

Construction Traffic Management Plan

Bankstown to Sydenham -Traction Substations and Site Compound

Line-wide Works Contract Sydney Metro City & Southwest

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Document Approval

Rev.	Date	Prepared by	Reviewed by	Recommended by	Approved by	Remarks
A	15 May 2020	Mong Sim	Shadi Muhieddine	Scott Brown	Scott Hunter	Initial submittal.
B	9 Oct 2020	Mong Sim	Shadi Muhieddine	Scott Brown	Scott Hunter	Minor revisions.
0	20 Oct 2020	Mong Sim	Shadi Muhieddine	Scott Brown	Scott Hunter	Approval.
1	22 Jun 2021	Mong Sim	Mong Sim	Scott Brown	Scott Hunter	TCPs attachment to Appendix E.
Signature:		✓	✓			

Details of Revision Amendments

Document Control

The Project Director is responsible for ensuring that this plan is reviewed and approved. The Project Traffic Manager is responsible for updating this plan to reflect changes to legal and other requirements.

Amendments

Any revisions or amendments must be approved by the Project Director and/or client before being distributed/implemented.

Revision Details

Revision	Details
A	Issued to for stakeholder review.
B	Minor revisions.
0	TfNSW approval on 19 Oct 2020.
1	TCPs attachment for OSOM deliveries for various stations to Appendix E.

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1. PART A – Management Systems, Compliance and CTMP Overview

1.1. Structure of this Plan

This Construction Traffic Management Plan (CTMP) describes Systems Connect traffic management planning and compliance during the construction stage for the Sydney Metro City & Southwest.

Part A: Overview	This section clearly defines: <ul style="list-style-type: none">• Project Overview, Objectives, Management and Compliance• Overall project summary and overview
Part B: Implementation	This section outlines in detail the key aspects for Traffic Management on the Project including: <ul style="list-style-type: none">• Implementation Details• Traffic Impact Assessment• Transport Management• Communications
Part C: Appendices	This section provides the following Appendices: <ul style="list-style-type: none">• Site access plan• Traction substation design drawings• Copy of correspondence• Compliance matrix• TCPs attachment

This Construction and Traffic Management Plan (CTMP) forms part of the Systems Connect Integrated Management Systems.

1.2. Management and Planning Strategy

This CTMP dictates the overall traffic management plan including resources, processes and procedures during construction of Sydney Metro Chatswood to Bankstown works.

This Plan aims to address the following objectives:

- Local road staging and traffic management plan
- Obtaining relevant approvals, whether from Local Council, Transport NSW (Sydney Roads), Sydney Coordination Office (SCO), Sydney Metro
- Specific community / stakeholder consultation process and community relations strategies for managing changed traffic conditions
- Potential road network impacts and the mitigation and management of them
- Auditing, inspections and monitoring the road network
- Fulfill the requirements of Principal's G10 Specification – Traffic and Transport Management
- Meet the contractual requirements
- Management of incidents
- Provide and facilitate a mechanism for the monitoring, ongoing regular review and updating of this CTMP.

1.3. Compliance

The CTMP is in compliance and is consistent with the following framework and applicable conditions. They are:

- Critical State Significant Infrastructure (CSSI 7400) and Revised Environment Mitigation Measure
- Critical State Significant Infrastructure (CSSI 8256) and Revised Environment Mitigation Measure
- Sydney Metro City and Southwest Construction Environment Management Framework
- Sydney Metro City and Southwest Construction Traffic Management Framework

1.4. Relevant Legislation

The key legislation relevant to traffic management includes:

- Environmental Planning and Assessment Act (EPA) 1979 Act
- The Roads Act 1993.
- Heavy Vehicle National Law 2014
- Work Health and Safety (WHS) Act 2011
- Principal's General Specification G10 – Traffic and Transport Management
- Traffic Control at Worksites Manual
- Relevant Australian Standards (AS) and Austroads Guidelines

1.5. LW Project Overview and Scope

Line-wide Works (LW) is delivered by Systems Connect, a CPB Contractors and UGL Engineering Joint Venture. Systems Connect is delivering LW in four distinct portions as follows, and as described in detail in Section 1.3.

- Portion 1 – SMTF (Tallawong) expansion works
- Portion 2 – SMTF South (Marrickville) stabling yard
- Portion 3 - Chatswood to Sydenham works
- Portion 4 – Sydenham to Bankstown works

The Sydney Metro City & Southwest (SMCSW) project will extend the current Metro North West Line which stops at Chatswood, to the CBD and to Bankstown.

The SMCSW project is being delivered through a series of contracts for the tunnels, stations, line-wide infrastructure and systems.

Line-Wide Works to be constructed by Systems Connect include:

- Tunnel works between Chatswood and Sydenham, comprising:
 - Tunnel track slab and rails;
 - High voltage reticulation, traction power and power control systems;
 - Earthing and bonding, electrolysis control and lightening protection measures;
 - Tunnel ventilation system;
 - Tunnel mechanical and electrical services;
- Northern Dive track slab and rails;
- Northern Dive Service Building works – Chatswood;
- Artarmon Substation Service Building works;
- Southern Dive Service Building works - Sydenham;
- Station civil works between Chatswood and Sydenham;
- Extension of the existing Sydney Metro Trains Facility – Tallawong;
- Construction of a new Sydney Metro Trains Facility (South) – Sydenham;
- Northern Connection works, tying the new Metro lines into the T1 North Shore Line – Chatswood.

LW is a key component of the SMCSW project, with works taking place over the full length of the project as shown in Figure 1 between Chatswood and Bankstown.

Sydney Metro City & Southwest Indicative Linewide Scope

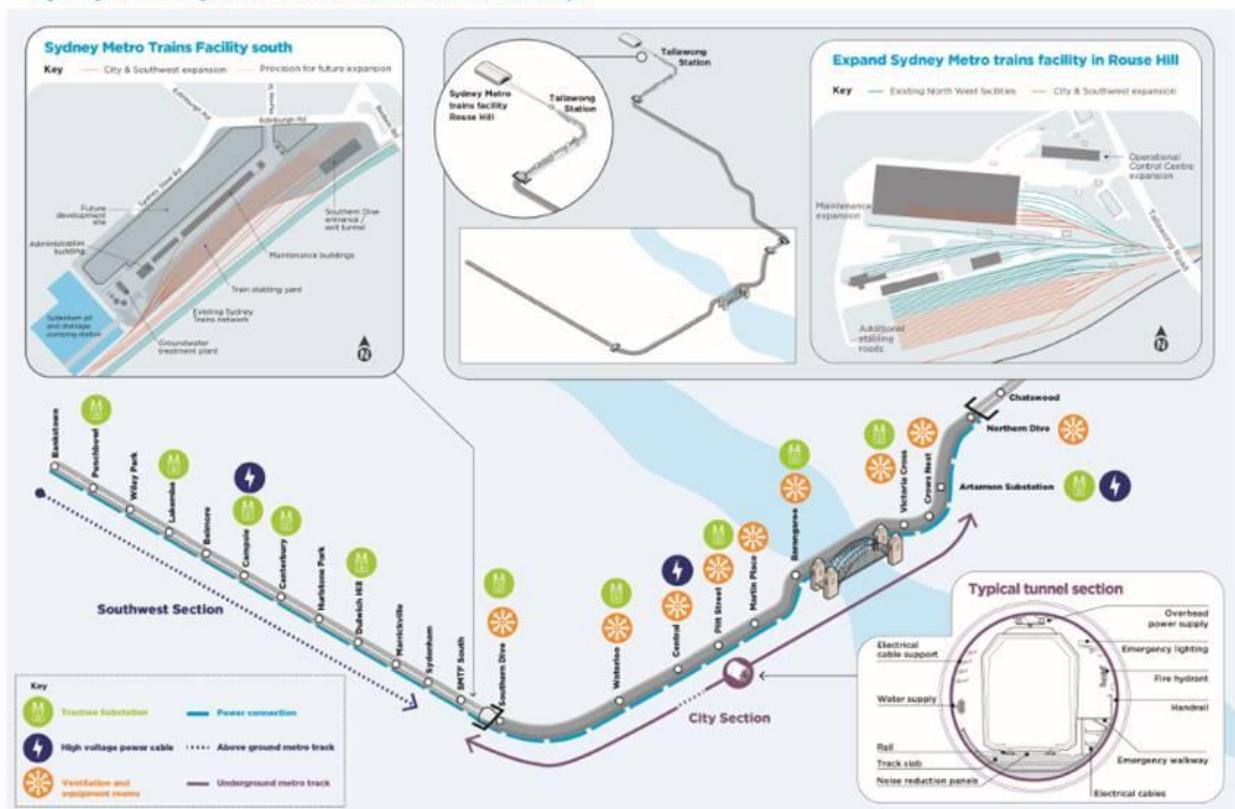


Figure 1. Line-wide Works Line Diagram (Latest diagram)

2. PART B – Implementation

2.1. Southwest Corridor Traction Substation and Site Compound

The Sydney Metro Southwest upgrade between Bankstown and Sydenham station consists of five (5) traction substations to provide power generation to the trains as part of the Sydney Metro overall infrastructures upgrade.

The five traction substations are located at:

1. Punchbowl traction substation located along South Terrace near Scott Street roundabout
2. Lakemba traction substation located along The Boulevard between Dennis Street and Taylor Street
3. Campsie traction substation located along Lillian Street near the intersection of Carrington Street
4. Canterbury traction substation located along Hutton Street near Hurlstone Avenue
5. Dulwich Hill traction substation located at the end of Randall Street.

All these traction substations perimeter are within the rail corridor.

A temporary site office is proposed within the rail corridor lane at Bridge Street, Belmore.

Refer to Appendix A for larger scale mapping of these substations and the temporary site office.

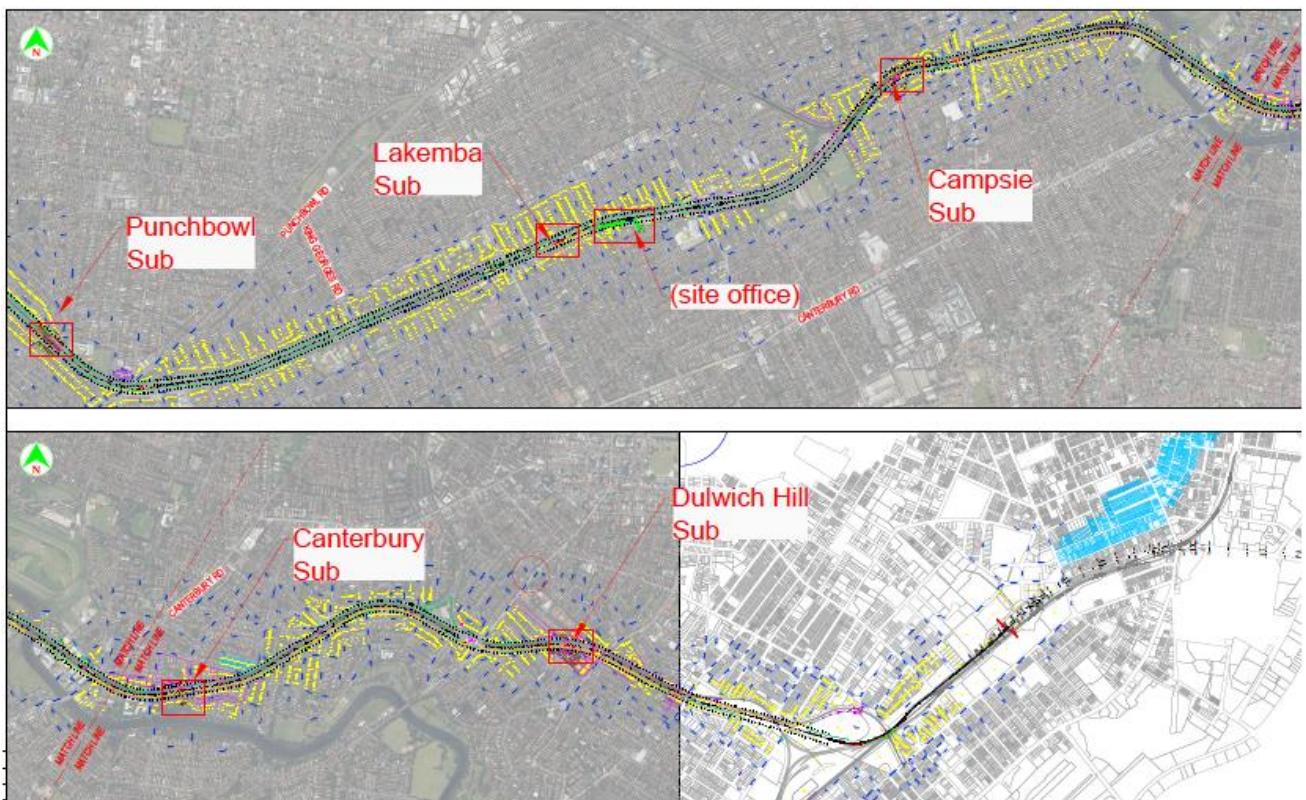


Figure 2. Locality map of traction substations (Refer to Appendix A for attachment and larger mapping scale)

Construction of these traction substations is planned from September 2020 and scheduled for completion in approximately March 2021. Systems Connect's scope of work consists of the following:

- Site clearing
- Minimal earthwork
- Foundation and/or ground improvement
- Civil and drainage work
- Electrical component work
- All other enabling works (testings and commissioning)

3. Traffic and Transport Management

3.1. Construction Access/Traffic

Access to each traction substation site is direct and not through any complex intersection. General construction vehicles are not foreseen to impact general traffic flow. Access is similar to a turnoff into an address or a driveway. Construction traffic movements will spread out between the five traction substations. Each substation may not have the same working time and have varying construction traffic movements. Total movement per site is not likely to exceed 20 movements per day. Construction vehicles typically consist of a utility vehicles, tippers and concrete trucks during concreting work. An oversized delivery requiring craneage work for the substation modules are required 1 to 2 times per each traction substation. Additional information regarding these special(large) deliveries route detail and craneage setups are not available as yet as it is going through planning phases. Once they are finalised, it will be resubmitted as appendices to this CTMP with the necessary approvals. Coordination work between councils and road authorities will be completed accordingly. These special deliveries and road closures are not due till from January 2021.

All construction traffic access maneuvers are per applicable standard road rules and traffic control at worksite manual. Where possible, vehicles will enter and exit from the left. Not all sites are possible with these movements.

The construction vehicle routes will avoid local roads as a through road where possible. Typically construction vehicles will be traveling along the main road along the rail corridor and arterial road (along SouthTerrace, the Boulevard, Canterbury Road, Punchbowl Road, King Georges Road and routes alike parallel and shortest to the rail alignment and to the traction substations).

Proposed no stopping zones will be required to suit each traction substations to ensure no construction entrances are blocked by parked vehicles and to exclude general parking area from the construction areas.

Below is a summary matrix of the proposed plan. Refer to each section areas for details.

Traction Substation	Proposed new No Stopping Zone	Parking Impact on the traction substation side	Pedestrian Impact	Resident Access impacted	Traffic control requirements	Notes
Punchbowl	Yes. 120m from the existing Gate through the roundabout till the next existing Gate.	No. Parking is default not permitted directly in front of a gate/driveway and near a roundabout. Parking is unmarked.	No. No designated footpath.	No. No establishment on the rail corridor side.	Stop slow during the substation building delivery. TBD at later stage. Wide load permit.	
Lakemba	Yes. 2 each 10m section at the temporary gate.	Yes. 4 total car space.	No. No designated footpath.	No. No establishment on the rail corridor side	Stop slow during the substation building delivery. TBD at later stage. Wide load permit..	
Campsie	Yes. 110m Gate to Gate.	Yes. Parking area within completed traction substation area.	Yes. Pedestrian to use other footpath.	No. No establishment on the rail corridor side	Stop slow during the substation building delivery. TBD at later stage. Wide load permit.	
Canterbury	Yes. No stopping zone is within the permanent gate into the substation of 6m wide west of the traction substation. A No stopping sign is also proposed on the east of the substation to ensure no parking on the existing substation gate.	Yes (Loss of 2 parking existing space) west of the traction substation	No.	No. No establishment on the rail corridor side	Stop slow during the substation building delivery. TBD at later stage. Wide load permit..	
Dulwich Hill	Yes. To ensure no parked cars blocking the entrance.	No. Default no parking to allow access.	No	Yes* House driveway within construction access.	Stop slow during the substation building delivery. TBD at later stage. Wide load permit.	

3.2.1 Punchbowl Traction Substation Access

Punchbowl traction substation is located at South Terrace near the intersection of Scott Street (or 530m west of Punchbowl train station). South Terrace is signposted at 60km/h. It is a 2 lane width road (1 lane each direction westbound and 1 lane each direction eastbound) with marked shoulder/edge line (E1) for both directions. Parking is available on both directions. Approach to the substation site has a direct sight distance from all directions. The area generally level.

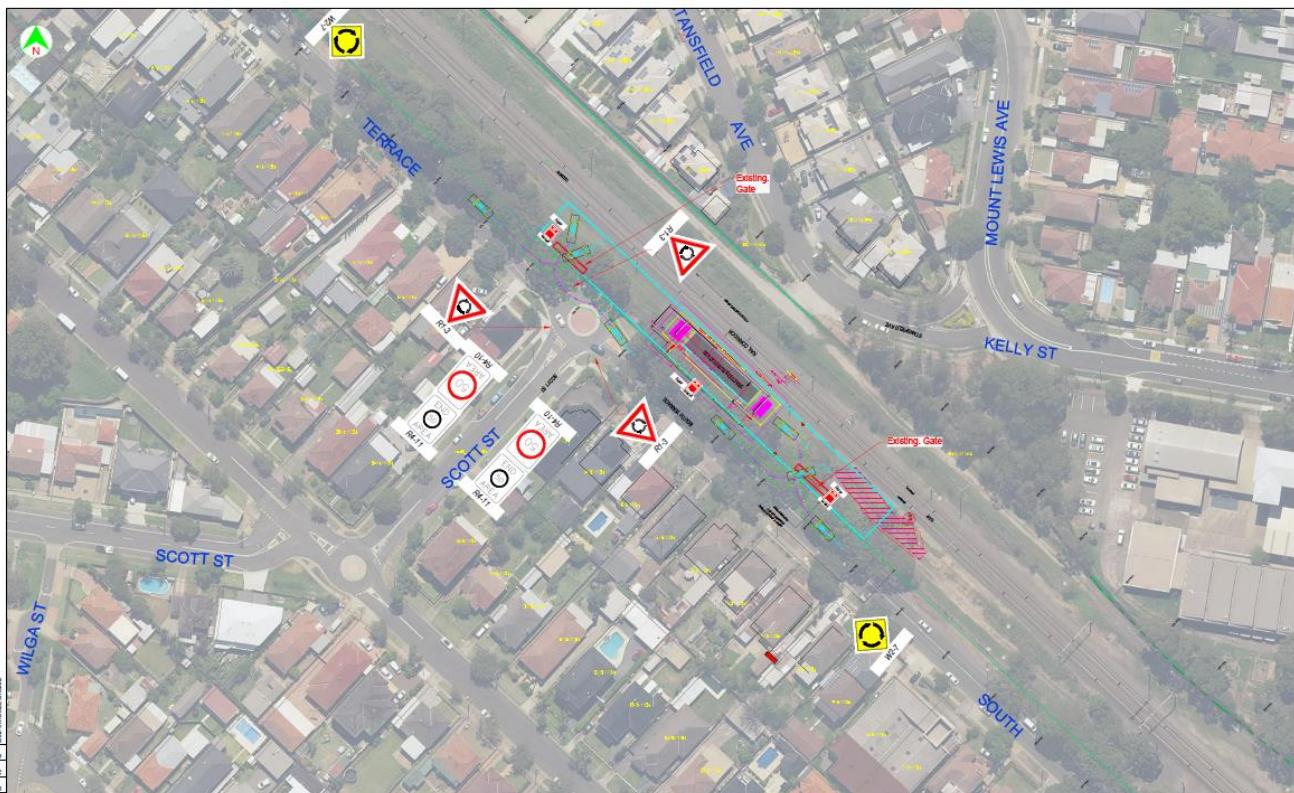


Figure 3. Punchbowl traction substation site plan (refer to Appendix A for details)



Figure 4. Site of future Punchbowl traction substation looking from South Terrace towards the rail corridor

Construction vehicles consisting of utility vehicles, tippers and concrete trucks during concrete work are the typical vehicles with movements less than 20 per day.

During the special delivery of oversized prefabricated substation modules, a stop slow operation will be in operation to lift the modules in place. Further information regarding the substation modules are not available during the preparation of this document. It will be furnished as soon as details are made available.

It has been taken into consideration that the lifting of the substation modules will be held during rail possession time and rail replacement buses may use South Terrace as the rail replacement route. Systems Connect traffic team will be relaying of the stop slow operation to Sydney Trains at the appropriate time.

3.2.2 Pedestrian

Existing pedestrian footpath is on the southern side of South Terrace. There is no marked footpath on the northern side of South Terrace. Pedestrian is not impacted.

3.2.3 Business / Resident Access

Resident access is not impacted. Construction vehicles could enter/exit without impacting resident access. There is no business establishment along South Terrace within the traction substation site.

3.2.4 Bus Operations

There are no immediate bus stops along the substation site. Rail replacement buses may be using South Terrace during rail closure. Systems Connect will coordinate work with Sydney Trains as required.

3.2.5 Emergency Services

Emergency services are not impacted as there is no planned road closure during the work.

3.3.1 Lakemba Traction Substation

Lakemba traction substation is located at the northern side of the Boulevard between Dennis Street and Taylor Street (or 390m east of Lakemba train station). The Boulevard is a wide 2 lane road (1 lane each direction) with shoulder parking on both sides. Speed limit is statutory at 50km/h with no speed limit sign posted. The Boulevard is a level road with generally good visibility for all directions.

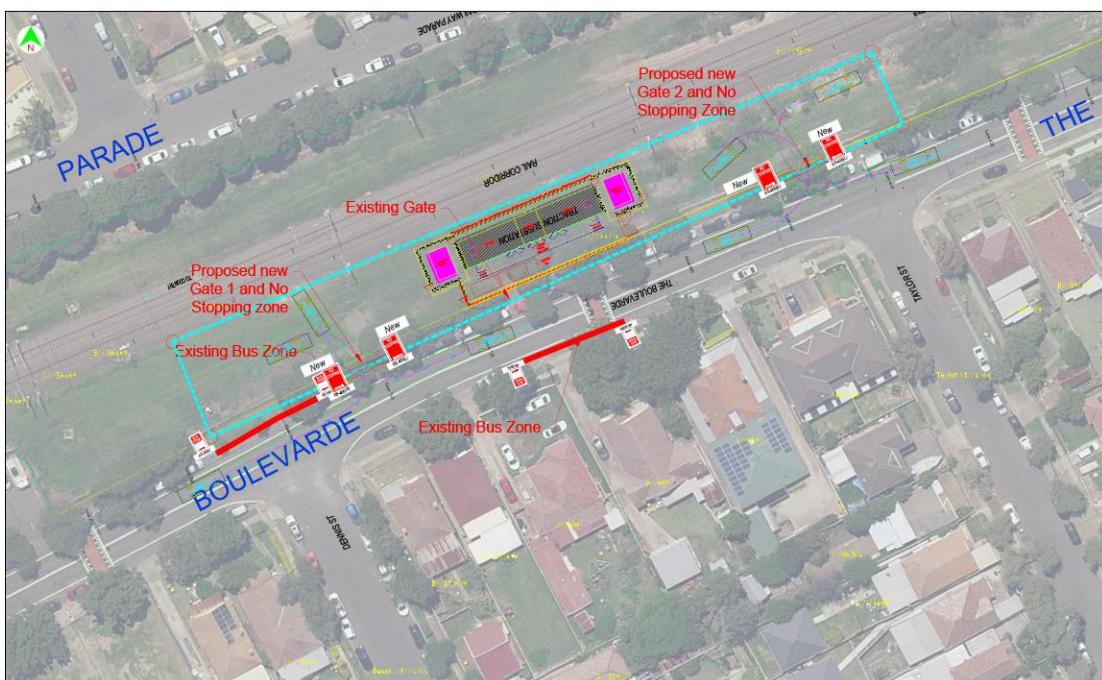


Figure 5. Lakemba traction substation site plan (refer to Appendix A for details)

There are existing bus zones on the Boulevard serving bus route # 942 (Lugarno – Campsie) both eastbound and westbound. Two (2) gates are proposed to allow access into the site as the existing rail corridor gate will not be useable upon the construction of the building which is located at the middle of the traction substation. The gate east of the substation will become the permanent substation gate. Two no stopping zones of 10m long each on the northern side of the Boulevard are proposed between the new traction substation to allow access for construction vehicles. Construction vehicle routes similar to other substation construction will use the most direct routes and avoid local roads where possible.

During the construction phase, there will be a planned stop slow operation at the Boulevard to allow craning of the prefabricated substation modules. The Boulevard may be used by the rail replacement buses during the operation. Systems Connect will relay the planned work with Sydney Trains as required. Details of the stop slow operation is not yet finalised during the preparation of this CTMP. Further information will be furnished once it is available.



Figure 5. View looking towards the new Lakemba traction substation at the rail corridor from the Boulevard

3.3.2 Pedestrian

Footpath is not impacted. There is no existing footpath on the northern side of the Boulevard between Dennis Street and Taylor Street. Existing footpath on the southern side of the Boulevard is not impacted.

3.3.3 Business / Resident Access

During the construction phase, resident access is not impacted. There are no residential nor business establishments on the northern side of the Boulevard.

3.3.4 Bus Operations

There are bus stops servicing route # 942 (Lugarno to Campsie) on the eastbound and westbound of the Boulevard between Dennis Street and Taylor Street. Frequency of route # 942 is approximately every 60mins on Monday to Friday which first service from approximately 06:00 till 19:30. (sourced from STA timetable). General construction traffic is not impacting the stopping location of the bus stops. Rail replacement buses may be using the Boulevard during planned rail closures. Systems Connect will coordinate work with Sydney Trains as required.

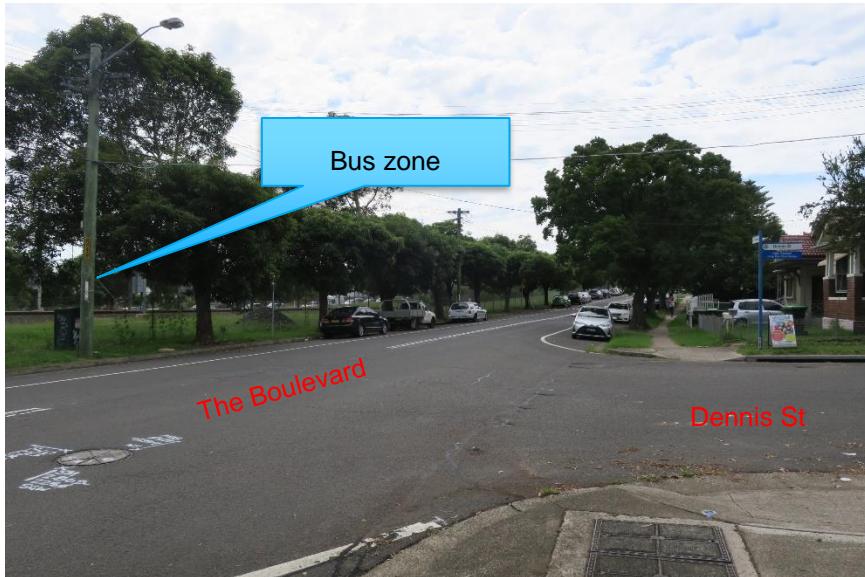


Figure 6. Bus zone at *The Boulevard* eastbound (refer to Appendix A for details)

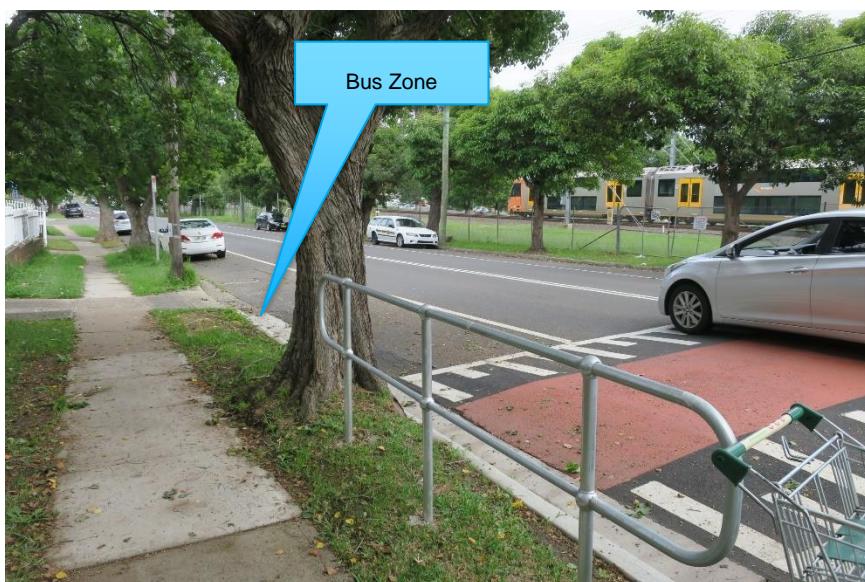


Figure 7. Bus zone at *The Boulevard* westbound just after the slow ramp (refer to Appendix A for details)

3.3.5 Emergency Services

Emergency services are not impacted from the work as there are no road closure in place during the work.

3.4.1 Belmore Site Office (non constructive work)

A temporary site office is proposed at Belmore at Bridge Road between Moreton Street and Marie Lane. Construction traffic is minimal. The site office is located on an existing rail corridor land. There is no construction work performed on this site. The site office serves with minimum functionality for administrative work and as minor storage area. Traffic will enter via an existing driveway at Bridge Street and exit on an existing driveway at the Boulevard. Traffic is not impacting on any other driveways, bus stops nor pedestrians.



Figure 8. Temporary site office at Bridge St, Belmore (refer to Appendix A for details)

3.5.1 Campsie Traction Substation

Campsie traction substation is located at Lillian Street near the intersection of Carrington Street (or 330m west of the Campsie train station). Lillian Street is statutory 50km/h with no speed limit sign posted. Lillian Street has parking on both the northern and southern sides. Parking on the northern side is an unmarked 90 degree angled parking and on the southside is a 2P 8:30am to 6pm Monday – Friday and 8:30am to 12:30pm on a Saturday. A no stopping zone length of 110m between the length of the work area is required due to the close proximity of the work site to the general unmarked parking area. The current unmarked 90 degree angled parking area will be within the completed substation landscaping boundary.

During the delivery and installation of the preassemble traction substation modules, a stop slow operation will be in place at the work site. At this stage, details of the oversized deliveries are not yet available. Further information will be provided and attached to the appendices.



Figure 9. Campsie Traction Substation access (refer to Appendix A for details)



Figure 10. View towards the new Campsie traction substation into the rail corridor looking from Lillian Street

3.5.2 Pedestrian

There is no dedicated footpath on the northern side of Lillian Street within the traction substation work limit. A Use Other Foopath (T8-4) sign will be installed along the northern side due to tendency of pedestrian to still

use the northern side road alignment as a walkway due to available parking areas on the northern side beyond the traction substation boundary.

3.5.3 Business / Resident Access

Resident access is not impacted. There is an Campsie RSL at the eastern end of Lillian Street. The RSL carpark is not impacted from the work.

3.5.4 Bus Operations

Lillian Street is not within existing bus operating route.

3.5.5 Emergency Services

No roads are closed during the contruction phase for the Campsie traction substation.

3.6.1 Canterbury Traction Substation

Canterbury substation is located at Hutton Street near the intersection of Hurlstone Avenue (or 540m east of Campsite train station). Hutton Street is a residential only street and is a no through road. Hutton Street within the traction substation site is not linemarked and it approximately 5m wide. There is pedestrian footpath along the southern side of Hutton Street but not on the northern side. Speed limit is statutory at 50km/h with no speed limit sign posted. A stop slow operation will be in place at Hutton Street and Hurlstone Avenue to allow delivery and lifting of the traction substation modules into place.

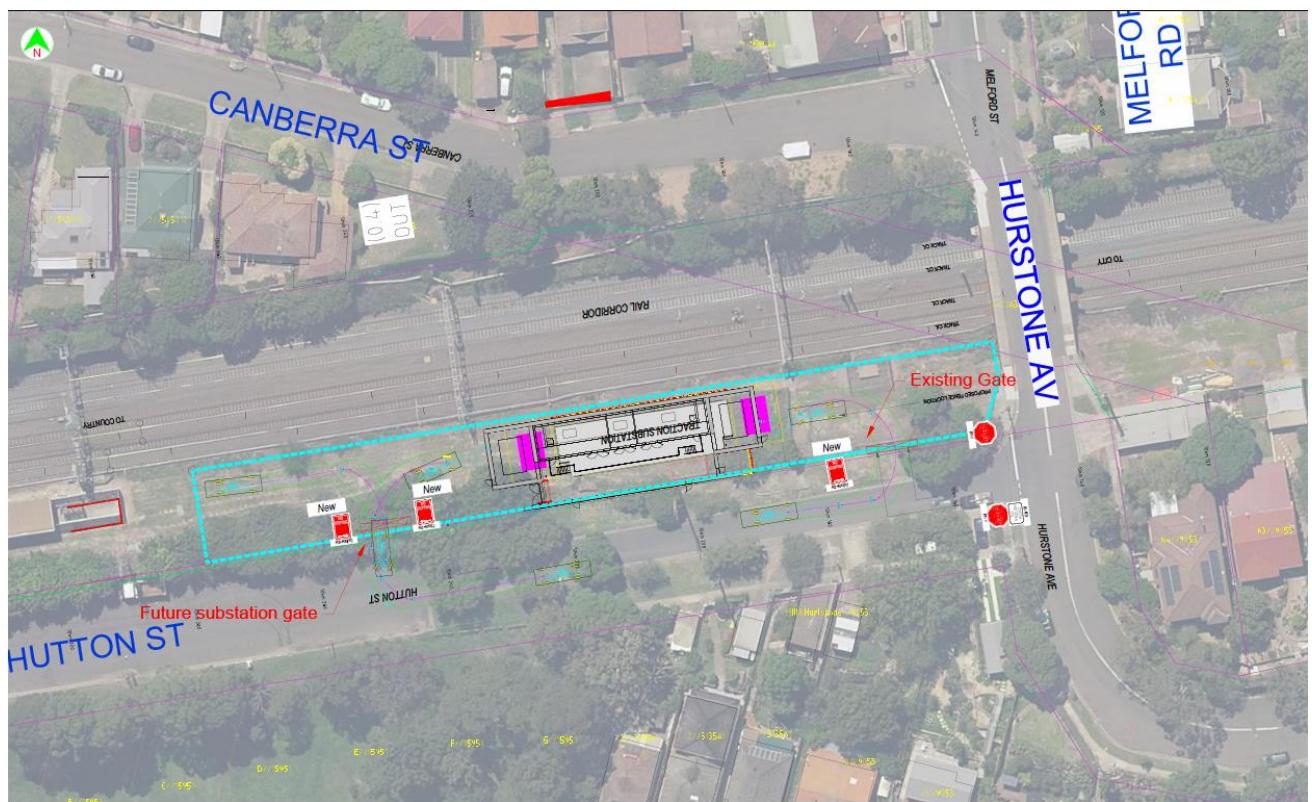


Figure 11. Canterbury traction substation site access (refer to Appendix A for details)



Figure 12. Looking towards Hutton Street from Hurlstone Avenue with the new traction substation on the right behind the vegetation

3.6.2 Pedestrian

Hutton Street immediately within the substation has a footpath on the southern side and no footpath on the northern side. Pedestrian is not impacted.

3.6.3 Business / Resident Access

Residents access are not impacting during construction work. There are not businesses establishments in the area.

3.6.4 Bus Operations

Hutton Street is not a bus route. No impact.

3.6.5 Emergency Services

No roads are planned to closed during the work. Access is available during the construction work.

3.7.1 Dulwich Hill Traction Substation

Dulwich Hill traction substation is located at Randall Street (or 510m east of Dulwich Hill train station). Randall Street is a residential only no through road. Speed limit is statutory at 50km/h as no posted speed limit sign is in the area. Access into the substation is via the end of the street where there is a rail access gate. During the delivery of the traction substation, a stop slow operation will be in place at the intersection of Randall Lane and Livingstone Road. A detail of the work will be furnished when more details regarding exact size, timing, travel route are finalised.



Figure 13. Canterbury traction substation (refer to Appendix A for details)



Figure 14. Looking towards the gate into Dulwich Hill traction substation

3.7.2 Pedestrians

Pedestrian path is not impacted from the work. Pedestrian traffic will be local residential traffic only.

3.7.3 Business / Residential Access

Residents access are not impacted except for the driveway # 20 at the end Randall Street. Property # 20 Randall Street has a unique boundary which shares the rail corridor access. The interface of these 2 driveway/access has co existed along time ago. The introduction of the substation traffic is not new to the property and the area. A common road and courtesy between drivers will have to apply. From observation, it is unlikely property #20 will have vehicles park inside of the property.

3.7.4 Bus Operations

Randall Street is not a bus route.

3.7.5 Emergency Service

No roads are planned to closed during the work. Access is available during the construction work.

4. Systems Connect and Stakeholder Key Contacts

Systems Connect and key stakeholders contacts below for the overall integration of the CTMP.

Name	Role	Contact Details
Carl Mella	Transport NSW (Sydney Roads) – Integration Leader	0429 505 970
Jake Coles	Sydney Coordination Office - Operations Manager – CBD	0466 454 819
Stephen Brown	Sydney Coordination Office - Precinct Project Manager	0457 809 028
Phil Brogan / Ken Hind	Sydney Metro – Traffic Advisor	0401 719 632 0416 797 029

Name	Role	Contact Details
Alvin Fung	Canterbury Bankstown Council – Project Manager	0437 804 725
Manoj Isac	Innerwest Council – Road Access Project Engineer	9392 5182
Matt Billings	Systems Connect – Environment Manager	0428 781 599
Scott Brown	Systems Connect – Project Manager	0408 162 755
Craig Godwin	Systems Connect – Safety Manager	0458 498 107
Svetlana Paunovic	Systems Connect – Community Manager	0438 540 245
Scott Jones	Systems Connect – Sr. Supervisor	(tba)
Mong Sim	Systems Connect – Traffic Engineer	0448 378 883

5. Communications and Community Strategy

Systems Connect will meet the reasonable needs and desires of the community for information on any changed traffic conditions, cyclist and pedestrian impacts and property access arrangement. Systems Connect will ensure that the public and other key stakeholders are informed of planned traffic arrangements, including any activities which may result in delays.

Communications, consultation and the dissemination of information associated with traffic and access will be undertaken as outlined in this section.

The aim of consultation and broad communication on traffic and access matters is to:

- Facilitate community feedback regarding traffic issues
- Recommend alternative and appropriate travel patterns during periods of change
- Manage traffic impacts to protect affected residential and business amenity
- Provide timely, accurate and comprehensive traffic information using all available media to inform road users and the community of the project's traffic impact mitigation measures.

Ongoing consultation with stakeholders will ensure that effective traffic management measures are developed and implemented to minimise disruption and inconvenience.

Systems Connect will coordinate engagement with Sydney Metro and the members of the TTLG to enable the local community and other stakeholders to receive timely and accurate information associated traffic and transport issues.

Tool	Purpose	Frequency
Traffic alert emails	Email alerts to Sydney Roads , Transport Management Centre, Council, transport operators and emergency services to advise of major traffic changes including road or lane closures and detours, incidents or undue congestion	5 business days prior to changes if applicable As soon as practicable following incidents or undue congestion
Advertisements	To inform of significant traffic changes, detours and traffic disruptions as required to comply with approvals; in local newspapers, radio and/or project website	5 business days prior to changes
Letterbox notifications	Notification letters to inform local residents and businesses potentially affected by planned traffic changes	5 business days prior to changes
Community emails	To inform and update the community of project progress, milestones, activities planned for the following month, current and upcoming traffic changes	As required

Tool	Purpose	Frequency
Community information line	Information to the project details with message service via an 1800 number	As required
TfNSW Sydney Metro website	Systems Connect will provide information in electronic format suitable to be uploaded onto the TfNSW Sydney Metro website, including copies of advertisements, traffic alerts, notification letters and other public material related to the works	As required
Systems Connect website	Information about the construction activities will be placed on the Systems Connect website including information about traffic changes, and executive summaries of publicly available reports relating to the project activities.	As required

The table above provides a guide to inform the community of changes to road and traffic conditions. It also provides a summary of the purpose and frequency of each method of communication.

6. Working Hours

The standard working hours 7am – 6pm on weekdays and 8am – 1pm on Saturdays. Some activities will need to be undertaken outside of these hours. Refer to out of hour application for additional details as required.

Construction Activity	Construction Hours / Comments
Standard construction hours	Monday to Friday: 7am – 6pm Saturdays: 8am to 1pm Sundays & Public Holidays: No work
Out of hours	Saturday afternoons: 1pm – 5pm Sundays: 8am – 5pm

7. Manage Emergencies

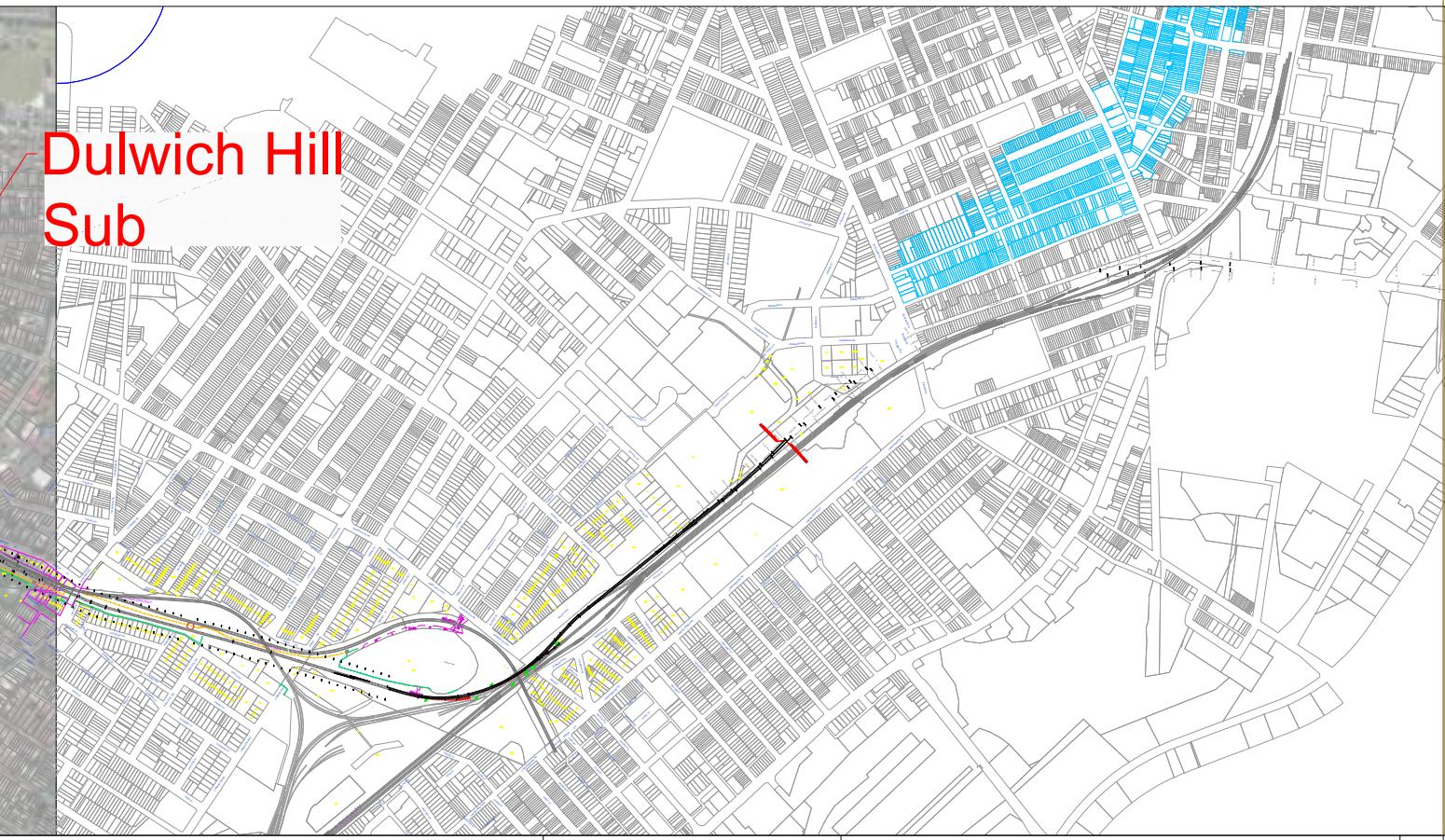
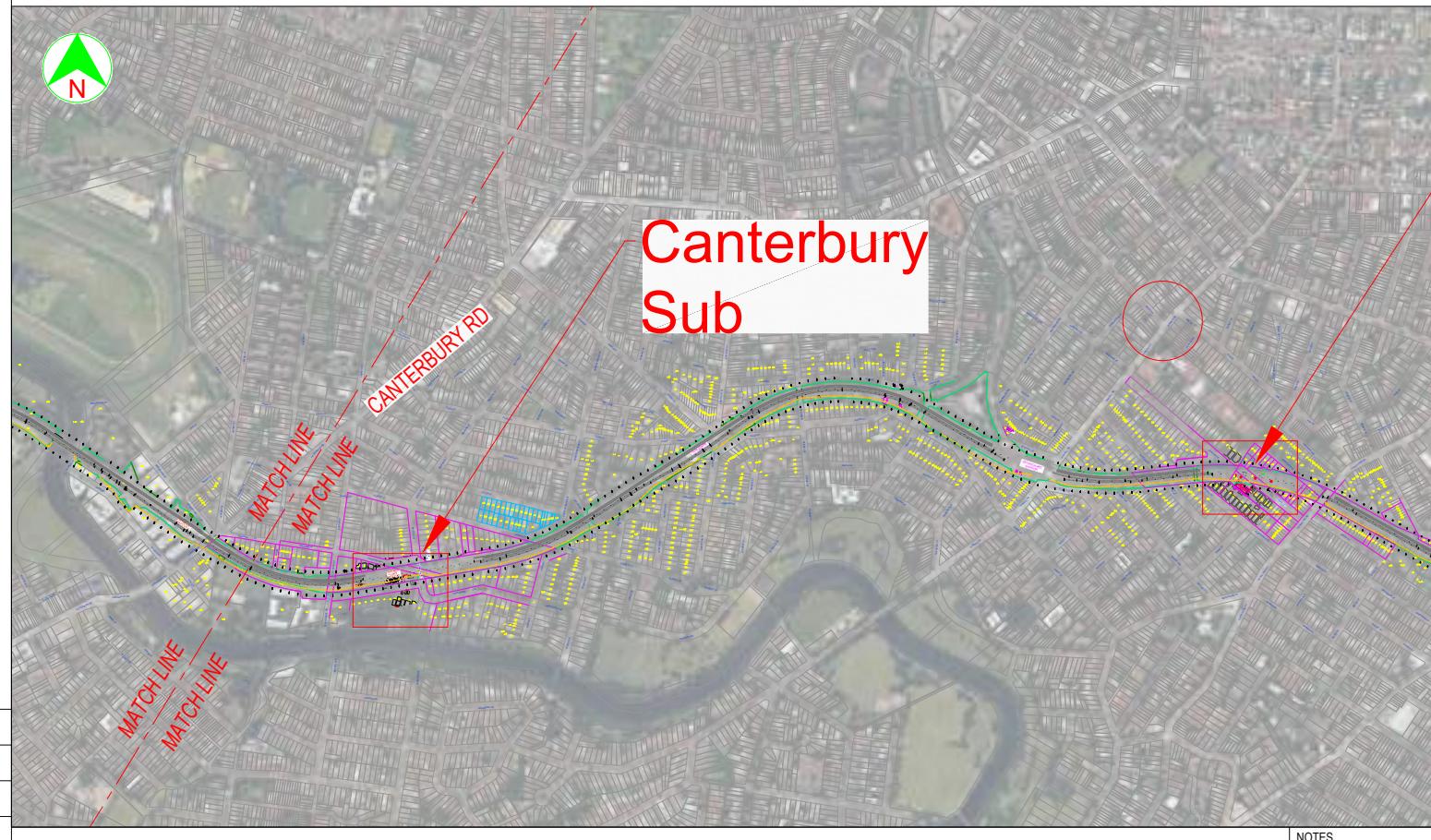
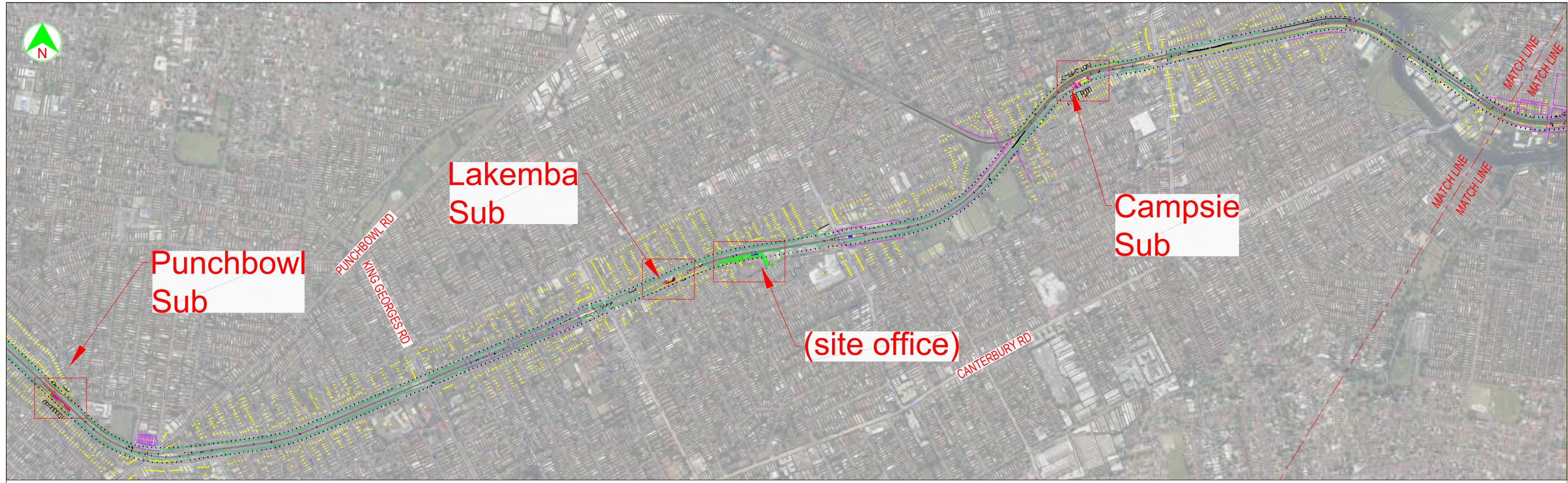
Systems Connect acknowledge the inevitable nature of emergencies and their potentially significant social, economic and environmental consequences. Accordingly, we are aware that the NSW Government has enacted the State Emergency & Rescue Management Act 1989 to support emergency management activities.

In NSW, the agencies primarily responsible for controlling hazards/emergencies are:

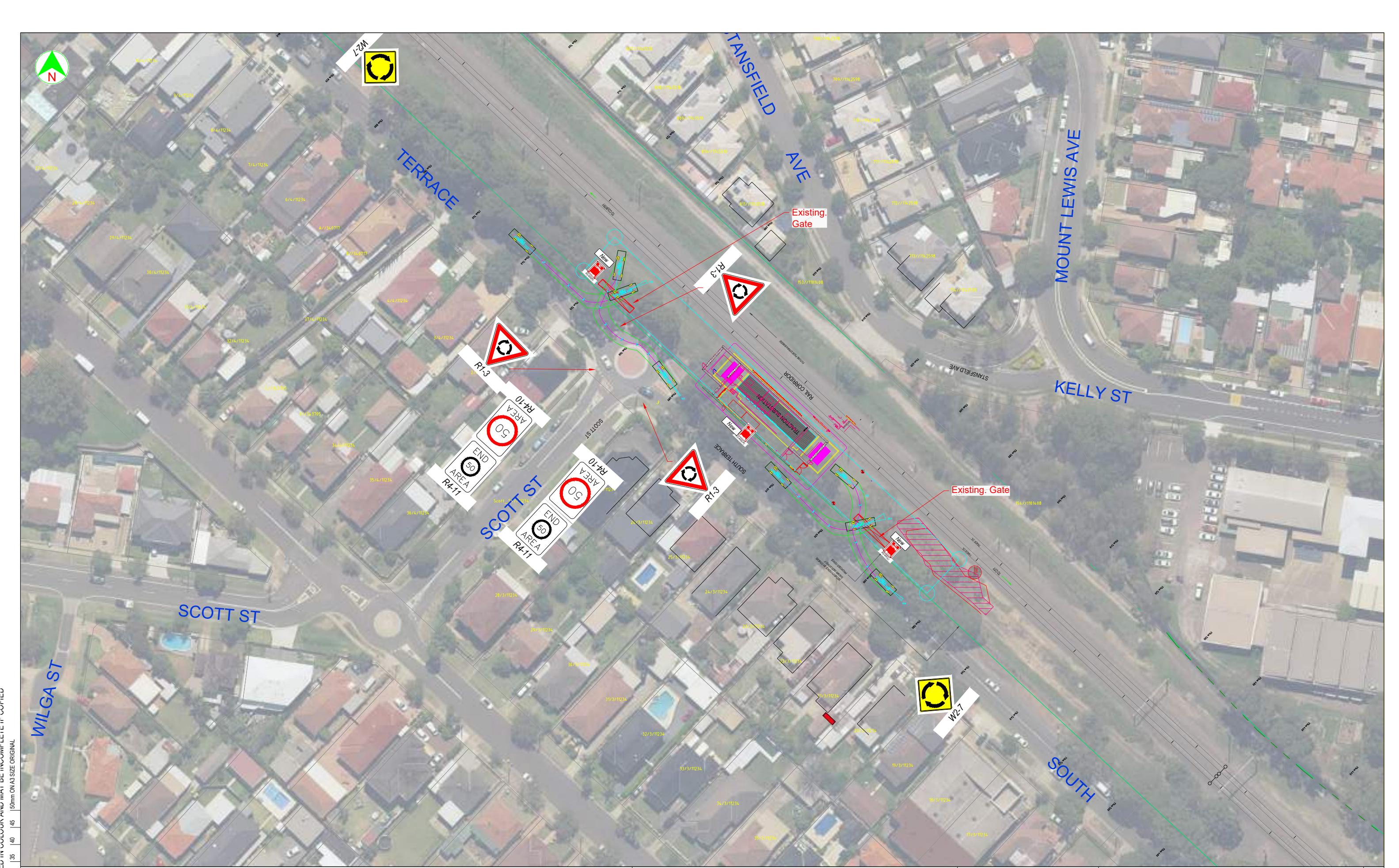
Unplanned Incident Agency Responsibility	
Law Enforcement / Emergencies	NSW Police
Fire	Fire and Rescue NSW / NSW Rural Fire Service
Hazardous Materials	Fire and Rescue NSW / NSW Rural Fire Service
Flood, storm or any natural disaster	NSW State Emergency Service

PART C – Appendices

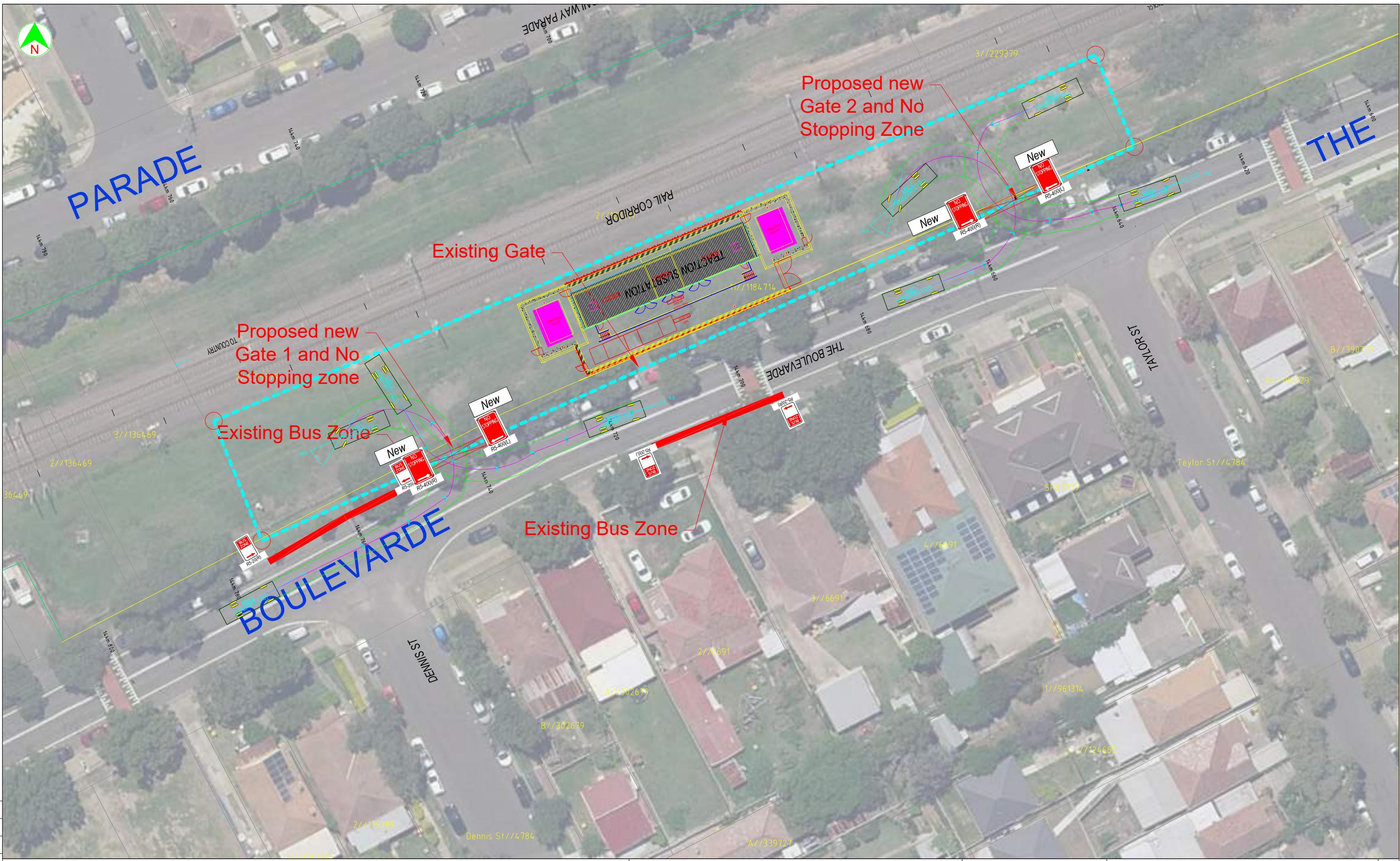
Appendix A. Site access



LEGEND					NOTES	PLOT DATE / TIME	PLOT BY M SIM	CLIENT	SOUTHWEST TRACTION SUBSTATION LOCALITY DIAGRAM			A3		
100	10	15	20	25	REVISION DESC	REV	DATE	APPROVAL	SCALES ON A3 SIZE DRAWING	DRAWINGS / DESIGN PREPARED BY	TITLE	NAME	DATE	SHEET
0	5	10	15	20	25	30	35	40	45	N.T.S	DRAWN	M.SIM	15/4/20	
										DRG CHECK	M.SIM	15/4/20		
										DESIGN				
										DESIGN CHECK				
										TRAFFIC MNGR				
										PREPARED FOR	Systems Connect	ISSUE STATUS		ISSUE 0
										FOR INFORMATION		SHEET No.	1 of 1	



LEGEND						NOTES	PLOT DATE / TIME	PLOT BY	CLIENT	SOUTHWEST TRACTION SUBSTATION - PUNCHBOWL		
Temp. fence	REVISION DESC	REV	DATE	APPROVAL	SCALES ON A3 SIZE DRAWING	DRAWINGS / DESIGN PREPARED BY	TITLE	NAME	DATE	Site Plan and Proposed Temp. signs.		
					SCALE 1:100		M.SIM	M.SIM	15/5/20	Systems Connect	SHEET	
					CO-ORDINATE SYSTEM		DRG CHECK	M.SIM	15/5/20		TRAFFIC MNGR	
					MGA ZONE 56	AHD	DESIGN				ISSUE STATUS	
							DESIGN CHECK				SHEET No.	1 of 1
							TRAFFIC MNGR				ISSUE	0



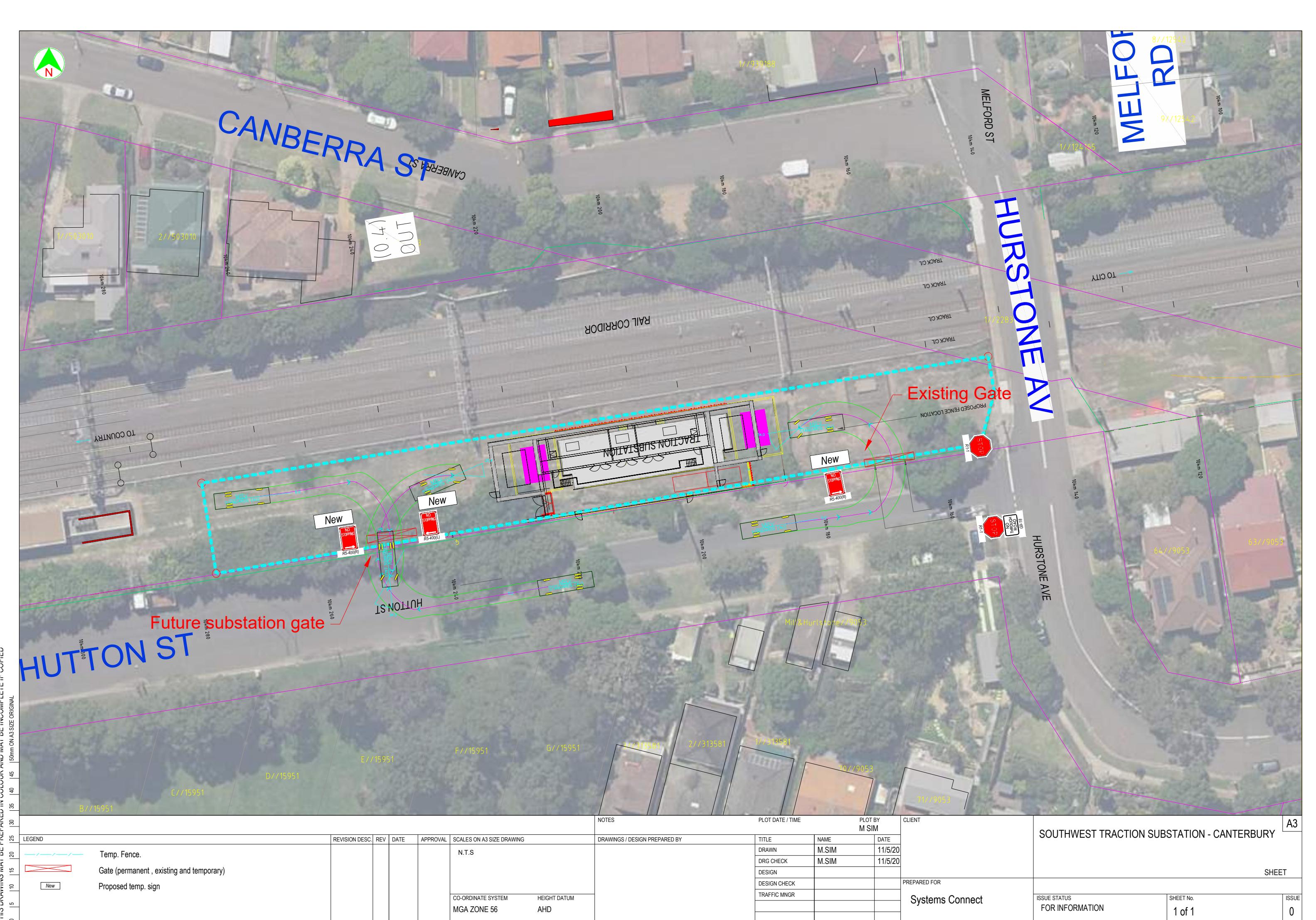
NOTES						PLOT DATE / TIME	PLOT BY M SIM	CLIENT	SOUTHWEST TRACTION SUBSTATION - LAKEMBA	A3
						DRAWINGS / DESIGN PREPARED BY	TITLE	NAME	DATE	
LEGEND	Temp. fence	REVISION DESC	REV	DATE	APPROVAL	SCALES ON A3 SIZE DRAWING	DRAWN	M.SIM	15/5/20	
	Temp. / New gate					SCALE 1:200 2 0 2 4 AT A3	DRG CHECK	M.SIM	15/5/20	
	Prop. new temp sign					CO-ORDINATE SYSTEM MGA ZONE 56	DESIGN			
						HEIGHT DATUM AHD	DESIGN CHECK			
							TRAFFIC MNGR			
						PREPARED FOR	Systems Connect	ISSUE STATUS FOR INFORMATION	SHEET No.	
						TRAFFIC MNGR		1 of 1	1 of 1	ISSUE 0



NOTES							PLOT DATE / TIME			PLOT BY M SIM			CLIENT Systems Connect	SOUTHWEST TRACTION SUBSTATION - DULWICH HILL				A3					
LEGEND							DRAWINGS / DESIGN PREPARED BY			TITLE				ISSUE STATUS				SHEET					
Temp. Fence.		REVISION DESC	REV	DATE	APPROVAL	SCALES ON A3 SIZE DRAWING	DRAWN	M.SIM	11/5/20					FOR INFORMATION				SHEET No.					
Temp. Gate						N.T.S	DRG CHECK	M.SIM	11/5/20					1 of 1				ISSUE					
Proposed temp. sign							DESIGN							0									
New							DESIGN CHECK																
							TRAFFIC MNGR																



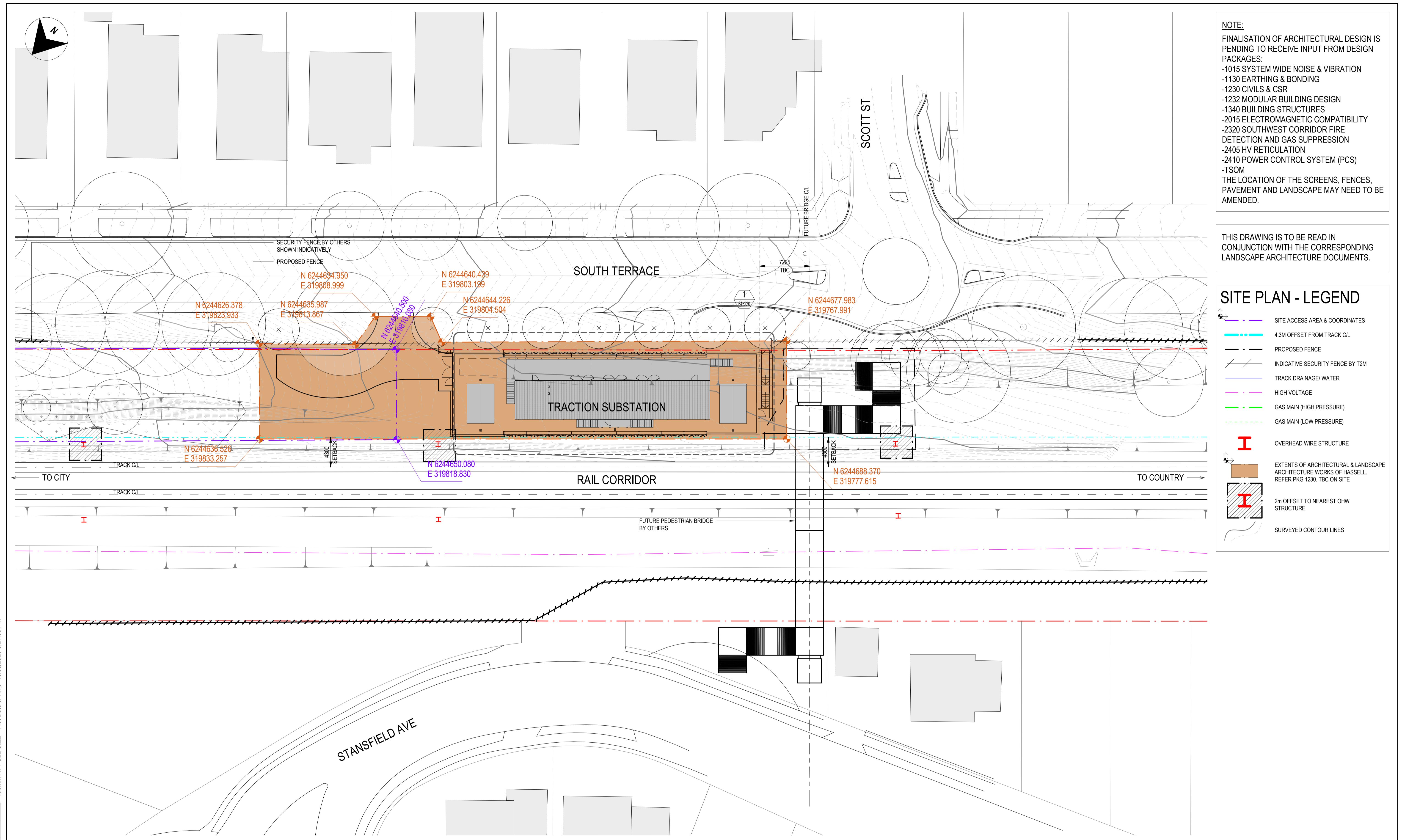
LEGEND						NOTES	PLOT DATE / TIME	PLOT BY M SIM	CLIENT	SOUTHWEST SITE COMPOUND - BELMORE			A3
REVISION DESC	REV	DATE	APPROVAL	SCALES ON A3 SIZE DRAWING		DRAWINGS / DESIGN PREPARED BY	TITLE	NAME	DATE				SHEET
				N.T.S									
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0	5	10	15	20	25	30	35	40	45	50	55	60	
CO-ORDINATE SYSTEM MGA ZONE 56						HEIGHT DATUM AHD	TRAFFIC MNGR			ISSUE STATUS FOR INFORMATION			SHEET No. 1 of 3
													ISSUE 0





NOTES						PLOT DATE / TIME			PLOT BY M SIM			CLIENT	SOUTHWEST TRACTION SUBSTATION - CAMPSIE			A3			
LEGEND						DRAWINGS / DESIGN PREPARED BY			TITLE		NAME		DATE		SHEET				
Temp. Fence.						N.T.S.			DRAWN		M.SIM	11/5/20							
Temp. Gate						DRG CHECK			M.SIM	11/5/20									
New Temp. signs						DESIGN													
						DESIGN CHECK													
						TRAFFIC MNGR													
						PREPARED FOR													
						Systems Connect			ISSUE STATUS			FOR INFORMATION			SHEET No.				
															1 of 1				
															ISSUE				
															0				

Appendix B. Design details (not final)



100mm AT FULL SIZE Plot Date & Time 13/03/2020 3:27:39 PM

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C01	MV	13/03/2020	STAGE 2 STATUS UPDATE
B	-	09/10/2019	STAGE 2 DESIGN SUBMISSION
A	-	06/06/2019	STAGE 1 DESIGN SUBMISSION
REV.	BY	DATE	DESCRIPTION APPD.
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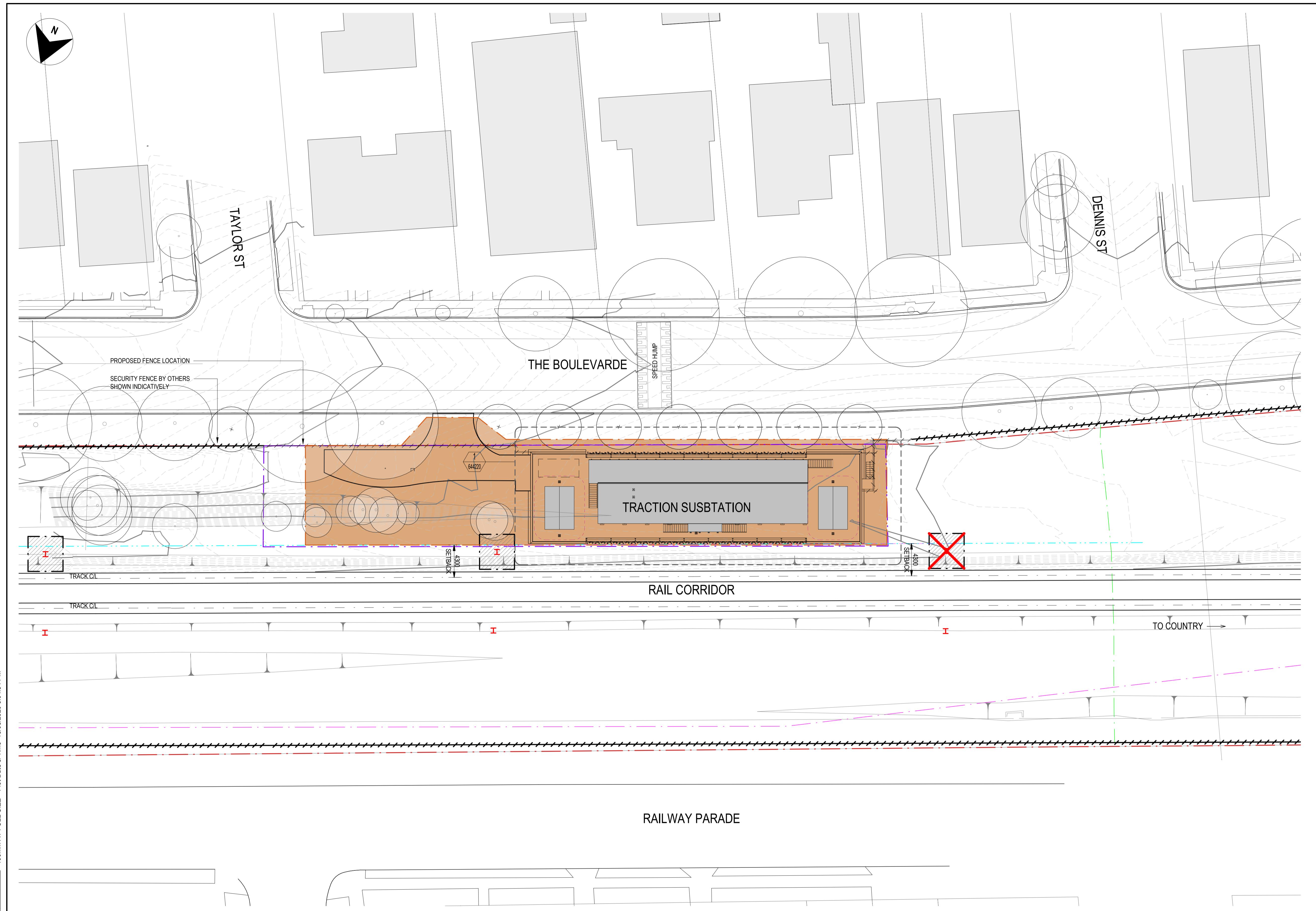
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CLIENT
 
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HASSELL

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 DRAWN M. VALDIVIA 13/03/2020
 DESIGNED P. MONCKTON 13/03/2020
 DRG CHECK K. OZAY 13/03/2020
 DESIGN CHECK C. CARR
 APPROVED
 STATUS: ISSUED FOR REVIEW SHEET 1 OF 1 DRG No. SMCSWLWC-SYC-TPS-AT-DWG-645030 REV. C01

SYDNEY METRO CITY & SOUTHWEST
 SOUTHWEST CORRIDOR TRACTION SUBSTATIONS
 PKG 4025 - GENERAL ARCHITECTURE - PUNCHBOWL TRACTION SUBSTATION
 PROJECT INFORMATION
 SITE PLAN



100mm AT FULL SIZE Plot Date & Time 13/03/2020 3:04:54 PM

DRAWING COLOUR CODED - PRINT ALL COPIES IN COLOUR

NOT FOR CONSTRUCTION

C01	MV	13/03/2020	STAGE 2 STATUS UPDATE	-
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A	-	06/06/2019	STAGE 1 DESIGN SUBMISSION	-
REV.	BY	DATE	DESCRIPTION	APPD.

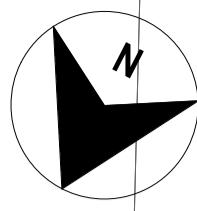
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NOTE: Do not scale from this drawing. ALT. DRG No.



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DRG CHECK K. OZAY 13/03/2020
DESIGN CHECK C. CARR
APPROVED
DRG No. SMCSWLW-SYC-TLS-AT-DWG-644030

SYDNEY METRO CITY & SOUTHWEST
SOUTHWEST CORRIDOR TRACTION SUBSTATIONS
PKG 4025 - GENERAL ARCHITECTURE - LAKEMBA TRACTION SUBSTATION
PROJECT INFORMATION
SITE PLAN
STATUS: ISSUED FOR REVIEW SHEET 1 OF 1 (C)
DRG No. SMCSWLW-SYC-TLS-AT-DWG-644030 REV. C01

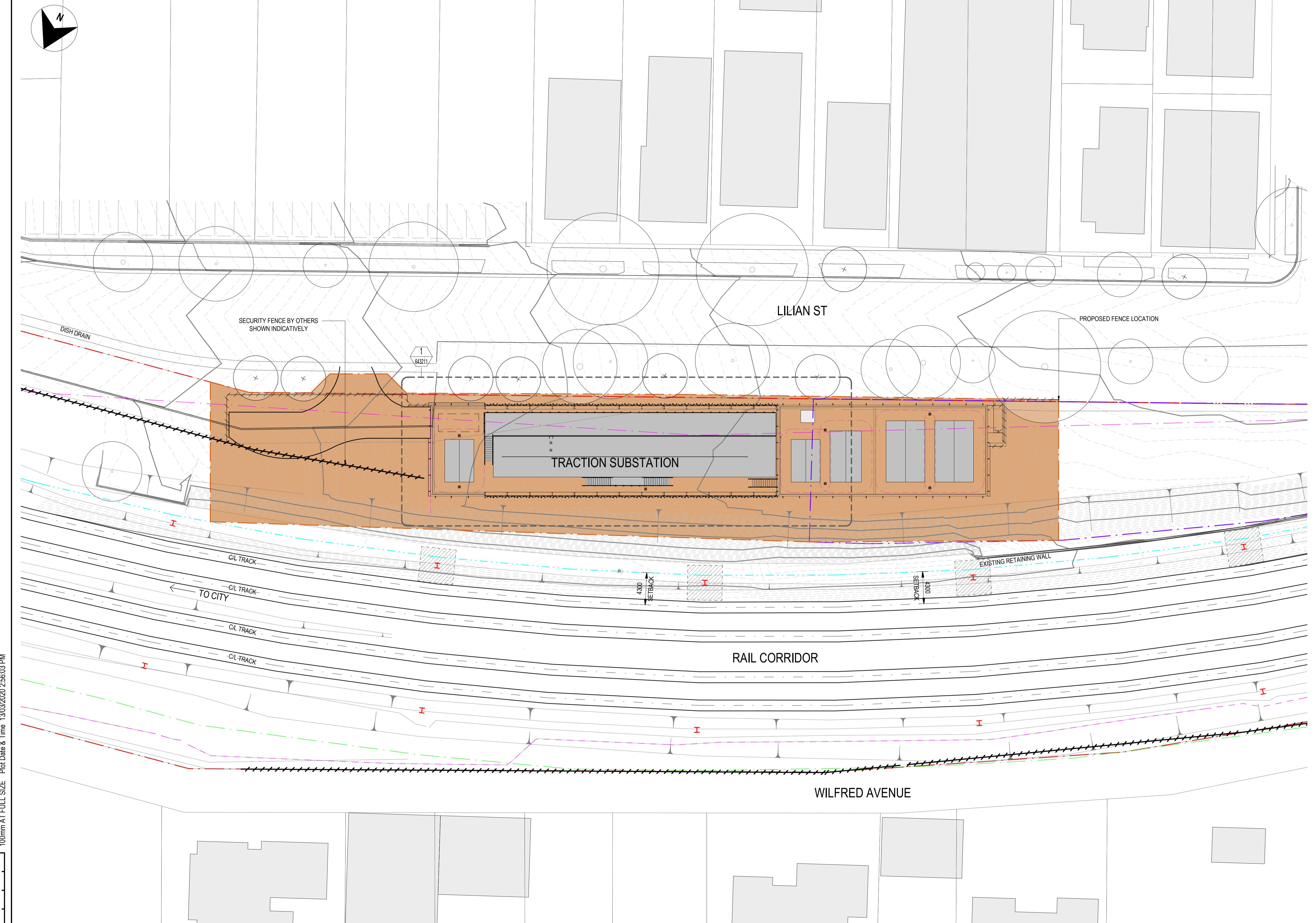


NOTE:
FINALISATION OF ARCHITECTURAL DESIGN IS PENDING TO RECEIVE INPUT FROM DESIGN PACKAGES:
-1015 SYSTEM WIDE NOISE & VIBRATION
-1130 EARTHING & BONDING
-1230 CIVILS & CSR
-1232 MODULAR BUILDING DESIGN
-1340 BUILDING STRUCTURES
-2015 ELECTROMAGNETIC COMPATIBILITY
-2320 SOUTHWEST CORRIDOR FIRE DETECTION AND GAS SUPPRESSION
-2405 HV RETICULATION
-2410 POWER CONTROL SYSTEM (PCS)
-TSOM
THE LOCATION OF THE SCREENS, FENCES, PAVEMENT AND LANDSCAPE MAY NEED TO BE AMENDED.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE CORRESPONDING LANDSCAPE ARCHITECTURE DOCUMENTS.

SITE PLAN - LEGEND

	SITE ACCESS AREA & COORDINATES
	4.3M OFFSET FROM TRACK C/L
	PROPOSED FENCE
	INDICATIVE SECURITY FENCE BY T2M
	TRACK DRAINAGE/WATER
	HIGH VOLTAGE
	GAS MAIN (HIGH PRESSURE)
	GAS MAIN (LOW PRESSURE)
	OVERHEAD WIRE STRUCTURE
	EXTENTS OF ARCHITECTURAL & LANDSCAPE ARCHITECTURE WORKS OF HASSELL. REFER PKG 1230, TBC ON SITE
	2m OFFSET TO NEAREST OHW STRUCTURE
	SURVEYED CONTOUR LINES



C01	MV	13/03/2020	STAGE 2 STATUS SUBMISSION
B	-	09/10/2019	STAGE 2 DESIGN SUBMISSION
A	-	06/06/2019	FOR STAGE 1 METRO SUBMISSION
REV.	BY DATE	DESCRIPTION	APPD.
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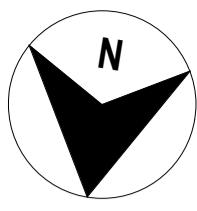
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CLIENT

SERVICE PROVIDERS

DRAWN M. VALDIVIA 13/03/2020
DESIGNED P. MONCKTON 13/03/2020
DRG CHECK K. OZAY 13/03/2020
DESIGN CHECK C. CARR
APPROVED

SYDNEY METRO CITY & SOUTHWEST
SOUTHWEST CORRIDOR TRACTION SUBSTATIONS
PKG 4025 - GENERAL ARCHITECTURE - CAMPSIE TRACTION SUBSTATION
PROJECT INFORMATION
SITE PLAN
STATUS: ISSUED FOR REVIEW SHEET 1 OF 1
DRG No. SMCSWLWC-SYC-TCS-AT-DWG-643030 REV. C01



100mm AT FULL SIZE Plot Date & Time 13/03/2020 2:27:37 PM

HURLSTONE AVE

HUTTON ST

MELFORD ST

CANBERRA ST

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NOTE:
 FINALISATION OF ARCHITECTURAL DESIGN IS PENDING TO RECEIVE INPUT FROM DESIGN PACKAGES:
 -1015 SYSTEM WIDE NOISE & VIBRATION
 -1130 EARTHING & BONDING
 -1230 CIVILS & CSR
 -1232 MODULAR BUILDING DESIGN
 -1340 BUILDING STRUCTURES
 -2015 ELECTROMAGNETIC COMPATIBILITY
 -2320 SOUTHWEST CORRIDOR FIRE DETECTION AND GAS SUPPRESSION
 -2405 HV RETICULATION
 -2410 POWER CONTROL SYSTEM (PCS)
 -TSOM
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THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE CORRESPONDING LANDSCAPE ARCHITECTURE DOCUMENTS

SITE PLAN - LEGEND

	SITE ACCESS AREA & COORDINATES
	4.3M OFFSET FROM TRACK C/L
	PROPOSED FENCE
	INDICATIVE SECURITY FENCE BY T2M
	TRACK DRAINAGE/WATER
	HIGH VOLTAGE
	GAS MAIN (HIGH PRESSURE)
	GAS MAIN (LOW PRESSURE)
	OVERHEAD WIRE STRUCTURE
	EXTENTS OF ARCHITECTURAL & LANDSCAPE ARCHITECTURE WORKS OF HASSELL. REFER PKG 1230, TBC ON SITE
	2m OFFSET TO NEAREST OHW STRUCTURE
	SURVEYED CONTOUR LINES

NOT FOR CONSTRUCTION

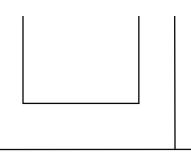
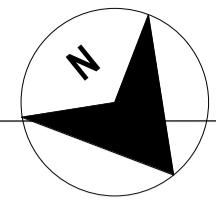
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B	-	09/10/2019	STAGE 2 DESIGN SUBMISSION	-
A	-	06/06/2019	STAGE 1 DESIGN SUBMISSION	-
REV.	BY	DATE	DESCRIPTION	APPD.

SCALE	
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NOTE: Do not scale from this drawing. ALT. DRG No. _____



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SERVICE PROVIDERS
 DRAWN M. VALDIVIA 13/03/2020
 DESIGNED P. MONCKTON 13/03/2020
 DRG CHECK K. OZAY 13/03/2020
 DESIGN CHECK C. CARR
 APPROVED
SYDNEY METRO CITY & SOUTHWEST
 SOUTHWEST CORRIDOR TRACTION SUBSTATIONS
 PKG 4025 - GENERAL ARCHITECTURE - CANTERBURY TRACTION SUBSTATION
 PROJECT INFORMATION
 SITE PLAN
 STATUS: ISSUED FOR REVIEW SHEET 1 OF 1 (C)
 DRG No. SMCSWLWC-SYC-TCR-AT-DWG-642030 REV. C01



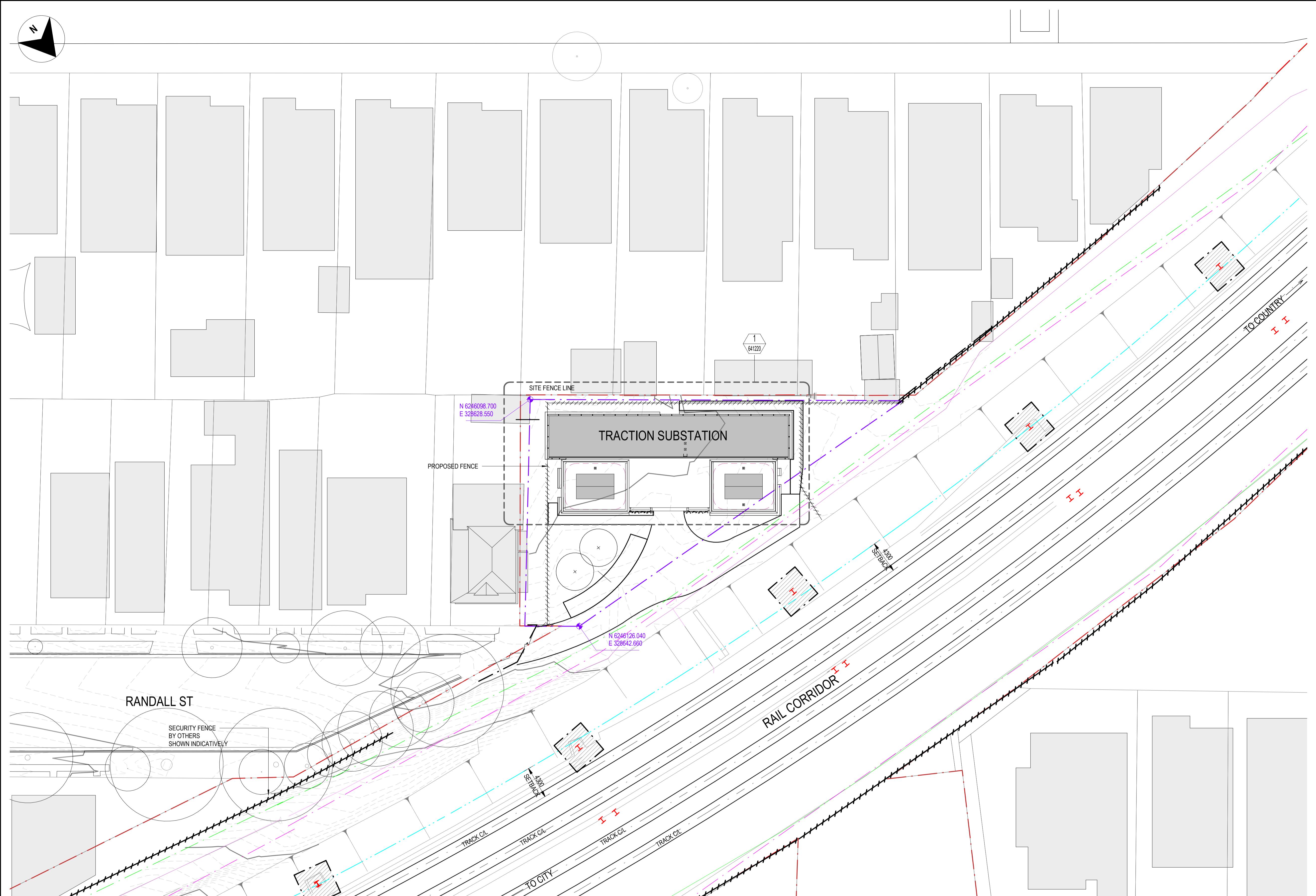
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 -TSOM
 THE LOCATION OF THE SCREENS, FENCES, PAVEMENT AND LANDSCAPE MAY NEED TO BE AMENDED.

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SITE PLAN - LEGEND

- SITE ACCESS AREA & COORDINATES
- 4.3M OFFSET FROM TRACK C/L
- PROPOSED FENCE
- INDICATIVE SECURITY FENCE BY T2M
- TRACK DRAINAGE/WATER
- HIGH VOLTAGE
- GAS MAIN (HIGH PRESSURE)
- GAS MAIN (LOW PRESSURE)
- OVERHEAD WIRE STRUCTURE
- EXTENTS OF ARCHITECTURAL & LANDSCAPE ARCHITECTURE WORKS OF HASSELL. REFER PKG 1230. TBC ON SITE
- 2m OFFSET TO NEAREST OHW STRUCTURE
- SURVEYED CONTOUR LINES

100mm AT FULL SIZE Plot Date & Time 13/03/2020 22:54:47 PM



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C01	MV	13/03/2020	STAGE 2 STATUS UPDATE	-
B	-	09/10/2019	STAGE 2 DESIGN SUBMISSION	-
A	-	06/06/2019	STAGE 1 DESIGN SUBMISSION	-
REV.	BY	DATE	DESCRIPTION	APPD.
A1 Original	Co-ordinate System: MGA Zone 56	Height Datum: A.H.D.	This sheet may be prepared using colour and may be incomplete if copied	

SCALE
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NOTE: Do not scale from this drawing. ALT. DRG No.

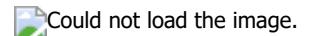
CLIENT

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DRAWN M. VALDIVIA 13/03/2020
DESIGNED P. MONCKTON 13/03/2020
DRG CHECK K. OZAY 13/03/2020
DESIGN CHECK C. CARR
APPROVED

SYDNEY METRO CITY & SOUTHWEST
SOUTHWEST CORRIDOR TRACTION SUBSTATIONS
PKG 4025 - GENERAL ARCHITECTURE - DULWICH HILL TRACTION SUBSTATION
PROJECT INFORMATION
SITE PLAN
STATUS: ISSUED FOR REVIEW SHEET 1 OF 1 (C)
DRG No. SMCSWLWC-SYC-TDH-AT-DWG-641030 REV. C01

Appendix C. General correspondence etc (attached when available)



LWC General Correspondence

Reference No: SMCSWLWC-RMS-LWC-GEN-000043
Project Title: Sydney Metro City & Southwest - LWC, TSOM
Contract No: LWC - Line Wide Contracts
Sub Contract: -
Orig Ref No:
DLM:

Date: 19 October 2020, 09:28 AM **Response required by:**
From: Quac Minh LA (Roads and Maritime Services (part of TfNSW division))
To: Susan Dai (Systems Connect)
Cc: Chris Berg (Sydney Metro) ; Ken Hind (Sydney Metro) ; JOSE ARGUETADOMINGUEZ (Sydney Metro) ; Phil Brogan (Sydney Metro) ; Garry Hitchcox (Sydney Metro) ; Nathan Hoffmeister (Sydney Metro) ; Deepak Shahani (Sydney Metro) ; Errol Pather (Sydney Metro) ; Jake Coles (Sydney Coordination Office) ; Carl Mella (Roads and Maritime Services (part of TfNSW division)) ; Hugh Chapman (Sydney Metro) ; Ali Faniad (Sydney Metro) ; Oscar Wang (Sydney Metro) ; Steve Brown (Sydney Coordination Office) ; Hayden Wright (Sydney Metro) ; Transmittal SM OpenAccess (Sydney Metro) ; Mathew Billings (Systems Connect) ; Mark Marriott (Sydney Metro) ; Jill Downing (Systems Connect) ; Kirimaru Friscan (Systems Connect) ; LWC Systems Connect Transfer (Systems Connect) ; Mathew Johnston (Systems Connect) ; Mong Sim (Systems Connect) ; John Grant (Systems Connect) ; Tofiga Tuapepe (Sydney Metro)
Subject: **Construction Traffic Management Plan - Sydenham to Bankstown Traction Substations and Compound Site Operation - TfNSW (former RMS) approval**

Susan,

In reference to your transmittal SMCSWLWC-SYC-TX-003781 dated 09/10/20.

In accordance with Schedule C1 Appendix A.9 Section 2.1 (c) and 2.2 (c) of the Principal's General Specifications G10 – Traffic and Transport Management and Minister's Condition of Approval E82 for the Sydney Metro City & South West, Transport for NSW – Greater Sydney – Planning and Programs, and the Sydney Coordination Office approve the Sydney Metro City & South West Traffic Management Plan – Line Wide Works – Sydenham to Bankstown Traction Substations and Compound Site Operation (SMCSWLWC-SYC-WEC-TF-PLN-004072.B.RVW.B.01) for the Sydney Metro City & South East project subject to the following requirements:

- obtaining Road Occupancy Licenses (RoLs) from the Transport Management Centre as required;
- addressing any safety issues identified within the Road Safety Audit review for this CTMP in advance of any works commencing;
- addressing any issues raised by Council, STA, Taxi Council, residents/businesses or Emergency Services in the CTMP approval process;
- addressing the requirements arising as an outcome of the Local Traffic Committee meeting;
- promptly addressing any SCO and/or TMC and/or TfNSW issue that eventuates during the works

regards,
Minh

Design Series:

Discipline: **Design Lots:** **Location:**

**Sydney Metro City & Southwest
Stakeholder Comment Tracker**

Southwest Traction Substation CTMP review tracker

No.	CTMP	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*	CLOSED OUT	RESPONSE
1	2/06/2020	TfNSW	Minh La	SMCSWLW C-SYC-WEC-TF-PLN-004072 Rev A.			In response to your transmittal SMCSWLWC-SYC-TX-002481 dated 15/05/20. TfNSW - Greater Sydney - Planning & Programs has reviewed the CTMP and has no comments.	(nil)		
2	19/05/2020	Metro	J Porter	SMCSWLW C-SYC-WEC-TF-PLN-004072 Rev A.	6. Working hours		Standard working hours are 8am-6pm Sunday. There are no standard out-of-hours as far as I'm aware? OOH should just be all other times outside of standard working hours.	Noted. This Table is updated per all recent CTMPs update.		
3	19/05/2020	Metro	J Porter	SMCSWLW C-SYC-WEC-TF-PLN-004072 Rev A.	Figure 1		Please ensure diagram details are readable, SM can supply high-res artwork if required	Diagram resolution as good as it gets from the available version.		
4	19/05/2020	Metro	J Porter	SMCSWLW C-SYC-WEC-TF-PLN-004072 Rev A.	3.6.3		Can you please provide more detail about the driveway impacts on Randall Street? How is this proposed to be mitigated / managed?	Property # 20 Randall Street has a unique boundary which shares the rail corridor access. The interface of these 2 driveway/access has co existed along time ago. The introduction of the substation traffic is not new to the property and the area. An common road and courtesy between drivers will have to apply. From observation, it is unlikely property #20 will have vehicles park inside of the property.		
5	19/05/2020	Metro	J Porter	SMCSWLW C-SYC-WEC-TF-PLN-004072 Rev A.	General		There are a number of typos and formatting errors in the document (misspelled streets, extra or missing spaces etc), please ensure a thorough proof-read is carried out by Comms / Media team before finalising.	Noted.		
6	26/05/2020	Metro	K Hind	SMCSWLW C-SYC-WEC-TF-PLN-004072 Rev A.	3.1 & 5		Can you please provide more information on how removal of parking will be communicated? Also what type of parking usage has been observed (e.g. how often, how long, primarily residents, commuter etc)	Each traction substations and its impact from the construction including details parking loss/removal/impact was communicated to relevant council. The presentation was first provided to Canterbury Bankstown Council on 18 May 2020 and Inner West on 11 May 2020. Strategy would be at the minimum - going through local traffic committee and notices installed on the parking area prior to construction. These details would still need detailing pending council preference. Parking usage is summarise on the table on section 3.1 on Rev B.		
7	26/05/2020	Metro	K Hind	SMCSWLW C-SYC-WEC-TF-PLN-004072 Rev A.	3.1		Heavy vehicle routes from the closest arterial road to the various sites should be provided.	Nominated routes attached. Final route may differ during actual work.		
8	26/05/2020	Metro	K Hind	SMCSWLW C-SYC-WEC-TF-PLN-004072 Rev A.	3.1 and various		The establishment of 'No Stopping' zones adjacent to the site entries and exits will need to be submitted to the relevant council for consideration by the Local Traffic Committee. Adequate time should be allowed for this as it can take 6-8 weeks from submission to approval.	Noted.		

9	26/05/2020	Metro	K Hind	SMCSWLW C-SYC- WEC-TF- PLN- 004072 Rev A.	3.1; 3.2.1		While no concrete path is provided on the footpath area adjacent to the site, it is still possible for pedestrians to use this footpath to access the bus stop or car parking along this section of road. Suitable signposting will be required to warn pedestrians.	For Lilian Street at Campsie, the only designated footpath is on the southern side of Lilian Street. A Use Other Footpath is shown on the long term traffic plan on the northern footpath to divert and deter pedestrian from the work zone side. For South Terrace at Punchbowl, pedestrian activity is not expected on the northern side side as there are no station, no establishments and no connectivity of foopaths to the northern side along the work zone side.		
10	26/05/2020	Metro	K Hind	SMCSWLW C-SYC- WEC-TF- PLN- 004072 Rev A.	3.5.1 and App. A		The swept path analysis for Hutton Street appears to require the MRV to encroach onto the footpath when turning into the western access. Parking is also permitted on the southern side of Hutton Street between Hurlstone Ave and the site access, is it proposed to restrict parking along this section during works? The Contractor should confirm if there are any weight restrictions in place on local roads surrounding the work sites.	MRV is revised to be in alignment of the pavement in Rev B. Parking area south of Hutton St is not impacted during the works. Weight restrictions may apply however it may be the only route to the site. Oversized permits and exemption criteria will be available at a later stage during finalisation of load size. An addendum will be added to the CTMP in due course.		
11	26/05/2020	Metro	K Hind	SMCSWLW C-SYC- WEC-TF- PLN- 004072 Rev A.	3.5.1 & Appendix A		The removal of the parking will impact on commuter parking at Campsie and potentially other locations. This will need to be discussed with council and may require alternative parking arrangements to be implemented.	Noted. The work impact was presented to the relevant council.		
12	26/05/2020	Metro	K Hind	SMCSWLW C-SYC- WEC-TF- PLN- 004072 Rev A.	3.5.1 & 3.6.1		The speed limit would be the statutory 50km/h so wording should include that, even though no speed limit signs are in place.	Noted.		
13	8/10/2020	SCO	S Brown.	SMCSWLW C-SYC- WEC-TF- PLN- 004072 Rev A.	3.6.3		Regarding the residential driveway at Randall Ln and its potential impact on construction.	Similar to Item # 4, no impact to majority of the driveways at Randall Street. Driveway # 20 has a unique boundary. A common courtesy applies. At the same time, it is observed there it is not likely # 20 will have a vehicle parked on the property due to the size of the clear area for parking a vehicle. Interfacing with rail corridor traffic has existed long ago within the dead end area and it is not going to be an issue for SC work that involves low movements to installe to future substation modules.		
14	8/10/2020	CBC					(no comments received to date)	Interface meeting held. Any CBC concerns to be addressed in a separate channel.		
15	8/10/2020	IWC					(no comments received to date)	Interface meeting held. Any IWC concerns to be addressed in a separate channel.		

Appendix D. Compliance Matrix Checklist

Southwest Traction Substations CTMP Compliance Matrix

		Comments
E47	Construction Traffic Management Plans (CTMPs) must be prepared for each Construction site or stage (or Low Impact Activity where required) in accordance with the CEMF and relevant Austraroads, Australian Standards and RMS requirements. The CTMPs must be submitted to the RMS following engagement with the Sydney Coordination Office and before Construction commences at the relevant Construction site or stage. A copy of the Construction Traffic Management Plans must be submitted to the Planning Secretary for information. (by SM only)	The submittal of the CTMP is per condition E46.
E46	The Proponent must establish a Traffic and Transport Liaison Group(s) (TTLGs) to inform traffic and transport management measures during Construction and Operation of the CS1. Management measures must be coordinated with the RMS following consultation with the Sydney Coordination Office the Relevant Roads Authority. The TTLG must comprise representatives from the Relevant Road Authority(ies), transport operators (including bus and taxi operators) and emergency services as required. The TTLG must be consulted to inform preparation of the Construction Traffic Management Plan(s).	The plan was presented to the TTLG on 29 April 2020.
E51	During Construction, all reasonably practicable measures must be implemented to maintain pedestrian and vehicular access to, and parking in the vicinity of, businesses and affected properties. Disruptions are to be avoided, and where avoidance is not possible, minimised. Where disruption cannot be minimised, alternative pedestrian and vehicular access must be provided, and opportunities for parking arrangements must be investigated in consultation with affected businesses/properties and implemented before the disruption. Adequate signage and directions to businesses/properties must be provided before, and for the duration of, any disruption.	A short term traffic control will be in place during identified work items for the delivery and lifting of TS modules. At other times, no long term impact from the construction of these traction substations.
TC6	Further consideration of the need for intersection modifications would be undertaken, to improve intersection performance at locations most affected by the addition of construction heavy vehicles and rail replacement buses. This would be undertaken in consultation with Transport for NSW, Roads and Maritime Services, the Sydney Coordination Office, and the relevant road authority. The improvements considered would include: <ul style="list-style-type: none"> • modification to the existing traffic signal phasing • lane priority changes • changing lane designations (line markings and signage) • kerbside changes (such as removing on street parking or implementing no standing zones at peak times to increase lane capacity) • physical geometric changes (such as minor kerb cut-backs to enable large vehicles to safely move through intersections) • restricting turning movements where traffic demand is low. 	The traction substations does not lie on any major intersections. The TSs are located on a dead on road or land within the rail corridor. Some parking restrictions are in place as the perimeter of the TS are within parking area (Campsie TS) or No Stopping sign in the permanent new driveways (Punchbowl and Lakemba) and general improvement to the parking area (Dulwich Hill and Canterbury). Refer to CTMP for additional information.
TC8	A construction traffic management plan would be prepared and implemented prior to construction. The plan would be prepared in accordance with the Construction Environmental Management Framework, and would detail, as a minimum: <ul style="list-style-type: none"> • how traffic would be managed when construction works are being carried out • the activities proposed and their impact on the road network and on road users • how these impacts would be addressed. The plan would be prepared in consultation with the Traffic and Transport Liaison Group, and would be approved by the relevant authority before construction commences.	Information in the CTMP. Refer to E46.
TC11	Consideration of special events would be undertaken as part of construction work programming. For special events that require specific traffic and pedestrian management, measure would be developed and implemented in consultation with Transport for NSW, Sydney Coordination Office, Roads and Maritime Services, the Inner West and Canterbury-Bankstown councils, and the organisers of the event.	Monthly coordination councils to coordinate work are held. Rail replacement buses, Council organised events (Ramadan bazaar, etc) were considered.
TC12	Vehicle access to and from construction sites would be managed to ensure pedestrian, cyclist, and motorist safety. Depending on the location, this may require manual supervision, barrier placement, temporary traffic signals, modifications to existing traffic signals, or police assistance.	CTMP have addressed these items. Each site varies.
TC14	Directional signage and line marking would be used to direct and guide drivers, pedestrians, and other road users past construction compounds and work sites, and on the surrounding road network. This may be supplemented by variable message signs to advise drivers of potential delays, traffic diversions, speed restrictions, or alternate routes.	Work on the TS are low impact. It is not foreseen traffic will be heavily impacted. On going monitoring plan and improvements plan to arise if traffic conditions change.
TC16	In the event of a traffic related incident, co-ordination would be carried out with the Sydney Coordination Office and Transport Management Centre's Operations Manager.	CTMP has section detailing the general information.
TC19	Pedestrian, cyclist, and motorist safety in the vicinity of the construction sites would be addressed during construction planning and development of the construction traffic management plan. Measures that may be implemented to assist in multi modal traffic management include: <input type="checkbox"/> speed awareness signs in conjunction with variable message signs near construction sites to provide alerts to drivers <input type="checkbox"/> a community engagement program to provide road safety education and awareness to road users about sharing the road safely with heavy vehicles <input type="checkbox"/> heavy vehicle training for drivers to understand route constraints, safety issues, and limiting the use of compression braking <input type="checkbox"/> safety technology and equipment installed on heavy vehicles to enhance vehicle visibility, eliminate vehicles' blind spots, and monitor vehicle location, speeding compliance, and driver behaviour.	Item TC19 may not be applicable to traction substation work. It maybe more relevant to stations work and the like. An opportunity to trial traffic control with new approved devices along the line or have a new community / safety oriented program.
TC22	The potential cumulative effects of construction traffic from multiple construction sites within the project would be further considered during development of the construction traffic management plan. Where there is potential for cumulative impacts across the project, these issues would be addressed with the assistance of the Traffic and Transport Liaison Group.	This is a future demand and be reevaluated as required.
CI1	All Co-ordination and consultation with these stakeholders would include: <input type="checkbox"/> provision of regular updates to the detailed construction program, construction sites and haul routes <input type="checkbox"/> identification of key potential conflict points with other construction projects <input type="checkbox"/> developing mitigation strategies in order to manage conflicts. Depending on the nature of the conflict, this could involve: – adjustments to the construction program, work activities or haul routes; or adjustments to the program, activities or haul routes of Sydney Metro or other construction projects <input type="checkbox"/> co-ordination of traffic management arrangements between projects.	On going coordination work.

Appendix E. TCPs for traction substation delivery (attached when available)



THIS DRAWING MAY BE REPRODUCED IN COLOUR AND MAY NOT BE COPIED
50mm ON A3 SIZE ORIGINAL.

NOTES

PLOT DATE / TIME

PLOT BY
M SIM

CLIENT

CAMPSIE JOINT TRAFFIC SETUP TCP
Campsie substation delivery and Downer
Package 5 - Option A - Downer via Anglo Rd

A3

SHEET

LEGEND				
—	General traffic detour directions	REVISION DESC	REV	DATE
—	Line-Wide OSM trucks movement to site			
—	Downer construction traffic			
[Yellow dashed]	Line-Wide work area	CO-ORDINATE SYSTEM	HEIGHT DATUM	
[Cyan dashed]	Downer work area	MGA ZONE 56	AHD	

DRAWINGS / DESIGN PREPARED BY
DRAWN M.SIM 15/5/21
DRG CHECK M.SIM 15/5/21
DESIGN
DESIGN CHECK
TRAFFIC MNGR

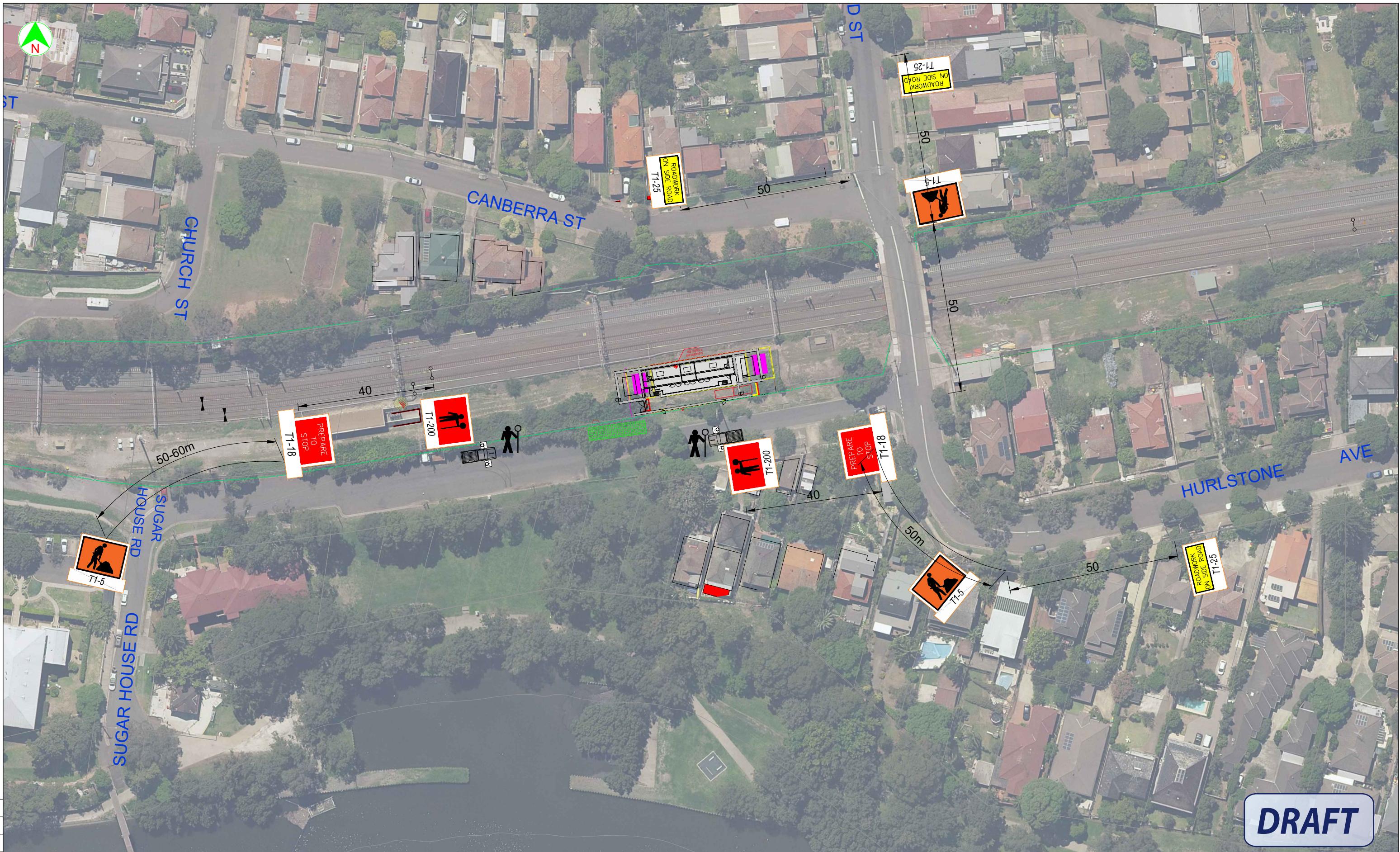
TITLE NAME DATE
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TRAFFIC MNGR

PREPARED FOR

Systems Connect

ISSUE STATUS SHEET No.
FOR INFORMATION 1 / 1

ISSUE
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NOTES								PLOT DATE / TIME			PLOT BY M SIM			CLIENT	Hutton St Stop slow	SHEET	
LEGEND								DRAWINGS / DESIGN PREPARED BY			TITLE	NAME	DATE				
Work area	Traffic controller vehicle	REVISION DESC	REV	DATE	APPROVAL	SCALES ON A3 SIZE DRAWING		Mong Sim. PWZTMP Card # 0052317834	DRAWN	M.SIM	10/5/21						A3
Traffic controller indicative location						CO-ORDINATE SYSTEM	MGA ZONE 56	HEIGHT DATUM	DESIGN								
								AHD	TRAFFIC MNGR								
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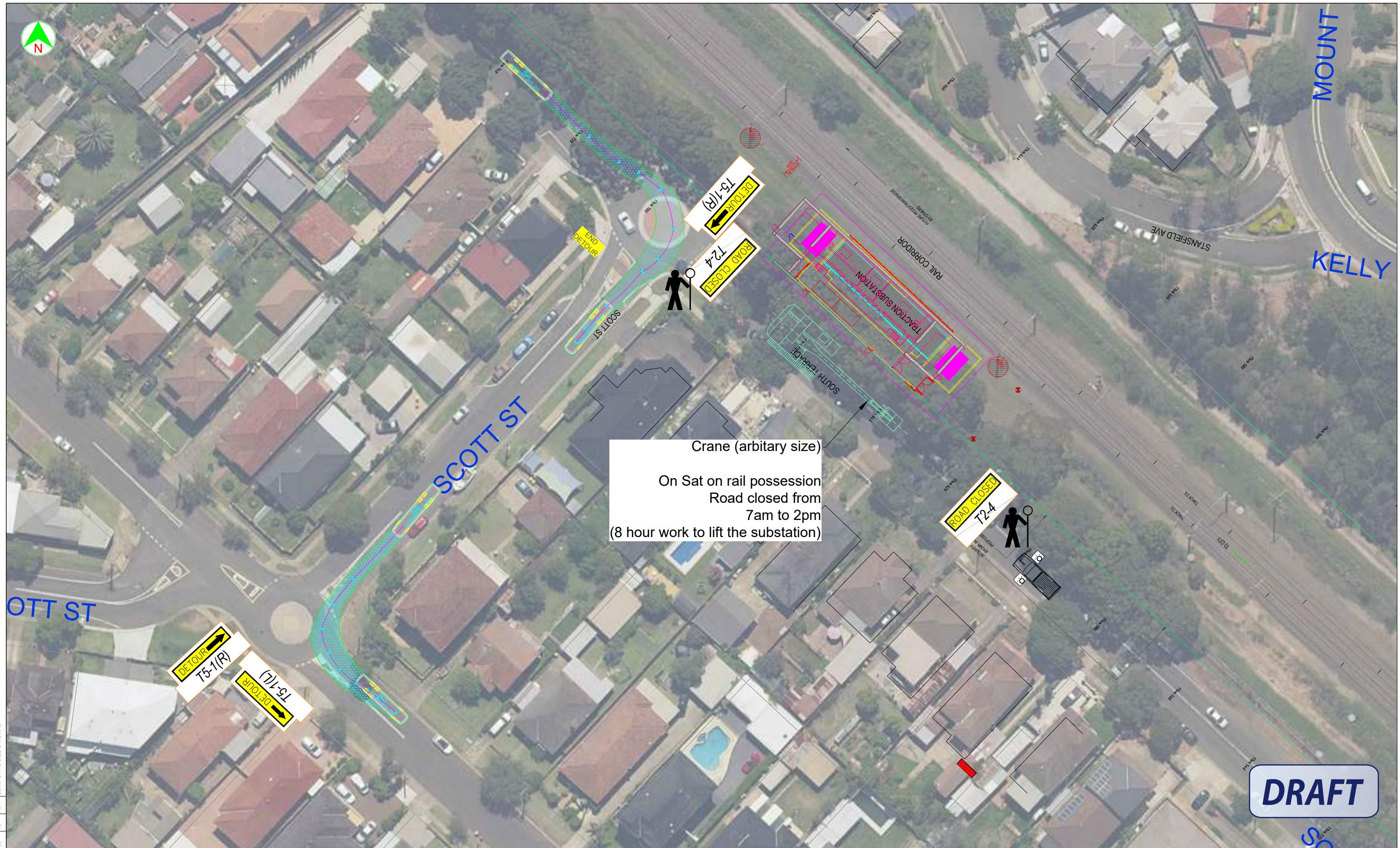


NOTES						PLOT DATE / TIME	PLOT BY M SIM	CLIENT	LAKEMLA SUBSTATION DELIVERY		A3
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LEGEND						DRAWN	M.SIM	24/3/21			
REVISION DESC	REV	DATE	APPROVAL	SCALES ON A3 SIZE DRAWING		DRG CHECK	M.SIM	24/3/21			
CO-ORDINATE SYSTEM MGA ZONE 56						DESIGN					
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CO-ORDINATE SYSTEM MGA ZONE 56						DESIGN CHECK					
HEIGHT DATUM AHD						TRAFFIC MNGR					
PREPARED FOR						Systems Connect	ISSUE STATUS	SHEET No.			ISSUE 0
FOR INFORMATION							FOR INFORMATION	SHEET No. 1 / 3			



MOUNT

KELLY



LEGEND						NOTES	PLOT DATE / TIME	PLOT BY M SIM	CLIENT	LAKEMBA SUBSTATION DELIVERY		A3
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30	35	40	45	50	55	60	DESIGN CHECK				ISSUE	
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50	55	60	65	70	75	80						



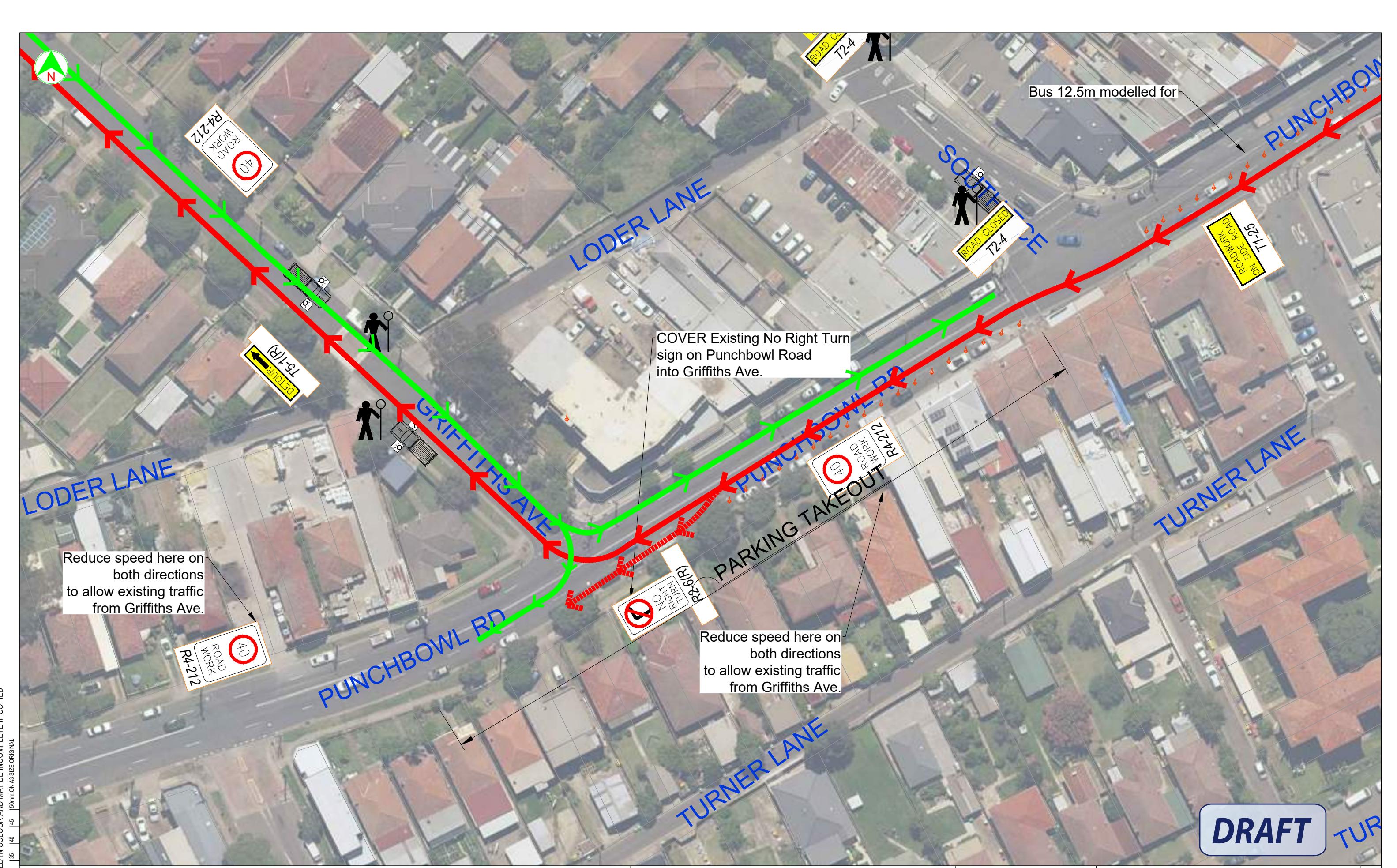
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						M SIM							
LEGEND						DRAWINGS / DESIGN PREPARED BY			TITLE	NAME	DATE		
REVISION DESC	REV	DATE	APPROVAL	SCALES ON A3 SIZE DRAWING		DRAWN	M.SIM	24/3/21 <th>DRG CHECK</th> <td>M.SIM</td> <td>24/3/21<th data-kind="ghost"></th><th data-kind="ghost"></th></td>	DRG CHECK	M.SIM	24/3/21 <th data-kind="ghost"></th> <th data-kind="ghost"></th>		
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MGA ZONE 56						TRAFFIC MNCR			TRAFFIC MNCR				
HEIGHT DATUM						PREPARED FOR							
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NOTES						PLOT DATE / TIME			PLOT BY M SIM			CLIENT PREPARED FOR Systems Connect	LAKEMBA SUBSTATION DELIVERY			A3	
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REV						DESIGN											
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APPROVAL						TRAFFIC MNCR											
SCALES ON A3 SIZE DRAWING																	
CO-ORDINATE SYSTEM						HEIGHT DATUM			ISSUE STATUS			SHEET No.			ISSUE		
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NOTES						PLOT DATE / TIME			PLOT BY M SIM			CLIENT DETROU PLAN at SOUTH TERRACE btw. SCOTT ST and LODER LN - OPTION B	LAKEMBA SUBSTATION DELIVERY			A3		
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65	70	75	80	85	90	SCALE ON A3 SIZE DRAWING												

South Terrace Options Comparison



Option A

Pro:

1. Does not change lane configuration at the intersection of South Terrace and Punchbowl Road.
2. No traffic temporary set out at Punchbowl Road except VMSs.
3. A more natural set out. Work is only for a shift <8 hour.

Con:

1. Semi sized need to take detour via Canterbury Road



Option B

Pro:

1. Semi does not need to use Canterbury Road detour. Semi could use the closer detour.

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Con:

1. Parking lane take out 150m at Punchbowl Road westbound.
2. If someone parks along the area, the plan is compromised. No guarantees of parking take out.
3. Make the right turn into Griffiths Street make cause Punchbowl eastbound traffic unaware of turning traffic.

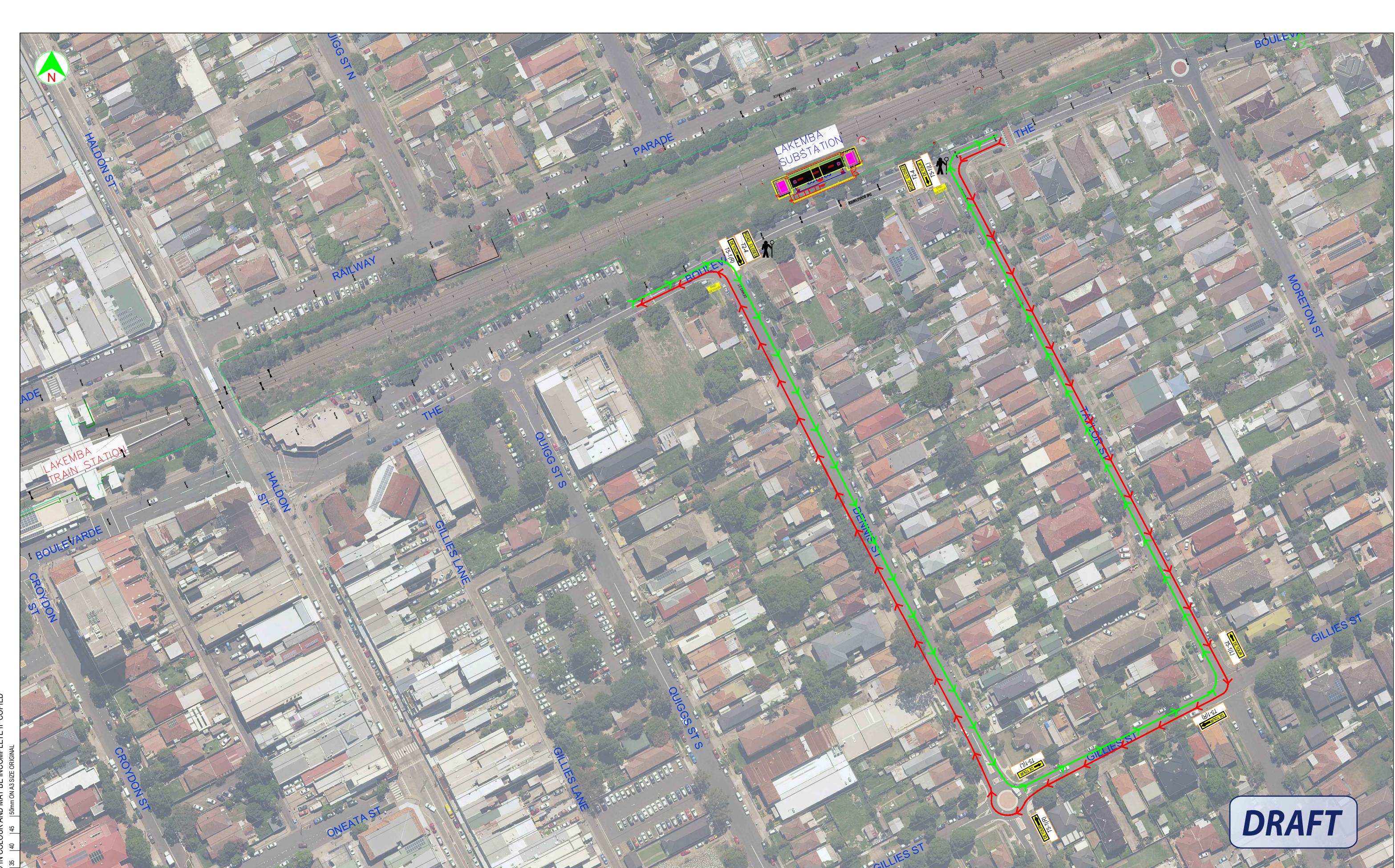
CONCLUSION:

Recommend Option A where traffic come naturally from Punchbowl Road into South Terrace and detour at Loder Lane. Semis may not be apparent during weekday (Saturday/Sun).



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NOTES						PLOT DATE / TIME			PLOT BY	CLIENT TCP PREPARED FOR Systems Connect	DULWICH HILL SUBSTATION DELIVERY			A3	
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THIS DRAWING WAS DRAFTED IN COLOUR AND MAY NOT LOOK CORRECT WHEN PRINTED IN BLACK & WHITE															



NOTES						PLOT DATE / TIME			PLOT BY M SIM	CLIENT	LAKEMBA SUBSTATION DELIVERY			A3
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