

Construction Traffic Management Plan Clyde



Project Name:	Sydney Metro West		
Client Name:	Transport for New South Wales		
Project Address:	Delta will undertake demolition and utility works at the following sites: 1. Clyde 2. Parramatta 3. Westmead		
Project Description/Scope:	DELTA Pty Ltd (DELTA) is responsible for the demolition of existing structures including removal of all hazardous materials and utility works of the Sydney Metro West Project at Clyde, Parramatta and Westmead		
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Authorised By (Project Director):	Name: [REDACTED]	Signature: [REDACTED]	Date: 13 th October 2021

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2 AUTHORISATION AND CONTROL

2.1 Authorisation

This Plan is authorised by the Project Director. All project personnel are to ensure that their work activities and those of Project Consultants, Contractors and Suppliers are carried out in accordance with the requirements of this Plan.

2.2 Distribution

This Plan is a Controlled Document and must be distributed and revised under the guidance of the Project Manager. People who hold Controlled copies are responsible for maintaining their copies up-to-date.

2.3 Revision

The Project Director will monitor the implementation of this Plan and review the need for change or improvements having due regard to:

- Change in work scope, client comments etc.
- Internal and external audits
- Suggestions and comments from project personnel
- Incidence and frequency of non-conformance
- Necessity for corrective or preventative action
- Legal Update and Requirements
- Review by Delta Groups Management team
- Annual Review

All changes must be formally approved by the Project Director. Changes to the recent revision will be highlighted.

The following table provides a record of amendments made to this document.

<i>Rev</i>	<i>Date</i>	<i>Description</i>	<i>Page</i>	<i>Developed By</i>	<i>Approved By</i>
0	25/08/2021	CTMP Initial submission	All	[REDACTED]	[REDACTED]
1	17/9/2021	CTMP revised based on comments received	All	[REDACTED]	[REDACTED]
2	13/10/2021	CTMP revised to include TGS changes as required by TMC/ CJP rejection of ROLA	All	[REDACTED]	[REDACTED]
3					
<i>Distribution Register</i>					
<i>Rev No.</i>	<i>Date of Issue</i>	<i>Name of Recipient</i>	<i>Position / Organisation</i>		
0	25/08/2021	[REDACTED]	Principal's Representative Project Manager		
1	17/09/2021	[REDACTED]	Principal's Representative Project Manager		
2	13/10/2021	[REDACTED]	<i>Principal's Representative Project Manager</i>		
3					

3 INTRODUCTION

3.1 Purpose

This Construction Traffic Management Plan (CTMP) has been prepared by Delta Pty Ltd. (Delta) to comply with the Ministerial Conditions of Approval (MCoA), Revised Environmental Management Measures (REMMs) and Sydney Metro's SMW and Greater West Construction Traffic Management Framework (Appendix to the Environmental Impact Statement (EIS) for the demolition phase of the Sydney Metro West (Western Tunnelling Package) Project and to meet the requirements of the Project Deed and various Scope of Technical Works appendices including the General and Particular Specifications as they relate to traffic.

DELTA has been engaged to carry out the scope of works as described in Section 7.

This CTMP provides specific management measures to ensure that Delta's demolition works are carried out so as to manage traffic and transport aspects of the Project in a responsible and sensitive manner.

Implementing the CTMP effectively will ensure that the Project meets regulatory and contract requirements in a systematic manner and continually improves its performance.

3.2 Scope of the CTMP

This CTMP addresses traffic management associated with the Project. It covers the Clyde site where physical works will occur and is applicable over the full duration of the Project.

All DELTA staff and subcontractors are required to comply fully with the requirements of this CTMP.

The plan forms part of the project management documentation that has been prepared in accordance with the requirements of the Contract. The Project will be guided by DELTA's Integrated Management System (IMS). DELTA IMS is certified as meeting the requirements of:

- ISO45001 Occupational Health and Safety Management Systems.
- ISO14001 Environmental management; and
- ISO9001 Quality Management Systems.

3.3 Project Description

The Sydney Metro is Australia's biggest public transport program comprising four main packages of works. The Sydney Metro West (SMW) package is a critical part of this overall program extending from Westmead to The Bays site in Rozelle. The package aims to:

- Provide faster more reliable public transport options between greater Parramatta and the Sydney CBD
- Double the existing rail capacity between Parramatta and Sydney CBDs
- Support growing residential and employment zones between Westmead and The Bays and
- Allow for better public transport transfers between rail lines

The Sydney Metro West project includes:

- Approximately 24-kilometres of twin tunnels between Westmead and the Sydney CBD
- New metro stations at Westmead, Parramatta, Sydney Olympic Park, North Strathfield, Burwood North, Five Dock, The Bays and Sydney CBD
- A turn-up-and-go metro service operating between Westmead and Sydney CBD.
- The approved Stage 1 construction works includes:
 - Tunnel excavation including tunnel support activities between Westmead and The Bays
 - Station excavation for new stations at Westmead, Parramatta, Sydney Olympic Park, North Strathfield, Burwood North, Five Dock and The Bays
 - Shaft excavation for services facilities at Rosehill, Silverwater and between Five Dock and The Bays
 - Civil work for a stabling and maintenance facility at Clyde
 - A concrete segment facility for use during tunnelling located at Clyde
 - Excavation of a tunnel dive structure and associated tunnels at Rosehill to support a connection between the Clyde facility and the mainline metro tunnels.

The proposed Sydney Metro West alignment and the locations of proposed stations and operational ancillary infrastructure are shown in Figure 1 below.



Sydney Metro requires the demolition of a number of buildings within the Clyde precinct to make way for development of the Sydney Metro West project. The successful and timely completion of Delta’s activities is required to facilitate works by the Main Works Tunnels and Stations Excavation Contractor at the station locations of Parramatta and Westmead and the Maintenance Stabling Facility (MSF) at Clyde.

This CTMP addresses the DELTA scope of works described within Schedule 10 of the Executed Contract. DELTA notes that the Project must be carried out generally in accordance with the description provided in the Environmental Impact Statement as amended by the Preferred Infrastructure Report and the Conditions of Approval.

The demolition sites are described below:

- Clyde site bounded by Unwin Street, Shirley Street Clyde
- Parramatta site bounded by George Street to the north, Macquarie Lane to the east, Macquarie Street to the south and by heritage and retained structures to the west, mainly located on Church Street.
- Westmead site bounded by Alexandra Parade to the north, Hawkesbury Road to the west, Bailey Street to the south and Hassall Street to the east

3.4 Objectives

DELTA’s traffic objectives for the Project are:

- To minimise our impacts on traffic and road users
- To avoid accidents and minimise potential road safety risks
- Minimise changes to the road and path network

4 LEGAL AND OTHER REQUIREMENTS

4.1 Legislation

Identified regulatory requirements are:

- An approved and valid Road Occupancy Licence (ROL) both Transport Management Centre and City of Parramatta Council
- An approved relevant Speed Zone Authorisation (SZA)
- Approved permits from City of Parramatta including Road Opening Permit (ROP) and Hoarding Permit, where required
- Australian Road Rules form the basis for state and territory road rules.
- Roads Act 1993 (NSW) sets out rights along a public road, establishes procedures for a public road and provides the classification of roads.

Legislation relevant to traffic management also includes the *Environmental Planning and Assessment Act 1979* (EP&A Act), under which the project approval was granted.

DELTA regularly reviews its legislative requirements in accordance with its Integrated Management System (IMS).

4.2 Guidelines and Other Documents

Guidelines, specifications, and policies relevant to traffic include:

- AUSTRROADS Cycling Aspects of AustRoads Guides, 2017
- AUSTRROADS Guide to Traffic Management, 2020 – Parts 1-13
- AUSTRROADS Guide to Road Design, 2009-2020 – Parts 1-8
- AUSTRROADS Guide to Road Safety, 2006-2019 – Parts 1-9
- AUSTRROADS Road Safety Audit Second Edition, 2019: Checklist 4. Pre-opening scheme audit.
- AUSTRROADS Road Safety Audit Second Edition, 2019: Checklist 5: Roadwork traffic scheme audit.
- AUSTRROADS Road Safety Audit Second Edition, 2019: Checklist 6: Existing roads: road safety audit.
- Department of Infrastructure, Planning and Natural Resources Planning Guidelines for Walking and Cycling (2004)
- Roads & Traffic Authority NSW Guide to Traffic Generating Developments, 2002
- Roads & Traffic Authority NSW Bicycle Guidelines Version 1.2, 2005
- Roads and Maritime QA Specification G10 – Traffic Management, 2020.
- Roads and Maritime NSW Speed Zoning Guidelines, 2011.
- Roads and Maritime Traffic Control at Worksites Manual, 2020

4.3 Minister's Conditions of Approval and Revised Environmental Mitigation Measures

DELTA notes that the Project must be carried out generally in accordance with the description provided in the Environmental Impact Statement (EIS) as amended by the Sydney Metro West Westmead to The Bays and Sydney CBD – Amendment Report Concept and Stage 1 2020, and the CSSI Ministerial Conditions of Approval (MCoA). Tables detailing the above requirements are included in Appendix A.

5 ROLES AND RESPONSIBILITIES

Table 1 provides the key roles and responsibilities under the CTMP.

Table 1: Project roles and responsibilities

Project Role	Responsibilities
Project Director	<ul style="list-style-type: none"> • Primary contact with the Principal's Representative on all aspects of the Project. • Approve and ensure implementation of this CTMP. • Approve monthly reports and issue to the Principal.
Project Manager	<ul style="list-style-type: none"> • Implement the CTMP. • Lead by example. • Organise on-site personnel with regard to their responsibilities within the CTMP. • Carry out periodic audits of the incident response process. • Manage non-conformances and initiate corrective action as required. • Review reports and follow up on recommendations.
Demolition Site Manager	<ul style="list-style-type: none"> • Implement the CTMP. • Lead by example. • Provide advice and assistance on the CTMP to employees. • Decide when training is required. • Undertaking inspection of the contracted or planned works to ensure that CTMP measures are implemented and effective. • Carry out weekly toolbox talks. • Manage the Site Folder and ensure all CTMP requirements are compiled.
Environment and Sustainability Manager	<ul style="list-style-type: none"> • Lead by example. • Ensure relevant information from the CTMP is incorporated into project inductions. • Prepare monthly reports and submit to the Project Director. • Participate in Principal-led site audits. • Attend toolbox meetings and inductions.

6 LOCALITY AND EXISTING CONDITIONS

6.1 Locality

The site is located in an industrial area of western Sydney and is bounded by M4 motorway, James Ruse Drive and Rosehill Gardens Racecourse and has street frontage on Unwin Street, Kay Street, Wentworth Street and Shirley Street, Clyde as shown on Figure 2, below.

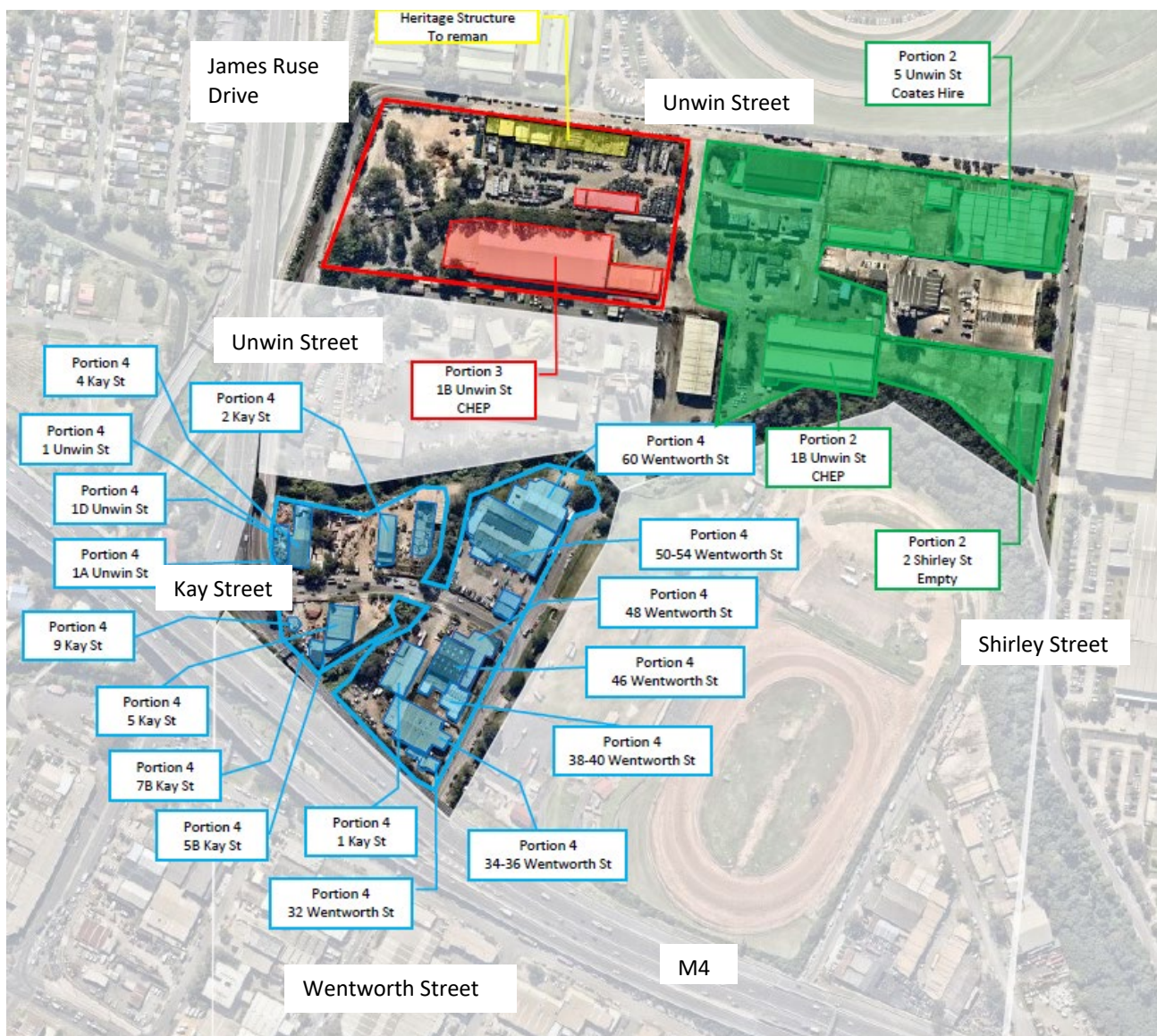


Figure 2: Clyde site

6.2 Land use

The site is located in a heavy industrialised area of western Sydney, refer to Figure 3. There are no sensitive receivers such as childcare, schools, aged care facilities located within the precinct. The Rosehill racecourse and stabling yards are located off Unwin Street to the north. Access to the racecourse is also available from Grand Avenue and from James Ruse Drive.

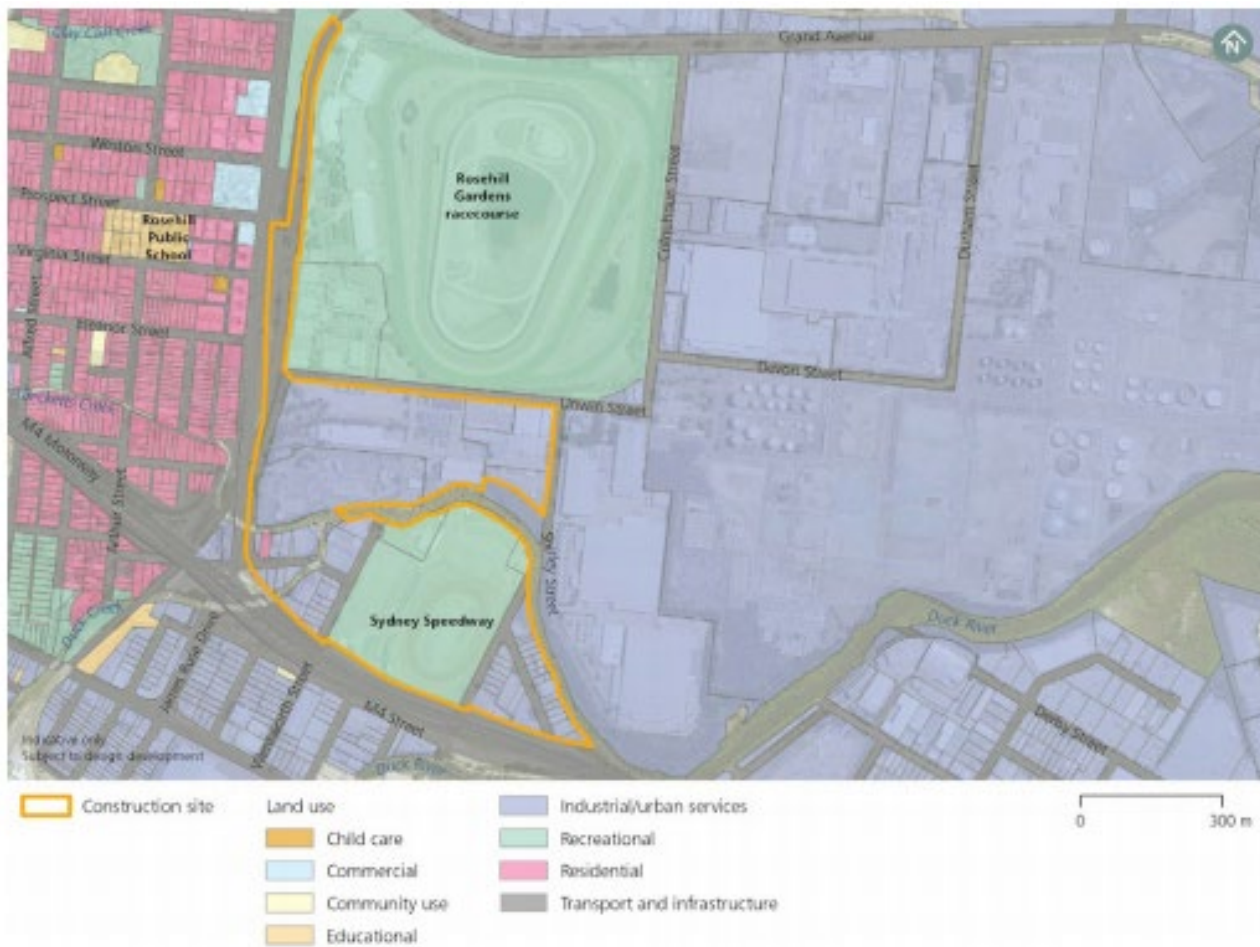


Figure 3: Existing land use (source: Chapter 14 EIS)

6.3 Existing road conditions

6.3.1 Wentworth Street

Wentworth Street is a local road under the care and control of the City of Parramatta Council. It commences at Parramatta Road and terminates at A’becketts Creek, Clyde. The speed limit is 50km/hr. This street has substantial industrial land uses with high heavy vehicle use. Wentworth Street is one of the main access/ egress points into the Clyde industrial estate.

Figure 4 provides peak period traffic volumes on Wentworth Street.

Table 10-16: Clyde stabling and maintenance facility construction site existing traffic volumes (2019)

Road	Direction	Morning peak hour (vehicles per hour)	Evening peak hour (vehicles per hour)
Unwin Street west of Colquhoun Street	Eastbound	220	190
	Westbound	280	130
Parramatta Road west of Wentworth Street	Eastbound	1,730	1,600
	Westbound	2,110	1,950
Kay Street west of Wentworth Street	Eastbound	150	170
	Westbound	270	90
James Ruse Drive north of Parramatta Road	Eastbound	1,300	1,280
	Westbound	1,500	1,110
Wentworth Street north of Parramatta Road	Eastbound	260	120
	Westbound	150	180

Figure 4: EIS Chapter 10 Transport and Traffic Stage 1 (page 10-13 Table 10-16)

Traffic signals exist at its intersection with Parramatta Road allowing all turning movements, by providing a dedicated right turn bay on Parramatta Road for northbound traffic and no restrictions in place on other turn movements. A Left Turn on Red is provided for vehicles egressing from Wentworth Street onto Parramatta Road.

A signalised pedestrian crossing is provided across Wentworth Street at Parramatta Road. This crossing is protected by a red arrow hold for left turning vehicles from Parramatta Road onto Wentworth Street. Footpaths are provided between Great West Highway to Kay Street on the western side. On the eastern side the footpath is discontinued under the M4 overpass, refer to Figure 5.



Figure 5: Existing footpaths and shared paths adjacent to Clyde site

A shared cycle path crosses Wentworth Street at the intersection with Martha Street, refer to Figure 6. No dedicated crossing facilities are provided across Wentworth Street. This shared path is part of the M4 shared path which connects South Wentworthville to the west with Sydney Olympic Park to the east.

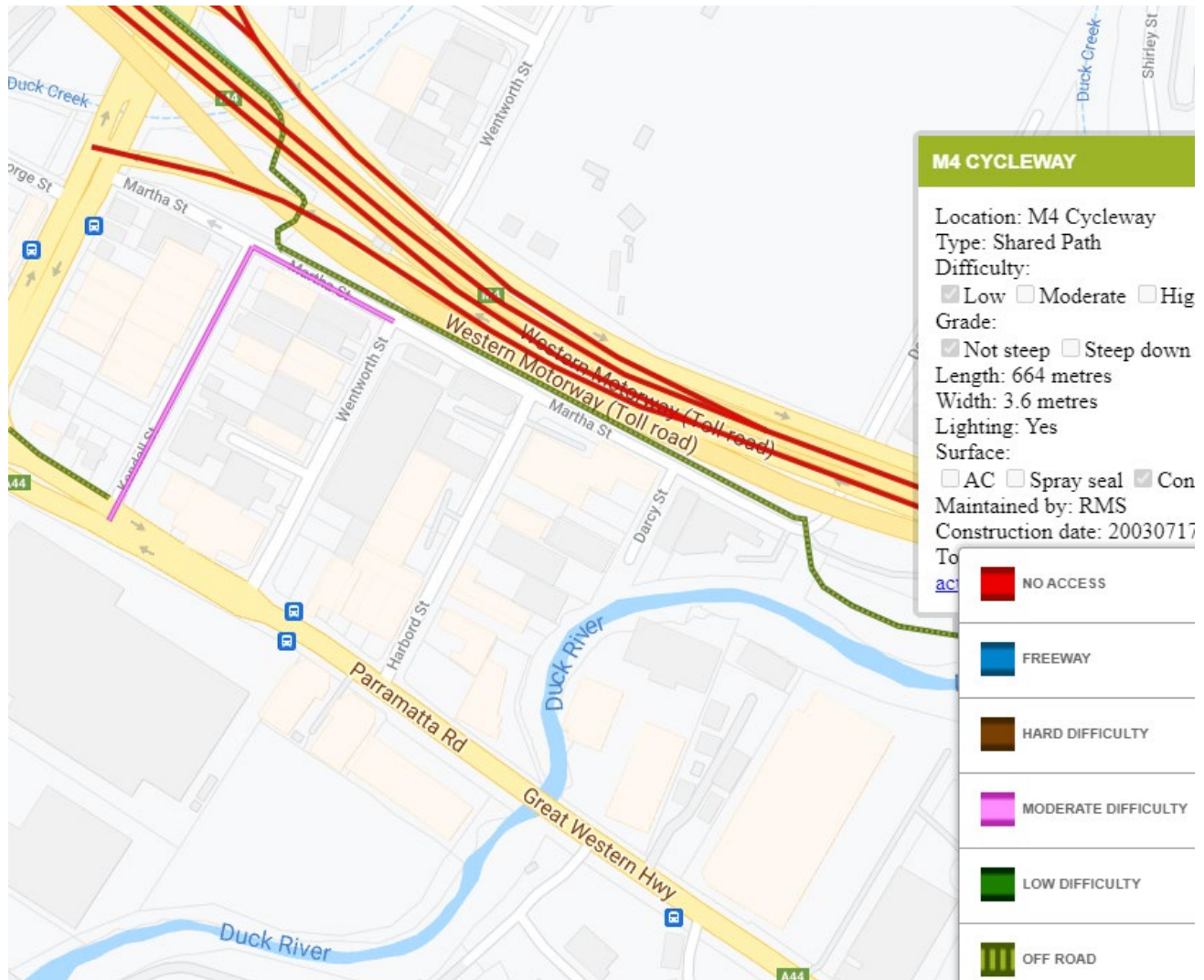


Figure 6: Excerpt from Sydney Metro Cycleway Finder

Parking is generally unrestricted along Wentworth Street, with No Stopping provided at intersections and intermittently across existing driveways, refer to Figure 7.

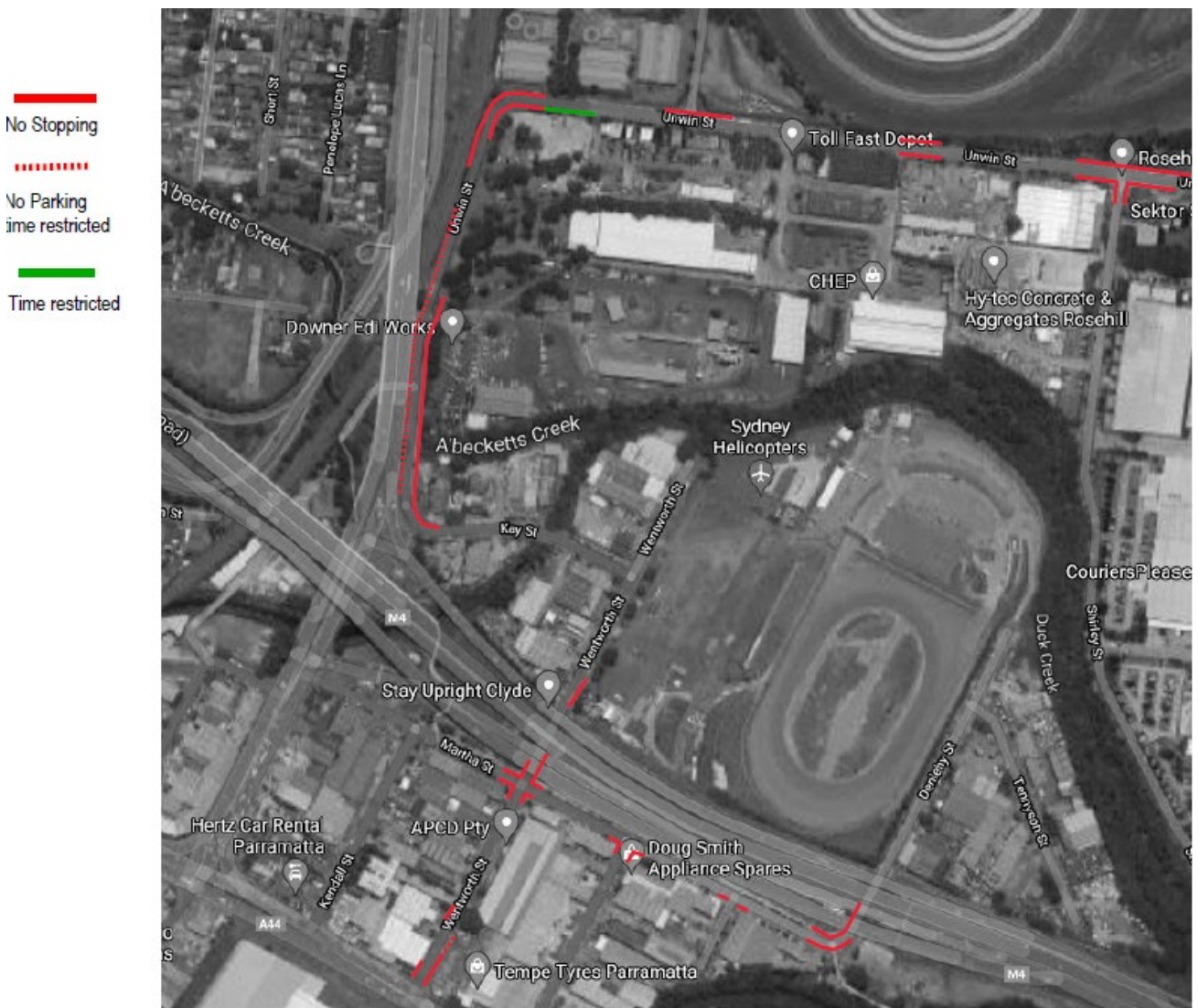


Figure 7: Existing parking restrictions

No public transport services operate on Wentworth Street or any streets within the Clyde industrial area. The closest public transport services are on Parramatta Road and Clyde Railway Station, located 1km from Wentworth Street.

Wentworth Street also forms part of the Performance Based Standard (PBS) network, as seen on Figure 8, shown in green.

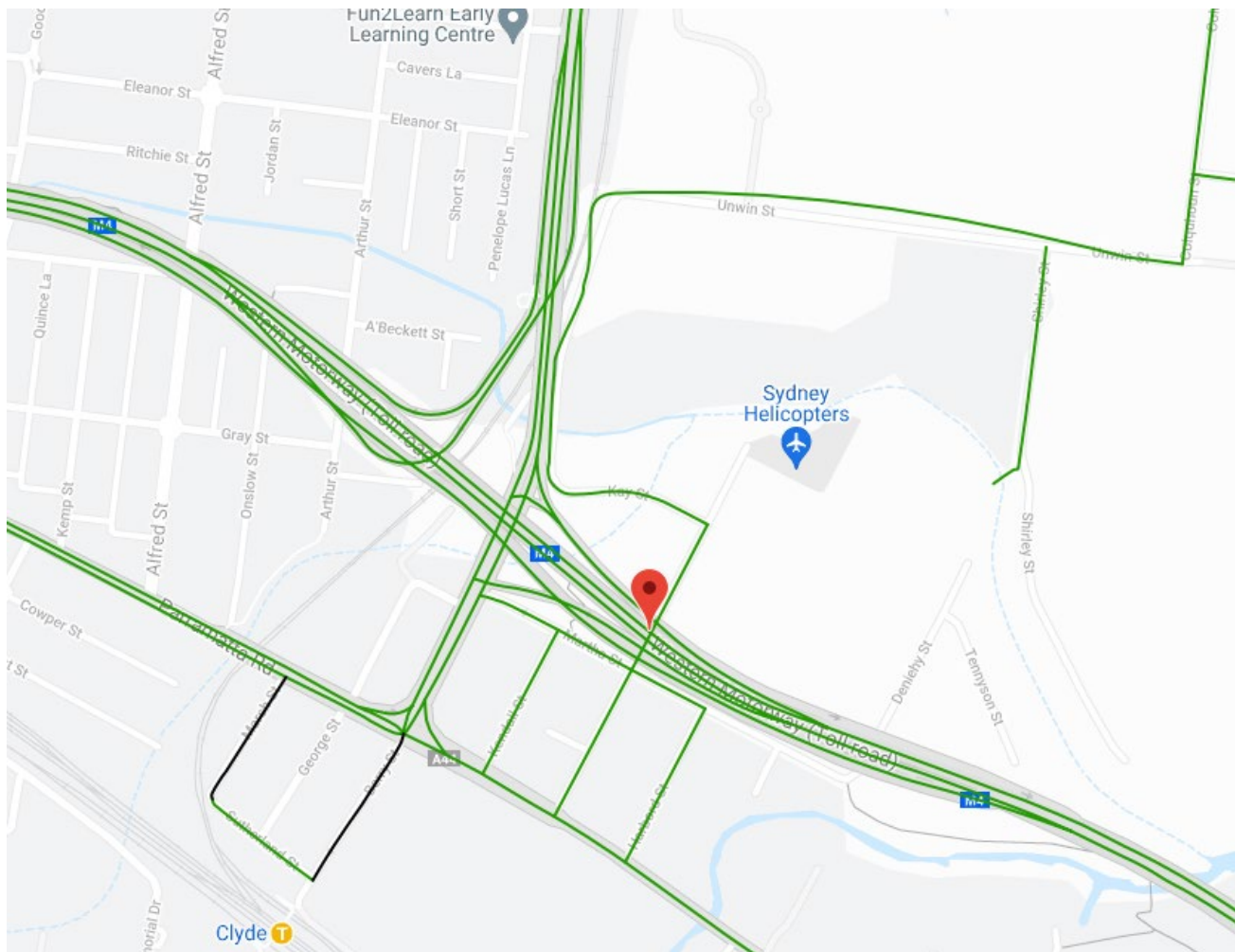


Figure 8: PBS nominated routes in Clyde area (source: TfNSW PBS Network)

The M4 passes over Wentworth Street between Martha Street and Kay Street. This imposes a height restriction of [4.6m](#).

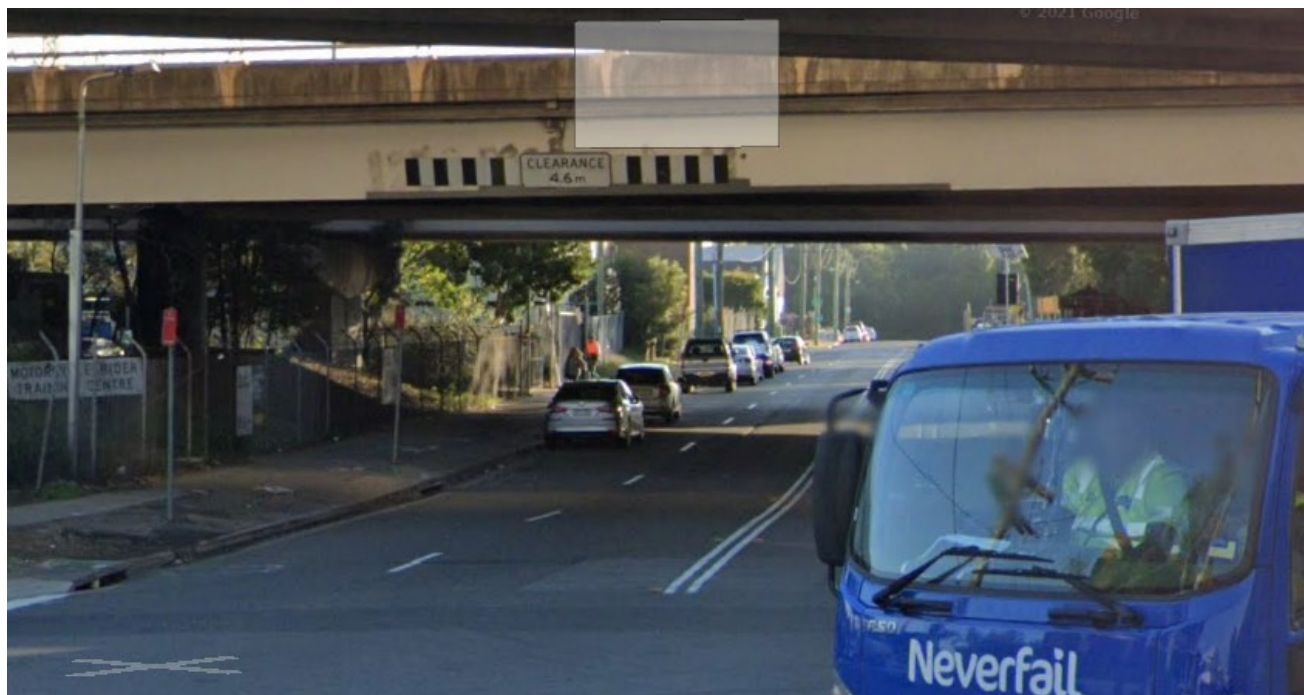


Figure 9: M4 Motorway overpass on Wentworth Street

6.3.2 Kay Street

Kay Street is a local road under the care and control of the City of Parramatta Council. It commences at Wentworth Street and terminates at Unwin Street, Clyde. The speed limit is 50km/hr. Similar to Wentworth Street this street services a highly industrialised area with high heavy vehicle use. At its intersection with Wentworth Street, the priority movement is from Wentworth Street northbound into Kay Street westbound and visa versa. The intersection priority is shown in Figure 10. No other intersections exist along Kay Street. At the western end, Kay Street continues as Unwin Street.

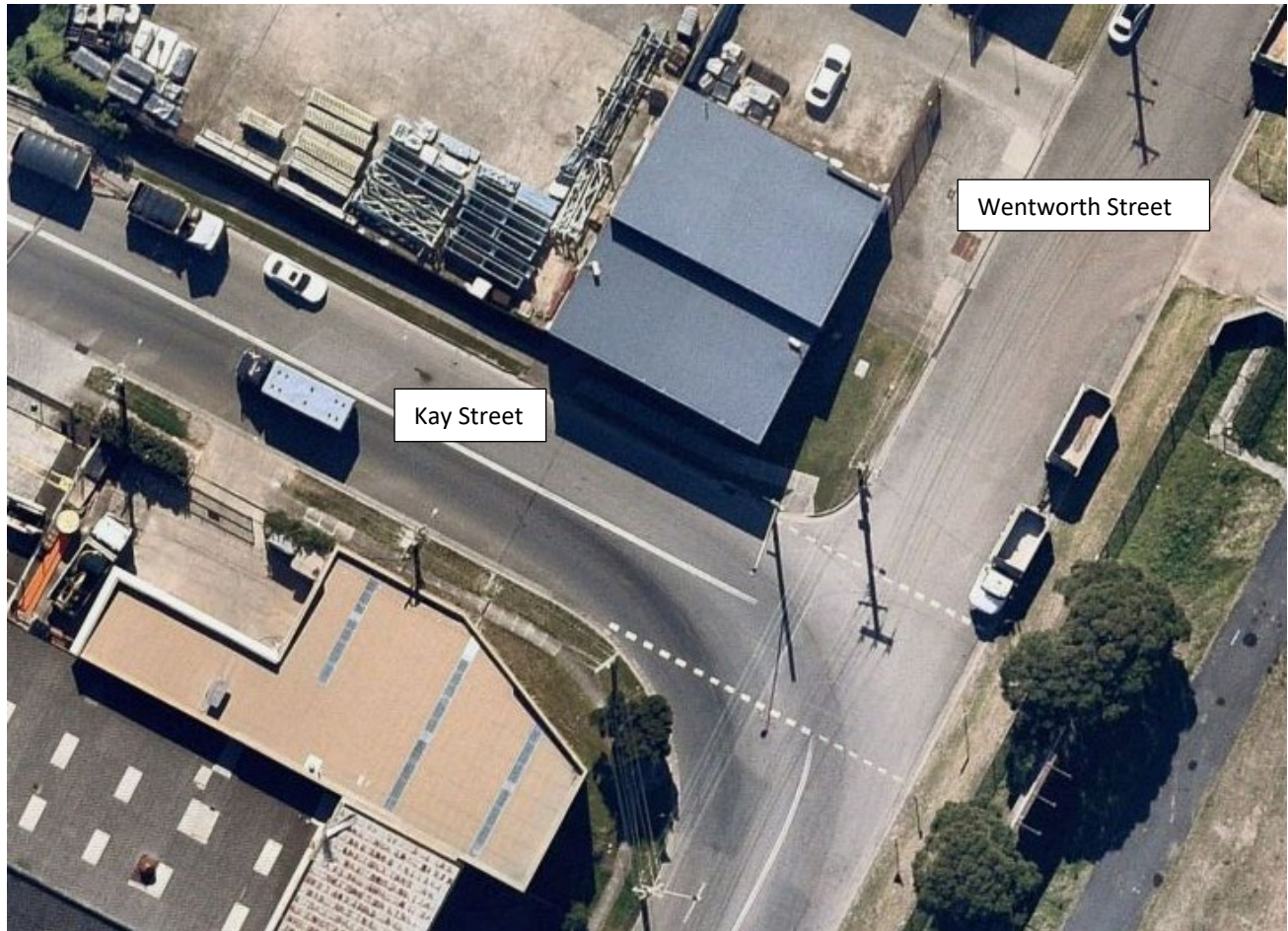


Figure 10: Kay Street Wentworth Street priority

Footpaths exist on both sides of the street. The southern footpath is discontinued outside of 7-9 Kay Street property boundary. On the northern side of Kay Street, the footpath continues onto Unwin Street, however, it is in a poor state of repair, refer to Figure 5 and Figure 11 below.



Figure 11: Kay Street/ Unwin Street footpath

Similar to Wentworth Street, no public transport services operate. Kay Street also forms part of the PBS road network, refer to Figure 8.

6.3.3 Unwin Street

Unwin Street is a local road under the care and control of the City of Parramatta Council. It commences at Kay Street and terminates at Colquhoun Street, Clyde. The speed limit is 50km/hr. Similar to Wentworth and Kay streets, this street services a highly industrialised area with high heavy vehicle use. On the northern side of Unwin Street, Rosehill Racecourse and associated stables are located. On the southern side of Unwin Street, a number of industrial estates exist. Footpaths are provided on the eastern side of Unwin Street between Unwin Street and Kay Street, no other footpaths are provided, as noted on Figure 5.

No public transport services operate along Unwin Street. A footpath exists on the eastern side between Kay Street to where Unwin Street (east to west) meets Unwin Street (north-south). No other footpaths exist along Unwin Street. A footpath connection does connect Unwin Street via Fleet Street to James Ruse Drive.

Speed management devices are installed along Unwin Street, as shown on Figure 12.



Figure 12: Typical speed management devices

6.3.4 Shirley Street

Shirley Street is a local road under the care and control of the City of Parramatta Council. It commences at Unwin Street and terminates at Duck Creek, Clyde. The speed limit is 50km/hr. Similar to all other streets in the area, this street services a highly industrialised area with high heavy vehicle use.

No public transport services operate along Unwin Street. A footpath exists on both sides of Shirley Street for approximately 300m, refer to Figure 5.

As with other roads noted above, Shirley Street forms part of the PBS network.

6.3.5 Existing TfNSW road classification

The existing road classifications are shown on Figure 13.

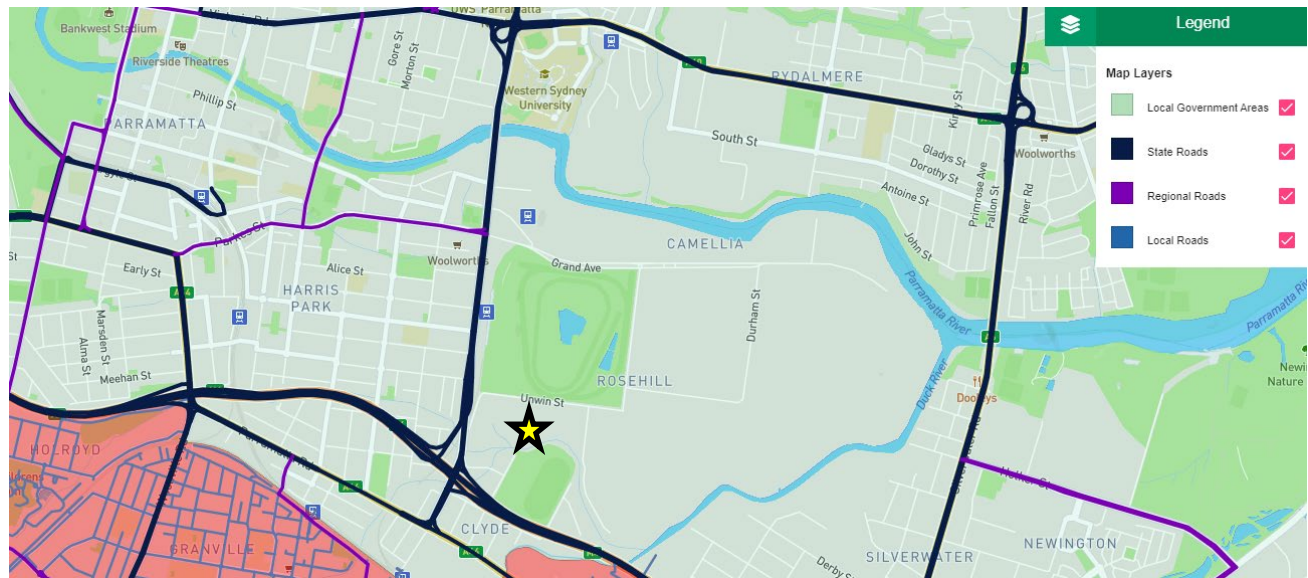


Figure 13: TfNSW Road Classification Map

7 SITE OPERATIONS

Duration: 8 months

Timing: 21 October 2021 to 20 May 2022

7.1 Works required

All buildings contained within the site are required to be demolished, other than the heritage façade located on Unwin Street. The scope of works is shown on Figure 14.

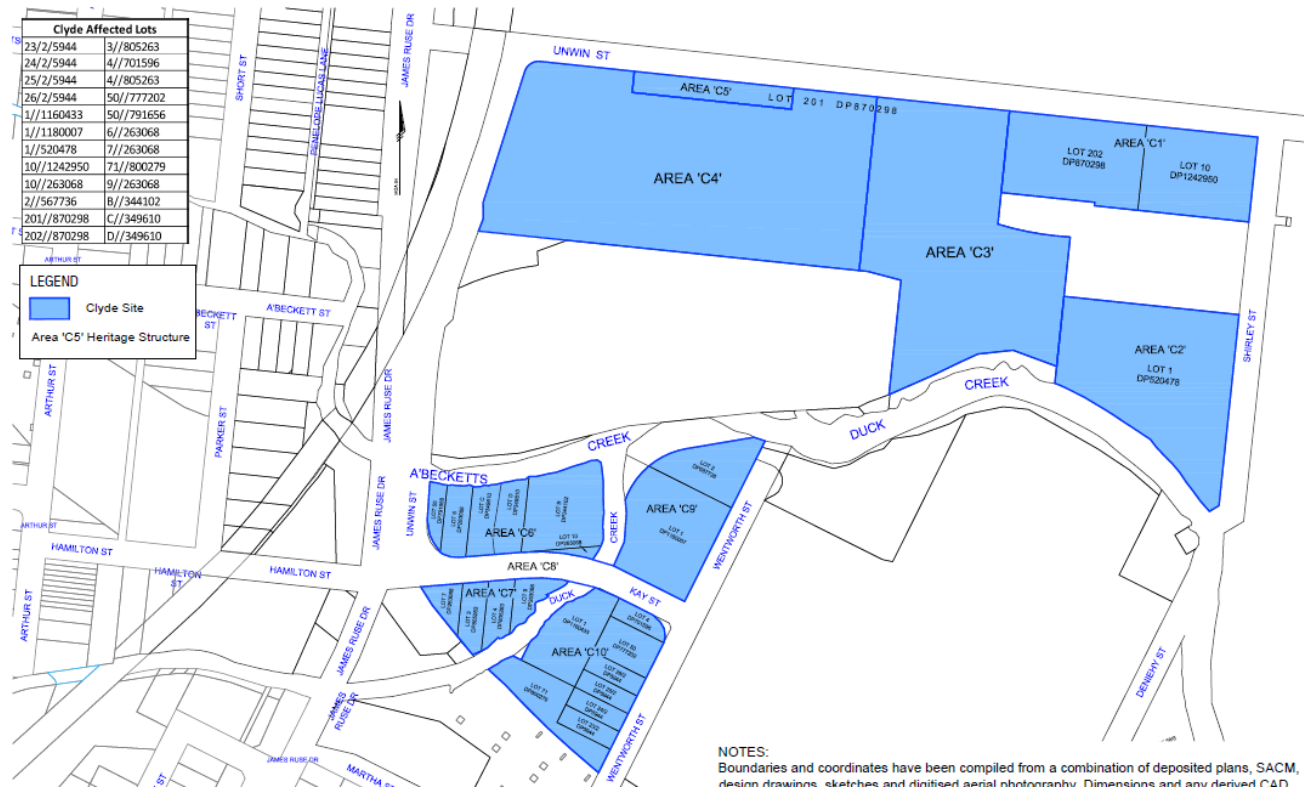


Figure 14: DELTA demolition scope of works

Site access dates for each of the areas is provided in Table 2 and shown on Figure 15.

Table 2: Site Access Date schedule

Area of the site	Location	Site Access Date
Area C1	Unwin Street	21 October 2021
Area C2	Shirley Street, Duck Creek	21 October 2021
Area C3	Unwin Street, Duck Creek	4 January 2022
Area C4	Unwin Street	4 January 2022
Area C5	Unwin Street	4 January 2022
Area C6	Kay Street and Unwin Street	21 October 2021
Area C7	Kay Street and Duck Creek	21 October 2021
Area C9	Wentworth Street, Kay Street and Duck Creek	21 October 2021
Area C10	Wentworth Street, Kay Street, Duck Creek	21 October 2021



Figure 15: Site Access Dates by Areas

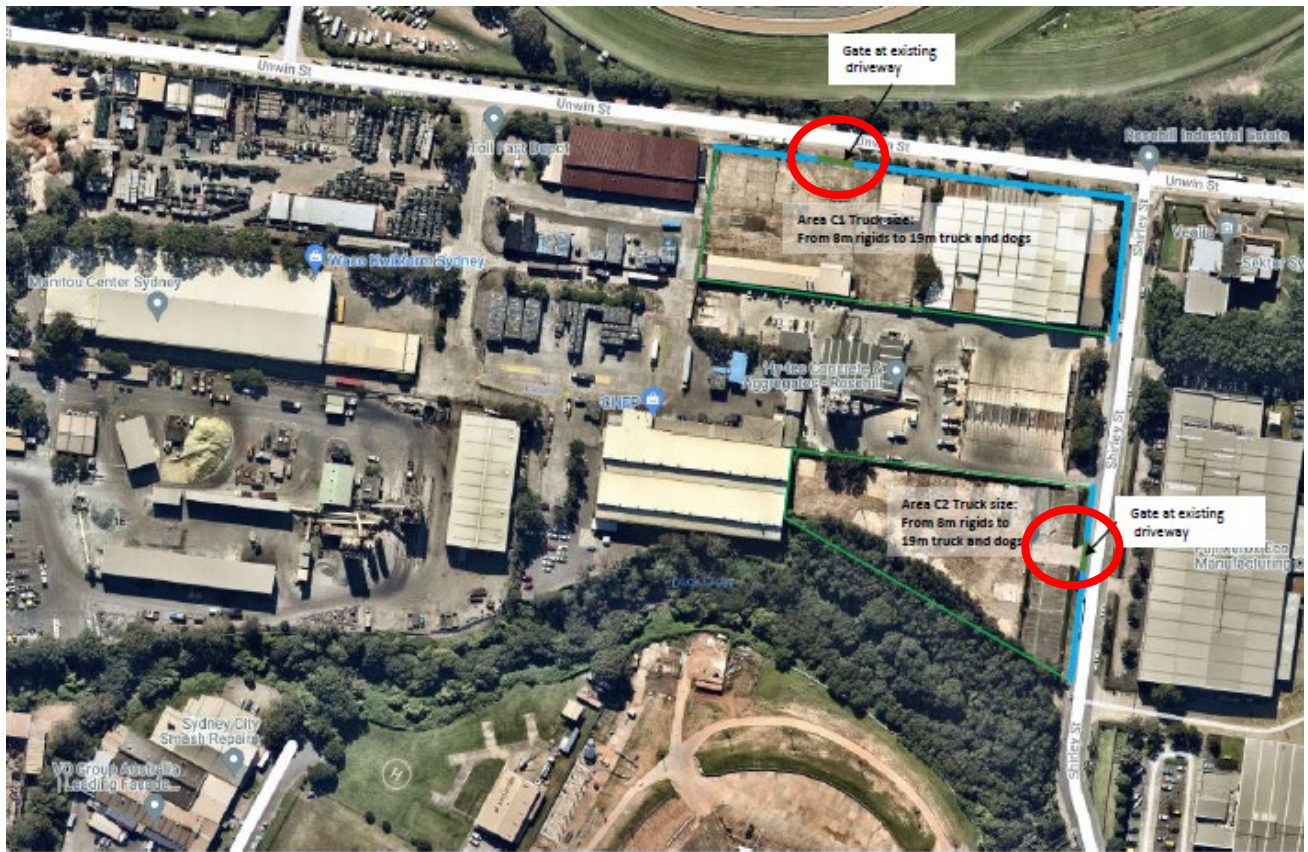
7.2 Operating Conditions for onsite works

Vehicle access will be provided via existing gates located on Unwin Street, Shirley Street, Kay Street and Wentworth Street, Clyde.

7.2.1 Areas C1 and C2

A class hoarding will be installed around the existing properties as shown on Figure 16. Existing access gates to be used include the following:

- Hytec Concrete and Aggregate egress driveway (Figure 17) and
- Coates Hire driveway (Figure 18)



- A Class Hoarding
- Existing Fencing
- Hoarding gate

Figure 16: Areas C1 and C2 site establishment



Figure 17: Hytec existing driveway on Shirley Street

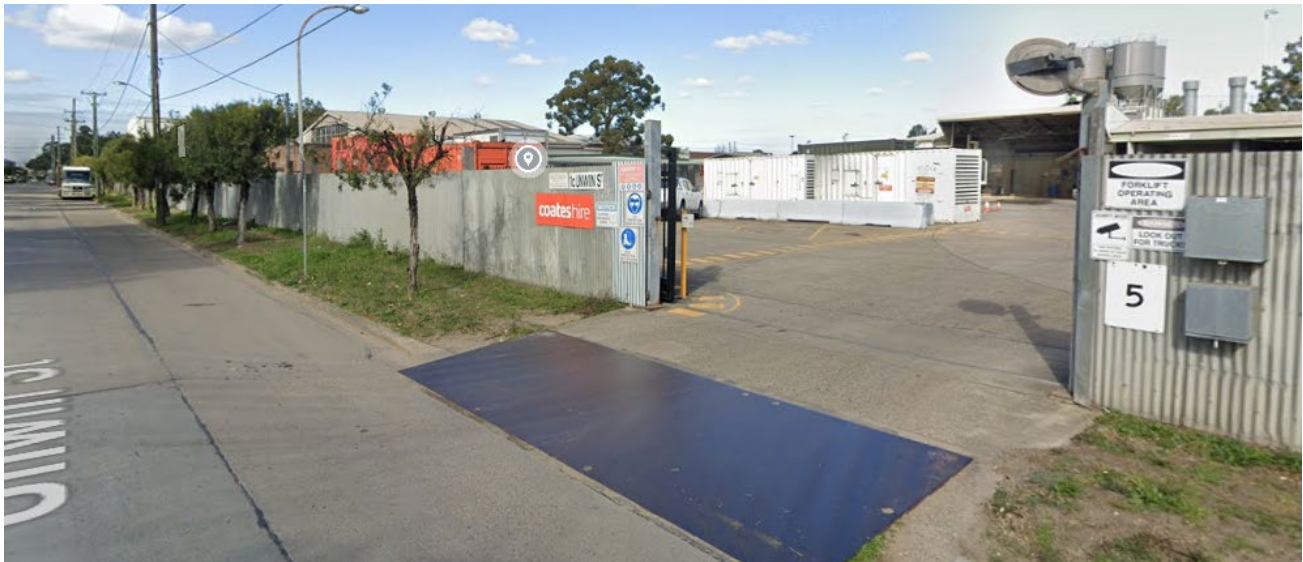


Figure 18: Coates Hire existing driveway

7.2.2 Areas C3, C4 and C5

A class hoarding will be installed around the existing properties as shown on Figure 17. Existing access gates to be used include the following:

- Toll fast depot (Figure 20) and
- Hillrose Business Park (Figure 21)

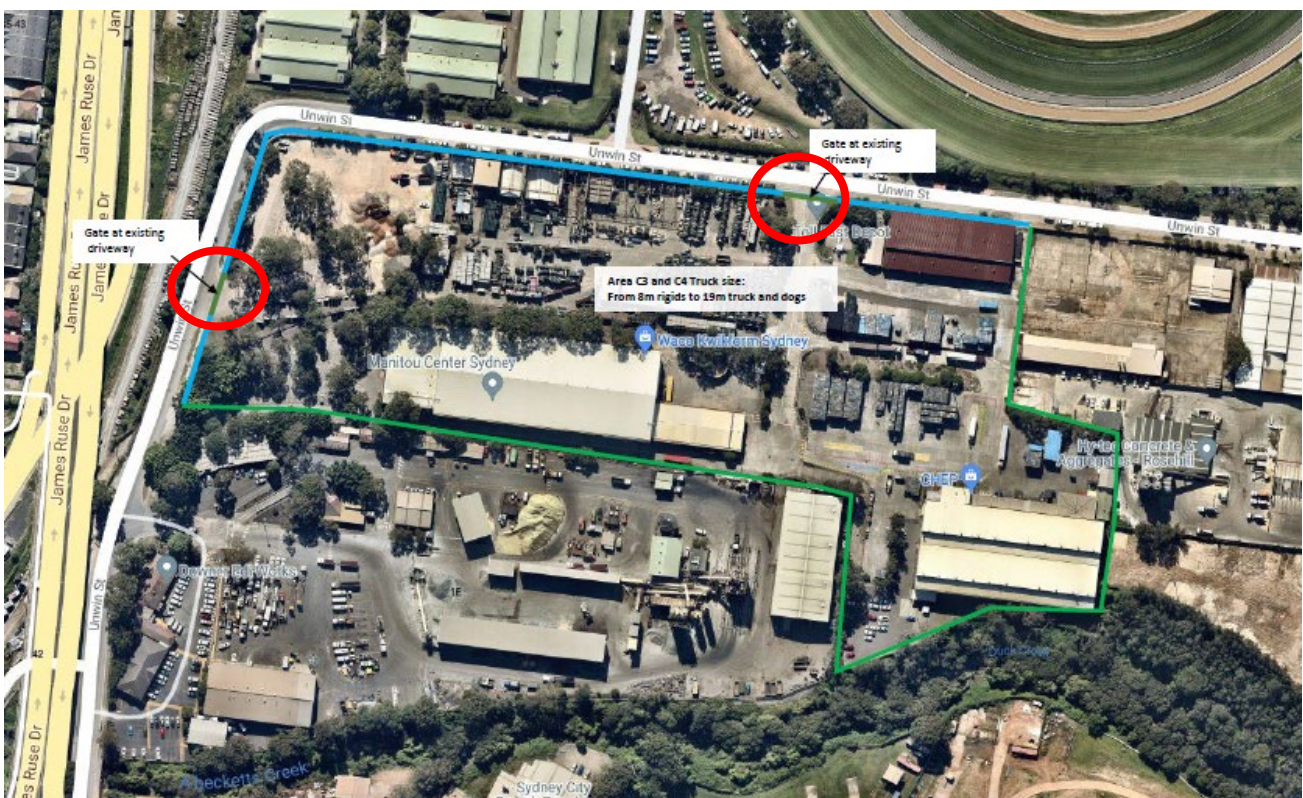


Figure 19: Areas C3, C4 and C5 site establishment

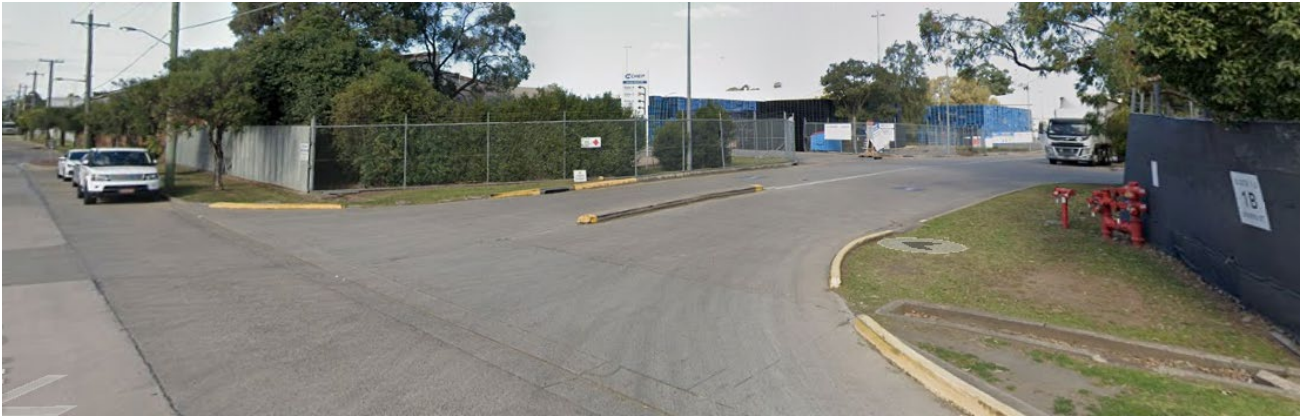


Figure 20: Toll Fast depot on Unwin Street



Figure 21: Hillrose Business Park on Unwin Street

7.2.3 Areas C6-C10

A class hoarding will be installed around the existing properties as shown on Figure 20. Existing access gates to be used include the following:

- 1 Kay Street (Figure 23)
- 2 Kay Street (Figure 24)
- 3 Kay Street (Figure 25)
- 36 and 38-40 Wentworth Street (Figure 26) and
- 50 Wentworth Street (Figure 27)

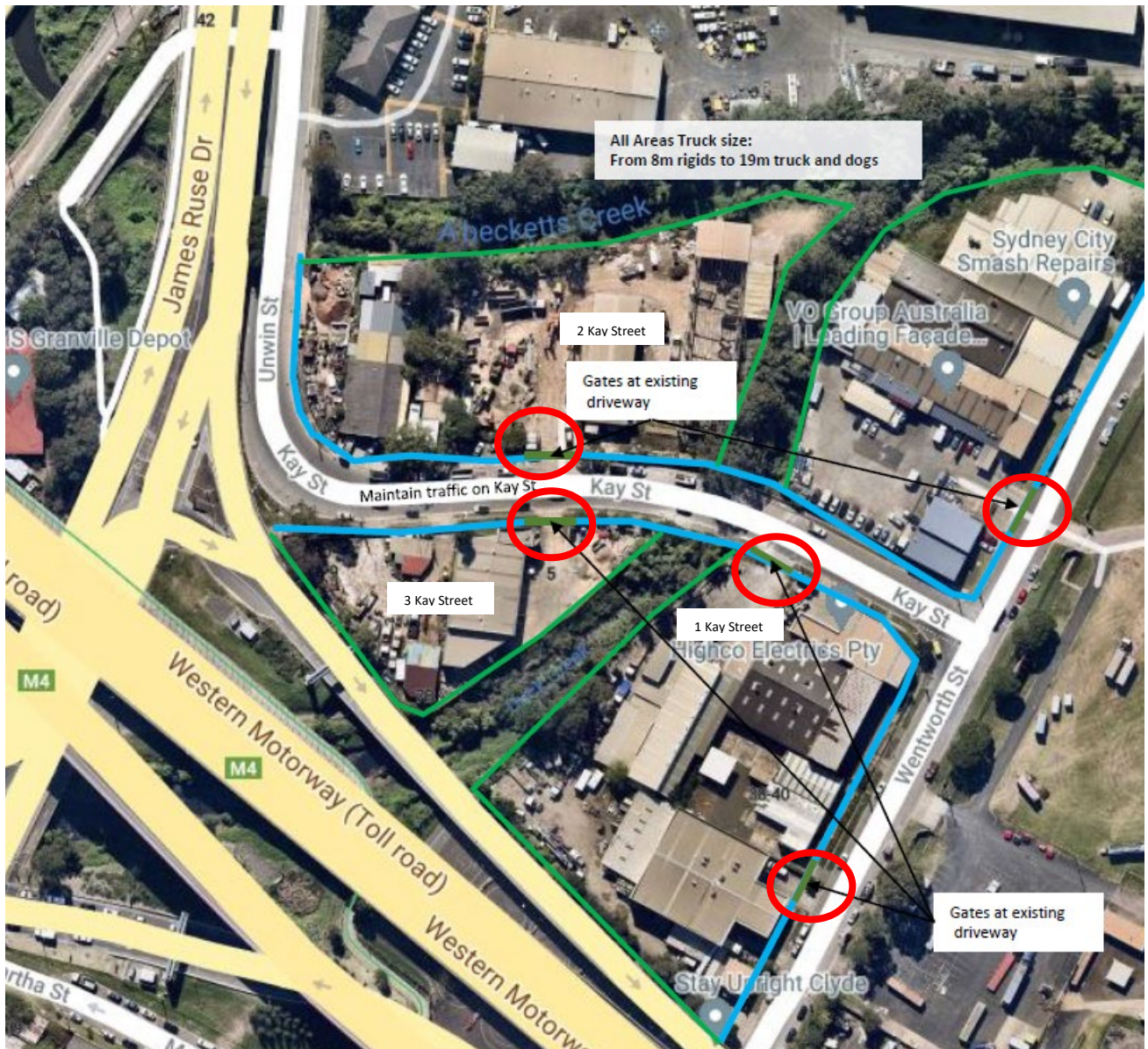


Figure 22: Areas C6-C10 site establishment



Figure 23: 1 Kay Street existing driveway



Figure 24: 2 Kay Street existing driveway



Figure 25: 3 Kay Street existing driveway



Figure 26: 36 and 38-40 Wentworth Street existing driveways



Figure 27: 50 Wentworth Street existing driveway

7.2.4 Operating Conditions for utility works

Utility works are required at the locations nominated in Table 3 and shown on Figure 28 through to Figure 31. Further details are also provided in Appendix C.

Table 3: Utility works and locations

Utilities	Works to be undertaken	Location
Electrical	<ul style="list-style-type: none"> Excavation Work on Power Poles Pull cables under road 	<ul style="list-style-type: none"> Unwin Street between Shirley Street and Unwin Street northern and southern side of street Wentworth Street between M4 Motorway and cul-de-sac western side of street Kay Street between Wentworth Street and Unwin Street – both sides of street
Communications	<ul style="list-style-type: none"> Excavation Work in Utility Pits 	<ul style="list-style-type: none"> Unwin Street to the west of the Rosehill Racecourse stables southern side Unwin Street at Shirley Street southern side Unwin Street last building before Kay Street and 2 Kay Street Shirley Street from Unwin Street western side Wentworth Street between M4 Motorway and cul-de-sac Kay Street between Wentworth Street and Duck Creek
Gas	<ul style="list-style-type: none"> Excavation Work in Utility Pits 	<ul style="list-style-type: none"> Unwin Street between Shirley Street and Unwin Street southern side Shirley Street south of Unwin Street western side Wentworth Street between M4 Motorway and cul-de-sac
Water	<ul style="list-style-type: none"> Excavation Work in Utility Pits 	<ul style="list-style-type: none"> Unwin Street west of Shirley Street southern side Unwin Street last building before Kay Street and 2 Kay Street Shirley Street between Duck Creek and Unwin Street western side Wentworth Street between M4 Motorway and cul-de-sac

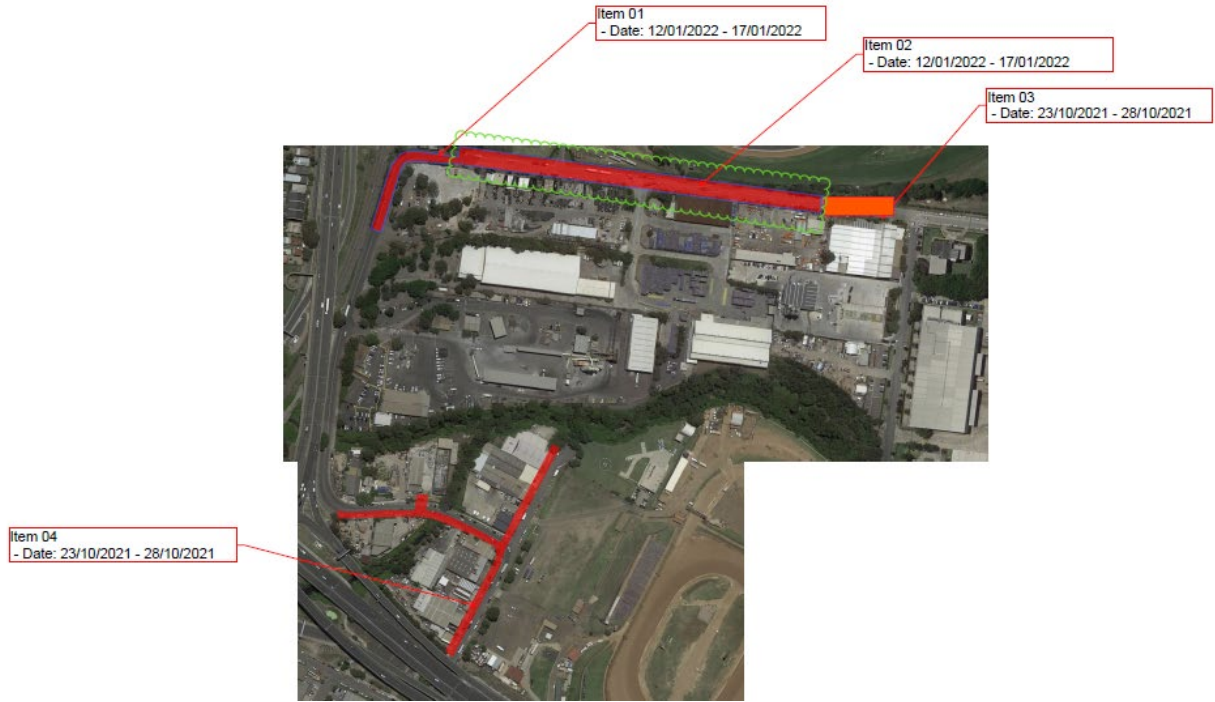


Figure 28: Electrical work locations

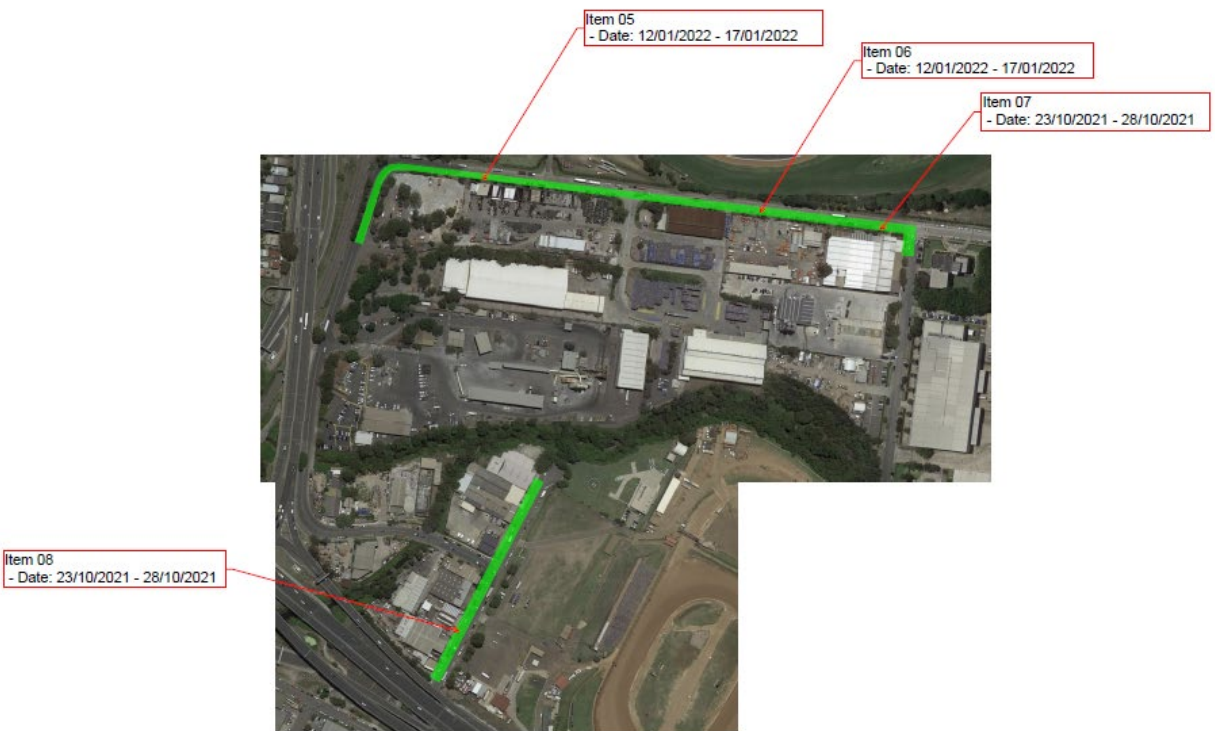


Figure 29: Gas work locations

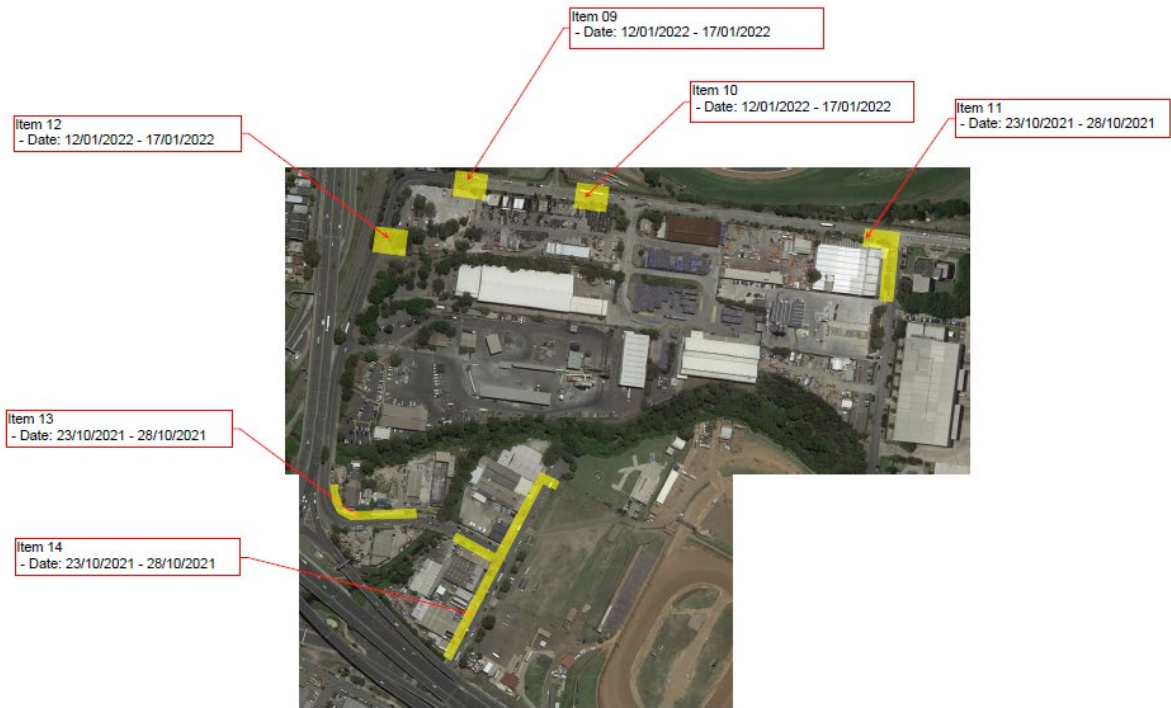


Figure 30: Communications works location

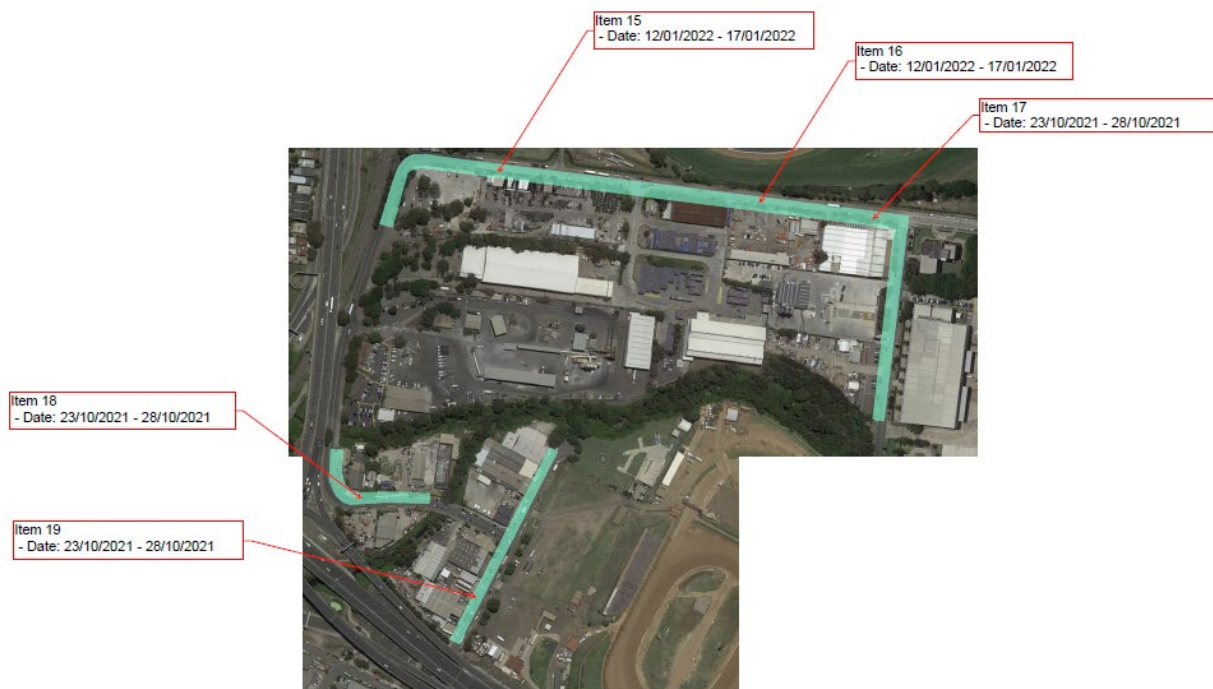


Figure 31: Water works locations

7.2.5 Impact on traffic flow during works

During works, there will be 4 light vehicle and 30 heavy vehicle movements per hour. These movements are below the indicative numbers provided for in the EIS from all sites in Clyde, (light vehicle movements per hour=5 outside of shift start and finish times and heavy vehicle movements per hour = 32), refer to Table 4, Figure 32 and Figure 33, below. It is noted that the DELTA numbers are significantly less than those identified on Figure 4.

Table 4: Comparison of DELTA and EIS vehicle #

Area	Gate	EIS heavy vehicle	DELTA heavy vehicle #
Area C1	Hytec		20
Area C2	Coates Hire		6

Area	Gate	EIS heavy vehicle	DELTA heavy vehicle #
Area C3	Tollfast		100
Area C4 and C5	Hillrose Business Park		50
Area C6	2 Kay Street		6
Area C7	1 Kay Street		20
Area C9	50 Wentworth Street		70
Area C10	36, 38-40 Wentworth Street		70
Total per day		352	342

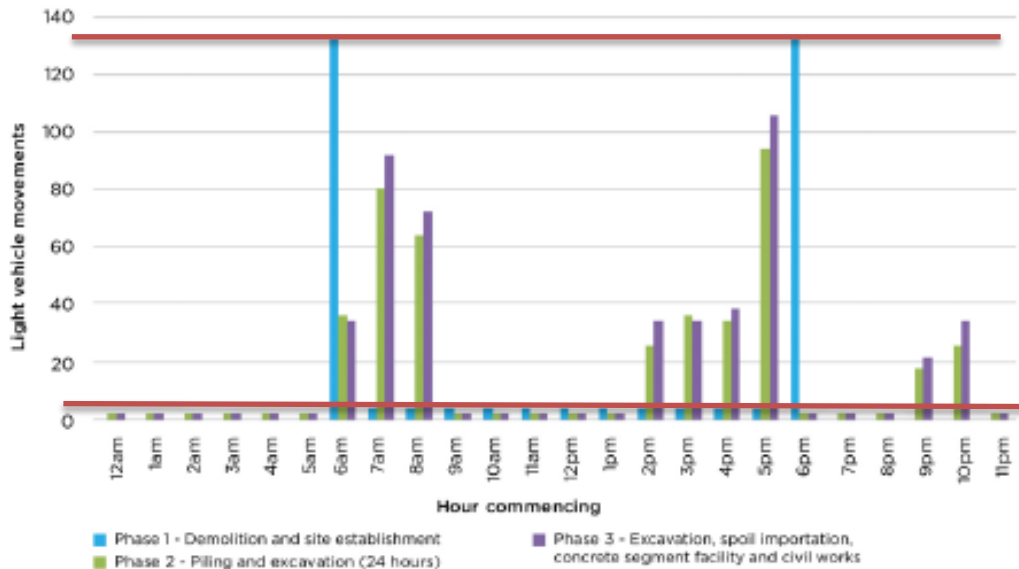


Figure 10-13: Hourly light vehicle movements at the Clyde stabling and maintenance facility construction site

Note: Movement means a one way movement. A truck entering and then leaving a work site represents 2 movements.

Figure 32: EIS light vehicle movements

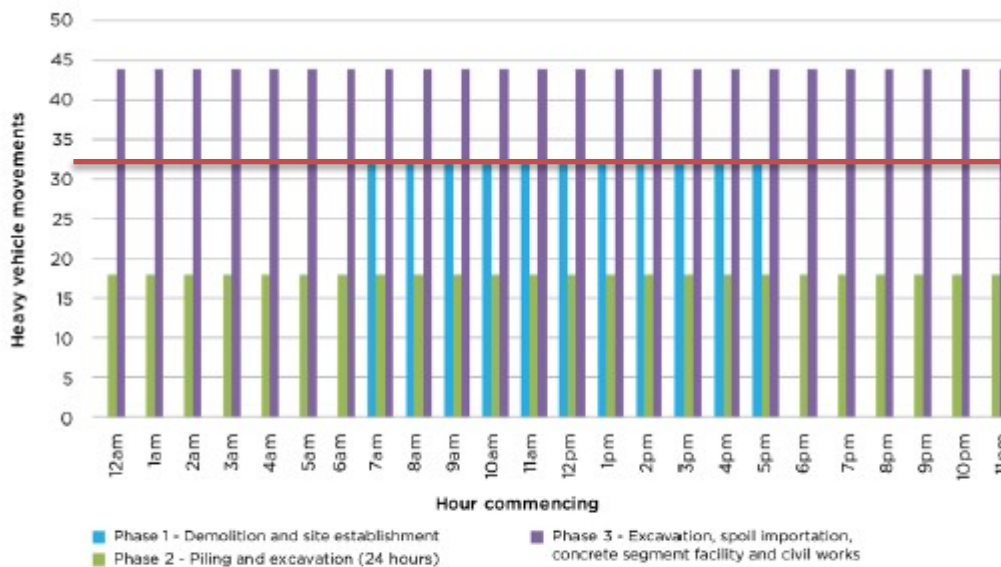


Figure 10-14: Hourly heavy vehicle movements at the Clyde stabling and maintenance facility construction site

Note: Movement means a one way movement. A truck entering and then leaving a work site represents 2 movements.

Figure 33: EIS heavy vehicle movements

Given the highly industrialised nature of the Clyde precinct prior to DELTA’s occupation, the proposed vehicle numbers are likely to be significantly lower than that generated by the previous occupants combined.

7.2.6 Impact on public transport

As noted previously, refer to section 6.3, no public transport operates along Wentworth, Kay, Unwin or Shirley streets. Therefore, there is no impact to existing public transport services.

7.2.7 Impact on active transport users

Vehicle access to and from construction sites will be managed to maintain pedestrian, cyclist and motorist safety, where there is an interface. Utility works may require pedestrian management. This management will consist of pedestrians being escorted through the work site by traffic controllers.

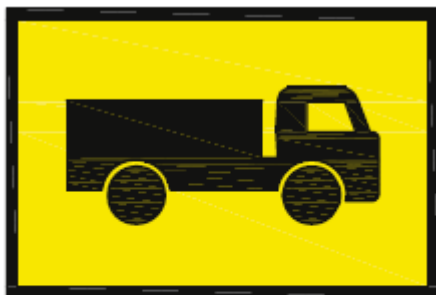
As noted previously, refer to section 6.3, there are minimal footpaths provided in the Clyde area and one shared path that crosses Wentworth Street at Martha Street. Given that this cycleway has been in operation since 2003 when all of the sites were in use, the number of vehicles being generated by the demolition works will have no impact on the shared path use.

To ensure that heavy vehicle drivers are aware of the shared path, signs will be provided upstream and downstream of Martha Street. The signs to be installed are shared path warning signs, as shown on Figure 34.



Figure 34: Shared path warning sign

Further signs are also proposed on Martha Street, either side of Wentworth Street to highlight the truck movements, as noted on Figure 35.



T2-25

Figure 35: Truck warning signs

The indicative location of the signs is shown on Figure 36.



Figure 36: Indicative location of signs

7.2.8 Impact on access

All pedestrian and vehicular access to, and parking in the vicinity of operating businesses will be maintained. Access will be provided for utility owners. Any changes required to access will be agreed with the relevant owner/ occupier. There is no impact on existing businesses in the area who remain. If changes are required to access, then the access will be reinstated to an equivalent standard unless agreed with the property occupier/ owner. Any works that will be required these will be completed within 1 month of the works being undertaken.

7.2.9 Impact on parking

There will be no permanent changes to existing parking restrictions on Wentworth Street, Kay Street, Unwin Street or Shirley Street during the site occupation. There will be temporary impacts on parking during short term utility works. Refer to Appendix G.

7.2.10 Cumulative impacts

With the removal of businesses in the area, there is no cumulative impacts. Parramatta Light Rail is operating at the northern end of Clyde near Grand Avenue with most vehicles accessing and egressing the site via the Grand Avenue bridge onto James Ruse Drive. Regular contact will be maintained throughout the life of the project. This will be done through attendance at the fortnightly Traffic Control Group (TCG) and monthly Traffic and Transport Liaison Group.

7.2.11 Special events

Rosehill Racecourse is found on the northern side of Unwin Street between Colquhoun Street and the disused Epping rail line to the west. The only gate used to access the racecourse is located at the western end of Unwin Street at the stable entry. This entry (Gate 2) provides access to the Horse Float Parking area, the infield car park, exhibition and event parking, exhibition centre loading dock and general deliveries, refer to Figure 37.

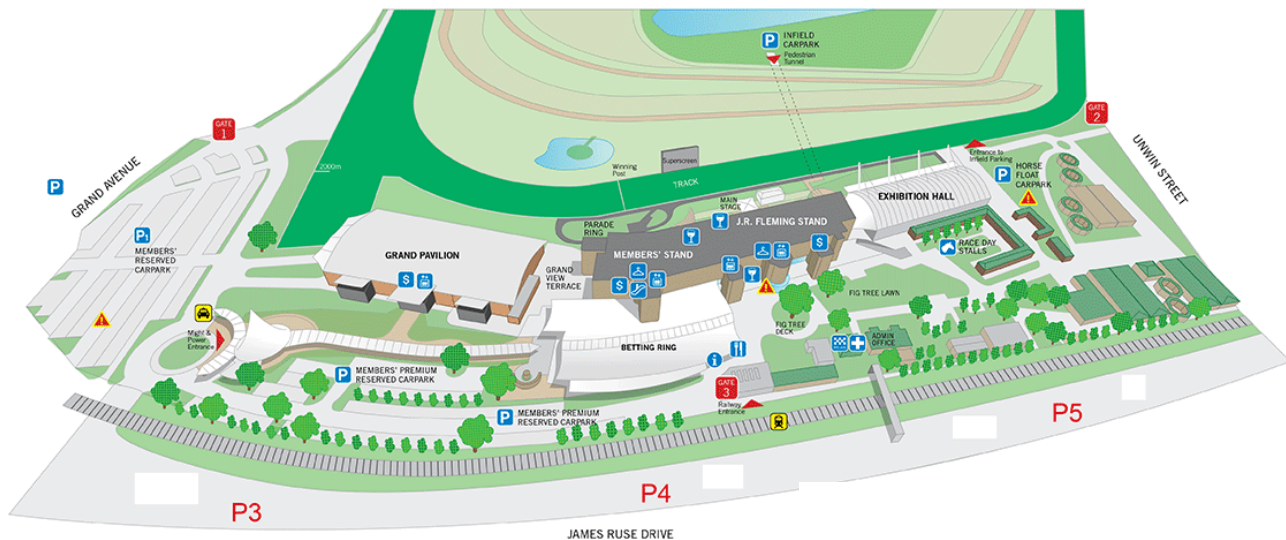


Figure 37: Rosehill Racecourse access egress

A calendar of racing events at Rosehill Racecourse is available [here](#) and is included in Appendix B. Typically, Saturdays are race days at Rosehill which commences after the construction activity has ceased for the day.

Other events held at Rosehill include:

- The Caravan and Camping Show with over 80,000 visitors each year – this show is yet to be confirmed at this location post 2021 – entry via Grand Avenue/ Prospect Street extension off James Ruse Drive
- Sydney Santa Spectacular with 35,000 visitors s – entry via Grand Avenue/ Prospect Street extension off James Ruse Drive
- The Pool and Spa Outdoor Living Expo with 7,000 visitors– entry via Grand Avenue/ Prospect Street extension off James Ruse Drive
- a multitude of smaller events that are held in the exhibition centre and function areas attracting between 1,000-10,000 attendees – entry via Grand Avenue/ Prospect Street extension off James Ruse Drive

However, the advent of COVID-19 has seen the cancellation of a number of scheduled events across the Sydney region. Where major special events are held, we would ensure that access is maintained to the events.

7.2.12 Staff transport and parking

There is significant onsite parking facilities located on the properties being demolition. DELTA will ensure that vehicles associated with the project workforce are stored on site and that access to pedestrian and cyclist facilities are unimpeded.

Sustainable transport options are available at Clyde include.

- Clyde rail station which is located 1km from the site
- Bus stops are located on Parramatta Road at Wentworth Street – (Stop ID: 2142150 and 2142154) servicing routes 909 (Bankstown to Parramatta) and M92 (Sutherland to Parramatta).

7.2.13 Incident response

In the event of an incident that has the potential to impact traffic or public transport, at sites managed by DELTA, we will ensure that traffic control resources are provided. These resources will consist of the following:

- Traffic control personnel
- Traffic control van including:
 - Barrier boards
 - Cones
 - Flashing arrows
 - Signs
 - Spill kit

DELTA will report all traffic accidents to Sydney Metro, the Transport Management Centre (13 17 00) and Customer Journey Planning.

7.2.14 Traffic Guidance Schemes (TGS). Road Occupancy License (ROL)/ Council permits identified works

Works that have been identified as requiring at Traffic Guidance Scheme are detailed below and the TGS are provided in Appendix C. This Appendix provides details on timing of implementation, the works being undertaken and expected traffic impacts.

- 1 Shuttle flow for building demolition works on Unwin Street, refer to Figure 38 for location

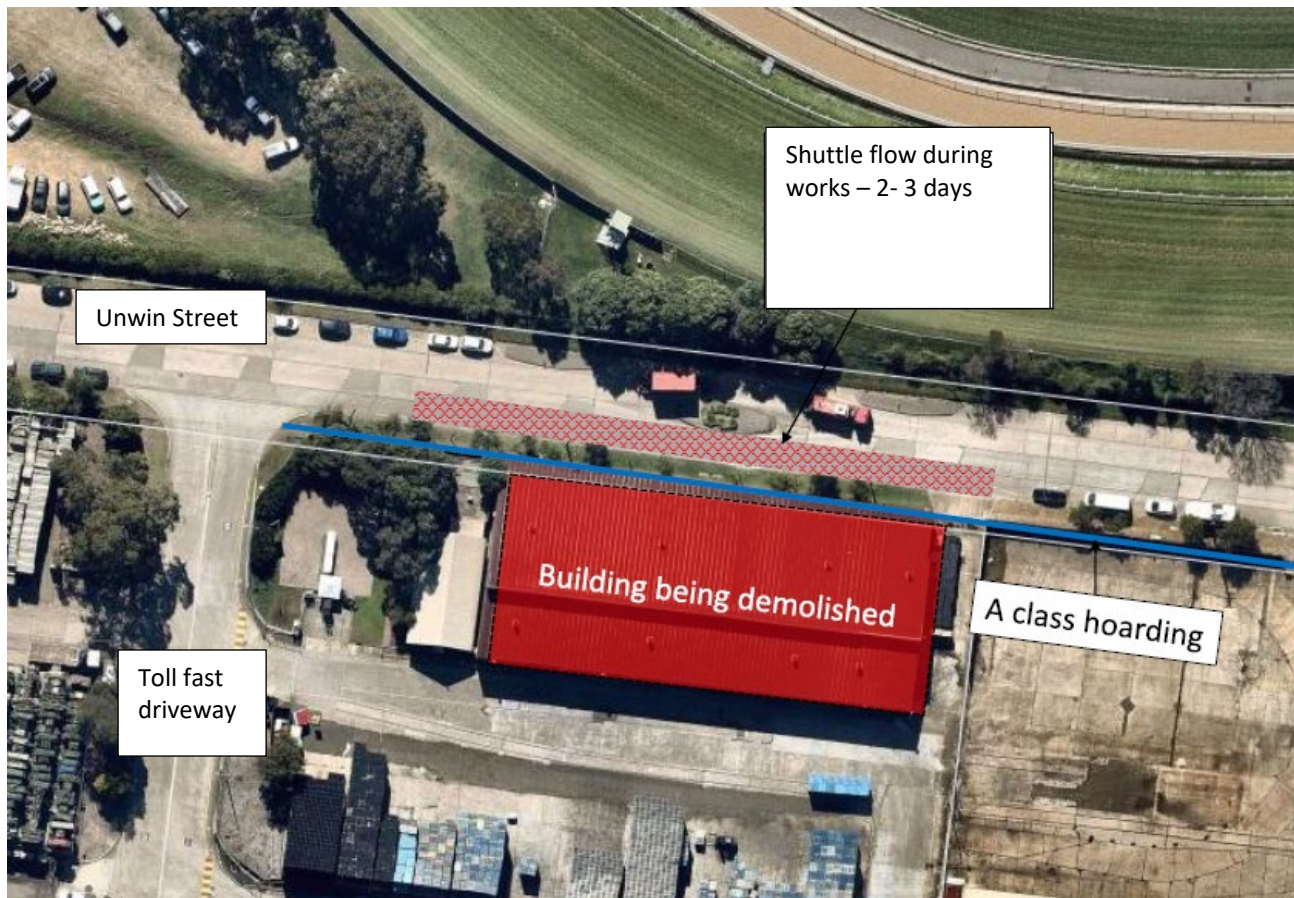


Figure 38: Unwin Street building demolition

Utility works will comprise a number of varying lane closures, as noted in Appendix C.

7.2.15 Road occupation and restoration

For any works that involve an occupation of the road/ footpath, a Road Occupancy License (ROL) from TMC will be applied for prior to the submission of a Road Occupancy License from the City of Parramatta Council. ROL through the TMC will be applied for 10 business days from the requirement. Electronic lodgement of the ROL will be undertaken using RMS’ OpLinc system. Council permits will be lodged electronically in accordance with the City of Parramatta Council requirements. For any works where parking is temporary impacted, DELTA will ensure that the parking removal is staged to minimise the time of parking space occupation.

For any road opening required, the relevant road opening permit will be applied for through the existing City of Parramatta Council website. The Road Opening permit will also be accompanied by a Road Occupation Permit. Details on the permits required are found at <https://www.cityofparramatta.nsw.gov.au/development/development-application-da/application-requirements/road-reserve>

A register of permits/ licenses will be maintained through the Works period and can be tabled at the TCG if requested. The register will also contain details of any traffic accidents that occur across the project.

8 FLEET MANAGEMENT

Trucks to be used on the project will be compliant with NSW legislation, Sydney Metro’s Principal Contractor Health and Safety Standard, relevant Australian Design Rules and vehicle standards and the Heavy Vehicle National Legislation. All heavy vehicle operations will be conducted in accordance with DELTA’s Chain of Responsibility (CoR) Management Plan including monitoring of compliance with nominated haulage routes.

A combination of truck types will be used during the site operations. These trucks may be truck and dog, semi-trailers, bin trucks, 12.5m SU truck, 10 wheeler bin truck, 5t tippers and low loaders.

All trucks will enter and exit the demolition sites in a forward direction, where reasonable and feasible. Where there is a requirement to undertake reversing movements on the public road system, traffic control will be implemented.

Construction site traffic will be managed to minimise movements during peak periods. This will be achieved by staggered start times for trucks and daily booking of trucks ensuring that only the truck numbers required for the loading tasks for that day are ordered. Given that the trucks will be loaded sequentially this provides for a staggered release of trucks onto the road network during the AM peak. The PM peak is also reduced as typically disposal sites are closed from 5PM meaning that if the disposal site is an hour away, the latest a truck can leave site is 4PM reducing our impact on the road network.

DELTA will provide sufficient onsite parking for heavy vehicles associated with the works. This will ensure that vehicles are not idling or queuing on state and regional roads. Given the amount of space available on the demolition sites, there is no requirement for any further marshalling facilities.

8.1 Haulage routes

Generally, the haulage routes will be via arterial roads/ freeways/ tollways. Where possible the routes have taken into account the requirements of the Environmental Impact Statement (EIS). It is noted that the EIS for this site access shows access via Wentworth Street. The routes within this CTMP are in accordance with the EIS, refer to Figure 39.

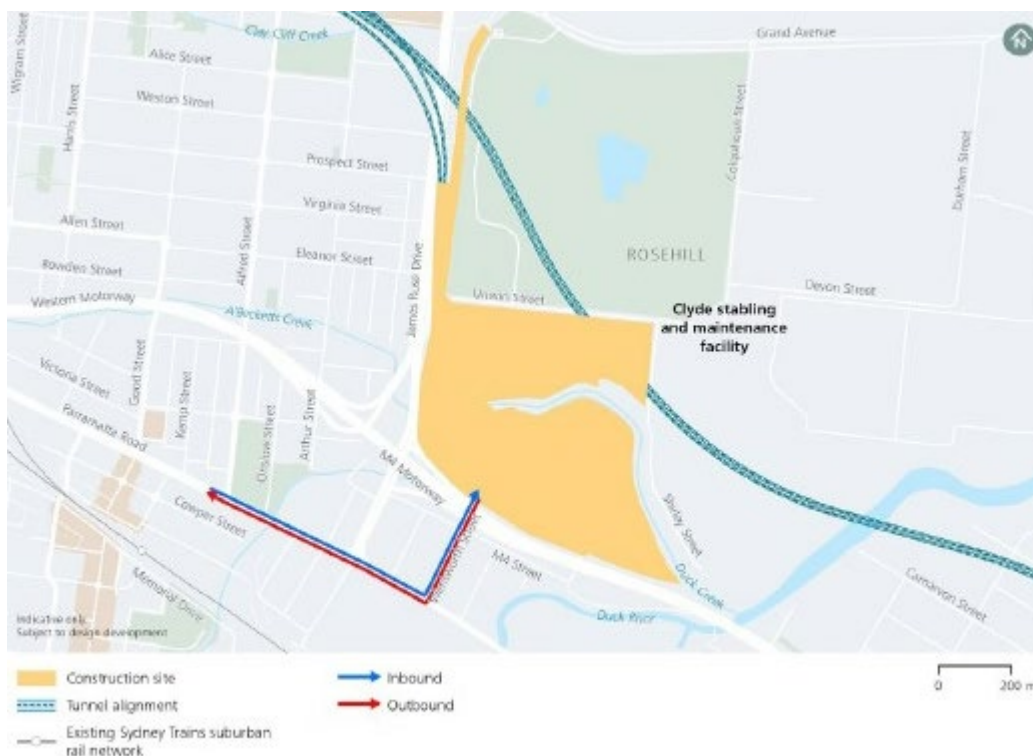


Figure 39: EIS Heavy vehicle routes

Material will be removed from site using a combination of vehicles. These trucks will range in size from 12.5m Single Unit to 19.0m and material will be taken to authorised disposal sites around Sydney. Refer to Appendix E for details on the proposed routes to the closest Motorway.

8.2 Permits/ Over dimensional vehicles

Permit issue for vehicles greater than 4.5 tonnes is through the National Heavy Vehicle Regulator (NHVR). This applies to particular special purpose vehicles (SPV) such as mobile cranes and other oversize/ over mass vehicles (OSOM). At present, TfNSW is currently undertaking this permit issue.

For over dimensional vehicles, generally vehicles that are greater than 25m in length or 3.5m width require a pilot(s). Extremely long or wide vehicles will require an escort (fee payable). Permits will be applied for by the transport operator.

Oversize vehicles will be required at this site for the delivery of large plant. These deliveries will occur outside of peak hours. Oversize loads will be 30t and 40t excavators with 6 pieces of plant on site which will be mobilised at the commencement of works and as work areas open up. Haulage contractors will manage their own permits.

8.3 Drivers and operators

Operator selection will be based on safety performance criteria. Operators and drivers will be required to have general construction industry induction cards and will be required to attend ongoing general project and site specific inductions.

All operators will be comprehensively trained with regard to community expectations and impacts from haulage operations through site inductions and attendance at the Sydney Metro Industry Curriculum (SMIC) – Safe Heavy Vehicle Introduction Skills which provides drivers with the knowledge, skills, motivation and confidence to drive heavy vehicles safely and professionally in an urban built up road environments whilst undertaking a transport task required on the project. This training course focuses on low risk driver behaviors, sharing the road safety with vulnerable road users and reinforces heavy vehicle driver knowledge and skill. The project and site inductions will have a particular focus on operator behavior. Operator competency and standards of behavior will be continually assessed, and discipline procedures will be put in place to maintain compliance.

9 MINISTERIAL CONDITIONS OF APPROVAL REQUIREMENTS

There are a number of plans/ reports that are required under the Ministerial Conditions of Approval as noted below and in Appendix A.

9.1.1 Road Dilapidation Report

Road dilapidation reports will be provided for the local roads used by construction vehicles. These reports will be undertaken prior to the use of these roads. A copy of the report(s) will be provided to the relevant road authority within three (3) weeks of completion of the survey and no later than 1 month before the road being used.

If damage to roads occurs as a result of heavy vehicle use associated with the demolition works, DELTA will (at the Relevant Road Authority's discretion):

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

Road dilapidation reports will be provided to Council week commencing 20th September 2021.

9.1.2 Heavy vehicle local road report

A Heavy Vehicle Local Road (HVLR) report will be provided to the Planning Secretary for approval, for use of local roads not identified in the Environmental Impact Statement or other planning documents. The report includes the following:

- a) A swept path analysis
- b) Demonstration that the use of local roads by Heavy Vehicles for the CSSI will not compromise the safety of pedestrians and cyclists of the safety of two-way traffic flow on two way roadways
- c) Details as to the date of completion of the road dilapidation surveys for the subject local roads and
- d) Measures that will be implemented to avoid where practicable the use of local roads past schools, aged care facilities and child care facilities during their peak operation times and
- e) Written advice from an appropriately qualified professional on the suitability of the proposed Heavy Vehicle route which takes into consideration items a) to d) of this condition

A copy of that HVLR is provided in Appendix F.

9.1.3 Construction Parking and Access Strategy

A Construction Parking and Access Strategy (CPAS) will be provided to the Planning Secretary for approval at least one (1) month before the commencement of construction that reduces the availability of existing parking. The approved strategy will be implemented before impacting on street parking. The Strategy is to identify and mitigate impacts resulting from on and off street parking changes during construction. The strategy includes the following:

- a) Achieving the requirements of Condition D90 which includes:
 - i. Minimise parking on public roads
 - ii. Minimise idling and queuing on state and regional roads
 - iii. Not carry out marshalling of construction vehicles near sensitive land user(s)
 - iv. Not block or disrupt access across pedestrian or shared user paths at any time unless alternate access is provided and
 - v. Ensure spoil haulage vehicles adhere to the nominated haulage routes identified in the CTMP's
- b) Confirmation and timing of the removal of on and off street parking associated with construction of Stage 1 of the CSSI
- c) Parking surveys of all parking spaces to be removed or occupied by the project workforce to determine current demand during peak, off peak, school drop off and pickup, weekend periods and during special events
- d) Consultation with affected stakeholders utilising existing on and off street parking stock which will be impacted as a result of construction
- e) Assessment of the impacts to on and off street parking stock taking into consideration, occupation by the project workforce, outcomes of consultation with affected stakeholders and considering the impacts of special events
- f) Identification of reasonable and practicable mitigation measures to manage impacts to stakeholders as a result of on and off street parking changes including but not necessarily limited to, staged removal and replacement of parking, provision of alternative parking arrangements, managed staff parking arrangements and working with relevant council(s) to introduce parking restrictions adjacent to work sites and compounds or appropriate residential parking schemes
- g) Where resident parking schemes already exist, off road parking facilities must be provided for the project workforce
- h) Mechanisms for monitoring, over appropriate intervals (not less than 6 months), to determine the effectiveness of implemented mitigation measures
- i) Details of shuttle bus service(s) to transport the project workforce to construction sites from public transport hubs and off site car parking facilities (where these are provided) and between construction sites;

- j) Provision of contingency measures should the results of mitigation or monitoring indicate implemented measures are ineffective and
- k) Provision of reporting of monitoring results to the Planning Secretary and Relevant Council(s) at six (6) monthly intervals

A copy of that CPAS is provided in Appendix G.

10 COMMUNITY

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

TfNSW's "[Be truck aware](#)" is an ongoing road safety campaign which aims to show road users the challenges that truck drivers face every day.

Any enquiries, complaints and/ or compliments will be directed to Sydney Metro's Sydney Metro Project:

- Information line 1800 612 173
- Email: sydneymetrowest@transport.nsw.gov.au
- [Enquiry Form](#)
- Sydney Metro West PO Box K659, Haymarket NSW 1240

Table 5: Proposed community notifications

Notification	Applicable
Newsletters	Applicable
Construction email updates	Applicable
Sydney Metro direct mail email updates	Applicable
Fact sheets	Applicable
Site signage and hoarding banners	Applicable
Sydney Metro website	Applicable
Variable message signs	Applicable

Two VMS will be installed prior to the commencement of the works. One on Unwin Street between Shirley Street and Unwin Street and the other on Wentworth Street. Messages will be as requested by Sydney Metro West.

10.1 Stakeholders consulted

Table 6 lists the consultation undertaken in the development of this CTMP and Appendix H provides the comments and responses provided.

Table 6: Stakeholders consulted

Stakeholder	Date	Consultation	Main contact people
TCG	19 August 2021	Meeting/ presentation	Berin Gordon, Todd Solomon, Phillip Brogan, Abdullah Khan, Peter Keyes, Chris Smith
TfNSW Customer Journey Planning	25 August 2021	Submission of CTMP	Peter Keyes
TfNSW Planning and Program	25 August 2021	Submission of CTMP	Sean McGregor
City of Parramatta Council	25 August 2021	Submission of CTMP	Council
Sydney Metro including Road Safety, Operations, Customer and Place Making	25 August 2021	Submission of CTMP	Berin Gordon, Todd Solomon
NSW Police Force	1 st September 2021	Submission of CTMP	Sergeant Jack Makhoul

Stakeholder	Date	Consultation	Main contact people
	11 th September 2021 14 th September 2021	Follow up on submission of CTMP Response received	
NSW Fire and Rescue	1 st September 2021 11 th September 2021	Submission of CTMP with email discussion Follow up on submission of CTMP	Andrew Shurety Superintendent Zone Commander Metropolitan West 2
NSW Ambulance Service	1 st September 2021 11 th September 2021	Submission of CTMP Follow up on submission of CTMP	Andrew Edwards Area Manager Health Relations Ambulance NSW
Sydney Metro including Road Safety, Operations, Customer and Place Making	17 th September 2021	Resubmission of CTMP	Berin Gordon, Todd Solomon
TfNSW Customer Journey Planning	17 th September 2021	Resubmission of CTMP	Peter Keyes
TfNSW Planning and Program	17 th September 2021	Resubmission of CTMP	Sean McGregor
City of Parramatta Council	17 th September 2021	Resubmission of CTMP	Council
Sydney Metro including Road Safety, Operations, Customer and Place Making	13 th October 2021	Resubmission of CTMP	Berin Gordon, Todd Solomon
TfNSW Customer Journey Planning	13 th October 2021	Resubmission of CTMP	Peter Keyes
TfNSW Planning and Program	13 th October 2021	Resubmission of CTMP	Sean McGregor
City of Parramatta Council	13 th October 2021	Resubmission of CTMP	Council

11 OTHER CONSIDERATIONS

11.1 Road Safety Audits

Road safety audits will be undertaken during the development of the CTMP and upon implementation of the long term work site. Refer to Appendix H for the audit report.

11.2 Traffic and Transport Liaison Group (TTLG)

The Traffic and Transport Liaison Group has been established by Sydney Metro for the project, as required under the MCoA D94. The TTLG consists of members from Sydney Metro, City of Parramatta Council and Emergency Services. The development of this Construction Traffic Management Plan will occur in consultation with this group, including Road Occupancy License(s) (ROL) applications. The TTLG meets monthly.

11.3 Traffic Control Group (TCG)

A Traffic Coordination Group has been established for the project by Sydney Metro. The TCG meets fortnightly and comprises of Sydney Metro representatives, Council representatives and other project contractors within the Parramatta CBD.

11.4 Police and Emergency Services

The Police and relevant Emergency Services will be informed, in a timely manner of relevant activities proposed within this CTMP. The initial communication to these stakeholders will be via the Traffic and Transport Liaison Group (TTLG). Regular updates will be provided to emergency services, including changes to road network configurations, changes to road conditions and worksite access locations, through emails and face to face discussions. Access to properties for emergency vehicles will be provided at all times

11.5 Toolbox Talks

Toolbox talks will be conducted weekly as a minimum, and will be used to present the status of safety and environmental performance, incidents, safety and security alerts, lessons learnt, bulletins, messages, etc.

DELTA's IMS Form 054 Toolbox Meeting will be used to record all toolbox talks.

11.6 Site contacts

Site contacts are provided in Table 7, below

Table 7: Site contacts

Name	Position	Organisation	Contact #	Email
David Mullane	Project Manager	DELTA	0431 100 688	david.mullane@deltagroup.com.au

12 MONITORING AND INSPECTION

12.1 Site Inspections

The site will be monitored by the site supervisor. Any changes as noted in this CTMP, to signs/ lines that impact on the public will be monitored daily during site operating hours.

Traffic control used for pedestrian management, lane closures etc will need to provide records of the traffic control implemented. Any changes required to the traffic control set up will be authorised by a holder of an RMS “Prepare a Work Zone Traffic Management Plan” or equivalent.

DELTA will carry out surveillance of traffic control devices and set ups Regular site inspections are carried out by the Site Manager and recorded on SEF 049 Site Inspection Report. Site inspections will be undertaken as noted in Table 8. Checklists are provided in Appendix J.

Table 8: Inspection timetable

Stage	Activity	Purpose
Planning	TGS verification	To ensure that the TGS selected or designed is suitable for the works and location
During temporary traffic management	Weekly inspections	To ensure that the CTMP and relevant TGS are appropriated and operating safely, effectively and efficiently
	Shift inspections	To ensure that the TGS is implemented as designed. This includes at a minimum twice per shift and when a: <ul style="list-style-type: none"> A. TGS is installed/ changed or updated B. At regular frequency after work commences (recommended every 2 hours) C. Once aftercare arrangements have been installed if required
	CTMP review	To ensure that the CTMP controls are achieving the required outcomes
	Road safety audits	To identify road safety crash potential and areas of risk that could lead to traffic incidents
Post completion	Post completion inspection	To ensure that the site has been demobilised as planned and is safe for opening to traffic

DELTA will monitor truck movements to ensure compliance with this document and all applicable Ministerial Conditions of Approval. Details of this monitoring is provided in the Chain of Responsibility Management Plan.

APPENDICES

A. Compliance

Table 9 Relevant Ministerial Conditions of Approval

Requirement	Detail	Where addressed
MCoA 80	Access to all utilities and properties must be maintained during works, unless otherwise agreed with the relevant utility owner, landowner or occupier	Section 7.2.8
MCoA 81	Any property access physically affected by the CSSI must be reinstated to at least an equivalent standard, unless otherwise agreed by the landowner or occupier. Property access must be reinstated within one (1) month of the work that physically affected the access is completed or in any other time frame agreed with the landowner or occupier	Section 7.2.8
MCoA D85	Construction Traffic Management Plans (CTMPs) must be prepared in accordance with the Construction Traffic Management Framework. A copy of the CTMPs must be submitted to the Planning Secretary for information before the commencement of any construction in the area identified and managed within the relevant CTMP	This plan
MCoA D86	Local roads proposed to be used by Heavy Vehicles to directly access construction sites that are not identified in the documents listed in Condition A1 of this schedule must be approved by the Planning Secretary and be included in the CTMPs	Refer to Heavy Vehicle Local Road Report
MCoA D87	All requests to the Planning Secretary for approval to use local roads under Condition D86 above must include the following: a) A swept path analysis b) Demonstration that the use of local roads by Heavy Vehicles for the CSSI will not compromise the safety of pedestrians and cyclists of the safety of two-way traffic flow on two way roadways c) Details as to the date of completion of the road dilapidation surveys for the subject local roads and d) Measures that will be implemented to avoid where practicable the use of local roads past schools, aged care facilities an child care facilities during their peak operation times and e) Written advice from an appropriately qualified professional on the suitability of the proposed Heavy Vehicle route which takes into consideration items a) to d) of this condition	Refer to Heavy Vehicle Local Road Report
MCoA D88	Before any local road is used by a heavy Vehicle for the purposes of construction of Stage 1 of the CSSI, a Road Dilapidation Report must be prepared for the road. A copy of the Road Dilapidation Report must be provided to the Relevant Road Authority (s) within three (3) weeks of completion of the survey and at no later than one (1) month before the road being used by Heavy Vehicles associated with the construction of Stage 1 of the CSSI	Section 9.1.1
MCoA 89	If damage to roads occurs as a result of the construction of Stage 1 of the CSSI, the Proponent must either (at the Relevant Road Authority's discretion): a) Compensate the Relevant Road Authority for the damage so caused or. b) Rectify the damage to restore the rod to at least the condition it was in pre-work as identified in the Road Dilapidation Report	Section 9.1.1
MCoA D90	Vehicles associated with the project workforce (including light vehicles and Heavy Vehicles) must be managed to: a) Minimise parking on public roads b) Minimise idling and queuing on state and regional roads c) Not carry out marshalling of construction vehicles near sensitive land user(s) d) Not block or disrupt access across pedestrian or shared user paths at any time unless alternate access is provided and e) Ensure spoil haulage vehicles adhere to the nominated haulage routes identified in the CTMPs	Sections 7.2.12, 7.2.8 , 8.1, 9.1.2 and Appendix F
MCoA D91	A Construction Parking and Access Strategy must be prepared to identify and mitigate impacts resulting from on and off-street parking changes during construction the construction Parking and Access Strategy must include, but not necessarily limited to: a) Achieving the requirements of Condition D90 above b) Confirmation and timing of the removal of on and off-street parking associated with construction of Stage 1 of the CSSI c) Parking surveys of all parking spaces to be removed or occupied by the project workforce to determine current demand during peak, off peak, school drop off and pick pup, weekend periods and during special events	Section 9.1.3 and Appendix G

Requirement	Detail	Where addressed
	<ul style="list-style-type: none"> d) Consultation with affected stakeholders utilising existing on and off-street parking stock which will be impacted as a result of construction e) Assessment of the impacts to on and off-street parking stock taking into consideration, occupation by the project workforce, outcomes of consultation with affected stakeholders and considering the impacts of special events f) Identification of reasonable and practicable mitigation measures to manage impacts to stakeholders as a result of on and off-street parking changes including, but not necessarily limited to, staged removal and replacement of parking, provision of alternative parking arrangements, managed staff parking arrangements and working with relevant council(s) to introduce parking restrictions adjacent to work sites and compounds or appropriate residential parking schemes g) Where residential parking schemes already exist, off road parking facilities must be provided for the project workforce h) Mechanisms for monitoring, over appropriate intervals (not less than 6 months), to determine the effectiveness of implemented mitigation measures i) Details of shuttle bus service(s) to transport the project workforce to construction sites from public transport hubs and off-site car parking facilities (where these are provided) and between construction sites j) Provision of contingency measures should the results of mitigation or monitoring indicate implemented measures are ineffective and k) Provision of reporting or monitoring results to the Planning Secretary and Relevant Council(s) at six (6) monthly intervals 	
MCoA D92	The Construction Parking and Access Strategy must be submitted to the Planning Secretary for approval at least one (1) month before the commencement of any construction that reduces the availability of existing parking. The approved Construction Parking and Access Strategy must be implemented before impacting on on-street and parking and incorporated into the CTMPs	Section 9.1.3
MCoA D93	During construction, all reasonably practicable measures must be implemented to maintain pedestrian, cyclist 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, cyclist and vehicle access, and parking arrangements, must be developed in consultation with affected businesses and implemented before the disruption. Adequate signage and directions to businesses must be provided before, and for the duration of any disruption	Sections 7.2.8 and 7.2.9
MCoA D94	A Traffic and Transport Liaison Group(s) must be established in accordance with the Construction Traffic Management Framework to inform the development of CTMPs	Section 11.2
MCoA D 95	Supplementary analysis and modelling as required by Sydney Metro and/ or the Traffic and Transport Liaison Group(s) must be undertaken to demonstrate that construction and operational traffic can be managed to minimise disruption to traffic network operations including changes to and the management of pedestrian, bicycle and public transport networks, public transport services, and pedestrian and cyclist movements. Revised traffic management measures must be incorporated into the CTMPs	Section 11.2
MCoA D98	Safe pedestrian and cyclist access must be maintained around construction sites during construction. In circumstances where pedestrian and cyclist access is restricted or removed due to construction activities, a proximate alternate route which complies with the relevant standards must be provided and signposted before the restriction or removal of the impacted access	Section 7.2.7

Table 10: Revised Environmental Management Measures (REMMs)

Requirement	Impact/ Issue	Mitigation Measure	Where addressed
TT1	Changes to the network	The community would be notified in advance of proposed road and pedestrian network changes through appropriate forms of community liaison	Section 9
TT2	Traffic incidents	In the event of a traffic related incident, coordination would be carried out with Transport for NSW, including Transport Coordination and / or the Transport Management Centre's Operations Manager	Section 7.2.13
TT3	Emergency vehicles access	Access to properties for emergency vehicles would be provided at all times	Section 11.4
TT4	Road safety	Vehicle access to and from construction sites would be managed to maintain pedestrian, cyclist and motorist safety. Depending on the location this may require manual supervision, physical barriers, temporary traffic signals and modifications to existing signals or on occasions police presence	Section 7.2.7
TT5		Additional enhancements for pedestrian, cyclist and motorist safety near the construction sites would be implemented during construction. This would include measures such as: <ul style="list-style-type: none"> ▪ Assessing the suitability of construction haulage routes through sensitive land use areas with respect to road safety ▪ Deployment of speed awareness signs in conjunction with variable message signs near construction sites to provide alerts to driver ▪ Providing community education and awareness about sharing the road safely with heavy vehicles ▪ Specific construction driver training to understand route constraints, safety and environmental considerations such as sharing the road safely with other road users and limiting the use of compression braking ▪ Requiring technology and equipment to improve vehicle safety, eliminate heavy vehicle blind spots and monitor vehicle location and driver behaviour 	Sections 8, 9 and Appendix F
TT6		All trucks would enter and exit construction sites in a forward direction, where reasonable and feasible	Section 8
TT7		Construction site traffic would be managed to minimise movements during peak periods	Section 8
TT8	Congestion	Construction site traffic immediately around construction sites (WMS, PMS, BNS and FDS) would be managed to minimise vehicle movements through school zones during pick up and drop off times	Applicable to Westmead (WMS) and Parramatta (PMS) sites only as noted in the REMM
TT9		Opportunities to minimise impacts at the Alexandra Avenue/ Bridge Road intersection would be determined in consultation with Transport for NSW	Applicable to Westmead site only as noted in the REMM
TT10	Loss of parking	Where existing parking is removed to facilitate construction activities, consultation would occur with the relevant local council to investigate opportunities to provide alternative parking facilities	Sections 7.2.9, 9.1.3 and Appendix G
TT11		Construction sites would be managed to minimise the number of construction workers parking on surrounding streets by: <ul style="list-style-type: none"> ▪ Encouraging workers to use public or active transport ▪ Encouraging ride sharing ▪ Provision of alternative parking locations and shuttle bus transfers where feasible and reasonable 	Section 7.2.12
TT15	Impacts on active transport	Where existing cyclists facilities (eg: bicycle parking) would be temporarily unavailable to facilitate construction activities, suitable replacement facilities would be provided for this duration	Section 7.2.7
TT17	Impacts on special events	During major special events, impacts to the transport and traffic network would be reduced by (as necessary) <ul style="list-style-type: none"> ▪ Minimising the level of construction activity and, if necessary, ceasing all construction activity 	Section 7.2.11

Requirement	Impact/ Issue	Mitigation Measure	Where addressed
		<ul style="list-style-type: none"> ▪ Maintaining appropriate access to all areas within the event precinct ▪ Erection of hoardings, site fencing and gates at key locations within the construction site boundary, to permit pedestrian movements adjacent to the construction site and separate pedestrians from construction vehicles ▪ Scheduling deliveries to the construction site outside of special event periods <p>For special events that require specific traffic measures, those measures would be developed in consultation with Transport for NSW, including Transport Coordination (for relevant locations) and the organisers of the event</p>	
TT18	Property access	Access to existing properties and buildings would be maintained in consultation with property owners	Section 7.2.8
TT19	Construction vehicle impacts	Traffic control measures require at the Parramatta metro station construction site access on George Street would be determined in consultation with Transport for NSW	Applicable to Parramatta site only as noted in the REMM
C11	Occurrence of cumulative impacts	<p>Coordination and consultation with the following stakeholders would occur, where required, to manage the interface of projects under construction at the same time:</p> <ul style="list-style-type: none"> ▪ Transport for NSW including Transport Coordination ▪ Department of Planning, Industry and Environment ▪ Sydney Trains ▪ NSW Trains ▪ Sydney Buses ▪ Sydney Water ▪ Port Authority of NSW ▪ Sydney Motorways Corporation ▪ Emergency service providers ▪ Utility providers ▪ Construction contractors <p>Coordination and consultation with these stakeholders would include:</p> <ul style="list-style-type: none"> ▪ Provision of regular updates to the detailed construction program, construction sites and haul routes ▪ Identification of key potential conflict points with other construction projects ▪ Developing mitigation strategies in order to manage conflicts. Depending on the nature of the conflict this could involve: <ul style="list-style-type: none"> • Adjustments to the Sydney Metro construction program work activities or haul routes or adjustments to the program activities or haul routes of other construction projects • Coordination of traffic management arrangements between projects 	Sections 7.2.10, 11.2 and 11.3

B.Special Events

Race Diary

Meeting Stage

- N = Nominations
- E = Ext Nominations
- W = Weights
- A = Acceptances

- R = Results
- Ab = Abandoned
- ☞ = Post Stewards

Meeting Type

- Blue = Metropolitan Race Meeting
- Purple = Provincial Race Meeting
- Green = Country Race Meeting
- Red = Barrier Trials

[If you're having trouble viewing video form, click here](#)

Show Date 

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
18 Oct 21 Muswellbrook Trials Hawkesbury	19 Oct 21 Grafton Orange Trials Grafton Orange Warwick Farm	20 Oct 21 Kensington	21 Oct 21 Hawkesbury	22 Oct 21 Canberra Scone Trials Canberra Scone	23 Oct 21 Albury Armidale Balranald Casino Harden Kembla Grange Mudgee Royal Randwick Trials Albury Armidale	24 Oct 21 Coonabarabran Port Macquarie Trials Port Macquarie
25 Oct 21 Beaumont Newcastle Trials Rosehill Gardens	26 Oct 21 Grafton Hawkesbury Trials Grafton	27 Oct 21 Kensington Trials Beaumont Newcastle	28 Oct 21 Gosford Sapphire Coast Trials Sapphire Coast	29 Oct 21 Moree Wagga Trials Moree Royal Randwick Wagga	30 Oct 21 Balranald Berrigan Coffs Harbour Dubbo Newcastle Rosehill Gardens Tumut Trials Coffs Harbour Dubbo	31 Oct 21 Goulburn Muswellbrook Trials Muswellbrook
01 Nov 21 Ballina Corowa Trials Ballina Corowa	02 Nov 21 Canberra Dubbo Kembla Grange Murwillumbah Muswellbrook Royal Randwick Sapphire Coast Tamworth Taree Wentworth Trials Canberra	03 Nov 21 Grafton Trials Grafton Warwick Farm	04 Nov 21 Hawkesbury	05 Nov 21 Albury Kempsey	06 Nov 21 Goulburn Rosehill Gardens Wyong Trials Goulburn	07 Nov 21 Armidale Warren Trials Armidale Warren
08 Nov 21 Lismore Queanbeyan Trials Lismore Queanbeyan Rosehill Gardens	09 Nov 21 Gosford	10 Nov 21 Hawkesbury Trials Kembla Grange Scone	11 Nov 21 Port Macquarie Trials Port Macquarie Royal Randwick	12 Nov 21 Ballina Canterbury Park Gundagai Trials Ballina Gosford	13 Nov 21 Bathurst Gundagai Kembla Grange Newcastle Trials Bathurst	14 Nov 21 Canberra Dubbo Trials Canberra Dubbo

Race Diary

Meeting Stage

- N = Nominations
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Show Date 

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
08 Nov 21 Lismore Queanbeyan Trials Lismore Queanbeyan Rosehill Gardens	09 Nov 21 Gosford	10 Nov 21 Hawkesbury Trials Kembla Grange Scone	11 Nov 21 Port Macquarie Trials Port Macquarie Royal Randwick	12 Nov 21 Ballina Canterbury Park Gundagai Trials Ballina Gosford	13 Nov 21 Bathurst Gundagai Kembla Grange Newcastle Trials Bathurst	14 Nov 21 Canberra Dubbo Trials Canberra Dubbo
15 Nov 21 Scone Trials Scone	16 Nov 21 Wyong Trials Warwick Farm	17 Nov 21 Rosehill Gardens	18 Nov 21 Hawkesbury Quirindi Trials Quirindi	19 Nov 21 Bong Bong Grafton Orange Trials Grafton Orange	20 Nov 21 Adaminaby Bowraville Cowra Gosford Hay Inverell Kembla Grange	21 Nov 21 Queanbeyan Taree
22 Nov 21 Wagga Trials Hawkesbury Wagga Wyong	23 Nov 21 Ballina Beaumont Newcastle Trials Ballina Royal Randwick	24 Nov 21 Warwick Farm	25 Nov 21 Narromine Wyong Trials Narromine	26 Nov 21 Canberra Canterbury Park Muswellbrook Trials Canberra Muswellbrook	27 Nov 21 Coonamble Kembla Grange Kempsey Rosehill Gardens Wagga Riverside Trials Coonamble Kempsey	28 Nov 21 Grafton Newcastle Trials Grafton
29 Nov 21 Sapphire Coast Taree Trials Sapphire Coast Taree	30 Nov 21 Tamworth Trials Rosehill Gardens Tamworth	01 Dec 21 Gosford	02 Dec 21 Coffs Harbour	03 Dec 21 Kensington Mudgee	04 Dec 21 Albury Cooma Gunnedah Newcastle Rosehill Gardens	05 Dec 21 Hawkesbury Nowra

Race Diary

Meeting Stage

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E = Ext Nominations
W = Weights
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Meeting Type

Blue = Metropolitan Race Meeting
Purple = Provincial Race Meeting
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Show Date 

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
29 Nov 21 Sapphire Coast Taree Trials Sapphire Coast Taree	30 Nov 21 Tamworth Trials Rosehill Gardens Tamworth	01 Dec 21 Gosford	02 Dec 21 Coffs Harbour	03 Dec 21 Kensington Mudgee	04 Dec 21 Albury Cooma Gunnedah Newcastle Rosehill Gardens	05 Dec 21 Hawkesbury Nowra
06 Dec 21 Tuncurry Wagga	07 Dec 21 Ballina Dubbo	08 Dec 21 Warwick Farm	09 Dec 21 Queanbeyan Wyong	10 Dec 21 Canterbury Park Murwillumbah Scone Warren	11 Dec 21 Albury Coffs Harbour Kembla Grange Moulamein Royal Randwick	12 Dec 21 Armidale Canberra
13 Dec 21 Beaumont Newcastle Kempsey	14 Dec 21 Orange	15 Dec 21 Wyong	16 Dec 21 Hawkesbury	17 Dec 21 Canterbury Park Goulburn Lismore	18 Dec 21 Dubbo Moree Newcastle Royal Randwick	19 Dec 21 Moruya Taree
20 Dec 21 Bathurst Tamworth	21 Dec 21 Scone	22 Dec 21 Warwick Farm	23 Dec 21 Gosford	24 Dec 21 Wagga	25 Dec 21	26 Dec 21 Albury Ballina Inverell Newcastle Queanbeyan Quirindi Royal Randwick Tumut Wauchope Wellington

C. Utility Works details

Item	Start Date	Finish Date	Utility	Street	Location - Start	Location - Finish	Side of Str	Work - Location	Work - Activity	Work area	Traffic control required	TGS#
1	12/01/2022	17/01/2022	Electricity	Unwin Street	Unwin Street	Unwin Street	North South	Northern Nature Strip Southern Nature Strip Portion of southern lane	Excavation Work on Power Poles Pull cables under road	- 90 m x 30 m	Lane and nature strip closure	TGS-CLY-UWN-EB-2201 and TGS-CLY-UWN-WB-2201
2	12/01/2022	17/01/2022	Electricity	Unwin Street	Unwin Street	Unwin Street	North South	Northern Nature Strip Southern Nature Strip Portion of southern lane	Excavation Work on Power Poles	- 350 m x 30 m	Lane and nature strip closure	TGS-CLY-UWN-EB-2201 and TGS-CLY-UWN-WB-2201
3	23/10/2021	28/10/2021	Electricity	Unwin Street	Shirley Street	Unwin Street	North South	Northern Nature Strip Southern Nature Strip Portion of southern lane	Excavation Work on Power Poles Pull cables under road	- 90 m x 30 m	Traffic, parking lane and nature strip closure	TGS-CLY-UWN-EB-2201 and TGS-CLY-UWN-WB-2201
4	23/10/2021	28/10/2021	Electricity	Kay Street	Wentworth Street	Unwin Street	North South	Southern Nature Strip Northern Nature Strip Airspace above road	Work on Power Poles Road Crossing	- 30 m x 30 m	Parking lane and nature strip closure	TGS-CLY-KAY-EB-2201
4	23/10/2021	28/10/2021	Electricity	Kay Street	Wentworth Street	Unwin Street	South	Southern Nature Strip	Excavation Work on Power Poles	- 180 m x 10 m	Parking lane and nature strip closure	TGS-CLY-KAY-WB-1201
4	23/10/2021	28/10/2021	Electricity	Wentworth Street	Western Motorway	Kay Street	West	Western Nature Strip Portion of western lane	Excavation Work on Power Poles	- 125 m x 10 m	Parking lane and nature strip closure	TGS-CLY-WEN-NB-1201
4	23/10/2021	28/10/2021	Electricity	Wentworth Street	Kay Street	Cul-de-sac	West	Western Nature Strip Portion of western lane	Work on Power Poles	- 115 m x 10 m	Parking lane and nature strip closure	TGS-CLY-WEN-NB-1201
5	12/01/2022	17/01/2022	Gas	Unwin Street	Unwin Street	Unwin Street	South	Southern Nature Strip Portion of southern lane	Excavation Work in Utility Pits	- 10 m x 5 m	Traffic, parking lane and nature strip closure	TGS-CLY-UWN-WB-2201
6	12/01/2022	17/01/2022	Gas	Unwin Street	Unwin Street	Unwin Street	South	Southern Nature Strip Portion of southern lane	Excavation Work in Utility Pits	- 10 m x 5 m	Traffic, parking lane and nature strip closure	TGS-CLY-UWN-WB-2201
7	23/10/2021	28/10/2021	Gas	Shirley Street	Shirley Street	Shirley Street	West	Western Nature Strip Portion of western lane	Excavation Work in Utility Pits	- 10 m x 5 m	Parking lane and nature strip closure	TGS-CLY-SHI-NB-1201
7	23/10/2021	28/10/2021	Gas	Unwin Street	Shirley Street	Unwin Street	South	Southern Nature Strip Portion of southern lane	Excavation Work in Utility Pits	- 10 m x 5 m	Traffic, parking lane and nature strip closure	TGS-CLY-UWN-WB-2201
8	23/10/2021	28/10/2021	Gas	Wentworth Street	Western Motorway	Kay Street	West	Western Nature Strip Portion of western lane	Excavation Work in Utility Pits	- 10 m x 5 m	Parking lane and footpath closure	TGS-CLY-WEN-NB-1201
8	23/10/2021	28/10/2021	Gas	Wentworth Street	Kay Street	Cul-de-sac	West	Western Nature Strip Portion of western lane	Excavation Work in Utility Pits	- 10 m x 5 m	Parking lane and nature strip closure	TGS-CLY-WEN-NB-1201
9	12/01/2021	17/01/2022	Communications	Unwin Street	to the west of Stables		South	Southern Nature Strip Portion of southern lane	Excavation Work in Utility Pits	- 10 m x 5 m	Traffic, parking lane and nature strip closure	TGS-CLY-UWN-WB-2201
10	12/01/2022	17/01/2022	Communications	Unwin Street	to the west of Tollfast		South	Southern Nature Strip Portion of southern lane	Excavation Work in Utility Pits	- 10 m x 5 m	Traffic, parking lane and nature strip closure	TGS-CLY-UWN-WB-2201
11	23/10/2021	28/10/2021	Communications	Shirley Street	Unwin Street		West	Western Nature Strip Portion of western lane	Excavation Work in Utility Pits	- 10 m x 5 m	Parking lane and nature strip closure	TGS-CLY-SHI-NB-1201
11	23/10/2021	28/10/2021	Communications	Unwin Street	Shirley Street		South	Southern Nature Strip Portion of southern lane	Excavation Work in Utility Pits	- 10 m x 5 m	Traffic, parking lane and nature strip closure	TGS-CLY-UWN-EB-2201 and TGS-CLY-UWN-WB-2201
12	12/01/2022	17/01/2022	Communications	Unwin Street	Hillrose Business Park driveway		East	Eastern Nature Strip Portion of eastern lane	Excavation Work in Utility Pits	- 10 m x 5 m	Parking lane and nature strip closure	TGS-CLY-UWN-SB-1201
13	23/10/2021	28/10/2021	Communications	Unwin Street	Last building before Kay Street	2 Kay Street	East	Southern Nature Strip Portion of southern lane	Excavation Work in Utility Pits	- 10 m x 5 m	Parking lane and nature strip closure	TGS-CLY-UWN-SB-1201
14	23/10/2021	28/10/2021	Communications	Kay Street	Wentworth Street	Duck Creek	South	Southern Nature Strip Portion of southern lane	Excavation Work in Utility Pits	- 10 m x 5 m	Parking lane and nature strip closure	TGS-CLY-KAY-WB-1201
14	23/10/2021	28/10/2021	Communications	Wentworth Street	Western Motorway	Kay Street	West	Western Nature Strip Portion of western lane	Excavation Work in Utility Pits	- 10 m x 5 m	Parking lane and nature strip closure	TGS-CLY-WEN-NB-1201
14	23/10/2021	28/10/2021	Communications	Wentworth Street	Kay Street	Cul-de-sac	West	Western Nature Strip Portion of western lane	Excavation Work in Utility Pits	- 10 m x 5 m	Parking lane and nature strip closure	TGS-CLY-WEN-NB-1201
15	12/01/2022	17/01/2022	Water	Unwin Street			South	Southern Nature Strip Portion of southern lane	Excavation Work in Utility Pits	- 10 m x 5 m	Traffic, parking lane and nature strip closure	TGS-CLY-UWN-WB-2201
15	12/01/2022	17/01/2022	Water	Unwin Street			South	Southern Nature Strip Portion of southern lane	Excavation Work in Utility Pits	- 10 m x 5 m	Traffic, parking lane and nature strip closure	TGS-CLY-UWN-WB-2201
16	12/01/2022	17/01/2022	Water	Unwin Street			South	Southern Nature Strip Portion of southern lane	Excavation Work in Utility Pits	- 10 m x 5 m	Traffic, parking lane and nature strip closure	TGS-CLY-UWN-WB-2201
17	23/10/2021	28/10/2021	Water	Shirley Street	Duck Creek	Unwin Street	West	Western Nature Strip Portion of western lane	Excavation Work in Utility Pits	- 10 m x 5 m	Parking lane and nature strip closure	TGS-CLY-SHI-NB-1201
17	23/10/2021	28/10/2021	Water	Unwin Street	Shirley Street		South	Southern Nature Strip Portion of southern lane	Excavation Work in Utility Pits	- 10 m x 5 m	Traffic, parking lane and nature strip closure	TGS-CLY-UWN-WB-2201
18	23/10/2021	28/10/2021	Water	Unwin Street	Last building before Kay Street	2 Kay Street	East	Eastern Nature Strip Portion of eastern lane	Excavation Work in Utility Pits	- 10 m x 5 m	Parking lane and nature strip closure	TGS-CLY-UWN-SB-1201
19	23/10/2021	28/10/2021	Water	Wentworth Street	Western Motorway	Kay Street	West	Western Nature Strip Portion of western lane	Excavation Work in Utility Pits	- 10 m x 5 m	Parking lane and nature strip closure	TGS-CLY-WEN-NB-1201
19	23/10/2021	28/10/2021	Water	Wentworth Street	Kay Street	Cul-de-sac	West	Western Nature Strip Portion of western lane	Excavation Work in Utility Pits	- 10 m x 5 m	Parking lane and nature strip closure	TGS-CLY-WEN-NB-1201

D. Traffic Guidance Schemes

TGS #	Location	From	To	Timing	Traffic control	Works	Impacts
TGS-CLY-UNW-WB-1201	Unwin Street	Rosehill Racecourse Gate 2	Shirley Street	Day	Shuttle flow	Building demolition	Minimal impacts to traffic as a number of industrial uses are no longer in this area No footpaths currently exists
TGS-CLY-KAY-EB-2201	Kay Street	Wentworth Street	Unwin Street	Day	Lane and nature strip closures	Electrical works including works on power poles	Minimal impacts to traffic as a number of industrial uses are no longer in this area Footpath to be maintained open
TGS-CLY-KAY-WB-1201	Kay Street	Wentworth Street	Unwin Street	Day	Parking lane closure	Utility works including excavation and work on utility pits	Works undertaken in parking lane Footpath to be maintained open
TGS-CLY-SHI-NB-1201	Shirley Street	Unwin Street	Duck Creek	Day	Parking lane and nature strip closure	Utility works including excavation and work on utility pits	Works undertaken in parking lane Footpath to be maintained open
TGS-CLY-UWN-SB-1201	Unwin Street	Shirley Street		Day	Nature strip, traffic and parking lane closure	Utility works including excavation and work on utility pits	Minimal impacts to traffic as a number of industrial uses are no longer in this area. Footpath to be maintained open
TGS-CLY-WEN-NB-1201	Wentworth Street	M4 Motorway Overpass	Cul-de-sac	Day	Parking lane and nature strip closure	Utility works including excavation and work on utility pits	Minimal impacts to traffic as a number of industrial uses are no longer in this area Footpath to be maintained open
TGS-CLY-KAY-WB-2201	Kay Street	Wentworth Street	Unwin Street	Day	Nature strip, traffic and parking lane closure	Utility works including excavation and work on utility pits	Minimal impacts to traffic as a number of industrial uses are no longer in this area Footpath to be maintained open

TGS #	Location	From	To	Timing	Traffic control	Works	Impacts
TGS-CLY-WEN-NB-1202	Wentworth Street	Kay Street	Cul-de-sac	Day	Parking lane and nature strip closure	Utility works including excavation and work on utility pits	Minimal impacts to traffic as a number of industrial uses are no longer in this area Footpath to be maintained open
TGS-CLY-UWN-EB-2202	Unwin Street	Unwin Street	Racecourse entry	Day	Nature strip, traffic and parking lane closure	Utility works including excavation and work on utility pits	Minimal impacts to traffic as a number of industrial uses are no longer in this area No footpaths currently exist.
TGS-CLY-UWN-EB-2203	Unwin Street	Racecourse Entry	West of Shirley Street	Day	Nature strip, traffic and parking lane closure	Utility works including excavation and work on utility pits	Minimal impacts to traffic as a number of industrial uses are no longer in this area No footpaths currently exist.
TGS-CLY-UWN-EB-2204	Unwin Street	East of Racecourse Entry	Shirley Street	Day	Nature strip, traffic and parking lane closure	Utility works including excavation and work on utility pits	Minimal impacts to traffic as a number of industrial uses are no longer in this area No footpaths currently exist.
TGS-CLY-UWN-WB-2202	Unwin Street	Unwin Street	Racecourse Entry	Day	Nature strip, traffic and parking lane closure	Utility works including excavation and work on utility pits	Minimal impacts to traffic as a number of industrial uses are no longer in this area No footpaths currently exist.
TGS-CLY-UWN-WB-2203	Unwin Street	Unwin Street	Racecourse Entry	Day	Nature strip, traffic and parking lane closure	Utility works including excavation and work on utility pits	Minimal impacts to traffic as a number of industrial uses are no longer in this area No footpaths currently exist.

Install as per TGS and in accordance with www.invarion.com
 any changes as shown on TGS

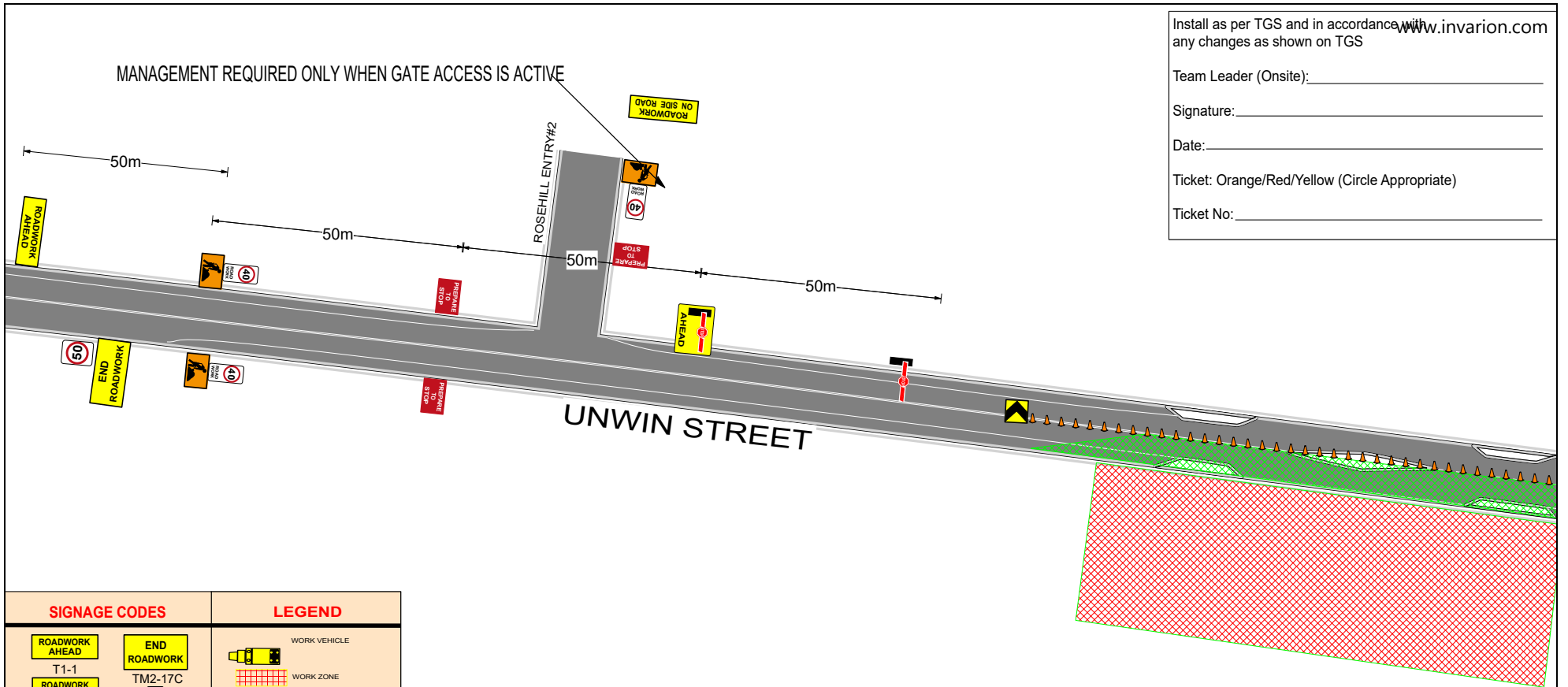
Team Leader (Onsite): _____

Signature: _____

Date: _____

Ticket: Orange/Red/Yellow (Circle Appropriate)

Ticket No: _____



SIGNAGE CODES		LEGEND	
			WORK VEHICLE
			WORK ZONE
			WORK ZONE
			TRAFFIC FLOW
			PEDESTRIAN DIVERSION ROUTE
			SITE BOUNDARY
			ACCESS GATE
			AUTHORISED TRAFFIC CONTROLLER
			700 MM TRAFFIC CONES WITH REFLECTIVE NIGHT STRIP SPACINGS OF 0.5M

EXISTING SPEED	TRAFFIC CONTROL TAPER	LATERAL SHIFT TAPER	MERGE TAPER
0-45	15M	15M	15M
46-55	15M	15M	30M
56-65	30M	30M	60M

	Area:	CLYDE
	Location:	UNWIN STREET
TRAFFIC GUIDANCE SCHEME DATE: 16/09/2021 R.2	TCP No:	TGS-CLY-UNW-WB-1201
	Sheet No:	1 OF 2

NOTES

- Traffic control works shall be installed & maintained in accordance with A.S. 1742.3 (Traffic Control Devices for Works on Roads) & Traffic control at Work Sites Manual .
- Local constraints may not allow sign and devices to be placed exactly in accordance with the TGS, therefore it may be necessary to place sign and devices as close as possible to the spacing indicated.
- Signs should generally be placed 1 meter clear of the travelled path where possible and be clearly visible and free of debris.
- Signs are to be Class 1 retro-reflective (day/night)
- Signage placed at D distance spacing (TCAWS Sec 7.3). Where duplication is not possible 0.5D spacing utilised where safe to implement

DRAWN BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
SIGNATURE:	
PLAN CHECKED BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
SIGNATURE:	

Install as per TGS and in accordance with www.invarion.com
any changes as shown on TGS

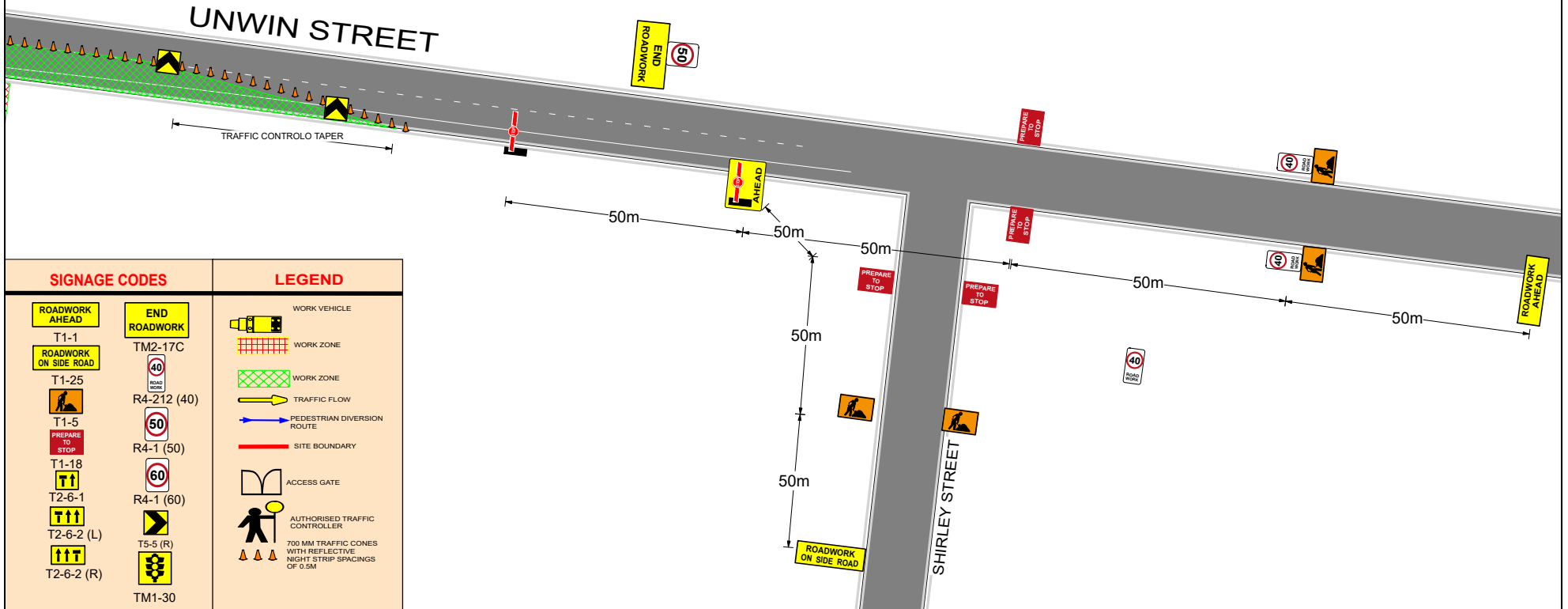
Team Leader (Onsite): _____

Signature: _____

Date: _____

Ticket: Orange/Red/Yellow (Circle Appropriate)

Ticket No: _____



SIGNAGE CODES		LEGEND
T1-1	TM2-17C	WORK VEHICLE
T1-25	R4-212 (40)	WORK ZONE
T1-5	R4-1 (50)	WORK ZONE
T1-18	R4-1 (60)	TRAFFIC FLOW
T2-6-1	T5-5 (R)	PEDESTRIAN DIVERSION ROUTE
T2-6-2 (L)	TM1-30	SITE BOUNDARY
T2-6-2 (R)		ACCESS GATE
		AUTHORISED TRAFFIC CONTROLLER
		700 MM TRAFFIC CONES WITH REFLECTIVE NIGHT STRIP SPACINGS OF 0.5M

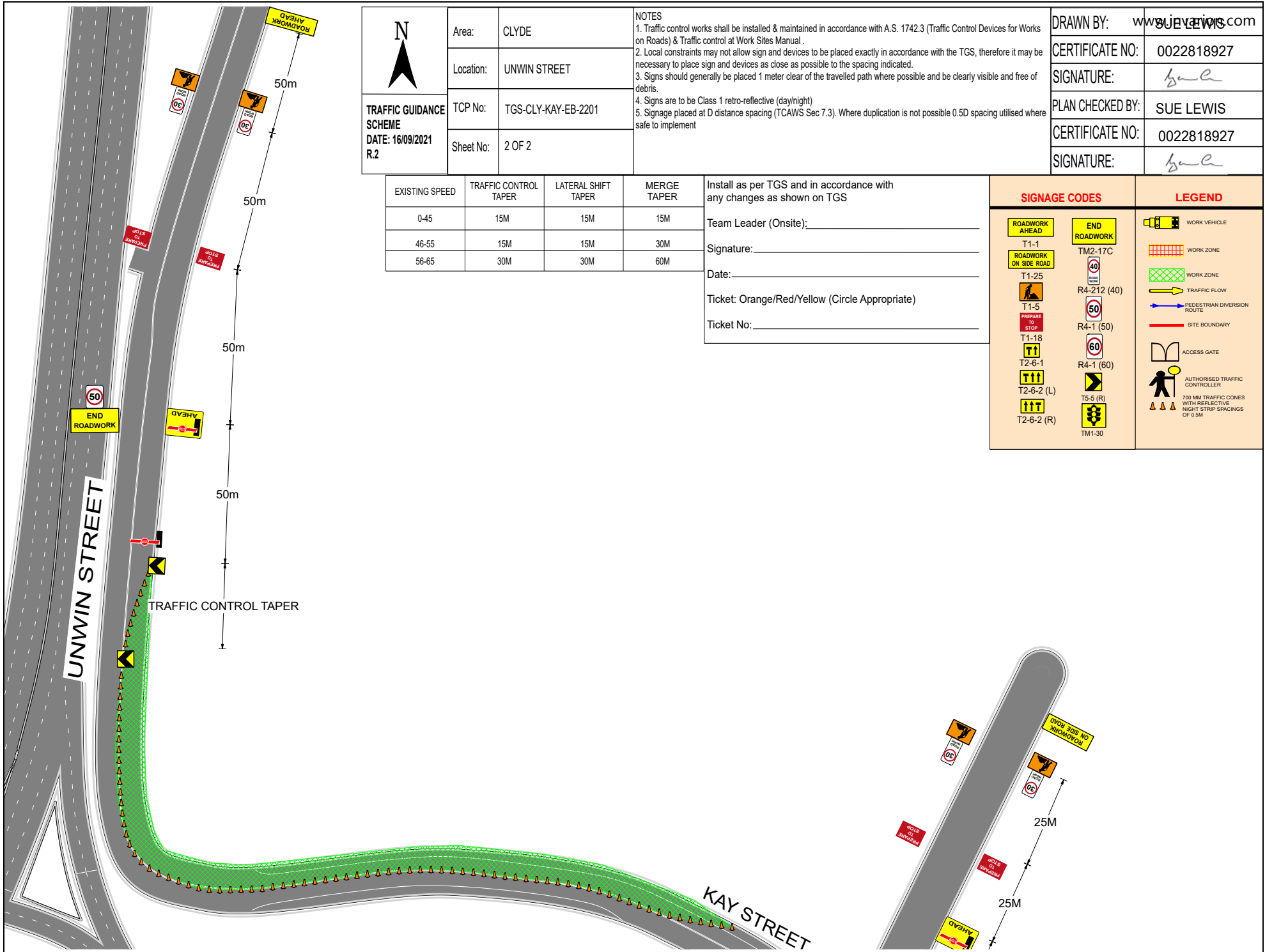
TRAFFIC GUIDANCE SCHEME
DATE: 16/09/2021
R.2

Area:	CLYDE
Location:	UNWIN STREET
TCP No:	TGS-CLY-UNW-WB-1201
Sheet No:	2 OF 2

NOTES

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5. Signage placed at D distance spacing (TCAWS Sec 7.3). Where duplication is not possible 0.5D spacing utilised where safe to implement

DRAWN BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
SIGNATURE:	
PLAN CHECKED BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
SIGNATURE:	



TRAFFIC GUIDANCE SCHEME
 DATE: 16/09/2021
 R.2

Area: CLYDE
 Location: UNWIN STREET
 TCP No: TGS-CLY-KAY-EB-2201
 Sheet No: 2 OF 2

NOTES
 1. Traffic control works shall be installed & maintained in accordance with A.S. 1742.3 (Traffic Control Devices for Works on Roads) & Traffic control at Work Sites Manual.
 2. Local constraints may not allow sign and devices to be placed exactly in accordance with the TGS, therefore it may be necessary to place sign and devices as close as possible to the spacing indicated.
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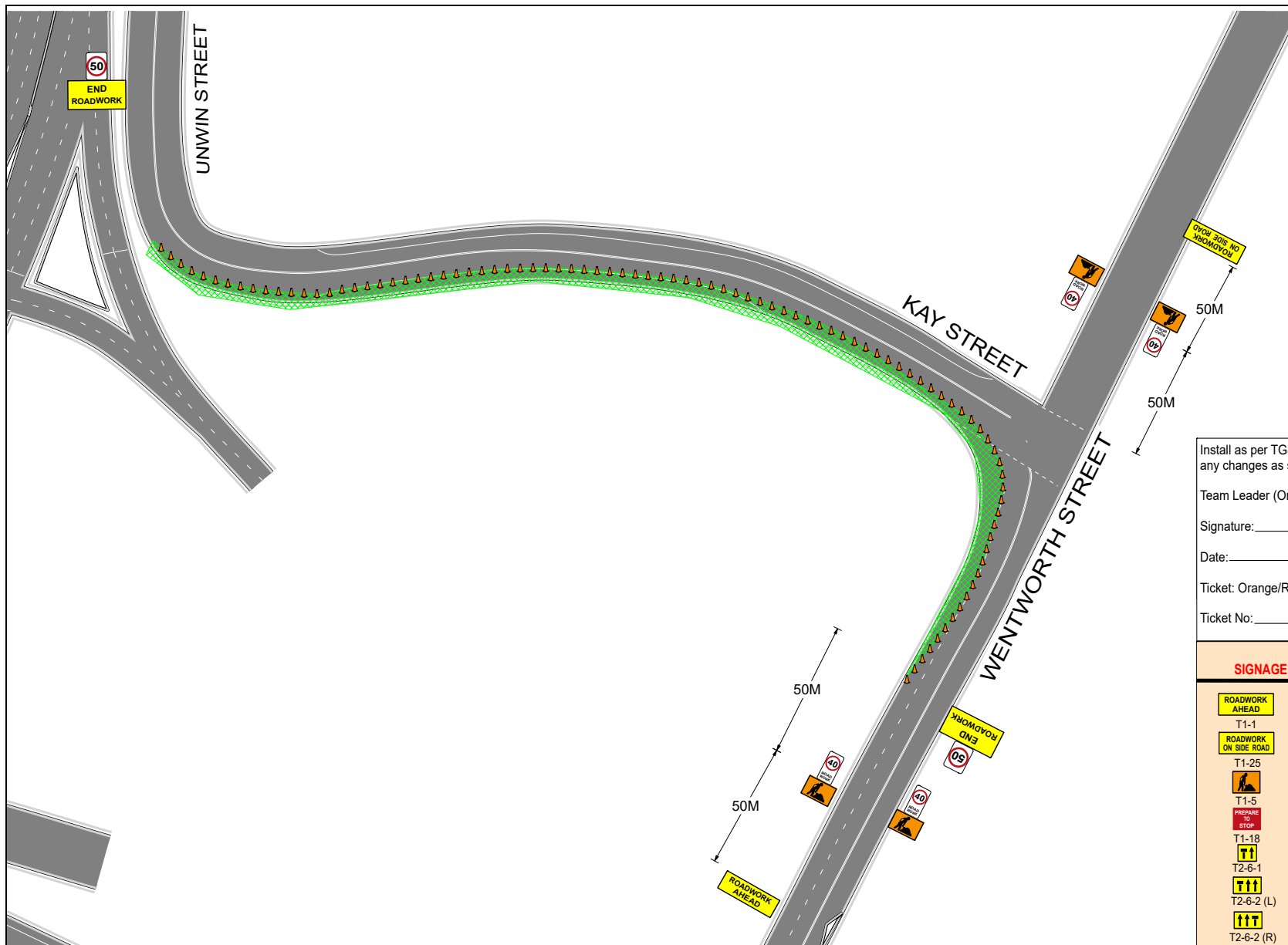
DRAWN BY: www.suelewis.com
 CERTIFICATE NO: 0022818927
 SIGNATURE: *[Signature]*
 PLAN CHECKED BY: SUE LEWIS
 CERTIFICATE NO: 0022818927
 SIGNATURE: *[Signature]*

EXISTING SPEED	TRAFFIC CONTROL TAPER	LATERAL SHIFT TAPER	MERGE TAPER
0-45	15M	15M	15M
46-55	15M	15M	30M
56-65	30M	30M	60M

Install as per TGS and in accordance with any changes as shown on TGS

Team Leader (Onsite): _____
 Signature: _____
 Date: _____
 Ticket: Orange/Red/Yellow (Circle Appropriate)
 Ticket No: _____

SIGNAGE CODES		LEGEND
ROADWORK AHEAD	END ROADWORK	WORK VEHICLE
T1-1	TM2-17C	WORK ZONE
ROADWORK ON SIDE ROAD	40	WORK ZONE
T1-25	R4-212 (40)	TRAFFIC FLOW
T1-5	50	PEDESTRIAN DIVERSION ROUTE
PREPARE TO STOP	R4-1 (50)	SITE BOUNDARY
T1-18	60	ACCESS GATE
T2-6-1	R4-1 (60)	AUTHORISED TRAFFIC CONTROLLER
T2-6-2 (L)	TS-5 (R)	700 MM TRAFFIC CONES WITH REFLECTIVE NIGHT STRIP SPACINGS OF 0.5M
T2-6-2 (R)	TM1-30	



Install as per TGS and in accordance with any changes as shown on TGS

Team Leader (Onsite): _____

Signature: _____

Date: _____

Ticket: Orange/Red/Yellow (Circle Appropriate)

Ticket No: _____

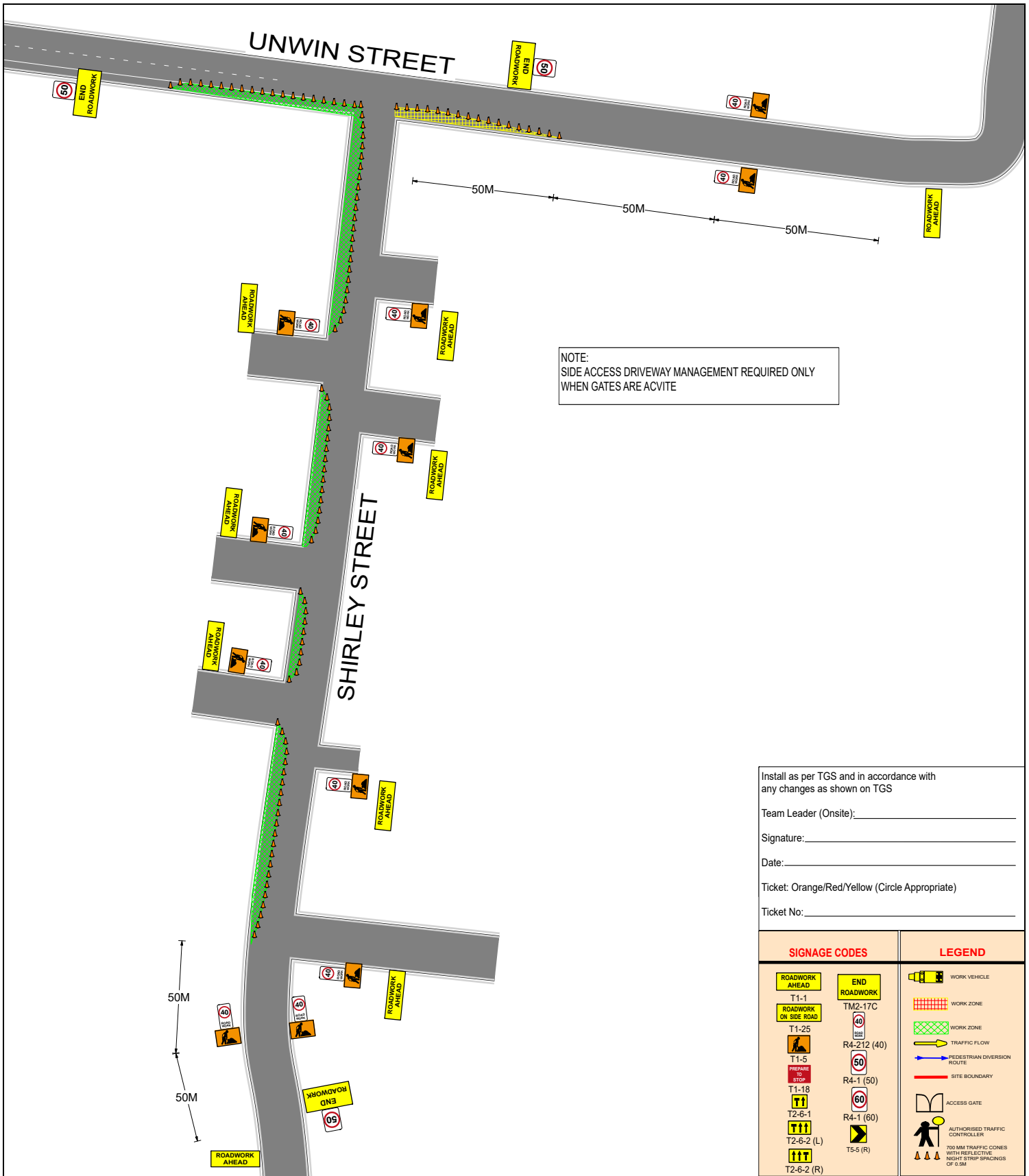
SIGNAGE CODES		LEGEND

 TRAFFIC GUIDANCE SCHEME DATE: 16/09/2021 R.2	Area:	CLYDE
	Location:	UNWIN STREET
	TCP No:	TGS-CLY-KAY-WB-1201
	Sheet No:	1 OF 1

NOTES

- Traffic control works shall be installed & maintained in accordance with A.S. 1742.3 (Traffic Control Devices for Works on Roads) & Traffic control at Work Sites Manual.
- Local constraints may not allow signs and devices to be placed exactly in accordance with the TGS, therefore it may be necessary to place sign and devices as close as possible to the spacing indicated.
- Signs should generally be placed 1 meter clear of the travelled path where possible and be clearly visible and free of debris.
- Signs are to be Class 1 retro-reflective (day/night)
- Signage placed at D distance spacing (TCAWS Sec 7.3). Where duplication is not possible 0.5D spacing utilised where safe to implement

DRAWN BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
SIGNATURE:	
PLAN CHECKED BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
SIGNATURE:	



NOTE:
SIDE ACCESS DRIVEWAY MANAGEMENT REQUIRED ONLY
WHEN GATES ARE ACTIVE

Install as per TGS and in accordance with any changes as shown on TGS

Team Leader (Onsite): _____

Signature: _____

Date: _____

Ticket: Orange/Red/Yellow (Circle Appropriate)

Ticket No: _____

SIGNAGE CODES		LEGEND
ROADWORK AHEAD	END ROADWORK	WORK VEHICLE
T1-1 ROADWORK ON SIDE ROAD	TM2-17C	WORK ZONE
T1-25	R4-212 (40)	WORK ZONE
T1-5	R4-1 (50)	TRAFFIC FLOW
PREPARE TO STOP	R4-1 (60)	PEDESTRIAN DIVERSION ROUTE
T1-18	R4-1 (60)	SITE BOUNDARY
T2-6-1	T5-5 (R)	ACCESS GATE
T2-6-2 (L)	T5-5 (R)	AUTHORISED TRAFFIC CONTROLLER
T2-6-2 (R)		700 MM TRAFFIC CONES WITH REFLECTIVE NIGHT STOP SPACINGS OF 0.5M

 TRAFFIC GUIDANCE SCHEME DATE: 16/09/2021 R2 www.invarion.com	Area:	CLYDE
	Location:	UNWIN STREET
	TCP No:	TGS-CLY-SHI-NB-1201
	Sheet No:	1 OF 1

NOTES

- Traffic control works shall be installed & maintained in accordance with A.S. 1742.3 (Traffic Control Devices for Works on Roads) & Traffic control at Work Sites Manual.
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- Signs are to be Class 1 retro-reflective (day/night)
- Signage placed at D distance spacing (TCAWS Sec 7.3). Where duplication is not possible 0.5D spacing utilised where safe to implement

DRAWN BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
SIGNATURE:	
PLAN CHECKED BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
SIGNATURE:	

Install as per TGS and in accordance with any changes as shown on TGS www.invarion.com

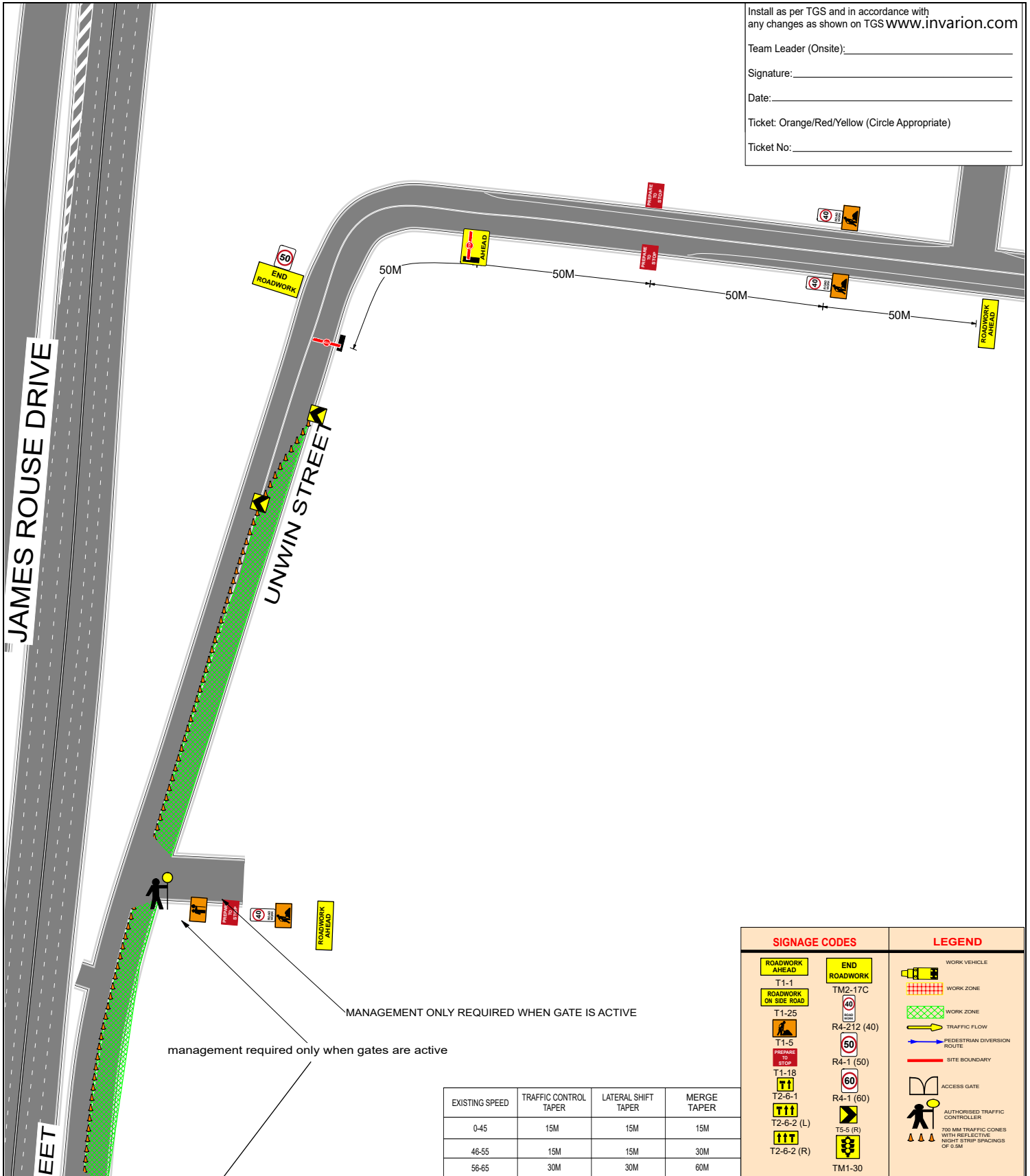
Team Leader (Onsite): _____

Signature: _____

Date: _____

Ticket: Orange/Red/Yellow (Circle Appropriate)

Ticket No: _____



SIGNAGE CODES		LEGEND
ROADWORK AHEAD	END ROADWORK	WORK VEHICLE
T1-1	TM2-17C	WORK ZONE
ROADWORK ON SIDE ROAD	40	WORK ZONE
T1-25	R4-212 (40)	TRAFFIC FLOW
PREPARE TO STOP	50	PEDESTRIAN DIVERSION ROUTE
T1-5	R4-1 (50)	SITE BOUNDARY
T1-18	60	ACCESS GATE
T2-G-1	R4-1 (60)	AUTHORISED TRAFFIC CONTROLLER
T2-G-2 (L)	T5-S (R)	700 MM TRAFFIC CONES WITH REFLECTIVE NIGHT STRIP SPACINGS OF 0.5M
T2-G-2 (R)	TM1-30	

EXISTING SPEED	TRAFFIC CONTROL TAPER	LATERAL SHIFT TAPER	MERGE TAPER
0-45	15M	15M	15M
46-55	15M	15M	30M
56-65	30M	30M	60M

 TRAFFIC GUIDANCE SCHEME DATE: 16/09/2021 R.2	Area:	CLYDE
	Location:	UNWIN STREET
	TCP No:	TGS-CLY-UWN-SB-1201
	Sheet No:	2 OF 2

NOTES

- Traffic control works shall be installed & maintained in accordance with A.S. 1742.3 (Traffic Control Devices for Works on Roads) & Traffic control at Work Sites Manual.
- Local constraints may not allow sign and devices to be placed exactly in accordance with the TGS, therefore it may be necessary to place sign and devices as close as possible to the spacing indicated.
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- Signs are to be Class 1 retro-reflective (day/night)
- Signage placed at D distance spacing (TCAWS Sec 7.3). Where duplication is not possible 0.5D spacing utilised where safe to implement

DRAWN BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
SIGNATURE:	
PLAN CHECKED BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
SIGNATURE:	

Install as per TGS and in accordance with any changes as shown on TGS

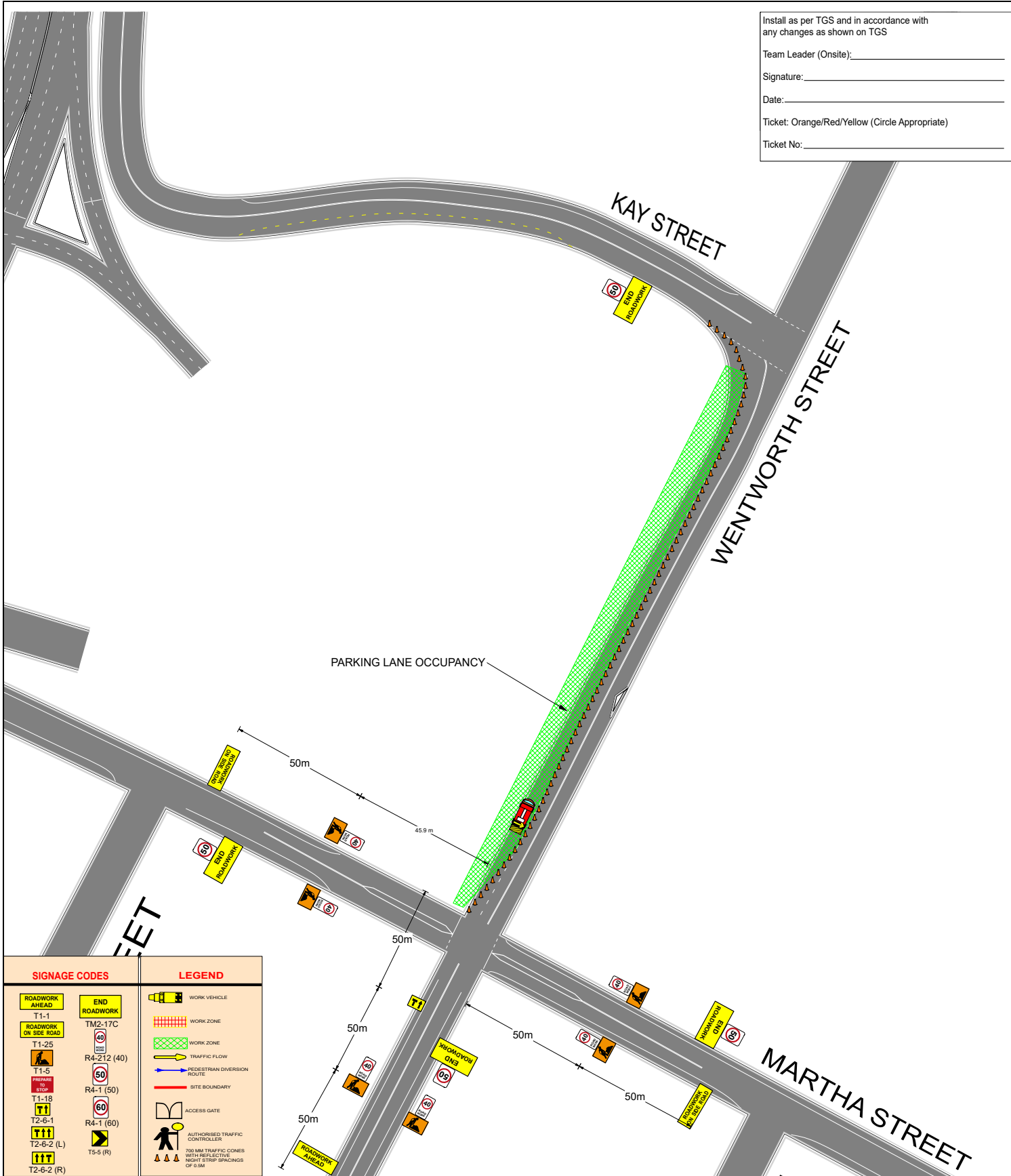
Team Leader (Onsite): _____

Signature: _____

Date: _____

Ticket: Orange/Red/Yellow (Circle Appropriate)

Ticket No: _____



SIGNAGE CODES		LEGEND	
ROADWORK AHEAD	END ROADWORK	WORK VEHICLE	WORK ZONE
ROADWORK ON SIDE ROAD	TM2-17C	WORK ZONE	TRAFFIC FLOW
T1-1	R4-212 (40)	PEDESTRIAN DIVERSION ROUTE	SITE BOUNDARY
T1-25	R4-1 (50)	ACCESS GATE	AUTHORIZED TRAFFIC CONTROLLER
T1-5	R4-1 (60)	700 MM TRAFFIC CONES WITH REFLECTIVE NIGHT STRIP SPACINGS OF 5.0M	
T1-18	T5-5 (R)		
T2-6-1			
T2-6-2 (L)			
T2-6-2 (R)			

TRAFFIC GUIDANCE SCHEME
 DATE: 16/09/2021
 R.2
 www.invarion.com

Area:	CLYDE
Location:	UNWIN STREET
TCP No:	TGS-CLY-WEN-NB-1201
Sheet No:	1 OF 1

NOTES

- Traffic control works shall be installed & maintained in accordance with A.S. 1742.3 (Traffic Control Devices for Works on Roads) & Traffic control at Work Sites Manual.
- Local constraints may not allow sign and devices to be placed exactly in accordance with the TGS, therefore it may be necessary to place sign and devices as close as possible to the spacing indicated.
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- Signs are to be Class 1 retro-reflective (day/night)
- Signage placed at D distance spacing (TCAWS Sec 7.3). Where duplication is not possible 0.5D spacing utilised where safe to implement

DRAWN BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
SIGNATURE:	
PLAN CHECKED BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
SIGNATURE:	

Install as per TGS and in accordance with any changes as shown on TGS

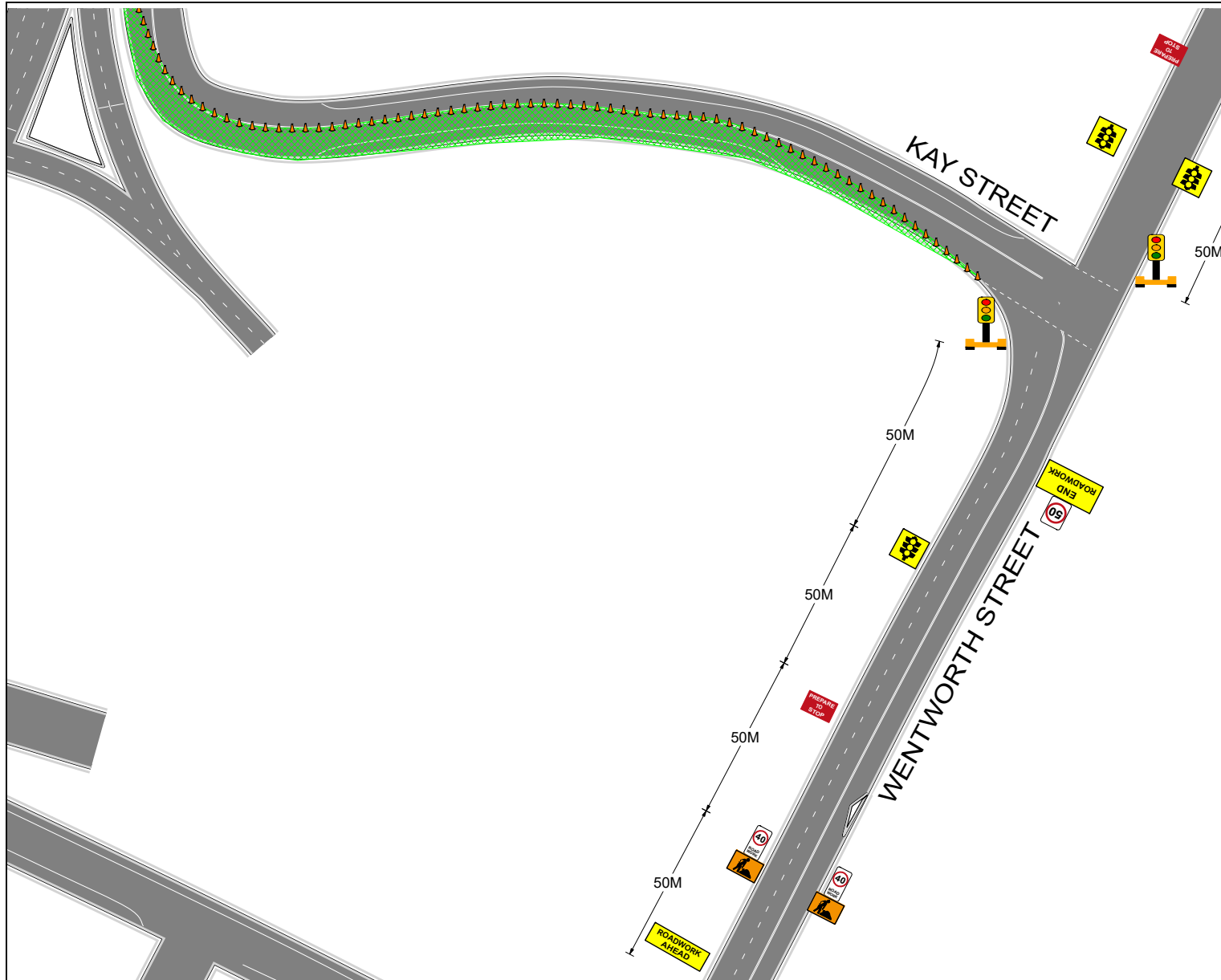
Team Leader (Onsite): _____

Signature: _____

Date: _____

Ticket: Orange/Red/Yellow (Circle Appropriate)

Ticket No: _____



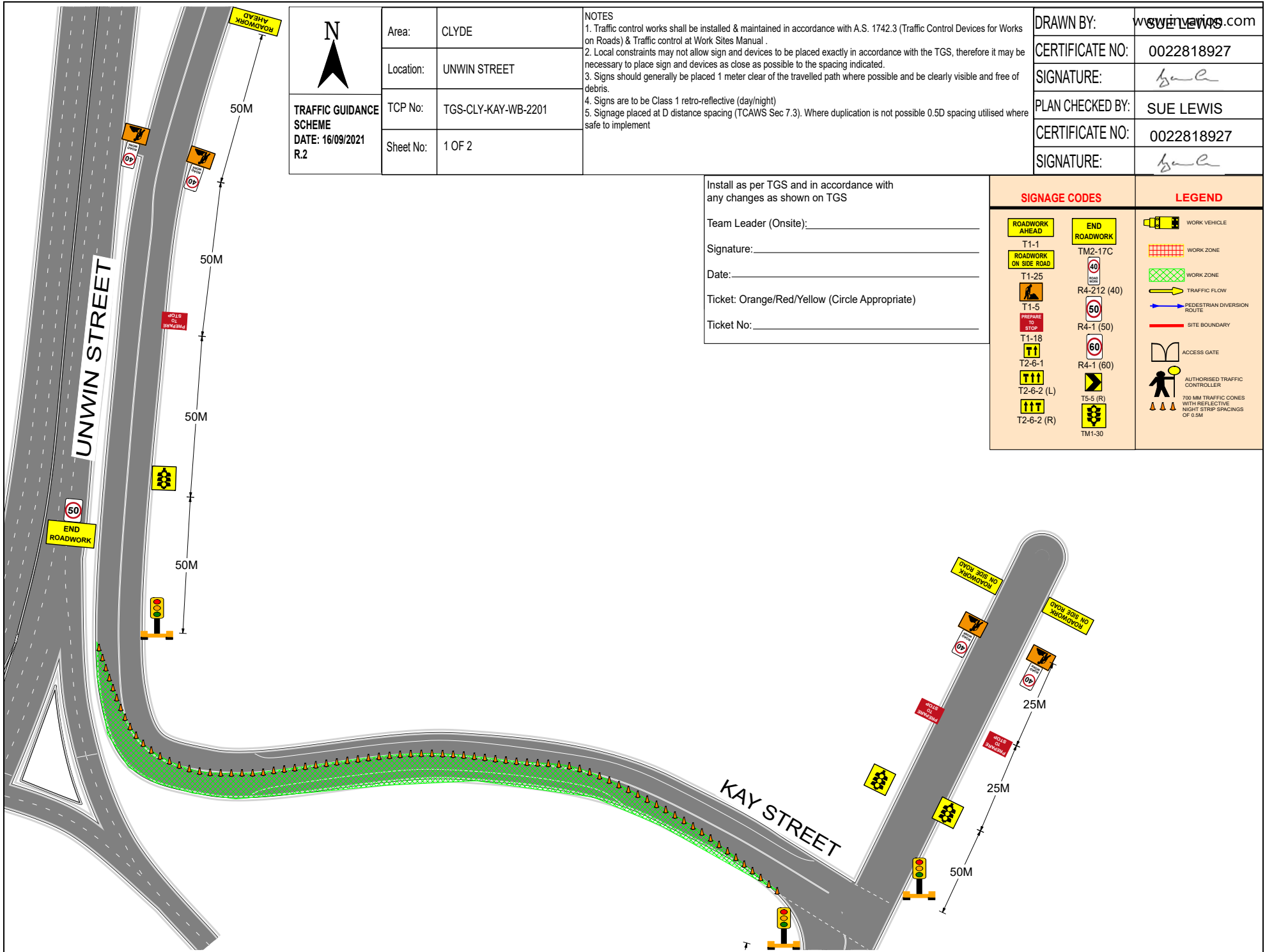
SIGNAGE CODES		LEGEND

 TRAFFIC GUIDANCE SCHEME DATE: 16/09/2021 R.2	Area:	CLYDE
	Location:	UNWIN STREET
	TCP No:	TGS-CLY-KAY-WB-2201
	Sheet No:	1 OF 2

NOTES

- Traffic control works shall be installed & maintained in accordance with A.S. 1742.3 (Traffic Control Devices for Works on Roads) & Traffic control at Work Sites Manual.
- Local constraints may not allow sign and devices to be placed exactly in accordance with the TGS, therefore it may be necessary to place sign and devices as close as possible to the spacing indicated.
- Signs should generally be placed 1 meter clear of the travelled path where possible and be clearly visible and free of debris.
- Signs are to be Class 1 retro-reflective (day/night)
- Signage placed at D distance spacing (TCAWS Sec 7.3). Where duplication is not possible 0.5D spacing utilised where safe to implement

DRAWN BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
SIGNATURE:	
PLAN CHECKED BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
SIGNATURE:	



TRAFFIC GUIDANCE SCHEME
 DATE: 16/09/2021
 R.2

Area:	CLYDE
Location:	UNWIN STREET
TCP No:	TGS-CLY-KAY-WB-2201
Sheet No:	1 OF 2

NOTES

1. Traffic control works shall be installed & maintained in accordance with A.S. 1742.3 (Traffic Control Devices for Works on Roads) & Traffic control at Work Sites Manual .
2. Local constraints may not allow sign and devices to be placed exactly in accordance with the TGS, therefore it may be necessary to place sign and devices as close as possible to the spacing indicated.
3. Signs should generally be placed 1 meter clear of the travelled path where possible and be clearly visible and free of debris.
4. Signs are to be Class 1 retro-reflective (day/night)
5. Signage placed at D distance spacing (TCAWS Sec 7.3). Where duplication is not possible 0.5D spacing utilised where safe to implement

DRAWN BY:	www.wsw.com
CERTIFICATE NO:	0022818927
SIGNATURE:	<i>[Signature]</i>
PLAN CHECKED BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
SIGNATURE:	<i>[Signature]</i>

Install as per TGS and in accordance with any changes as shown in TGS

Team Leader (Onsite): _____

Signature: _____

Date: _____

Ticket: Orange/Red/Yellow (Circle Appropriate)

Ticket No: _____

SIGNAGE CODES		LEGEND
ROADWORK AHEAD	END ROADWORK	WORK VEHICLE
ROADWORK ON SIDE ROAD	TM2-17C	WORK ZONE
T1-25	40	WORK ZONE
T1-5	R4-212 (40)	TRAFFIC FLOW
PREPARE TO STOP	50	PEDESTRIAN DIVERSION ROUTE
T1-18	R4-1 (50)	SITE BOUNDARY
T2-6-1	60	ACCESS GATE
T2-6-2 (L)	R4-1 (60)	AUTHORISED TRAFFIC CONTROLLER
T2-6-2 (R)	TS-5 (R)	700 MM TRAFFIC CONES WITH REFLECTIVE NIGHT STRIP SPACINGS OF 0.5M
	TM1-30	

Install as per TGS and in accordance with any changes as shown on TGS

www.invarion.com

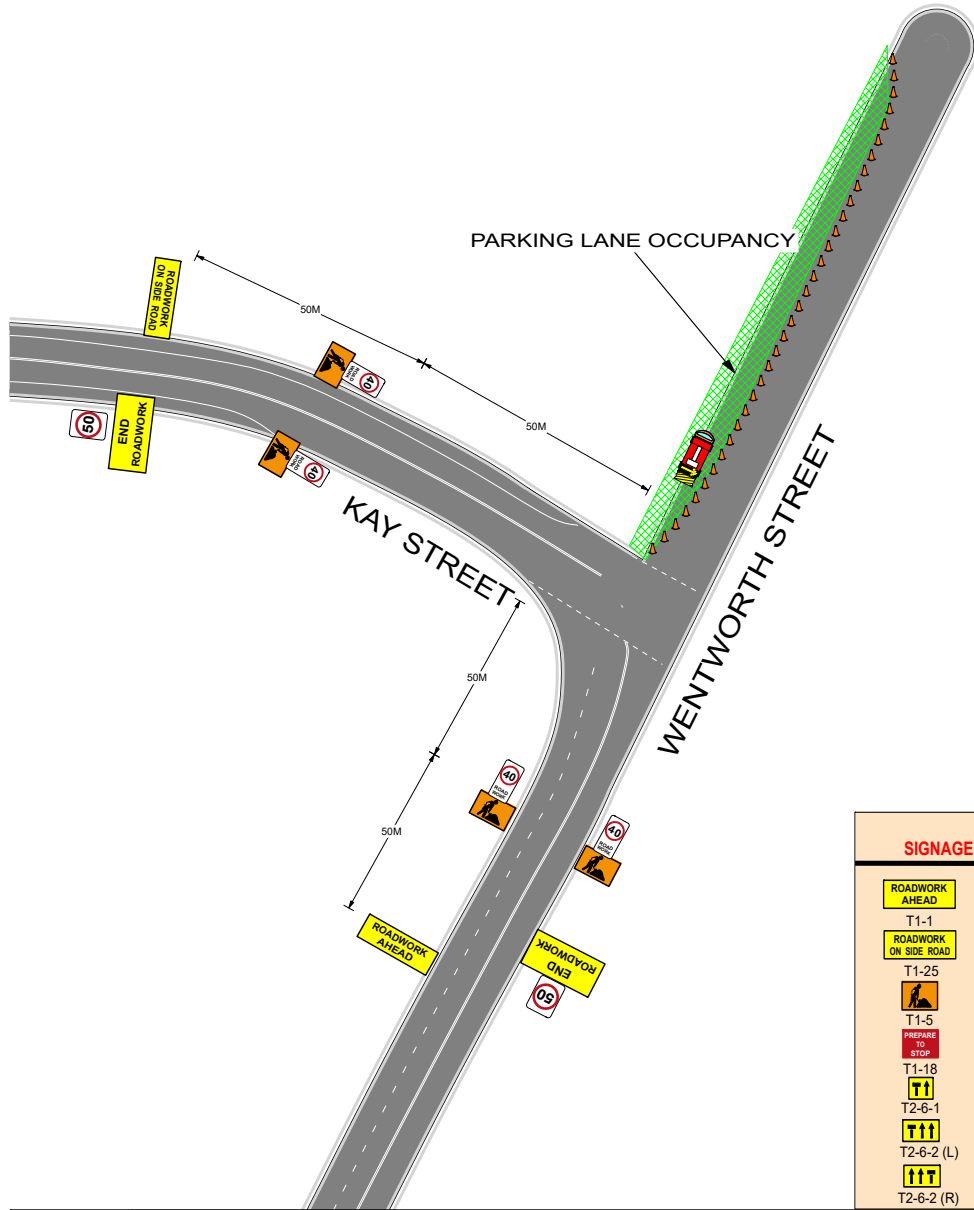
Team Leader (Onsite): _____

Signature: _____

Date: _____

Ticket: Orange/Red/Yellow (Circle Appropriate)

Ticket No: _____



SIGNAGE CODES		LEGEND	
ROADWORK AHEAD	END ROADWORK	WORK VEHICLE	WORK ZONE
T1-1	TM2-17C	WORK ZONE	TRAFFIC FLOW
ROADWORK ON SIDE ROAD	40	PEDESTRIAN DIVERSION ROUTE	SITE BOUNDARY
T1-25	R4-212 (40)	ACCESS GATE	AUTHORISED TRAFFIC CONTROLLER
PREPARE TO STOP	50	700 MM TRAFFIC CONES WITH REFLECTIVE NIGHT STRIP SPACINGS OF 0.5M	
T1-5	R4-1 (50)		
T1-18	60		
T2-6-1	R4-1 (60)		
T2-6-2 (L)	T5-5 (R)		
T2-6-2 (R)			

 TRAFFIC GUIDANCE SCHEME DATE: 16/09/2021 R.2	Area:	CLYDE
	Location:	UNWIN STREET
	TCP No:	TGS-CLY-WEN-NB-1202
	Sheet No:	1 OF 1

NOTES

- Traffic control works shall be installed & maintained in accordance with A.S. 1742.3 (Traffic Control Devices for Works on Roads) & Traffic control at Work Sites Manual.
- Local constraints may not allow sign and devices to be placed exactly in accordance with the TGS, therefore it may be necessary to place sign and devices as close as possible to the spacing indicated.
- Signs should generally be placed 1 meter clear of the travelled path where possible and be clearly visible and free of debris.
- Signs are to be Class 1 retro-reflective (day/night)
- Signage placed at D distance spacing (TCAWS Sec 7.3). Where duplication is not possible 0.5D spacing utilised where safe to implement.

DRAWN BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
SIGNATURE:	
PLAN CHECKED BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
SIGNATURE:	

Install as per TGS and in accordance with any changes as shown on TGS

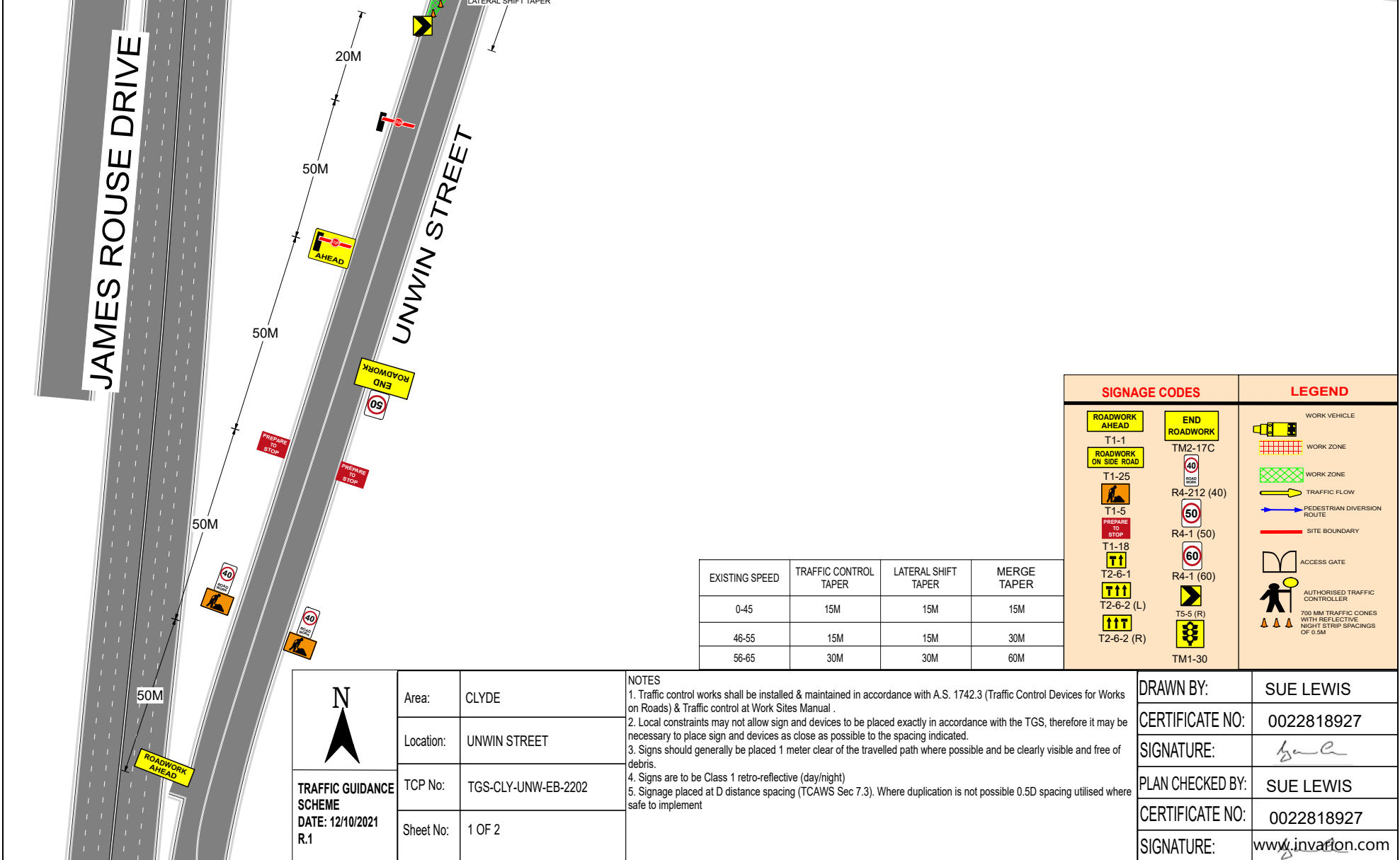
Team Leader (Onsite): _____

Signature: _____

Date: _____

Ticket: Orange/Red/Yellow (Circle Appropriate)

Ticket No: _____



SIGNAGE CODES		LEGEND
ROADWORK AHEAD	END ROADWORK	WORK VEHICLE
T1-1	TM2-17C	WORK ZONE
ROADWORK ON SIDE ROAD	40	WORK ZONE
T1-25	R4-212 (40)	TRAFFIC FLOW
T1-5	50	PEDESTRIAN DIVERSION ROUTE
PREPARE TO STOP	R4-1 (50)	SITE BOUNDARY
T1-18	60	ACCESS GATE
T2-6-1	R4-1 (60)	AUTHORISED TRAFFIC CONTROLLER
T2-6-2 (L)	T5-5 (R)	700 MM TRAFFIC CONES WITH REFLECTIVE NIGHT STRIP SPACINGS OF 0.5M
T2-6-2 (R)	TM1-30	

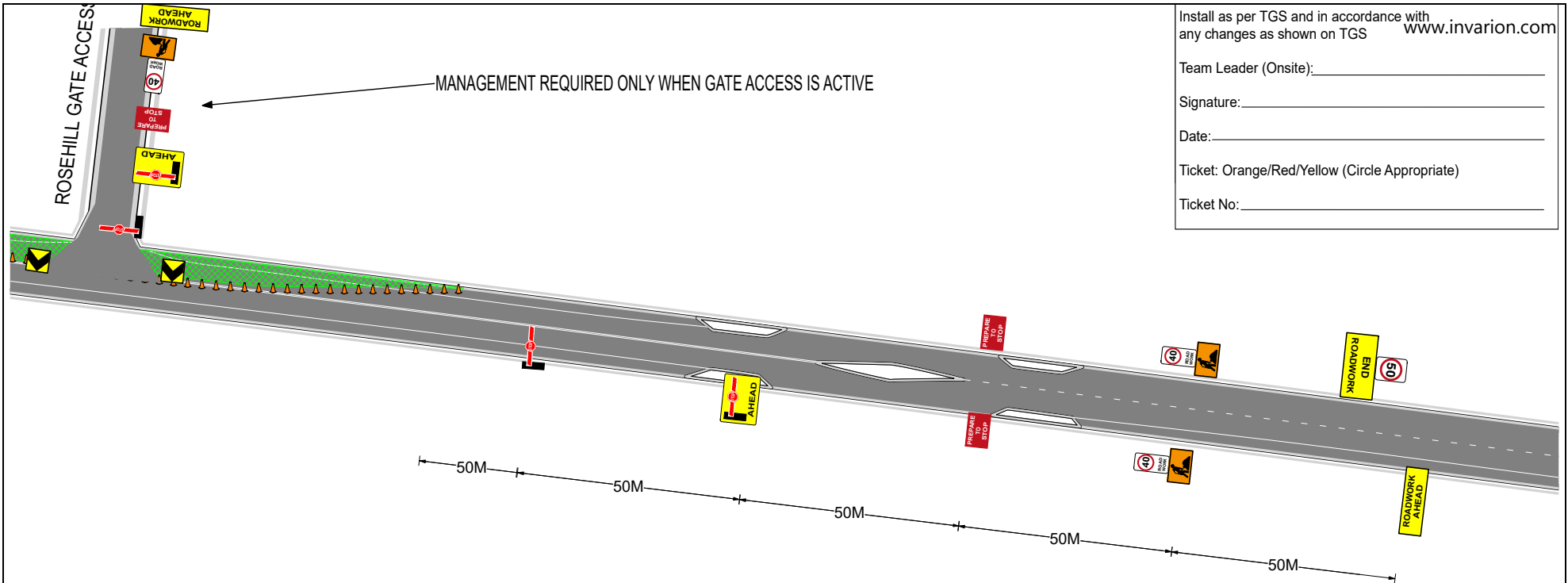
EXISTING SPEED	TRAFFIC CONTROL TAPER	LATERAL SHIFT TAPER	MERGE TAPER
0-45	15M	15M	15M
46-55	15M	15M	30M
56-65	30M	30M	60M

<p>TRAFFIC GUIDANCE SCHEME DATE: 12/10/2021 R.1</p>	Area:	CLYDE
	Location:	UNWIN STREET
	TCP No:	TGS-CLY-UNW-EB-2202
	Sheet No:	1 OF 2

NOTES

- Traffic control works shall be installed & maintained in accordance with A.S. 1742.3 (Traffic Control Devices for Works on Roads) & Traffic control at Work Sites Manual.
- Local constraints may not allow sign and devices to be placed exactly in accordance with the TGS, therefore it may be necessary to place sign and devices as close as possible to the spacing indicated.
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- Signage placed at D distance spacing (TCAWS Sec 7.3). Where duplication is not possible 0.5D spacing utilised where safe to implement

DRAWN BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
SIGNATURE:	
PLAN CHECKED BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
SIGNATURE:	www.invarion.com



Install as per TGS and in accordance with any changes as shown on TGS www.invarion.com

Team Leader (Onsite): _____

Signature: _____

Date: _____

Ticket: Orange/Red/Yellow (Circle Appropriate)

Ticket No: _____

EXISTING SPEED	TRAFFIC CONTROL TAPER	LATERAL SHIFT TAPER	MERGE TAPER
0-45	15M	15M	15M
46-55	15M	15M	30M
56-65	30M	30M	60M

SIGNAGE CODES		LEGEND
ROADWORK AHEAD	END ROADWORK	WORK VEHICLE
T1-1	TM2-17C	WORK ZONE
ROADWORK ON SIDE ROAD	40	WORK ZONE
T1-25	R4-212 (40)	TRAFFIC FLOW
ROADWORK	50	PEDESTRIAN DIVERSION ROUTE
T1-5	R4-1 (50)	SITE BOUNDARY
PREPARE TO STOP	60	ACCESS GATE
T1-18	R4-1 (60)	AUTHORISED TRAFFIC CONTROLLER
T1	T5-5 (R)	700 MM TRAFFIC CONES WITH REFLECTIVE NIGHT STRIP SPACINGS OF 0.5M
T2-6-1	T2-6-2 (R)	
T2-6-2 (L)	TM1-30	
T2-6-2 (R)		

 TRAFFIC GUIDANCE SCHEME DATE: 16/09/2021 R.2	Area:	CLYDE
	Location:	UNWIN STREET
	TCP No:	TGS-CLY-UNW-EB-2202
	Sheet No:	2 OF 2

NOTES

- Traffic control works shall be installed & maintained in accordance with A.S. 1742.3 (Traffic Control Devices for Works on Roads) & Traffic control at Work Sites Manual .
- Local constraints may not allow sign and devices to be placed exactly in accordance with the TGS, therefore it may be necessary to place sign and devices as close as possible to the spacing indicated.
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DRAWN BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
SIGNATURE:	
PLAN CHECKED BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
SIGNATURE:	

Install as per TGS and in accordance with any changes as shown on TGS

Team Leader (Onsite): _____

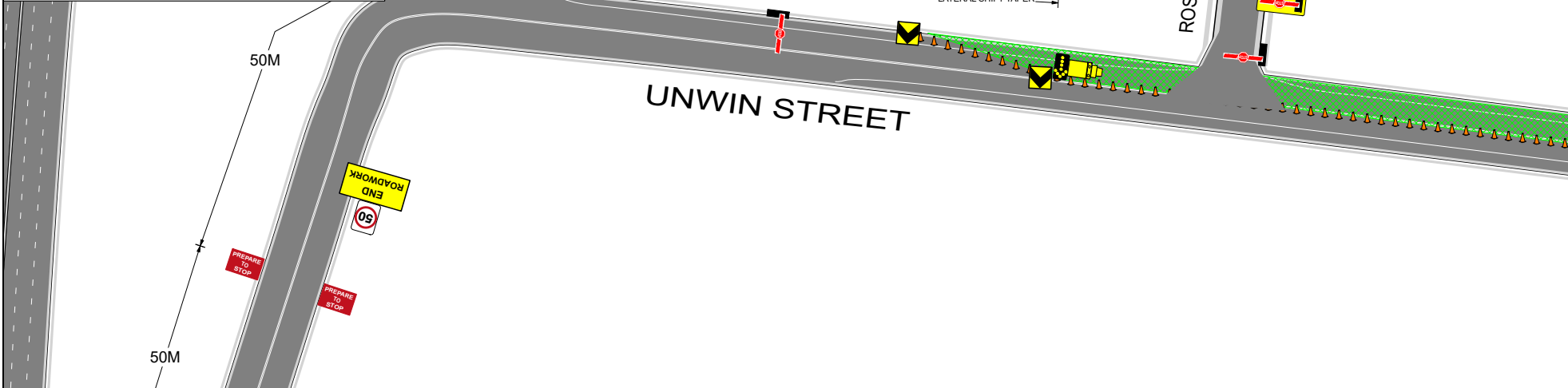
Signature: _____

Date: _____

Ticket: Orange/Red/Yellow (Circle Appropriate)

Ticket No: _____

MANAGEMENT REQUIRED ONLY WHEN GATE ACCESS IS ACTIVE



SIGNAGE CODES		LEGEND
T1-1	TM2-17C	WORK VEHICLE
T1-25	R4-212 (40)	WORK ZONE
T1-5	R4-1 (50)	TRAFFIC FLOW
T1-18	R4-1 (60)	PEDESTRIAN DIVERSION ROUTE
T2-6-1	T5-5 (R)	SITE BOUNDARY
T2-6-2 (L)	TM1-30	ACCESS GATE
T2-6-2 (R)		AUTHORISED TRAFFIC CONTROLLER
		700 MM TRAFFIC CONES WITH REFLECTIVE NIGHT STRIP SPACINGS OF 0.5M

EXISTING SPEED	TRAFFIC CONTROL TAPER	LATERAL SHIFT TAPER	MERGE TAPER
0-45	15M	15M	15M
46-55	15M	15M	30M
56-65	30M	30M	60M

	Area:	CLYDE
	Location:	UNWIN STREET
TRAFFIC GUIDANCE SCHEME DATE: 12/10/2021 R.1	TCP No:	TGS-CLY-UNW-EB-2203
	Sheet No:	1 OF 2

NOTES

- Traffic control works shall be installed & maintained in accordance with A.S. 1742.3 (Traffic Control Devices for Works on Roads) & Traffic control at Work Sites Manual .
- Local constraints may not allow sign and devices to be placed exactly in accordance with the TGS, therefore it may be necessary to place sign and devices as close as possible to the spacing indicated.
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- Signage placed at D distance spacing (TCAWS Sec 7.3). Where duplication is not possible 0.5D spacing utilised where safe to implement

DRAWN BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
SIGNATURE:	
PLAN CHECKED BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
SIGNATURE:	

Install as per TGS and in accordance with any changes as shown on TGS www.invarion.com

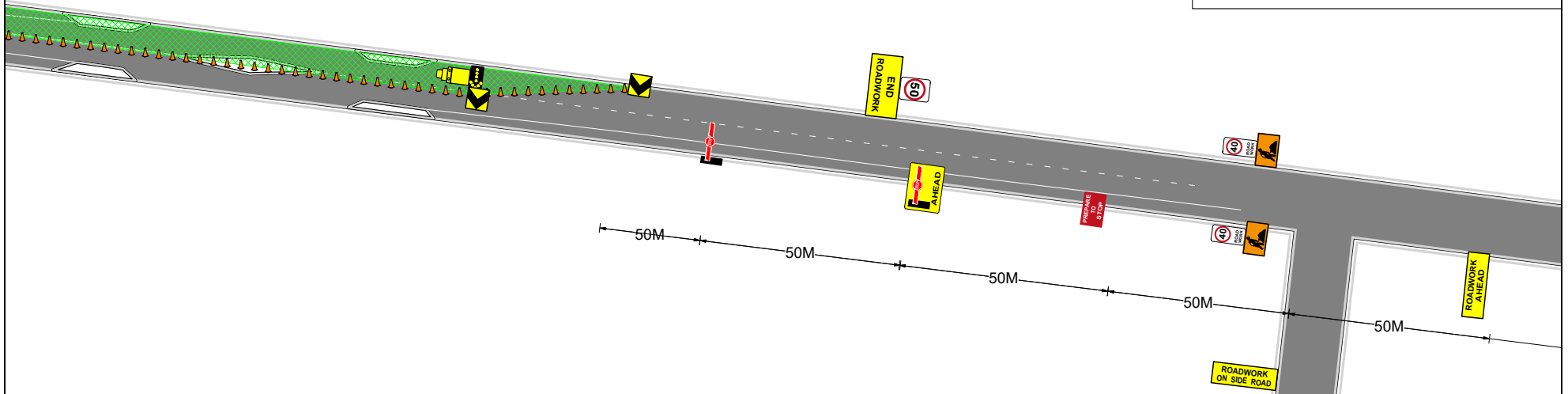
Team Leader (Onsite): _____

Signature: _____

Date: _____

Ticket: Orange/Red/Yellow (Circle Appropriate)

Ticket No: _____



SIGNAGE CODES		LEGEND
ROADWORK AHEAD T1-1	END ROADWORK TM2-17C	WORK VEHICLE
ROADWORK ON SIDE ROAD T1-25	40 R4-212 (40)	WORK ZONE
PREPARE TO STOP T1-5	50 R4-1 (50)	WORK ZONE
T1-18	60 R4-1 (60)	TRAFFIC FLOW
T2-6-1	70 R4-1 (70)	PEDESTRIAN DIVERSION ROUTE
T2-6-2 (L)	T5-5 (R)	SITE BOUNDARY
T2-6-2 (R)	TM1-30	ACCESS GATE
		AUTHORIZED TRAFFIC CONTROLLER
		700 MM TRAFFIC CONES WITH REFLECTIVE NIGHT STRIP SPACINGS OF 0.5M

EXISTING SPEED	TRAFFIC CONTROL TAPER	LATERAL SHIFT TAPER	MERGE TAPER
0-45	15M	15M	15M
46-55	15M	15M	30M
56-65	30M	30M	60M

 TRAFFIC GUIDANCE SCHEME DATE: 16/09/2021 R.2	Area:	CLYDE
	Location:	UNWIN STREET
	TCP No:	TGS-CLY-UNW-EB-2203
	Sheet No:	2 OF 2

NOTES

- Traffic control works shall be installed & maintained in accordance with A.S. 1742.3 (Traffic Control Devices for Works on Roads) & Traffic control at Work Sites Manual.
- Local constraints may not allow sign and devices to be placed exactly in accordance with the TGS, therefore it may be necessary to place sign and devices as close as possible to the spacing indicated.
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- Signage placed at D distance spacing (TCAWS Sec 7.3). Where duplication is not possible 0.5D spacing utilised where safe to implement

DRAWN BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
SIGNATURE:	
PLAN CHECKED BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
SIGNATURE:	

Install as per TGS and in accordance with any changes as shown on TGS

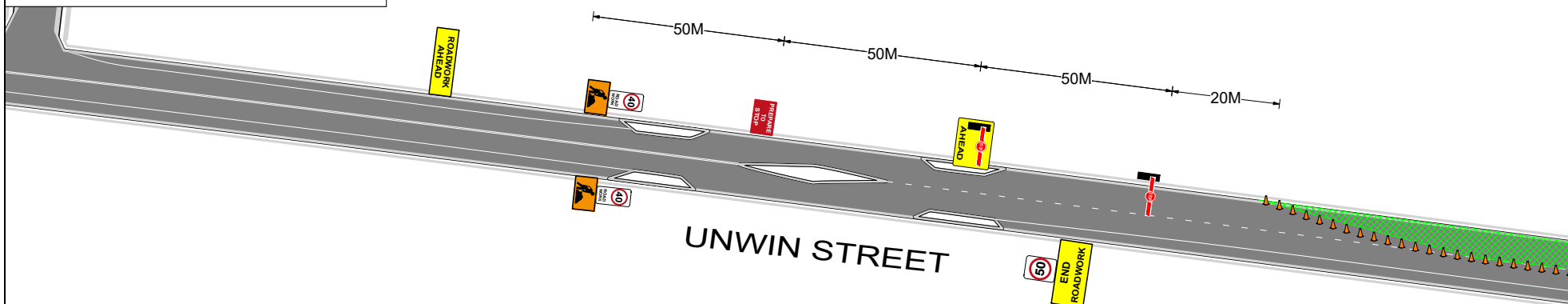
Team Leader (Onsite): _____

Signature: _____

Date: _____

Ticket: Orange/Red/Yellow (Circle Appropriate)

Ticket No: _____



SIGNAGE CODES		LEGEND	
	END ROADWORK (TM2-17C)		WORK VEHICLE
			WORK ZONE
	R4-1 (40)		WORK ZONE
			TRAFFIC FLOW
	R4-1 (50)		PEDESTRIAN DIVERSION ROUTE
			SITE BOUNDARY
	R4-1 (60)		ACCESS GATE
			AUTHORISED TRAFFIC CONTROLLER
	T5-5 (R)		700 MM TRAFFIC CONES WITH REFLECTIVE NIGHT STRIP SPACINGS OF 0.5M
	TM1-30		

EXISTING SPEED	TRAFFIC CONTROL TAPER	LATERAL SHIFT TAPER	MERGE TAPER
0-45	15M	15M	15M
46-55	15M	15M	30M
56-65	30M	30M	60M

N

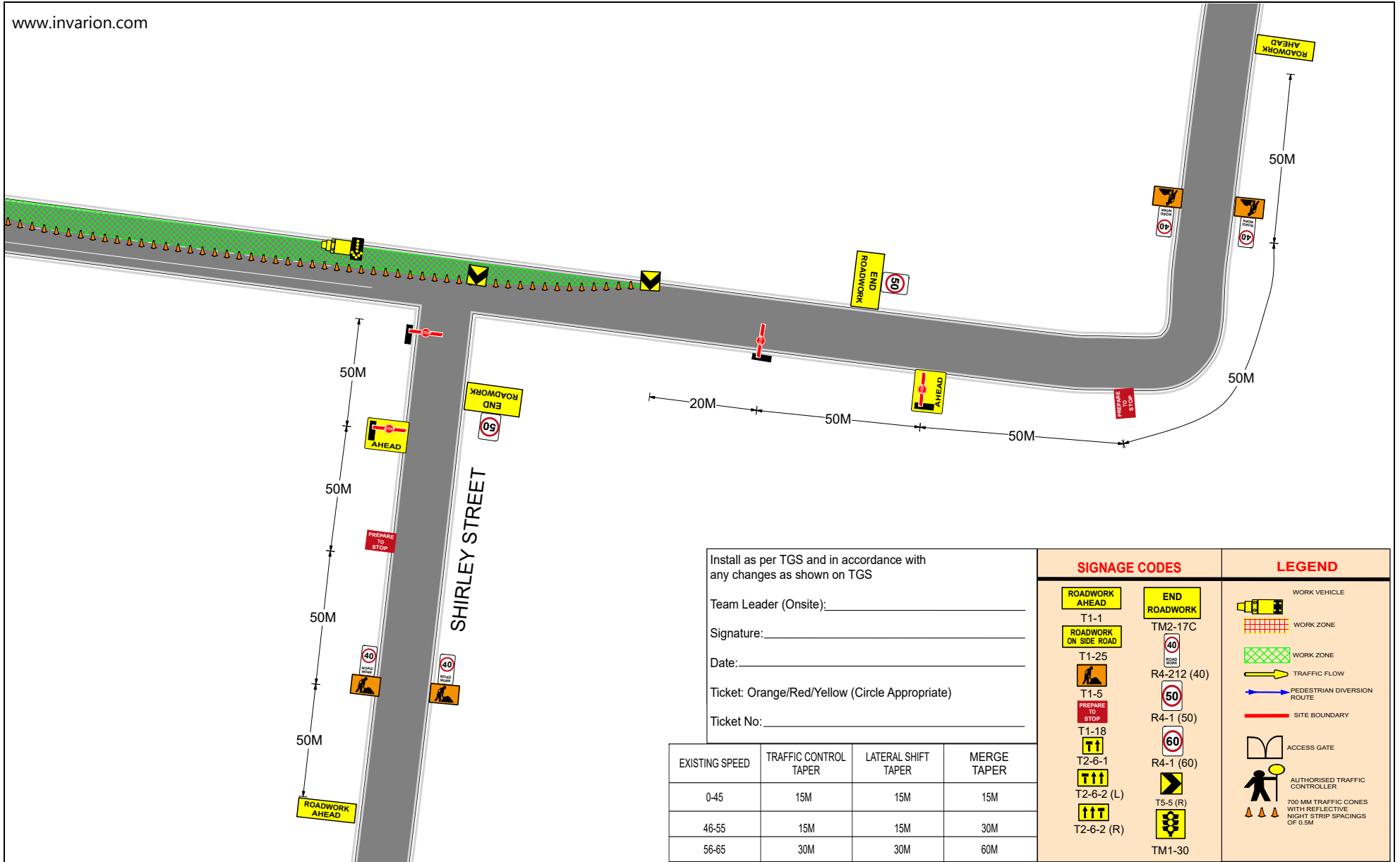
TRAFFIC GUIDANCE SCHEME
DATE: 12/10/2021
R.1

Area:	CLYDE
Location:	UNWIN STREET
TCP No:	TGS-CLY-UNW-EB-2204
Sheet No:	1 OF 2

NOTES

- Traffic control works shall be installed & maintained in accordance with A.S. 1742.3 (Traffic Control Devices for Works on Roads) & Traffic control at Work Sites Manual .
- Local constraints may not allow sign and devices to be placed exactly in accordance with the TGS, therefore it may be necessary to place sign and devices as close as possible to the spacing indicated.
- Signs should generally be placed 1 meter clear of the travelled path where possible and be clearly visible and free of debris.
- Signs are to be Class 1 retro-reflective (day/night)
- Signage placed at D distance spacing (TCAWS Sec 7.3). Where duplication is not possible 0.5D spacing utilised where safe to implement

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CERTIFICATE NO:	0022818927
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PLAN CHECKED BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
SIGNATURE:	



Install as per TGS and in accordance with any changes as shown on TGS

Team Leader (Onsite): _____

Signature: _____

Date: _____

Ticket: Orange/Red/Yellow (Circle Appropriate)

Ticket No: _____

EXISTING SPEED	TRAFFIC CONTROL TAPER	LATERAL SHIFT TAPER	MERGE TAPER
0-45	15M	15M	15M
46-55	15M	15M	30M
56-65	30M	30M	60M

SIGNAGE CODES		LEGEND
T1-1	TM2-17C	WORK VEHICLE
T1-25	R4-212 (40)	WORK ZONE
T1-5	R4-1 (50)	TRAFFIC FLOW
T1-18	R4-1 (60)	PEDESTRIAN DIVERSION ROUTE
T2-6-1	T5-5 (R)	SITE BOUNDARY
T2-6-2 (L)	TM1-30	ACCESS GATE
T2-6-2 (R)		AUTHORISED TRAFFIC CONTROLLER
		700 MM TRAFFIC CONES WITH REFLECTIVE NIGHT STRIP SPACINGS OF 0.5M

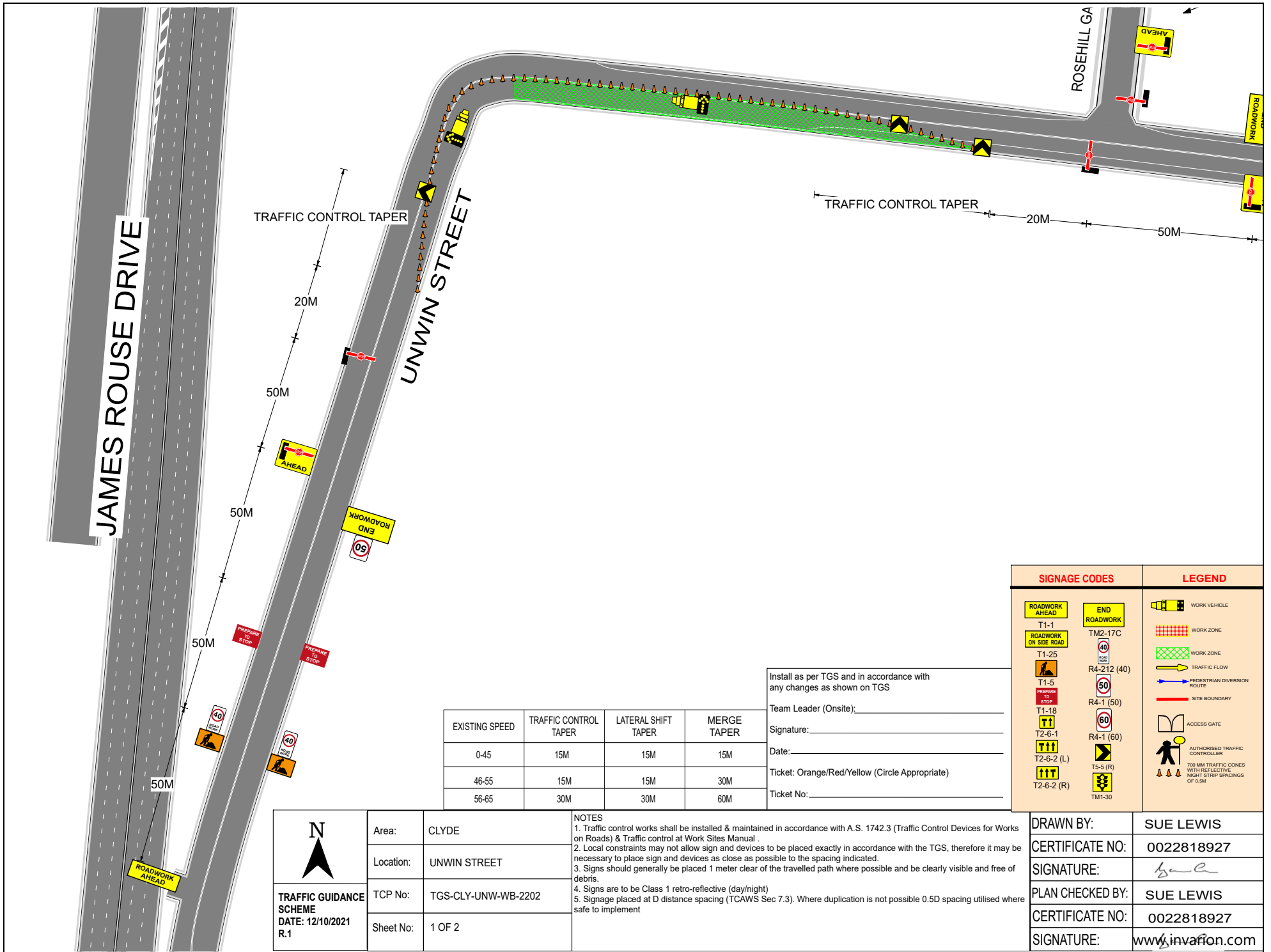
TRAFFIC GUIDANCE SCHEME
DATE: 16/09/2021
R.2

Area: CLYDE
Location: UNWIN STREET
TCP No: TGS-CLY-UNW-EB-2204
Sheet No: 2 OF 2

NOTES

- Traffic control works shall be installed & maintained in accordance with A.S. 1742.3 (Traffic Control Devices for Works on Roads) & Traffic control at Work Sites Manual .
- Local constraints may not allow sign and devices to be placed exactly in accordance with the TGS, therefore it may be necessary to place sign and devices as close as possible to the spacing indicated.
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- Signs are to be Class 1 retro-reflective (day/night)
- Signage placed at D distance spacing (TCAWS Sec 7.3). Where duplication is not possible 0.5D spacing utilised where safe to implement

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CERTIFICATE NO: 0022818927
SIGNATURE: *Sue Lewis*
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CERTIFICATE NO: 0022818927
SIGNATURE: *Sue Lewis*



Install as per TGS and in accordance with any changes as shown on TGS

Team Leader (Onsite): _____

Signature: _____

Date: _____

Ticket: Orange/Red/Yellow (Circle Appropriate)

Ticket No: _____

EXISTING SPEED	TRAFFIC CONTROL TAPER	LATERAL SHIFT TAPER	MERGE TAPER
0-45	15M	15M	15M
46-55	15M	15M	30M
56-65	30M	30M	60M

SIGNAGE CODES		LEGEND
ROADWORK AHEAD	END ROADWORK	WORK VEHICLE
ROADWORK ON SIDE ROAD	TM2-17C	WORK ZONE
T1-1	R4-212 (40)	WORK ZONE
T1-5	50	TRAFFIC FLOW
T1-18	R4-1 (50)	PEDESTRIAN DIVERSION ROUTE
PREPARE TO STOP	60	SITE BOUNDARY
T2-6-1	R4-1 (60)	ACCESS GATE
T2-6-2 (L)	T5-5 (R)	AUTHORISED TRAFFIC CONTROLLER
T2-6-2 (R)	TM1-30	700 MM TRAFFIC CONES WITH REFLECTIVE NIGHT STRIP SPACINGS OF 0.5M

<p>TRAFFIC GUIDANCE SCHEME DATE: 12/10/2021 R.1</p>	Area:	CLYDE	<p>NOTES</p> <p>1. Traffic control works shall be installed & maintained in accordance with A.S. 1742.3 (Traffic Control Devices for Works on Roads) & Traffic control at Work Sites Manual .</p> <p>2. Local constraints may not allow sign and devices to be placed exactly in accordance with the TGS, therefore it may be necessary to place sign and devices as close as possible to the spacing indicated.</p> <p>3. Signs should generally be placed 1 meter clear of the travelled path where possible and be clearly visible and free of debris.</p> <p>4. Signs are to be Class 1 retro-reflective (day/night)</p> <p>5. Signage placed at D distance spacing (TCAWS Sec 7.3). Where duplication is not possible 0.5D spacing utilised where safe to implement</p>
	Location:	UNWIN STREET	
	TCP No:	TGS-CLY-UNW-WB-2202	
	Sheet No:	1 OF 2	

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CERTIFICATE NO:	0022818927
SIGNATURE:	
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CERTIFICATE NO:	0022818927
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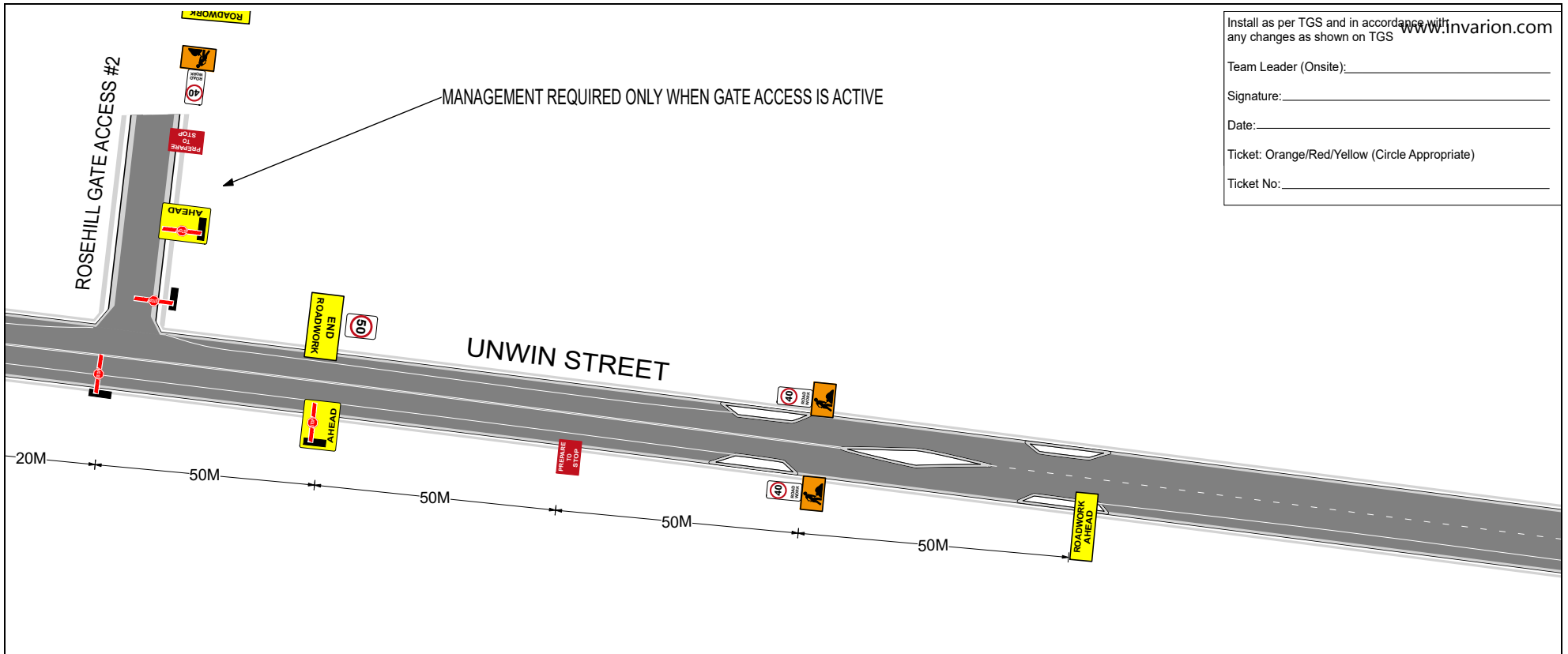
Team Leader (Onsite): _____

Signature: _____

Date: _____

Ticket: Orange/Red/Yellow (Circle Appropriate)

Ticket No: _____



SIGNAGE CODES		LEGEND
ROADWORK AHEAD	END ROADWORK	WORK VEHICLE
T1-1	TM2-17C	WORK ZONE
ROADWORK ON SIDE ROAD	40	WORK ZONE
T1-25	R4-212 (40)	TRAFFIC FLOW
T1-5	50	PEDESTRIAN DIVERSION ROUTE
PREPARE TO STOP	R4-1 (50)	SITE BOUNDARY
T1-18	60	ACCESS GATE
T2-6-1	R4-1 (60)	AUTHORISED TRAFFIC CONTROLLER
T2-6-2 (L)	T5-5 (R)	700 MM TRAFFIC CONES WITH REFLECTIVE NIGHT STRIP SPACINGS OF 0.5M
T2-6-2 (R)	TM1-30	

EXISTING SPEED	TRAFFIC CONTROL TAPER	LATERAL SHIFT TAPER	MERGE TAPER
0-45	15M	15M	15M
46-55	15M	15M	30M
56-65	30M	30M	60M

 TRAFFIC GUIDANCE SCHEME DATE: 12/10/2021 R.3	Area:	CLYDE
	Location:	UNWIN STREET
	TCP No:	TGS-CLY-UNW-WB-2201
	Sheet No:	2 OF 2

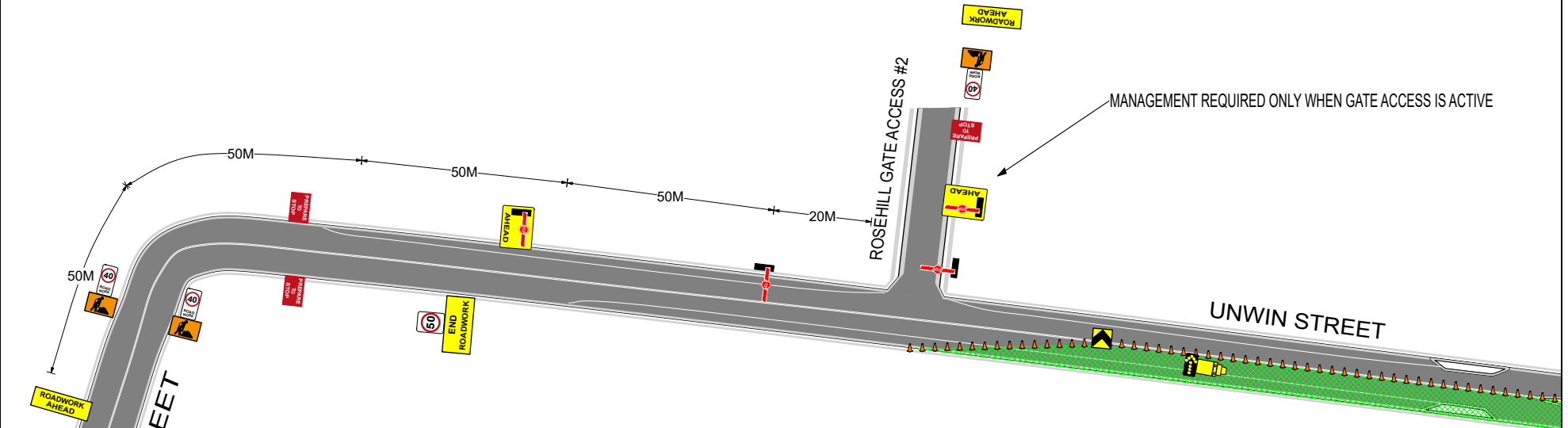
NOTES

- Traffic control works shall be installed & maintained in accordance with A.S. 1742.3 (Traffic Control Devices for Works on Roads) & Traffic control at Work Sites Manual.
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- Signage placed at D distance spacing (TCAWS Sec 7.3). Where duplication is not possible 0.5D spacing utilised where safe to implement

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PLAN CHECKED BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
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Team Leader (Onsite): _____
 Signature: _____
 Date: _____
 Ticket: Orange/Red/Yellow (Circle Appropriate)
 Ticket No: _____



SIGNAGE CODES		LEGEND
ROADWORK AHEAD	END ROADWORK	WORK VEHICLE
ROADWORK ON SIDE ROAD	TM2-17C	WORK ZONE
T1-25	R4-212 (40)	WORK ZONE
T1-5	R4-1 (50)	TRAFFIC FLOW
PREPARE TO STOP	R4-1 (60)	PEDESTRIAN DIVERSION ROUTE
T1-18	R4-1 (60)	SITE BOUNDARY
T2-6-1	T5-5 (R)	ACCESS GATE
T2-6-2 (L)	T2-6-2 (R)	AUTHORISED TRAFFIC CONTROLLER
T2-6-2 (R)	TM1-30	700 MM TRAFFIC CONES WITH REFLECTIVE NIGHT STRIP SPACINGS OF 0.5M

EXISTING SPEED	TRAFFIC CONTROL TAPER	LATERAL SHIFT TAPER	MERGE TAPER
0-45	15M	15M	15M
46-55	15M	15M	30M
56-65	30M	30M	60M

 TRAFFIC GUIDANCE SCHEME DATE: 12/10/2021 R.1	Area:	CLYDE	NOTES 1. Traffic control works shall be installed & maintained in accordance with A.S. 1742.3 (Traffic Control Devices for Works on Roads) & Traffic control at Work Sites Manual. 2. Local constraints may not allow sign and devices to be placed exactly in accordance with the TGS, therefore it may be necessary to place sign and devices as close as possible to the spacing indicated. 3. Signs should generally be placed 1 meter clear of the travelled path where possible and be clearly visible and free of debris. 4. Signs are to be Class 1 retro-reflective (day/night) 5. Signage placed at D distance spacing (TCAWS Sec 7.3). Where duplication is not possible 0.5D spacing utilised where safe to implement
	Location:	UNWIN STREET	
	TCP No:	TGS-CLY-UNW-WB-2203	
	Sheet No:	1 OF 2	

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CERTIFICATE NO:	0022818927
SIGNATURE:	

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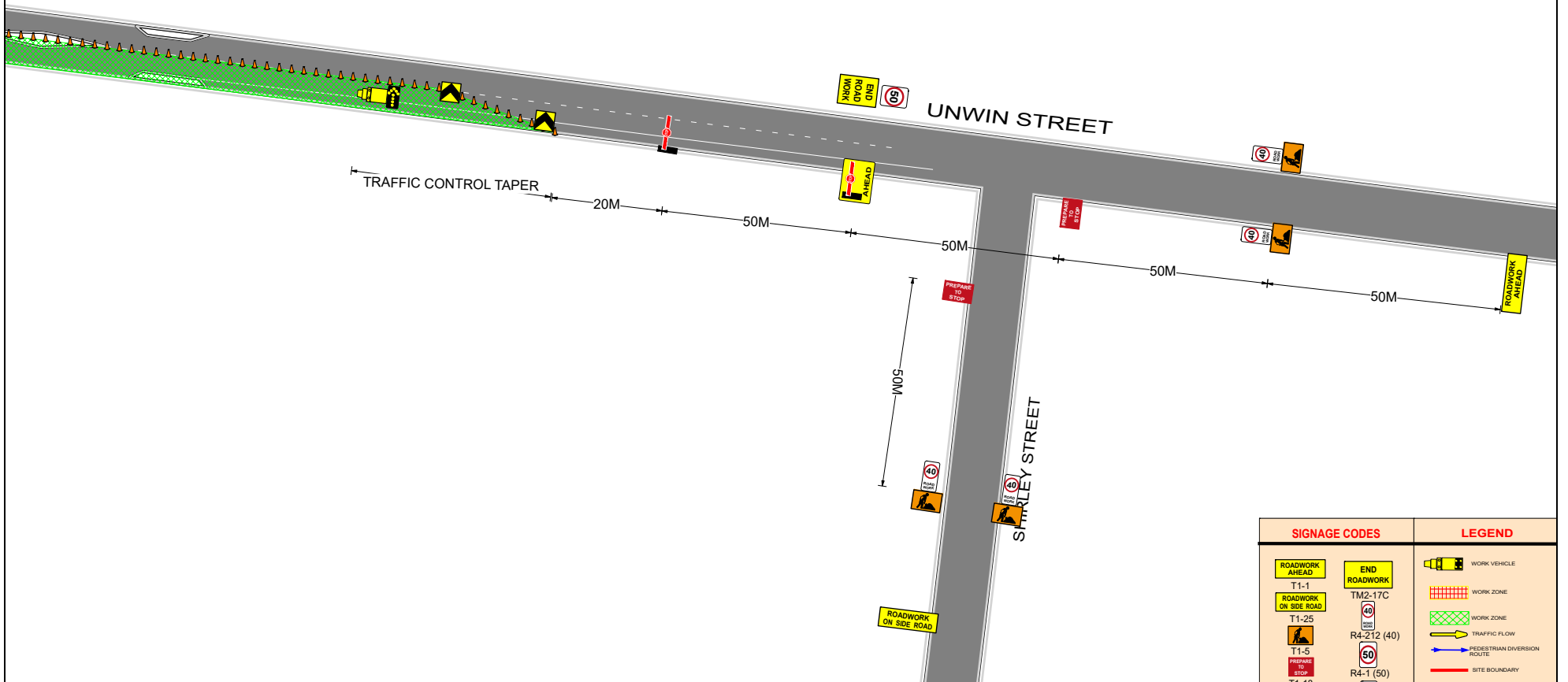
Team Leader (Onsite): _____

Signature: _____

Date: _____

Ticket: Orange/Red/Yellow (Circle Appropriate)

Ticket No: _____



EXISTING SPEED	TRAFFIC CONTROL TAPER	LATERAL SHIFT TAPER	MERGE TAPER
0-45	15M	15M	15M
46-55	15M	15M	30M
56-65	30M	30M	60M

SIGNAGE CODES	LEGEND
ROADWORK AHEAD T1-1 ROADWORK ON SIDE ROAD T1-25 T1-5 PREPARE TO STOP T1-18 T2-6-1 T2-6-2 (L) T2-6-2 (R)	WORK VEHICLE WORK ZONE TRAFFIC FLOW PEDESTRIAN DIVERSION ROUTE SITE BOUNDARY ACCESS GATE AUTHORISED TRAFFIC CONTROLLER 700 MM TRAFFIC CONES WITH REFLECTIVE NIGHT STRIP SPACINGS OF 0.5M
END ROADWORK TM2-17C R4-212 (40) R4-1 (50) R4-1 (60) T5-5 (R) TM1-30	

 TRAFFIC GUIDANCE SCHEME DATE: 12/10/2021 R.3	Area:	CLYDE	NOTES 1. Traffic control works shall be installed & maintained in accordance with A.S. 1742.3 (Traffic Control Devices for Works on Roads) & Traffic control at Work Sites Manual. 2. Local constraints may not allow sign and devices to be placed exactly in accordance with the TGS, therefore it may be necessary to place sign and devices as close as possible to the spacing indicated. 3. Signs should generally be placed 1 meter clear of the travelled path where possible and be clearly visible and free of debris. 4. Signs are to be Class 1 retro-reflective (day/night) 5. Signage placed at D distance spacing (TCAWS Sec 7.3). Where duplication is not possible 0.5D spacing utilised where safe to implement
	Location:	UNWIN STREET	
	TCP No:	TGS-CLY-UNW-WB-2203	
	Sheet No:	2 OF 2	

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SIGNATURE:	
PLAN CHECKED BY:	SUE LEWIS
CERTIFICATE NO:	0022818927
SIGNATURE:	

E. Haul Routes

Figure	Description
Figure 39	M4 inbound to Clyde
Figure 40	M4 outbound to Clyde
Figure 41	Clyde to M4 inbound
Figure 42	Clyde to M4 outbound

← from Western Motorway, Merrylands NSW 2160 to Wentworth St, Clyde NSW 2142

5 min (3.0 km)
via Great Western Hwy/Parramatta Rd/A44
Fastest route, the usual traffic

Western Motorway
Merrylands NSW 2160

- ↑ Head south-east on M4
450 m
- ↘ Take the A44/Church Street exit towards Parramatta/Granville/Milperra
500 m
- ↗ Use the middle 2 lanes to turn right onto Church St/Great Western Hwy/A44
51 m
- ↙ Use the left 2 lanes to turn left onto Great Western Hwy/Parramatta Rd/A44
1.7 km
- ↙ Turn left onto Wentworth St
Destination will be on the left
350 m

Wentworth St
Clyde NSW 2142

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

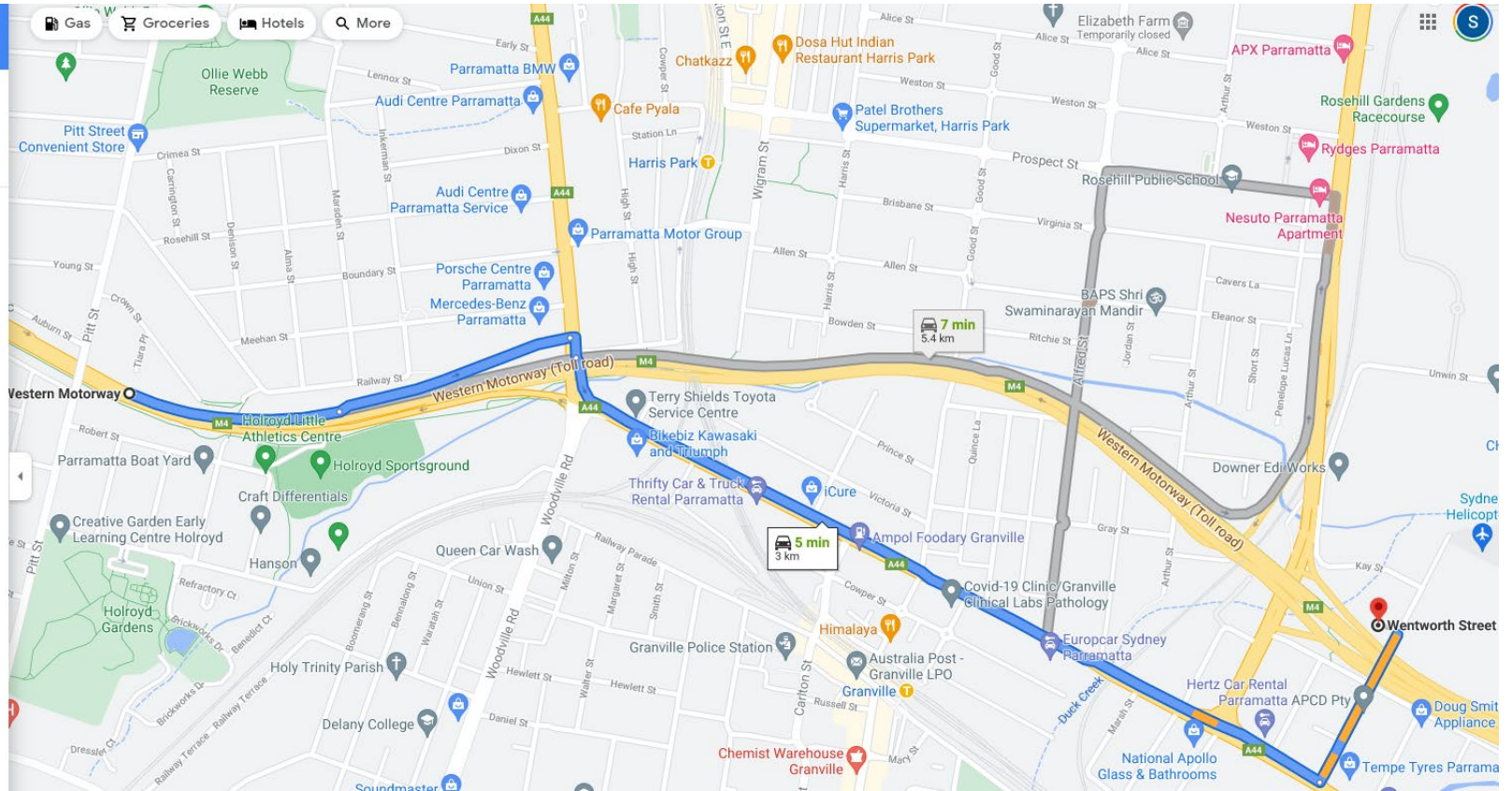


Figure 40: Haul route from M4 Motorway inbound carriageway to Site

— Proposed haul route

3 min (1.7 km)

via Wentworth St
Fastest route, despite the usual traffic
▲ This route has tolls.

Western Motorway

Clyde NSW 2142

- ↑ Head north-west on M4
▲ Toll road
180 m
- ↘ Use the 2nd from the left lane to keep right at the fork and stay on M4
▲ Toll road
54 m
- ↘ Take the James Ruse Dr exit towards Granville W/Parramatta
▲ Toll road
700 m
- ↙ Use the left 2 lanes to turn left onto James Ruse Dr
180 m
- ↙ Use the left 2 lanes to turn left onto Great Western Hwy/Parramatta Rd/A44
240 m
- ↙ Turn left onto Wentworth St
📍 Destination will be on the left
350 m

Wentworth St

Clyde NSW 2142

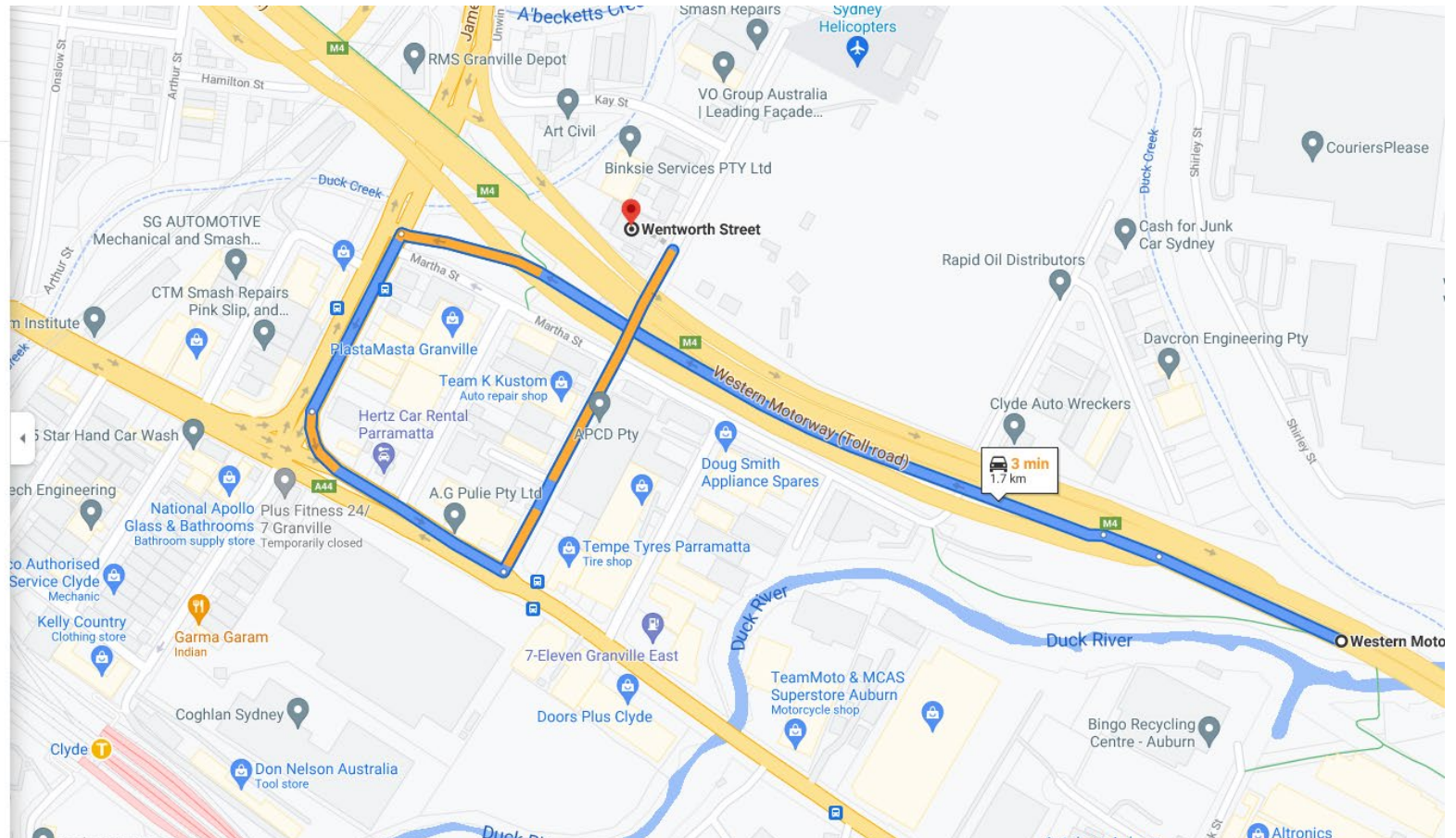


Figure 41: M4 Motorway outbound carriageway to Clyde

4 min (1.9 km)

via Wentworth St

Fastest route, the usual traffic

▲ This route has tolls.

Wentworth St

Clyde NSW 2142

- ↑ Head south-west on Wentworth St towards Martha St
350 m
- ↘ Turn right onto Great Western Hwy/Parramatta Rd/A44
240 m
- ↘ Use the right lane to turn right onto James Ruse Dr
280 m
- ↘ Slight right
▲ Toll road
1.0 km
- ↘ Merge onto M4
▲ Toll road
75 m

Western Motorway

Clyde NSW 2142

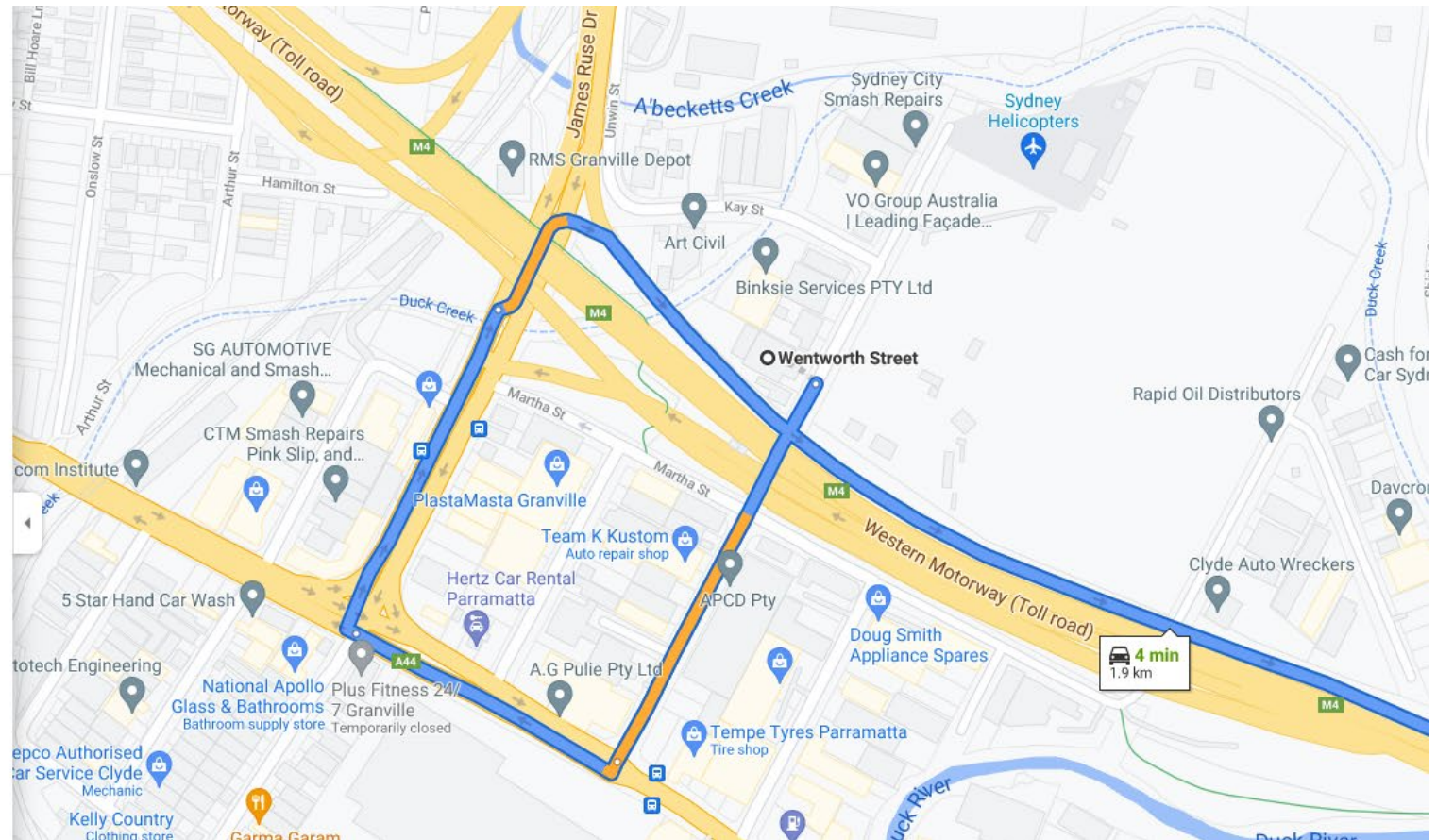


Figure 42: Site to M4 Motorway Inbound carriageway

Wentworth St, Clyde NSW 2142

Western Motorway, Merrylands NSW 21

Add destination

Leave now

OPTIONS

Send directions to your phone

via Great Western Hwy/Parramatta Rd/A44 **5 min**
2.9 km
Fastest route, the usual traffic

DETAILS

Explore Western Motorway

Restaurants Hotels Gas stations Parking Lots More

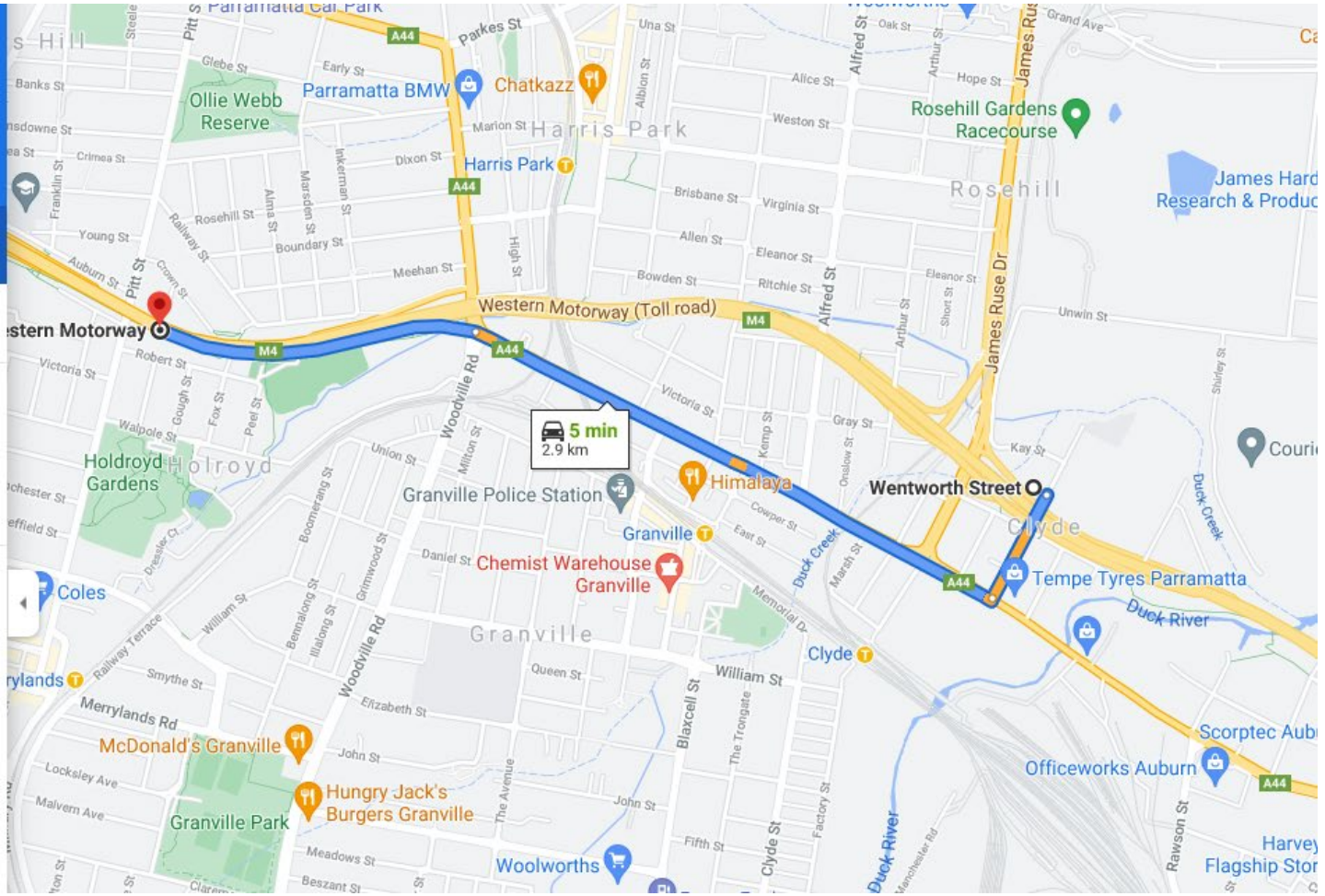


Figure 43: Site to M4 Motorway outbound

F. Heavy Vehicle Local Road Report

PROVIDED SEPARATLEY

G. Construction Parking and Access Strategy

PROVIDED SEPARATLEY

H. Road safety audit

ROADWORKS TRAFFIC SCHEME ROAD SAFETY AUDIT

Sydney Metro West – Clyde Precinct Demolition Works - CTMP



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Website www.civlink-consulting.com.au



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ROADWORK TRAFFIC SCHEME - ROAD SAFETY AUDIT



Sydney Metro West – Clyde Precinct Demolition Works – CTMP

Document Control

Title:	Description
Ref No.:	20210823 – Sydney Metro West – Clyde Precinct Demolition Works – CTMP – Roadworks Traffic Scheme Audit
Description:	20210823 – Sydney Metro West – Clyde Precinct Demolition Works – CTMP – Roadworks Traffic Scheme Audit

Role	Name	Position	Date	Signed
Author:	ALEX GOSPER	LEVEL 3 ROAD SAFETY AUDITOR	23/08/2021	
Approved by:	ALEX GOSPER	LEVEL 3 ROAD SAFETY AUDITOR	23/08/2021	

Document Revisions

No.	Date	Issue / Description
00	23/06/2021	ORIGINAL ISSUE

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Author: Alex Gosper

Reviewer: Louis Peau

Approved by: Alex Gosper

Date 23/08/2021

Distribution: Sue Lewis (Sue Lewis Consulting)



Executive Summary

Audited Project:	Sydney Metro West - Clyde precinct Demolition Work CTMP
Audit for:	Sue Lewis Consulting
Address:	Not provided
Email Address:	siouxzie.lewis@gmail.com
Clients Contact:	Sue Lewis Consulting Pty Ltd
Auditors:	Alex Gosper (Level 3 Road Safety Auditor – ID:0908), Director / Senior Civil Engineer – Civlink Consulting Pty Ltd Louis Peau (Level 3 Road Safety Auditor – ID:1271), Director / Senior Civil Engineer – Civlink Consulting Pty Ltd
Audit Type:	Roadworks Traffic Scheme Road Safety Audit
Commencement Meeting:	22 nd August 2021
Site Visit:	N/A
Completion Meeting:	To be advised
Previous Audit:	N/A

This Roadworks Traffic Scheme Road Safety Audit reviewed the Construction Traffic Management Plan package for the proposed works for the demolition of structures at the Clyde site as part of the Sydney Metro West construction project. The audit checked that the proposed series of temporary arrangements were suitable for the intended purpose and so conducive to a safe road environment for all types of road users.

This report documents the identified audit findings dated 23/08/2021.

The road safety audit identified a number of possible deficiencies, each of which have had a risk classification as low or to note and are listed in Section 4 - Audit Findings.



1. Introduction

1.1 Project Description

TfNSW requires the demolition of a number of buildings within the Clyde precinct to make way for development of the Sydney Metro West project. The successful and timely completion of Delta's activities is required to facilitate works by the Main Works Tunnels and Stations Excavation Contractor at the station locations of Parramatta and Westmead and the Maintenance Stabling Facility (MSF) at Clyde.

This CTMP addresses the DELTA scope of works described within Schedule 10 of the Executed Contract. DELTA notes that the Project must be carried out generally in accordance with the description provided in the Environmental Impact Statement as amended by the Preferred Infrastructure Report and the Conditions of Approval.

The demolition sites are described below:

- Clyde site bounded by Unwin Street, Shirley Street Clyde
- Parramatta site bounded by George Street to the north, Macquarie Lane to the east, Macquarie Street to the south and by heritage and retained structures to the west, mainly located on Church Street.
- Westmead site bounded by Alexandra Parade to the north, Hawkesbury Road to the west, Bailey Street to the south and Hassall Street to the east

1.2 Purpose of Audit

This report presents findings of a Roadwork Traffic Scheme road safety audit. The audit will review the various documents and plans incorporated in the the Construction Traffic Management Plan for the demolition works associated with the Sydney Metro West works at the Clyde precinct.

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

The CTMP being audited covers the hoarding, demolition and exporting of materials out of the site in preparation for the Sydney Metro West construction project to take over and construction stations and stabling yards. The are specific to the CTMP being audited as part of this report is shown in Figure 1, below;

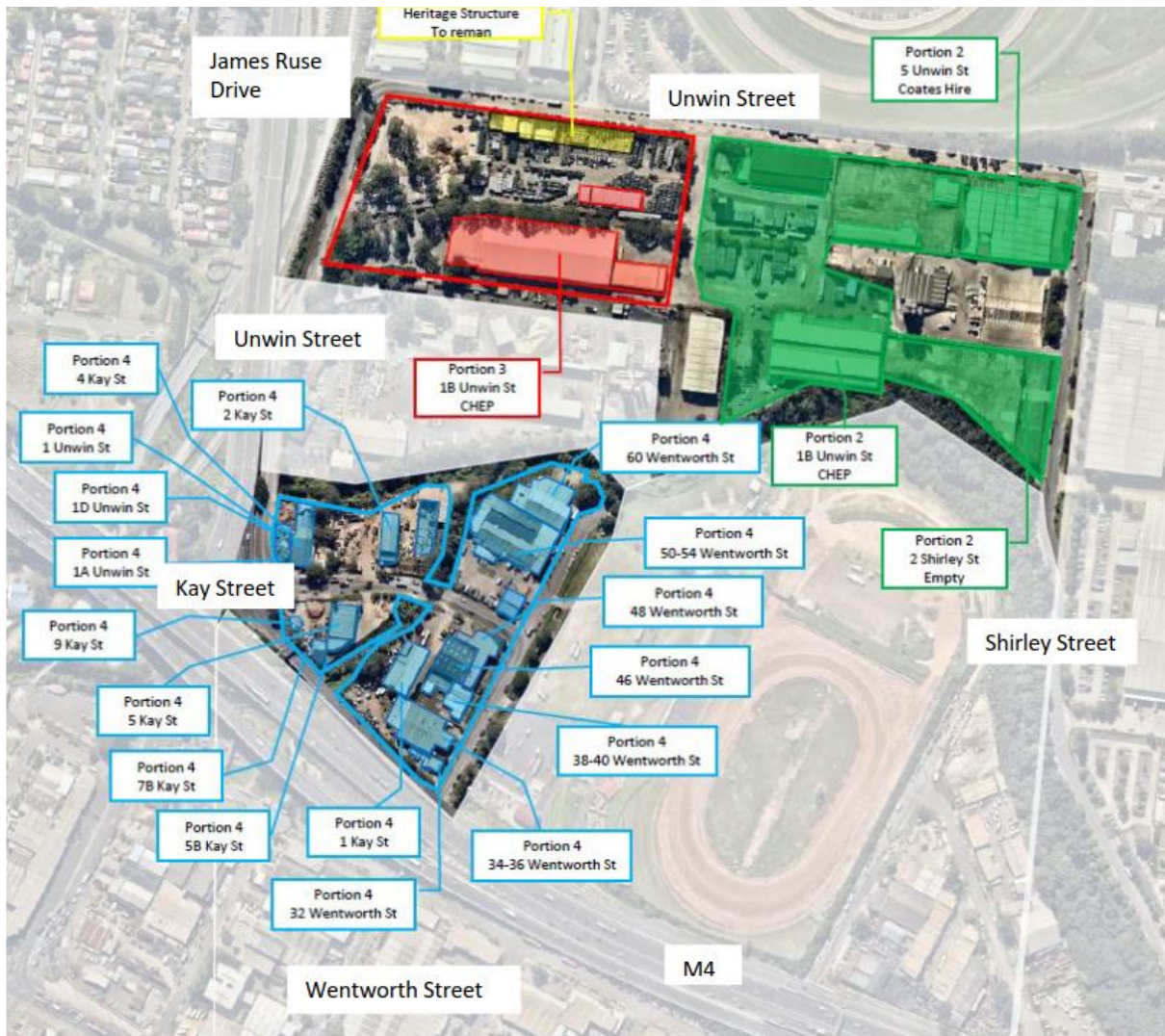


Figure 1: CTMP and Desktop Road Safety Audit Scope

[Source: DEL-CLY-WTP-CTMP-1.08-01]

1.3 Audit Objectives

The objective of this road safety audit was to identify relevant road safety deficiencies in the CTMP planning documents which, if addressed, would improve safety for road users.

The other objectives of this Roadwork Traffic Scheme Road Safety Audit were to:

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



1.4 Procedures and reference material

The procedures used are those in the Austroads Guide to Road Safety Part 6: Road Safety Audit (2019) and RMS Guidelines for Road Safety Audit Practices 2011.

Technical reference documents for Traffic Guidance Schemes is the Traffic Control at Worksites Manual (TCAWS) Version 6, 2020.

1.5 Supporting information

The Construction Traffic Management Plan package was the primary reference document provided for assessment, and audit. The audit was conducted primarily focusing on the areas where changes are proposed within the project, the ways in which these changes will be implemented and a review of how these new temporary arrangements may interact with the existing road configuration.

The entire CTMP was reviewed as part of the assessment however audit findings were primarily concentrated on the localised Traffic Guidance Schemes and associated construction planning documents.

Description	Version	Notes
Sydney Metro West – Construction Traffic Management Plan – Clyde Construction Traffic Management Plan	00	Whole document

1.6 Audit Team

This Audit Team consisted of:

- a) Alex Gosper (Civlink Consulting Director / Traffic Manager / Senior Civil Engineer). Alex is a registered Road Safety Auditor with the Institute of Public Works Engineers Australia, NSW and senior auditor in both VIC & QLD. Alex is a registered Level 3 Road Safety Auditor in NSW.
- b) Louis Peau (Civlink Consulting Director / Traffic Manager / Senior Civil Engineer). Louis has 10 years construction and traffic experience and is a registered Road Safety Auditor in NSW and senior auditor in both VIC & QLD. Louis is a registered Level 3 Road Safety Auditor in NSW.

2. Road Safety Audit Program

2.1 Commencement Meeting

On Sunday the 22nd of August a commencement email was received from Sue Lewis requesting a desktop audit be conducted on the Construction Traffic Management Plan (CTMP) for the Sydney Metro demolition works by Delta Group at the Clyde site. The audit was to be conducted by Alex Gosper, Lead Road Safety Auditor (Civlink Consulting) with the assistance of Louis Peau. The audit was to be conducted on the provided CTMP documentation which outlined the various arrangements for the demolition and clearing of the sites in Clyde across Area C1 through C10, generally on Unwin Street or Wentworth Street, east of James Ruse Drive.

2.2 Completion meeting

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



2.3 Responding to the audit report

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

2.4 Corrective action response

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

2.5 Disclaimer

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

3. Risk Assessment Approach

This audit identified and rated risks per the Austroads recommendation using the assessment process below. Potential safety hazards were identified and categorised based on the frequency of occurrence and severity (consequence of crash). A preliminary risk rating for each identified issue has been assigned in Section 3 which were determined via a subjective judgement by the Auditor guided by the Austroads "*Guide to Road Safety, Part 6: Road Safety Audit*".

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



3.1 Frequency

	Description
Frequent	Once or more per week
Probable	Once or more per year (but less than once a week)
Occasional	Once every five or ten years
Improbable	Less often than once every ten years

3.2 Severity

	Description	Examples
Catastrophic	Likely multiple deaths	High-speed, multi-vehicle crash on freeway. Car runs into crowded bus stop. Bus and Petrol Tanker collide. Collapse of bridge or tunnel.
Serious	Likely death or serious injury	High or medium-speed vehicle collision. High or medium-speed collision with a fixed roadside object. Pedestrian struck at high speed. Cyclist is hit by a motor vehicle.
Minor	Likely minor injury	Some low-speed vehicle collisions. Cyclist falls from bicycle at low speed. Left-turn rear-end crash in a slip lane.
Limited	Likely trivial injury or property damage	Some low-speed vehicle collisions. Pedestrian walks into object (no head injury). Car reverses into post.

3.3 Risk Rating

	Frequent	Probable	Occasional	Improbable
Catastrophic	Intolerable	Intolerable	Intolerable	High
Serious	Intolerable	Intolerable	High	Medium
Minor	Intolerable	High	Medium	Low
Limited	High	Medium	Low	Low

3.4 Treatment

Risk	Suggested treatment approach
Intolerable	Must be corrected immediately.
High	Should be corrected within 48 hours and risk reduced until then.
Medium	Should be corrected within 7 days and risk reduced until then.
Low	Should be monitored and the risk significantly reduced within 7 days

4. Audit Findings

						For completion by Project	
DEFICIENCY MATRIX							
No.	Document Reference	Description of Deficiency / Observation	Frequency	Severity	Risk	Accept Y/N	Action
1	Appendix C – General	TGS doesn't appear to be drawn to scale and has no dimensions for signage positions which may contribute to insufficient advanced warning for motorists approaching the works. This may contribute to rear-end type collisions due to inadequate advanced warning.	Improbable	Minor	Low	Y	Drawings amended
2	Appendix C – General	It is proposed to utilise manual traffic controllers in a number of locations. The current TCWS outlines a requirement for the use of a Portable Traffic Control Device in lieu of manual traffic controllers where the permanent speed is >45km/h. These areas appear to have a permanent speed of 50km/h which would therefore require either a boom gate or portable signal.	Note			Y	Drawings amended
3	Appendix C – General	The TGS in Appendix C typically include a speed reduction to 40km/h. Speed change at the start of the zone requires them to be erected on both sides of the carriageway, alternatively at 0.5D spacing.	Note			Y	Drawings amended
4	TGS-CLY-UNW-WB-1201	The TGS appears to be missing Sheet 2 of 2 (first plan in CTMP provided)	Note			Y	Drawing provided

ROADWORK TRAFFIC SCHEME - ROAD SAFETY AUDIT



Sydney Metro West – Clyde Precinct Demolition Works – CTMP

5	TGS-CLY-KAY-EB-2201	The TGS suggests the use of a traffic controller adjacent to what appears to be two traffic lanes. Where using a PTCO to stop traffic it would be limited to stopping a single lane of traffic. It is noted that prior to this point the kerbside lane is typically used for parking.	Note			Y	Drawing amended
6	TGS-CLY-SHI-NB-1201	The TGS shows works on the western side of Shirley Street. There appears to be no Roadwork Ahead sign or speed restriction facing traffic entering from Unwin Street. This could contribute to drivers travelling faster than intended or increase likelihood of run-off road incidents.	Improbable	Minor	Low	Y	Drawing amended
7	TGS-CLY-WEN-NB-1201	The TGS appears to be missing speed reinstatement and end roadwork signage heading south-east along Martha Street.	Note			Y	Drawing amended

5. Conclusion

The report some areas where additional info may be required, or potential deficiencies have been identified for consideration by the traffic and/or project manager.

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



Date: 23/08/2021

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ROADWORK TRAFFIC SCHEME - ROAD SAFETY AUDIT

Sydney Metro West – Clyde Precinct Demolition Works – CTMP



APPENDIX A – Construction Traffic Management Plan

I. Stakeholder consultation



Sue Lewis

RE: DELTA Group working for TfNSW on Sydney Metro West project [SEC=OFFICIAL]

1 message

Jack Makhoul

To: Sue Lewis

Cc: William Graham

Tue, Sep 14, 2021 at 9:37 AM

Good Morning Sue,

I had a reviewed the CTMP for the Sydney Metro West project for work to be conducted for the Clyde precinct demolition Works. I have no issues with the content of the CTMP and management of the roads is appropriate for the conditions and the work to be undertaken. As such, concurrence is given and I have no further queries that needs clarification.

Kind Regards

**Jack Makhoul****Sergeant****Traffic Supervisor****Parramatta Police Area Command****95 Marsden Street Parramatta. NSW. 2150****E: 36013@police.nsw.gov.au P: 02 9633 0634 E: 78634****From:** Sue Lewis**Sent:** Saturday, 11 September 2021 11:06 AM**To:** Jack Makhoul police.nsw.gov.au>; Andrew Shurety @fire.nsw.gov.au>; andrew.edwards1@health.gov.au**Cc:** Angus Lumsden**Subject:** Re: DELTA Group working for TfNSW on Sydney Metro West project

Morning

Just following up regarding the plan sent to you - have you any comments or queries that I may be able to answer?

Regards

Sue Lewis

Good Morning

I have been provided your contact details by Ian Vienott from Parramatta Connect (Parramatta Light Rail works). I have been requested by TfNSW Sydney Metro West to provide a copy of our Construction Traffic Management Plans (CTMP) for our works.

DELTA Group have been contracted by TfNSW to provide demolition and utility works at the following locations:

- Clyde
- Parramatta and
- Westmead

I have attached a copy of the CTMP for Clyde - the others will follow

It would be appreciated if you could provide any feedback on the attached document

If you wish to discuss the contents of the document please feel free to call me on the number below

Regards

Sue Lewis

Director

Sue Lewis Consulting Pty Limited





Sue Lewis

Re: DELTA Group working for TfNSW on Sydney Metro West project

1 message

Sue Lewis

Sat, Sep 11, 2021 at 11:06 AM

To: makh1jac Andrew Shurety andrew.edwards@health

Cc: Angus Lumsden

Morning

Just following up regarding the plan sent to you - have you any comments or queries that I may be able to answer?

Regards

Sue Lewis

On Wed, Sep 1, 2021 at 8:03 AM Sue Lewis wrote:

Good Morning

I have been provided your contact details by Ian Vienott from Parramatta Connect (Parramatta Light Rail works). I have been requested by TfNSW Sydney Metro West to provide a copy of our Construction Traffic Management Plans (CTMP) for our works.

DELTA Group have been contracted by TfNSW to provide demolition and utility works at the following locations:

- Clyde
- Parramatta and
- Westmead

I have attached a copy of the CTMP for Clyde - the others will follow

It would be appreciated if you could provide any feedback on the attached document
If you wish to discuss the contents of the document please feel free to call me on the number below

Regards

Sue Lewis
Director
Sue Lewis Consulting Pty Limited

Sue Lewis Consulting
Construction Traffic Planning 



Sue Lewis

Road Occupancy Licence Application 1707614 - Refused

1 message

tmc_piu@tmc.transport.nsw.gov.au <tmc_piu@tmc.transport.nsw.gov.au>
To: Sue Lewis

Fri, Oct 8, 2021 at 1:09 PM

Dear Valued Customer

Your Road Occupancy Licence Application 1707614 for UNWIN ST, ROSEHILL has been refused for the following reasons:

- THE WORKSITE IS TOO LONG. WORKS CAN BE UNDERTAKEN IN SHORTER SECTIONS

Should you require any clarification on this matter, please contact us on 0283961513 during normal business hours.

Kind Regards,
Road Occupancy Unit, Sydney



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Sue Lewis

Road Occupancy Licence Application 1707622 - Refused

1 message

tmc_piu@tmc.transport.nsw.gov.au <tmc_piu@tmc.transport.nsw.gov.au>
To: Sue Lewis

Fri, Oct 8, 2021 at 1:09 PM

Dear Valued Customer

Your Road Occupancy Licence Application 1707622 for UNWIN ST, ROSEHILL has been refused for the following reasons:

- SOUTHBOUND BOOM GATE IS TOO CLOSE TO THE CORNER. SOUTHBOUND BOOM GATE TO BE RELOCATED TO UNWIN ST.

Should you require any clarification on this matter, please contact us on 0283961513 during normal business hours.

Kind Regards,
Road Occupancy Unit, Sydney



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Document No	Rev	Sts	Discipline										
SMWSDDS-DLT-CLJ-TF-PLN-000029	00	RVW	TF										
Attachments	Item	Date	Rev	Sts	Raised By	Raised By Company	Commented By	Document Ref	Deed Ref	Comments	Closed-Out	Category	Response
No	49	2021-09-10	00	RVW	Sandy Leung	Parramatta City Council	Denniel Custodio	7.2.9 Impact on parking	-	Parking for construction workers, staff and visitors should be provided on site and not rely on on-street parking.	N	OBS	All staff are provided parking on site
No	48	2021-09-10	00	RVW	Sandy Leung	Parramatta City Council	Denniel Custodio	8.2 Permits/ Over dimensional vehicles	-	Any oversize vehicles using local roads require approval from NHVR prior to driving through the local roads.	N	OBS	Noted through the existing permit system as noted within the document
No	47	2021-09-10	00	RVW	Sandy Leung	Parramatta City Council	Denniel Custodio	7.2.14	-	Occupation of any part of the footpath or road, such as the closure of the westbound lane on Unwin Street during demolition works, will require a Road Occupancy Permit from Council. This is required to be obtained prior to carrying out the construction work.	N	OBS	Noted
No	46	2021-09-10	00	RVW	Sandy Leung	Parramatta City Council	Denniel Custodio	7.2.5 Impact on traffic flow during works	-	It is noted that during the demolition works, there will be 4 light vehicle and 30 heavy vehicle movements per hour which is below the indicative numbers provided for in the EIS. Access to the building sites will be via Wentworth Street with lane closures occurring throughout due to utility and demolition works.	N	OBS	Noted
No	45	2021-09-10	00	RVW	Michael Kolos	Parramatta City Council	Denniel Custodio	Appendix D Traffic Guidance Schemes	-	Absence of dimensions between many signs is noted as deficiency in the RSA, yet the traffic control plans have not been updated to address this deficiency	N	OBS	TGS updated
No	44	2021-09-10	00	RVW	Michael Kolos	Parramatta City Council	Denniel Custodio	Appendix G Road Safety Audit	-	This RSA is a desktop audit, involving no site inspection, so may have limitations	N	OBS	Agreed this is a desktop audit only
No	43	2021-09-10	00	RVW	Michael Kolos	Parramatta City Council	Denniel Custodio	Appendix E Haul Routes Figure 32	General Specification	It seems an alternate inbound haul route from the M4 Motorway eastbound (shown in gray) uses the James Ruse Dr exit, Prospect St and Alfred St. This is not supported as this haul route passes a school and streets with a residential character.	N	MNC	Legend included on drawing
No	42	2021-09-10	00	RVW	Michael Kolos	Parramatta City Council	Denniel Custodio	7.2.7 Impact on active transport users	General Specification	Provide W6-9 signs on Wentworth St for heavy vehicle drivers as they approach the shared path crossing of Wentworth St at Martha St warning of pedestrians and cyclists crossing ahead. Include as site induction the issue of safety for pedestrian and cyclists crossing Wentworth St at Martha St, using the M4 shared path. Install on shared path on both approaches to Wentworth St crossing T2-25 signs (truck warning) to height awareness of trucks to pedestrians and cyclists about to cross Wentworth St. The reason for the above is that unlike truck drivers who previously served this area and were aware of the shared path crossing of Wentworth St, many drivers serving the demolition works will be unaware of this issue.	N	MNC	Noted - document amended accordingly
No	41	2021-09-10	00	RVW	Michael Kolos	Parramatta City Council	Denniel Custodio	7.2.7 Impact on active transport users	General Specification	Confirm if pedestrian route from Wentworth St to James Ruse Drive pedestrian bridge, mentioned in 6.2.3 Unwin St connecting the M4 shared path remains accessible and if not, what is the alternate pedestrian route?	N	MNC	No impact on this route
No	40	2021-09-09	00	RVW	Sean Macgregor	Transport for New South Wales	Sean Macgregor			No Comments	Y		Noted
No	39	2021-09-07	00	RVW	Kenneth Hind	Sydney Metro	Kenneth Hind	Appendix D	NA	While pedestrian numbers may not be significant in the area, if it is proposed to close a footpath on one side of the road there does not appear to be any proposed signposting control for pedestrians to direct them to cross over and manage the crossing.	N	OBS	Pedestrians will be managed through the work sites if required
No	38	2021-09-07	00	RVW	Kenneth Hind	Sydney Metro	Kenneth Hind	Appendix D	NA	The TGS plans notes refer to streets that are not in the area on the adjacent sketch. This needs to be corrected.	N	OBS	Noted TGS amended

No	37	2021-09-07	00	RVW	Alexandra Parker	Sydney Metro	Alexandra Parker	9	Requirement TT5	Requirement TT5: Deployment of speed awareness signs in conjunction with variable message signs near construction sites to provide alerts to driver in section 9 - Variable Message Signs have been flagged as not applicable	N	ANC	Document amended
No	36	2021-09-07	00	RVW	Alexandra Parker	Sydney Metro	Alexandra Parker	8	Requirement TT5	Requirement TT5 includes: Proving community education and awareness about sharing the road safely with heavy vehicles. Cant see where addressed in section 8	N	ANC	The Truck aware campaign by TfNSW is part of the community education and awareness about sharing the road
No	35	2021-09-07	00	RVW	Alexandra Parker	Sydney Metro	Alexandra Parker	Section 9: Community	N/A	Section 9: Community. To include: Sydney Metro West, PO Box K659, Haymarket, NSW 1240.	N	OBS	Document amended
No	34	2021-09-07	00	RVW	Alexandra Parker	Sydney Metro	Alexandra Parker	Section 9, Table 4	N/A	Section 9: Community. Table 4: Should align to OCCS re community notification requirements. Newsletters Email updates Notifications Signage Sydney Metro website and contractor website	N	OBS	Document amended
No	33	2021-09-07	00	RVW	Kenneth Hind	Sydney Metro	Kenneth Hind	6.2.1	NA	The first two paragraphs refer to Parramatta Road and the third paragraph refers to Great Western Highway. Please keep road names consistent.	N	OBS	Document amended
No	32	2021-09-07	00	RVW	Kenneth Hind	Sydney Metro	Kenneth Hind	Figure 1	NA	Update this figure as the Rydalmere alignment is no longer an option and the Pyrmont and CBD station locations have been identified.	N	OBS	Document amended
No	31	2021-09-06	00	RVW	Michael Holmes	Sydney Metro	Michael Holmes	11 MONITORING AND INSPECTION	General Specification 2.11.1, 2.12.11	What monitoring activities will Delta undertake to monitor heavy vehicle movements in compliance with project approved haulage routes and any applicable permit conditions? If this is addressed in a separate plan, please provide appropriate reference/s.	N	OBS	Document amended
No	30	2021-09-06	00	RVW	Michael Holmes	Sydney Metro	Michael Holmes	8 FLEET MANAGEMENT	General Specification 2.12.11	Please could you clarify the following truck types listed in second sentence that would be used during site operations: "5 Tippers" - is this supposed to say 5-axle twin-steer tippers? "Cement Tankers" - is this correct?	N	OBS	Cement tankers removed 5Tonne tippers
No	29	2021-09-06	00	RVW	Michael Holmes	Sydney Metro	Michael Holmes	8 Fleet Management	General Specification 2.12.11	In relation to first sentence - please note trucks used on the project must also comply with the applicable Australian Design Rules (ADRs) and Sydney Metro project-specific safety requirements.	N	OBS	Document amended
No	28	2021-09-06	00	RVW	Michael Holmes	Sydney Metro	Michael Holmes	7.2.13 Incident response	General Specification 2.12.10 Emergency/Incident Management	Note that 7.2.13 Incident response is in relation to "sites managed by Delta". What is the incident response procedure in the event that one of Delta's heavy vehicles impacts either traffic flow or the safety of other road users on the public road network (for example a heavy vehicle incident on one of the project's haulage routes to/ from a site)? If Incident Response / Emergency Management procedures are provided in a separate plan, please provide the appropriate reference here.	N	OBS	Document amended
No	27	2021-09-06	00	RVW	Andrew Sargent	Sydney Metro	Andrew Sargent	3.2 Scope of the CTMP	0	Refers to certification to AS/NZS 4801. Other documents note certification to ISO45001.	N	OBS	Document amended
No	26	2021-09-02	00	RVW	Luke Wilby	Transport for New South Wales	Luke Wilby	TGS-CLY-UWN-SB-1201 Sheet 2 of 2	NA	The end roadworks, increased speed limit to 50km/h is located right on a sharp curve - effectively encouraging vehicles to increase speed as they enter the curve. Please consider relocating end roadworks sign to after the curve to reduce the risk of crashes through the corner.	N	OBS	TGS amended

No	25	2021-09-02	00	RVW	Luke Wilby	Transport for New South Wales	Luke Wilby	7.2.7 Impact on active transport users	NA	There is a green on green conflict at the left turn from Parramatta Rd into Wentworth Street. This provides a green walk signal to pedestrians crossing Wentworth Street while left turning vehicles also receive a green signal to proceed, creating a significant safety risk for pedestrians. Please confirm if this still exists, and if it does please consider the risk and demonstrate how it will be managed SFAIRP.	N	OBS	Document amended
No	24	2021-09-02	00	RVW	Luke Wilby	Transport for New South Wales	Luke Wilby	7.2.5 Impact on traffic flow during works	NA	The text in this section is somewhat confusing. The opening line refers to 4 light vehicle and 30 heavy vehicle movements which does not align with the second sentence or figures 27 and 28. Please update whichever is wrong or clarify to make the opening sentence clearer in what it is referring to. Thanks.	N	OBS	Document amended
No	23	2021-09-02	00	RVW	Berin Gordon	Sydney Metro	Berin Gordon	Section 7.2.5	General Specification 2.11.1 (d)	"During works, there will be 4 light vehicle and 30 heavy vehicle movements." Will this be every day, or at work peak? For the life of the works? Does it include short term utility works or just the vehicles entering and exiting the demolition sites (long term)?	N	MNC	These are the DELTA vehicle numbers. The numbers on Figures 27 and 28 are the EIS predicted vehicle numbers.
No	22	2021-09-02	00	RVW	Berin Gordon	Sydney Metro	Berin Gordon	Appendix Headings	General Specification 2.11.1 (d)	The word Appendix is missing from the title of each Appendix	N	OBS	I am unable to include that - the TOC shows the listing of Appendices
No	21	2021-09-02	00	RVW	Berin Gordon	Sydney Metro	Berin Gordon	Table 9 TT10	General Specification 2.11.1 (d)	Section 7.2.9 focuses on the CPAS not how 'consultation would occur with the relevant local council to investigate opportunities to provide alternative parking facilities'. All parking is within the site, at Clyde, correct? Does this REMM apply as it is about existing parking being removed?	N	MNC	The section referenced clearly states that no permanent parking is removed
No	20	2021-09-02	00	RVW	Berin Gordon	Sydney Metro	Berin Gordon	Table 9 TT8 & TT19	General Specification 2.11.1 (d)	It is fine that an item does not apply to the Clyde site, but please provide detail in the CTMP as to why.	N	MNC	Document amended
No	19	2021-09-02	00	RVW	Berin Gordon	Sydney Metro	Berin Gordon	Table 9 TT7	General Specification 2.11.1 (d)	Section 8.1 is given as the response to this REMM, but Section 8.1 does not provide detail on how 'Construction site traffic would be managed to minimise movements during peak periods'. Update the CTMP accordingly.	N	MNC	Document amended
No	18	2021-09-02	00	RVW	Berin Gordon	Sydney Metro	Berin Gordon	Table 9 TT2	General Specification 2.11.1 (d)	Section 7.2.13 is shown as the response to this REMM, and while notifying Metro is good, how, "in the event of a traffic related incident" is coordination with "Transport for NSW, including Transport Coordination and / or the Transport Management Centre's Operations Manager" undertaken?	N	MNC	Document amended
No	17	2021-09-02	00	RVW	Berin Gordon	Sydney Metro	Berin Gordon	Section 10	General Specification 2.11.1 (d)	What is the 'Traffic control used for pedestrian management, lane closures etc'? The TGS show the footpaths open, item 12 and 13 on .pdf page 42 say the footpath is closed, while Section 7.2.7 and 7.2.8 are general statements: 7.2.7 'Vehicle access to and from construction sites will be managed to maintain pedestrian...' and 7.2.8 'All reasonably practicable measures will be implemented to maintain pedestrian and vehicular access'. If pedestrians are impacted, at any time, what specifically will be done (and where) to manage pedestrian? Update the CTMP accordingly	N	MNC	Where works are taking place next to an existing footpath, pedestrians will be managed through the site
No	16	2021-09-02	00	RVW	Berin Gordon	Sydney Metro	Berin Gordon	Section 10	General Specification 2.11.1 (d)	Provide detail in the CTMP as to how "The Police and relevant Emergency Services will be informed in a timely manner of relevant activities proposed". What is the process/method?	N	MNC	Refer to Section 10.4 which notes the communications with Emergency Services
No	15	2021-09-02	00	RVW	Berin Gordon	Sydney Metro	Berin Gordon	Section 8.3	General Specification 2.11.1 (d)	All operators will be comprehensively trained...'? How, what method/s or course? Update the CTMP accordingly	N	MNC	Document amended

No	14	2021-09-02	00	RVW	Berin Gordon	Sydney Metro	Berin Gordon	Section 8.2	General Specification 2.11.1 (d)	How many and what type of oversize vehicle movements will be made to and from site? Include the movement/per day and over what time period.	N	ANC	Document amended
No	13	2021-09-02	00	RVW	Berin Gordon	Sydney Metro	Berin Gordon	Section 8.2	General Specification 2.11.1 (d)	Sydney Metro does not issue or obtain OSOM permits. The contractor (or their sub-contractor) must obtain these permits through existing, long established, approval channels.	N	ANC	Document amended
No	12	2021-09-02	00	RVW	Berin Gordon	Sydney Metro	Berin Gordon	Section 8 Intro	General Specification 2.11.1 (d)	How will 'Construction site traffic will be managed to minimise movements during peak periods' ? What is the process/method? Update the CTMP accordingly	N	MNC	Document amended
No	11	2021-09-02	00	RVW	Berin Gordon	Sydney Metro	Berin Gordon	Section 7.2.13	General Specification 2.11.1 (d)	What will be the method/process that Delta will use to report all traffic accidents to Sydney Metro?	N	MNC	As per the requirements included in the Project Health and Safety Plan
No	10	2021-09-02	00	RVW	Berin Gordon	Sydney Metro	Berin Gordon	Section 7.2.12	General Specification 2.11.1 (d)	"minimise our impact on existing street parking" Wont all construction parking be within the site, so there will be no need to minimise impact? Clarify, within the CTMP, if existing on street parking is to be affected.	N	MNC	Document amended
No	09	2021-09-02	00	RVW	Berin Gordon	Sydney Metro	Berin Gordon	Section 7.2.11	General Specification 2.11.1 (d)	This section states 'we would minimise our construction level of activity...' , but there is no analysis/explanation as to how this would be done and to what extent this may affect the event and/or the works. Update the CTMP accordingly	N	MNC	Document amended
No	08	2021-09-02	00	RVW	Berin Gordon	Sydney Metro	Berin Gordon	Section 7.2.10	General Specification 2.11.1 (d)	What is the cumulative impact on and from the business on Wentworth Ave (mostly between Parramatta Rd and Martha St)? They will remain in operation during utility works, Figures 23 to 26, are underway, plus Wentworth Ave operates as the EIS approved main access for project heavy vehicles.	N	MNC	There is no works south of the M4 overpass in the nominated area
No	07	2021-09-02	00	RVW	Berin Gordon	Sydney Metro	Berin Gordon	Section 7.2.8	General Specification 2.11.1 (d)	It is noted that 'all reasonably practicable measures will be implemented..' What are those measures? Update the CTMP accordingly	N	MNC	Document amended
No	06	2021-09-02	00	RVW	Berin Gordon	Sydney Metro	Berin Gordon	Section 7.2.7	General Specification 2.11.1 (d)	The text states 'little or no impact...' What is the 'little' impact? Update the CTMP accordingly	N	MNC	Document amended
No	05	2021-09-02	00	RVW	Berin Gordon	Sydney Metro	Berin Gordon	Figure 3	General Specification 2.11.1 (d)	The existing cycle shared path is shown, but there is no analysis/explanation as to whether the works and/or vehicle movements for the works will impact the shared path. If there are impacts detail what the mitigations would be? Update the CTMP accordingly	N	MNC	There is no impact on the shared path operations. Signage is proposed to highlight the shared path to heavy vehicle operators and heavy vehicle operations in the area to shared path users
No	04	2021-09-02	00	RVW	Berin Gordon	Sydney Metro	Berin Gordon	Title page	General Specification 2.11.1 (d)	Add 'Clyde' to the heading on the title page, or somewhere on the title page.	N	OBS	Document amended
No	03	2021-08-31	00	RVW	John Ieroklis	Sydney Metro	John Ieroklis			No Comments	Y		Noted
No	02	2021-08-31	00	RVW	Peter Keyes	Sydney Coordination Office	Peter Keyes	Appendix D		Any future approval of this CTMP is not an approval of the proposed road occupancies therein. The proponent must apply and obtain approval from the Transport Management Centre for a Road Occupancy Licence (ROL) for any required lane closures and/or Speed Zone Authorisations as part of the ROL.	N	OBS	Noted
No	01	2021-08-31	00	RVW	Peter Keyes	Sydney Coordination Office	Peter Keyes	Appendix D		The Traffic Guidance Schemes (TGS) included in the CTMP are considered for information only. It is the proponents responsibility to ensure that TGS' comply with AS1742.3 and Transport for NSW's "Traffic Control at Worksites" manual and be signed by a person with TfNSW certification to prepare a TGS.	N	OBS	Noted

J. Inspection checklists

E.5 Post completion inspection checklist

Completed by:			
Name:		Road name/Staging Plan number:	
Signature:		Date / time:	
ITCP or PWZTMP card number			
Drive through post completed inspection			
Item		Comments / Action	
Have all work activities been completed?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Has all plant and equipment been removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Have all TTM signs and devices been removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Has all TTM linemarking been obliterated?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Have existing permanent speed limits been reinstated?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Have all TTM site hazards been removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Other	<input type="checkbox"/> Yes <input type="checkbox"/> No		

Desktop post completion inspection		
Have all TGSs for completed tasks been retained?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Have all TMP required documents been placed in relevant folders?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Has TMP/TGS designer requested addition information post TTM removal?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Is the road safe for opening to road users?	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Additional comments:

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E.4 Shift / Daily TTM inspection checklist

Shift Inspections must be undertaken by a person holding the PWZTMP or ITCP qualification when a TGS is installed, changed or updated, to ensure the TGS is implemented as designed. This includes at a minimum, twice per shift (recommended every 2 hours). This form can also be used for inspecting 'Aftercare' arrangements.

Completed by:				
Name:		Signature:		
TMP Reference:		TGS Reference:		
Date:		Time/s	Inspection 1	Inspection 2
			00-00	00-00
			00-00	
Drive through TGS inspection			Inspection 1	Inspection 2
Have any adjustments been made to the approved TGS?			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
If yes, provide details:	Are changes within tolerances? <i>If no, TGS must be reviewed by a PWZTMP</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Have changes been approved? <i>If no, TGS must be approved</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:				
Have all signs and devices been installed in accordance with approved TGS? <i>If no, provide detail of action taken</i>			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:				

Drive through TGS inspection		<i>Inspection 1</i>	<i>Inspection 2</i>	<i>Inspection 3</i>
Are PTCs positioned as prescribed in TGS? <i>If no, provide detail of action taken</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Comments or details of action taken:				
Are manual traffic controllers clear of travel lane, have suitable escape route? <i>If no, provide detail and reposition manual traffic controllers</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Comments or details of action taken:				
Are sign and devices in good condition, clearly visible to road users? <i>If no, provide detail of action taken</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:				
Are all signs mounted level and suitably clear of travel lanes? <i>If no, provide detail of action taken</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:				
Are conflicting or non-applicable signs covered or removed? <i>If no, provide detail and remove or cover signs</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Comments or details of action taken:				

Drive through TGS inspection		<i>Inspection 1</i>	<i>Inspection 2</i>	<i>Inspection 3</i>
Is temporary delineation installed as prescribed i.e. straight line forming taper? <i>If no provide details and rectify delineation</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:				
Have site conditions changed due to shade, park vehicles, glare etc. <i>If yes provide details and note if action is required</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:				
Are registered trailers i.e. VMS / light towers; suitably clear of travel lanes and delineated? <i>If no provide details and rectify location</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Comments or details of action taken:				
Are temporary speed zones operating as prescribed? <i>If no provide details and discuss with work supervisor</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Comments or details of action taken:				
Are workers on foot / plant clearances been applied / observed? <i>If no provide details and implement controls to rectify</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Comments or details of action taken:				

Post drive through confirmation		<i>Inspection 1</i>	<i>Inspection 2</i>	<i>Inspection 3</i>
Is TGS valid for the site activity and operating safely as intended? <i>If no provide details and implement controls to rectify</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:				
Is TGS is appropriate for the current traffic conditions? <i>If no provide details and implement controls to rectify</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:				
Have potential hazards identified in TGS been addressed? i.e. end-of-queue management <i>If no provide details of additional hazards and controls required</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:				

Additional comments:

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E.3 Weekly TTM inspection checklist

Weekly inspections must only be carried out by a PWZTMP qualified person. Weekly inspections must be carried out when a site is first open and at least once every week thereafter.

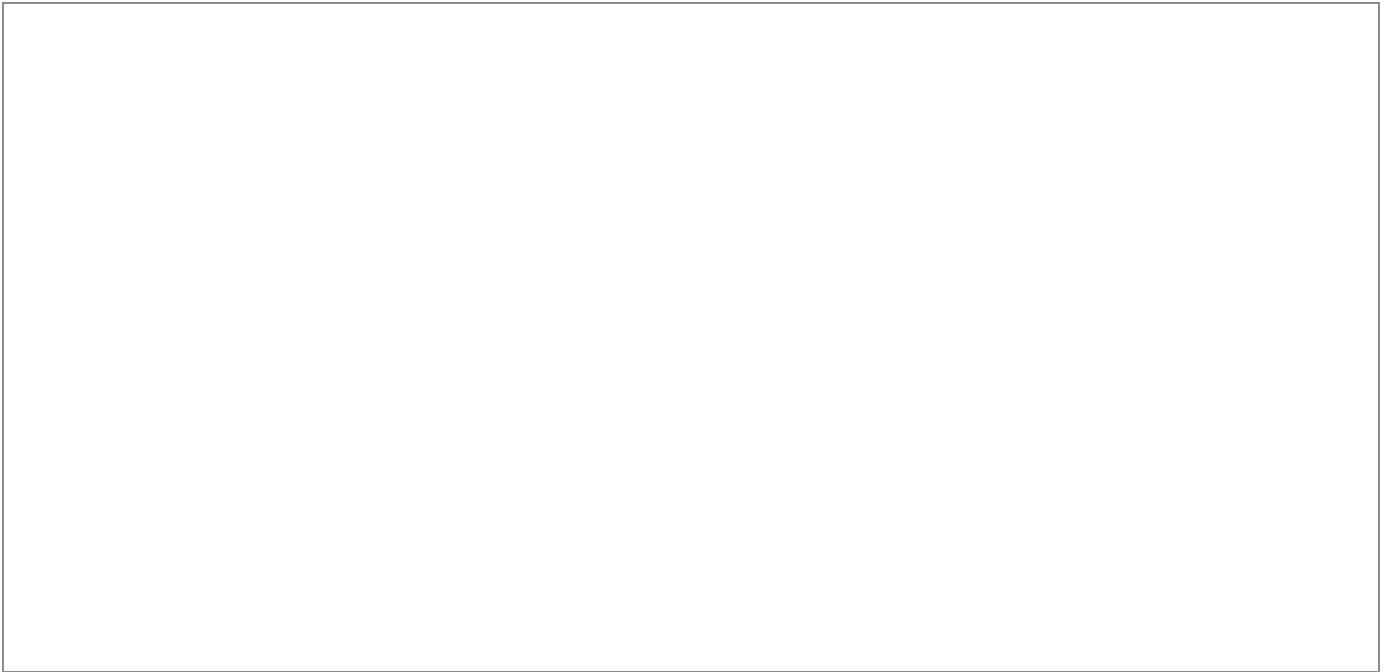
Completed by:			
Name:		Signature:	
TMP Reference:		TGS Reference:	
Date:		Inspection type	<input type="checkbox"/> Pre-opening <input type="checkbox"/> Weekly
Desktop review			
Is a copy of the location TMP and relevant TGS available? <i>If no inspection must not be undertaken until documents are obtained</i>			<input type="checkbox"/> Yes <input type="checkbox"/> No
Details of TMP and TGS:			
Are the location TMP and relevant TGS approved? <i>If no, work must be stopped until documents are approved</i>			<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:			
Site Inspection			
Inspection completed:	<input type="checkbox"/> During the day <input type="checkbox"/> During the night		
Signs and devices positioned as prescribed and commanding attention? <i>If no provide details and rectify signs</i>			<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:			

Site Inspection		
Sign sizes as prescribed?		<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>If no provide details and rectify signs</i>		
Comments or details of action taken:		
Signs are mounted level and suitably clear of travel lanes?		<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>If no provide details and rectify signs</i>		
Comments or details of action taken:		
Has temporary delineation been applied as prescribed, with permanent markings obliterated?		<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>If no provide details of action required to rectify delineation</i>		
Comments or details of action taken:		
Are registered trailers i.e. VMS / light towers; suitably clear of travel lanes and delineated?		<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>If no provide details and rectify location</i>		
Comments or details of action taken:		
Are temporary speed zones operating as prescribed?		<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>If no provide details and discuss with work supervisor</i>		
Comments or details of action taken:		
Are PTCD positioned as prescribed in TGS?		<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>If no provide details of action required to rectify</i>		
Comments or details of action taken:		

Site Inspection		
Are manual traffic controllers clear of travel lane, have suitable escape route?		<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>If no provide details of action required to rectify</i>		
Comments or details of action taken:		
Are site accesses and egresses well defined and safe for work vehicles?		<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>If no provide details of action required to rectify</i>		
Comments or details of action taken:		
Termination signs are suitably located? i.e. D downstream of last activity.		<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>If no provide details of action required to rectify</i>		
Comments or details of action taken:		

Post site inspection confirmation	
Is worksite layout operating safely as intended?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>If no provide details and implement controls to rectify</i>	
Comments or details of action taken:	
Has TMP identified and addressed key TTM risks?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>If no provide details and implement controls to rectify</i>	
Comments or details of action taken:	
Have key TTM risks been addressed on site?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>If no provide details of additional hazards and controls required</i>	
Comments or details of action taken:	
Have copies of Shift Inspections been sighted as completed as required?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<i>If no provide details and discuss with nominated rep completing Shift Inspections</i>	
Comments or details of action taken:	

Additional comments:



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