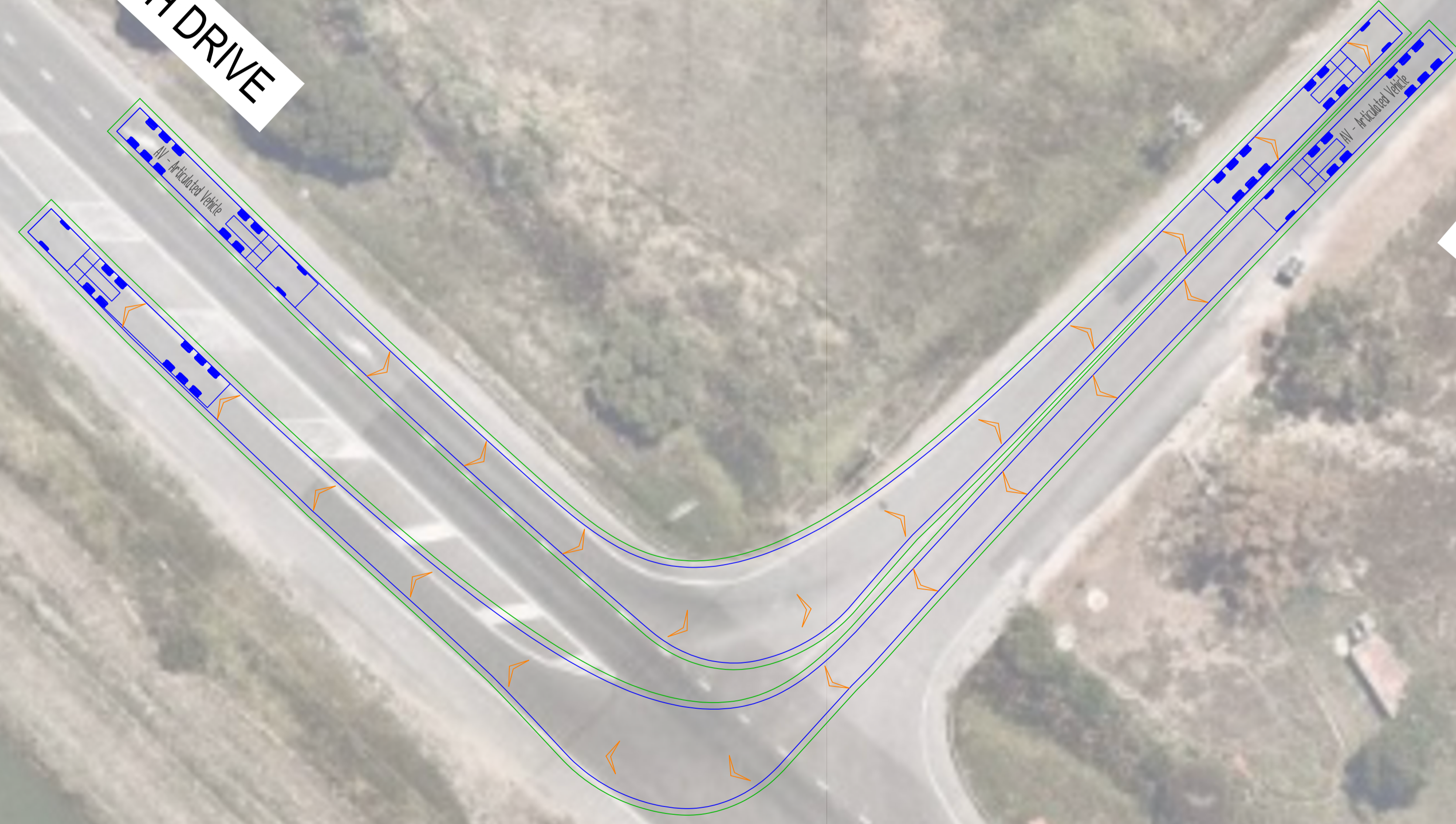
300mm CLEARANCE

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

ELIZABETH DRIVE

LUDDENHAM ROAD



TfNSW_SecurityClassificationDesc

FOR INFORMATION

Cad File: C:\Users\WendyZheng\OneDrive - Parklife - J:\Documents\07_Luddenham (RC)\act\SMW\SASSM-PLD-SVD-DE-TMP-000003_LDN.dwg Plot Date: 28/08/23 - 16:18 Plot Date & Time: 100mm AT FULL SIZE

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

tbSheetSize	Co-ordinate System: tbCoordSys	Height Datum: tbHght	This sheet may be prepared using colour and may be incomplete if copied
-------------	--------------------------------	----------------------	---

NOTE: Do not scale from this drawing.

CLIENT:

tbAEOSuppName

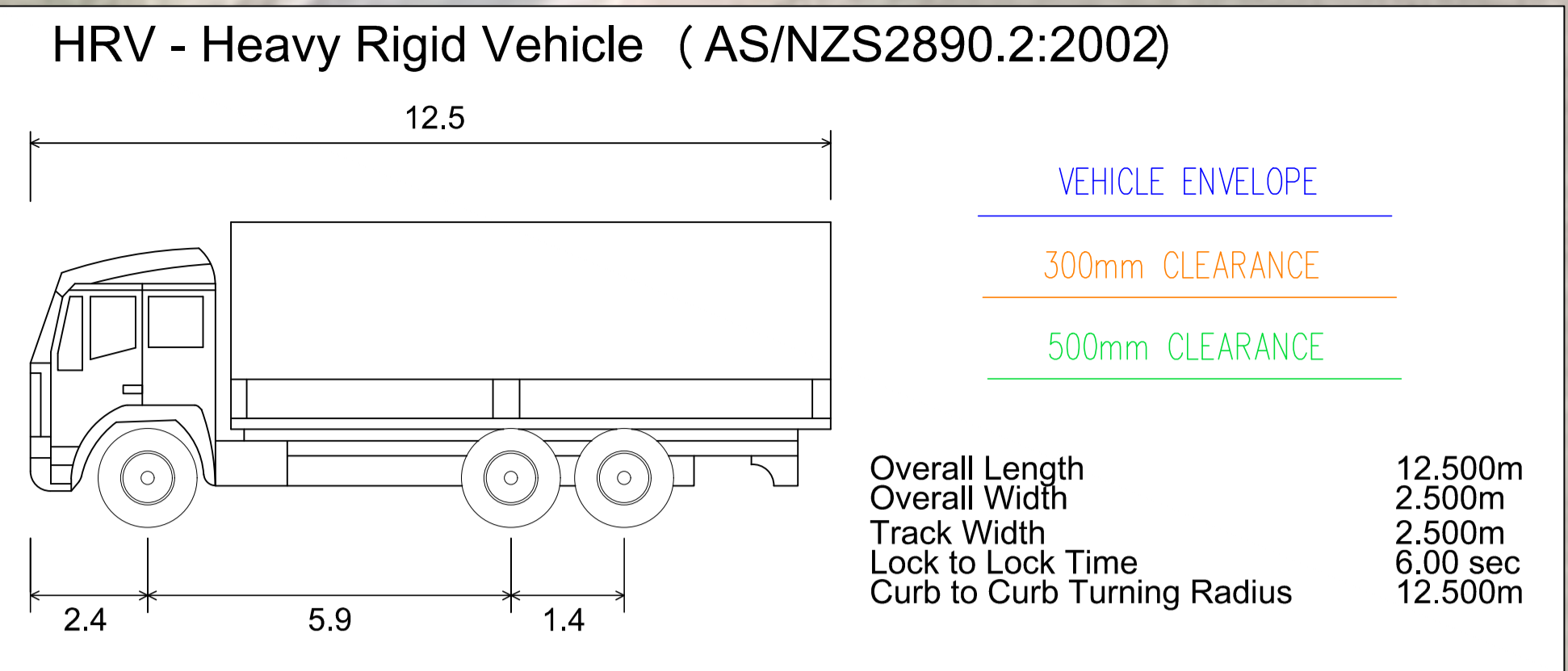
The information shown on this drawing is for the purposes of the Sydney Metro Project only. No warranty is given or implied as to its suitability for any other purpose. The Service Providers accept no liability arising from the use of this drawing and the information shown thereon for any purpose other than the Sydney Metro Project.

TAO DESIGN COMPANY/CONTRACTOR:

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

tbDesignCompName
tbAEODisciplineDesc

SYDNEY METRO - WSA - SSTOM	
tbLine	tbDetail1
tbDetail1	tbDetail2
tbDetail2	tbDetail3
FILE No: tbFileNo	SHEET No: tbOfSheets
STATUS: tbStatus	EDMS No: tbEDMS
DRG No: tbAEOOrgNo	REV Ver
	tRev Ver



ELIZABETH DRIVE

LUDDENHAM ROAD



TfNSW_SecurityClassificationDesc

FOR INFORMATION

100mm AT FULL SIZE Plot Date & Time: Plot Date: 26/08/23 - 16:17

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

tbSheetSize Co-ordinate System: tbCoordSys Height Datum: tbHghtDat

NOTE: Do not scale from this drawing.

CLIENT:

tbAEOName

The information shown on this drawing is for the purposes of the Sydney Metro Project only. No warranty is given or implied as to its suitability for any other purpose. The Service Providers accept no liability arising from the use of this drawing and the information shown thereon for any purpose other than the Sydney Metro Project.

TAO DESIGN COMPANY/CONTRACTOR:

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

tbDesignCompName
 tbAEODisciplineDesc

SYDNEY METRO - WSA - SSTOM

tbLine	FILE No: tbFileNo	SHEET No: tbSheetNo	Of Sheets: ©
tbDetail1	STATUS: tbStatus	EDMS No: tbEDMS	
tbDetail2	DRG No: tbAEOOrgNo	REV tRev	VER Ver
tbDetail3			

Appendix B Risk Assessment

Sydney Metro WSA – Stabling and Maintenance Facility

Risk Assessment and Communication Tool

Site Name	Luddenham Station		
Site Location	Luddenham Road, Luddenham		
Date of Assessment	23 August 2023		
Revision	Issue II		
Document Control			
Date Issued	Revision	Issued By	Checked By
02/08/2023	Issue I	W. Zheng	D. Odobasa
23/08/2023	Issue II	W. Zheng	D. Odobasa

Risk Matrix							
Likelihood \ Impact		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 separated 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.	Operational Solution	Main Contractor	L6	C2	Low 16

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/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.	Operational Solution	Main Contractor	L5	C4	Low 12

8	Potential obstruction of sightline	Trucks using the channelised left turn lane to enter the main site access may obstruct sightline of vehicles exiting the main site access resulting in conflict between exiting vehicles and eastbound vehicles travelling along Luddenham Road.	Main Site Access	Stop line and stop sign	L3	C3	20	<p>Monitor the channelised left turn lane to ensure vehicles entering the site do not dwell and queue along the left turn lane.</p> <p>Ensure vehicles entering site are tracked using the vehicle management system to ensure a minimum 2 minute headway between trucks.</p> <p>Brief suppliers and truck drivers on the need to stop at the stop line and ensure there is clear sightline of through traffic before exiting site.</p>	Operational Solution	Main Contractor	L4	C3	13
---	------------------------------------	--	------------------	-------------------------	----	----	----	---	----------------------	-----------------	----	----	----

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	11/08/2023	TFN	LWILBY	SMWSASSM-PLD-LDN-TF-PLN-000001	Table 5	NA	Near Map shows a very short section of on road cycle lane on either side of the gate 4 access. Please update the document to reflect this. That includes this table, text under figure 9 in section 4.5.2, and opening sentence in section 5.2.	Observation		N
	28/08/2023	PLD	WZHENG	SMWSASSM-PLD-LDN-TF-PLN-000001	Table 5	NA	Text in Table 5 in Section 3.4.3, Section 4.5.2 and Section 5.2 updated to reflect the short section of on road cycle lane.	Observation		N
02	11/08/2023	TFN	LWILBY	SMWSASSM-PLD-LDN-TF-PLN-000001	4.5.2 Truck routes	NA	Please confirm in the document if these routes align with the EIS approved routes. If they dont please provide a reason why and outline what safety mitigation measures have been put in place. Thanks.	Observation		N
	28/08/2023	PLD	WZHENG	SMWSASSM-PLD-LDN-TF-PLN-000001	4.5.2 Truck routes	NA	The routes documented in this plan aligns with the EIS approved routes.	Observation		N
03	11/08/2023	TFN	LWILBY	SMWSASSM-PLD-LDN-TF-PLN-000001	9.1 Road safety audit	CTMF requirements	Noted that the RSA will be provided in Rev B, however it should be provided in the first revision to give reviewers the opportunity to assess the appropriateness of any controls implemented to address raised road safety risks. Please submit RSA asap. Thanks.	Actual Non-Compliance		N
	28/08/2023	PLD	WZHENG	SMWSASSM-PLD-LDN-TF-PLN-000001	9.1 Road safety audit	CTMF requirements	RSA included in Rev B. We acknowledge the request for RSA to be included in future Rev A CTMP.	Actual Non-Compliance		N
04	11/08/2023	TFN	LWILBY	SMWSASSM-PLD-LDN-TF-PLN-000001	General	NA	Heavy vehicles using the left turn lane to enter site may obscure sight distance between vehicles exiting site and general road traffic travelling in an east bound direction along Luddenham Road. This has the potential to lead to high speed t bone crashes that will likely result in serious injuries and/or fatalities. Please consider this risk and ensure that it is addressed as a specific risk/awareness in driver training.	Observation		N
	28/08/2023	PLD	WZHENG	SMWSASSM-PLD-LDN-TF-PLN-000001	General	NA	The Risk Assessment in Appendix B updated to include this comment as a risk, with three mitigation measures included to respond to thr risk. The issue form part of site induction with all site personnel and contractors.	Observation		N
05	11/08/2023	TFN	LWILBY	SMWSASSM-PLD-LDN-TF-PLN-000001	Appendix E Drivers Code of Conduct	NA	Under "Encouraging safe driving behaviour by" dot point on page 59 please consider including awareness on the increased risks of severe crashes that higher speed roads with limited shoulder width such as Luddenham Rd present, including head on collisions and run off road crashes. Thanks.	Observation		N
	28/08/2023	PLD	WZHENG	SMWSASSM-PLD-LDN-TF-PLN-000001	Appendix E Drivers Code of Conduct	NA	Additional text included in Appendix E under "Encouraging safe driving behaviour by" dot point.	Observation		N
06	14/08/2023	SMD	PBROGAN	SMWSASSM-PLD-LDN-TF-PLN-000001	General	CTMF	Make it clear in the document whether any aspect of the works covered by this CTMP requires referral via the local traffic committee.	Observation		N
	28/08/2023	PLD	WZHENG	SMWSASSM-PLD-LDN-TF-PLN-000001	General	CTMF	Section 7.1 of the CTMP updated to include a statement confirming works covered in this CTMP does not trigger referral via the local traffic committee.	Observation		N

NO.	DATE	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*	LINKED ITEM NO	CLOSED OUT
07	14/08/2023	SMD	PBROGAN	SMWSASSM-PLD-LDN-TF-PLN-000001	pdf page 48	ctmf	Pdf page 48 - Check whether a swept path is supposed to be shown on this plan ?	Observation		N
	28/08/2023	PLD	WZHENG	SMWSASSM-PLD-LDN-TF-PLN-000001	pdf page 48	ctmf	Pdf page 48 - this plan showed the Portion 02 (Shared Access not required) traffic management arrangement. Swept path assessment provided on page 49.	Observation		N
08	14/08/2023	SMD	PBROGAN	SMWSASSM-PLD-LDN-TF-PLN-000001	General	CTMF	Make clear within the document that throughout all stages of construction no (exiting) heavy or light vehicles will turn left onto Luddenham Road to head northbound.	Observation		N
	28/08/2023	PLD	WZHENG	SMWSASSM-PLD-LDN-TF-PLN-000001	General	CTMF	Additional text provided in Section 4.5.2 of CTMP and Appendix E Driver Code of Conduct under the heading "The Site Team Responsibilities".	Observation		N
09	18/08/2023	TFN	FLARUE	SMWSASSM-PLD-LDN-TF-PLN-000001	3.3/4.1	NA	The SCAW project is currently constructing a roundabout for access to portion 3, is there an opportunity to consolidate the access to Luddenham Road at one location rather than 2? The roundabout would also provide better priority when exiting the site	Observation		N
	28/08/2023	PLD	WZHENG	SMWSASSM-PLD-LDN-TF-PLN-000001	3.3/4.1	NA	There is no scope to consolidate site access to one location due to construction needs of both SCAW and SSTOM, and licensing arrangement agreed between SCAW and SSTOM.	Observation		N
10	18/08/2023	TFN	FLARUE	SMWSASSM-PLD-LDN-TF-PLN-000001	3.4.3	NA	There is a dedicated shared cyclepath through the area with the seagull treatment, it should be recognised and addressed in the TMP	Observation		N
	28/08/2023	PLD	WZHENG	SMWSASSM-PLD-LDN-TF-PLN-000001	3.4.3	NA	Text in Table 5 in Section 3.4.3, Section 4.5.2 and Section 5.2 updated to reflect the short section of on road cycle lane.	Observation		N
11	18/08/2023	TFN	FLARUE	SMWSASSM-PLD-LDN-TF-PLN-000001	4.5.2	NA	All HVs associated with these works are not to travel through the Kemps Creek area and must contain all movements to that shown in the map	Observation		N
	28/08/2023	PLD	WZHENG	SMWSASSM-PLD-LDN-TF-PLN-000001	4.5.2	NA	Comment is noted and reinforced with additional wording in Section 4.5.2 and Appendix E Drivers Code of Conduct, under the heading "The Site Team Responsibilities".	Observation		N
12	18/08/2023	TFN	FLARUE	SMWSASSM-PLD-LDN-TF-PLN-000001	6	NA	The last paragraph mentions a pool bus but is this referring to a dedicated service? If it is a dedicated bus then why can't it operate to the times that SSTOM requires?	Observation		N
	28/08/2023	PLD	WZHENG	SMWSASSM-PLD-LDN-TF-PLN-000001	6	NA	To achieve the SSTOM requirement of 6:45am briefing, if a pool bus service is to operate, it will need to depart either St Marys Station or Leppington Station no later than 6am to allow for minimum travel time of 35 minutes. Considering SSTOM has a target to recruit 50% of workforce within Western Sydney, taking into consideration the connecting rail service timing and public bus timetable, the travel time required far exceed self-driving or car pooling to/from site. A survey is planned to be distributed to all site personnel during site induction to gauge interest of a pool bus service. SSTOM will operate a bus to meet Green Travel Plan target if there is demand for the service.	Observation		N
13	21/08/2023	PCC	LVALLEJO				No Comments			Y

NO.	DATE	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*	LINKED ITEM NO	CLOSED OUT
	28/08/2023	PLD	WZHENG				It is noted that Penrith City Council has no comments on this CTMP.			Y
14	22/08/2023	TFN	TNG	SMWSASSM-PLD-LDN-TF-PLN-000001	Section 3.4.3 _ Table 5		Suranga P. - Eventhough there are no dedicated cycle paths and the pedestrain walkways adjacent to the site, we believe that SSTOM Contracator is considering the possibile cyclist movemnets when preparing the CTMP.	Observation		N
	28/08/2023	PLD	WZHENG	SMWSASSM-PLD-LDN-TF-PLN-000001	Section 3.4.3 _ Table 5		Text in Table 5 in Section 3.4.3, Section 4.5.2 and Section 5.2 updated to reflect the short section of on road cycle lane.	Observation		N
15	22/08/2023	TFN	TNG	SMWSA SM-PLD-LDN-TF-PLN-000001	Section 4.5.1_Fig. 8		Suranga P. - Are the numbers given in the table (HV numbers) includes HV numbers from SCAW contracator or those are purely relating to the SSTOM contractor's HV movements?	Observation		N
	28/08/2023	PLD	WZHENG	SMWSA SM-PLD-LDN-TF-PLN-000001	Section 4.5.1_Fig. 8		The numbers provided in Table 7 and Table 8 account for SSTOM HV movements only. SCAW movements are accounted for in SCAW CTMP Gates 4&5 (SMWSASCA-CPU-1NL-NL000-TF-PLN-000005).	Observation		N
16	22/08/2023	TFN	TNG	SMWSA SM-PLD-LDN-TF-PLN-000001	Section 5.1		Suranga P. - 1. What are the SSTOM contractors arrangmnets for minimising incoming and exting traffic during AM and PM peaks? 2. With reference to the entering traffic,how the Luddenham Road Queing is going to be monitored and what is the arrangemnet in case any queing happened at Luddenham Road?	Observation		N
	28/08/2023	PLD	WZHENG	SMWSA SM-PLD-LDN-TF-PLN-000001	Section 5.1		SSTOM will have a vehicle management system in place to capture truck routes and records of HV entry and exit during the AM and PM peaks. SSTOM contractors are briefed on the maximum number of HV vehicles that can enter and exit the site during the AM and PM peaks to ensure compliance with EIS volumes. The traffic control point is set approximately 50 metres inboard to ensure no queuing occurs on the left turn lane. Vehicle management system allows for monitoring of approaching heavy vehicles to ensure staggering of arriving vehicles to limit the probability of queuing on Luddenham Road.	Observation		N
17	22/08/2023	TFN	TNG	SMWSA SM-PLD-LDN-TF-PLN-000001	Section 6		Suranga P. - 1. Has the SSTOM contractor prepared the car parking layout for LV parking to replicate the possible parking arrangement within construction site. 2.What is the expected maximum labour/manpower count as per labour/manpower histogram and what is the peak period?	Observation		N
	28/08/2023	PLD	WZHENG	SMWSA SM-PLD-LDN-TF-PLN-000001	Section 6		SSTOM has not prepared a car parking layout for LV parking. Peak on-site personnel is expected to occur in mid to late 2025, whereby the site will be fully handed over to SSTOM where additional site area is available.	Observation		N
18	22/08/2023	TFN	TNG	SMWSASSM-PLD-LDN-TF-PLN-000001	Section 4.5.1 & Table 7		Thomas Ng - Any indication of the SCAW construction demands accessing Gate 4 before the opening of Luddenham roundabout?	Observation		N
	28/08/2023	PLD	WZHENG	SMWSASSM-PLD-LDN-TF-PLN-000001	Section 4.5.1 & Table 7		Refer to approved SCAW CTMP Gates 4&5 (SMWSASCA-CPU-1NL-NL000-TF-PLN-000005) for details.	Observation		N

Appendix D Road Safety Audit

Traffic Management Road Safety Audit Report

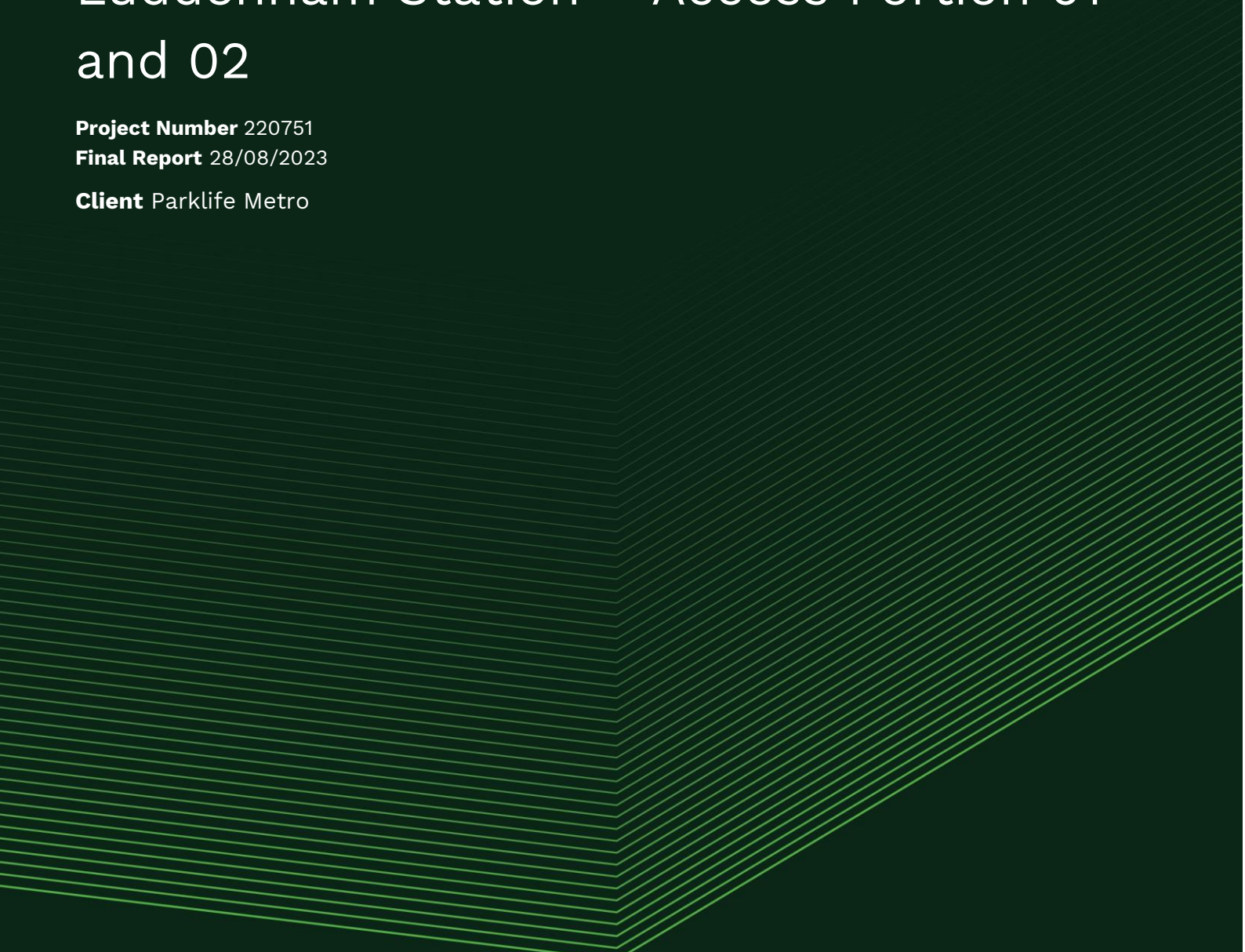
Sydney Metro – Western Sydney Airport

Luddenham Station – Access Portion 01 and 02

Project Number 220751

Final Report 28/08/2023

Client Parklife Metro



Document control record

Document prepared by:

Trafficworks Pty Ltd

ABN 59 125 488 977

1st Floor 132 Upper Heidelberg Rd Ivanhoe Vic 3079

PO Box 417 Ivanhoe Vic 3079

Ph (03) 9490 5900

www.trafficworks.com.au

Disclaimer

The information contained in this document is intended to be received, used and relied upon by the named addressee or client only for the purpose for which it has been prepared. Trafficworks Pty Ltd does not warrant the accuracy or relevance of the information, including by implication, contained in this document if it is used or relied upon by any person other than the named addressee or client. Copying, reproduction including by electronic means, unauthorised use or disclosure of this document is prohibited except with the express written authorisation of Trafficworks Pty Ltd.

Document control

Report title	Sydney Metro – Western Sydney Airport Luddenham 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	17/08/2023	Preliminary draft	Bernard Chan Aaron Wu	Paul Mihailidis
Final	28/08/2023	Final	Bernard Chan Aaron Wu	Paul Mihailidis

Table of Contents

1	Introduction	4
2	Road safety audit (RSA) overview	6
2.1	Audit team	6
2.2	Commencement meeting	6
2.3	Inspection.....	6
2.4	Risk ratings	6
2.5	Safe System approach.....	8
2.6	Supporting information used in the audit.....	8
3	Site Description.....	9
3.1	Existing conditions	9
3.2	Proposed conditions.....	10
4	Findings	12
4.1	Limitations of the audit.....	12
5	Conclusion.....	18

Appendix 1 – Severity guidance sheet

Appendix 2 – Likelihood / severity risk matrix

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 Luddenham Station. There will be 3 handovers to SSTOM, as outlined below:

- Access Portion 01: 2 October 2023
- Access Portion 02: 26 November 2023
- Access Portion 03: 4 April 2024

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

The CTMP will be updated for Access Portions 03 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)

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 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:

- ‘Construction Traffic Management Plan – Luddenham Station’, prepared by Parklife Metro D&C. Document no. SMWSASSM-PLD-LDN-TF-PLN-000001, Rev A, dated 07/08/2023.

3 Site Description

3.1 Existing conditions

Luddenham Road is a regional road aligned in a northeast to southwest direction, connecting Mamre Road to the northeast and Elizabeth Drive to the southwest. At the site, it consists of one traffic lane with an approximately a 1.0 m wide sealed shoulder in each direction.

The speed limits on Luddenham Road near the site are summarised in Figure 2.

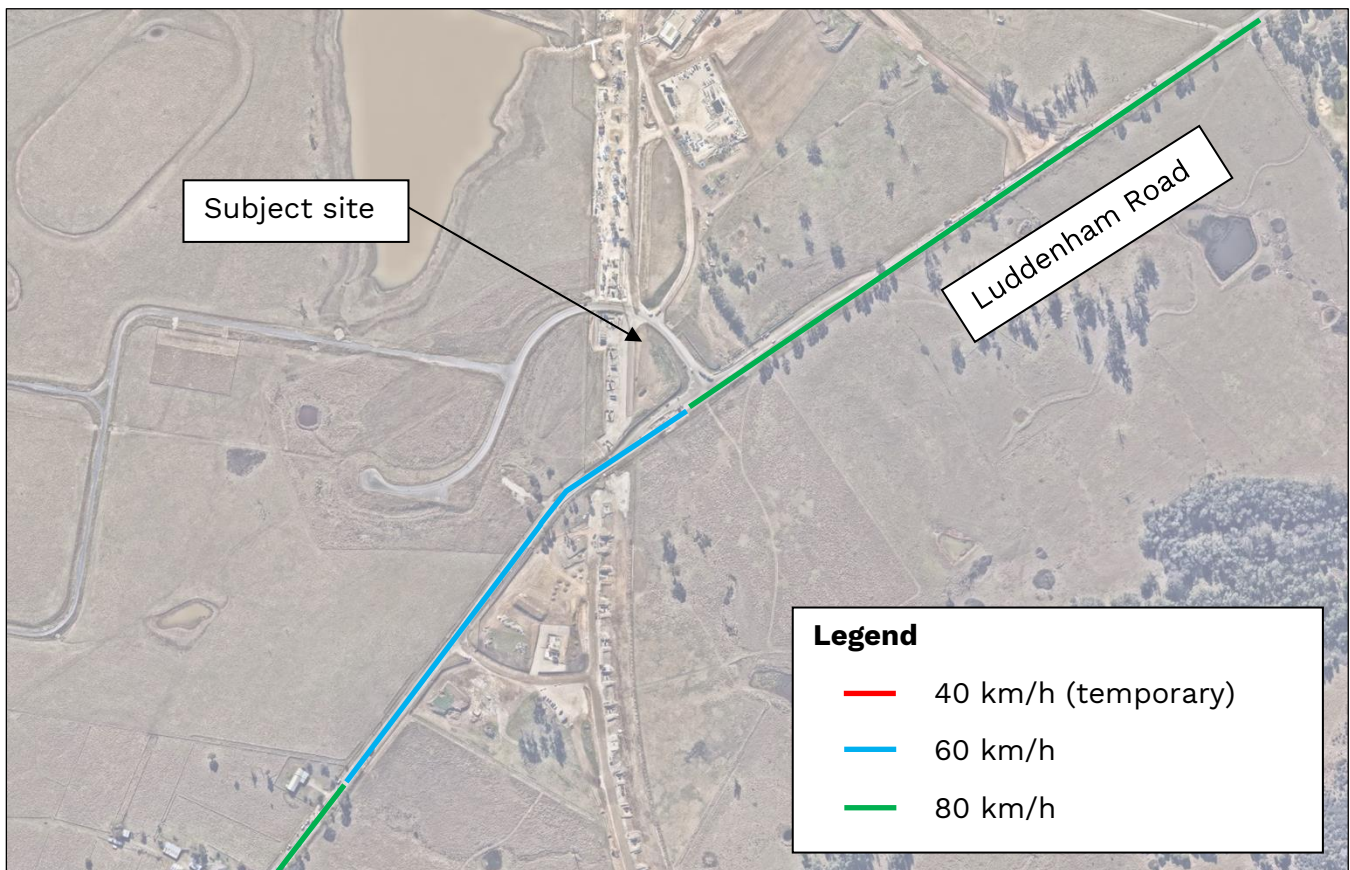


Figure 2: Speed limits on Luddenham Road (source: nearmap.com under license to Trafficworks)

The Luddenham Station site access is located on Luddenham Road, approximately 1.7 km southwest of Twin Creeks Road. The subject site is shown in Figure 3.

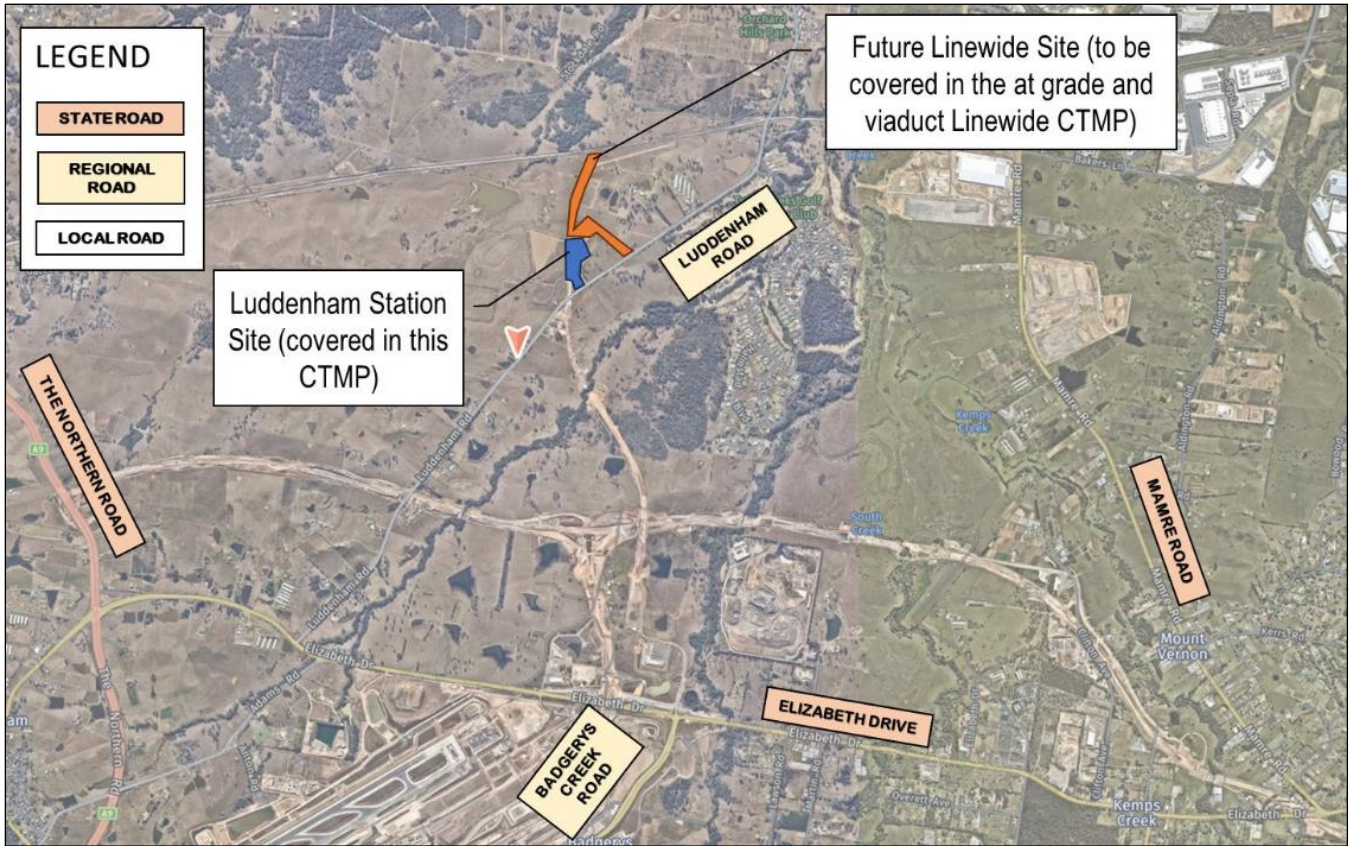


Figure 3: subject site

3.2 Proposed conditions

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

- a main shared access from Luddenham Road. This access will be used by both light vehicles and heavy vehicles
- an access from Luddenham Road (Gate 3), north of the main access. This access will be upgraded to a roundabout during Access Portion 1.
 - before Access Portion 2 handover and the roundabout is constructed, all vehicles will access the site via the main shared access
- largest vehicle required to access the site will be a 19 m semi-trailer
- 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 via Luddenham Road to the south, to access approved B-double routes (Elizabeth Drive, Badgerys Creek Road, and Northern Highway)
- at the Elizabeth Drive / Luddenham Road intersection, the majority of heavy construction vehicles will turn left in and right out of Luddenham Road onto Elizabeth Drive. Only concrete trucks up to 12.5 m in length will access to/from the east (see Figure 5 for construction vehicle access routes)

- should adjacent landowners require access through the construction site, all construction vehicles will be held within the site. Adjacent landowners will need to schedule when they require access.

The locations of the access are shown in Figure 4.

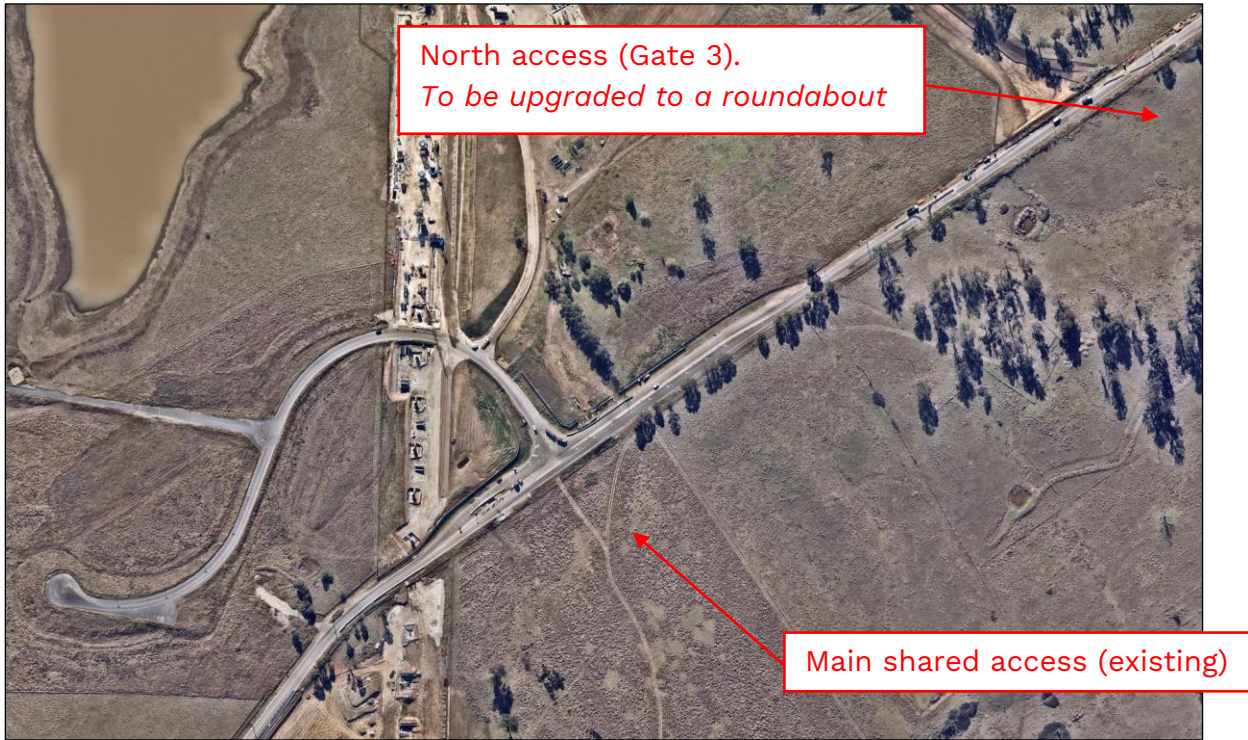


Figure 4: location of access

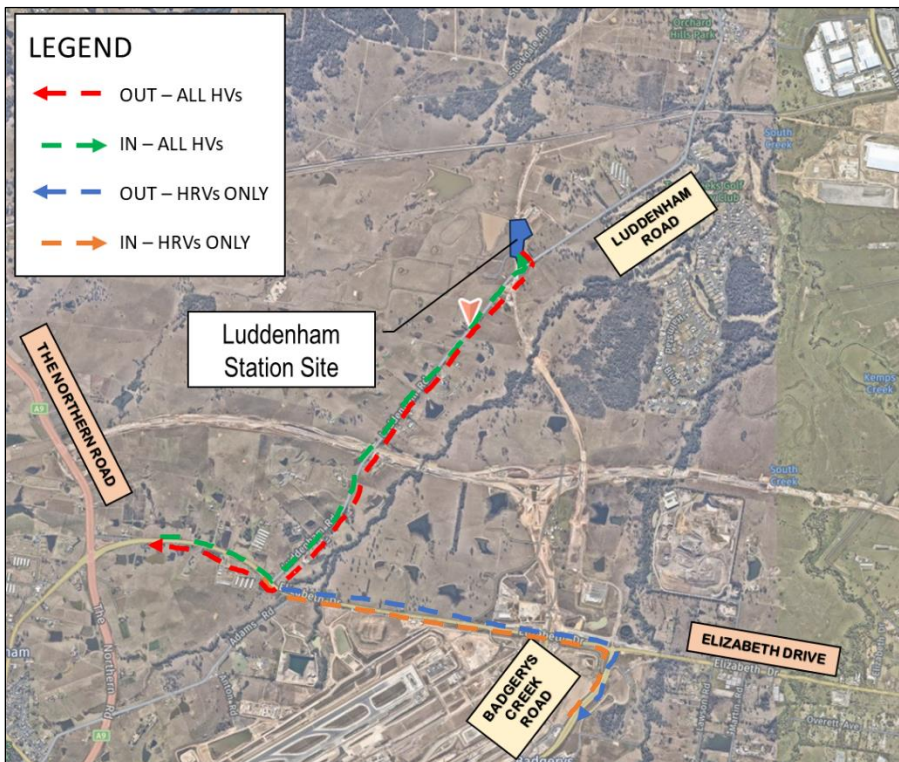


Figure 5: Construction vehicle access route

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.

4.1 Limitations of the audit

The provided Construction Traffic Management Plan (CTMP) does not provide a:

- traffic guidance scheme on Luddenham Road
- intersection designs.



Table 1: Audit findings

No	Audit findings	Photos	Risk rating	Client response	
				Accept: Yes/No	Reasons/ Comments
1 General issues					
1.1.	<p>At the Luddenham Road / Elizabeth Drive intersection, the majority of construction traffic, including 19 m semi-trailers will perform the left-in and right out movements to/from Luddenham Drive. Some concrete trucks will turn left out and right into Luddenham Drive.</p> <p>No swept path assessments have been provided at the intersection.</p> <p>There is a risk of heavy vehicles crashing into traffic in opposing traffic lanes, if turning movements cannot be catered for trucks at the intersection. This may result in injury to occupants.</p>		<p>Likelihood: Rare</p> <p>Severity: Moderate</p> <p>Risk rating: LOW</p>	Yes	Swept path assessment included in Revision B CTMP.

Other safety issues were identified which is outside of SSTOM's project scope. These are listed in Table 2 below and should be considered and rectified separately.

Table 2: Audit findings outside of SSTOM's project scope

No	Audit findings	Photos	Risk rating	Client response	
				Accept: Yes/No	Reasons/ Comments
2.1	<p>In the southbound direction at the main shared access, Luddenham Road transitions from 80 km/h to 60 km/h. The 60 km/h speed limit continues for a length of 580 m before transitioning back to 80 km/h. Further to the south, the speed limit transitions to 60 km/h for a very short section and then to 40 km/h, which has been implemented for the M12 Motorway project.</p> <p>In the northbound direction, the speed limit reduces from 80 km/h to 60 km/h south of the main shared access, and a 60 km/h applies across the main shared access. North of the main shared access, a 40 km/h ahead sign has been installed immediately north of a 60 km/h sign, implemented for the works undertaken by other contractors. However, no subsequent 40 km/h sign has been installed.</p> <p>There appears to be a lack of co-ordination between the various contractors, resulting in inconsistent speed signing and short section of speed limits. This can result in driver confusion in the speed limits and lead to non-compliance.</p> <p>It is noted this is outside of SSTOM's scope of works.</p>	 	NOTE ONLY	Yes	<p>RSA findings referred to Sydney Metro for distribution to relevant contractors to address matter of concern.</p> <p>SSTOM to ensure its CTMP implementation include daily site visit and necessary coordination take place.</p>

No	Audit findings	Photos	Risk rating	Client response	
				Accept: Yes/No	Reasons/ Comments
2.2	<p>A roundabout will be constructed at the northern access (Gate 3) to Luddenham Road. No details of the roundabout have been provided. The roundabout is within a crest on Luddenham Road and is near timber electricity poles and trees. There is second crest south of the proposed roundabout.</p> <p>The speed limit on Luddenham Road at Gate 3 is 80 km/h. It is unclear whether there will be sufficient sight distance to the roundabout.</p> <p>The pavement condition of Luddenham Road near the proposed roundabout is poor. Poor skid resistance reduces motorists' ability to decelerate on the approach to the roundabout.</p> <p>Once the roundabout is constructed, there is a risk of motorists failing to observe the roundabout. This increases the risk of motorists running off the road (potentially colliding with the nearby electricity poles and trees or other motorists), resulting in injury to the motorist of the errant vehicle.</p> <p>It is noted this is outside of SSTOM's scope of works.</p>	 <p><i>Luddenham Road, on the north approach to Gate 3, facing south</i></p>  <p><i>Luddenham Road, within the proposed roundabout, facing south</i></p>	NOTE ONLY	Yes	<p>SSTOM Traffic team conducted site inspection and concur with the road safety auditor in relation to poor existing road pavement conditions. Matter referred to Sydney Metro for coordination with other contractors to resolve issue.</p>

No	Audit findings	Photos	Risk rating	Client response	
				Accept: Yes/No	Reasons/ Comments
2.3	<p>A roundabout will be constructed at the northern access (Gate 3) to Luddenham Road. No details have been provided of how traffic will be managed while the roundabout is being constructed during Access Portion 1 and 2.</p> <p>It is unclear whether Luddenham Road will be open to the public while construction works occur. The speed limit on Luddenham Road at this location is 80 km/h.</p> <p>The worksite is within a crest and motorists may not observe changed road conditions.</p> <p>If construction works for the roundabout occur while Luddenham Road is open to the public, and inadequate traffic management is in place, there is a risk of injury to motorists.</p> <p>It is noted this is outside of SSTOM's scope of works.</p>		NOTE ONLY	No	<p>Construction and CTMP arrangement of roundabout construction outside of SSTOM scope.</p> <p>Referred to Sydney Metro for coordination with SCAW to ensure matter is resolved.</p>

No	Audit findings	Photos	Risk rating	Client response	
				Accept: Yes/No	Reasons/ Comments
2.4	<p>On the east side of Luddenham Road, opposite the proposed southern access, safety barrier is installed on the inside of a curve.</p> <p>The safety barrier restricts stopping sight distance to a potential object on the road. The proposed construction works may result in debris or objects falling onto the road.</p> <p>There is a risk of motorists attempting to avoid objects on the road and swerving, resulting in a head-on or a run off road crash.</p> <p>It is noted this is outside of SSTOM's scope of works.</p>		NOTE ONLY	No	<p>The existing barriers were installed by others and outside of SSTOM scope of works.</p> <p>Referred to Sydney Metro for coordination with relevant parties to ensure matter is resolved.</p>

Client response completed by:

Name: Dora Choi

Signed: _____ Date: 28/08/2023

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, 28 August 2023

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

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



Monday, 28 August 2023

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

RSA-03-1649 – Level 3 road safety auditor (team member)



Monday, 28 August 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 5 provides a severity guidance sheet.

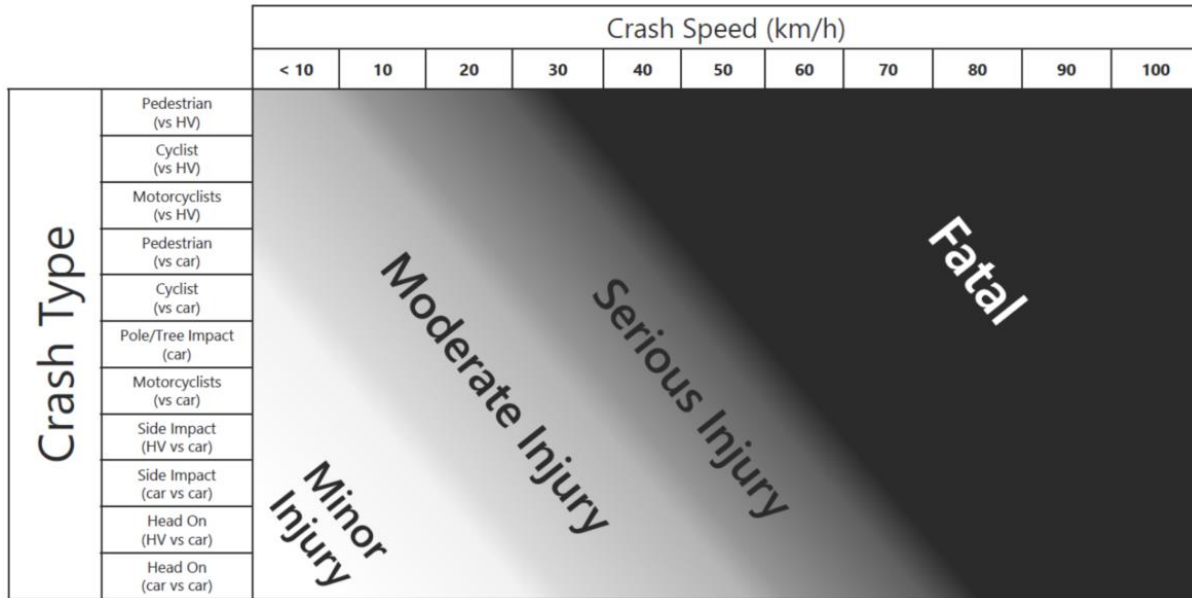


Figure 5: Severity guidance sheet

Appendix 2 – Likelihood / severity risk matrix

Figure 6 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 6: 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 Luddenham 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;
- 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 not use Luddenham Road north of site access.

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.

The Contractor is also responsible for notifying all drivers of the approved haulage route and all vehicles to turn right out of the site onto Luddenham Road, with no access to Kemps Creek via northern section of Luddenham Road.

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:
 - Luddenham Road is a higher speed road with limited road shoulder. This results in an increased risk of severe crashes, run off road crashes, and head on collisions. Driver shall ensure they follow the road rules and obey traffic signage and look out for through vehicles before exiting the site.
 - 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.

