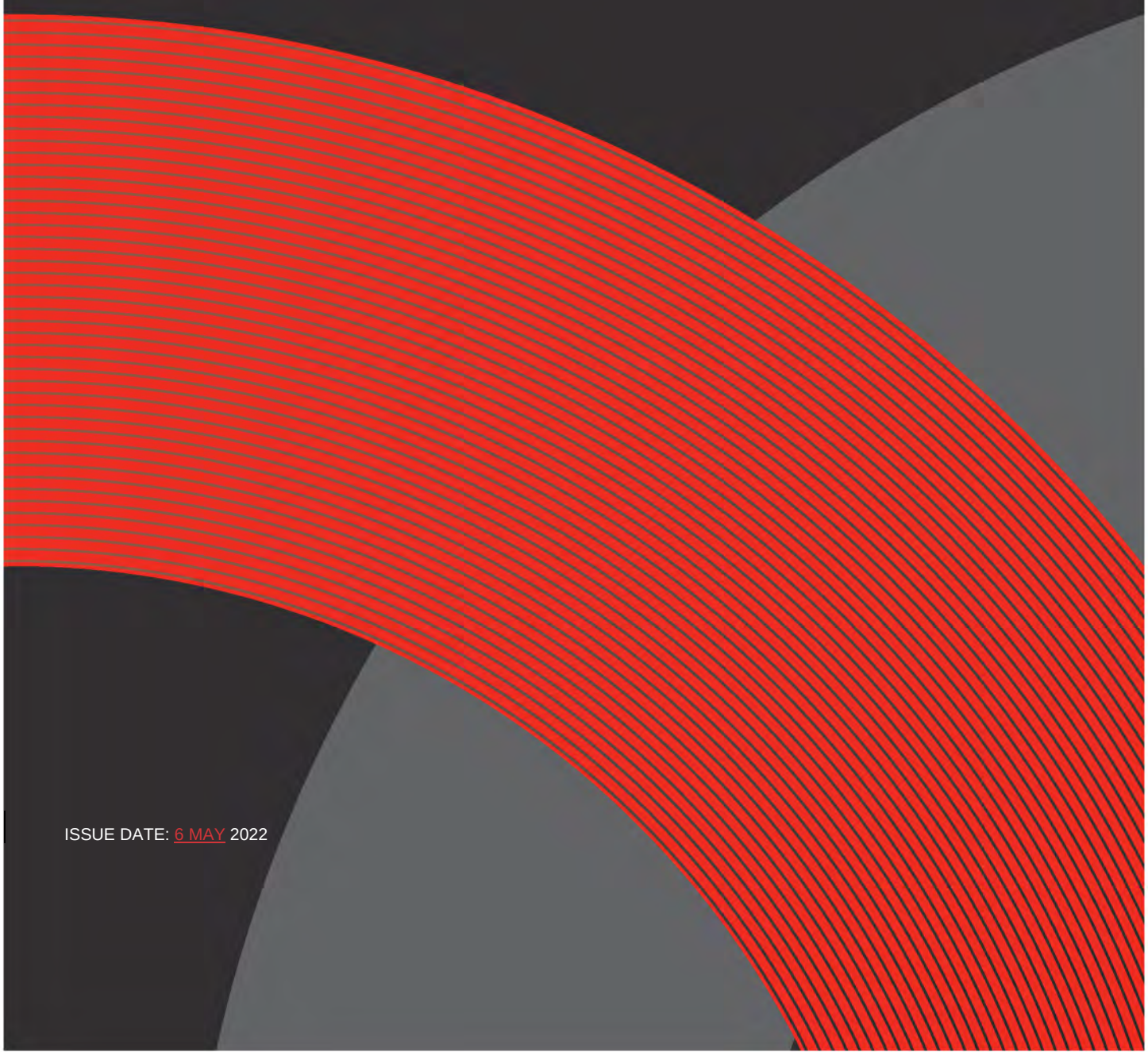
# CONSTRUCTION TRAFFIC MANAGEMENT PLAN

Sydney Metro West – Western Tunnelling Package

Clyde/ Rosehill Site Establishment



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## Document Details

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| Action Type | Position | Name | Signature | Date Signed |
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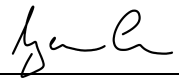
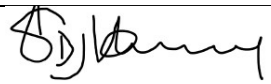
| Prepared by | Traffic Manager | S Lewis |  | 6 May 22 |
| Reviewed by | Construction Manager | J Gadallah |  | 6 May 22 |
| I hereby confirm this activity and all associated work, have been appropriately planned and the relevant resources are available to conduct the work in accordance with the agreed method.<br>I hereby approve this activity to commence, as the stated controls applications are the most appropriate and are in accordance with the Risk Matrix. | | | | |
| Approved by | Deputy Project Director | S Hussey |  | 6 May 22 |

***NOTES:***

*Once all signatures have been obtained, the Document Author is responsible for ensuring the signed and approved hard and soft copies are uploaded on to the project share drive or passed to the Responsible Person for filing.*

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# 1 INTRODUCTION

Sydney Metro West (SMW) is a new underground railway connecting Greater Parramatta and the Sydney CBD. It will provide fast connections between greater Sydney's two major business centres as well as providing better access to the growing business and entertainment precincts in Olympic Park and Pyrmont, the health and medical research hub at Westmead and the future business and tourism site at The Bays.

SMW is being delivered in a number of packages. The Western Tunnelling Package (WTP) is ~~an enabling~~one package for SMW. It involves 9km of twin railway tunnels between Sydney Olympic Park and Westmead as well as:

- Westmead Station box excavation, including temporary support, stub tunnels, partially mined station cavern and crossover cavern including permanent lining and support
- Parramatta Station, including excavation of station box and associated support
- Clyde Maintenance and Stabling Facility (MSF), including permanent dive structure, portal, spur running tunnels, spur tunnel junction cavern, bulk earthworks, civil structures, utilities corridor, road crossing and creek diversion
- Rosehill Services Facility, including shaft excavation, permanent lining and lateral support
- Silverwater Services Facility, including shaft excavation, nozzle enlargement excavations, permanent lining and support
- a precast segment manufacturing facility at Eastern Creek
- demolition and site clearance works.

The entire Sydney Metro West Stage 1 is shown on Figure 1-1.


Figure 1-1: Project location

The objectives for WTP are to:

- provide the tunnel infrastructure for conveying passenger rolling stock between Sydney Olympic Park and Westmead and to Clyde MSF with a 120-year design life

- ensure the timely and effective delivery of the overall Sydney Metro West Project
- minimise impacts on the environment
- maximise opportunities for social sustainability, workforce development and local procurement
- minimise disruption, delay and inconvenience to the affected public, road and public transport users, and adjacent businesses during the delivery of the project
- achieve a value-for-money outcome when viewed on the basis of effective risk management and whole-of-life cost
- ensure seamless, timely, progressive handover of completed sections.

## 1.1 Purpose

This Clyde/ Rosehill site specific Construction Traffic Management Plan (CTMP or this Plan) has been developed by Gamuda Laing O'Rourke (GLC) to identify the traffic management measures at the Clyde/ Rosehill worksite for site establishment associated with the Sydney Metro West Western Tunnelling Package (WTP Works). Further Plans will be developed for the various phase of works as noted below:

- Clyde/ Rosehill Site Establishment – THIS PLAN
- Clyde/ Rosehill Utility Works - depending on the outcomes of the investigation works detailed in this CTMP
- Clyde/ Rosehill Site Operations Stage 1 – change of activities and vehicle numbers with use of driveways built during the site establishment phase of works
- Clyde/ Rosehill Site Operations Stage 2 – use of new set of traffic signals on Unwin Street to access the Rosehill dive site and modifications to the existing signals at the intersection of Prospect Street/ James Ruse Drive

This plan sets out the traffic management initiatives that will be deployed to minimise disruption and ensure the safety of the wide range of stakeholders potentially affected by the SBT works including but not limited to motorists, pedestrians, cyclists, public transport users, local residents, property owners, business owners and workers/ staff.

This plan has been prepared in accordance with SSI 10038 Planning Approval Condition D85 and will be submitted to the Planning Secretary of the NSW Department of Planning and Environment ~~and Industry~~ for information prior to the commencement of any construction in the area identified and managed within this CTMP

## 1.2 Objectives

GLC are committed to striving to achieve the objectives as outlined in the CTMF and the environmental performance outcomes, namely:

a) Minimising disruption and maintaining safety for all road users including pedestrian, cyclists, motorists and public transport users and providers
b) Ensuring construction traffic access the arterial network as soon as practicable on route to and immediately after leaving the construction site
c) Minimising change to traffic operations and kerbside access
d) Minimising construction traffic generation during network peak periods, as outlined in the EIS
e) Maintaining access to properties, businesses, and utility providers/ maintainers
f) Remain incident and injury free to workers and members of the public
g) Working collaboratively with other stakeholders and other major projects to mitigate traffic and transport impacts

# 2 LOCALITY AND EXISTING CONDITIONS

The site is located in an industrial area of western Sydney and is bounded by Duck Creek to the south, Unwin Street to the north, the disused Epping rail line to the west and Shirley Street. Tennyson Street to the east as shown on Figure 2-1.


Figure 2-1: Site locality

The Clyde/ Rosehill site is located within the nominated construction zone, highlighted below and is situated in a highly industrialised area which is predominantly zoned for industrial uses, refer to Figure 2-2.


Figure 2-2: Existing land use zoning

A review of the existing sensitive receivers and their locations was undertaken by Sydney Metro West during the EIS development phase. The results of this review is shown below on Figure 2-3. A land use survey is included as part of the detailed Noise and Vibration Impact Statement (SMWSTWTP-GLO-1NL-NL000-NV-PLN-000002). This is currently in draft and is being informed by construction from the EPA and other stakeholders. Throughout the construction period this detailed Noise and Vibration Impact Statement will be an evolving document.

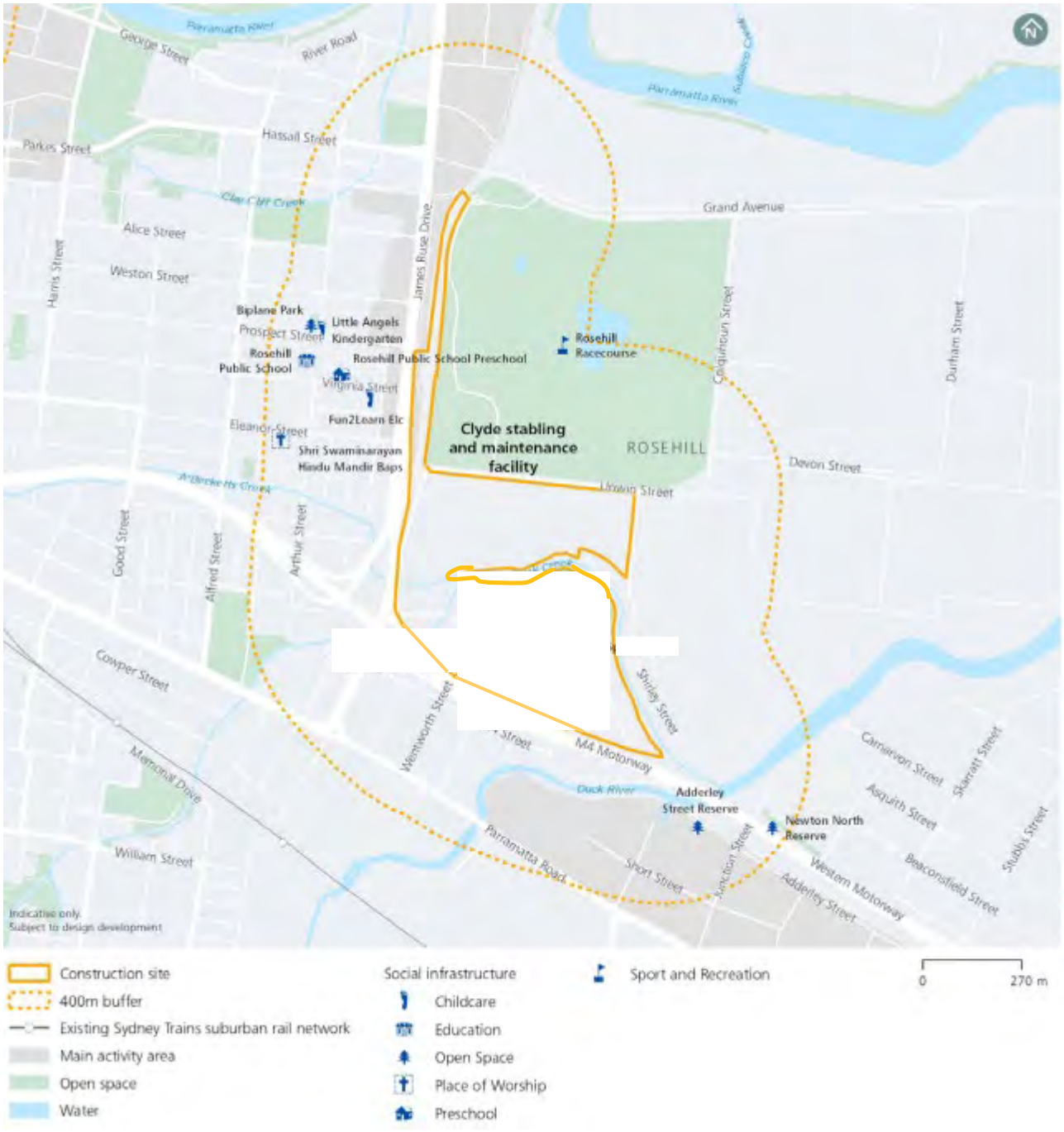



Figure 2-3: Existing sensitive receivers

Surrounding the site, the road network is typically local roads, with Parramatta Road, James Ruse Drive and Church Street being state arterial roads. The M4 Motorway is south of the site, refer to Figure 2-4. Refer to Figure 2-1 for actual site boundaries.

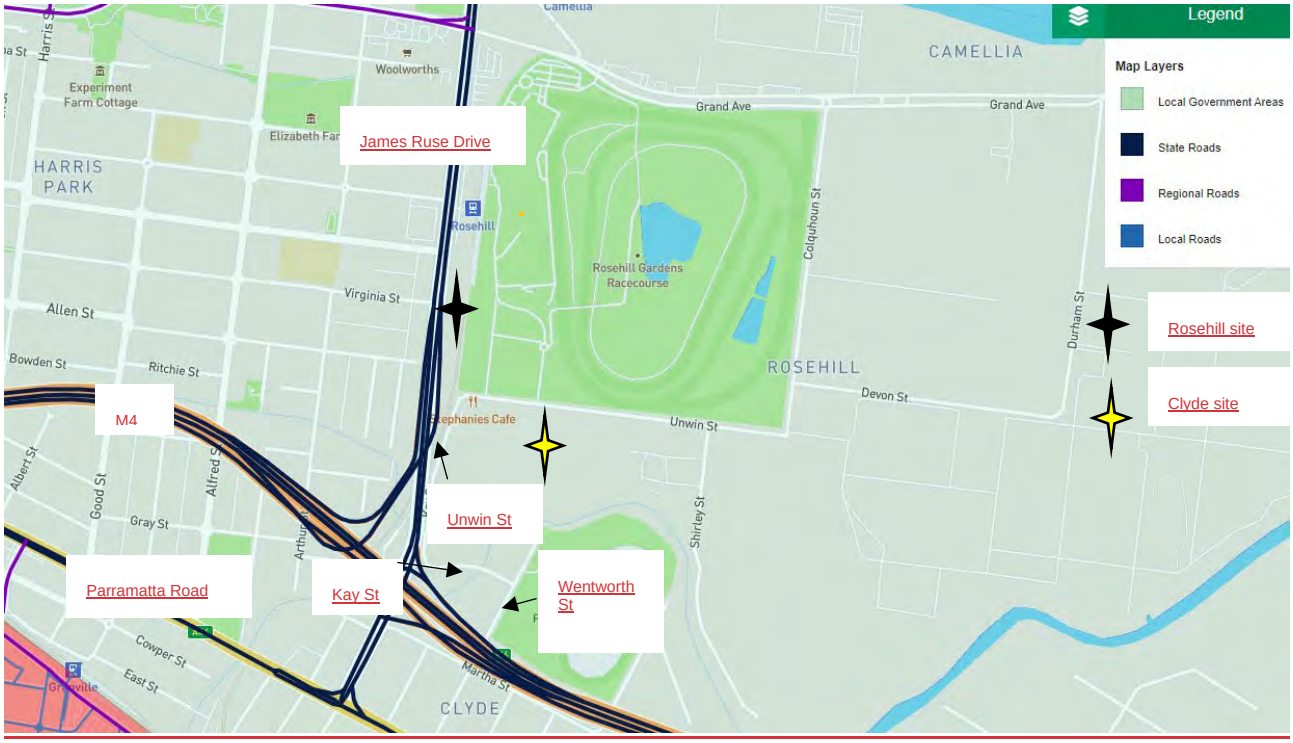



Figure 2-4: TfNSW Road Network Classification

Surrounding the site, the road network is typically recognised as Performance Based Standard routes allowing the use of greater mass vehicles, refer to Figure 2-5. The use of PBS vehicles will reduce the number of vehicles required for the spoil haulage task in particular. This will be notable during the site operations phase of the project.

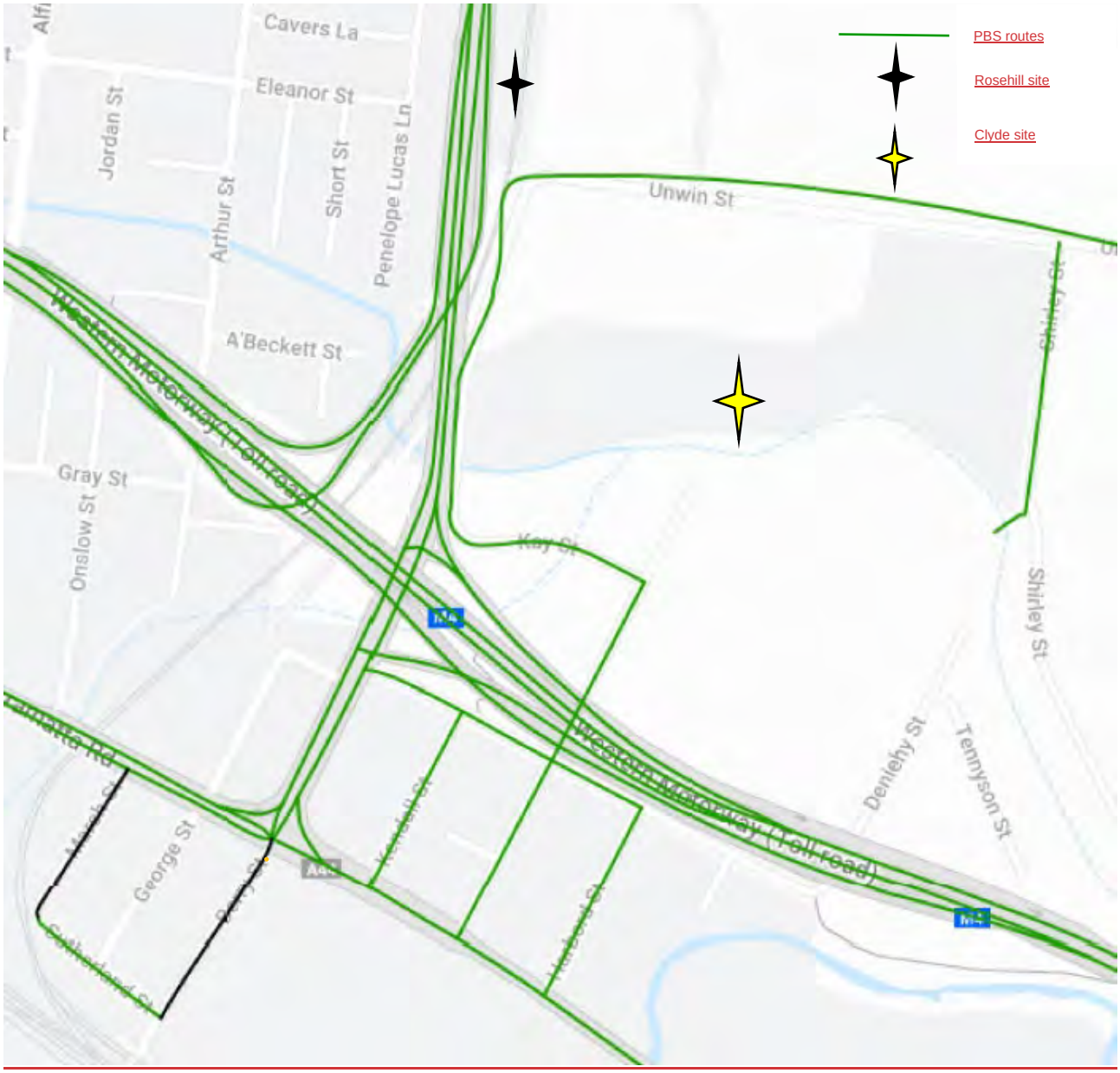



Figure 2-5: TfNSW recognised PBS routes

## 2.1 Wentworth Street

Wentworth Street is a local road under the care and control of the City of Parramatta Council. It starts at Parramatta Road and ceases at Duck Creek, Clyde. Wentworth Street runs in a north south direction. The speed limit is 50km/hr. No public transport operates along Wentworth Street.

North of the M4 Motorway overpass, the street previously contained industrial uses on the western side, however, with the demolition works by Sydney Metro West, the western side of the street contains no premises. On the eastern side of the street, Sydney Speedway was previously located.

The speedway site also forms part of the Sydney Metro west Clyde site. South of the M4 Motorway overpass, the street has industrial complexes on both sides of the street. North of Kay Street, Wentworth Street has been acquired by Sydney Metro from the City of Parramatta Council and Sydney Metro West intends to license Wentworth Street from north of the M4 overpass from Council. All other land required for the construction and operation of the Sydney Metro West Stage 1 has been acquired by Sydney Metro.

Traffic signals are located at the intersection of Wentworth Street and Parramatta Road. These signals allow for all movements. Signalised pedestrian crossings are provided across Wentworth Street and on the northern approach on Parramatta Road. A left turn arrow hold is provided for east to north movements providing protection for the Wentworth Street signalised crossing.

Parking is typically unrestricted along Wentworth Street with a small section of No Parking provided on the eastern side of Wentworth Street leading towards the signals on Parramatta Road.

Footpaths are provided on both sides of the street between the M4 Motorway overpass and Parramatta Road. North of the overpass, a footpath is only provided on the western side.

A shared cycle path crosses Wentworth Street at the intersection with Martha Street. No dedicated crossing facilities are provided across Wentworth Street. This shared path is known as the M4 Motorway shared path, connecting South Wentworthville to Sydney Olympic Park, refer to Figure 2-6~~Figure 2-6~~.

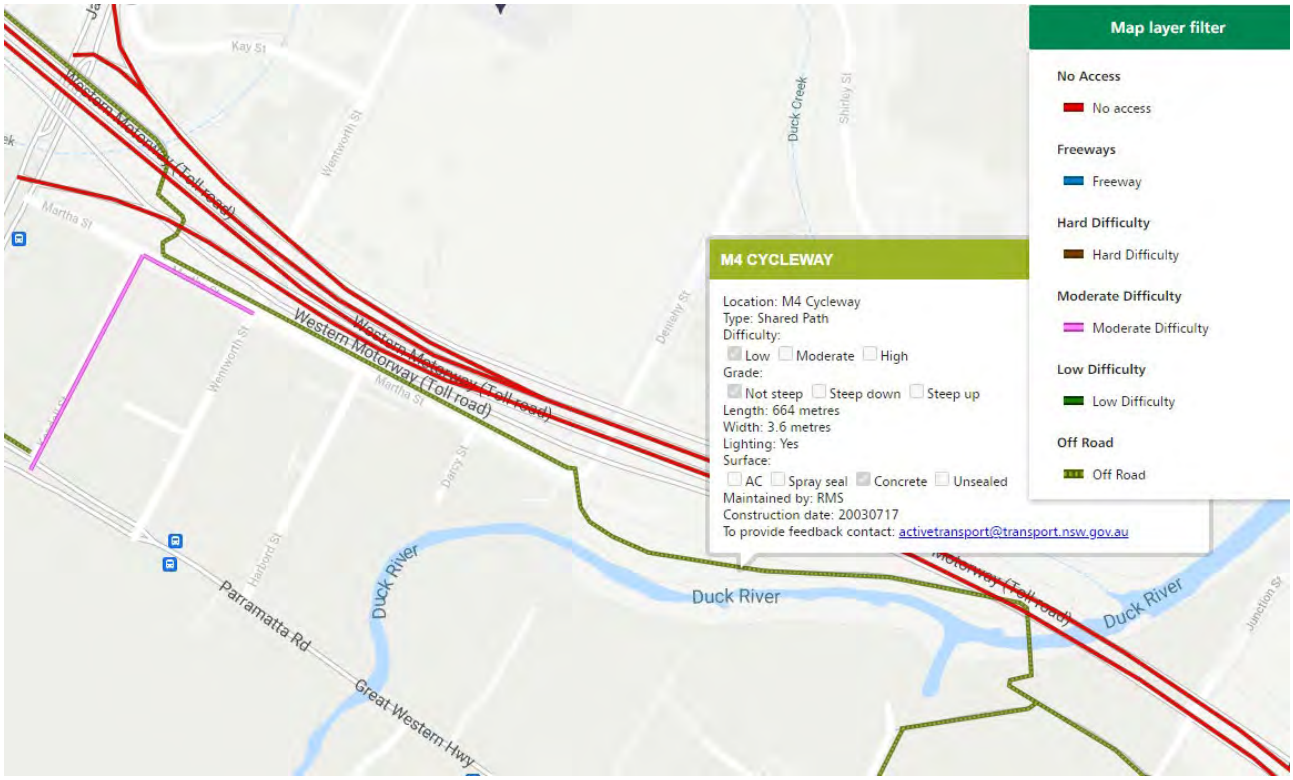



Figure 2-6: TfNSW Cycleway Finder

## 2.2 Kay Street

Kay Street is a local road under the care and control of the City of Parramatta Council. It starts at Wentworth Street and ceases at Unwin Street. Kay Street runs in an east west direction. The speed limit is 50km/hr. The street previously contained industrial premises which have been

demolished as part of the Sydney Metro Enabling Works. There is no public transport operating along Kay Street. Parking is typically unrestricted. Footpaths are provided on both sides of the street. A bridge over Duck Creek is located on Kay Street. It is noted that Sydney Metro intends to license Kay Street from the City of Parramatta Council for the Western Tunnelling Package of works.

## 2.3 Unwin Street

Unwin Street is a local road under the care and control of the City of Parramatta council. It starts at Kay Street and ceases at Colquhoun Street. Unwin Street runs in a north south direction between Kay Street and Unwin Street and east west direction between Unwin Street and Colquhoun Street. Th existing speed limit is 50km/hr. No public transport operates along Unwin Street. Parking is restricted on the western side of Unwin Street between Kay Street and Unwin Street between the hours of 630AM-430PM Monday to Friday. There is a small section of 30 minute parking on the southern side of Unwin Street opposite the Rosehill Gardens entry to the stables. Outside of these two locations, parking is generally unrestricted.

Unwin Street between Kay Street and Unwin Street on the eastern side of the street, previously contained industrial premises which have been demolished by the Sydney Metro Enabling Works contractor. On the western side of this section of Unwin Street, ~~the old T6 Carlingford to Epping~~the former Carlingford corridor ~~rail line was previously located~~. This rail line was closed in January 2020.

Fleet Street is located off Unwin Street. Fleet Street contains a TfNSW depot and provides a footpath connection to James Ruse Drive.

Unwin Street between Unwin Street and Shirley Street on the southern side of the street, also previously contained industrial premises which have largely been demolished other than the RTA heritage wall. The northern boundary of Unwin Street is bordered by Rosehill Gardens Racecourse.

Unwin Street has footpaths on the eastern side between Kay Street and Unwin Street and a small section of footpath exists on the southern side for approximately 160m east of Unwin Street. No other footpaths are provided, until east of Shirley Street.

A bridge over A'Becketts Creek is located on Unwin Street. It is noted that Sydney Metro intends to license Unwin Street from the City of Parramatta Council for the Western Tunnelling Package of works.

## 2.4 Shirley Street

Shirley Street is a local road under the care and control of the City of Parramatta Council. It starts at Unwin Street and ceases at Duck River. Shirley Street generally runs in a north south direction. The speed limit is 50km/hr. the street previously contained industrial uses on the west side of the street north of Duck River, however, these were demolished as part of the Sydney Metro Enabling Works. Bulky good premises are located on the eastern side of the street. No public transport operates along Shirley Street. Parking is generally unrestricted; however, No Stopping is installed south of the Hytec gate, approximately 65m south of the Unwin Street kerb on the western side.

It is noted, however, that parking between the power poles occurs, refer to Figure 2-7~~Figure 2-7~~.


Figure 2-7: Parking on Shirley Street

## 2.5 Martha Street

Martha Street is a local road under the care and control of the City of Parramatta Council. It starts at James Ruse Drive and ends at Deniehy Street. Martha Street runs east to west and has a speed limit of 50km/hr. the street has industrial uses on the southern side and the M4 Motorway on the northern side. Parking is unrestricted along both sides of Martha Street. The M4 Motorway shared path is located on the northern side of Martha Street and a footpath is located on the southern side. At the eastern most end the shared path crosses across Martha Street to continue towards the east. There is no public transport along Martha Street.

## 2.6 Deniehy Street

Deniehy Street is a local road previously under the care and control of the City of Parramatta Council but this road is now under the Sydney Metro West ownership. Footpaths typically exist only under the M4 Motorway overpass. No public transport operates along Deniehy Street. The buildings in this area will be demolished and the street will be incorporated into the construction site. However, at present the street is open to the public. Parking is unrestricted.

## 2.7 Tennyson Street

Tennyson Street is a local road previously under the care and control of the City of Parramatta Council but this road is now under the Sydney Metro West ownership. Footpaths do not exist. No public transport operates along Deniehy Street. The buildings in this area will be demolished and

the street will be incorporated into the construction site. However, at present the street is open to the public. Parking is unrestricted.

# 3 SITE ESTABLISHMENT

*Time*: April through to June 2022

*Duration*: 3 months

The site establishment works will consist of the following:

- Service investigations/ relocations/ protection/ termination and temporary site connections including:
  - Site investigations to verify the location of existing utilities
  - Temporary water connection on Unwin Street southern nature strip west of Shirley Street
- Clearing and grubbing internal to site
- Installation of site boundary fencing and noise hoarding
- Installation of temporary facilities such as amenities and office blocks
- Electrical HV connection from existing Rosehill Zone substation at the corner of Unwin and Colquhoun Street to the new switching stations internal to the site
- Works internal to site including:
  - Establishment of internal haul roads
  - Establishment of internal car parking facilities
  - Service connections
  - Establishment of hard stand for laydown areas
  - Piling platform

## 3.1 Working hours

The standard construction hours for the project are as noted in the Ministerial Conditions of Approval (MCoA D35) are:

a) 7AM to 6PM Monday to Friday
b) 8AM to 6PM Saturdays and
c) at no time on Sundays or public holidays

## ~~3.1~~3.2 Utility investigations

In order to define the location of existing utilities more accurately within our digital model, GLC need to undertake additional site investigations to supplement the current information contained in the model. The current information ranges in accuracy from low - Class D (indicative from Dial Before You Dig drawings) through to high – Class A (positively identified utility with survey pick up). In order to ensure we can operate safely around existing services and to ensure the planned utility adjustments can be performed as per the design, we need to validate the location of the existing services within the planned areas of work. These investigations will be undertaken as early as possible to inform the proposed design and planned works

The investigations will be performed on utilities generally located behind the back of kerb. The works will include potholing and positively identifying the utility through non-destructive excavation. Where this is not possible (due to the location of the utility or depth) we will trace the utility with ground penetrating radar. The works will be conducted during standard working hours. The established work zone will only be on a single side of the street at a time and generally the length of the work zone will be about 150m, depending upon the number of utilities in the search area and the scope that can be undertaken in a given shift. All disturbed ground will be made good at the completion of each shift.

The following locations have been identified as requiring further utility investigations:

### ~~3.1.1~~3.2.1 Unwin Street – northern and southern side

Utility investigation is required within this area to support the incoming power supply to the TBM's as well as temporary utility connections for the site complex. The works locations are as noted on Figure 3-1.


Figure 3-1:Unwin Street southern side work areas

### ~~3.1.2~~3.2.2 Unwin St southern, ~~and~~ eastern and western sides

Utility investigation works are required in this vicinity to inform the design of protection slabs required for the new approach and departure roads of the rolling stock into the ~~Stabling Yard~~ Clyde MSF as well as a protection slab over existing utilities for the new alignment of Unwin Road and for the proposed Unwin Street traffic signals. The works locations are shown on Figure 3-2.


Figure 3-2: Works on Unwin Street

As Unwin St will be transferred to a new alignment in the end state, GLC need to determine the extent of the existing utilities to develop designs to re-align or remove the existing utilities, refer to Figure *3-4*.


Figure 3-3: Unwin St work areas

### ~~3.1.3~~3.2.3 Kay Street

As Kay St will be ~~removed~~ transferred to a new alignment in the ~~final design~~end state, which includes the removal of Kay St bridge over Ducks Creek, GLC need to determine the extent of the existing utilities to develop designs to re-align or remove the existing utilities, refer to Figure 3-4.


Figure 3-4: Kay St work areas

### ~~3.1.4~~3.2.4 Wentworth Street

Associated with the Kay St investigations, GLC need to confirm the utilities within Wentworth St to inform the utility relocation designs, as the tie in locations for the relocated utilities will be within Wentworth St. the investigations could potentially extend under the M4 Motorway up to Martha St, depending on pit, valve and joint locations, refer to Figure 3-5.

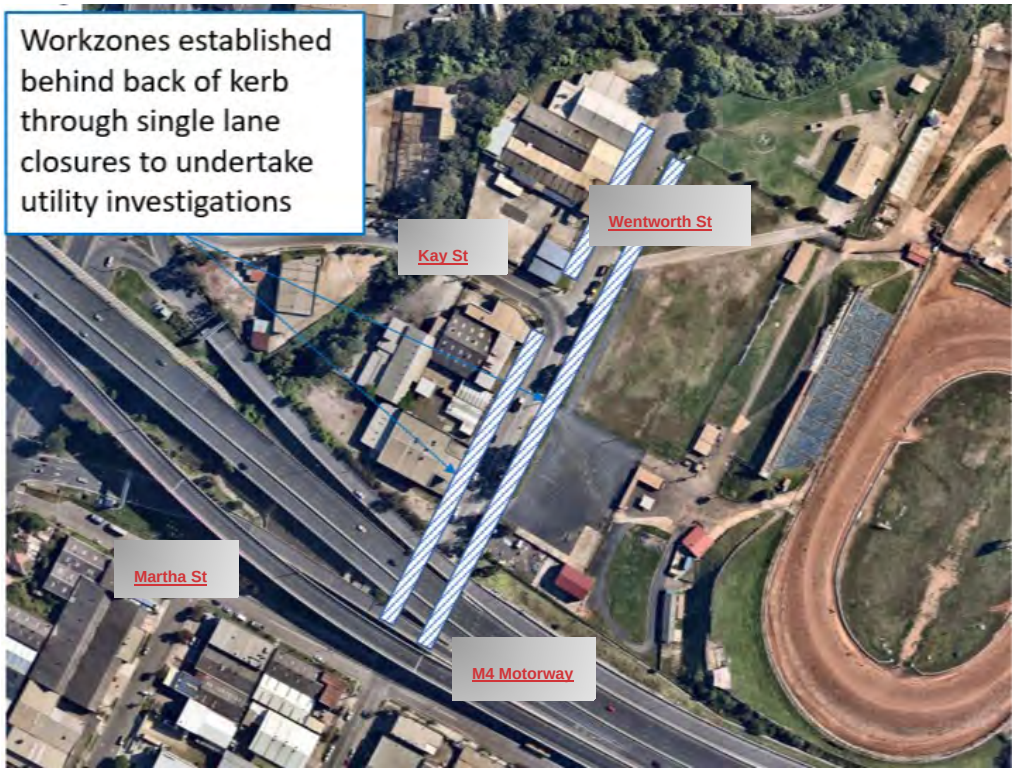



Figure 3-5: Wentworth St work areas

GLC need to determine the extent of the existing utilities to develop designs to re-align or remove the existing utilities, refer to Figure 3-6.


Figure 3-6~~3~~: Wentworth St work areas

### ~~3.1.5~~3.2.5 Deniehy and Tennyson streets

Utility investigations are required within these streets, refer to Figure 3-7, to determine the exact location of existing services so that these services can be diverted into the Combined Services Trench around the perimeter of site. It should be noted that these streets will be closed and subsumed into the site.

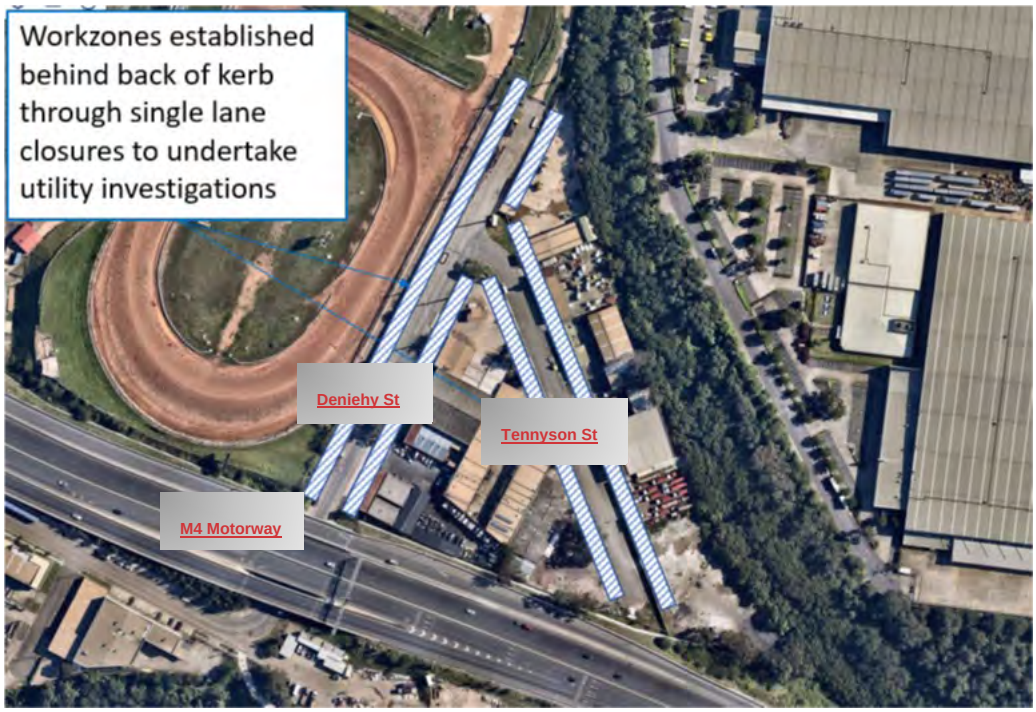



Figure 3-7: Deniehy and Tennyson streets work areas

## ~~3.2~~3.3 Utility works

The utility works will be undertaken during normal construction hours and will involve excavations in Shirley and Unwin streets. At the end of each shift, road plates will be used to cover the excavations.

Table 3-1: Utility works

| Activities | Resources required |
|---|---|
| Stormwater – Information relating to the internal stormwater reticulation system is unavailable at the time of writing this plan. Site Investigation works are planned to map this system; however, a scope cannot be defined until this investigation works is completed.<br><br>Despite this, GLC will require a new connection for water treatment plant discharge. Current planned location is into Unwin St pit. | 1 day with vac truck and 2 men<br><br>2 days with an excavator (5t-8t) and 2 men |

| Activities | Resources required |
|---|---|
| Communications– Investigation required to validate use of existing infrastructure to kerbside pit. | 1 day - 2 men & a ute to pull new fibre |
| Water – We will be needing a new 80mm connection to the site off the DN150 watermain on the southern side of Unwin Street | 1 day with vac truck and 2 men<br>1 day with an excavator (5t-8t) and 2 men |

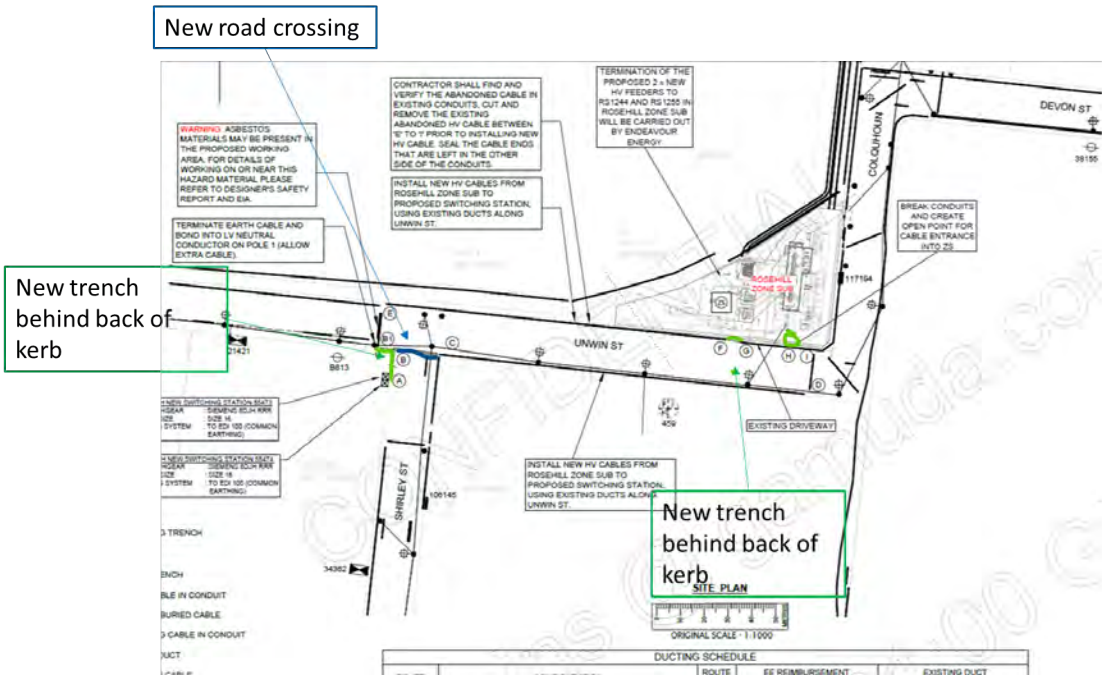



Figure 3-8: Unwin St trench excavation

As can be seen from Figure 3-8, the majority of trenches are behind the back of the kerb. However, GLC will need to construct a road crossing across the entrance to Shirley Street.

Figure 3-9 shows the work areas required along both sides of Unwin Street to install the new cables and exhume the redundant cables. The works are proposed to be completed using a single lane closure on Unwin Street, one side then the other.

Workzones behind back of kerb to install new cables through existing conduits and remove redundant cables

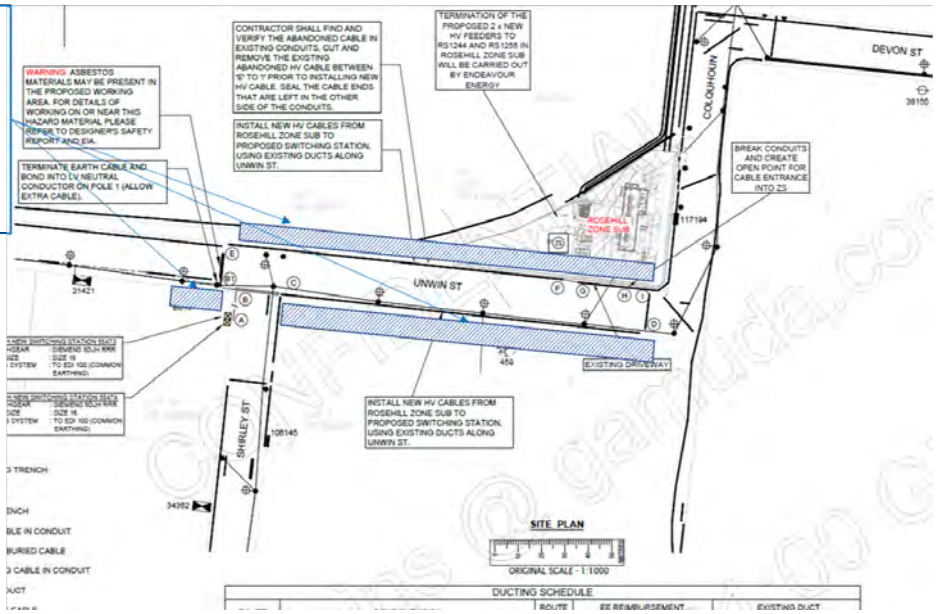



Figure 3-9: Work zones along Unwin Street

## ~~3.3~~3.4 Operating Conditions

Vehicle access to and from the construction site will be managed to maintain pedestrian, cyclists and motorist safety. General traffic and higher mass vehicles access in the precinct will be maintained throughout the works. At the Clyde site, pedestrian management will be in place to facilitate heavy vehicle movements, where footpath exists.

Site access/ egress is proposed as per Table 3-2~~Table 3-3~~ and the locations are shown on Figure 3-10.

Table 3-2: Proposed site establishment gates

| Gate | Location | Vehicle type | Access | Egress |
|---|---|---|---|---|
| 1 | Unwin Street | Light | √ | √ |
| 2 | Shirley Street | Heavy | √ | X |
| 3 | Shirley Street | Heavy | X | √ |
| 4 | James Ruse Drive – Prospect St extension | Light | √ | X |
| 5 | Unwin Street | Light | √ | √ |
| 6 | Unwin Street | Heavy | √ | √ |


Figure 3-10: Gate locations for site establishment works

The site will be accessed via existing driveways for gates ~~3-6~~1-4. New driveways will be required for gates 5 and 6.

The Unwin Street driveway (#1) is located approximately 15m west of the Shirley Street intersection and is shown on Figure 3-11. The access will cater for all movements.


Figure 3-11: Access/ egress #1 Unwin Street, Clyde for light vehicles

The Shirley Street driveways (#2 and 3) were previously used by Hytec batch plant, which has now been demolished, refer to Figure 3-12 and Figure 3-13. The access will be right in and left out.


Figure 3-12: Access/ Shirley St access #2


Figure 3-13: Shirley St egress #3

Light and heavy vehicle access into the Rosehill dive site ~~for light vehicles~~ is proposed via the existing signalised intersection of Prospect Street/ James Ruse Drive, #4, refer to Figure 3-14. The light vehicle access will be limited to right in and left in only whilst the heavy vehicle access will be via the right turn bay. .

Figure 3-14: James Ruse Drive ~~light~~ vehicle entry into site (gate#4)

Access and egress will eventually be ~~is proposed~~ via a newly constructed driveway on Unwin Street with left in/ left out movements only, refer to Figure 3-15. Prior to the driveway being constructed, all vehicles will egress the site from the current gate located to the south along Unwin Street, refer to Figure *3-16*.

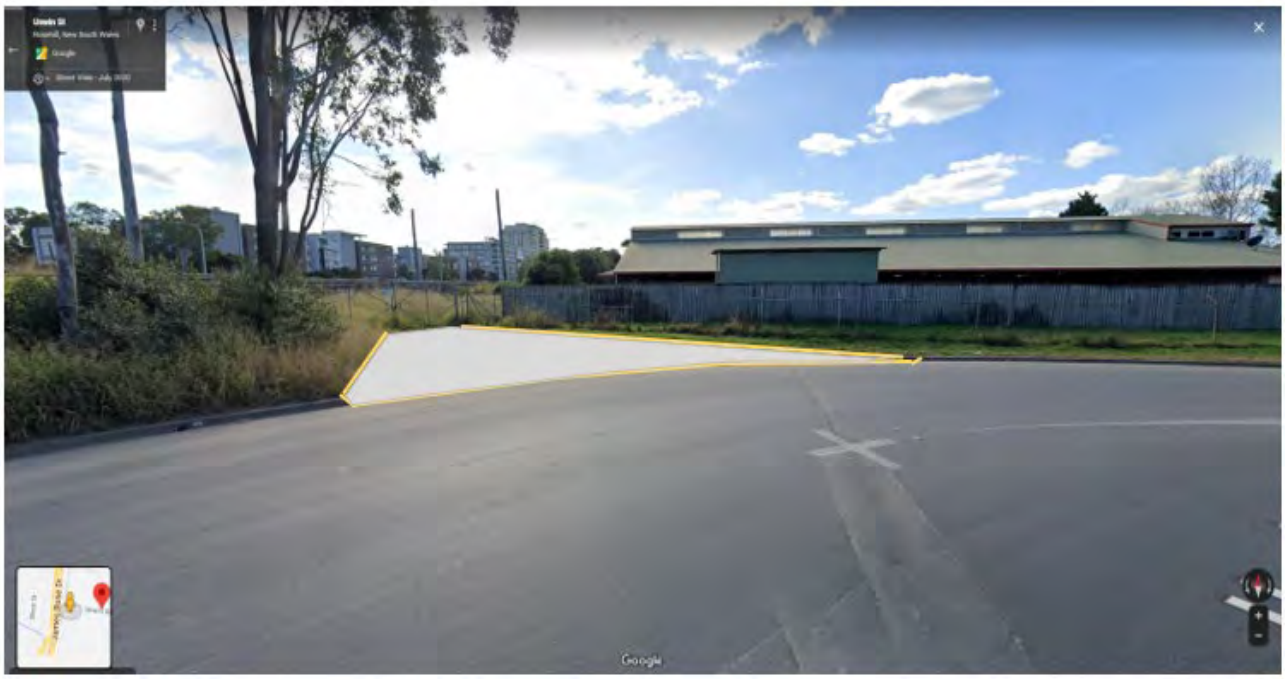


Figure 3-15~~3~~: Unwin Street gate #5

Heavy vehicle access into the Rosehill site is proposed via the P5 entry off James Ruse Drive and egress is proposed via the existing ~~Parramatta Light Rail access/~~ egress point, gate#6, on Unwin Street, refer to Figure 3-16. A new driveway will need to be installed to provide a more suitable ~~access/~~ egress point. Vehicles will turn ~~left in/~~ left out only and use other access points to turn around within site to proceed to the south along the nominated heavy vehicle routes.


Figure 3-16: Unwin Street heavy vehicle ~~access/~~ egress ~~into~~ from the Rosehill site

### ~~3.3.1~~3.4.1 Impact on traffic flow

The EIS for the Sydney Metro West Stage 1 project, noted for light vehicles that the site establishment phase of the works would have distinct peak travel periods, typically prior to and post the standard construction hours and that light vehicle numbers would be fairly constant over the work day, refer to Figure 3-17.

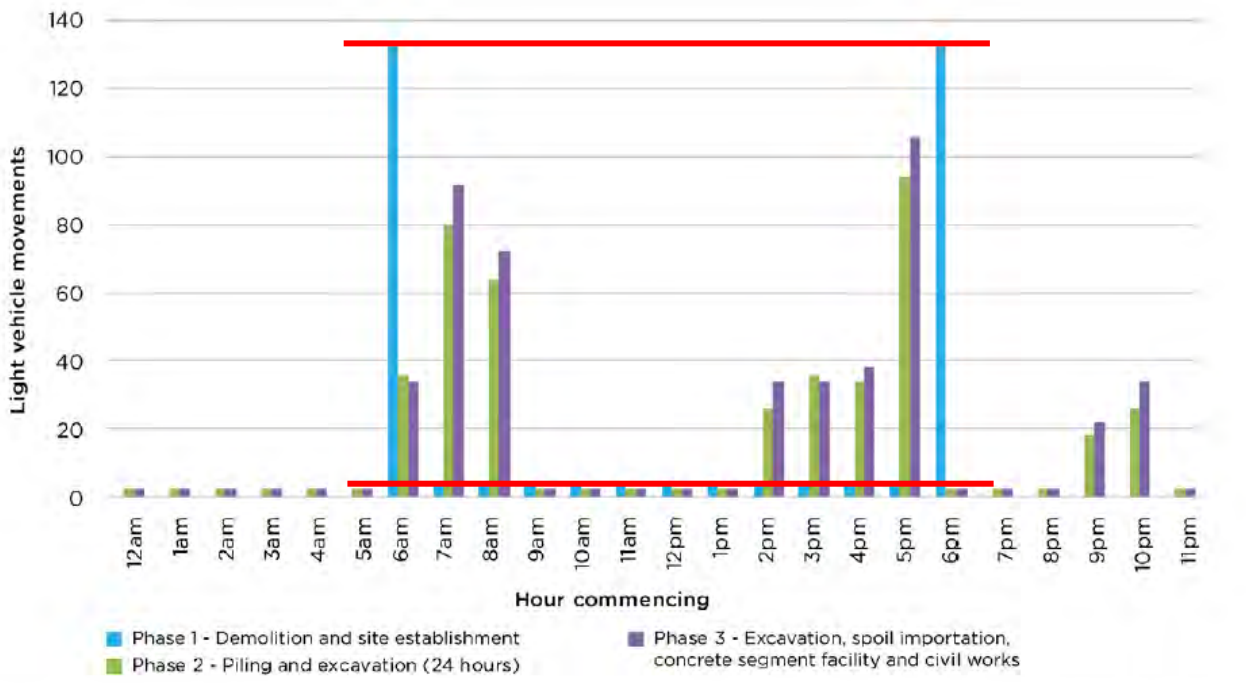



**Figure 10-13: Hourly light vehicle movements at the Clyde stabling and maintenance facility construction site**

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

Figure 3-17: EIS light vehicle movements

For heavy vehicle movements, the EIS predicted movements were evenly spread over the course of the work day, refer to Figure 3-18.

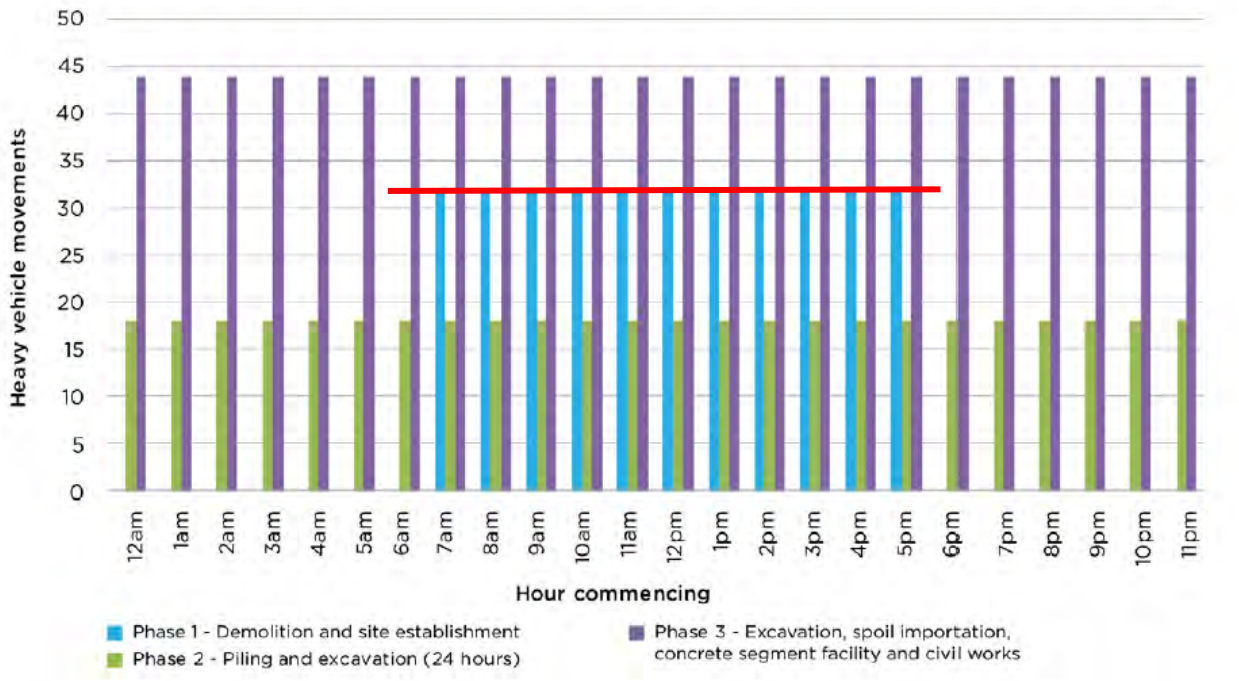



**Figure 10-14: Hourly heavy vehicle movements at the Clyde stabling and maintenance facility construction site**

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

Figure 3-18: EIS hourly heavy vehicle movements (source: EIS Chapter 10 page 10-13)

A comparison of traffic volumes during the site establishment is provided in Table 3-3.

Table 3-3: Comparison of EIS and GLC Site Establishment vehicle movements (numbers)

| Time | EIS Light | GLC Light | EIS Heavy | GLC Heavy |
|---|---|---|---|---|
| 0600-0700 | 132 (66) | 132 (66) | 0 | 0 |
| 0700-1700 | 4 (2) | 4 (2) | 32 (16) | 26 (13) |
| 1700-1800 | 132 (66) | 132 (66) | 0 | 0 |

Traffic volumes were provided in the EIS, refer to Table 3-4.

Table 3-4: 2019 traffic volumes (source: EIS Chapter 10 Table 10-16 page 10-13)

| 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 |
| Kay Street west of Wentworth Street | Eastbound | 150 | 170 |
| | Westbound | 270 | 90 |
| Wentworth Street, north of Parramatta Road | Northbound | 260 | 120 |
| | Southbound | 150 | 180 |

The data shows that the vehicle numbers predicted in the EIS and GLC vehicle numbers are substantially under the volumes provided for previously in this area when all businesses were operational. It is further noted that ta number of businesses that previously operated in the area are no longer present, as the demolition works for the Sydney Metro site has been completed.

### ~~3.3.2~~3.4.2 Impact on public transport

No public transport operates in the Clyde area.

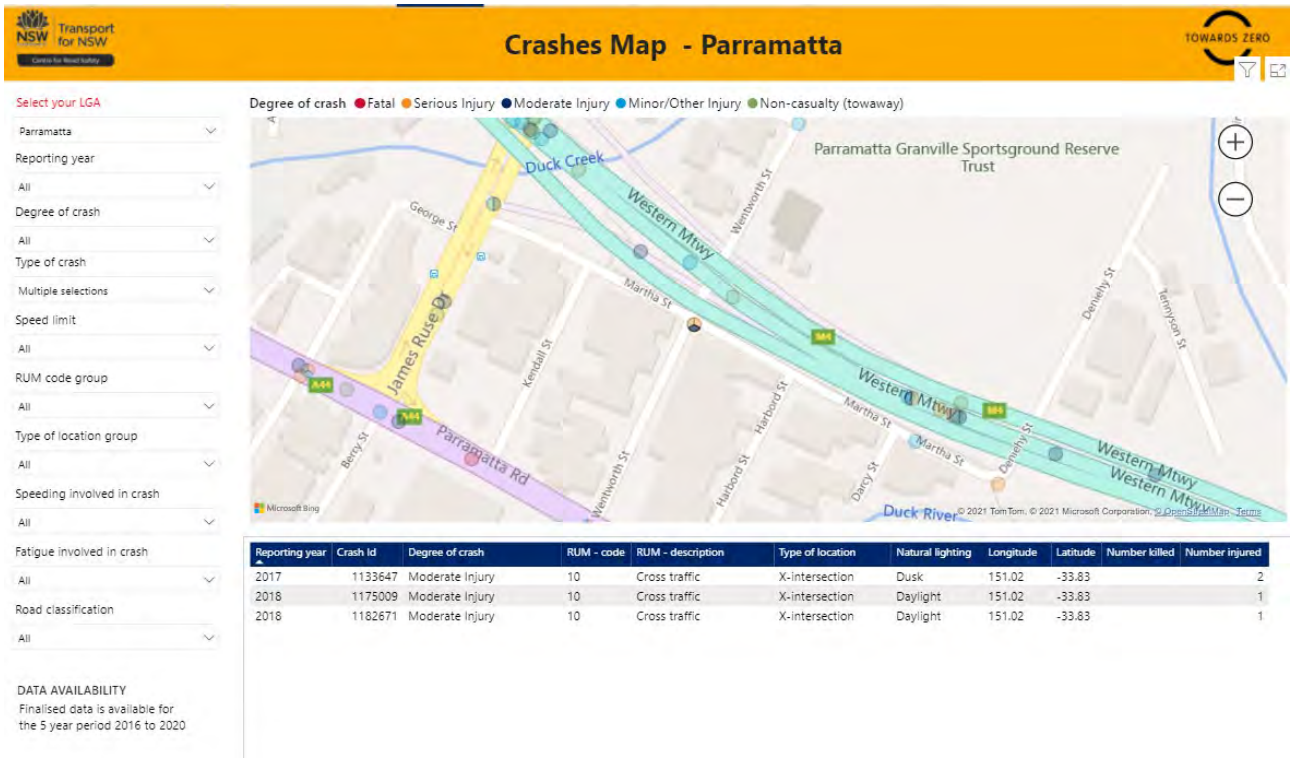
### ~~3.3.3~~3.4.3 Impact on active transport

As noted in the EIS, "*the pedestrian network around the Clyde stabling and maintenance facility construction site is limited given the industrial land uses to the east of Rosehill Gardens racecourse and north of Duck River".*

As noted in section 2 of this CTMP, footpaths are limited, with no pedestrian facilities provided on the east west section of Unwin Street, adjacent to the site, and footpaths provided on Shirley Street, for a short length and on the eastern side of Unwin Street north south section. However, as noted in sections 2.1 and 2.5, the M4 shared path crosses Wentworth Street at Martha Street. It is noted that this path was constructed in 2003 when the Clyde area was a heavily used industrial area.

Where footpaths cross existing driveways that are to be used for the works, appropriate traffic control will be put in place, with pedestrian management, as per TGS-PED-ALL-1101 (included in Appendix B with intermittent stops of pedestrians. ~~.~~

A review of crash statistics was undertaken which showed that between the years of 2016 and 2020, there were three (3) reported crashes at ~~this~~ the intersection of Martha Street and Wentworth Street where the shared path crosses across Wentworth Street with all crashes being vehicle crashes only, refer to Figure 3-19.




| Reporting year | Crash Id | Degree of crash | RUM - code | RUM - description | Type of location | Natural lighting | Longitude | Latitude | Number killed | Number injured |
|---|---|---|---|---|---|---|---|---|---|---|
| 2017 | 1133647 | Moderate Injury | 10 | Cross traffic | X-intersection | Dusk | 151.02 | -33.83 | | 2 |
| 2018 | 1175009 | Moderate Injury | 10 | Cross traffic | X-intersection | Daylight | 151.02 | -33.83 | | 1 |
| 2018 | 1182671 | Moderate Injury | 10 | Cross traffic | X-intersection | Daylight | 151.02 | -33.83 | | 1 |

Figure 3-19: TfNSW Road Safety Centre for NSW – Crash statistics

TfNSW have also implemented a Be truck aware campaign which aims to show road users, the challenges that truck drivers face every day. Where an existing driveway crosses a footpath truck awareness decals will be installed either side of the driveway, as noted on Figure 3-20


Figure 3-20: Proposed Truck Aware decal locations

GLC will not block or disrupt access across pedestrian or shared user paths at any time unless alternate access is provided which complies with the applicable standard.

### ~~3.3.4~~3.4.4 Impact on properties and utilities

There will be some impact to access for businesses on Shirley Street during the utility works. Access will be managed to ensure that this impact is minimised. During construction, all reasonably practicable measures will be implemented to maintain pedestrian, cyclists and vehicular access to, and parking in the vicinity of businesses and affected properties. Disruptions will be planned to be avoided, however, where it is unavoidable, the disruption will be minimised. In the event that it is not possible to minimise the impact, alternate access for all forms of traffic and/ or parking arrangements, will be provided in consultation with the affected businesses and these alternate access arrangements will be implemented before the disruption. Adequate signage and directions to businesses will be provided before, and for the duration of any disruption

GLC will ensure that access to all utilities and properties will be maintained during works, unless otherwise agreed with the relevant utility owner, landowner or occupier. Where access is affected, GLC will reinstate the access to an equivalent standard within one month of the completion of works, or as agreed by the landowner or occupier.

### ~~3.3.5~~3.4.5 Impact on parking

There will be short term impacts to parking during the utility works. These impacts will be limited to standard construction hours only. There will be no permanent impacts to parking for the site establishment phase of works.

### ~~3.3.6~~3.4.6 Cumulative impacts

There are 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, through attendance at the Traffic Control Group (TCG) and Traffic and Transport Liaison Group (TTLG).

## ~~3.4~~3.5 Special events

Rosehill Gardens Racecourse is located on the northern side of Unwin Street, opposite the Clyde Maintenance and Stabling Facility. Gate 2, refer to, Figure 3-21, to the racecourse is located on Unwin Street servicing the in-field car park, the float parking area, exhibition and event parking area and exhibition loading dock and general deliveries.

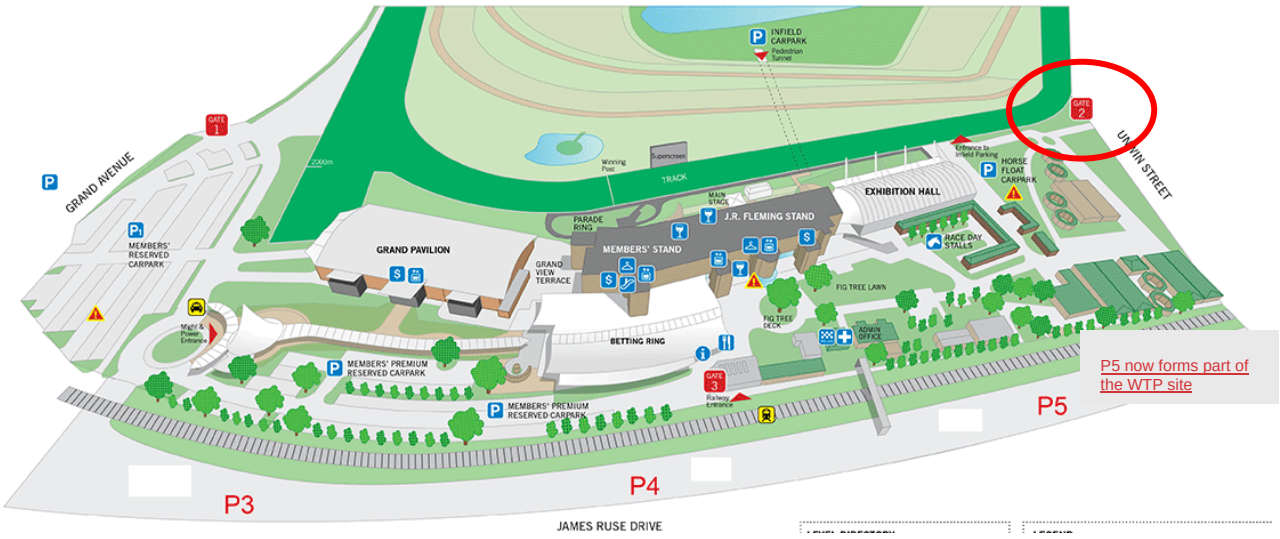



Figure 3-21: Rosehill Gardens Racecourse gate overview

A calendar of racing events at the racecourse is available is updated regularly.

A number of other non-race day events are also held at the racecourse including:

- The Caravan and Camping show with over 80,000 visitors
- Sydney Santa Spectacular with 35,000 visitors
- The Pool and Spa Outdoor living expo with 7,000 visitors
- Other events ranging from between 1,000 to 10,000 attendees.

All of these non-race day events visitors/ attendees, access/ egress via either Grand Parade or James Ruse Drive.

During major special events, defined in *Guide to Traffic and Transport Management for Special Events,* published by NSW Government (version 3.5 July 1, 2018) as a Class One event that has major impacts on the transport and traffic network, GLC will review options to limit our impact by:

- Minimising the level of construction activity and, if necessary, ceasing all construction activity
- Maintaining appropriate access to all areas within the event precinct
- Erection of hoardings, site fencing and gates at key locations with 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, especially during peak bump in and bump out times. The hours of opening of the infield car park is as noted below.

| 11:00 am | Member Gates Open |
|---|---|
| 11:15 am | Public Gates Open |
| 12:25 pm | First Race |
| 6:00 pm | Last Race |

## ~~3.5~~3.6 Staff transport and parking

All staff parking during the site establishment phase of the works will be catered for within the site. The site is currently cleared of buildings/ structures and contains a significant amount of hardstand available for parking. Once the site is configured for the site establishment works, 72 light vehicle car spaces will be available for the workforce off Unwin Street, refer to Figure 3-22.

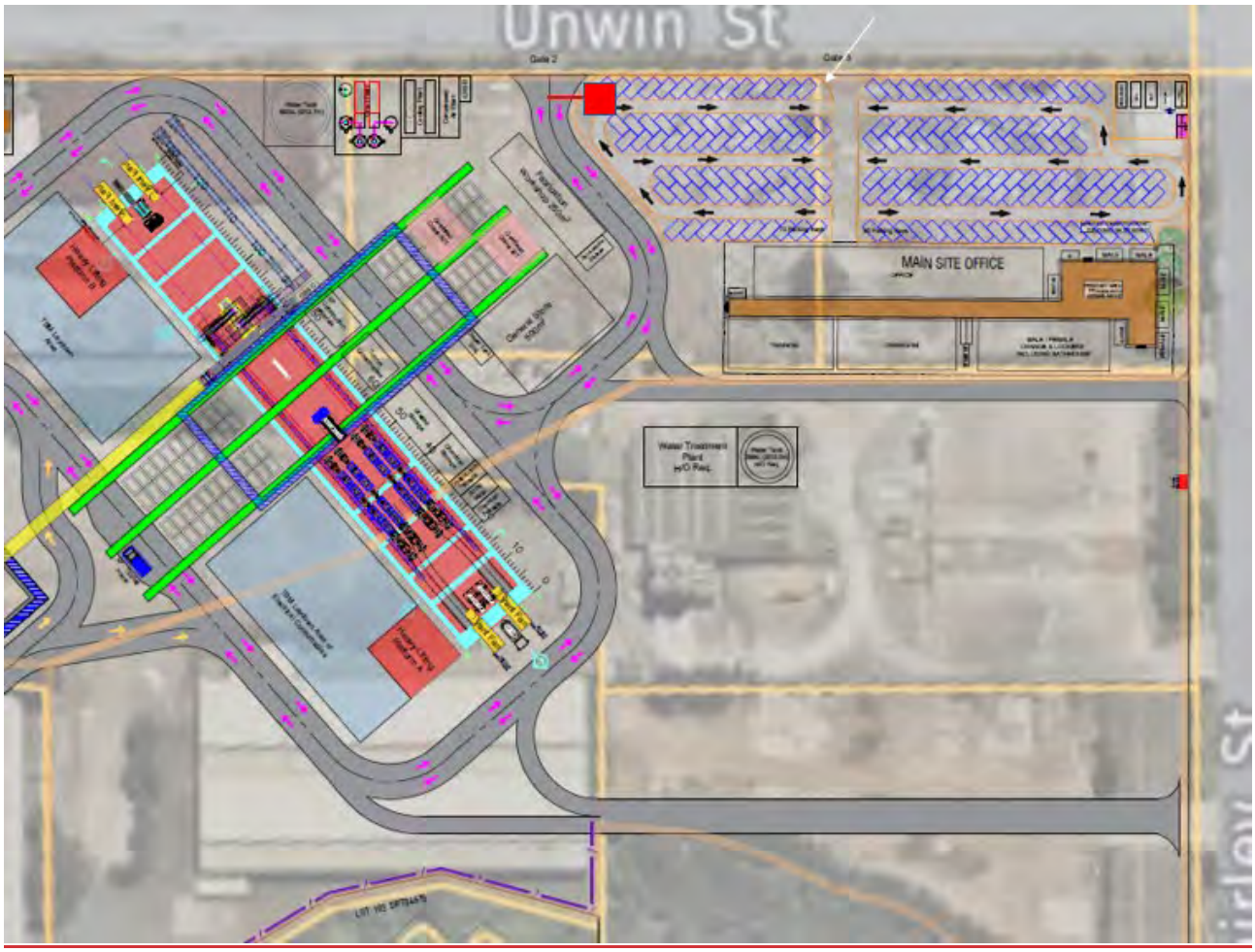



Figure 3-22: Clyde site light vehicle onsite parking

For the Rosehill site, ample onsite parking is available as Sydney Metro West has taken over the former parking area P5 which is located to the south of P4, as noted on Figure 3-21. The access into the site is managed through the installation of security shed with boom gate which will be located within the site, to the east of the intersection, as noted on

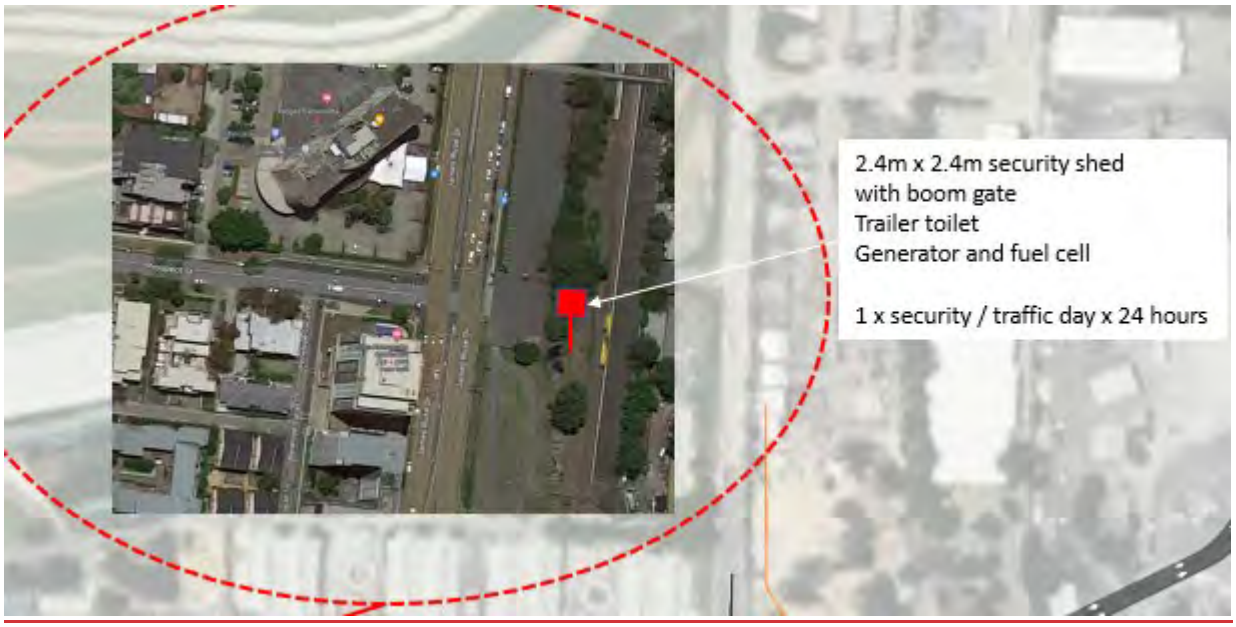



Figure 3-23: Rosehill gate management

## ~~3.6~~3.7 Traffic Guidance Schemes (TGS) identified works

Works that have been identified as requiring TGS are:

- Temporary water connection on Unwin Streets southern nature strip west of Shirley Street
- Temporary water connection across Shirley Street
- Temporary electrical supply to the 2xHV switching stations
- Temporary sewer connection across Shirley Street
- Driveway construction on Unwin Street
- Utility investigations around the site at various locations

The TGS are contained within Appendix B.

The Road Occupancy Licenses (ROL) and Council permit applications will be lodged post the external review of the Construction Management Plan.

### ~~3.6.1~~3.7.1 Road occupation and restoration

For any works that involve an occupation of the road/ footpath, a Road Occupancy License (ROL) will be sought from the Transport Management Centre (TMC) will be applied for prior to the submission of a ROL from the City of Parramatta Council. ROL through the TMC will be applied for a minimum of 10 business days from the proposed start date. Electronic lodgement of the ROL will be undertaken using TfNSW's OpLinc system.

Council permits will be lodged electronically in accordance with the City of Parramatta Council requirements. For any works where parking is temporary impact, GLAAC 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 (ROP) will be applied for through the existing City of Parramatta Council website. The ROP will also be accompanied by a ROL. Details on the permits required are found at City of Parramatta Council road permits.

A register of permits/ licenses will be maintained through the works period and can be tabled at the TCG, if requested.

# 4 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 GLC'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 establishment works, with trucks being truck and dog, semi-trailers, 12.5m Single Unit trucks and low loaders. All trucks will enter and exit the site in a forward direction, where reasonable and feasible. Where there is a requirements to undertake reversing movements on the public road system, appropriate traffic control will be implemented.

## 4.1 Management strategy

Construction site traffic will be managed to minimise movements during peak periods. This will be achieved through scheduling of vehicles and staggered start and finish times. GLC will provide sufficient onsite parking for heavy vehicles. This will ensure that vehicles are not idling or queuing on public roads. Given the amount of space available on site, there is no requirement for further marshalling facilities.

## 4.2 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 heavy vehicle movements through site inductions and attendance at the Sydney Metro Industry Curriculum (SMIT) – 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. The training course focuses on low risk driver behaviours, shared the road safely with vulnerable road users and reinforces heavy vehicle driver knowledge and skill. The project and site inductions will have a particular focus on operator behaviour. The driver induction process will include safety awareness in relation to all road users, particularly pedestrians and cyclists where the M4 shared path along Martha Street crosses the heavy vehicle routes.

## 4.3 Heavy vehicle routes and compliance

Generally, the heavy vehicle routes will be via arterial roads/ freeways/ tollways. Where possible the routes have considered the requirements of the Environmental Impact Statement (EIS). It is noted that the EIS for this site shows access via Wentworth Street, however, the EIS does not identify heavy vehicle routes north of the M4 Motorway overpass, refer to Figure 3-24. However, the roads within the Clyde area are recognised as heavy vehicle routes, refer to Figure 2-5.

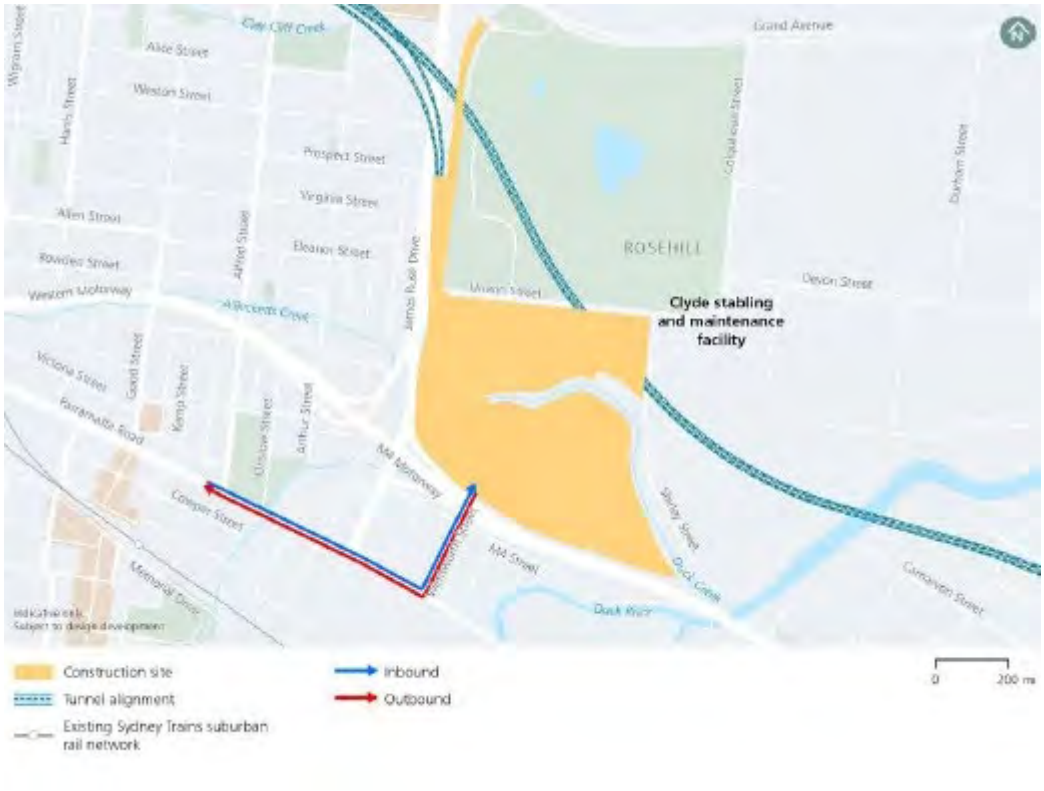



Figure 3-24: EIS nominated heavy vehicle routes

### 4.3.1 Proposed heavy vehicle routes

The roads to be used for heavy vehicle movements that are not captured within the EIS are as per Table 3-5 and Figure 3-25.

Table 3-5: Roads to be used not included in the EIS

| Road name | Between | Between | Classification | Two way traffic flow | Parking | Speed limit |
|---|---|---|---|---|---|---|
| Wentworth Street | M4 Motorway Overpass | Kay Street | Local | Yes | Yes | 50km/hr |
| Wentworth Street | Kay Street | Duck Creek | Local (to be subsumed within the site) | Yes | Yes | 50km/hr |

| Road name | Between | Between | Classification | Two way traffic flow | Parking | Speed limit |
|---|---|---|---|---|---|---|
| Kay Street | Wentworth Street | Unwin Street | Local | Yes | Yes | 50km/hr |
| Unwin Street | Kay Street | Shirley Street | Local | Yes | Yes | 50km/hr |
| Shirley Street | Unwin Street | Duck Creek | Local | Yes | Yes | 50km/hr |
| Martha Street | Wentworth Street | Deniehy Street | Local | Yes | Yes | 50km/hr |
| Deniehy Street | Martha Street | End of road | Local (to be subsumed within the site) | Yes | Yes | 50km/hr |
| Tennyson Street | Deniehy Street | End of road | Local (to be subsumed within the site) | Yes | Yes | 50km/hr |


Figure 3-25: Local roads within the Clyde/ Rosehill area

Materials will be delivered/ removed from site using a combination of vehicles and taken to authorised disposal sites around Sydney, refer to Appendix C for the proposed routes to the closest motorway.

## 4.4 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 ass (OSOM) vehicles. 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 and piling rigs. These deliveries will occur outside of peak hours. Contractors will manage their own permits.

The existing M4 Motorway overpass is currently height limited (4.6m) as noted on Figure 3-26.


Figure 3-26: M4 Overpass on Wentworth Street

Where vehicles are unable to be accommodated, an alternative route would be detailed within the accompanying permit application for oversize vehicles with the use of Grand Avenue being the only other route available.

# 5 MINISTERIAL CONDITIONS OF APPROVAL

There are a number of plans/ reports that are required under the Ministerial Conditions of Approval (MCoA) as noted in Appendix A and included in subsequent appendices of this CTMP.

## 5.1 Heavy Vehicle Local Road (HVLR) report

A Heavy Vehicle Local Road is to be provided to the Planning Secretary for approval, for use of local roads not identified in the EIS 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).

A copy of the HVLR is provided in Appendix C.

## 5.2 Construction Parking and Access Strategy (CPAS)

A Construction Parking and Access Strategy is to 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 CPAS identifies and provides mitigation measures to alleviate the impacts form on and off street parking changes during construction. The CPAS includes the following:

a) Achieving the requirements of MCoA D90 which includes:
    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
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 exiting 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 six (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 the CPAS is provided in Appendix D.

## 5.3 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 one (1) month before the road is used.

If damage to roads occurs as a result of heavy vehicle use associated with the construction works, GLC, 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

A copy of the Road Dilapidation Report transmittal to the City of Parramatta Council is provided in Appendix D of the HVLR included in Appendix C of this CTMP.

# 6 COMMUNITY AND CONSULTATION

## 6.1 Communications and the community

Table 3-6 notes the notifications to be provided to the local community and travelling public for the site establishments works, associated with this CTMP.

Any enquiries, compliments or complaints will be directed to GLC's communications team via

- Information line 1800 612 173
- Email sydneymetrowest@transport.nsw.gov.au
- Mailing address Sydney Metro West, PO BOX K659, Haymarket, NSW 1240

Table 3-6:Proposed community notifications

| Notification | Applicable? |
|---|---|
| Newsletters | Yes |
| Construction email updates | Yes |
| Fact sheets | Yes |
| Site signage | Yes |
| GLC website | Pending |
| Sydney Metro website | Pending |
| Variable Message signs | Where required |

## 6.2 Stakeholders

Various stakeholders will be consulted for further development of this CTMP. Stakeholder details that have been consulted are provided in Table 3-7.

Table 3-7: Stakeholder consultation details

| Stakeholder | Date | Consultation type |
|---|---|---|
| Sydney Metro Traffic Control Group TfNSW-Customer Journey Planning | 17th March 2022 | Presentation |
| TfNSW Customer Journey Planning | 8th April 2022 | Submission of CTMP |
| Sydney Metro West | 8th April 2022 | Submission of CTMP |
| City of Parramatta Council | 8th April 2022 | Submission of CTMP |
| Customer Journey Planning | 6th May 2022 | Resubmission of CTMP |
| Sydney Metro West project team | 6th May 2022 | Resubmission of CTMP |
| City of Parramatta Council | 6th May 2022 | Resubmission of CTMP |

### 6.2.1 Traffic and Transport Liaison Group (TTLG)

The TTLG has been established by Sydney Metro for the project, as required under MCoA D94. The TTLG consists of members from Sydney Metro, City of Parramatta Council and representatives from the Emergency Services. The development of this CTMP will occur in consultation with this group. The TTLG meets monthly.

Supplementary analysis and modelling as required by Sydney Metro and/ or the Traffic and Transport Liaison Group(s) will 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 pedestrians, bicycle and public transport networks, public transport services, and pedestrian and cyclist movements. Any revised traffic management measures identified through the supplementary analysis and modelling will be incorporated into the CTMP.

### 6.2.2 Traffic Control Group (TCG)

A TCG has been established for the project by Sydney Metro. The TCG meets fortnightly and is comprised of Sydney Metro representatives, Council representatives and other project contractors.

### 6.2.3 Emergency Services

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 TTLG. Regular updates will be provided to Emergency Services representatives noting changes to the road network, changes to road conditions and worksite access locations. This communication will be via emails and face to face discussions. Access to properties for emergency vehicles will be provided at all times.

# 7 OTHER CONSIDERATIONS

## 7.1 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 E.

## 7.2 Inspections and monitoring

Typical inspections and monitoring is as per Table 3-8

Table 3-8: inspections and frequency

| 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 appropriate and operating safely, effectively and efficiently |
| | Shift inspection | To ensure that the TGS is implemented as designed. This includes at a minimum twice per shift and when:<br>A. TGS is installed/ changed or updated<br>B. At regular frequency after work commences (every 2 hours)<br>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 crashes |
| Post completion | Post completion inspection | To ensure that the site has been demobilised as planned and is safe for opening to traffic |

## 7.3 Emergency and incident management

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

- Traffic control personnel
- Traffic control vehicle containing:
    - Barrier boards
    - Cones/ bollards
    - Flashing arrow
    - Signs
    - Spill kit

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

## 7.4 On site contacts

Site contacts are provided in Table 3-9.

Table 3-9: Site contacts

| Name | Position | Organisation | Contact # | Email |
|---|---|---|---|---|
| Daniel Kelly | Logistic Manager | GLC | 0437 315 649 | Daniel.kelly@laingorourke.com.au |
| Gary Marshall | Superintendent | GLC | 0419 382 572 | gary.marshall@gamuda.com.au |
| Andy Thompson | Surface Works Construction Manger | GLC | 0423 479 033 | andy.thompson@gamuda.com.au |
| Peter McCabe | Stakeholder Manager | GLC | 0439 707 101 | peter.mccabe@gamuda.com.au |

# A COMPLIANCE TABLES

*Table 3-10: Relevant Ministerial Conditions of Approval*

| Requirement | Details | Where addressed |
|---|---|---|
| MCoA D80 | Access to all utilities and properties must be maintained during works, unless otherwise agreed with the relevant utility owner, landowner or occupier | Section 3.4.4 |
| MCoA D81 | 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 3.4.4 |
| 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 CTMP | Appendix C |
| MCoA D87 | All requests to the Planning Secretary for approval to use local roads under Condition D86 must include the following:<br>a) A swept path analysis<br>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<br>c) Details as to the date of completion of the road dilapidation surveys for the subject local roads and<br>d) Measure 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 | Appendix C |

| Requirement | Details | Where addressed |
|---|---|---|
| | 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 | |
| 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 5.3 and Appendix C |
| MCoA D89 | 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):<br>a) Compensate the Relevant Road Authority for the damage so caused or<br>b) Rectify the damage to restore the road to at least the condition it was in pre-work as identified in the Road Dilapidation Report | Section 5.3 |
| MCoA D90 | Vehicles associated with the project workforce (including light vehicles and Heavy Vehicles) must be managed to:<br>a) Minimise parking on public roads | Section 3.4.5 |
| | b) Minimise idling and queuing on state and regional roads | Section 4 |
| | c) Not carry out marshalling of construction vehicles near sensitive land user(s) | Section 4 |
| | d) Not block or disrupt access across pedestrian or shared user paths at any time unless alternate access is provided and | Section 3.4.3 |
| | e) Ensure spoil haulage vehicles adhere to the nominated haulage routes identified in the CTMP | Section 4.3 |
| 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.<br>The Construction Parking and Access Strategy must include, but not necessarily limited to: | Appendix D |

| Requirement | Details | Where addressed |
|---|---|---|
| | a) Achieving the requirement of Condition D90 above<br>b) Confirmation and timing of the removal of on and off street parking associated with construction of Stage 1 of the CSSI<br>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 up, weekend periods and during special events<br>d) Consultation with affected stakeholder utilising existing on and off street parking stock which will be impacted as a result of construction<br>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.<br>f) Identification of reasonable and practicable mitigation measures to manage the 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<br>g) Where residential parking schemes already exist, off road parking facilities must be provided for the project workforce<br>h) Mechanisms for monitoring, over appropriate interval (not less than 6 months) to determine the effectiveness of implemented mitigation measures<br>i) Details of shuttle bus service(s) to transport the project workforce to construction sites from public transport bubs and off site car parking facilities (where these are provided) and between construction sites<br>j) Provision of contingency measures should the results of mitigation or monitoring indicate implemented measures are ineffective and<br>k) Provision of reporting or monitoring results to the Planning Secretary and Relevant Council(s) at six (6) monthly intervals | |

| Requirement | Details | Where addressed |
|---|---|---|
| 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 parking and incorporated into the CTMPs | Section 5.2 and Appendix D |
| MCoA D93 | During construction, all reasonably practicable measures must be implemented to maintain pedestrian, cyclists 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, alternate pedestrian, cyclists and vehicular 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 | Section 3.4.4 |
| 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 6.2.1 |
| MCoA D95 | 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 pedestrians, bicycle and public transport networks, public transport services, and pedestrian and cyclist movements. Revised traffic management measures must be incorporated into the CTMPs | Section 6.2.1 |
| MCoA D96 | The permanent road works at Clyde/ Rosehill must be designed, constructed and operated with the objective of integrating with existing and proposed road and related transport networks and minimising adverse changes to the safety, efficiency and accessibility of the networks and avoid deterioration tin peak period levels of service in relation to permanent and operational changes. Design and assessment of related traffic, parking, pedestrian and cycle accessibility impacts and changes shall be undertaken in: | Not relevant to the CTMP – Refer to Design process |

| Requirement | Details | Where addressed |
|---|---|---|
| | a) In consultation with, and to the reasonable requirements of the relevant Traffic and Transport Liaison Group<br>b) In consideration of existing and future demand, connectivity (in relation to permanent changes) and performance and safety requirements<br>c) To minimise and manage local area traffic impacts<br>d) To ensure access is maintained to property and infrastructure and<br>e) To meet relevant design, engineering and safety guidelines, including Austroads, Australian Standards and TfNSW requirements<br>Copies of civil, structure and traffic signal design plans shall be submitted to the Relevant Road Authority for consultation during design development and before completion of construction of Stage 1 of the CSSI | |
| MCoA D97 | Permanent road works, including vehicular access, signalised intersection works, and works relating to pedestrians, cyclist and public transport users must be subject to safety audits, demonstrating consistency with relevant design, engineering and safety standards and guidelines. Safety audits must be prepared in consultation with the relevant Traffic and Transport Liaison Group before the completion and use of the subject infrastructure and must be made available to the Planning Secretary upon request | Not relevant to the CTMP – Refer to Design process |
| 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 3.4.3 |
| MCoA D99 | Opportunities to maximise spoil material removal by non-road methods must be investigated and implemented where reasonably practicable to minimise movements by road | Not applicable to site establishment works |

*Table 3-11: Relevant Revised Environmental Management Measures*

| Requirement | Impact/ issue | Details | 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 6 |
| 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 Traffic Management Centre's Operations Manager | Section 7.3 |
| TT3 | Emergency vehicle access | Access to properties for emergency vehicles would be provided for at all times | Section 3.4.4 |
| TT4 | Road safety | Vehicle access to and from construction sites would be managed to maintain pedestrian, cyclists 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 3.4.3 |
| TT5 | Road safety | Additional enhancements for pedestrian, cyclist and motorist safety near the construction sites would be implemented during construction. This would include measures such as:<br>• Assessing the suitability of construction haulage routes through sensitive land use areas with respect to road safety | Appendix C |
| | | • Deployment of speed awareness signs in conjunction with variable message signs near construction sites to provide alerts to drivers | Not applicable to site establishment works |
| | | • Providing community education and awareness about sharing the road safely with heavy vehicles | Appendix C |

| Requirement | Impact/ issue | Details | Where addressed |
|---|---|---|---|
| | | • Specific construction driver training to understand the route constraints, safety and environmental considerations such as sharing the road safety with other road users and limiting the use of compression braking | Appendix C |
| | | • Requiring technology and equipment to improve vehicle safety, eliminate heavy vehicle blind spots and motor vehicle location and driver behaviour | Appendix C |
| TT6 | Road safety | • All trucks would enter and exit construction sites in a forward direction, where reasonable and feasible | Section 4 |
| TT7 | Congestion | Construction site traffic would be managed to minimise movements during peak periods | Section 4 |
| 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), Parramatta (PMS), Burwood North (BNS) and Five Dock (FDS) only as noted in the REMM |
| TT9 | Congestion | Opportunities to minimise impacts at the Alexandra Avenue/ Bridge Road intersection would be determined in consultation with Transport for NSW | Applicable to Westmead site 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 | Section 6 |
| TT11 | Loss of parking | Construction sites would be managed to minimise the number of construction workers parking on surrounding streets by:<br>• Encouraging workers to use public or active transport<br>• Encouraging ride sharing | Appendix D |

| Requirement | Impact/ issue | Details | Where addressed |
|---|---|---|---|
| | | • Provision of alternative parking locations and shuttle bus transfers where feasible and reasonable | |
| TT12 | Change of bus stop locations | Any temporary closure or relocation of bus stops and kiss and ride facilities would be carried out in consultation with Transport for NSW including Transport Coordination (for relevant locations), the relevant local council and bus operators. Wayfinding and customer information would be provided to notify customers of relocated bus stops | Applicable to Westmead (WMS), North Strathfield (NSMS), Burwood North (BNS) and The Bays (TBS) only as noted in the REMM |
| TT13 | Bus priority | Opportunities to improve bus priority along the temporary detour at Westmead metro station construction site would be investigated during detailed design | Applicable to Westmead site as noted in the REMM |
| TT14 | Active transport | Pedestrian and cyclist access would be maintained during the temporary closure of Alexandra Avenue at Westmead. Wayfinding and customer information would be provided to guide pedestrians and cyclists to alternative routes | Applicable to Westmead site as noted in the REMM |
| TT15 | Impacts on active transport | Where existing cyclists facilities, (eg: bicycle parking) would be temporary unavailable to facilitate construction activities, suitable replacements facilities would be provided for this duration | Section 3.4.3 |
| TT17 | Impacts on special events | During major special events, impacts to the transport and traffic network would be reduced by, (as necessary)<br>• Minimising the level of construction activity and, if necessary, ceasing all construction activity<br>• Maintaining appropriate access to all areas within the event precinct<br>• Erection of hoardings, site fencing and gates at key locations with the construction site boundary, to permit pedestrian movements adjacent to the construction site and separate pedestrians from construction vehicles | Section 3.5 |

| Requirement | Impact/ issue | Details | Where addressed |
|---|---|---|---|
| | | • Scheduling deliveries to the construction site outside of special event periods | |
| TT18 | Property access | Access to existing properties and buildings would be maintained in consultation with property owners | Section 3.4.4 |
| TT19 | Construction vehicle impacts | Traffic control measures required at the Parramatta metro station construction site access on Gorge Street would be determined in consultation with Transport for NSW | Applicable to Parramatta site as noted in the REMM |
| C11 | Occurrence of cumulative impacts | Coordination and consultation with the following stakeholders would occur, where required, to manage the interface of projects under construction at the same time:<br>• Transport for NSW including Transport Coordination<br>• Department of Planning, Industry and Environment<br>• Sydney Trains<br>• NSW Trains<br>• Sydney Buses<br>• Sydney Water<br>• Port Authority of NSW<br>• Sydney Motorways Corporation<br>• Emergency Services providers<br>• Utility providers<br>• Construction contractors<br>Coordination and consultation with these stakeholders would include:<br>• Provision of regular updates to the detailed construction program, construction sites and haul routes<br>• Identification of key potential conflict points with other construction projects | Section 6 |

| Requirement | Impact/ issue | Details | Where addressed |
|---|---|---|---|
| | | • Developing mitigation strategies in order to manage conflicts. Depending on the nature of the conflict this could include:<br>– 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<br>– Coordination of traffic management arrangements between projects | |

# B TRAFFIC GUIDANCE SCHEMES

Table 3-12: Traffic Guidance Schemes

| TGS# | Location | Between | | Time of Day | Traffic control | Works | Impacts |
|---|---|---|---|---|---|---|---|
| LOR-TGS-005-1 | Unwin Street | Unwin Street | Kay Street | Day | Stop Slow | Driveway works | Intermittent stop of traffic – all access maintained |
| TGS-CLY-KAY-EB-2201 | Kay Street | Wentworth Street | Unwin Street | Day | Stop Slow | Utility investigations | Intermittent stop of traffic – all access maintained |
| TGS-CLY-KAY-WB-1201 | Kay Street | Wentworth Street | Unwin Street | Day | Parking lane | Utility investigations | Works contained within parking lane |
| TGS-CLY-SHI-NB-1201 | Shirley Street | Unwin Street | Duck River | Day | Parking lane | Utility investigations/ connections | Works contained within parking lane |
| TGS-CLY-SHI-NB-2201 | Shirley Street | Unwin Street | South of Unwin Street | Day | Stop Slow | Utility connections | Intermittent stop of traffic – all access maintained |
| TGS-CLY-SHI-SB-1202 | Shirley Street | Unwin Street | South of Unwin Street | Day | Parking lane | Utility investigations/ connections | Works contained within parking lane |
| TGS-CLY-SHI-SB-2201 | Shirley Street | Unwin Street | South of Unwin Street | Day | Stop Slow | Utility connections | Intermittent stop of traffic – all access maintained |
| TGS-CLY-UNW-EB-1204 | Unwin Street | Colquhoun Street | West of Shirley Street | Day | Parking lane | Utility investigations | Works contained within parking lane |
| TGS-CLY-UNW-EB-2201 | Unwin Street | Unwin Street | Unwin Street | Day | Stop Slow | Driveway works | Intermittent stop of traffic – all access maintained |

| TGS# | Location | Between | | Time of Day | Traffic control | Works | Impacts |
|---|---|---|---|---|---|---|---|
| TGS-CLY-UNW-WB-1204 | Unwin Street | Colquhoun Street | Shirley Street | Day | Stop Slow | Utility investigations | Intermittent stop of traffic – all access maintained |
| TGS-CLY-UNW-EB-2203 | Unwin Street | Unwin Street | Unwin Street | Day | Stop Slow | Utility investigations | Intermittent stop of traffic – all access maintained |
| TGS-CLY-UWN-SB-1201 | Unwin Street | Unwin Street | Kay Street | Day | Stop Slow | Utility investigations | Intermittent stop of traffic – all access maintained |
| TGS-CLY-UNW-WB-2203 | Unwin Street | Rosehill gate entry | Shirley Street | Day | Stop Slow | Utility investigations | Intermittent stop of traffic – all access maintained |
| TGS-CLY-UNW-WB-2202 | Unwin Street | Unwin Street | Rosehill gate entry | Day | Stop Slow | Utility investigations | Intermittent stop of traffic – all access maintained |
| TGS-CLY-WEN-AL-4401 | Wentworth Street | Kay Street | | Day | Stop Slow | Utility investigations | Intermittent stop of traffic – all access maintained |
| TGS-CLY-WEN-NB-1201 | Wentworth Street | Kay Street | End of road | Day | Parking lane | Utility investigations | Works contained within parking lane |
| TGS-CLY-WEN-SB-1201 | Wentworth Street | Kay Street | End of road | Day | Parking lane | Utility investigations | Works contained within parking lane |
| TGS-CLY-WEN-SB-1201 | Wentworth Street | Kay Street | End of road | Day | Parking lane | Utility investigations | Works contained within parking lane |
| TGS-CLY-WEN-SB-1202 | Wentworth Street | End of road | M4 Motorway overpass | Day | Stop Slow | Utility investigations | Works contained within parking lane |
| TGS-PED-ALL-1101 | All | | | | Pedestrian management | Heavy Vehicle access/ egress | Intermittent stop of pedestrians during heavy vehicle |

| TGS# | Location | Between | | Time of Day | Traffic control | Works | Impacts |
|---|---|---|---|---|---|---|---|
| | | | | | | across footpaths | movements at footpath locations |

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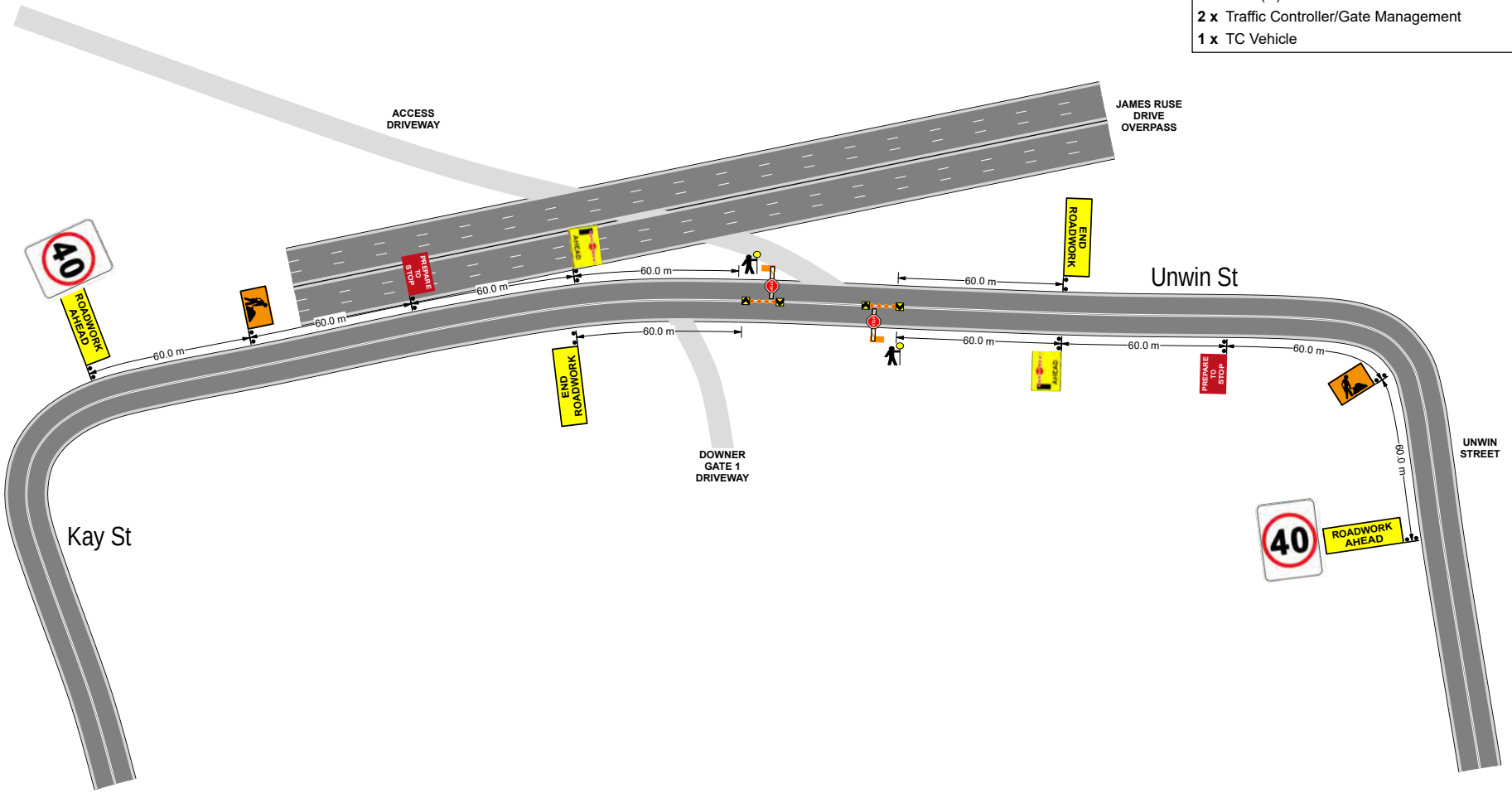
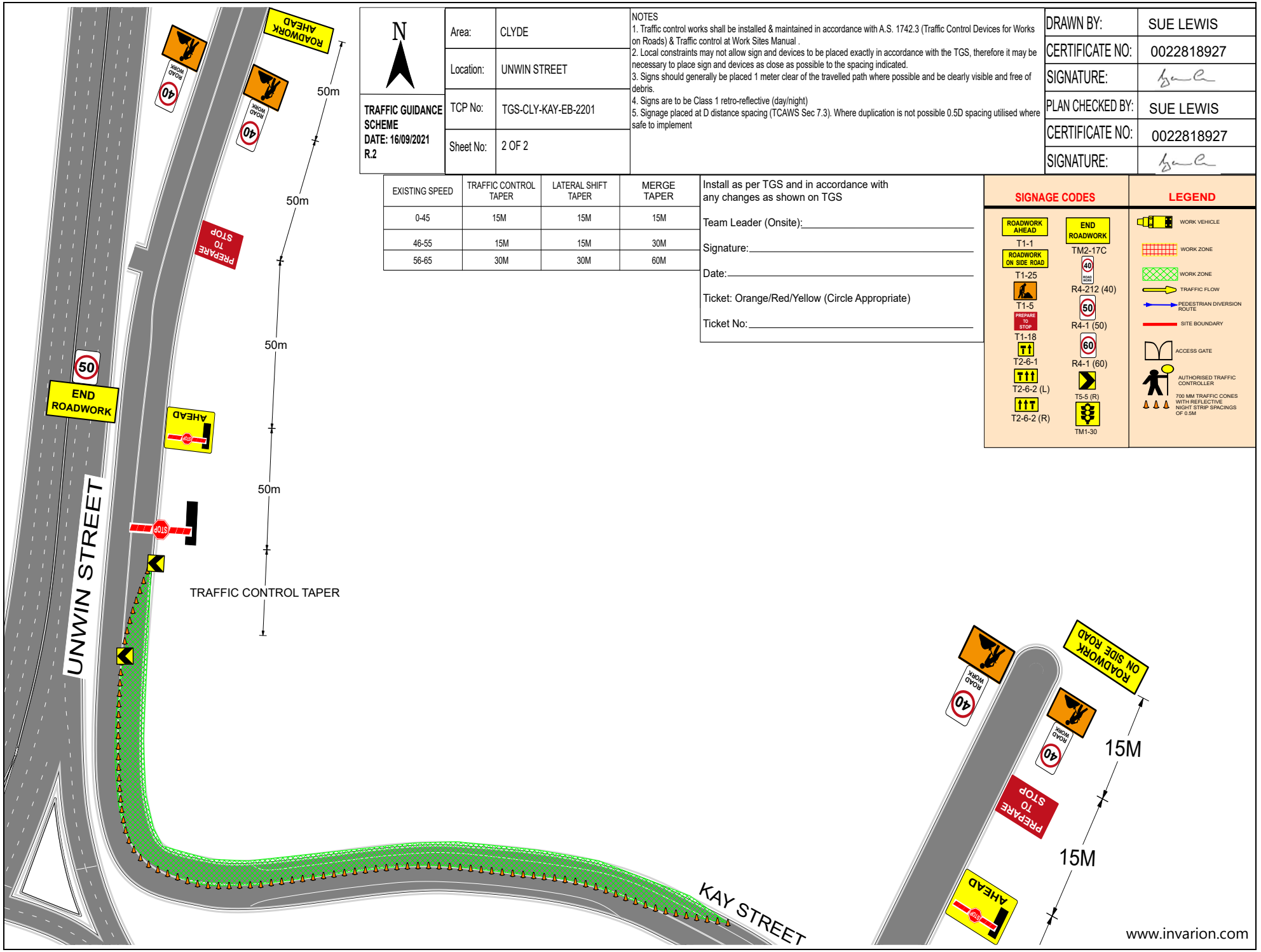
| Legend |
|---|
| Portaboom |
| TC Vehicle |
| Traffic Cones |
| Traffic Controller/Gate Management |

| Manifest |
|---|
| **2 x** Portaboom |
| **2 x** T1-1 ROADWORK AHEAD |
| **2 x** T1-18 PREPARE TO STOP |
| **2 x** T1-272N BOOM BARRIER AHEAD |
| **2 x** T1-5 WORKERS AHEAD |
| **2 x** T2-16 END ROADWORK |
| **2 x** T5-5 (L) HAZARD WARNING MARKER LEFT |
| **2 x** T5-5 (R) HAZARD WARNING MARKER RIGHT |
| **2 x** Traffic Controller/Gate Management |
| **1 x** TC Vehicle |




| REV | REVISION DESCRIPTION | TGS PLAN # | LOR-TGS-005-1 Unwin Street Driveway | CLIENT: Gamuda / Laing O'Rourke JV | GAMUDA Australia / LAING O'ROURKE | DESIGNED BY | Gregory Cocker | APPROVED BY | | IMPLEMENTED BY | | DD Traffic Management |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00 | **Initial TGS Drafted** | ROAD NAME | **1 Unwin Street** | | | SIGNATURE | ~~Gcocker~~ | SIGNATURE | | SIGNATURE | | |
| 01 | | SUBURB | **Rosehill** | ROL REQUIRED | Y ☐ N ☒ | DATE | **04/04/2022** | DATE | | DATE | | Web: www.ddtraffic.com.au<br>Email: sydney@dd-group.com.au<br>Phone: 1300 597 622 |
| 02 | | WORK LOCATION | **Northbound** | SZA REQUIRED | Y ☐ N ☒ | CERTIFICATE # | **TCT0027509** | CERTIFICATE # | | CERTIFICATE # | | |

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

**TRAFFIC GUIDANCE SCHEME**
**DATE: 16/09/2021**
**R.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: | SUE LEWIS |
| CERTIFICATE NO: | 0022818927 |
| SIGNATURE: | |
| PLAN CHECKED BY: | SUE LEWIS |
| CERTIFICATE NO: | 0022818927 |
| 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**

- 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)
- END ROADWORK — TM2-17C
- R4-212 (40)
- R4-1 (50)
- R4-1 (60)
- T5-5 (R)
- TM1-30

**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

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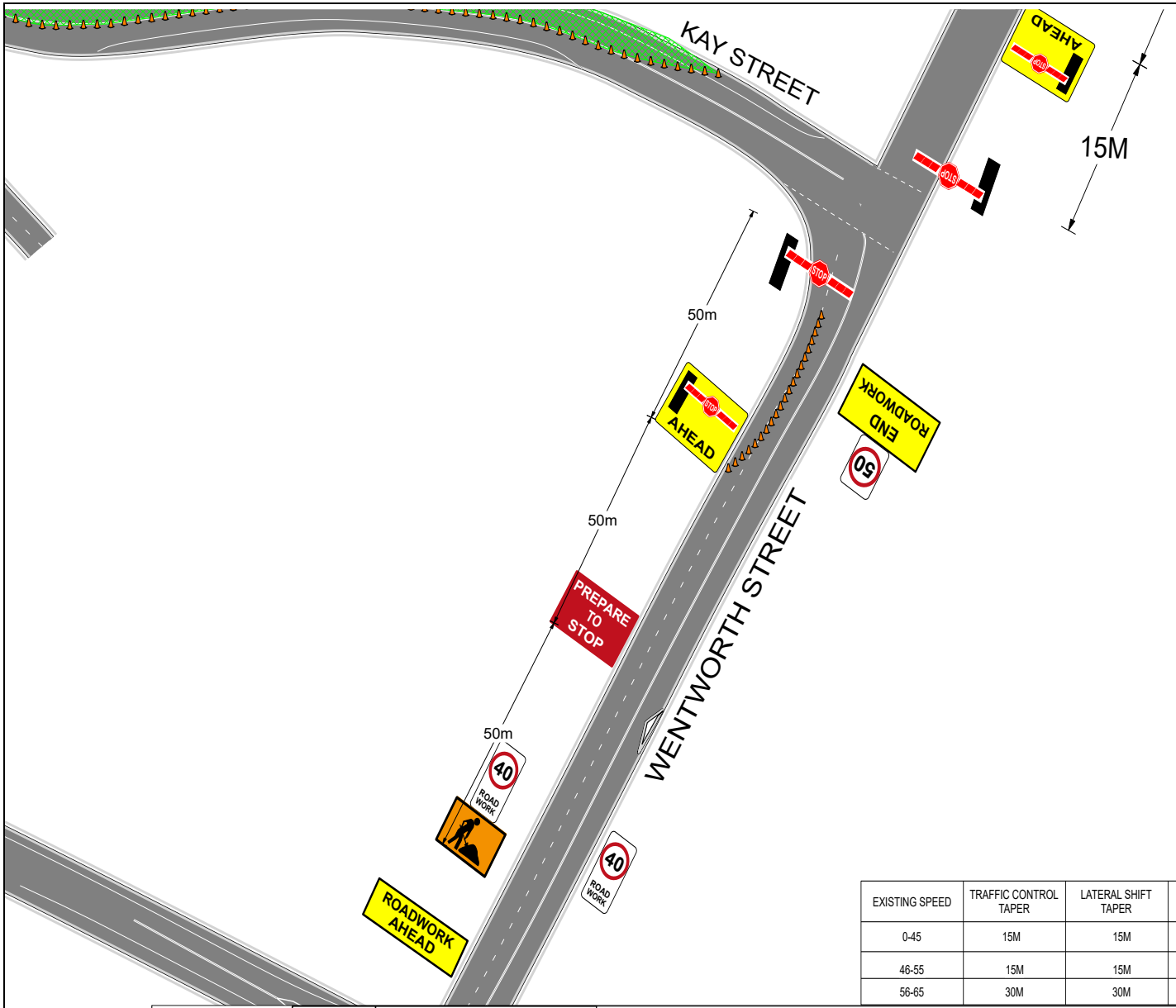


Install as per TGS and in accordance with any changes as shown on TGS

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**

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)

END ROADWORK TM2-17C

R4-212 (40)

R4-1 (50)

R4-1 (60)

T5-5 (R)

TM1-30

**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

N

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

| | |
|---|---|
| Area: | CLYDE |
| Location: | UNWIN STREET |
| TCP No: | TGS-CLY-KAY-EB-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

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| DRAWN BY: | SUE LEWIS |
| CERTIFICATE NO: | 0022818927 |
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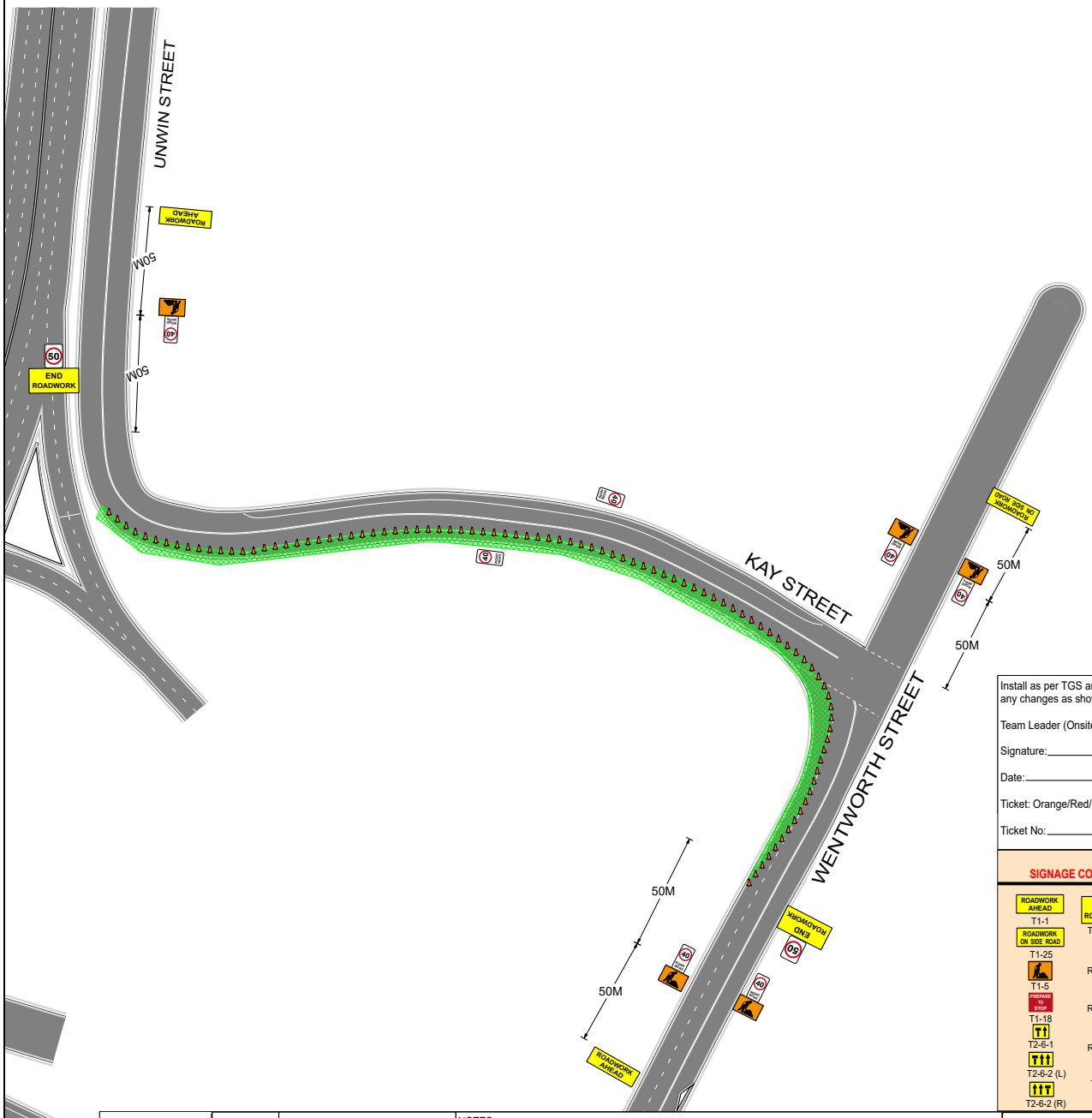
| CERTIFICATE NO: | 0022818927 |
| SIGNATURE: | |




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**

- 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)
- END ROADWORK TM2-17C
- R4-212 (40)
- R4-1 (50)
- R4-1 (60)
- T5-5 (R)

**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

N

**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
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 .
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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

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| DRAWN BY: | SUE LEWIS |
| CERTIFICATE NO: | 0022818927 |
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| SIGNATURE: | |

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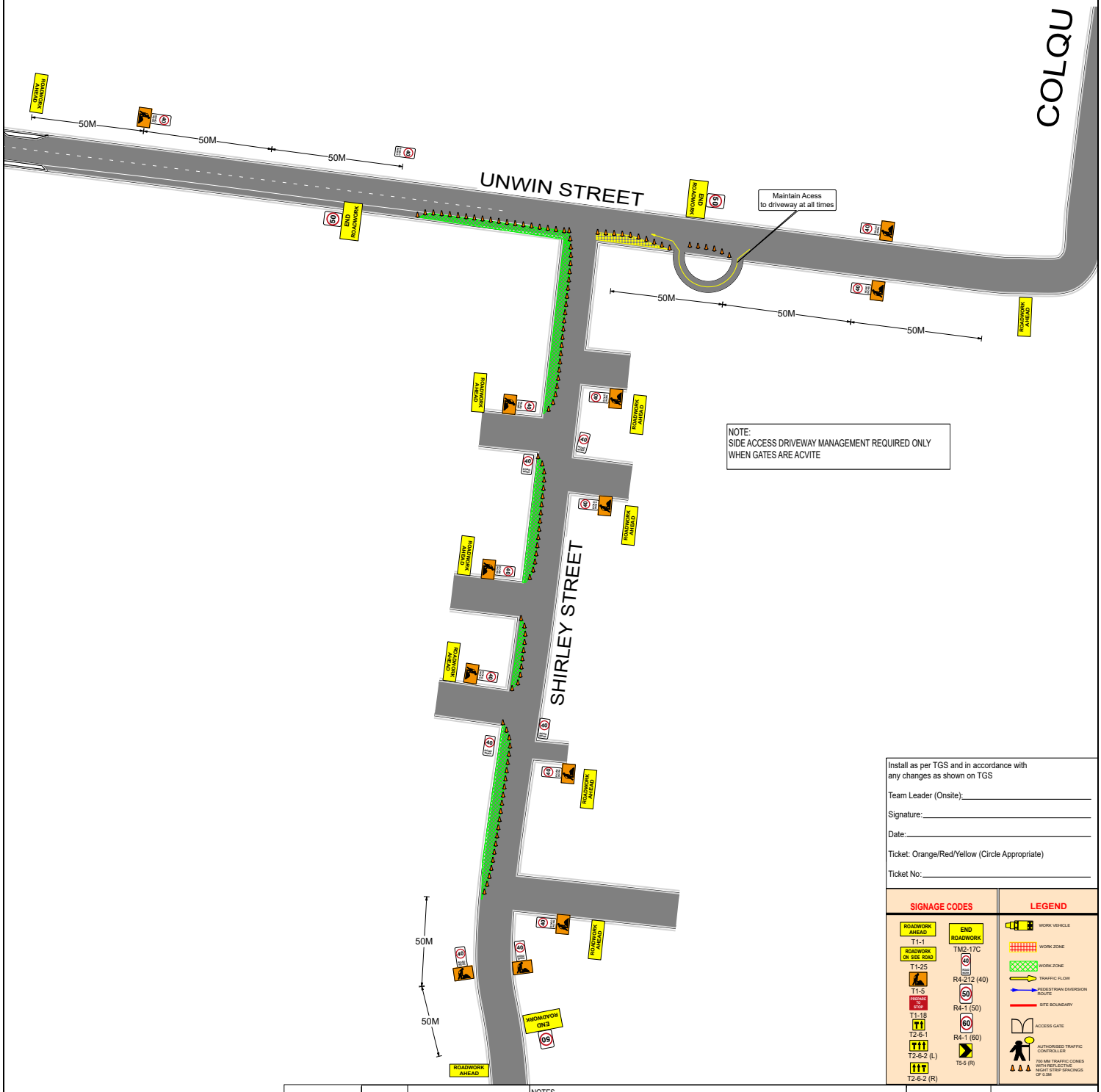


Install as per TGS and in accordance with any changes as shown on TGS

Team Leader (Onsite):_____

Signature:_____

Date:_____

Ticket: Orange/Red/Yellow (Circle Appropriate)

Ticket No:_____

**SIGNAGE CODES**

ROADWORK AHEAD T1-1
END ROADWORK TM2-17C
ROADWORK ON SIDE ROAD T1-25
R4-2\2 (40)
T1-5
R4-1 (50)
PREPARE TO STOP T1-18
R4-1 (60)
T2-6-1
T2-6-2 (L)
T5-5 (R)
T2-6-2 (R)

**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

N

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

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

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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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

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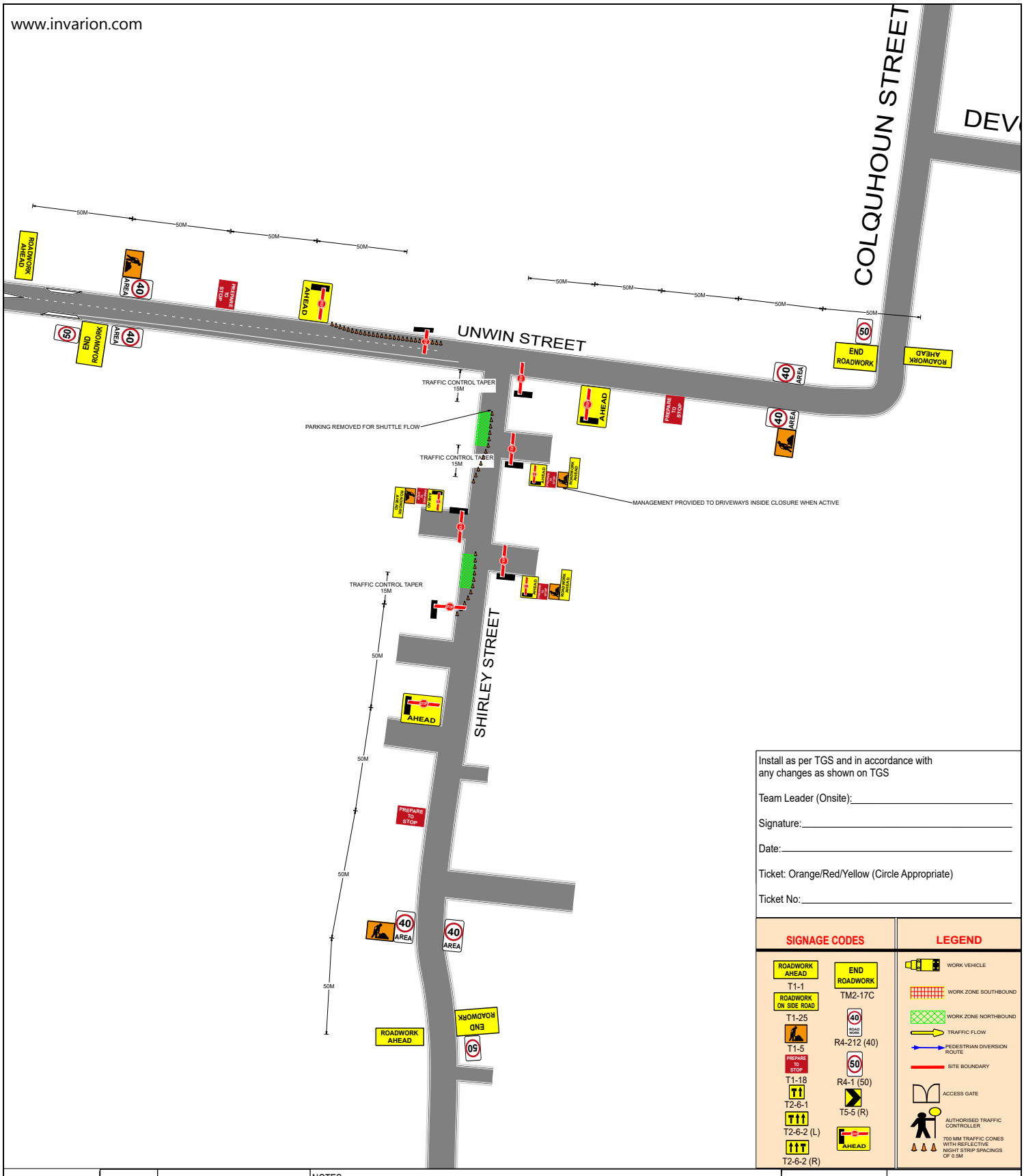



Install as per TGS and in accordance with any changes as shown on TGS

Team Leader (Onsite):_____

Signature:_____

Date:_____

Ticket: Orange/Red/Yellow (Circle Appropriate)

Ticket No:_____

**SIGNAGE CODES**

- ROADWORK AHEAD T1-1
- END ROADWORK TM2-17C
- ROADWORK ON SIDE ROAD T1-25
- R4-212 (40)
- T1-5
- T1-18
- R4-1 (50)
- T2-6-1
- T5-5 (R)
- T2-6-2 (L)
- AHEAD
- T2-6-2 (R)

**LEGEND**

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

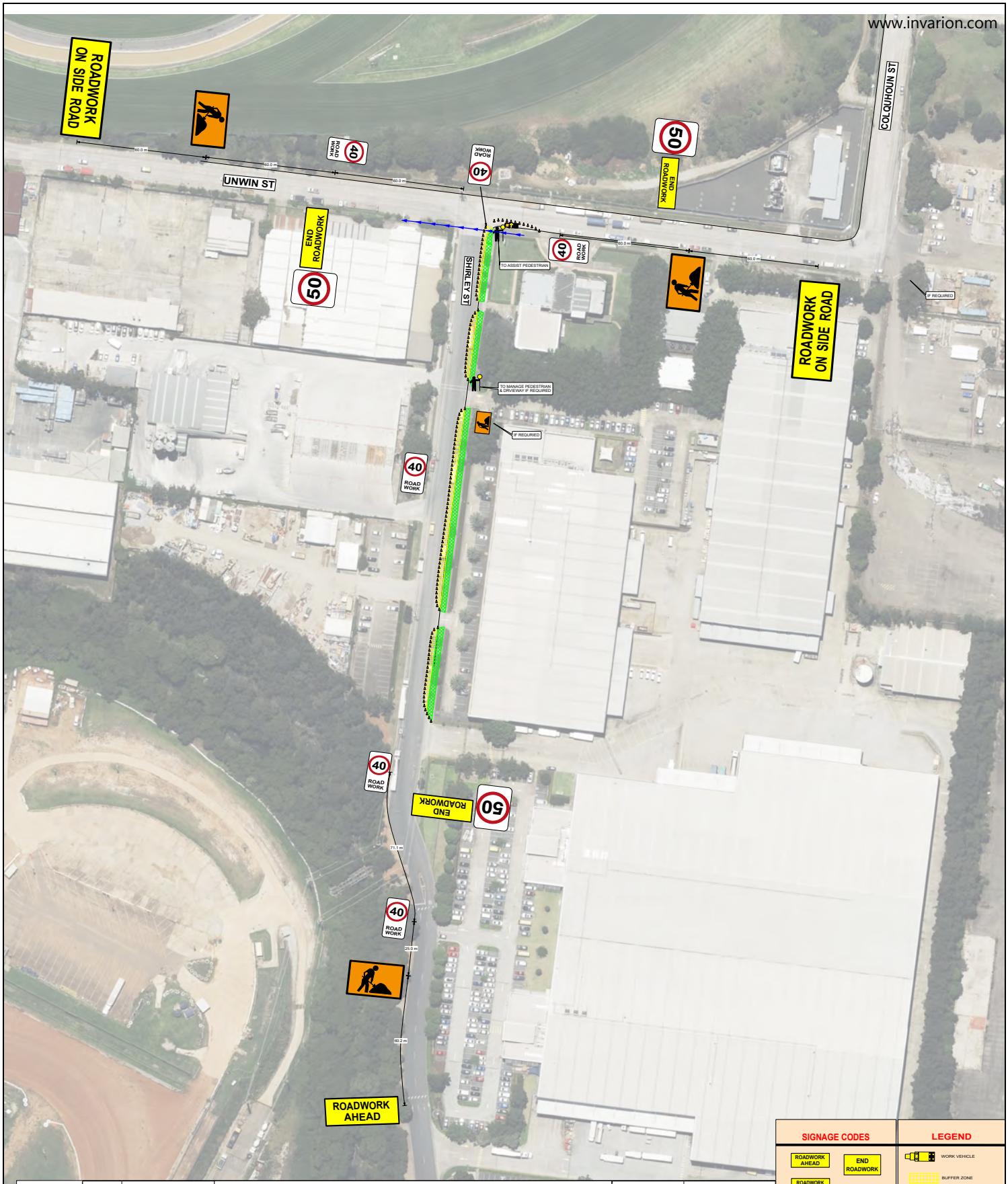
N

**TRAFFIC GUIDANCE SCHEME**
**DATE: 05/12/2021**
**R.1**

| | |
|---|---|
| Area: | CLYDE |
| Location: | SHIRLEY STREET |
| TCP No: | TGS-CLY-SHI-NB-2201 |
| Sheet No: | 1 OF1 |

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 VOL.6.
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).
6. Dimentiion D can be reviewed in accordance with AS1742.3 and AGRD where site constraints require.
7. Where duplication requirements are not possible 0.5D spacing utilised where safe to implement
8. Road plates installed in accordance with RMS specification M209

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




| | | |
|---|---|---|
| N | Area: | CLYDE |
| | Location: | SHIRLEY ST |
| TRAFFIC CONTROL PLAN DATE: 19/03/2022 R.1 | TCP No: | TGS-CLY-SHI-SB-1202 |
| | Sheet No: | 1 OF 1 |

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 TCP, 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. Access to bus stops to be maintained
6. Access to private property driveways to be maintained
7. President Avenue northside between Cross Lane and Crawford Road is typically unrestricted parking
8. President Avenue southside between Lachal Avenue and O'Connell Street - is unrestricted parking with small sections allocated to timed restrictions as identified
9. D as noted in TCAWS, Section 7.3 is the regulatory speed approaching each advance sign

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

**SIGNAGE CODES**

ROADWORK AHEAD
ROADWORK ON SIDE ROAD
END ROADWORK
PREPARE TO STOP
40 ROAD WORK
50
60

**LEGEND**

WORK VEHICLE
BUFFER 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

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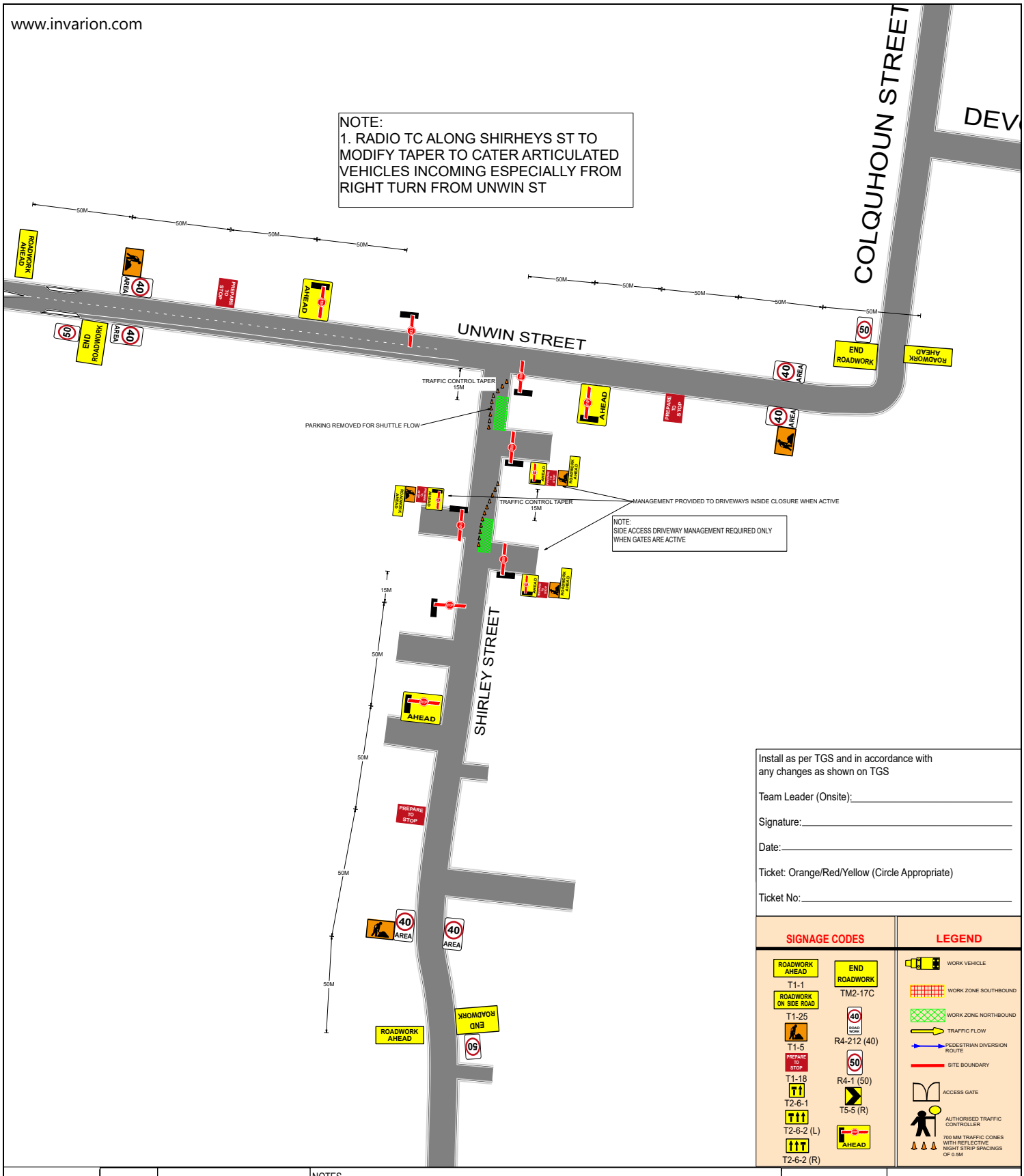
NOTE:
1. RADIO TC ALONG SHIRHEYS ST TO MODIFY TAPER TO CATER ARTICULATED VEHICLES INCOMING ESPECIALLY FROM RIGHT TURN FROM UNWIN ST




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**

- ROADWORK AHEAD — T1-1
- END ROADWORK — TM2-17C
- ROADWORK ON SIDE ROAD — T1-25
- 40 ROAD WORK — R4-212 (40)
- T1-5
- PREPARE TO STOP — T1-18
- 50 — R4-1 (50)
- T2-6-1
- T5-5 (R)
- T2-6-2 (L)
- AHEAD
- T2-6-2 (R)

**LEGEND**

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

N

**TRAFFIC GUIDANCE SCHEME**
**DATE: 05/12/2021**
**R.1**

| | |
|---|---|
| Area: | CLYDE |
| Location: | SHIRLEY STREET |
| TCP No: | TGS-CLY-SHI-SB-2201 |
| Sheet No: | 1 OF1 |

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 VOL.6.
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).
6. Dimentiion D can be reviewed in accordance with AS1742.3 and AGRD where site constraints require.
7. Where duplication requirements are not possible 0.5D spacing utilised where safe to implement
8. Road plates installed in accordance with RMS specification M209

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

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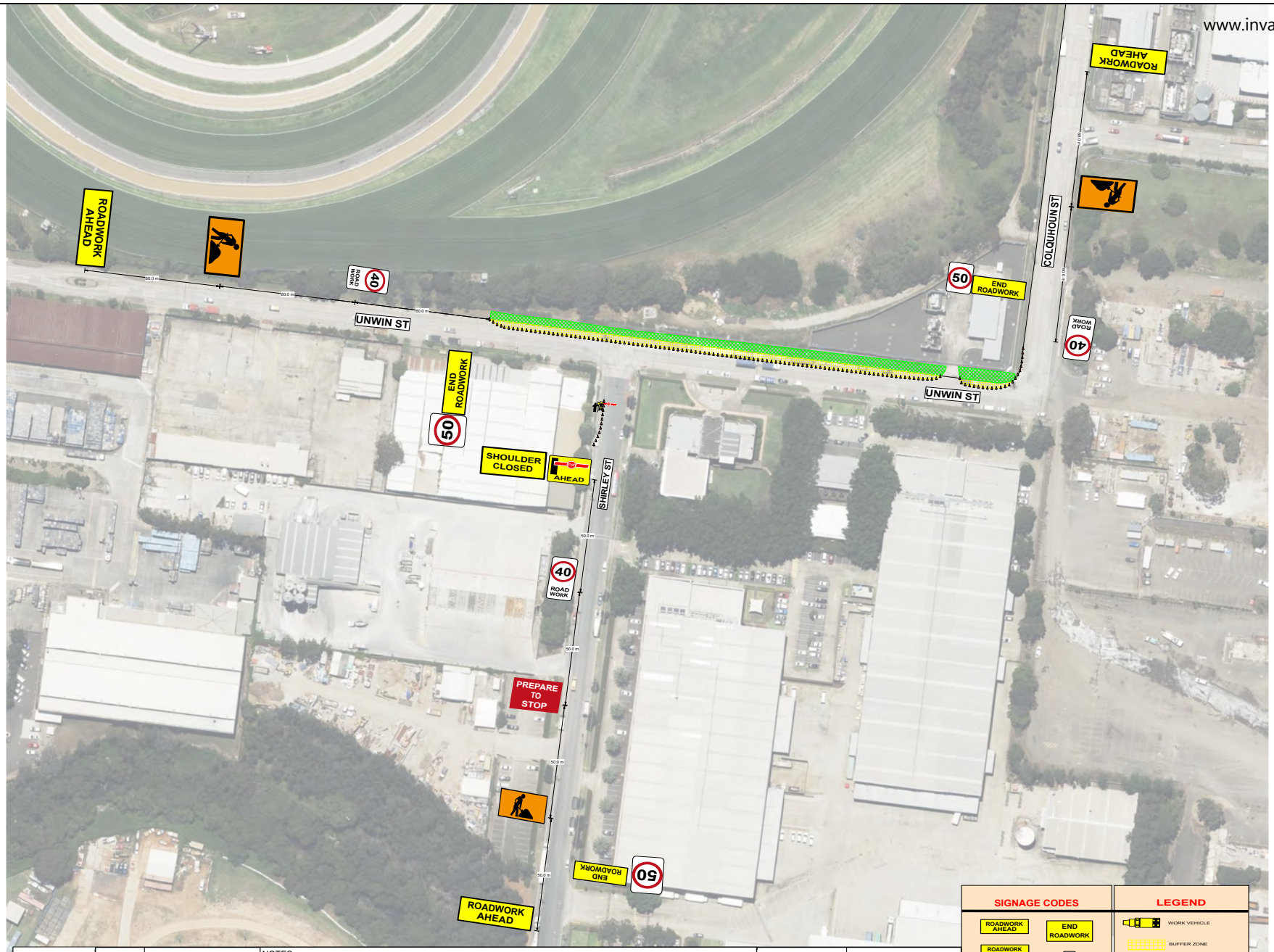



N

| | |
|---|---|
| Area: | CLYDE |
| Location: | UNWIN ST |
| TCP No: | TGS-CLY-UNW-EB-1204 |
| Sheet No: | 1 OF 1 |

**TRAFFIC CONTROL PLAN**
**DATE: 19/03/2022**
**R.1**

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 TCP, 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. Access to bus stops to be maintained
6. Access to private property driveways to be maintained
7. President Avenue northside between Cross Lane and Crawford Road is typically unrestricted parking
8. President Avenue southside between Lachal Avenue and O'Connell Street - is unrestricted parking with small sections allocated to timed restrictions as identified
9. D as noted in TCAWS, Section 7.3 is the regulatory speed approaching each advance sign

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

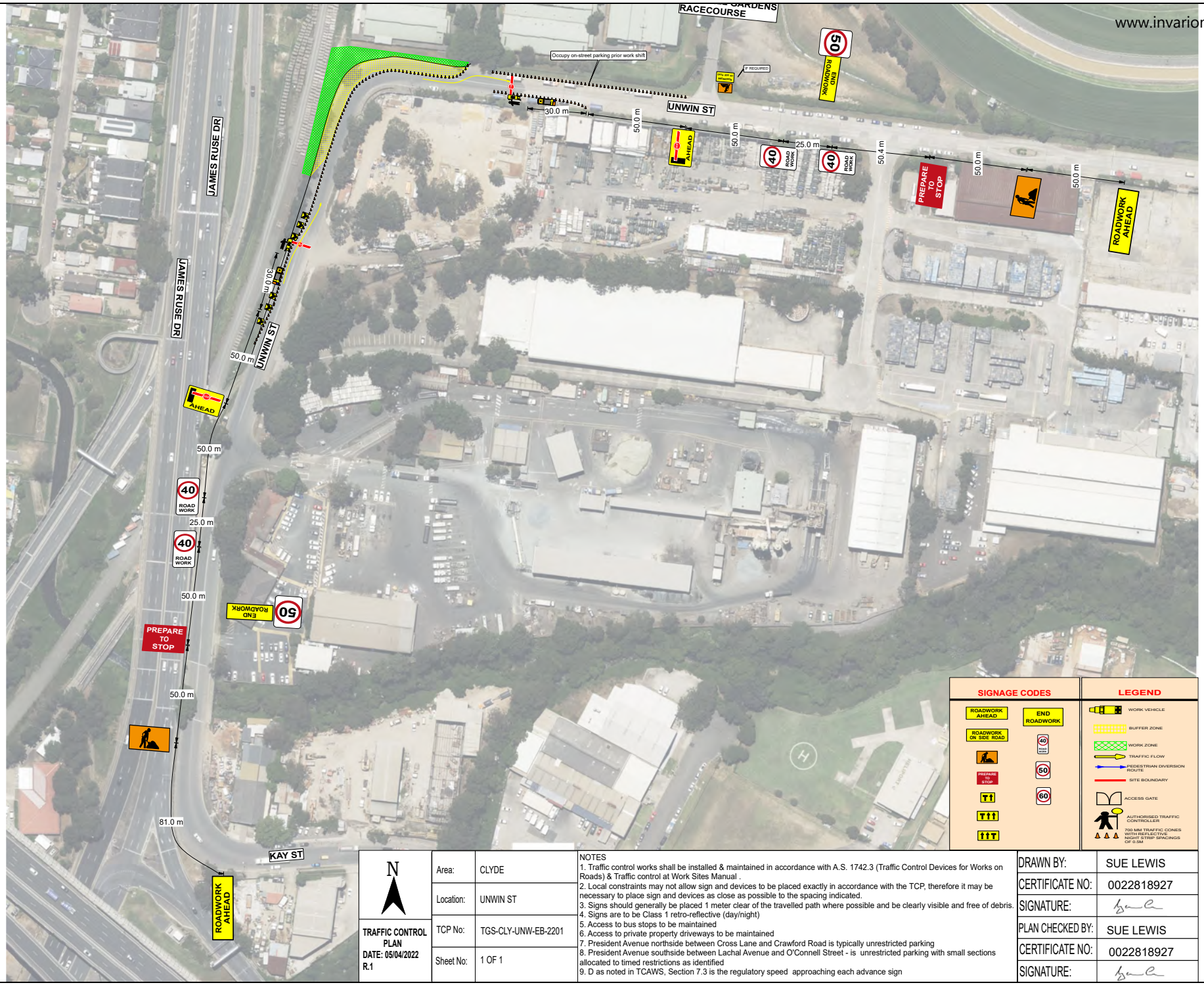
**SIGNAGE CODES**

ROADWORK AHEAD
END ROADWORK
ROADWORK ON SIDE ROAD
PREPARE TO STOP
40
50
60

**LEGEND**

WORK VEHICLE
BUFFER 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

www.invarion.com




N

**TRAFFIC CONTROL PLAN**
**DATE: 05/04/2022**
**R.1**

| | |
|---|---|
| Area: | CLYDE |
| Location: | UNWIN ST |
| TCP No: | TGS-CLY-UNW-EB-2201 |
| Sheet No: | 1 OF 1 |

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 TCP, 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. Access to bus stops to be maintained
6. Access to private property driveways to be maintained
7. President Avenue northside between Cross Lane and Crawford Road is typically unrestricted parking
8. President Avenue southside between Lachal Avenue and O'Connell Street - is unrestricted parking with small sections allocated to timed restrictions as identified
9. D as noted in TCAWS, Section 7.3 is the regulatory speed approaching each advance sign

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

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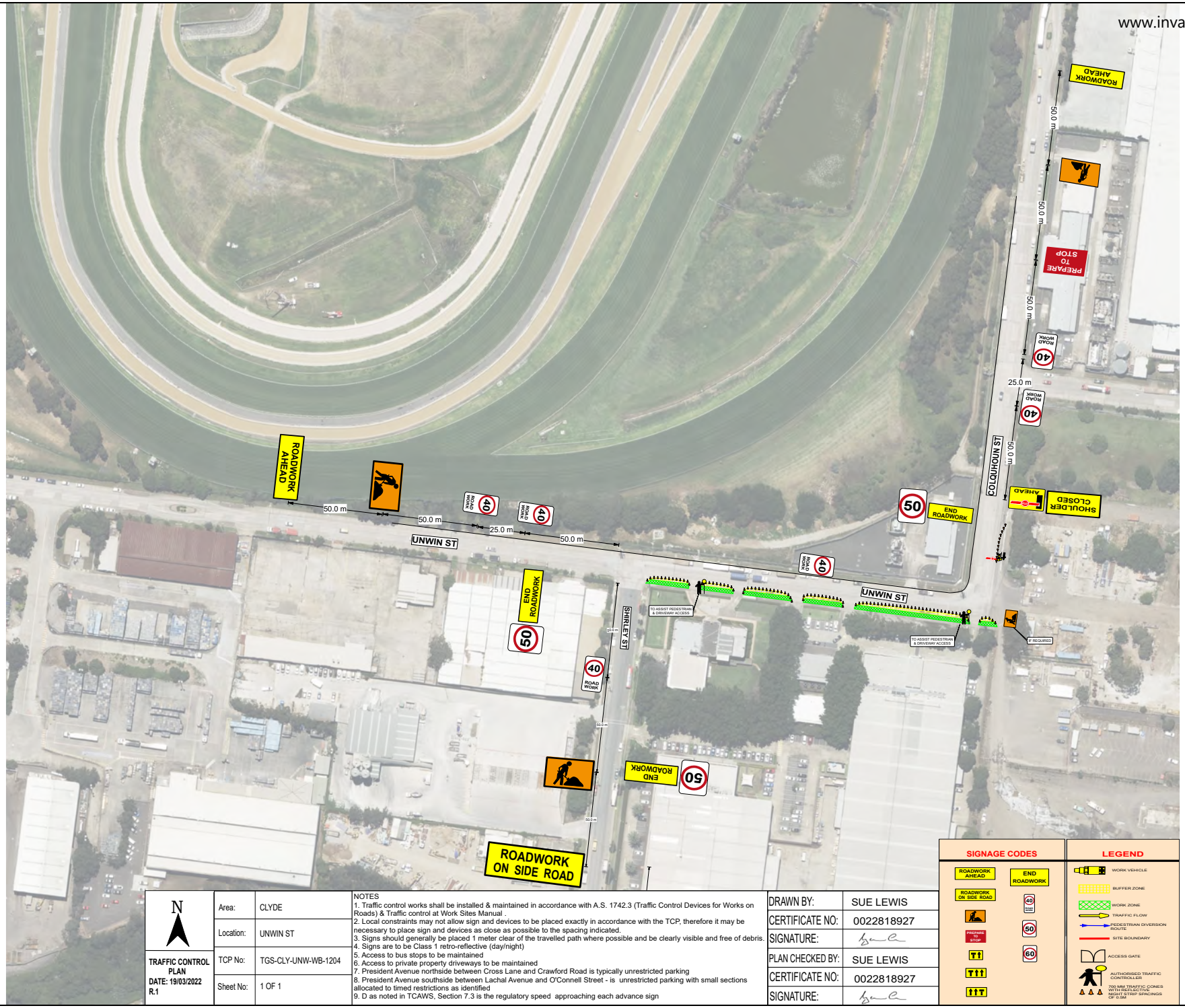


| | | |
|---|---|---|
| N | Area: | CLYDE |
| | Location: | UNWIN ST |
| TRAFFIC CONTROL PLAN<br>DATE: 19/03/2022<br>R.1 | TCP No: | TGS-CLY-UNW-WB-1204 |
| | Sheet No: | 1 OF 1 |

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 TCP, 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. Access to bus stops to be maintained
6. Access to private property driveways to be maintained
7. President Avenue northside between Cross Lane and Crawford Road is typically unrestricted parking
8. President Avenue southside between Lachal Avenue and O'Connell Street - is unrestricted parking with small sections allocated to timed restrictions as identified
9. D as noted in TCAWS, Section 7.3 is the regulatory speed approaching each advance sign

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

**SIGNAGE CODES**

ROADWORK AHEAD
END ROADWORK
ROADWORK ON SIDE ROAD
PREPARE TO STOP
40 ROAD WORK
50
60

**LEGEND**

WORK VEHICLE
BUFFER 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 9.0M

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:_____

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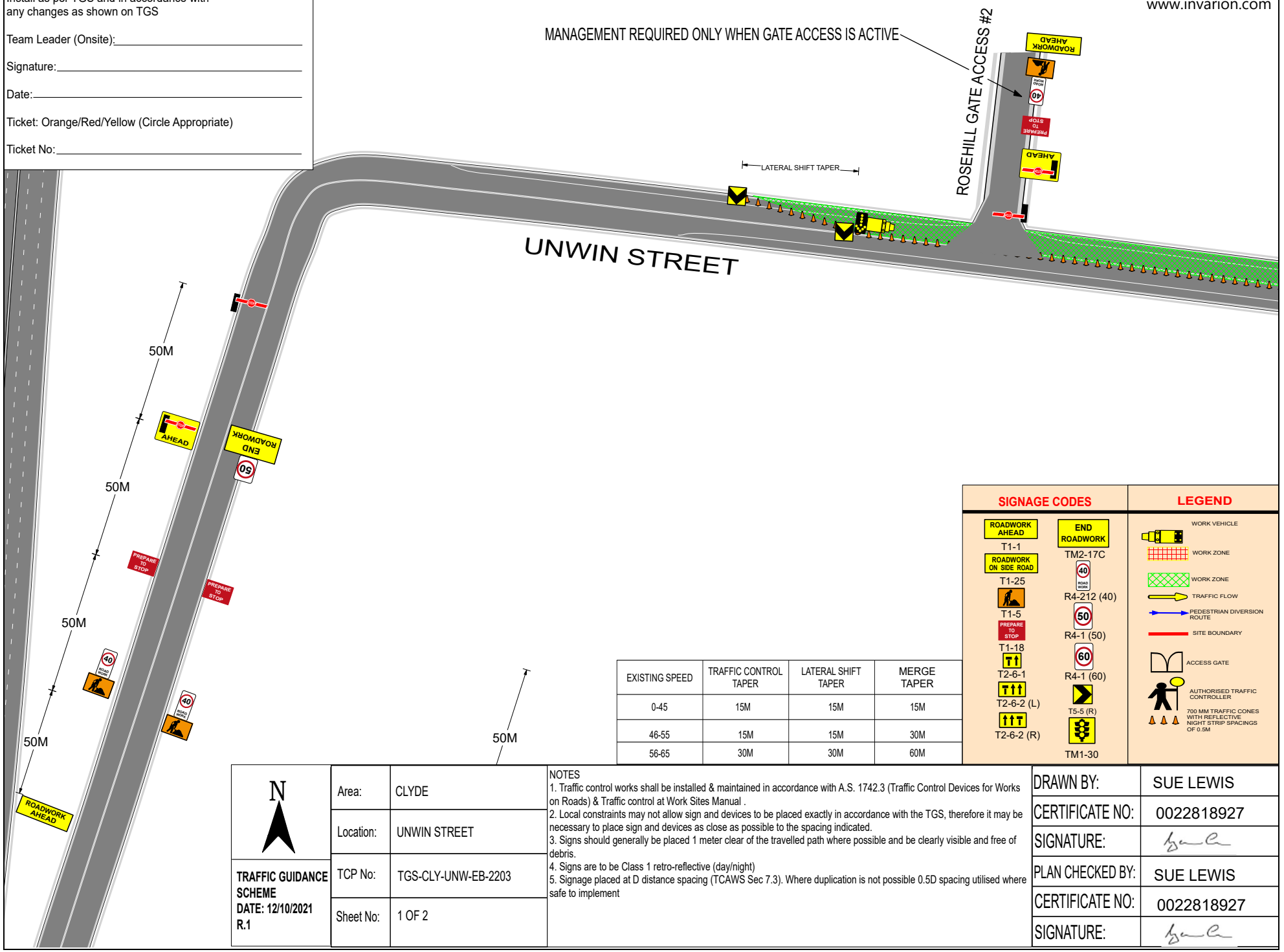



| EXISTING SPEED | TRAFFIC CONTROL TAPER | LATERAL SHIFT TAPER | MERGE TAPER |
|---|---|---|---|
| 0-45 | 15M | 15M | 15M |
| 46-55 | 15M | 15M | 30M |
| 56-65 | 30M | 30M | 60M |

## SIGNAGE CODES

- 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)
- END ROADWORK — TM2-17C
- R4-212 (40)
- R4-1 (50)
- R4-1 (60)
- T5-5 (R)
- TM1-30

## 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

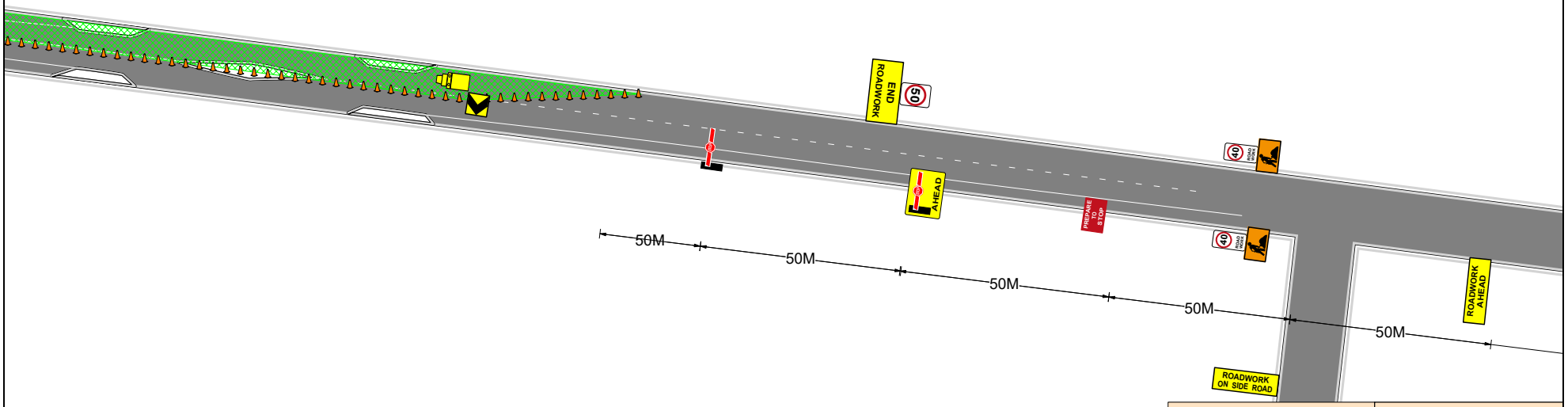
N

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

| | |
|---|---|
| Area: | CLYDE |
| Location: | UNWIN STREET |
| TCP No: | TGS-CLY-UNW-EB-2203 |
| 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: | SUE LEWIS |
| CERTIFICATE NO: | 0022818927 |
| SIGNATURE: | |
| PLAN CHECKED BY: | SUE LEWIS |
| CERTIFICATE NO: | 0022818927 |
| 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

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)

END ROADWORK TM2-17C

R4-212 (40)

R4-1 (50)

R4-1 (60)

T5-5 (R)

TM1-30

## 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

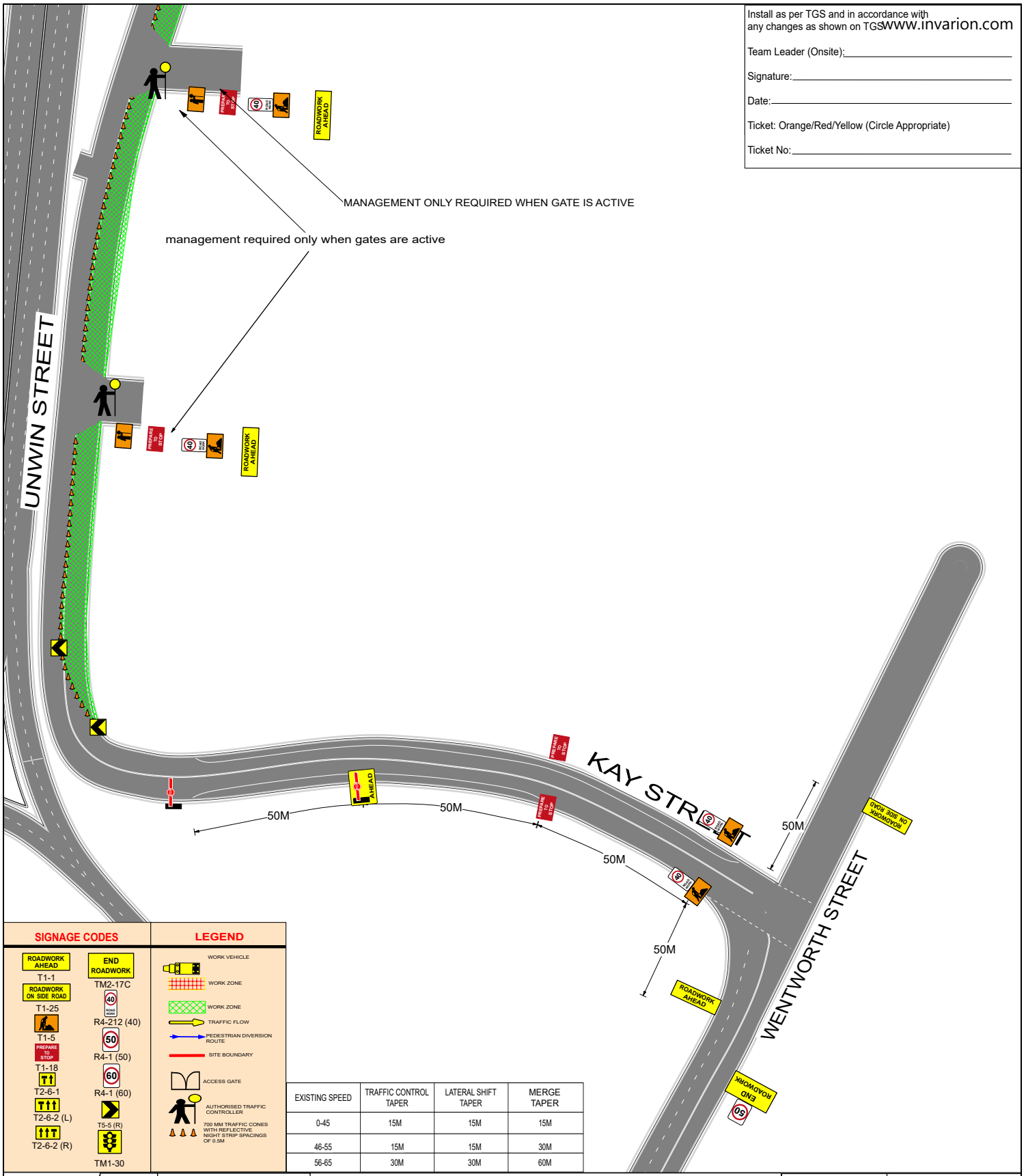
N

**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
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: | 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

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Team Leader (Onsite):

Signature:

Date:

Ticket: Orange/Red/Yellow (Circle Appropriate)

Ticket No:

## SIGNAGE CODES

- 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)
- END ROADWORK TM2-17C
- R4-212 (40)
- R4-1 (50)
- R4-1 (60)
- T5-5 (R)
- TM1-30

## 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 |

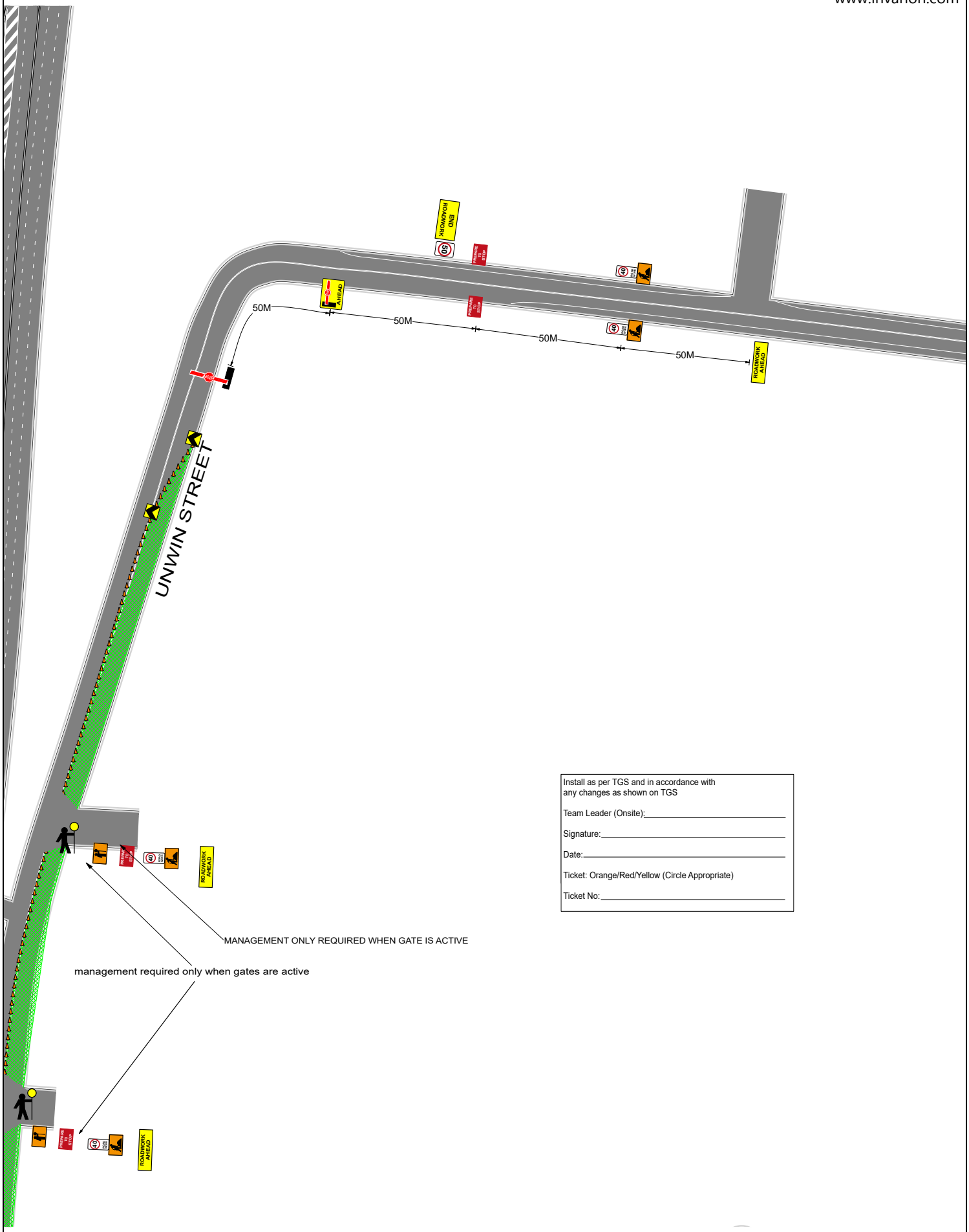
N

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

| | |
|---|---|
| Area: | CLYDE |
| Location: | UNWIN STREET |
| TCP No: | TGS-CLY-UWN-SB-1201 |
| 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: | 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

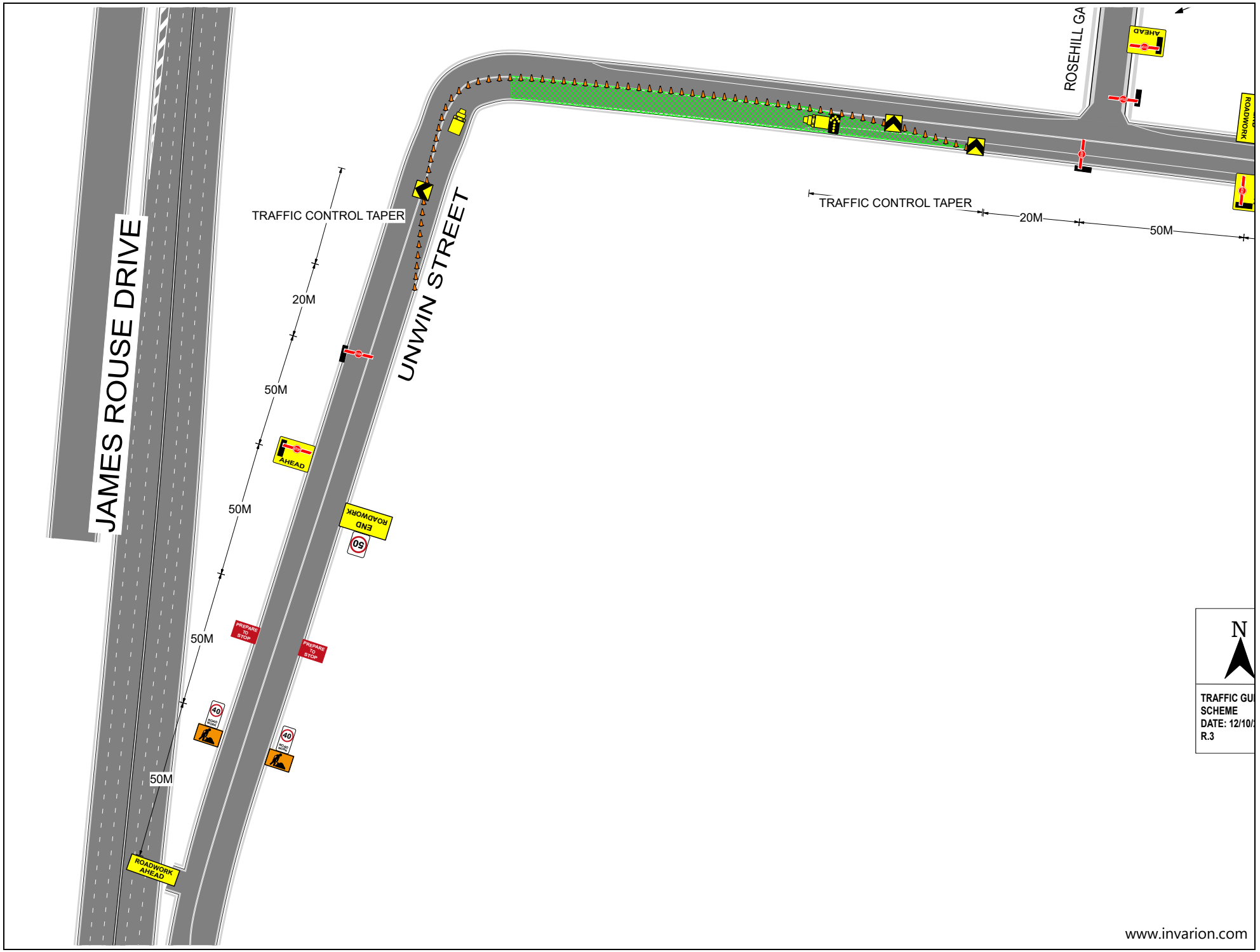
Team Leader (Onsite):_____

Signature:_____

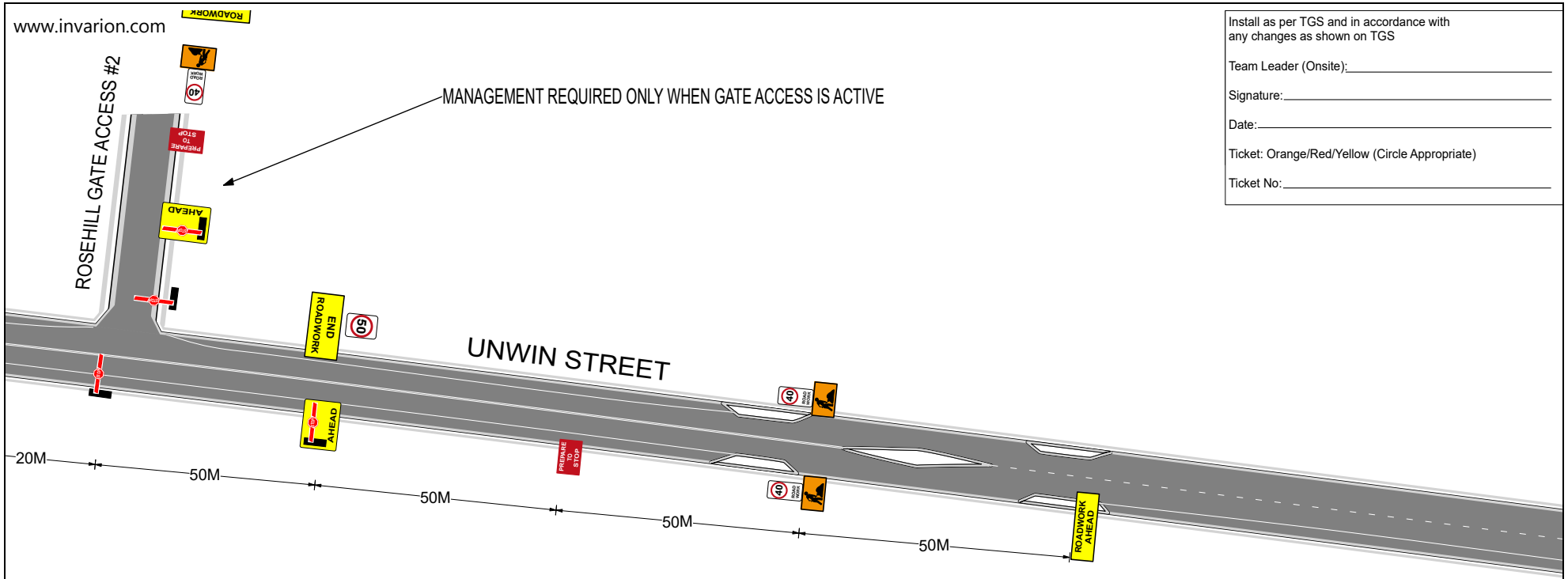
Date:_____

Ticket: Orange/Red/Yellow (Circle Appropriate)

Ticket No:_____


JAMES ROUSE DRIVE
UNWIN STREET
ROSEHILL GA
TRAFFIC CONTROL TAPER
20M
50M
TRAFFIC CONTROL TAPER
20M
50M
50M
50M
50M
AHEAD
AHEAD
ROADWORK
END ROADWORK
50
PREPARE TO STOP
PREPARE TO STOP
40
40
ROADWORK AHEAD
N
TRAFFIC GU
SCHEME
DATE: 12/10/
R.3
www.invarion.com

www.invarion.com




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

- 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)
- END ROADWORK — TM2-17C
- R4-212 (40)
- R4-1 (50)
- R4-1 (60)
- T5-5 (R)
- TM1-30

## 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

N

**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
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.
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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: | |

www.invarion.com

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

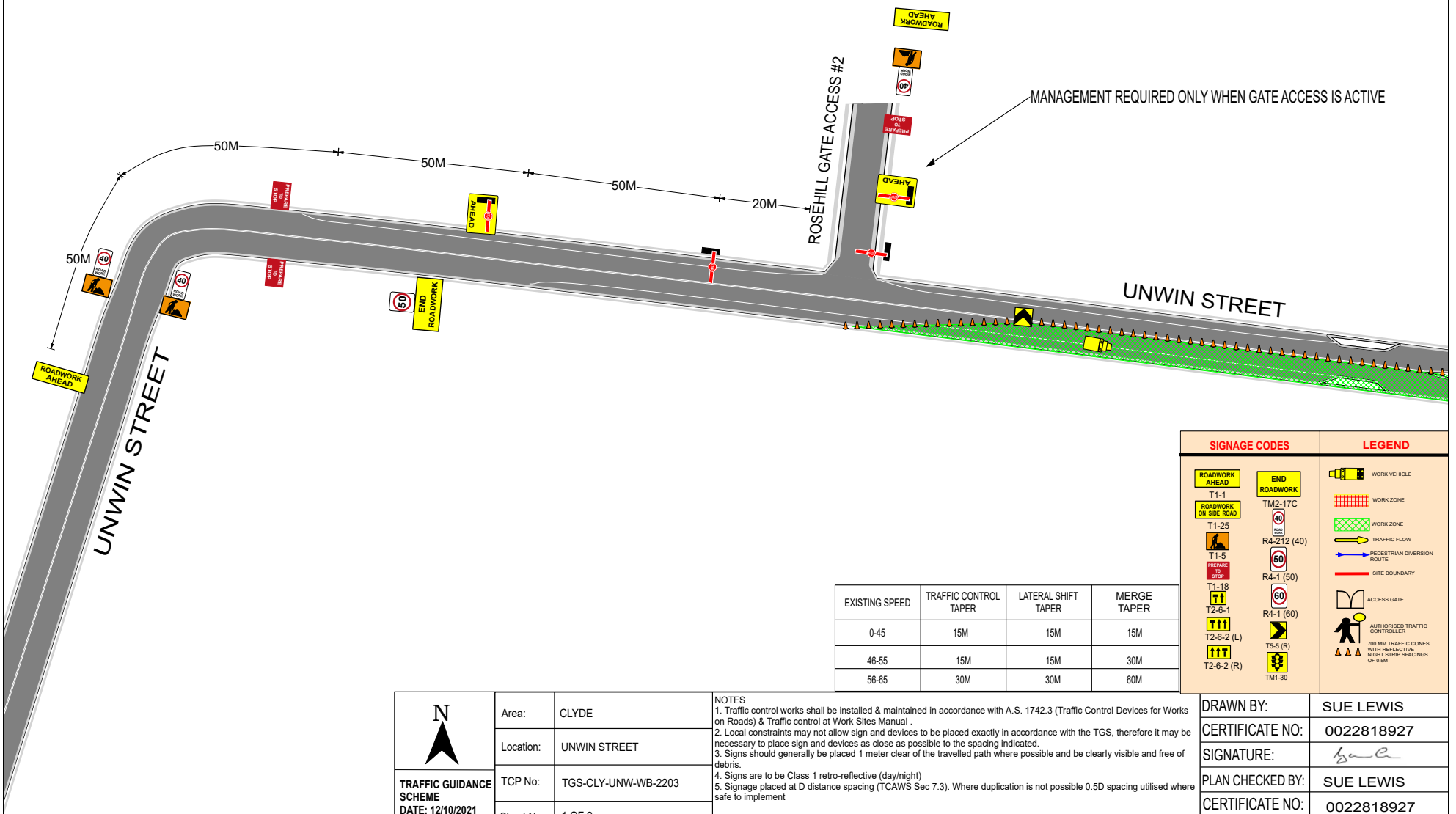
Team Leader (Onsite):_____

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**

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)

END ROADWORK TM2-17C

R4-212 (40)

R4-1 (50)

R4-1 (60)

T5-5 (R)

TM1-30

**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

N

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

| | |
|---|---|
| Area: | CLYDE |
| Location: | UNWIN STREET |
| TCP No: | TGS-CLY-UNW-WB-2203 |
| 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: | SUE LEWIS |
| CERTIFICATE NO: | 0022818927 |
| SIGNATURE: | |
| PLAN CHECKED BY: | SUE LEWIS |
| CERTIFICATE NO: | 0022818927 |
| SIGNATURE: | |

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

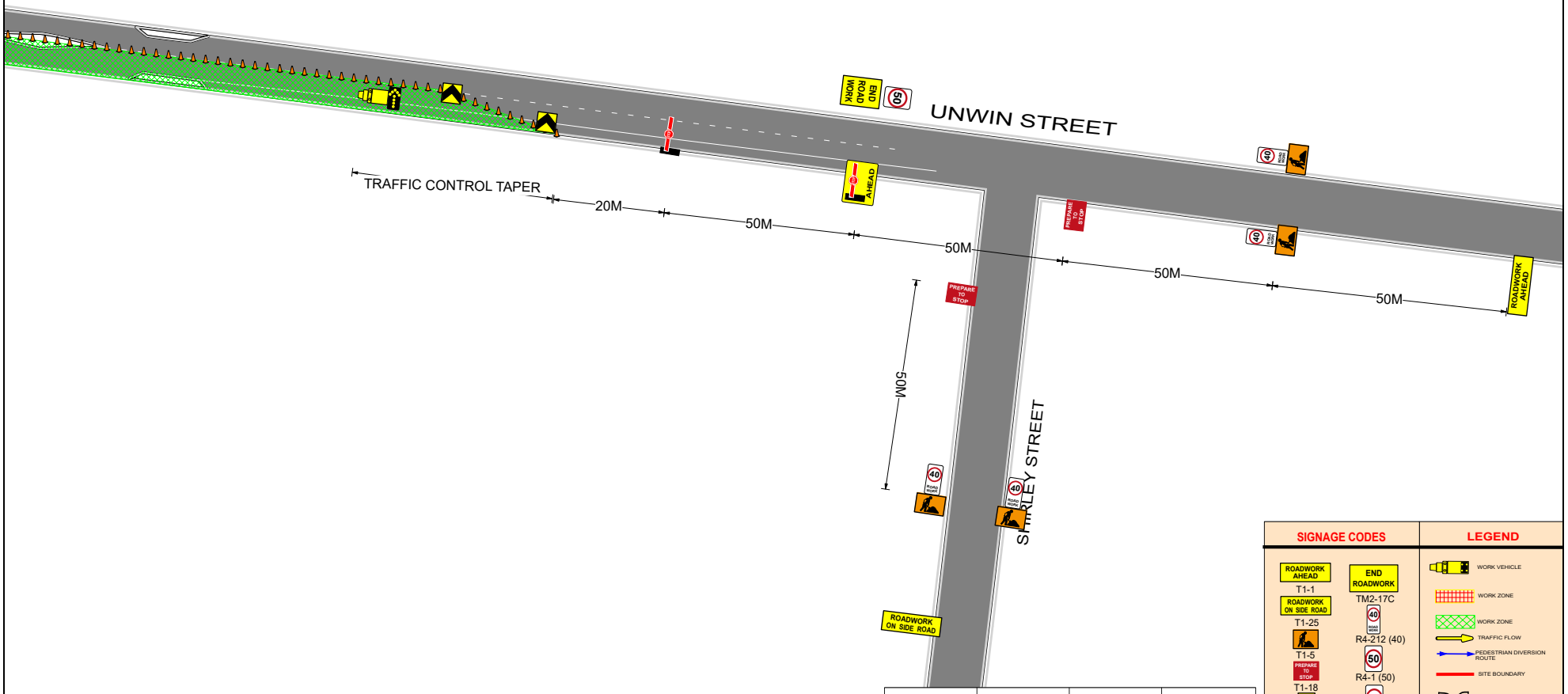
Team Leader (Onsite):_____

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**

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)

END ROADWORK TM2-17C

R4-212 (40)

R4-1 (50)

R4-1 (60)

T5-5 (R)

TM1-30

**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

N

**TRAFFIC GUIDANCE SCHEME**
**DATE: 12/10/2021**
**R.3**

| | |
|---|---|
| Area: | CLYDE |
| Location: | UNWIN STREET |
| TCP No: | TGS-CLY-UNW-WB-2203 |
| 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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5. 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: | |
| PLAN CHECKED BY: | SUE LEWIS |
| CERTIFICATE NO: | 0022818927 |
| SIGNATURE: | |

TGS-CLY-KAY-EB-1201-R2_TCP1_1773264.pdf

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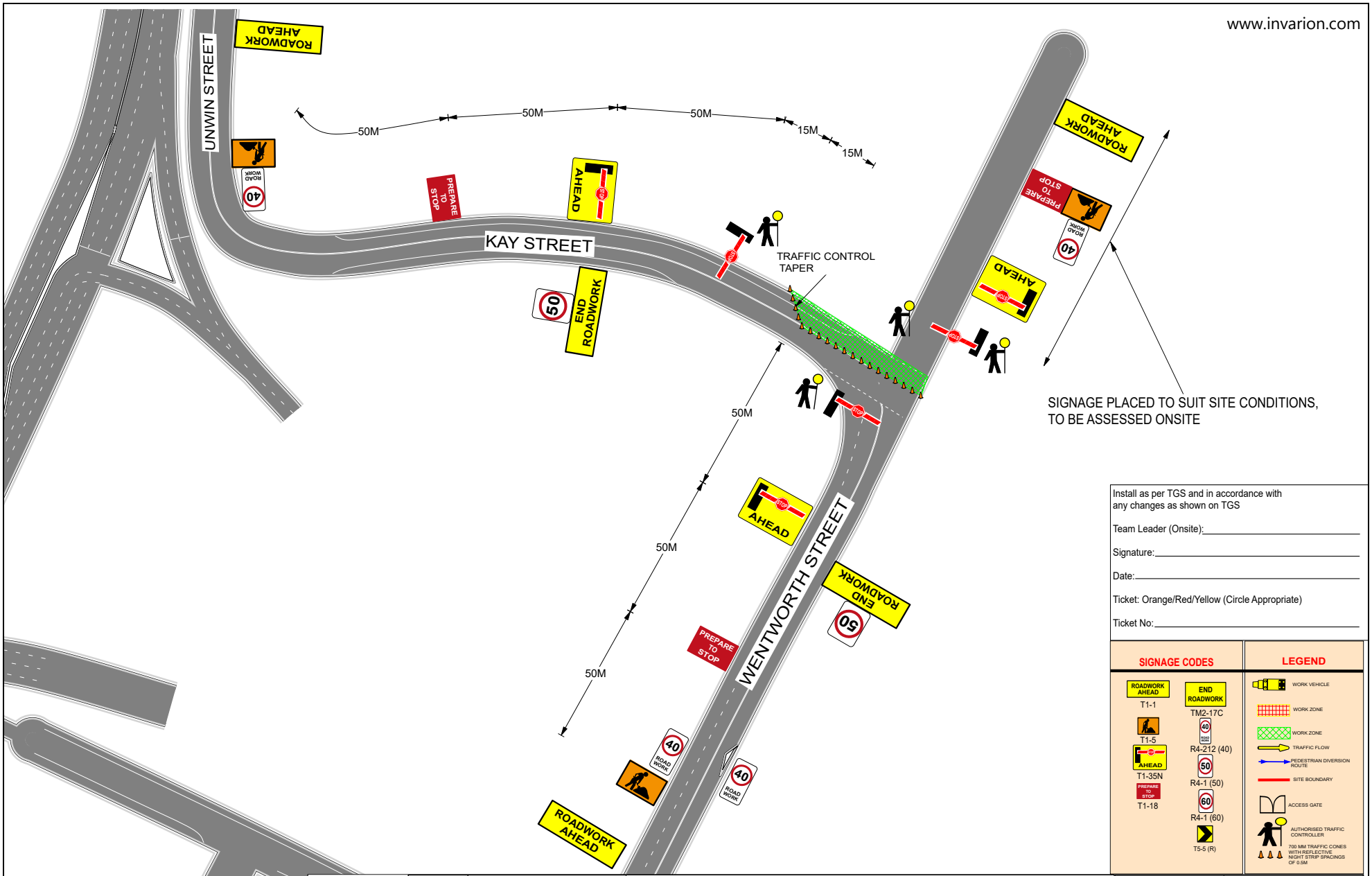


Install as per TGS and in accordance with any changes as shown on TGS

Team Leader (Onsite):_____

Signature:_____

Date:_____

Ticket: Orange/Red/Yellow (Circle Appropriate)

Ticket No:_____

**SIGNAGE CODES**

ROADWORK AHEAD T1-1

END ROADWORK TM2-17C

T1-5

R4-212 (40)

AHEAD T1-35N

R4-1 (50)

PREPARE TO STOP T1-18

R4-1 (60)

T5-5 (R)

**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

N

**TRAFFIC GUIDANCE SCHEME**
**DATE: 06/02/2022**
**R.2**

| | |
|---|---|
| Area: | CLYDE |
| Location: | WENTWORTH STREET |
| TCP No: | TGS-CLY-WEN-AL-4401 |
| Sheet No: | 1 OF 1 |

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
6. Should manual traffic management be required a documented onsite assesment is reuired to replace any PTCD in accordance with TCAWS vol. 6.

| | |
|---|---|
| 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

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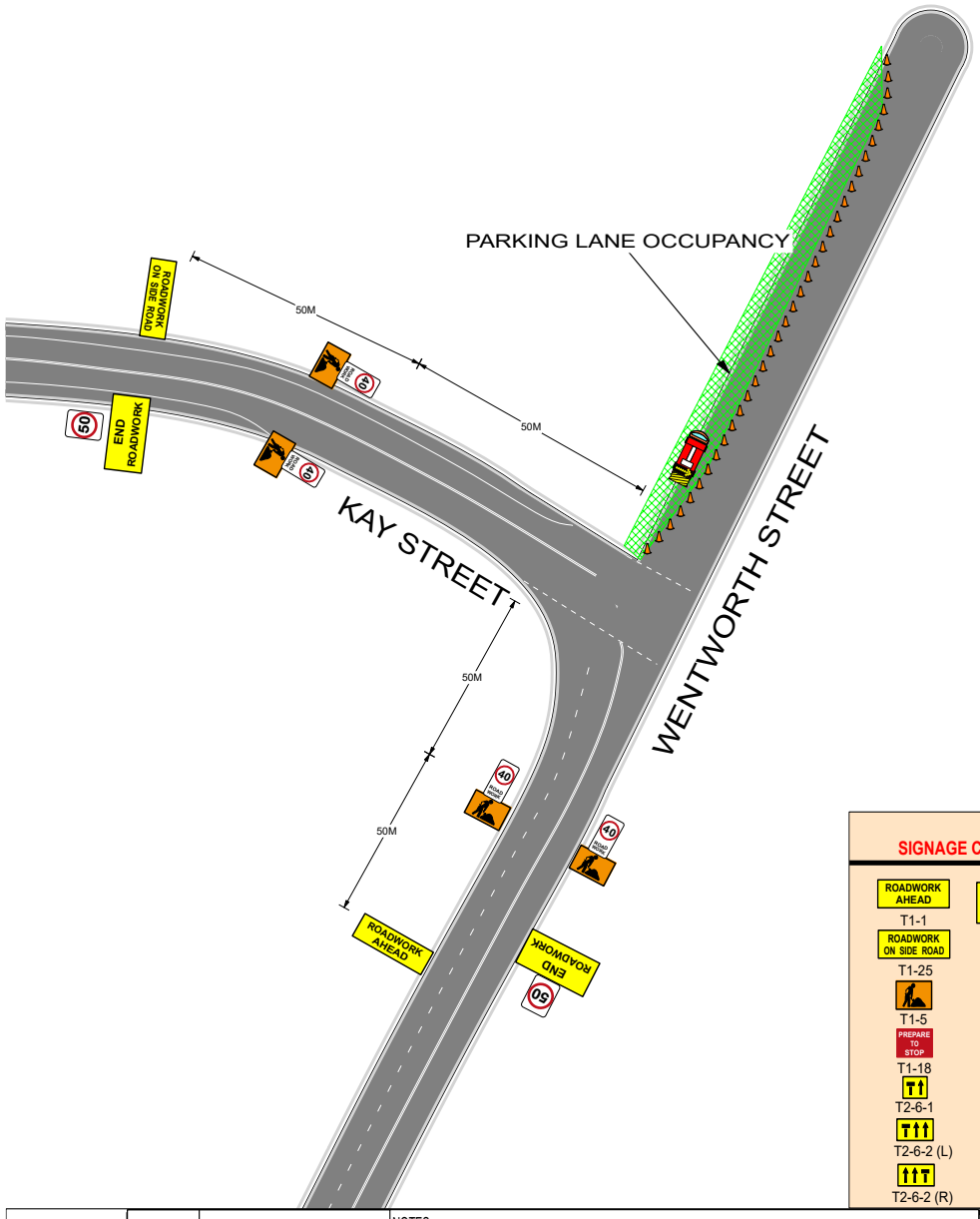
Team Leader (Onsite):_____

Signature:_____

Date:_____

Ticket: Orange/Red/Yellow (Circle Appropriate)

Ticket No:_____




**SIGNAGE CODES**

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)

END ROADWORK TM2-17C

R4-212 (40)

R4-1 (50)

R4-1 (60)

T5-5 (R)

**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

N

**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
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 .
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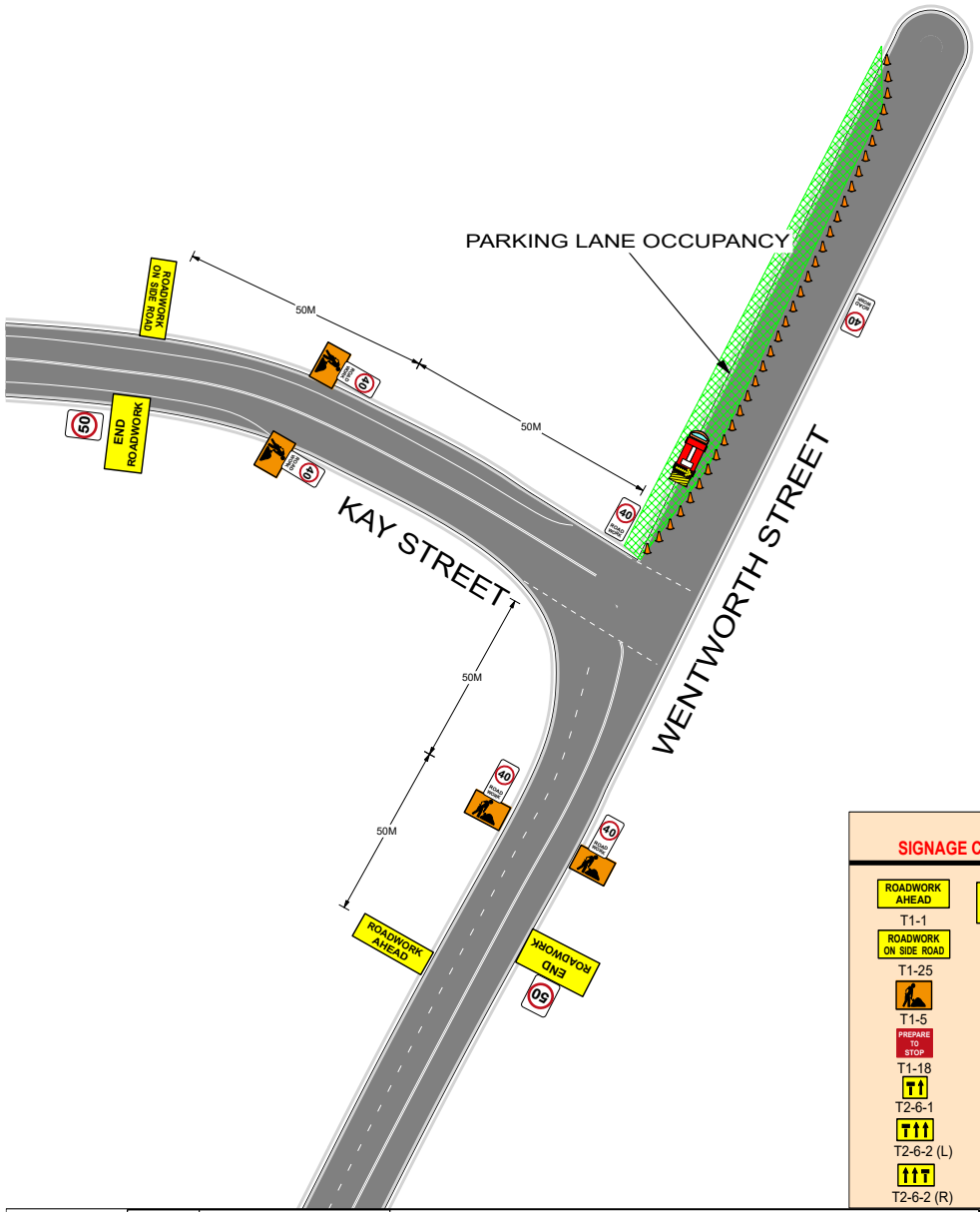
Signature:_____

Date:_____

Ticket: Orange/Red/Yellow (Circle Appropriate)

Ticket No:_____




**SIGNAGE CODES**

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ROADWORK ON SIDE ROAD T1-25

T1-5

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R4-1 (50)

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**LEGEND**

WORK VEHICLE

WORK ZONE

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700 MM TRAFFIC CONES WITH REFLECTIVE NIGHT STRIP SPACINGS OF 0.5M

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**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 |

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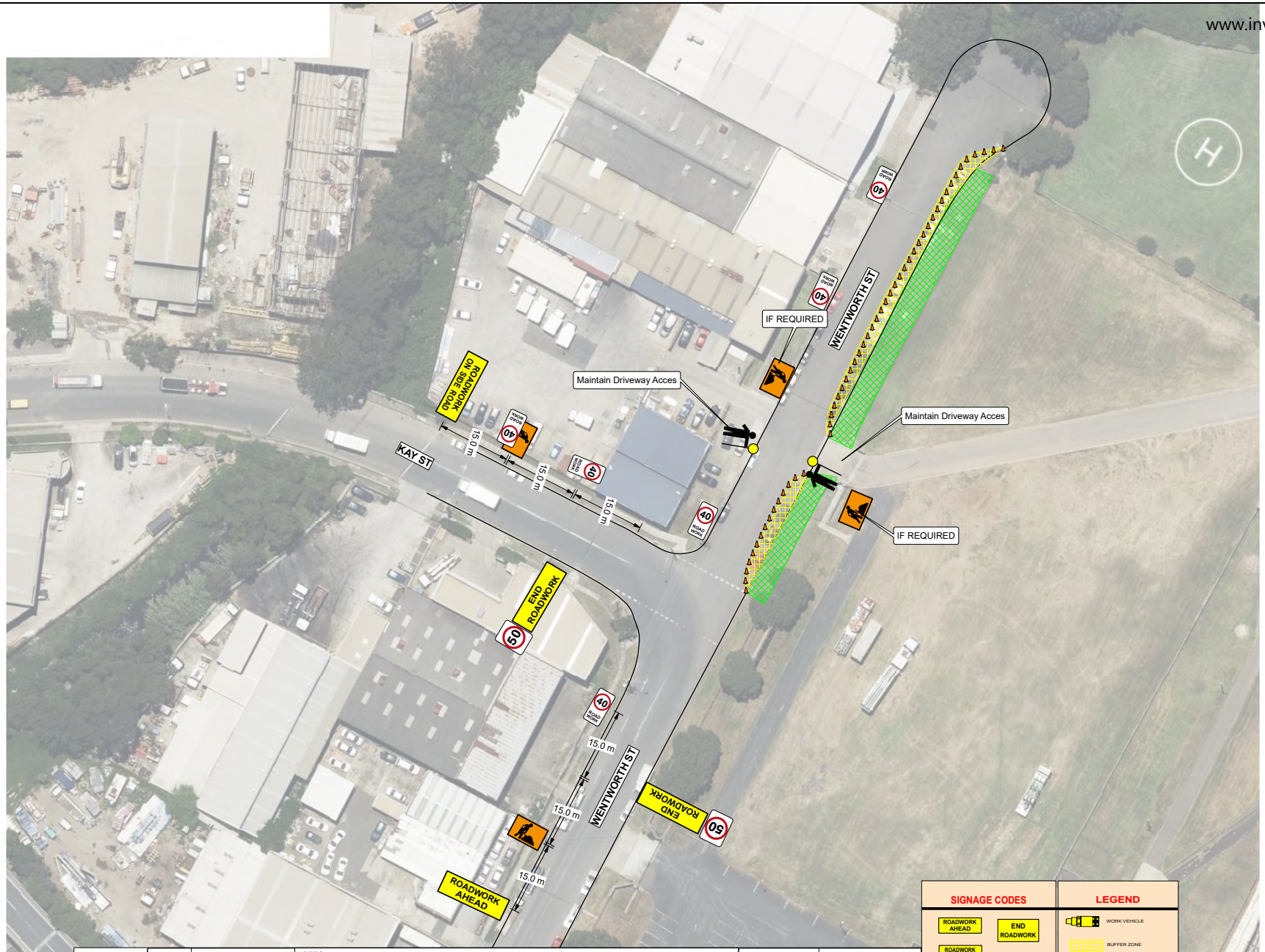


N

| | |
|---|---|
| Area: | CLYDE |
| Location: | WENTWORTH ST |
| TCP No: | TGS-CLY-WEN-SB-1201 |
| Sheet No: | 1 OF 1 |

**TRAFFIC CONTROL PLAN**
**DATE: 19/03/2022**
**R.1**

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 .
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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. Access to bus stops to be maintained
6. Access to private property driveways to be maintained
7. President Avenue northside between Cross Lane and Crawford Road is typically unrestricted parking
8. President Avenue southside between Lachal Avenue and O'Connell Street - is unrestricted parking with small sections allocated to timed restrictions as identified
9. D as noted in TCAWS, Section 7.3 is the regulatory speed approaching each advance sign

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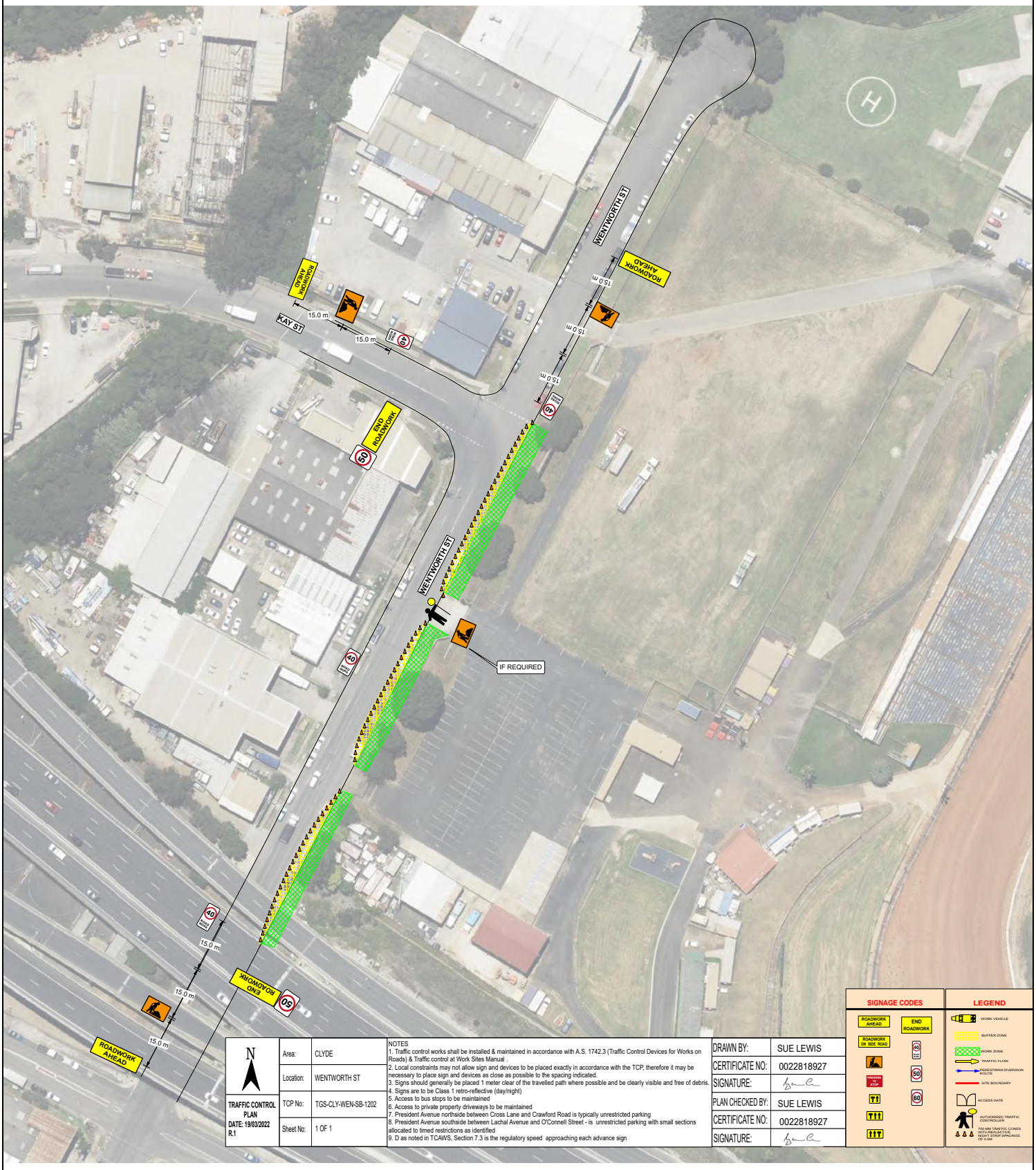
| PLAN CHECKED BY: | SUE LEWIS |
| CERTIFICATE NO: | 0022818927 |
| SIGNATURE: | |




| | | | |
|---|---|---|---|
| N | Area: | CLYDE | |
| | Location: | WENTWORTH ST | |
| TRAFFIC CONTROL PLAN<br>DATE: 19/03/2022<br>R.1 | TCP No: | TGS-CLY-WEN-SB-1202 | |
| | Sheet No: | 1 OF 1 | |

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

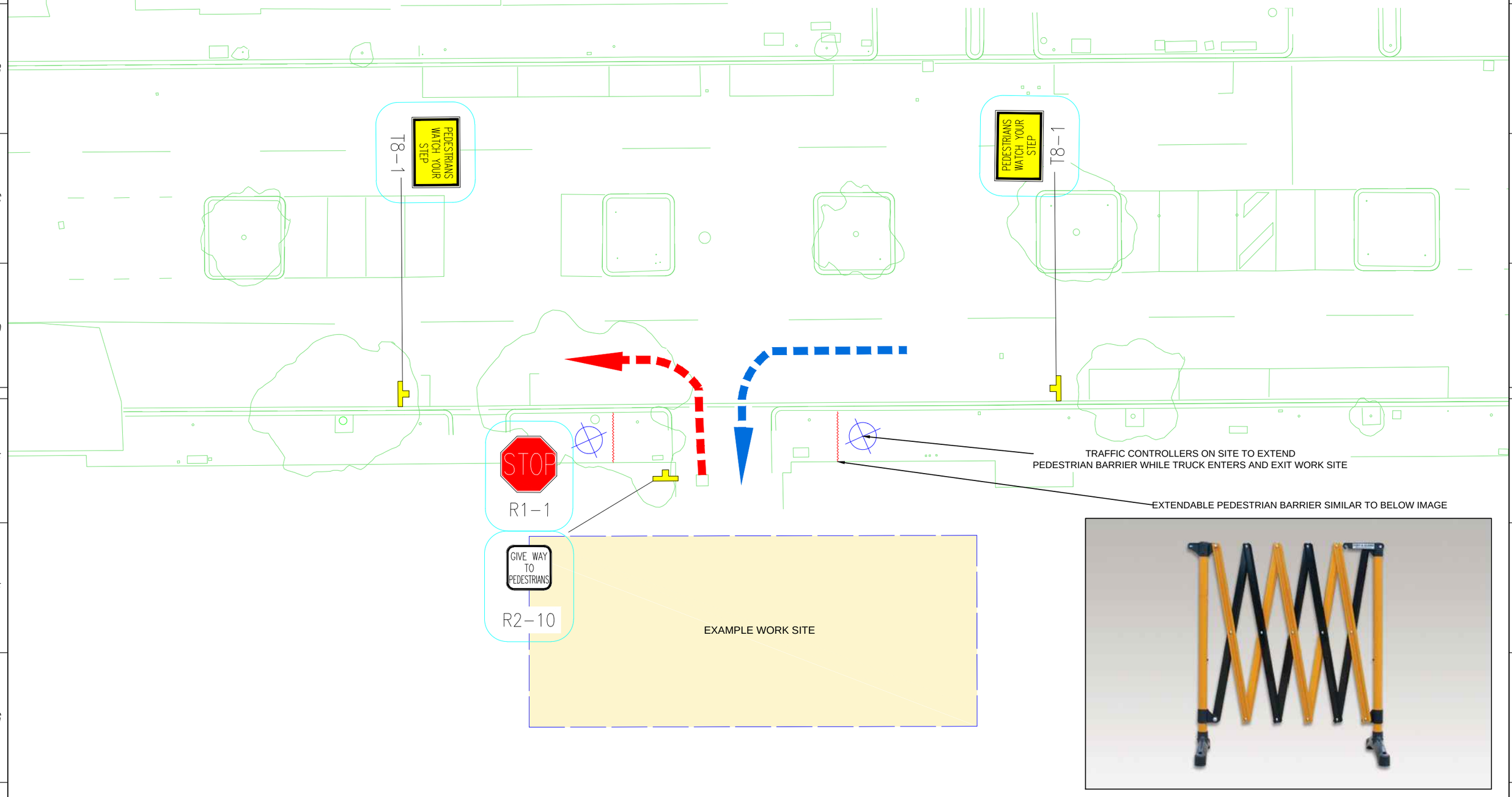
SIGNAGE CODES




LEGEND

GENERAL NOTES

- THIS TGS HAS BEEN PREPARED IN ACCORDANCE WITH THE TCAWS MANUAL 2020
- ALL SIGNAGE MUST BE PLACED TO NOT RESTRICT PEDESTRAIN PATH IN ACCORDANCE WITH THE TCAWS MANUAL V4 2010, SECTION 3.2.8
- THE CONTRACTOR SHALL ENSURE ALL ROL AND SZA REQUIREMENTS ARE SATISFIED DURING IMPLEMENTATION OF THIS TGS.
- ANY EXISTING SIGNAGE THAT CONFLICTS WITH THIS TGS MUST BE COVERED AT THE START OF SHIFT AND UNCOVERED AT THE END OF SHIFT.
- THE SITE MUST COMPLY WITH THE TRAFFIC CONTROL AT WORK SITES MANUAL V4 2010 EDITION AN A.S. 1742.3
- PEDESTRIANS WILL ONLY BE HELD FOR SHORT PERIODS WHILST THE TRUCKS ENTER/EXIT THE SITE AND WILL NOT BE UNDULY HELD BY TRAFFIC CONTROLLERS OUTSIDE OF IMMEDIATE VEHICLE MOVEMENTS




EXTENDABLE PEDESTRIAN BARRIER SIMILAR TO BELOW IMAGE



| REV | BY | DATE | DESCRIPTION | APPD. |
|---|---|---|---|---|
| B-00 | LS | 19/03/2017 | AMENDED AS PER COMMENTS | SL |
| A-01 | LS | 15/03/2017 | UPDATED NOTES | SL |
| A-00 | LS | 19/02/2017 | INITIAL DRAFT | SL |

COORDINATE SYSTEM: | HEIGHT DATUM: | SCALE:

DRAWN BY: LS
DRW CHECK: SS
APPROVED: SL
IND REVIEW: N/A

PROJECT

CLIENT

# SYDNEY METRO

## TYPICAL PEDESTRIAN MANAGEMENT SHORT TERM STOP ON FOOTPATH

DRAWING No: TGS-PED-ALL-1101

SHEET 1 OF 1

REVISION B-00

Plot Date: 19 March 2017 - 1:20 PM

Cad File No: C:\Users\samue\OneDrive\FDConsulting\102-SUELEWISCONSULTING\10-DELTAGROUP\126-GENERICPEDESTRIANCLOSURE_VEHICLEACCESS\102-10-126-B-00.dwg

# C HEAVY VEHICLE LOCAL ROAD REPORT

(Provided separately)

# D CONSTRUCTION PARKING AND ACCESS STRATEGY

(Provided separately)

# E ROAD SAFETY AUDIT REPORT

# Road Safety Audit Report

## Sydney Metro West – Western Tunnelling Package

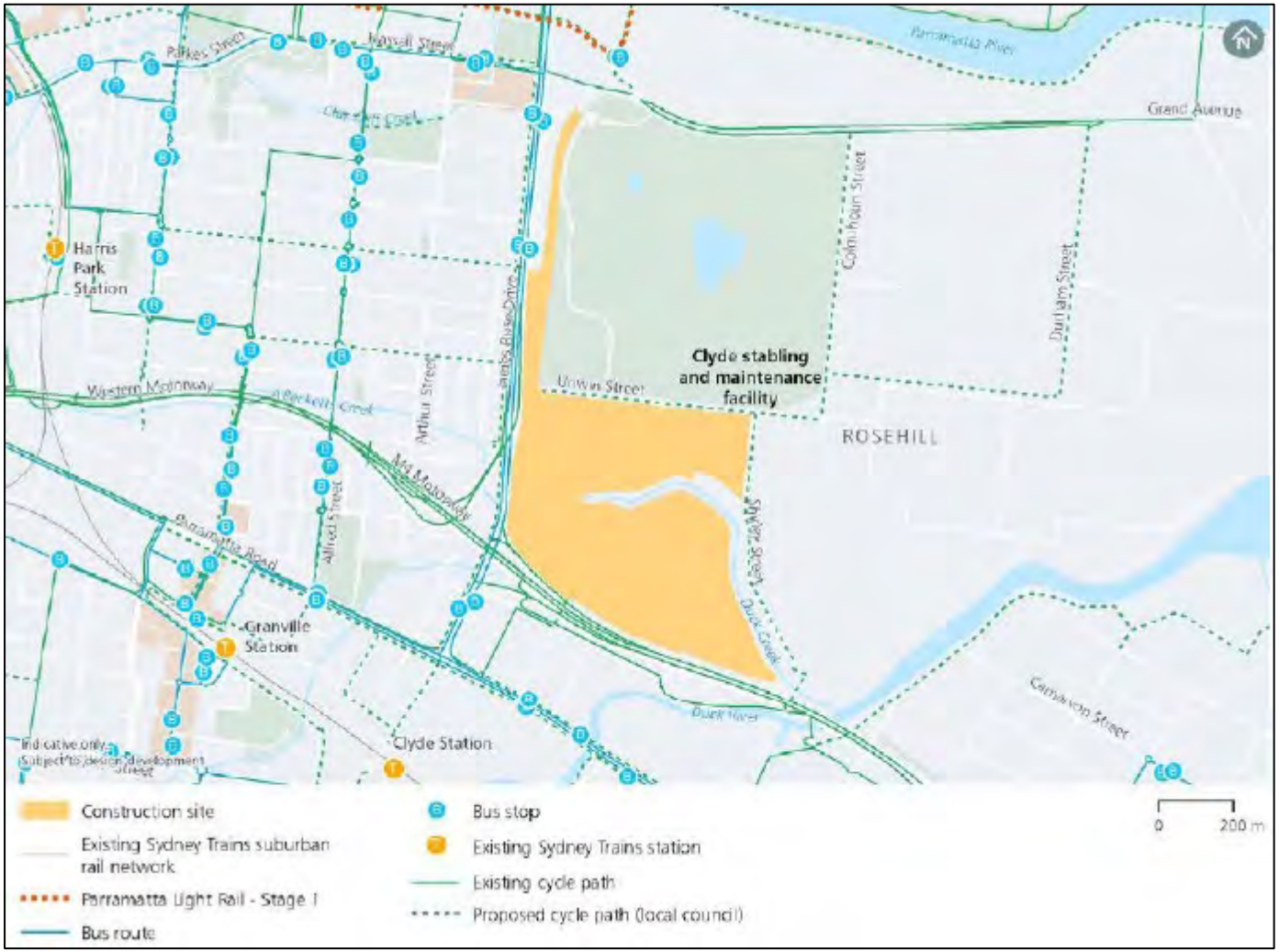
*Practical*
*Independent*
*Specialised*

| | | | | |
|---|---|---|---|---|
| **Road/Area** | Various | | **Road Safety Audits Reference** | RSA-12361 |
| **Traffic Stage/Phase** | Clyde Site Establishment | | **Report Date** | 8 April 2022 |
| **Audit Stage** | *Desktop* Traffic Guidance Scheme | | **Lead Auditor**<br>**Second Auditor** | Raj Muthusamy (Level III RMS)<br>Mike Game |
| **Client** | **Sue Lewis Consulting** | | **TMP / Drawings** | TGS-CLY-KAY-WB-1201, TGS-CLY-SHI-NB-2201, TGS-CLY-SHI-NB-1201, TGS-SHI-SB-1201, TGS-CLY-SHI-SB-2201, TGS-CLY-UNW-EB-2203 (2 sheets), TGS-CLY-UNW-EB-1204, TGS-CLY-UNW-WB-2202 (2 sheets), TGS-CLY-UNW-WB-2203 (2 sheets), TGS-CLY-UNW-WB-1204, TGS-CLY-UWN-SB-1201 (2 sheets), TGS-CLY-WEN-AL-4401, TGS-CLY-WEN-NB-1202, TGS-CLY-WEN-SB-1201, TGS-CLY-WEN-SB-1202 & TGS-CLY-KAY-EB-2201 (2 sheets). |
| **Client Contact** | Sue Lewis | | **Report Provider** | Road Safety Audits |

**Desktop TGS General Scope:** The scope of the audit is to assess the plans on their merits and in the context of the road environment, with standards and guidelines as a reference.


**Raj Muthusamy**
Senior Road Safety Auditor
CPEng, RPEQ, NER,
BE (Civil)

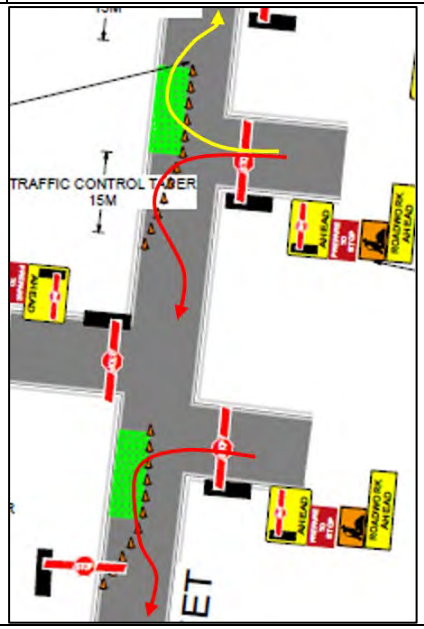
**Mike Game**
Road Safety Auditor
BE (Chem. Eng.), MBA



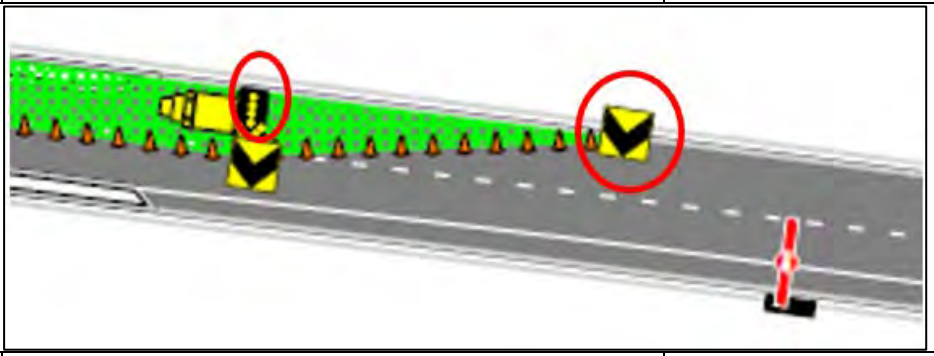

**Location of the subject site**

| Sydney Metro West – Western Tunnelling Package Clyde Site Establishment | | | | |
|---|---|---|---|---|
| | **Audit Point** | **Treatment Option** | **Sue Lewis Consulting** Responder: | |
| | | | **Response**[x] | **Status**[y] |
| **TGS-CLY-KAY-WB-1201** | | | | |
| 1. | There are no roadwork ahead and roadwork speed limits signs proposed along Kay Street. | Install roadwork signs and speed limit signs.<br><br>Risk: Low | TGS amended | Closed |
| | | | | |
| 2. | Based on Google Streetview, it appears that the existing centreline marking in Unwin Street/Kay Street is faded. The proposed works on the southern side effectively narrows the westbound traffic lane. | Reinstate the faded centreline or installed temporary RRPMs at close spacing to clearly define the centreline.<br><br>Risk: Low | The works are within the parking lanes and vehicles will not impact the existing travel lane widths | Closed |
| |  | | | |

| Sydney Metro West – Western Tunnelling Package Clyde Site Establishment | | | | |
|---|---|---|---|---|
| | **Audit Point** | **Treatment Option** | **Sue Lewis Consulting** Responder: **Response**[x] | **Status**[y] |
| 3. | Parked vehicles along the both legs of Wentworth Street, on approach to the work area could obscure proposed roadwork signs. | Review whether the proposed signs can be obscured by parked vehicles. It may be necessary to post mount the signs or ban parking where advance signage is proposed.<br><br>Risk: Low | To be monitored on site during implementation | Ongoing |
| | | | | |
| **TGS-CLY-SHI-NB-2201** | | | | |
| 4. | No road safety issues are identified given the proposed boom gates to control and manage conflicting traffic movements. | Nil.<br><br>Risk: N/A | Noted | Closed |
| | | | | |

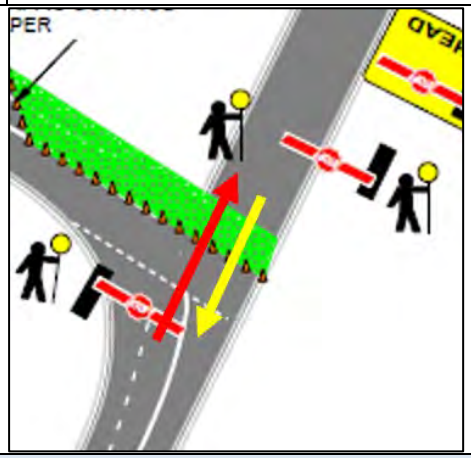
| Sydney Metro West – Western Tunnelling Package Clyde Site Establishment | | | | |
|---|---|---|---|---|
| | **Audit Point** | **Treatment Option** | **Sue Lewis Consulting** Responder: **Response**[x] | **Status**[y] |
| 5. | It is noted that kerbside parking is to be removed at the work areas to facilitate shuttle flow. However, the narrowed resultant single lane may not be adequate to accommodate the turning movement of articulated vehicles to and from the side accesses. | Review turning movement requirements for egressing vehicles from abutting side accesses. Also check required movements from Shirley Street into the abutting accesses.<br><br>Risk: Low | It should be noted that the affected driveways on the eastern side of Shirley Street are light vehicles only. The driveways on the western side are under GLC control | Closed |
| |  | | | |

| Sydney Metro West – Western Tunnelling Package Clyde Site Establishment | | | | |
|---|---|---|---|---|
| | **Audit Point** | **Treatment Option** | **Sue Lewis Consulting** Responder: | |
| | | | **Response**[x] | **Status**[y] |
| **TGS-CLY-SHI-NB-1201** | | | | |
| 6. | There appears to be no 40km/h speed limit signs proposed along Shirley Street. Roadwork ahead and 40km/h speed limit signs are not shown facing eastbound drivers on Unwin Street. | Include roadwork and speed limit signs.<br><br>Risk: Low | TGS amended | Closed |
| | | | | |
| **TGS-CLY-SHI-SB-1202** | | | | |
| 7. | There is no 40km/h signs proposed at the northern end of Shirley Street to face traffic turning into the street from Unwin Street. There are also no 40km/h speed limit repeater signs proposed along Shirley Street. | Include roadwork speed limit signs.<br><br>Risk: Low | TGS amended | Closed |
| | | | | |
| **TGS-CLY-SHI-SB-2201** | | | | |
| 8. | Similar issue as audit point 5. | Refer to audit point 5. | Refer to response to point 5 | Closed |
| | | | | |
| 9. | It may be difficult for an articulated vehicle to turn right from Unwin Street into Shirley Street due to the proximity of the work area to the intersection. | Review and confirm that the turning movement swept path of the expected articulated vehicle can be accommodated.<br><br>Risk: Low | Note added to TGS to facilitate those movements | Closed |
| | | | | |

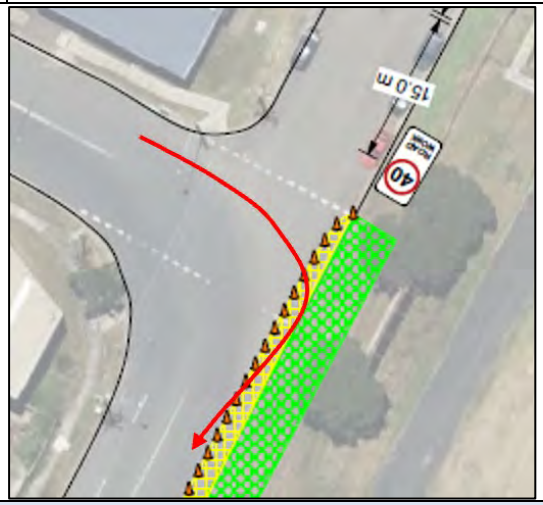
| Sydney Metro West – Western Tunnelling Package Clyde Site Establishment | | | | |
|---|---|---|---|---|
| | **Audit Point** | **Treatment Option** | **Sue Lewis Consulting** Responder: **Response**[x] | **Status**[y] |
| **TGS-CLY-UNW-EB-2203** | | | | |
| 10. | There is no requirement for westbound traffic on Unwin Street to change lanes at the eastern limit of works. The proposed lateral shift sign and flashing arrow may add to unnecessary driver confusion. | Omit the flashing arrow and sign shown circled in red below.<br><br>Risk: Low | TGS amended | Closed |
| |  | | | |
| 11. | it is unclear if kerbside parking will be banned along the section where shuttle flow is proposed. | Review and confirm.<br><br>Risk: N/A | Parking in some areas along Unwin Street is not available – where parking is available and interferes with the operation of the TGS the parking will be temporarily removed | Closed |
| | | | | |
| **TGS-CLY-UNW-EB-1204** | | | | |
| 12. | No safety issues are identified. | Nil.<br><br>Risk: N/A | Noted | Closed |
| | | | | |

| Sydney Metro West – Western Tunnelling Package Clyde Site Establishment | | | | |
|---|---|---|---|---|
| | **Audit Point** | **Treatment Option** | **Sue Lewis Consulting** Responder: **Response**[x] | **Status**[y] |
| **TGS-CLY-UNW-WB-2202** | | | | |
| 13. | Proposed arrow board facing northbound vehicles on Unwin Street is not necessary as a merge or lane change is not required. | Omit the arrow board facing northbound traffic.<br><br>Risk: Low | TGS amended | Closed |
| | | | | |
| 14. | The flashing arrow board facing westbound traffic appears to be positioned too far from the end of the taper. | It is suggested that the work vehicle with the flashing arrow board be shifted further east closer to the taper.<br><br>Risk: Low | TGS amended | Closed |
| | | | | |
| **TGS-CLY-UNW-WB-2203** | | | | |
| 15. | Proposed arrow board facing eastbound vehicles on Unwin Street is not necessary as a merge or lane change is not required. | Omit the arrow board facing eastbound traffic.<br><br>Risk: Low | TGS amended | Closed |
| | | | | |
| **TGS-CLY-UNW-WB-1204** | | | | |
| 16. | 40km/h roadwork speed limit signs are not proposed to face traffic entering Shirley Street from Unwin Street. | Include 40km/h speed limit sign to face traffic turning into Shirley Street from Unwin Street.<br><br>Risk: Low | TGS amended | Closed |
| | | | | |
| 17. | There appears to be no 40km/h speed limit repeater signs along Unwin Street. | Include 40km/h speed limit repeater signs.<br><br>Risk: Low | TGS amended | Closed |
| | | | | |

| Sydney Metro West – Western Tunnelling Package Clyde Site Establishment | | | | |
|---|---|---|---|---|
| | **Audit Point** | **Treatment Option** | **Sue Lewis Consulting** Responder: | |
| | | | **Response**[x] | **Status**[y] |
| **TGS-CLY-UWN-SB-1201** | | | | |
| 18. | No road safety issues are identified. | Nil.<br><br>Risk: N/A | Noted | Closed |
| | | | | |
| **TGS-CLY-WEN-AL-4401** | | | | |
| 19. | No road safety issues are identified. However, there is potential for parked vehicles along the kerb on Wentworth Street to obscure proposed advance warnings signage. | Review whether the proposed signs can be obscured by parked vehicles. It may be necessary to post mount the signs or ban parking where advance signage is proposed.<br><br>Risk: Low | To be monitored on site during implementation | Ongoing |
| | | | | |

| Sydney Metro West – Western Tunnelling Package Clyde Site Establishment | | | | |
|---|---|---|---|---|
| | **Audit Point** | **Treatment Option** | **Sue Lewis Consulting** Responder: **Response**[x] | **Status**[y] |
| 20. | It is unclear as to how southbound and northbound movement for the northern leg of Wentworth Street will be facilitated. It is assumed that the bollards will be removed and reinstated as required. | Review and confirm.<br><br>Risk: Low | Confirmed | Closed |
| |  | | | |
| **TGS-CLY-WEN-NB-1202** | | | | |
| 21. | No road safety issues are identified. However, there is potential for parked vehicles along the kerb on Wentworth Street to obscure proposed advance warnings signage. | Review whether the proposed signs can be obscured by parked vehicles. It may be necessary to post mount the signs or ban parking where advance signage is proposed.<br><br>Risk: Low | To be monitored during installation | Ongoing |
| | | | | |
| 22. | No 40km/h roadwork speed limit sign proposed at the northern leg of Wentworth Street. | Include 40km/h speed limit signs.<br><br>Risk: Low | TGS amended | Closed |
| | | | | |

| Sydney Metro West – Western Tunnelling Package Clyde Site Establishment | | | | |
|---|---|---|---|---|
| | **Audit Point** | **Treatment Option** | **Sue Lewis Consulting** Responder: **Response**[x] | **Status**[y] |
| **TGS-CLY-WEN-SB-1201** | | | | |
| 23. | No road safety issues are identified. However, there is potential for parked vehicles along the kerb on Wentworth Street to obscure proposed advance warnings signage. | Review whether the proposed signs can be obscured by parked vehicles. It may be necessary to post mount the signs or ban parking where advance signage is proposed.<br>Risk: Low | To be monitored during installation | Ongoing |
| | | | | |
| 24. | No 40km/h roadwork speed limit sign proposed at the northern leg of Wentworth Street. | Include 40km/h speed limit signs.<br>Risk: Low | TGS amended | Closed |
| | | | | |
| **TGS-CLY-WEN-SB-1202** | | | | |
| 25. | No road safety issues are identified. However, there is potential for parked vehicles along the kerb on northern leg of Wentworth Street to obscure proposed advance warnings signage. | Review whether the proposed signs can be obscured by parked vehicles. It may be necessary to post mount the signs or ban parking where advance signage is proposed.<br>Risk: Low | To be monitored during installation | Ongoing |
| | | | | |
| 26. | No 40km/h speed limit repeater signs are shown along Wentworth Street for the entire length where works are proposed. | Include 40km/h speed limit repeater signs.<br>Risk: Low | TGS amended | Closed |
| | | | | |

| Sydney Metro West – Western Tunnelling Package Clyde Site Establishment | | | | |
|---|---|---|---|---|
| | **Audit Point** | **Treatment Option** | **Sue Lewis Consulting** Responder: **Response**[x] | **Status**[y] |
| 27. | There may be potential for swept path encroachment into the work area within the intersection. | Review and check that there is adequate width to accommodate the turning movement of articulated vehicles without having to cross the centreline or encroach into the proposed work area.<br><br>Risk: Medium | Agree – Parking lane closure changed to stop slow to facilitate heavy vehicle swept paths | Closed |
| |  | | | |
| **TGS-CLY-KAY-EB-2201** | | | | |
| 28. | No road safety issues are identified. However, there is potential for parked vehicles along the kerb on northern leg of Wentworth Street to obscure proposed advance warnings signage. | Review whether the proposed signs can be obscured by parked vehicles. It may be necessary to post mount the signs or ban parking where advance signage is proposed.<br><br>Risk: Low | To be monitored during installation | Ongoing |

## Explanatory Notes

**Short Format**: This 'short format' report has been pioneered by RSA (Road Safety Audits) since 2008, initiated through requests by clients to assist their processes, for ease with stakeholders, and for timeliness. It is typically confined in use to construction traffic management and typically for discrete packages of plans / areas and often for large projects with repetitious small audit sections. The use of this format assumes that the reader/s know what a road safety audit is and how to respond to it.

**Projects:** Audit points are often raised in projects in relation to: 1. specific themes (e.g. the use of a safety barrier type), or 2. the treatment of particular locations. Once key issues have been initially raised, they will not necessarily be re-raised in future audits. This will depend on the issue, the RSA's perception of the client's assessment and understanding of the issue, and other factors. Therefore, discrete audits as part of a project should be read and actioned by a **project representative who is familiar with the audit history**.

**Responding**: Although the client receiving the report does not have to agree to the audit findings/suggestions, the issues and associated risks should be carefully considered. A written response should be made to all of the audit findings raised, then signed off by the responsible person from the project team.

[X]**Response**: The responder should focus on and consider the **audit point**, regardless of whether the audit team's suggested treatment option is feasible / appropriate / agreed to.

[Y]**Status**: The status of the issue as it sits with the Project. i.e. 'actioned', 'closed', 'pending information / further guidance'.

**Language:**
Austroads Road Safety Audit Part 6 suggests that the organisation responding to the audit provides a risk assessment. However, RSA will at times offer a guide of 'high' 'medium' and 'low' risk, which is based on a professional appraisal of the risk ('severity' and 'frequency') for the responder to use as a guide. Other language commonly used and its intent is as follows:

- 'Urgent': Needs immediate attention / changes as per RSA suggestion or similar.
- 'Recommend' / 'Serious' / 'Important': Must be robustly reviewed. Most likely requires a change to avoid a high-risk road environment for one or more user groups.
- 'Should' / 'Suggest' / 'Significant': Based on the view of the RSA team the suggestion should be done, but it concedes that there could be reasons why inaction or alternative action may be preferred. Must be robustly reviewed by contractor and where relevant with key traffic engineering project stakeholders.
- 'Review' / 'Consider': RSA is raising an observation but has no *strong* opinion on the outcome and need for changes. Project should review because it's not an immediate and high risk and may not be immediately obvious to RSA the reasons for the practice / setup / behaviour. May need monitoring.
- 'Minor': Typically, a low road-safety consequence / compliance issues (to guidelines or plans) / administrative controls. Unlikely to increase risk of crash.
- 'Note': Little or no road safety significance. Typically added to give a complete picture of the design, site, context, analysis, auditors understanding.

**Intent of Issues Listing Order**: Audit points might be clustered according to location, theme, or time. When this is not done and the audit comprises an uncategorised list of points, the key issues are often discussed first. However, there is no official ordering of points, and they should all be read on their merits and on the basis of the language guide above.
**References**: 1. Austroads Guide to Road Safety – Road Safety Audit – (2019) 6 and 6A; 2. AS 1742.3 – 2019; 2. State specific codes and guidelines re: Traffic Control at Work Sites; and 3. Design: 1. Austroads guidelines and 2. state-specific supplements and technical publications as relevant.

**Safe System**: Austroads GRS-RSA6A encourages practitioners to adopt safe system principles within the road safety audit. Safe system (roads) calls for a design to not allow serious injury and fatalities to occur for the expected road users and the typical crash types expected for that design type. This design-objective is considered within this road safety audit as a good practice objective. However, in practice, safe system-based analysis of risks and treatment options is typically not adopted for traffic management stage audits in the same way as it is in design stage audits.

**Process and Quality:** RSA's quality assurance process is based on its senior auditors having a rich experience base, but also utilises customised checklists designed for niche areas in traffic engineering/road design (e.g. safety barriers, pavement shaping, CBD traffic management), in conjunction with a four-layer audit process: 1. on-site inspection; 2. media and data capture and review; 3. specialist / second auditor input; and (where warranted) 4. secondary blinded reviews.

**Audit Coverage**: The audit has attempted to balance the safety needs of all road users. As per Austroads guidelines, the suggestions provided have attempted to be realistic/feasible and commensurate with the actual risk posed. Suggestions are made from a safety perspective only, and are made in the absence of full project knowledge and design constraints. RSA can provide a detailed risk assessment / issue evaluation report upon request. The audit raises potential safety risks noted / observed / anticipated by the audit team, and in particular the higher-risk issues. However, a road safety audit is undertaken by people, highly influenced by the experience, views and limitations of the individual team members. It is expected that the project team has competence to identify safety issues itself as the project progresses, and to ask the audit team further questions where necessary.

# F STAKEHOLDER CONSULTATION

# REVIEW COMMENTS SHEET

| DOCUMENT NO. | TITLE | VER | STATUS | NO. | DATE | COMPANY | RAISED BY | REVIEW DOC. NO.* | DOCUMENT REF* | DEED REF* | COMMENTS / RESPONSE | COMMENT CATEGORY* | CLOSED OUT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SMWSTWTP-GLO-CLJ-TF-PLN-000001** | ****Sydney Metro West - WTP - Construction Traffic Management Plan - Clyde & Rosehill** | A.01 | S3 | 01 | 14/04/2022 | SMD | SCLARKE | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | Fig 9 | N/A | Section 3.1.1.1 and Fig 9 headings state works on the southern side, however the figure also identify work area on thre northern side - please clarify | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | Fig 9 | N/A | Document amended | Observation | N |
| | | | | 02 | 14/04/2022 | SMD | SCLARKE | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | Fig 16-20 | N/A | Please coordinate gate numbers between Fig 16-20 * Fig 16 gate 3 is off Shirley, but in Fig 17 gate 3 is off Unwin * Fig 18/19 is the shirley st access egress labels gate 4 and 5, but in fig 16 shirley st is gate 3 and 4 * Fig 20 has James Ruse Drive access as gate 6, but fig 16 has it as gate 4 Suggest to provide gate location map for all gates 1 8 for clarity | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | Fig 16-20 | N/A | Document amended | Observation | N |
| | | | | 03 | 14/04/2022 | SMD | SCLARKE | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | Section 3.3 | N/A | Section 3.3 notes that visitor access to the Rosehill Racecourse is via James Ruse drive on race days and special event days. This access is adjacent the Racecourse parking Area 4 which coincides with the site access gate 4 (in fig 16). What traffic and pedestrian management is proposed to mange the potential conflict of construction traffic and racecourse visitors | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | Section 3.3 | N/A | the document notes that access to the infield car park is located off Unwin Street and that non-race day events use James Ruse Drive or Grand Avenue for access/ egress. Times assocateed with raceday meetings have been included within the CTMP | Observation | N |
| | | | | 04 | 14/04/2022 | SMD | SCLARKE | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | Section 3.4 | N/A | While it is noted that car parking for staff would be on site, suggest providing a bit more detail eg location / available spaces to accommodate anticipated peak staff | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | Section 3.4 | N/A | Document amended | Observation | N |
| | | | | 05 | 14/04/2022 | SMD | SCLARKE | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | Appendix B - TGSCLYKAYEB2201 Sheet 1 of 2 | N/A | Wentworth street has two lanes on the southern approach. Should there be a vehicle in the left lane at the portable boom barrier which may reduce the visibility of the portable boom barrier for approaching vehicle the right lane. Consider lane taper on approach to single lane to reduce risk in line with TCAWS manual. Additionally why is the road works speed limit at 30 km/h when all other TGS are 40 km/h? | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | Appendix B - TGSCLYKAYEB2201 Sheet 1 of 2 | N/A | TGS amended | Observation | N |
| | | | | 06 | 14/04/2022 | SMD | SCLARKE | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | Appendix B - TGSCLYSHINB1201 | na | The TCG has lane closure (in yellow on plan) on the eastern approach along Unwins st on approach to Shirley St for a distance of 50m. This distance incorporates both the entry and exit to Viola. Consider how access is to be maintained in conjunction with the taper/lane closure cones | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | Appendix B - TGSCLYSHINB1201 | na | TGS amended | Observation | N |
| | | | | 07 | 14/04/2022 | SMD | SCLARKE | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | Appendix B - TGSCLYSHINB2201 | na | Unwin street has two lanes on the approach Shirley street. Although this maybe used for parking, in the event of no parking occurring there is a two lane approach to the portable boom gate. Should there be a vehicle in the left lane at the portable boom barrier which may reduce the visibility of the portable boom barrier for approaching vehicle the right lane. Consider lane taper on approach to single lane to reduce risk in line with TCAWS manual | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | Appendix B - TGSCLYSHINB2201 | na | TGS amended | Observation | N |
| | | | | 08 | 14/04/2022 | SMD | SCLARKE | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | Appendix B - TGSCLYSHINB220 | N/A | There are multiple warning signs proposed on the driveways along Shirley St. Please confirm how such would be implemented within the driveways given the short available length on approach to the portable boom barrier | Observation | N |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | Appendix B - TGSCLYSHINB220 | N/A | Noted, discussions will be held on site with the affected businesses and drivers as they enter the car parking areas | Observation | N |
| | | | | 09 | 14/04/2022 | SMD | SCLARKE | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | Section 4.3 - Tabel 5 | N/A | Will James Ruse Dr be used for HV access given that there is a proposed site access gate off it. James Ruse Drive is not part of the EIS nor in Table 5 of Section 4.3 | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | Section 4.3 - Tabel 5 | N/A | No heavy vehicles will not be accessing the site from James Ruse Drive - only light vehicles | Observation | N |
| | | | | 10 | 21/04/2022 | TFN | LWILBY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | 1.2 Objectives | NA | None of the objectives call out maintaining safety for other road users and the public, please consider expanding first dot point to capture minimising safety risk as well as disruption. | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | 1.2 Objectives | NA | Document amended | Observation | N |
| | | | | 11 | 21/04/2022 | TFN | LWILBY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | 3.2.3 Impact on active transport | NA | There is a statement on the TfNSW Be Truck Aware campaign but no confirmation that this safety campaign and associated messaging will be used around site where relevant to assist in mitigating increased risk to vulnerable road users from increased truck movements. Please consider confirming that this campaign will be considered / used around site where needed. | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | 3.2.3 Impact on active transport | NA | Document amended | Observation | N |
| | | | | 12 | 21/04/2022 | TFN | LWILBY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | Appendix B Traffic Guidance Schemes - LOR-TGS-005-1 | NA | Given this TGS appears to close Kay Street (via boom control) please consider a reduced 40km/h road works speed limit. | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | Appendix B Traffic Guidance Schemes - LOR-TGS-005-1 | NA | TGS amended | Observation | N |
| | | | | 13 | 21/04/2022 | TFN | LWILBY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | Appendix B TGS - TGS CLY-UWN-SB-1201_TCP1_1757040 | NA | The end roadwork sign is positioned close to a tight bend, this may encourage motorists to increase speed as they approach the bend which increases their risk of a crash. Please consider moving end roadwork sign to after the bend. | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | Appendix B TGS - TGS CLY-UWN-SB-1201_TCP1_1757040 | NA | TGS amended | Observation | N |
| | | | | 14 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | section 1 page 6 | na | "The Western Tunnelling Package (WTP) is an enabling package for SMW." Review language - WTP is not considered enabling works. | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | section 1 page 6 | na | Document amended | Observation | N |
| | | | | 15 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | section 1.1 page 7 | na | "(CTMP of this plan)" should be capital 'P' Plan?Explain GLC's role?Site establishment - elaborate that the plan will be updated for following stages include tunnelling etc.what is SBT? Use consistent terminology across plans.Its is now DPE. Amend accordingly. | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | section 1.1 page 7 | na | Document amended | Observation | N |
| | | | | 16 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | section 2 figure 2 page 8 | na | Review and update with more details. - What is Rosehill vs Clyde Site? - former Carlingford rail corridor - Clyde southern boundary is the M4 Motorway corridor not Duck creek. - street references are incorrect. - Figure 2 needs legend (red & blue line?), include north, label roads | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | section 2 figure 2 page 8 | na | Document amended | Observation | N |
| | | | | 17 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | figure 3 page 9 | na | former sydney speedway -as Sydney Metro have acquired this land & facilitated their relocation. | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | figure 3 page 9 | na | Document amended | Observation | N |
| | | | | 18 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | figure 4 page 10 | na | What are the requirements for WTP to assess sensitive receivers and update since EIS?Remove references to sport and recreation within the project site. No longer relevant. | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | figure 4 page 10 | na | A land use survey is included as part of the detailed Noise and Vibration Impact Statement (SMWSTWTP-GLO-1NL-NL000-NV-PLN-000002). This is currently in draft and is being informed by construction from the EPA and other stakeholders. Throughout the construction period this document will be an evolving document. | Observation | N |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 19 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | figure 5 page 11 | na | Include a more appropriate zoom level for a Clyde/Rosehill CTMP.Label key roads.Label Clyde/Rosehill site | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | figure 5 page 11 | na | Document amended | Observation | N |
| | | | | 20 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | page 12 section 2 | na | Elaborate as to what PBS approved routes means for WTP.Include a better quality figure and clearly label relevant roads.Label construction site | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | page 12 section 2 | na | Document amended | Observation | N |
| | | | | 21 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | page 12 section 2.1 | na | Duck creek not A'Becketts creek.Include note that Wentworth St north of Kay intersection is to be acquired by Sydney Metro (ie project site)Sydney Metro intends to licence Wentworth Street (M4 Overpass to Kay St) from CoPC for WTP works.In general - simplify by identifying that Sydney Metro has acquired the industrial land for the Clyde MSF. | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | page 12 section 2.1 | na | Document amended | Observation | N |
| | | | | 22 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | section 2.2 page 13 | na | Kay St includes bridge over Duck CreekSydney Metro intends to licence Kay Street from CoPC fro WTP works. | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | section 2.2 page 13 | na | Document amended | Observation | N |
| | | | | 23 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | section 2.3 page 13 | na | Unwin St include bridge over A'Becketts creekSydney Metro intends to licence Unwin Street (from Kay St to Gate 3/4) from CoPC for WTP works. | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | section 2.3 page 13 | na | Document amended | Observation | N |
| | | | | 24 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | page 14 section 2.3 | na | this is incorrect. It is the former Carlingford rail corridor. ATC on northern boundary | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | page 14 section 2.3 | na | Document amended | Observation | N |
| | | | | 25 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | section 3 page 17 | na | Time: include 2022. 3.1.1document what the standard working hours are. | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | section 3 page 17 | na | Document amended | Observation | N |
| | | | | 26 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | figure 9 page 18 | na | label streets in figure | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | figure 9 page 18 | na | Document amended | Observation | N |
| | | | | 27 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | page 19 | na | use consistent language - Clyde MSF label streets in figure | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | page 19 | na | Document amended | Observation | N |
| | | | | 28 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | page 20 | na | Review language - existing Kay st to be transferred to a new alignment in end state. Not 'final design'. label streets & duck creek in figureThe figure shows some works on Unwin st & bridge over A'Becketts creek. transfer accordingly to section 3.1.1.2 | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | page 20 | na | Document amended | Observation | N |
| | | | | 29 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | page 21 figure 12 | na | label streets in figure | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | page 21 figure 12 | na | Document amended | Observation | N |
| | | | | 30 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | figure 13 | na | label streets in figure | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | figure 13 | na | Document amended | Observation | N |
| | | | | 31 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | figure 16 page 25 | na | Gate # locations in figure 16 don't align with the document. Review and updateGate #7 & # 8 not shown.include plan view for each gate showing vehicle movement in/out of each access point. | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | figure 16 page 25 | na | Document amended | Observation | N |
| | | | | 32 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | figure 20 | na | Provide more detail on the vehicle movements, including site boundary (former carpark P5) vs adjacent carpark P4 to the north which is retained by ATC and remains publicly available. How will GLC prevent egress from its site? | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | figure 20 | na | Document amended | Observation | N |
| | | | | 33 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | page 29 | na | How will GLC exit Clyde dive site prior to construction of this access given gate #6 does not allow egress? | Observation | N |

| DOCUMENT NO. | TITLE | VER | STATUS | NO. | DATE | COMPANY | RAISED BY | REVIEW DOC. NO.* | DOCUMENT REF* | DEED REF* | COMMENTS / RESPONSE | COMMENT CATEGORY* | CLOSED OUT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | page 29 | na | Document amended | Observation | N |
| | | | | 34 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | figure 22 | na | Existing 'PLR' access gate #8 appears to be outside WTP's Project Site boundary as identified in the Site Access Schedule (refer to Area D8b). GLC to review and amend as necessary. | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | figure 22 | na | Document amended | Observation | N |
| | | | | 35 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | page 31 section 3.2.1 | na | "typically prior to post the standard construction hours" review sentence. | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | page 31 section 3.2.1 | na | Document amended | Observation | N |
| | | | | 36 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | section 3.2.3 page 33 | na | north/south Unwin st has footpath. east/west Unwin st does not. Amend as necessary. "Where footpaths cross existing driveways that are to be used for the works, appropriate traffic control will be put in place". Provide details of the method. | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | section 3.2.3 page 33 | na | Document amended | Observation | N |
| | | | | 37 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | section 3.2.3 page 34 | na | 20216?Elaborate - what intersection is being assessed? | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | section 3.2.3 page 34 | na | Document amended | Observation | N |
| | | | | 38 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | page 35 figure 26 | na | Update figure 26. Former carpark P5 acquired by Metro fro WTPHow will access off JRD be managed at carpark P4 and former carpark P5? | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | page 35 figure 26 | na | Document amended | Observation | N |
| | | | | 39 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | section 3.5.2 page 36 | na | Does Council have/issue ROLs? Review and amend as necessary. | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | section 3.5.2 page 36 | na | It is GLC's understanding that both TMC and Council will issue ROLs | Observation | N |
| | | | | 40 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | table 5 page 38 | na | Include a map showing these additional local roads | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | table 5 page 38 | na | Document amended | Observation | N |
| | | | | 41 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | section 4.4 page 39 | na | review first paragraph and correct typosWhat is the height clearance of M4 overbridge at Wentworth St?What is the plan for loads which exceed this height? | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | section 4.4 page 39 | na | Document amended | Observation | N |
| | | | | 42 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | section 5.3 page 41 | na | Review sentence "A copy of the report(s) will be provided to the relevant road authority within three (3) of complement of the survey and no later than one (1) month before the road is used" | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | section 5.3 page 41 | na | Document amended | Observation | N |
| | | | | 43 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | table 7 page 42 | na | Update to: Sydney Metro Traffic Control Group TfNSW - Customer Journey Planning | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | table 7 page 42 | na | Document amended | Observation | N |
| | | | | 44 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | section 7.3 page 45 | na | Update to TfNSW Customer Journey Planning | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | section 7.3 page 45 | na | Document amended | Observation | N |
| | | | | 45 | 22/04/2022 | SMD | ISUBRAMANI | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | drawing page 82 | na | Delta Group? Amend. | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 | drawing page 82 | na | Document amended | Observation | N |
| | | | | 46 | 26/04/2022 | SMD | PBROGAN | SMWSTWTP-GLO-CLJ-TF-PLN-000001 REV.A | general | tba | Please ensure the CTMP acknowledges the need for maintenance of general traffic and B-Double (higher mass vehicles) access and egess through the precint throughout the works. | Observation | N |
| | | | | | | | D KELLY | SMWSTWTP-GLO-CLJ-TF-PLN-000001 REV.A | general | tba | Document amended | Observation | N |
| | | | | 47 | 27/04/2022 | SMD | LADAMS | | | | No Comments | | Y |
| | | | | | | | D KELLY | | | | Noted | | Y |

# G INSPECTIONS AND CHECKLISTS

## 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* | *Inspection 3* |
| | | | 00-00 | 00-00 | 00-00 |

| **Drive through TGS inspection** | | *Inspection 1* | *Inspection 2* | *Inspection 3* |
|---|---|---|---|---|
| **Have any adjustments been made to the approved TGS?** | | ☐ Yes<br>☐ No | ☐ Yes<br>☐ No | ☐ Yes<br>☐ No |
| If yes, provide details: | Are changes within tolerances?<br>***If no, TGS must be reviewed by a PWZTMP*** | ☐ Yes<br>☐ No | ☐ Yes<br>☐ No | ☐ Yes<br>☐ No |
| | Have changes been approved?<br>***If no, TGS must be approved*** | ☐ Yes<br>☐ No | ☐ Yes<br>☐ No | ☐ Yes<br>☐ No |
| Comments or details of action taken: | | | | |
| **Have all signs and devices been installed in accordance with approved TGS?**<br>***If no, provide detail of action taken*** | | ☐ Yes<br>☐ No | ☐ Yes<br>☐ No | ☐ Yes<br>☐ No |
| Comments or details of action taken: | | | | |

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

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

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

Additional comments:

**Reset forms - pages 278 to 281**

## 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? | ☐ Yes<br>☐ No | |
| Has all plant and equipment been removed? | ☐ Yes<br>☐ No | |
| Have all TTM signs and devices been removed? | ☐ Yes<br>☐ No | |
| Has all TTM linemarking been obliterated? | ☐ Yes<br>☐ No | |
| Have existing permanent speed limits been reinstated? | ☐ Yes<br>☐ No | |
| Have all TTM site hazards been removed? | ☐ Yes<br>☐ No | |
| Other | ☐ Yes<br>☐ No | |

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

Additional comments:

**Reset forms - pages 282 to 283**

## 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 | ☐ Pre-opening | ☐ Weekly |
| **Desktop review** | | | | |
| **Is a copy of the location TMP and relevant TGS available?** ***If no inspection must not be undertaken until documents are obtained*** | | | ☐ Yes ☐ No | |
| **Details of TMP and TGS:** | | | | |
| **Are the location TMP and relevant TGS approved?** ***If no, work must be stopped until documents are approved*** | | | ☐ Yes ☐ No | |
| Comments or details of action taken: | | | | |
| **Site Inspection** | | | | |
| **Inspection completed:** | ☐During the day ☐During the night | | | |
| **Signs and devices positioned as prescribed and commanding attention?** ***If no provide details and rectify signs*** | | | ☐ Yes ☐ No | |
| Comments or details of action taken: | | | | |

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

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

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

Additional comments:

**Reset forms - pages 273 to 277**