

# CONSTRUCTION TRAFFIC MANAGEMENT PLAN

Sydney Metro West – Western Tunnelling Package Unwin St –  
Northern Diversion Construction

September – December 2024

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Issue Date: **25<sup>th</sup> September 2024**

## Document Details

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Project Name	<b>Sydney Metro West – Western Tunnelling Package</b>
Client	<b>Sydney Metro</b>
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Revision Date	<b>25 September 2024</b>

## Revision History

Revision No.	Revision Date	Revision Description
A	5 September 2024	For Stakeholders review
B	25 September 2024	For Stakeholders approval – comments addressed

## Document Authorisation

Action Type	Position	Name	Signature	Date Signed
Prepared by	Traffic Manager			25/09/2024
Reviewed by	Logistic Project Manager			26/09/2024
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. 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	Senior Project Manager			26/09/2024

*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

## 1.1 Purpose

This document has been prepared to assist GLC with the implementation of a long-term lane closure via shuttle flow (stop/slow) and weekend closures of Unwin St between WTP Rosehill Gate 1 and WTP MSF Gate 9 for the Unwin St northern diversion construction. These gates are located between Shirley St and Wentworth Ave. Work area location is shown below in figure 1. This closure is required to enable the northern tie in construction for the new Unwin St bridge diversion. The northern side of the section is proposed to be constructed first with the set-up then switching to the opposite side to allow the southern section to be constructed. A total of 10-14 weeks is expected to complete the works, with 5-7 weeks on each section. As part of the changes overs in each section it is also proposed to utilise a weekend 56-hour and 36-hour shutdown closure of Unwin Street.

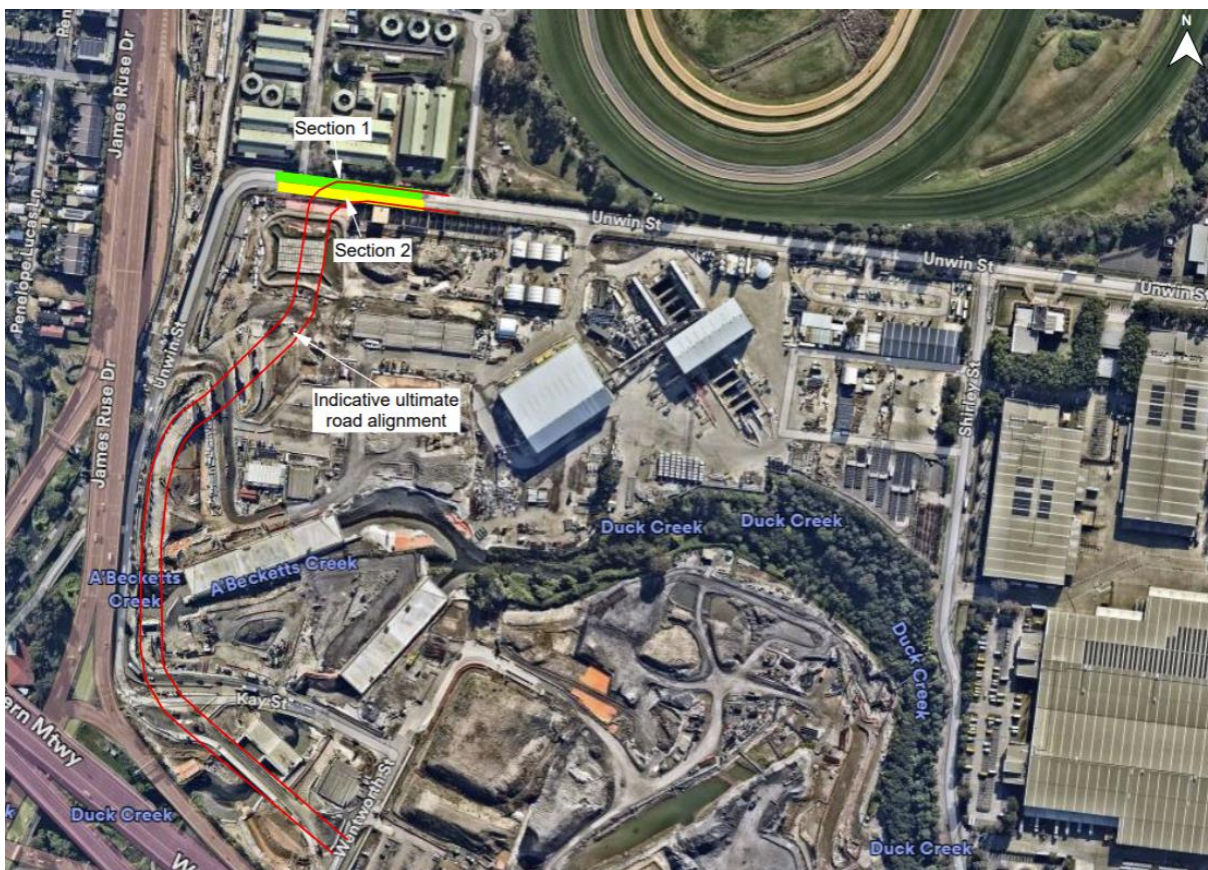


Figure 1 - Work Location Map





## 1.2 Clyde/Rose Hill Construction Traffic Management Plans

Table 1 - Project CTMPs for Clyde/Rose Hill

Plan #	Plan name	Description	Status
SMWSTWTP-GLO-1NL-NL000-TF-PLN-00001	Project Wide CTMP	Overarching Traffic Management Plan	Approved
SMWSTWTP-GLO-CLJ-TF-PLN-000001	Clyde/Rosehill Site Establishment	For works to establish the Clyde/Rosehill sites	Approved
SMWSTWTP-GLO-CLJ-TF-PLN-000004	Clyde/Rosehill Site Operations	Site Operating Conditions at Clyde/Rosehill	Approved
SMWSTWTP-GLO-CLJ-TF-PLN-000005	Unwin ST and Kay St 56hr Closure	Stage 1A, Stage 1B, Stage 2, and Stage 3 road alignment and associated traffic switch	Approved
SMWSTWTP-GLO-RSH-TF-PLN-000001	James Ruse Drive Barriers	Concrete barriers placed along eastern verge of James Ruse Dr alongside Clyde Dive compound	Under assessment
SMWSTWTP-GLO-RSH-TF-PLN-0000002	Unwin St Northern Diversion	Construction of northern diversion for new alignment of Unwin St	<b>This Plan</b>
Plans have 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 for information prior to the commencement of any construction in the area identified and managed within this CTMP			

## 1.3 Project Zone Location

The work area in regard to the overall project location is in the MSF West and Rosehill zones.



Figure 4 - Project Zone Map



## 1.4 Works and Timing

Works involves utility relocations and new installations, drainage and general pavement construction to various designs. The existing Unwin St pavement needs to be removed and the fill excavated approximately 1m below pavement level to build the new foundation for the new pavement. A new drainage system will also be installed which will connect to the existing stormwater system. The new pavement design consists of a combination of concrete and asphalt pavement. The intention is to construct the NB lane, switch traffic on the NB lane, then start construction on the SB lane.

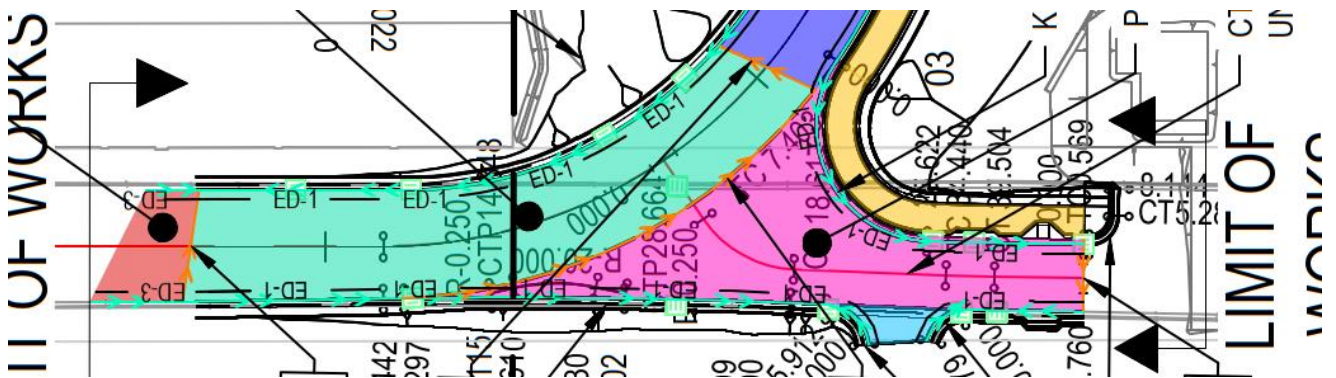


Figure 5 - Indicative Diagram of Pavement Types

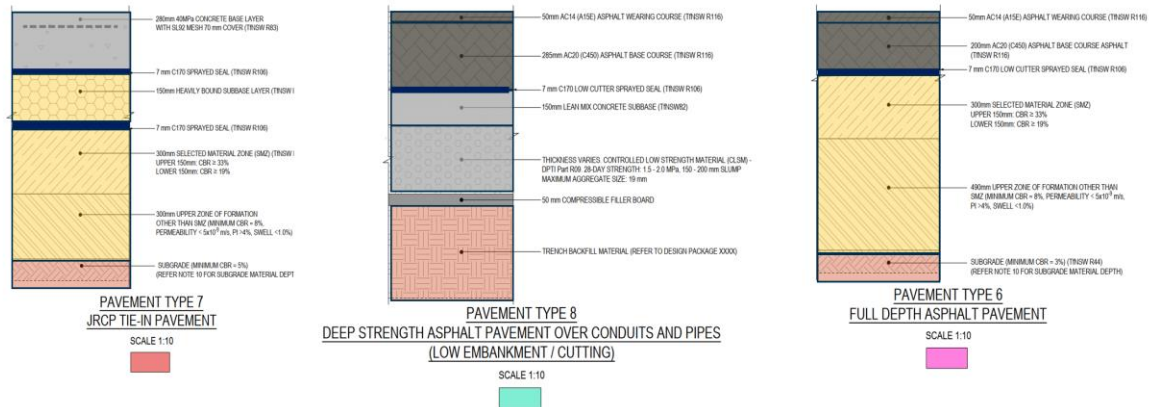


Figure 6 - Pavement Types

Works are proposed to be conducted from September – December 2024 pending all approvals. A total of approximately 12 weeks is expected for the entire section of work to be completed, with 5-6 weeks expected for each section. In conjunction with these works it is also proposed to implement a 56-hour and 36 hour weekend closures of Unwin St from 10PM Friday nights to 5AM Monday mornings, and one from Saturday night (time to be determined) to 5AM Monday morning. Overview of works timings is as per below points:

- Section 1 – northern part of Unwin St – 30<sup>th</sup> September (or when approved) to 27<sup>th</sup> October 2024 (Chapter 2 of this CTMP)
- Section 1 – Contingency – if significant works on the northern section are still to be completed a weekend shutdown closure of Unwin Street is proposed 25-28 October 2024 (Chapter 3 of this CTMP)
- Section 2 – southern part of Unwin St – 28 October to 7<sup>th</sup> December 2024. (Chapter 4 of this CTMP)
- Section 2 – finalization and opening – to complete and enable full tie-in to the Unwin Street diversion a weekend shutdown closure of Unwin Street is proposed 7<sup>th</sup>-9<sup>th</sup> December 2024. (Chapter 5 of this CTMP).

Standard construction hours will be utilized:

Monday – Friday 0700-1800

Saturday – 0800-1800

As required for any night shifts and weekend closure, Out Of Hours Works will follow Project environmental and community protocols. A full program of the works is included in Appendix 2.

## 2. UNWIN ST NORTHERN LANE WORKS (SECTION 1)

### 2.1 Proposed Conditions

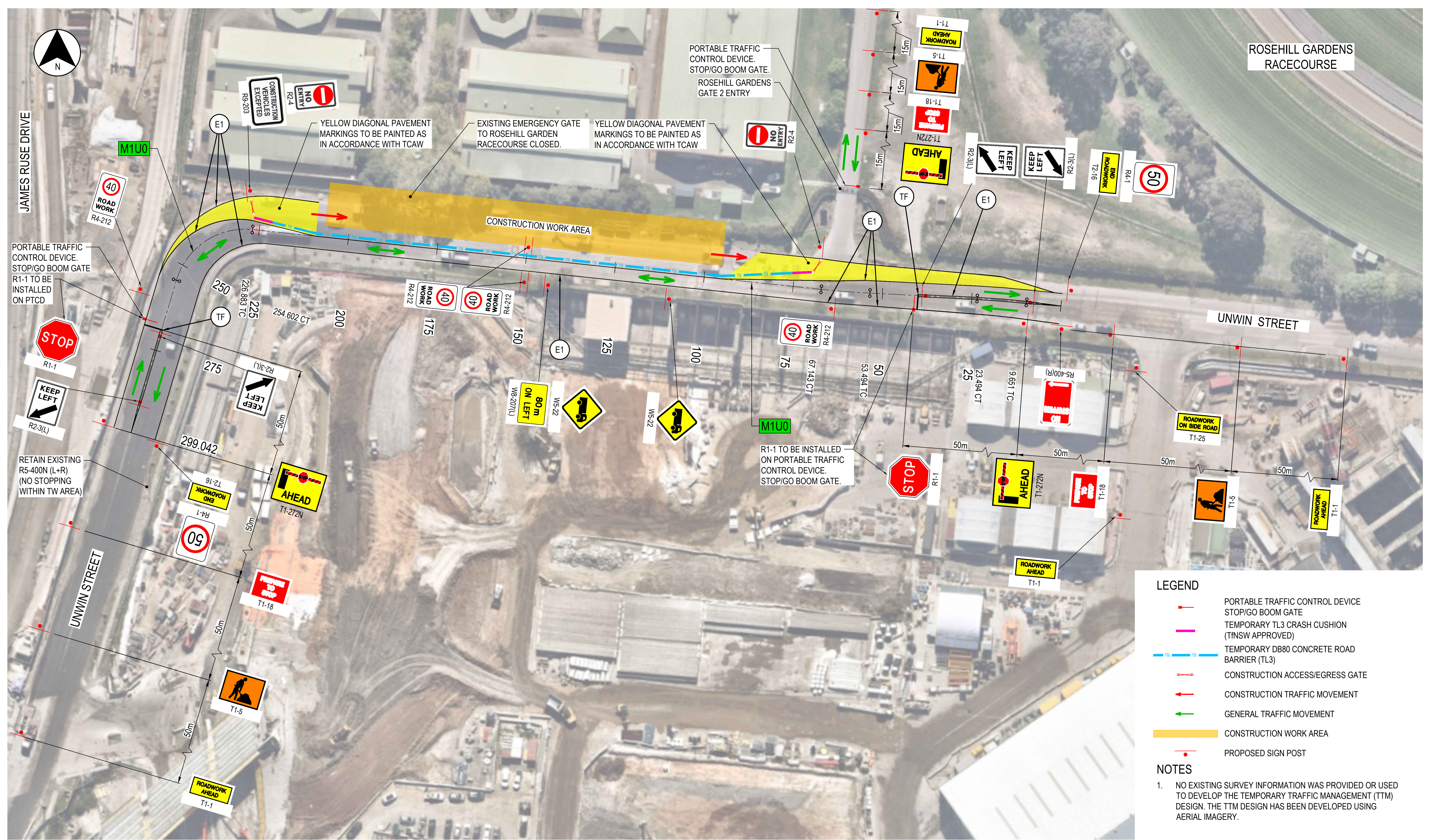
The proposed date is 30<sup>th</sup> September to 27<sup>th</sup> October 2024.

A long-term lane closure is proposed on Unwin St which will require 24/7 traffic control under shuttle flow (stop/slow) for the duration of the works. Approved TfNSW safety barriers are also proposed to be implemented for the duration of the works. Work area will be in the north on the eastbound lane and traffic will be managed under shuttle flow through the southern side or westbound lane.

### 2.2 Stage Plan

Staging Plan P0153-DTAL-0000-RW-DRG-101001 will be in place for the duration of these works. This plan is shown over page in figure 7 along with cross sections (figure 8) and swept paths (figures 9-12). The single staging plan will remain the same throughout this section of works. Site stopping distance checks are included in Appendix 3.





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	<table border="1"> <tr> <td>B</td> <td>POST TFNSW TMP REVIEW</td> <td>DT 25.09.24</td> <td>DT 25.09.24</td> <td>DT 25.09.24</td> </tr> <tr> <td>A</td> <td>ISSUED FOR INFORMATION</td> <td>DT 04.09.24</td> <td>DT 04.09.24</td> <td>DT 04.09.24</td> </tr> <tr> <td>REV</td> <td>DESCRIPTION</td> <td>DESIGNER INITIAL/DATE</td> <td>VERIFIED INITIAL/DATE</td> <td>APPROVED INITIAL/DATE</td> </tr> </table>			B	POST TFNSW TMP REVIEW			DT 25.09.24	DT 25.09.24	DT 25.09.24	A	ISSUED FOR INFORMATION	DT 04.09.24	DT 04.09.24	DT 04.09.24	REV	DESCRIPTION	DESIGNER INITIAL/DATE	VERIFIED INITIAL/DATE	APPROVED INITIAL/DATE	1:500 @ A1 	DRAWN: J.HARRIS 25.09.24 DESIGNED: D.TALEVSKI 25.09.24 DRG CHECK: J.HARRIS 25.09.24 DESIGN CHECK: D.TALEVSKI 25.09.24 PROJ DESIGN MGR: D.TALEVSKI 25.09.24 APPROVED: D.TALEVSKI 25.09.24	FILE No/DRAWING SET No: STATUS: FOR INFORMATION DRG No: P0153-DTAL-0000-RW-DRG-101001
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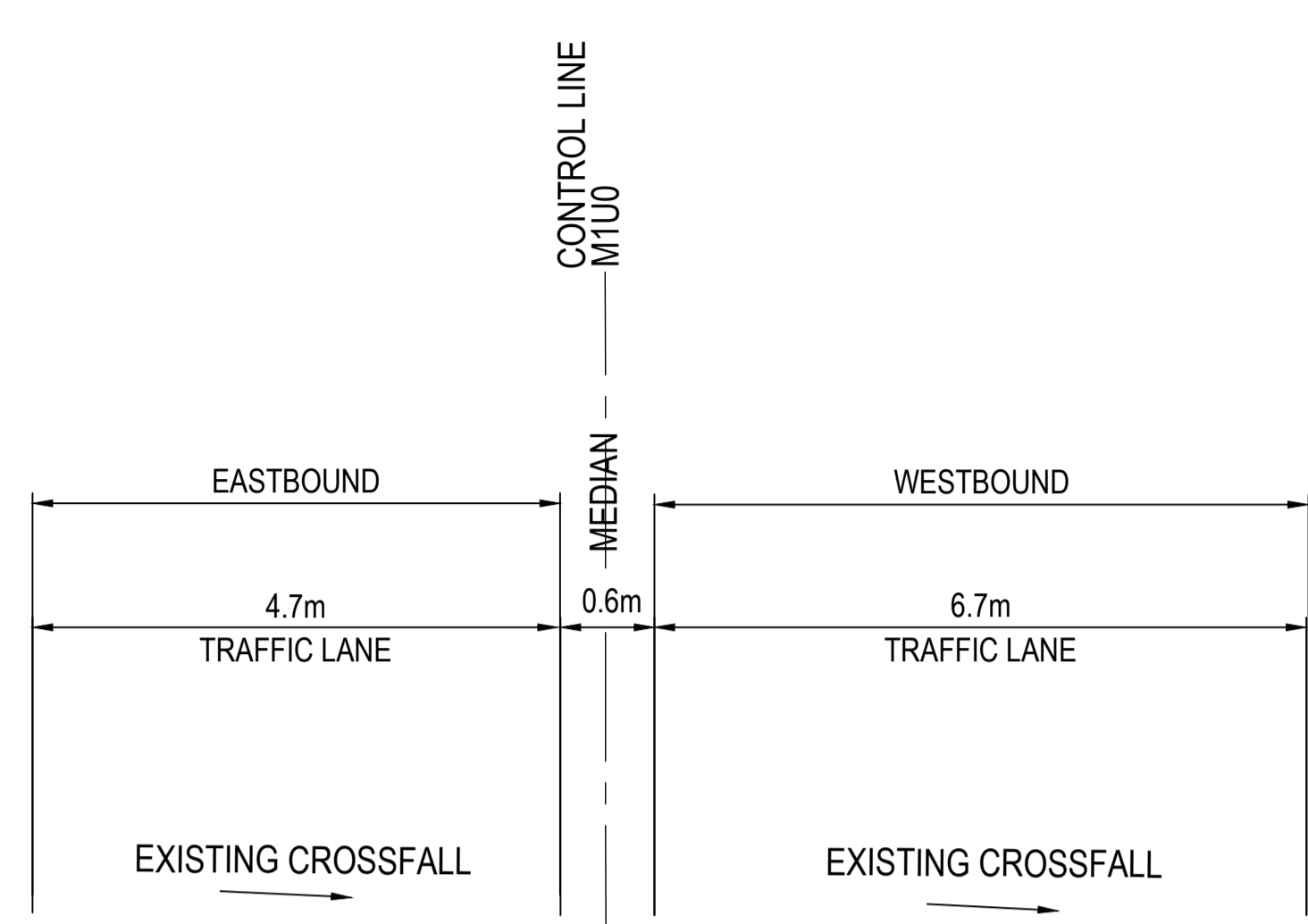
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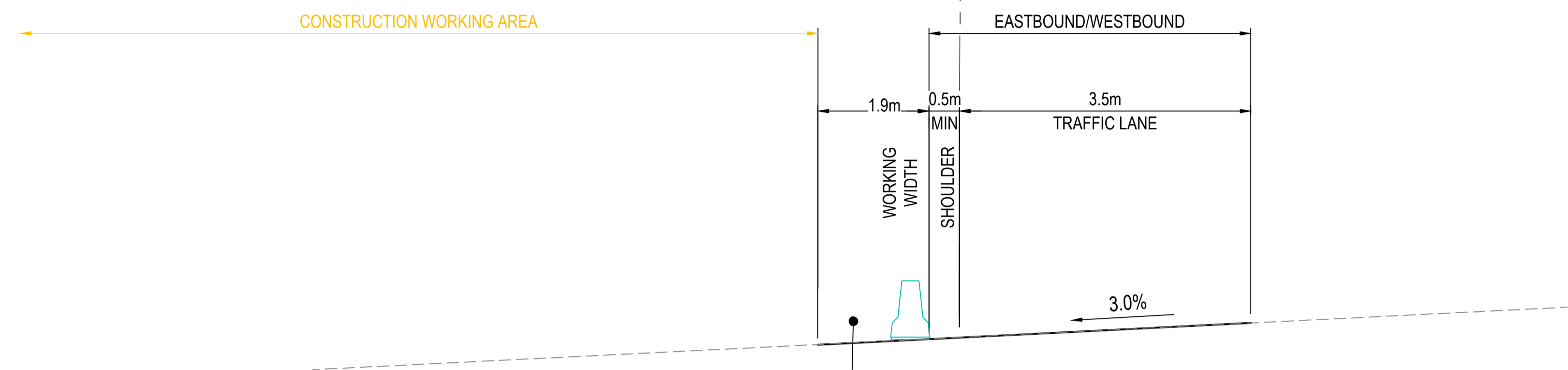
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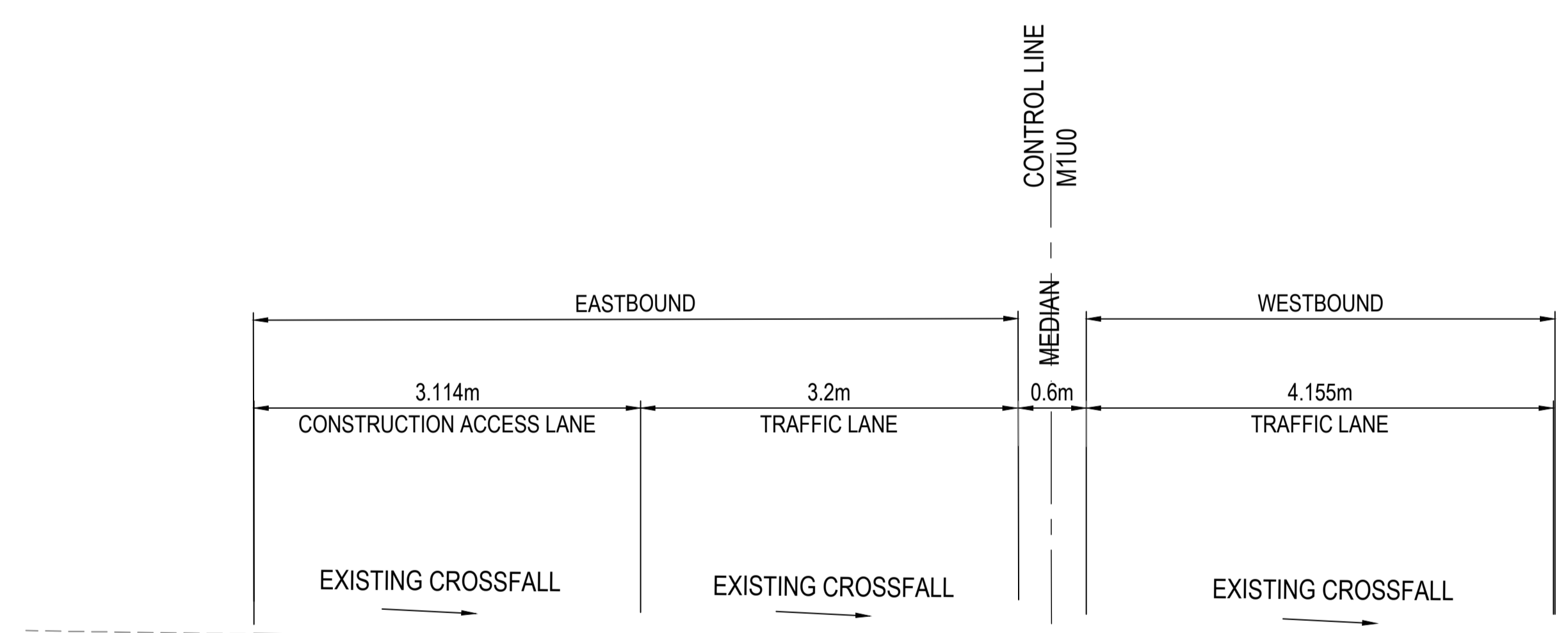
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UNWIN STREET NORTHERN DIVERSION PART 1 - CH 280 (M1U0)  
1:250



UNWIN STREET NORTHERN DIVERSION PART 1 - CH 150  
1:250



UNWIN STREET NORTHERN DIVERSION PART 1 - CH 20

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			<b>D-TAL</b> <b>CASE</b> CIVIL AND STRUCTURAL ENGINEERING	DRAWN --- J.HARRIS --- 04.09.24 DESIGNED --- D.TALEVSKI --- 04.09.24 DRG CHECK --- J.HARRIS --- 04.09.24 DESIGN CHECK --- D.TALEVSKI --- 04.09.24 PROJDESIGN MNGR --- D.TALEVSKI --- 04.09.24 APPROVED --- D.TALEVSKI --- 04.09.24	FILE No/DRAWING SET No: PART SHEET: 1 OF 1 A1 STATUS: FOR INFORMATION BRIDGE No: © DRG No: P0153-DTAL-0000-RW-DRG-201001 REV A VER EDMS No. AMD No.
	COORDINATE SYSTEM: GDA2020	HEIGHT DATUM: AHD	DESIGN LOT CODE:		

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PLOT DATE & TIME: 4/9/2024 6:54:21 PM  
Plotted by: JHARR



# TURNPATH – P0153 - UNWIN STREET NORTHERN DIVERSION - PART 1

## UNWIN ST EASTBOUND

*Design Vehicle = 26m B-DOUBLE*



**UNWIN ST WESTBOUND**

*Design Vehicle = 26m B-DOUBLE*





**UNWIN ST EASTBOUND ENTRY GATE**

*Construction Vehicle = 19m SEMI*



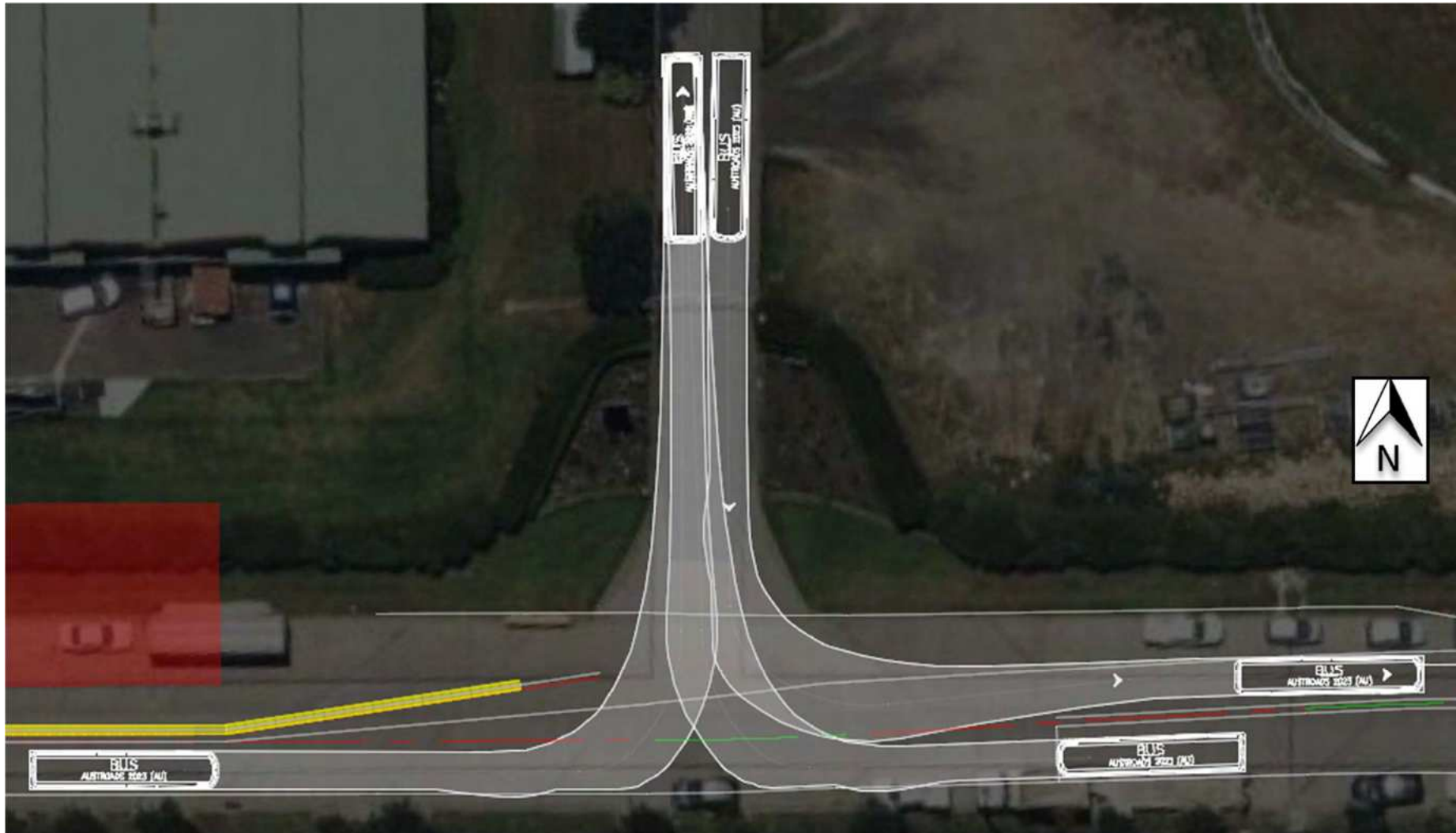
**UNWIN ST EASTBOUND EXIT GATE**

*Construction Vehicle = 19m SEMI*



**UNWIN ST ROSEHILL GARDENS GATE 2 (EAST)**

*Design Vehicle = 12.5m long BUS*





## 2.3 VMS

VMS locations and VMS messaging strategies are shown in Figure 13 and Table 2 below.

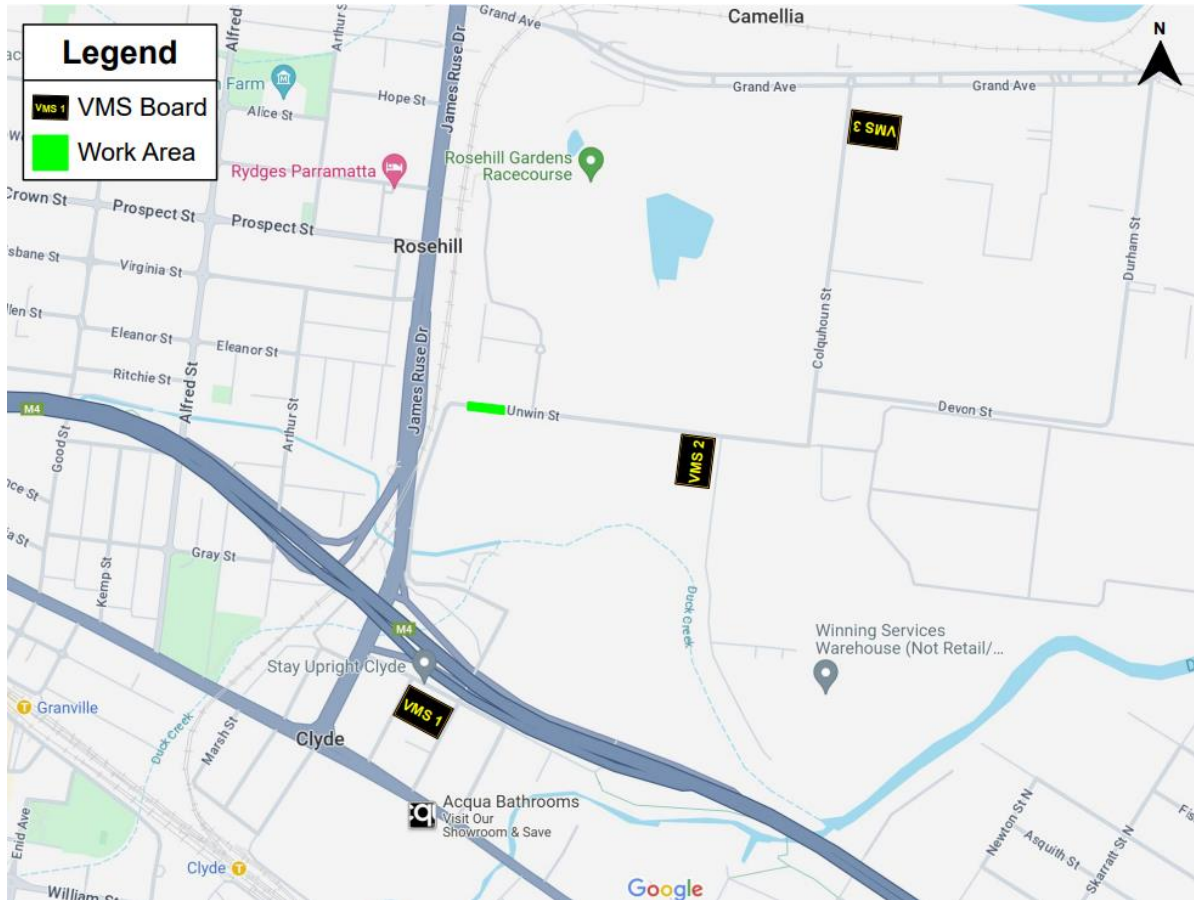


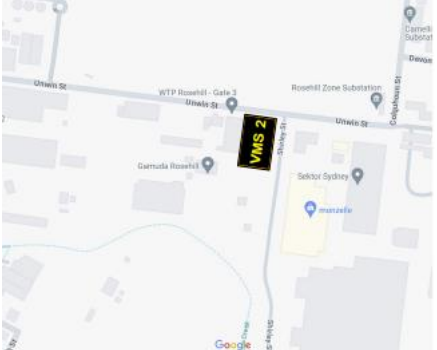



Figure 13 - Overview VMS locations

INTEGRATED MANAGEMENT SYSTEM  
 Site Specific Construction Traffic Management Plan – Unwin St – Northern Diversion Construction  
 Sydney Metro West – Western Tunnelling Package

Table 2 - Section1 VMS Strategy

VMS Unit	Street location	Specific location	Aerial Location	Street View location	Preconstruction messaging	During construction messaging	
					7 days prior	24/7	
1	Wentworth St, Clyde	Wentworth St facing south approx. 20-30m south of Martha St			Screen 1	<b>ROADWORK UNWIN ST FROM 30/09</b>	<b>ROADWORK AHEAD UNWIN ST</b>
					Screen 2		<b>EXPECT DELAYS</b>
2	Unwin St, Rosehill	Unwin St facing east approx. 20m west of Shirley St			Screen 1	<b>ROADWORK UNWIN ST FROM 30/09</b>	<b>ROADWORK AHEAD UNWIN ST</b>
					Screen 2		<b>EXPECT DELAYS</b>

INTEGRATED MANAGEMENT SYSTEM  
 Site Specific Construction Traffic Management Plan – Unwin St – Northern Diversion Construction  
 Sydney Metro West – Western Tunnelling Package

3	Colquhoun St, Rosehill	Colquhoun St facing north approx. 30m south of Grand Ave			Screen 1	ROADWORK UNWIN ST FROM 30/09	ROADWORK AHEAD UNWIN ST
					Screen 2		EXPECT DELAYS

## 2.4 Construction Traffic Generation

Vehicles of various sizes are expected to attend the worksite each shift during these works. Vehicles include but are not limited to light vehicles, semi-trailers (floats/deliveries), agi's, asphalt trucks, rollers. As long-term works are proposed only minimal light vehicles are expected in AM and PM peaks. All other vehicles will remain on site after initial delivery until works is completed and then removed from site.

Table 3 - Vehicle movements per shift

Vehicle Type	Estimated Movements Per Shift		
	In	Out	Total
Traffic Vehicles	2	2	4
Light Vehicles (work utes/support vehicles)	3	3	6
Franna (barriers only – first shift, change over shift and last shift only)	1	1	2
Semi-trailers (barriers/deliverys)	3	3	6
Excavator (remain on site)	1	1	2
Agi's (some shifts only)	5	5	10
Asphalt (some shifts only)	5	5	10
<b>Total</b>			<b>40</b>

## 2.5 Construction Haulage

Construction haulage routes are as per the EIS and HVLR report. The Roads utilised include:

- James Ruse Drive
- Grand Avenue
- Colquhoun Street
- Unwin Street
- Wentworth Street
- Parramatta Road



Figure 14 - Haulage Route

## 2.6 Impacts on Traffic Flow

Unwin Street is a local road which primarily serves to provide access to the surrounding/adjoining industrial land uses. Traffic volumes are low and hence minimal impact on traffic is expected under this set-up. Traffic Controllers will adjust to priority flow as required if any queues eventuate

## 2.7 Impacts on Parking

There are no impacts on parking as part of this CTMP implementation.



## 2.8 Impacts on Properties and Utilities

Full access is still permitted along Unwin St and surrounding sheets. Community notifications will advise of works and possible minor delays.

Rosehill Gardens has an emergency exit gate that opens onto the proposed work area. GLC is currently in discussion with ATC as to what treatments/options would be deemed suitable. At the time of writing this CTMP final outcome is not known. GLC will comply with any ATC directions regarding this property gate.

Email correspondence which has verbal approval from Rosehill Gardens and the Rosehill Gardens Emergency Management Plan included in Appendix 6.



Figure 15 - Rosehill Gardens gate to be blocked as part of this stage

## 2.9 Impacts on Pedestrians and Cyclists

Cyclists will be permitted to pass through work site under the traffic control conditions. Pedestrians will be diverted onto opposite footways during each section of works. Temporary ramps that will comply with AS1428.1 will be provided as required and the area checked regularly to ensure it is free of any hazards. Traffic Controllers will stop traffic to allow pedestrians to cross any traffic lanes until return to regular footway.

## 2.10 Impacts on Public Transport

Unwin Street is not a public transport route. There are no impacts to Public Transport as part of this CTMP.

## 2.11 Impacts on Emergency Services

Emergency Services will always have priority under lights and sirens. On approach traffic controllers will stop all directions to allow Emergency vehicle to pass through work site.

## 2.12 Impacts on major Events

Rosehill Gardens has 3 expected race days during the proposed works period:

Saturday 28th September

Wednesday 2nd October

Saturday 12th October

There are also some minor functions at Rosehill Gardens during this period. GLC will ensure all traffic control measures assist in bump-in and bump-out of event traffic in line with Rosehill Gardens/ATC preferences.

### 3. CONTINGENCY WEEKEND CLOSURE – UNWIN ST

#### 3.1 Proposed Conditions

If significant works are still to be completed in this section a 56hr weekend shutdown closure is proposed. The proposed dates/times are 2200 Friday 25th October to 0500 Monday 28th October 2024.

The 56hr Closure will close Unwin St at the Colquhoun St/Devon St intersection, Unwin St/Shirley St Intersection and at Wentworth St/Martha St intersection shown in Figure 16. Vehicle access to and from the construction site will be managed at each closure point by Traffic Control to maintain safe access and egress.

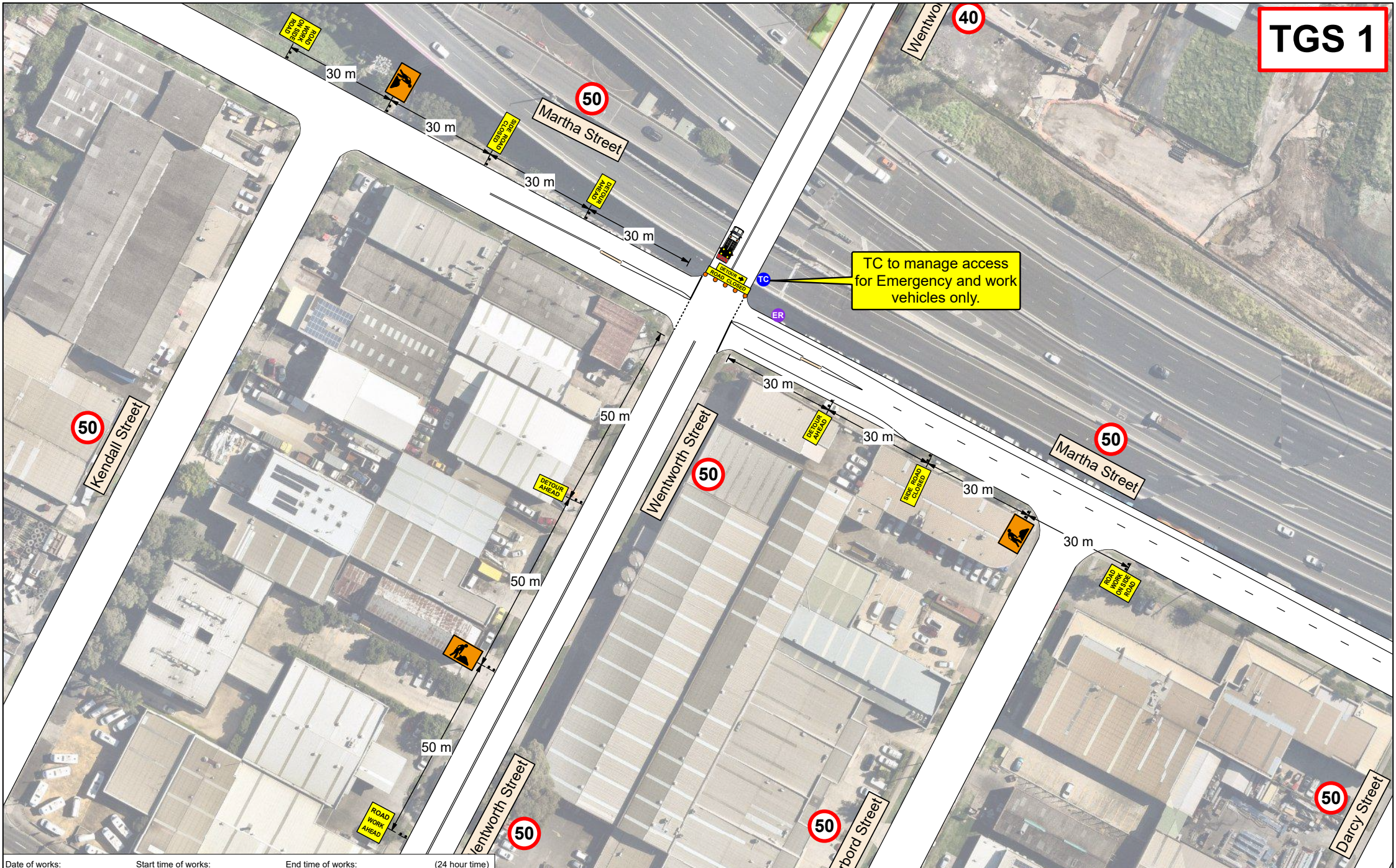


Figure 16 - Closure overview

#### 3.2 TGS

A single traffic guidance scheme will be in place for the duration of these works. TGS highlights closure points and is shown over page in figure 17. For note risk assessment has been removed from this TGS for clarity. Full TGS risk assessment is included in Appendix 3.

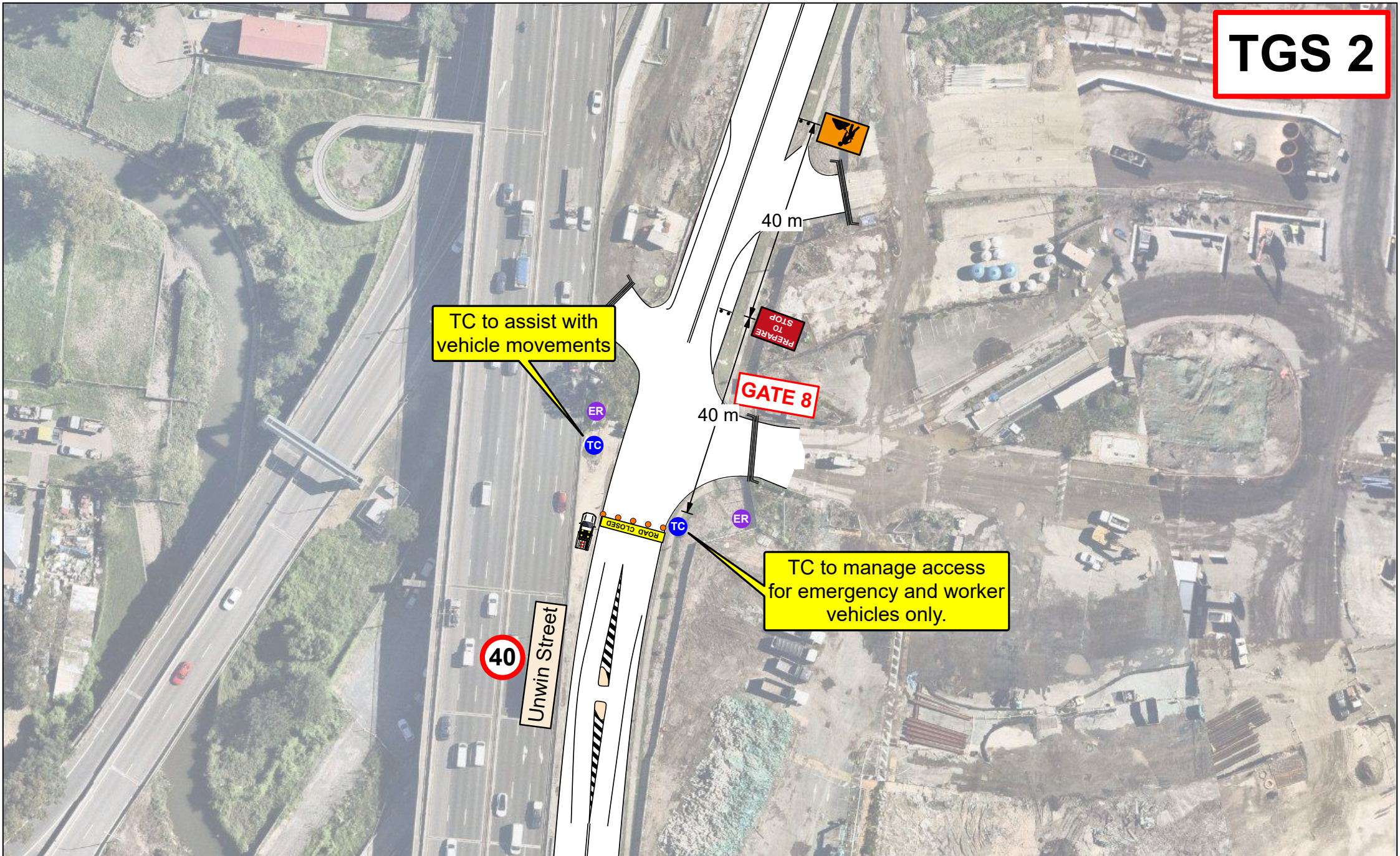




Date of works: \_\_\_\_\_ Start time of works: \_\_\_\_\_ End time of works: \_\_\_\_\_ (24 hour time)

Issue	Desg	Appd	Date & Time	Amendment Description	TGS Name & Number:	TGS Designed By:	PWZTMP:	Exp:	Signature:	Date of Approval:	Page 4 / 10
01	AC	PL	17/10/2023 22:30	Original Issue	LGP - 63822 - GLC 151 - Wentworth to Unwin St - Clyde - CS6 TS4 - Road	Alec Czarnowski	TCT1010645	N/A	AC	24/09/2024	
02	AC	PL	07/11/2023 13:15	Amended as per comments	Works Location:	Peter Lozano	TCT0058486	N/A			
03	AC	PL	07/11/2023 16:30	Amended as per comments	Wentworth to Unwin Street - Clyde	Client Company:					
04	AC	PL	13/11/2023 12:06	Amended detour	Project Name:	Gamuda Australia					
05	DK	KD	24/09/2024 15:15	Moved closure to Rosehill Race Gate	Sydney Metro Werstern Tunnelling	Client Contact:	Daniel Kelly	Contact Number:	0437 315 649		

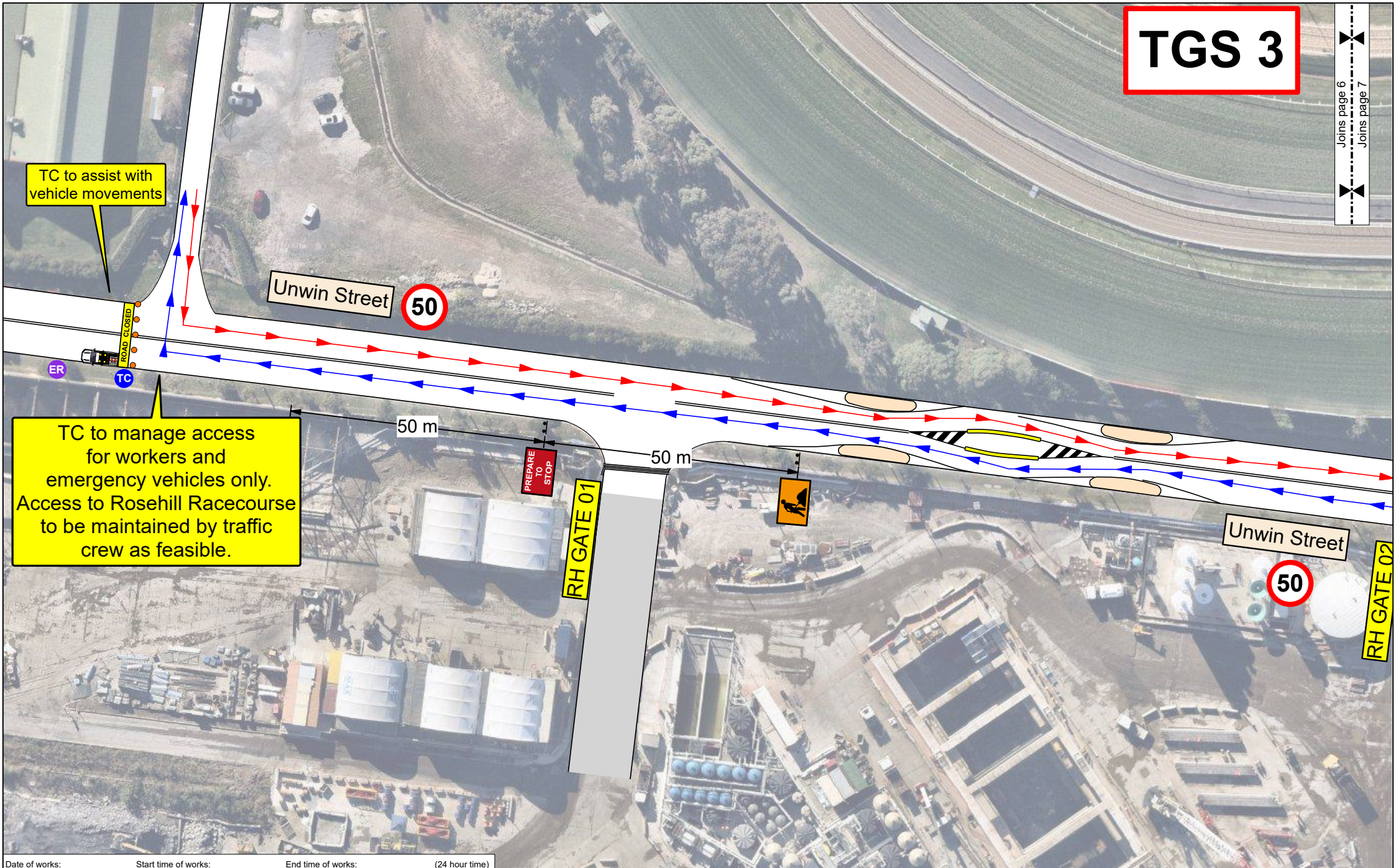




Date of works: \_\_\_\_\_ Start time of works: \_\_\_\_\_ End time of works: \_\_\_\_\_ (24 hour time)

Issue	Desg	Appd	Date & Time	Amendment Description	TGS Name & Number:	TGS Designed By:	PWZTMP:	Exp:	Signature:	Date of Approval:	Page 5 / 10
01	AC	PL	17/10/2023 22:30	Original Issue	LGP - 63822 - GLC 151 - Wentworth to Unwin St - Clyde - CS6 TS4 - Road	Alec Czarnowski	TCT1010645	N/A	AC	24/09/2024	
02	AC	PL	07/11/2023 13:15	Amended as per comments	Works Location:	Peter Lozano	TCT0058486	N/A			
03	AC	PL	07/11/2023 16:30	Amended as per comments	Wentworth to Unwin Street - Clyde	Client Company:					
04	AC	PL	13/11/2023 12:06	Amended detour	Project Name:	Client Contact:	Contact Number:				
05	DK	KD	24/09/2024 15:15	Moved closure to Rosehill Race Gate	Sydney Metro Werstern Tunnelling						
Scale: 1 : 750					Original Size A3		Lack Group acknowledges the traditional owners of country throughout Australia and recognises their continuing connection to land, waters and community. We pay our respect to them and their cultures; and to elders both past and present.				





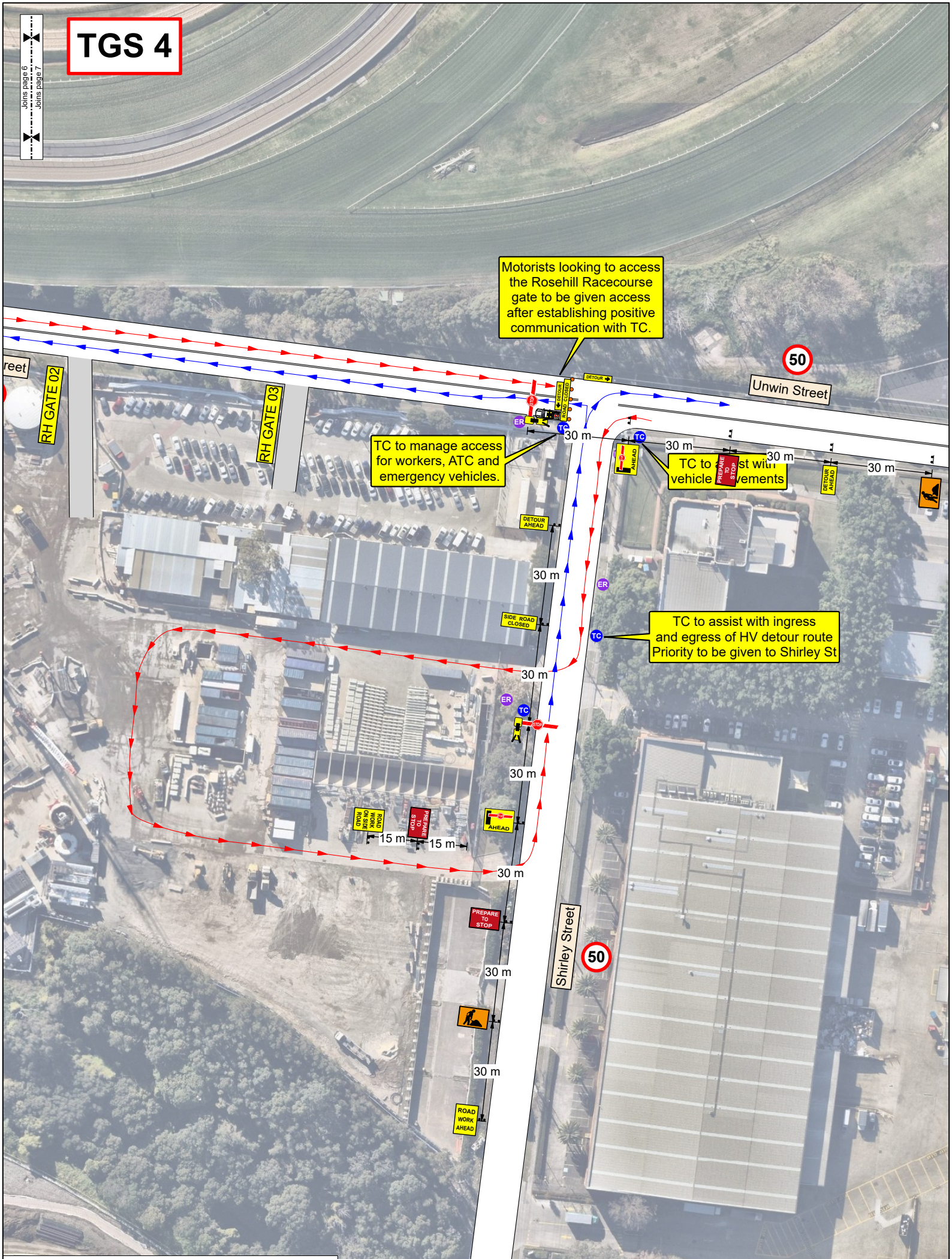
Date of works: \_\_\_\_\_ Start time of works: \_\_\_\_\_ End time of works: \_\_\_\_\_ (24 hour time)

Issue	Desg	Appd	Date & Time	Amendment Description	TGS Name & Number:	TGS Designed By:	PWZTMP:	Exp:	Signature:	Date of Approval:	Page 6 / 10
01	AC	PL	17/10/2023 22:30	Original Issue	LGP - 63822 - GLC 151 - Wentworth to Unwin St - Clyde - CS6 TS4 - Road	Alec Czarnowski	TCT1010645	N/A	AC	24/09/2024	  
02	AC	PL	07/11/2023 13:15	Amended as per comments	Works Location:	Peter Lozano	TCT0058486	N/A			
03	AC	PL	07/11/2023 16:30	Amended as per comments	Wentworth to Unwin Street - Clyde	Client Company:	Gamuda Australia				
04	AC	PL	13/11/2023 12:06	Amended detour	Project Name:	Client Contact:	Daniel Kelly	Contact Number:	0437 315 649		
05	DK	KD	24/09/2024 15:15	Moved closure to Rosehill Race Gate	Sydney Metro Werstern Tunnelling	Project Description:	Construction Stage 6 - Traffic Switch 4				
Scale: 1 : 750				Original Size A3	Lack Group acknowledges the traditional owners of country throughout Australia and recognises their continuing connection to land, waters and community. We pay our respect to them and their cultures; and to elders both past and present.						



# TGS 4

JOINS page 6  
JOINS page 7



Date of works: \_\_\_\_\_ Start time of works: \_\_\_\_\_ End time of works: \_\_\_\_\_ (24 hour time)

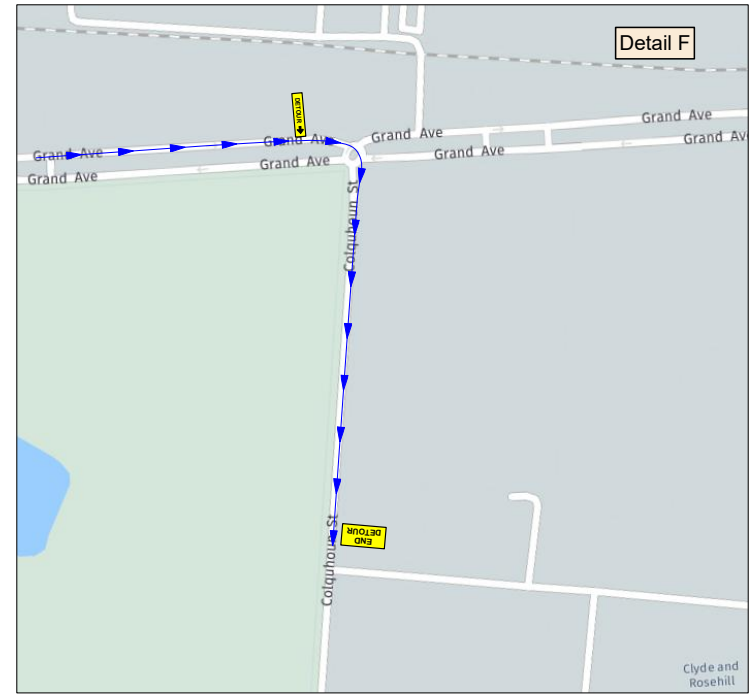
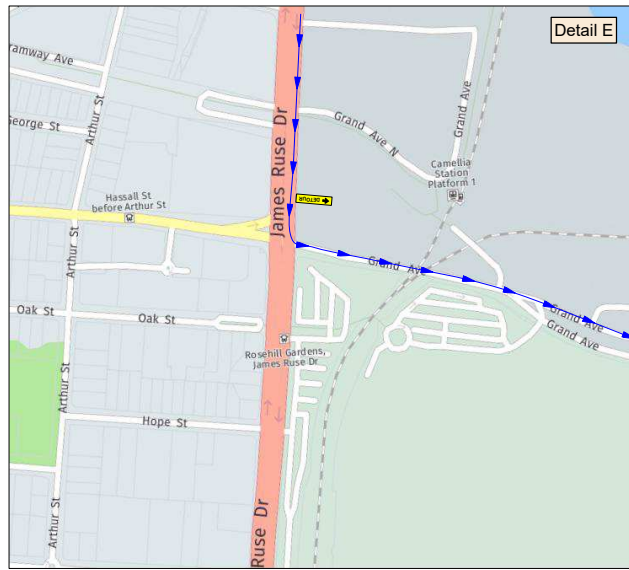
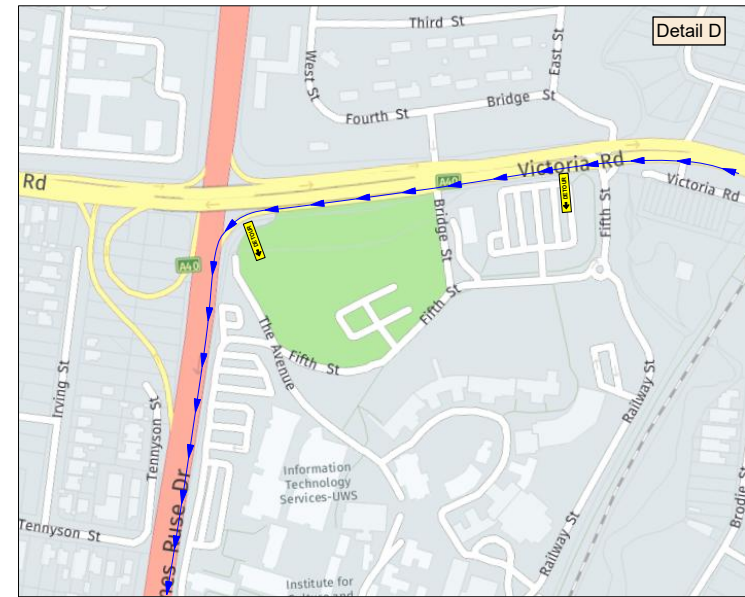
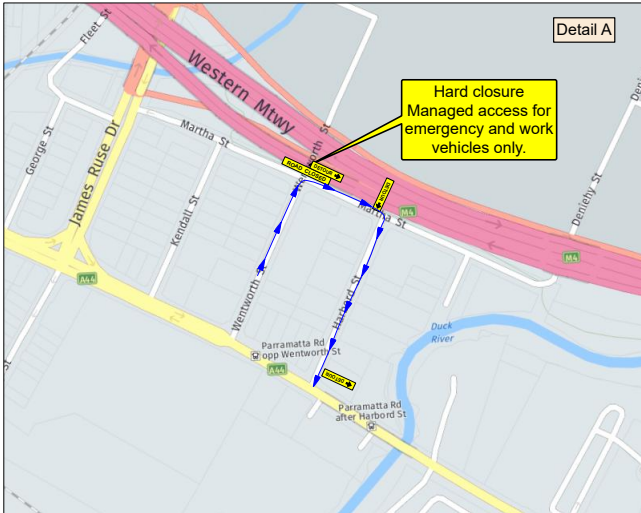
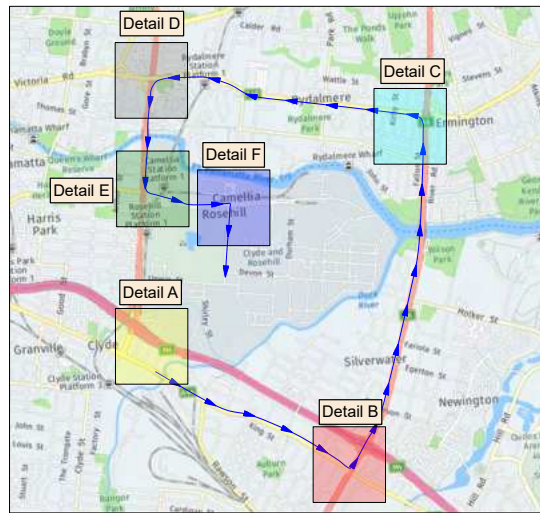
Issue	Desg	Appd	Date & Time	Amendment Description	TGS Name & Number:	TGS Designed By:	PWZTMP:	Exp:	Signature:	Date of Approval:	Page 7 / 10
01	AC	PL	17/10/2023 22:30	Original Issue	LGP - 63822 - GLC 151 - Wentworth to Unwin St - Clyde - CS6 TS4 - Road	Alec Czarnowski	TCT1010645	Exp:/NA	AC	24/09/2024	
02	AC	PL	07/11/2023 13:15	Amended as per comments	Works Location:						
03	AC	PL	07/11/2023 18:30	Amended as per comments	Wentworth to Unwin Street - Clyde						
04	AC	PL	13/11/2023 12:06	Amended detour	Project Name:						
05	DK	KD	24/09/2024 15:15	Moved closure to Rosehill Race Gate	Sydney Metro Werstern Tunnelling	Construction Stage 6 - Traffic Switch 4					







# Wentworth Closure detour Route (From Wentworth To Unwin)



Date of works: \_\_\_\_\_ Start time of works: \_\_\_\_\_ End time of works: \_\_\_\_\_ (24 hour time)

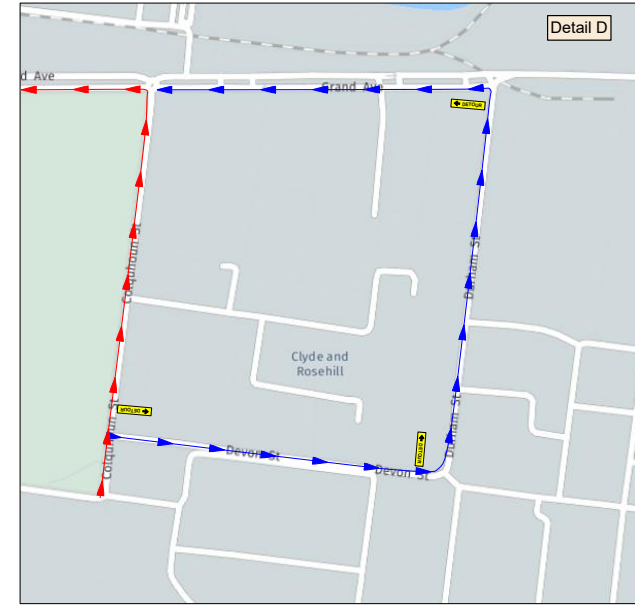
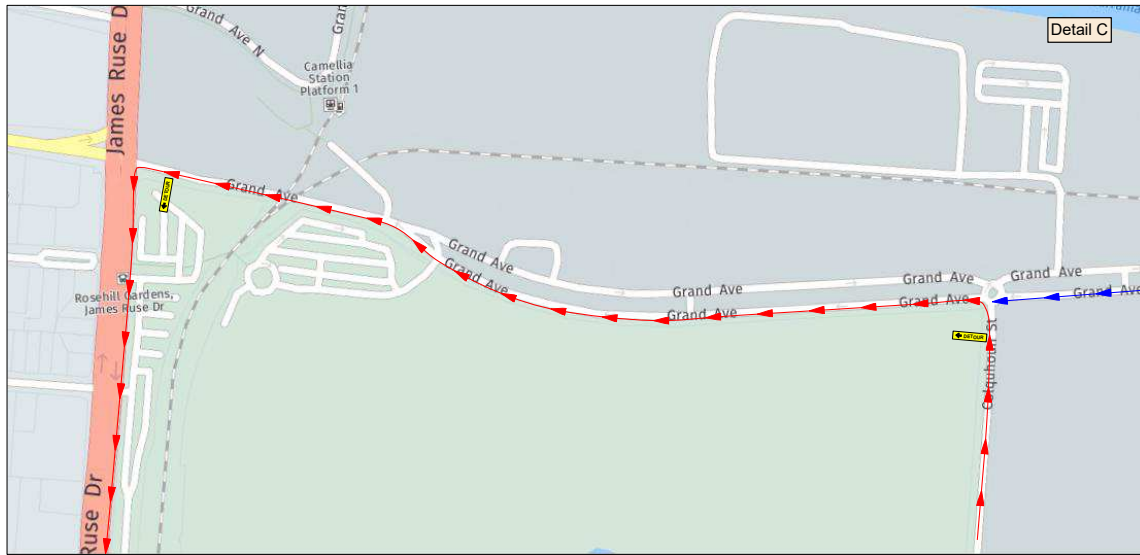
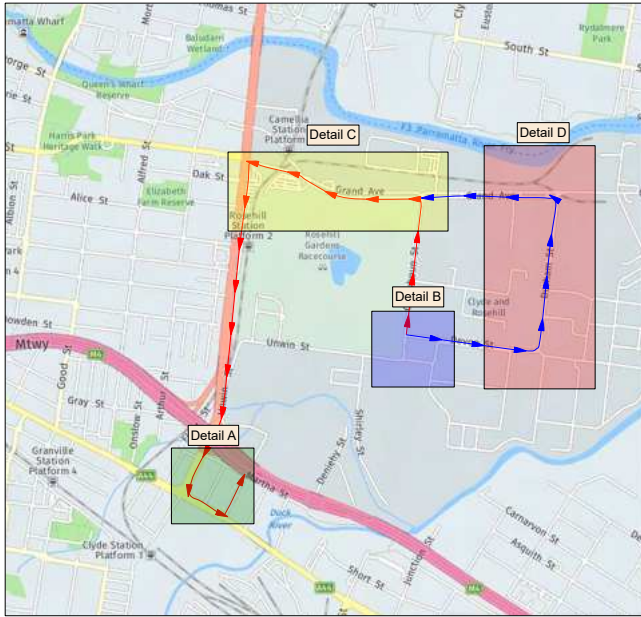
Issue	Desg	Appd	Date & Time	Amendment Description	TGS Name & Number:
01	AC	PL	17/10/2023 22:30	Original Issue	LGP - 63822 - GLC 151 - Wentworth to Unwin St - Clyde - CS6 TS4 - Road
02	AC	PL	07/11/2023 13:15	Amended as per comments	Works Location:
03	AC	PL	07/11/2023 16:30	Amended as per comments	Wentworth to Unwin Street - Clyde
04	AC	PL	13/11/2023 12:06	Amended detour	Project Name:
05	DK	KD	24/09/2024 15:15	Moved closure to Rosehill Race Gate	Sydney Metro Werstern Tunnelling
				Original Size A3	Project Description:
					Construction Stage 6 - Traffic Switch 4

TGS Designed By: Alec Czarnowski	PWZTMP: TCT1010645	Exp: N/A	Signature: <i>AC</i>	Date of Approval: 24/09/2024	Page 9 / 10
TGS Approved By: Peter Lozano	PWZTMP: TCT0058486	Exp: N/A	Signature: <i>[Signature]</i>		
Client Company: Gamuda Australia	Client Contact: Daniel Kelly	Contact Number: 0437 315 649			

**Lack**  
group  
Australia



## Unwin St Closure detour Route (From Unwin To Wentworth )



Date of works: \_\_\_\_\_ Start time of works: \_\_\_\_\_ End time of works: \_\_\_\_\_ (24 hour time)

Issue	Desg	Appd	Date & Time	Amendment Description	TGS Name & Number:	TGS Designed By:	PWZTMP:	Exp:	Signature:	Date of Approval:	Page 10 / 10
01	AC	PL	17/10/2023 22:30	Original Issue	LGP - 63822 - GLC 151 - Wentworth to Unwin St - Clyde - CS6 TS4 - Road	Alec Czarnowski	TCT1010645	N/A	AC	24/09/2024	 
02	AC	PL	07/11/2023 13:15	Amended as per comments		Works Location:	Peter Lozano	TCT0058486	N/A		
03	AC	PL	07/11/2023 16:30	Amended as per comments	Wentworth to Unwin Street - Clyde	Client Company:	Gamuda Australia				
04	AC	PL	13/11/2023 12:06	Amended detour	Project Name:	Client Contact:	Daniel Kelly	Contact Number:	0437 315 649		
05	DK	KD	24/09/2024 15:15	Moved closure to Rosehill Race Gate	Sydney Metro Werstern Tunnelling	Project Description:	Construction Stage 6 - Traffic Switch 4				
Scale: 1 : 750				Original Size A3	Lack Group acknowledges the traditional owners of country throughout Australia and recognises their continuing connection to land, waters and community. We pay our respect to them and their cultures; and to elders both past and present.						

### 3.3 VMS

VMS locations and VMS messaging strategies are shown in Figure 18 and Table 3 below

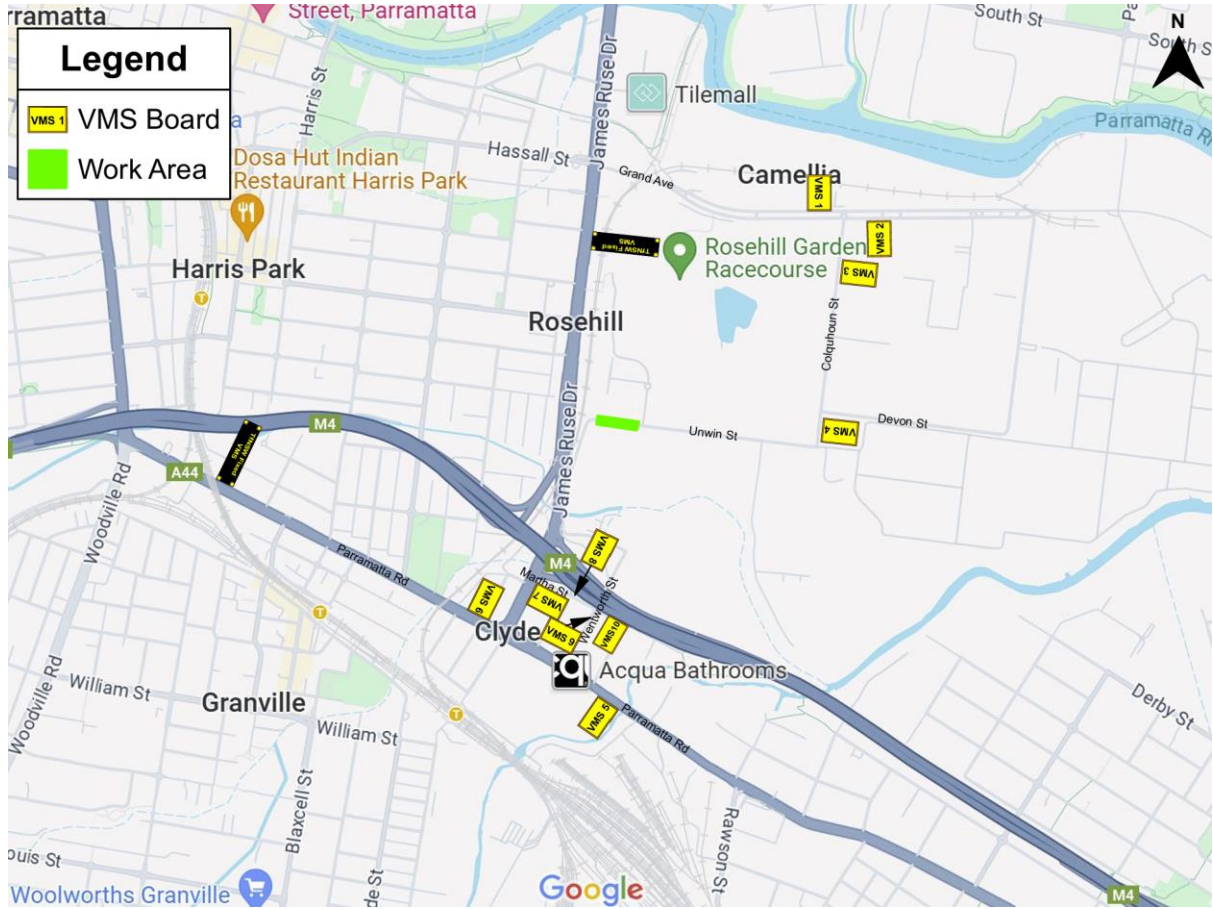



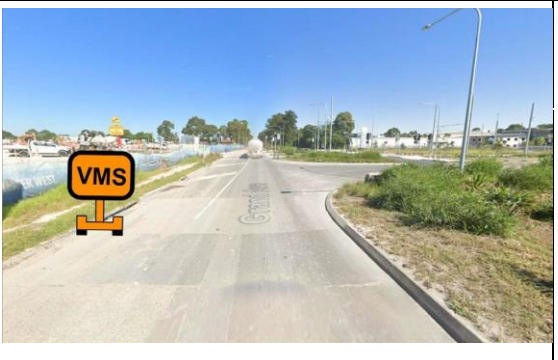






Figure 18 - Unwin St closure VMS location map



Table 4 - Unwin St Closure VMS Strategy





VMS Unit	Street location	Specific location	Aerial Location	Street View location	Preconstruction messaging	During construction messaging	
					7 days prior	24/7	
1	Grand Ave, Rosehill	GRAND AVE, 100m WEST OF COLQUHOUN ST FACING EASTBOUND TRAFFIC			Screen 1	<b>UNWIN ST CLOSURE 25-28 OCT</b>	<b>UNWIN ST CLOSED TIL 5AM MON</b>
					Screen 2	<b>LIVE TRAFFIC.COM</b>	<b>FOLLOW DETOUR</b>
2	Grand Ave, Rosehill	GRAND AVE, 130m E A ST OF COLQUHOUN ST FACING WESTBOUND TRAFFIC			Screen 1	<b>UNWIN ST CLOSURE 25-28 OCT</b>	<b>UNWIN ST CLOSED TIL 5AM MON</b>
					Screen 2	<b>LIVE TRAFFIC.COM</b>	<b>FOLLOW DETOUR</b>

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 Sydney Metro West – Western Tunnelling Package

3	Colquhoun St, Rosehill	COLQUHOUN ST FACING NORTH APPROX. 30M SOUTH OF GRAND AVE			Screen 1	<b>UNWIN ST CLOSURE 25-28 OCT</b>	<b>UNWIN ST CLOSED TIL 5AM MON</b>
					Screen 2	<b>LIVE TRAFFIC.COM</b>	<b>FOLLOW DETOUR</b>
4	Colquhoun St, Rosehill	COLQUHOUN ST APPROX. 30M SOUTH OF DEVON ST FACING SOUTHBOUND TRAFFIC			Screen 1	<b>UNWIN ST CLOSURE 25-28 OCT</b>	<b>UNWIN ST CLOSED TIL 5AM MON</b>
					Screen 2	<b>LIVE TRAFFIC.COM</b>	<b>FOLLOW DETOUR</b>
5	Parramatta Rd, Clyde	PARRAMATTA RD ON GRASS AREA OUTSIDE 2B PARRAMATTA RD FACING WESTBOUND			Screen 1	<b>UNWIN ST CLOSURE 25-28 OCT</b>	<b>UNWIN ST CLOSED TIL 5AM MON</b>



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		TRAFFIC			Screen 2	<b>LIVE TRAFFIC.COM</b>	<b>FOLLOW DETOUR</b>
6	James Ruse Dr, Clyde	JAMES RUSE DR ON GRASS AREA OUTSIDE 10 JRD FACING EASTBOUND TRAFFIC			Screen 1	<b>UNWIN ST CLOSURE 25-28 OCT</b>	<b>UNWIN ST CLOSED TIL 5AM MON</b>
					Screen 2	<b>LIVE TRAFFIC.COM</b>	<b>FOLLOW DETOUR</b>

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 Site Specific Construction Traffic Management Plan – Unwin St – Northern Diversion Construction  
 Sydney Metro West – Western Tunnelling Package

7	James Ruse Dr, Clyde	FACING SOUTHBOUND TRAFFIC ON JAMES RUSE DR, ON THE CORNER OF MARTHA ST AND JAMES SMALL DR			Screen 1	<b>UNWIN ST CLOSURE 25-28 OCT</b>	<b>UNWIN ST CLOSED TIL 5AM MON</b>
					Screen 2	<b>LIVE TRAFFIC.COM</b>	<b>FOLLOW DETOUR</b>
8	Martha St, Clyde	FACING EASTBOUND TRAFFIC ON MARTHA ST, 60m WEST OF WENTWORTH ST			Screen 1	<b>UNWIN ST CLOSURE 25-28 OCT</b>	<b>UNWIN ST CLOSED TIL 5AM MON</b>
					Screen 2	<b>LIVE TRAFFIC.COM</b>	<b>FOLLOW DETOUR</b>



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9	Wentworth St, Clyde	FACING NORTHBOUND TRAFFIC ON WENTWORTH ST, 20m SOUTH OF MARTHA ST			Screen 1 Screen 2	UNWIN ST CLOSURE 25-28 OCT	UNWIN ST CLOSED TIL 5AM MON
						LIVE TRAFFIC.COM	FOLLOW DETOUR
10	MARTHA ST, CLYDE	FACING WESTBOUND TRAFFIC ON MARTHA ST, 50m EAST OF WENTWORTH ST			Screen 1 Screen 2	UNWIN ST CLOSURE 25-28 OCT	UNWIN ST CLOSED TIL 5AM MON
						LIVE TRAFFIC.COM	FOLLOW DETOUR

### 3.4 Construction Traffic Generation

Vehicles of various sizes are expected to attend the worksite each shift during these works. Vehicles include but are not limited to light vehicles, semi-trailers (floats/deliveries), agi's, asphalt trucks, rollers. As long-term works are proposed only minimal light vehicles are expected in AM and PM peaks. All other vehicles will remain on site after initial delivery until works is completed and then removed from site.

Table 5 - Vehicle movements per shift

Vehicle Type	Estimated Movements Per Shift		
	In	Out	Total
Traffic Vehicles	2	2	4
Light Vehicles (work utes/support vehicles)	3	3	6
Franna (barriers only – first shift, change over shift and last shift only)	1	1	2
Semi-trailers (barriers/deliverys)	3	3	6
Excavator (remain on site)	1	1	2
Agi's (some shifts only)	5	5	10
Asphalt (some shifts only)	5	5	10
<b>Total</b>			<b>40</b>

### 3.5 Construction Haulage

Construction haulage routes are as per the EIS and HVLR report. The Roads utilised include:

- James Ruse Drive
- Grand Avenue
- Colquhoun Street
- Unwin Street
- Wentworth Street
- Parramatta Road



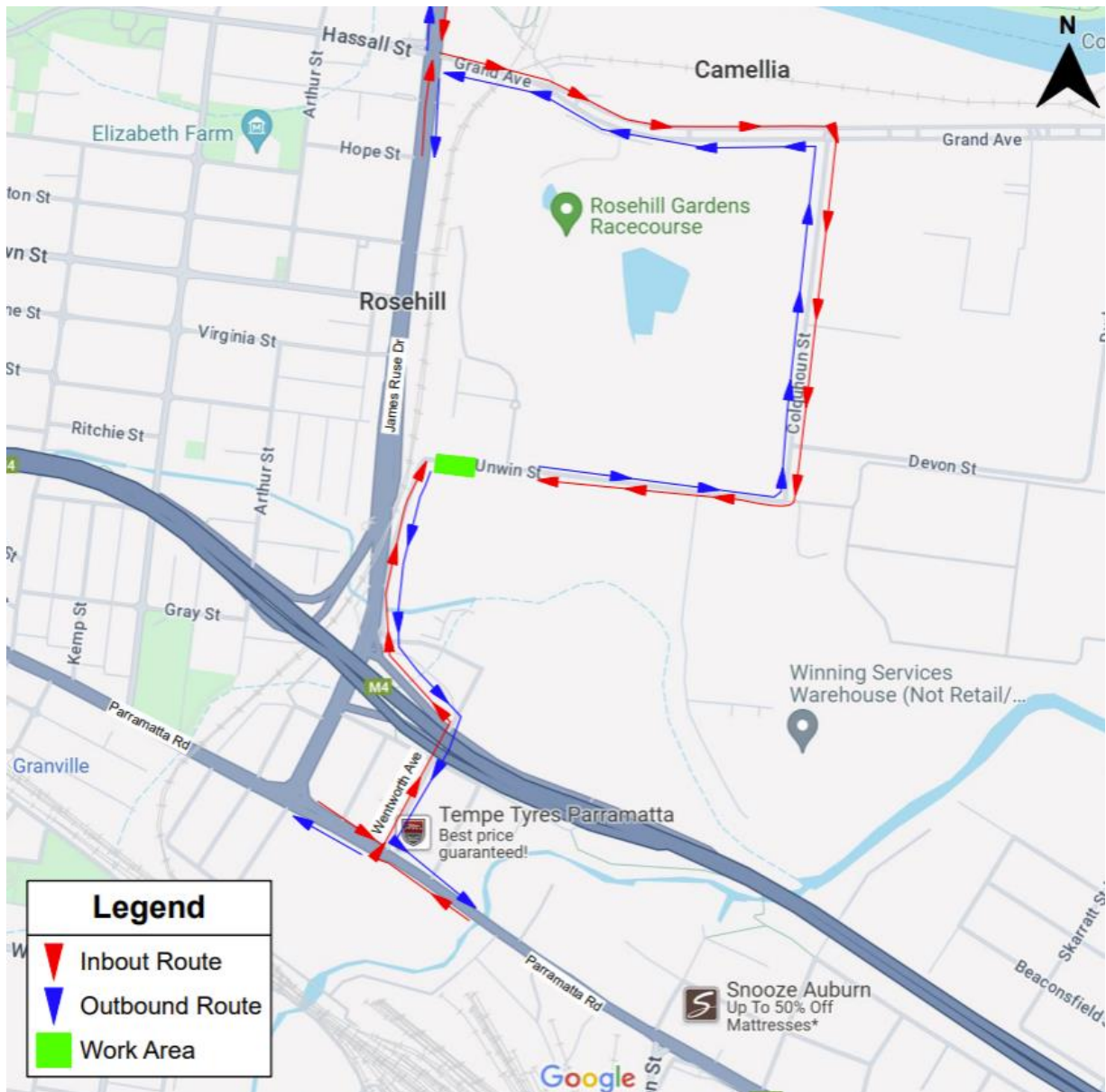


Figure 19 - Haulage Route

### 3.6 Impacts on Traffic Flow

Unwin Street is a local road which primarily serves to provide access to the surrounding/adjoining industrial land uses. Traffic volumes are low and hence a moderate impact on traffic is expected under this set-up. Traffic Controllers will adjust to priority flow as required if any queues eventuate

### 3.7 Impacts on Parking

There are no impacts on parking as part of this CTMP implementation.

### 3.8 Impacts on Properties and Utilities

Full access is still permitted along Unwin St and surrounding sheets. Community notifications will advise of works and possible minor delays.

Rosehill Gardens has an emergency exit gate that opens onto the proposed work area. GLC is currently in discussion with ATC as to what treatments/options would be deemed suitable. At the time of writing this CTMP final outcome is not known. GLC will comply with any ATC directions regarding this property gate.

Email correspondence which has verbal approval from Rosehill Gardens and the Rosehill Gardens Emergency Management Plan included in Appendix 6.



Figure 20 - Rosehill Gardens gate to be blocked as part of this stage



### 3.9 Impacts on Pedestrians and Cyclists

Cyclists will be required to follow normal road traffic detours or have the option to dismount and walk along designated footway under escort of traffic controllers.

Pedestrians will be escorted along designated footway by traffic controllers.

### 3.10 Impacts on Public Transport

Unwin Street is not a public transport route. There are no impacts to Public Transport as part of this CTMP.

### 3.11 Impacts on Emergency Services

Access to properties for emergency vehicles will be provided at all times. Emergency Service vehicles will be permitted access through the work area. Upon entering the outer road closure point Traffic Controllers will be advised so clear path can be created through the area.

### 3.12 Impacts on major Events

There are no notified race days at Rosehill Gardens during the proposed work period.

## 4. UNWIN ST SOUTHERN LANE WORKS (SECTION 2)

### 4.1 Proposed Conditions

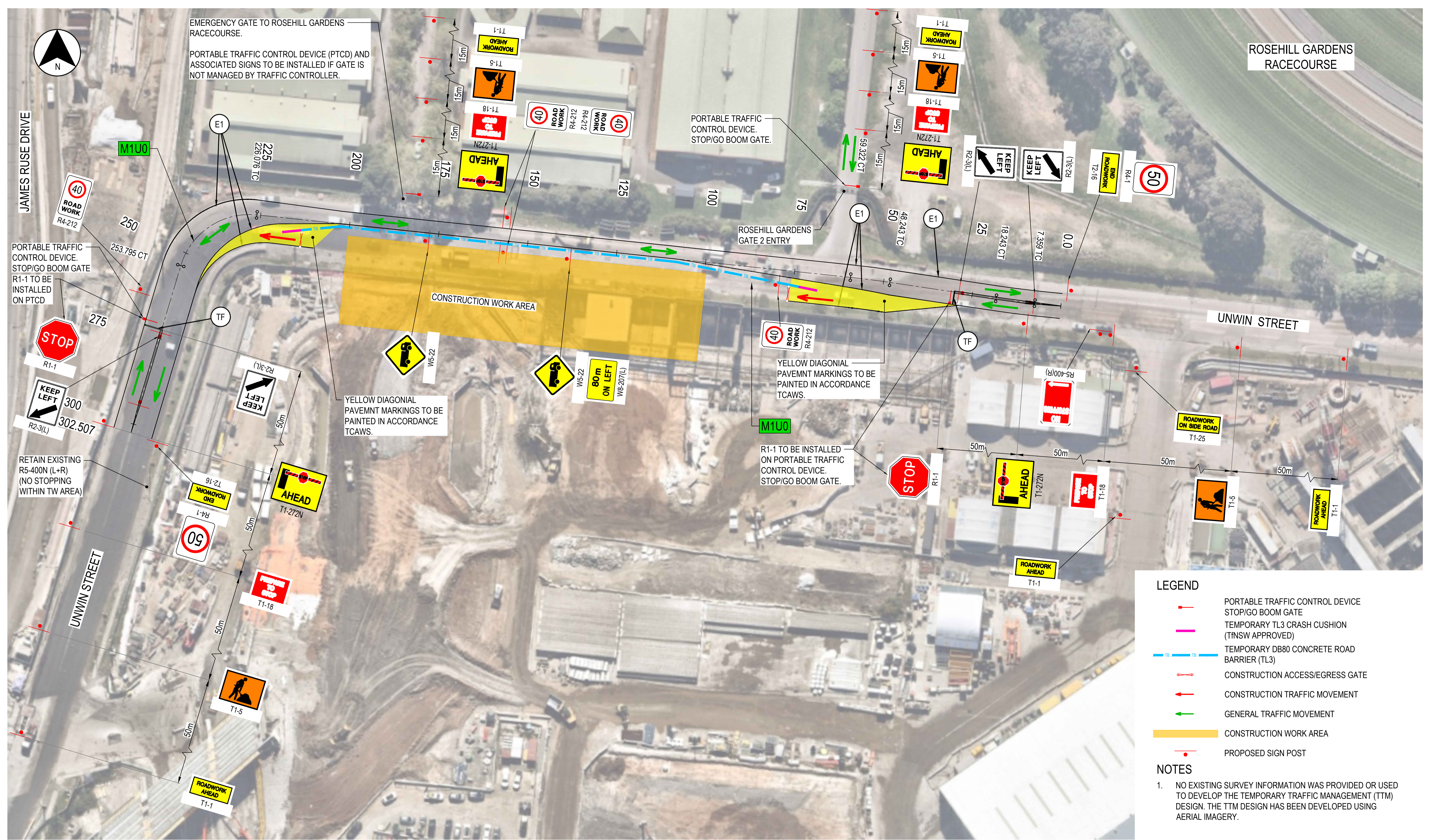
The proposed date is 28th October to 7th December 2024.

A long-term lane closure is proposed on Unwin St which will require 24/7 traffic control under shuttle flow (stop/slow) for the duration of the works. Approved TfNSW safety barriers are also proposed to be implemented for the duration of the works.

### 4.2 TGS/Stage Plan

Staging Plan P0153-DTAL-0000-RW-DRG-101002 will be in place for the duration of these works. This plan is shown over page in figure 21 along with cross sections (figure 22) and swept paths (figures 23-26). The single staging plan will remain the same throughout this section of works. Site stopping distance checks are included in Appendix 3.





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NOT FOR CONSTRUCTION

REFERENCES:

B	POST TfNSW TMP REVIEW	DT 25.09.24	DT 25.09.24	DT 25.09.24
A	ISSUED FOR INFORMATION	DT 04.09.24	DT 04.09.24	DT 04.09.24
REV	DESCRIPTION	DESIGNER INITIAL/DATE	VERIFIED INITIAL/DATE	APPROVED INITIAL/DATE

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED.

COORDINATE SYSTEM: GDA2020

HEIGHT DATUM: AHD

SCALE: AS SHOWN

1:500 @ A1

DESIGN LOT CODE:

CLIENT:

**LAING O'ROURKE**

PREPARED FOR:

**GAMUDA Australia**

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**D-TAL**

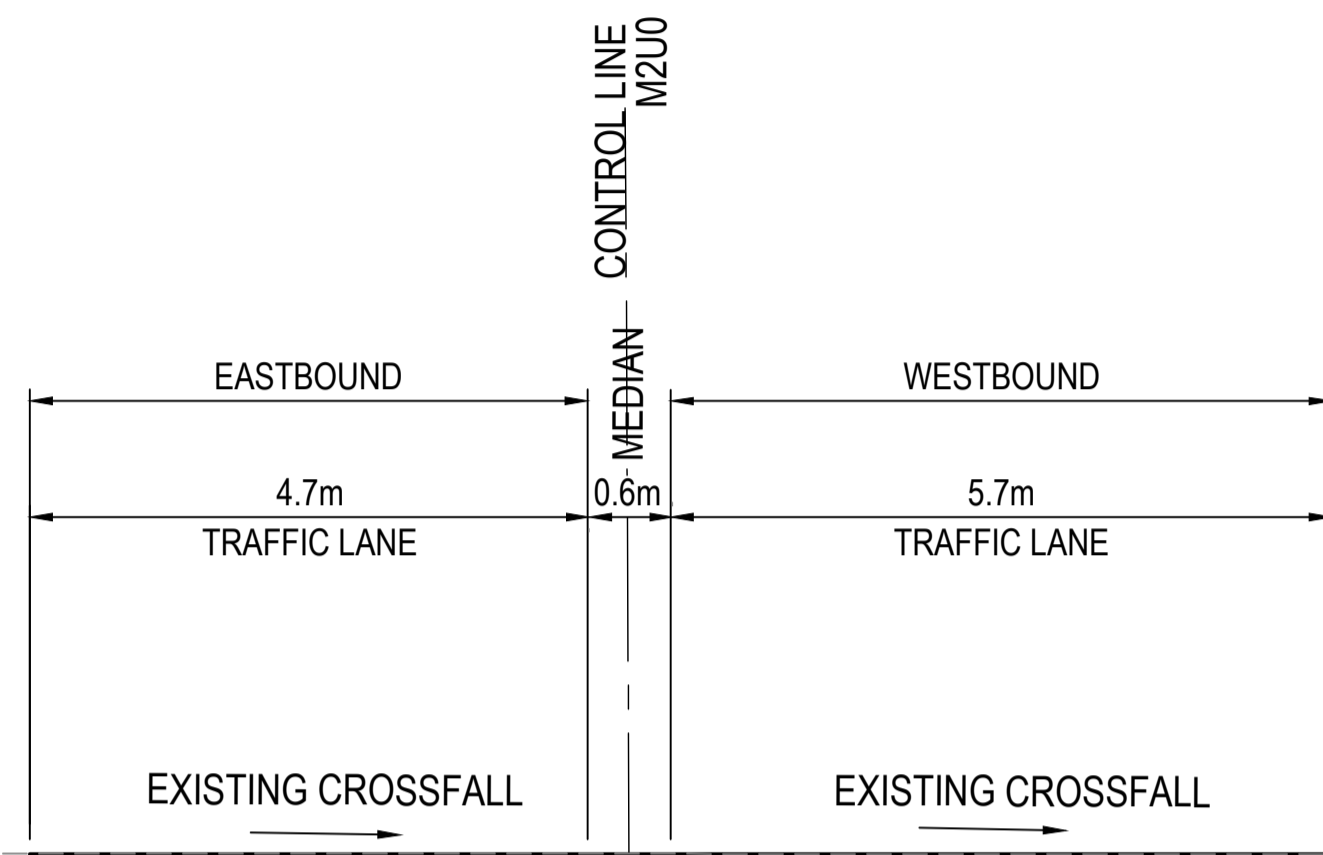
**CASE**  
CIVIL AND STRUCTURAL ENGINEERING

DRAWN	J.HARRIS	25.09.24
DESIGNED	D.TALEVSKI	25.09.24
DRG CHECK	J.HARRIS	25.09.24
DESIGN CHECK	D.TALEVSKI	25.09.24
PROJ DESIGN MGR	D.TALEVSKI	25.09.24
APPROVED	D.TALEVSKI	25.09.24

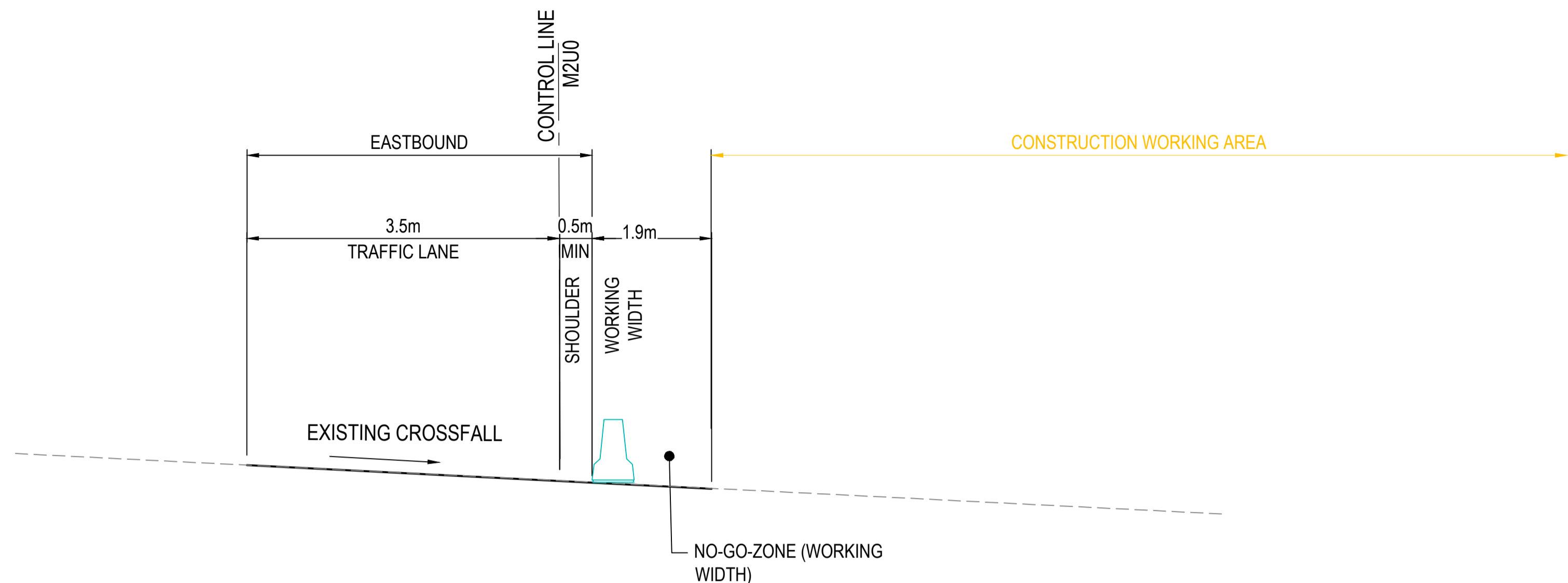
SYDNEY METRO WEST  
UNWIN STREET  
ROAD ALIGNMENT AND DETAIL  
PLAN  
STAGE 2

FILE No/DRAWING SET No:	PART	SHEET: 2 OF 2	A1
STATUS: FOR INFORMATION	BRIDGE No:	©	
DRG No: P0153-DTAL-0000-RW-DRG-101002	REV B	VER	EDMS No. AMD No.

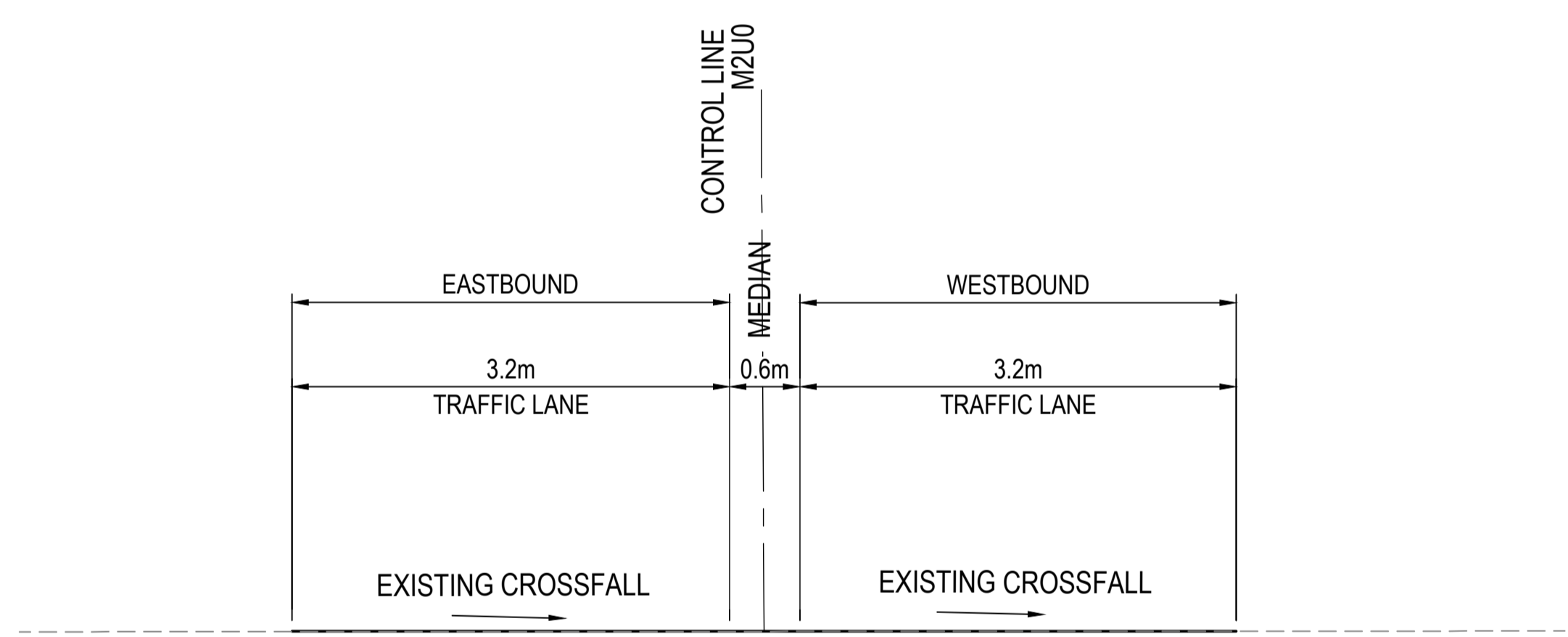




UNWIN ST NORTHERN DIVERSION PART 2 (M2U0) - CH 280  
1:250



UNWIN STREET NORTHERN DIVERSION PART 2 (M2U0) - CH 150  
1:250



UNWIN ST NORTHERN DIVERSION PART 2 (M2U0) - CH 20  
1:250

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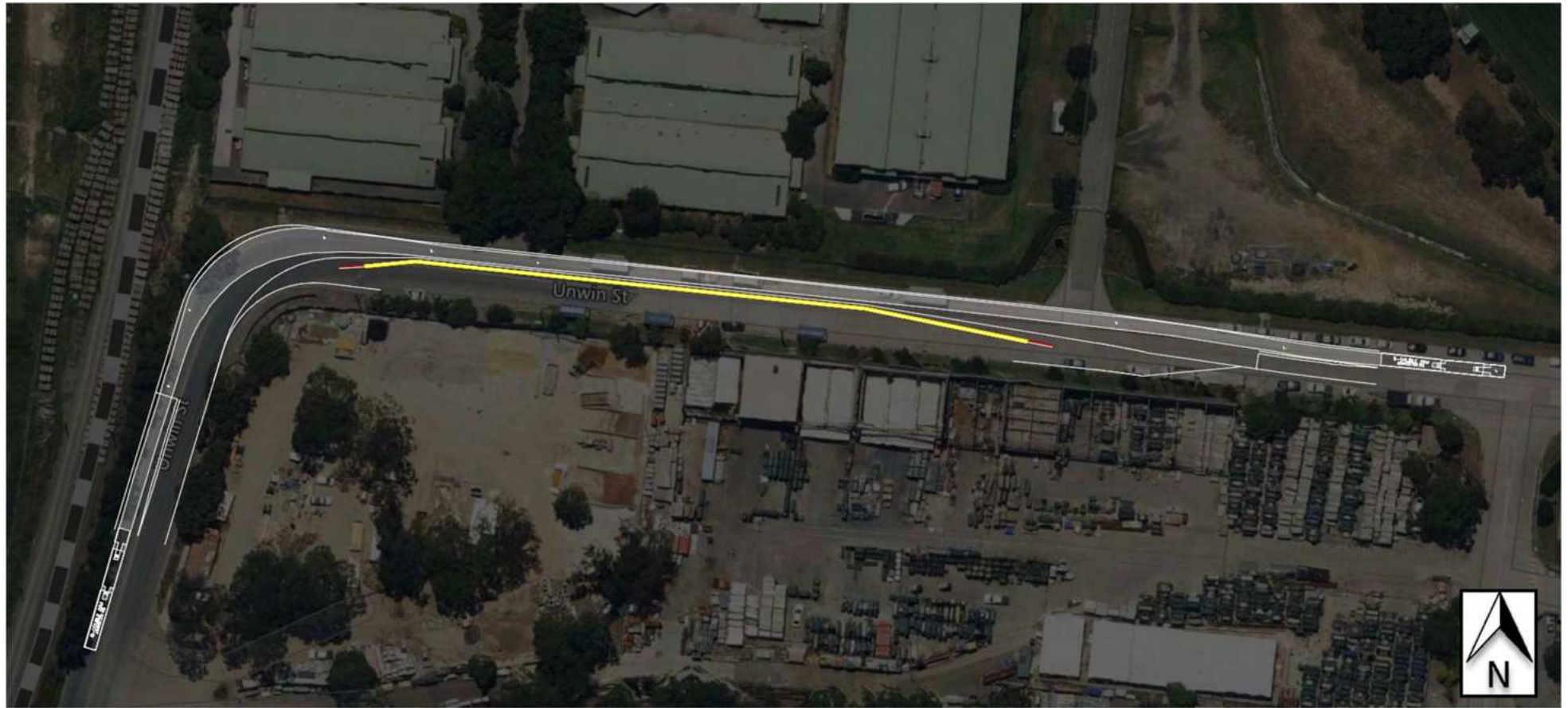
REFERENCES:	THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED.			SCALE: AS SHOWN	CLIENT:	<small>This drawing and the related information have been prepared by, or at the request of, Transport for NSW for a specific purpose and may not be used for any purpose other than the purpose intended by Transport for NSW. Transport for NSW does not provide any warranties and accepts no liability arising out of the use of this drawing or any of the related information for any purpose other than the intended purpose. This drawing is protected by copyright and no part of this drawing may be reproduced in any form without the express written permission of Transport for NSW.</small>	WESTERN HARBOUR TUNNEL UNWIN STREET ROAD ALIGNMENT AND DETAIL TYPICAL SECTIONS STAGE 2
						DRAWN --- J.HARRIS --- 04.09.24 DESIGNED --- D.TALEVSKI --- 04.09.24 DRG CHECK --- J.HARRIS --- 04.09.24 DESIGN CHECK --- D.TALEVSKI --- 04.09.24 PROJ DESIGN MNGR --- D.TALEVSKI --- 04.09.24 APPROVED --- D.TALEVSKI --- 04.09.24	
							FILE No/DRAWING SET No: PART SHEET: 1 OF 1 A1 STATUS: FOR INFORMATION BRIDGE No: © DRG No: P0153-DTAL-0000-RW-DRG-202001 REV A VER EDMS No. AMD No.
COORDINATE SYSTEM: GDA2020			HEIGHT DATUM: AHD	DESIGN LOT CODE:			



## TURNPATH – P0153 UNWIN STREET NORTHERN DIVERSION PART 2

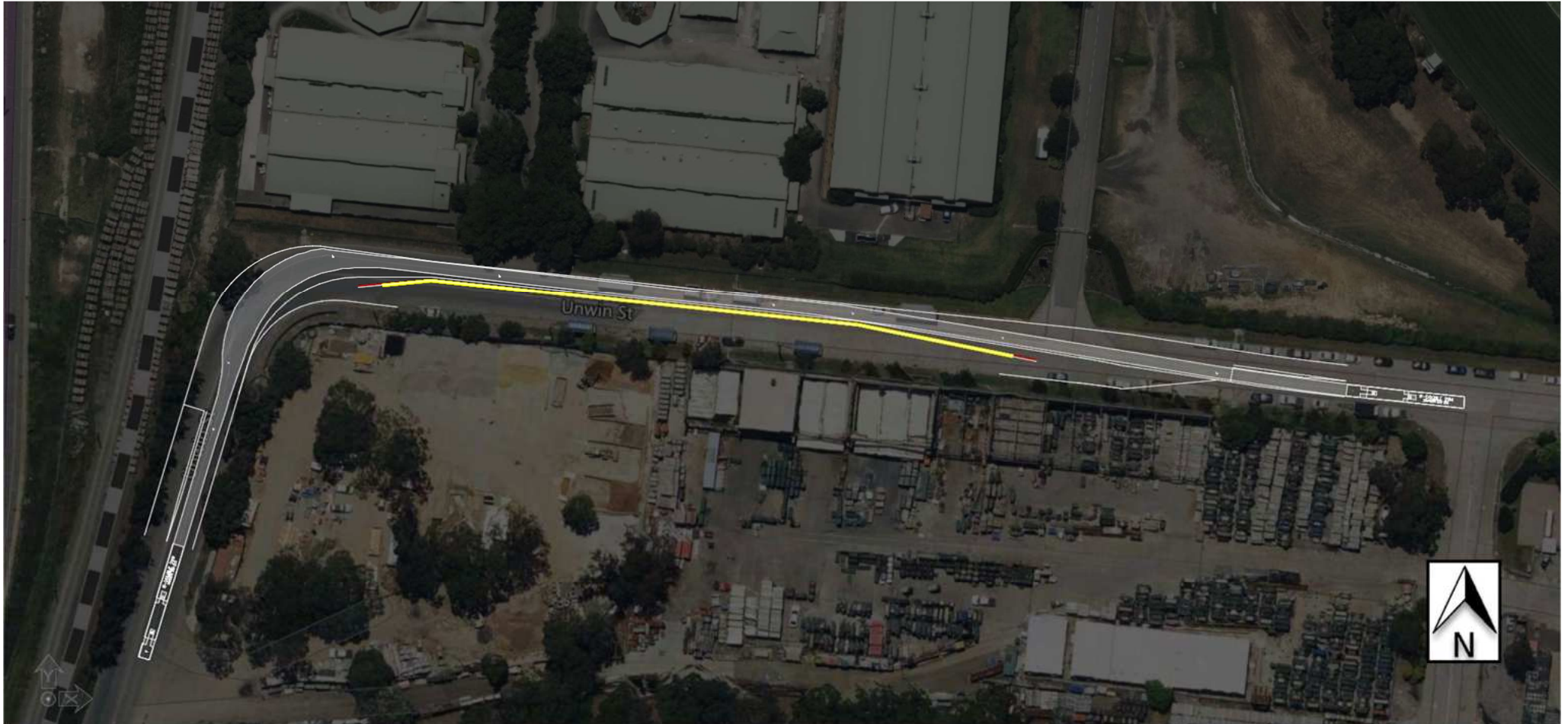
### UNWIN ST EASTBOUND

*Design Vehicle = 26m B-DOUBLE*



**UNWIN ST WESTBOUND**

*Design Vehicle = 26m B-DOUBLE*





**UNWIN ST WESTBOUND ENTRY GATE**

*Construction Vehicle = 19m SEMI*



**UNWIN ST WESTBOUND EXIT GATE**

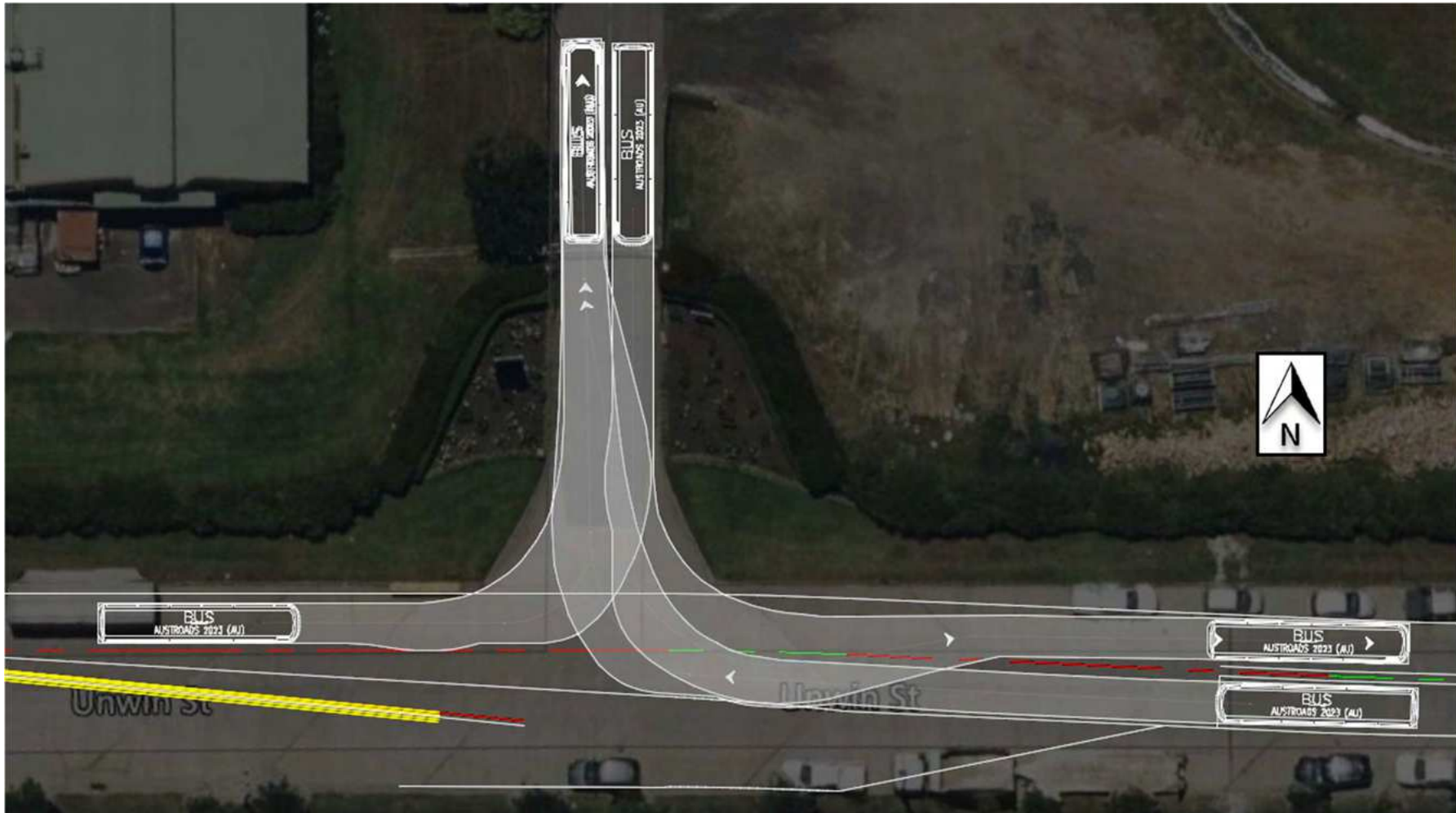
*Construction Vehicle = 19m SEMI*





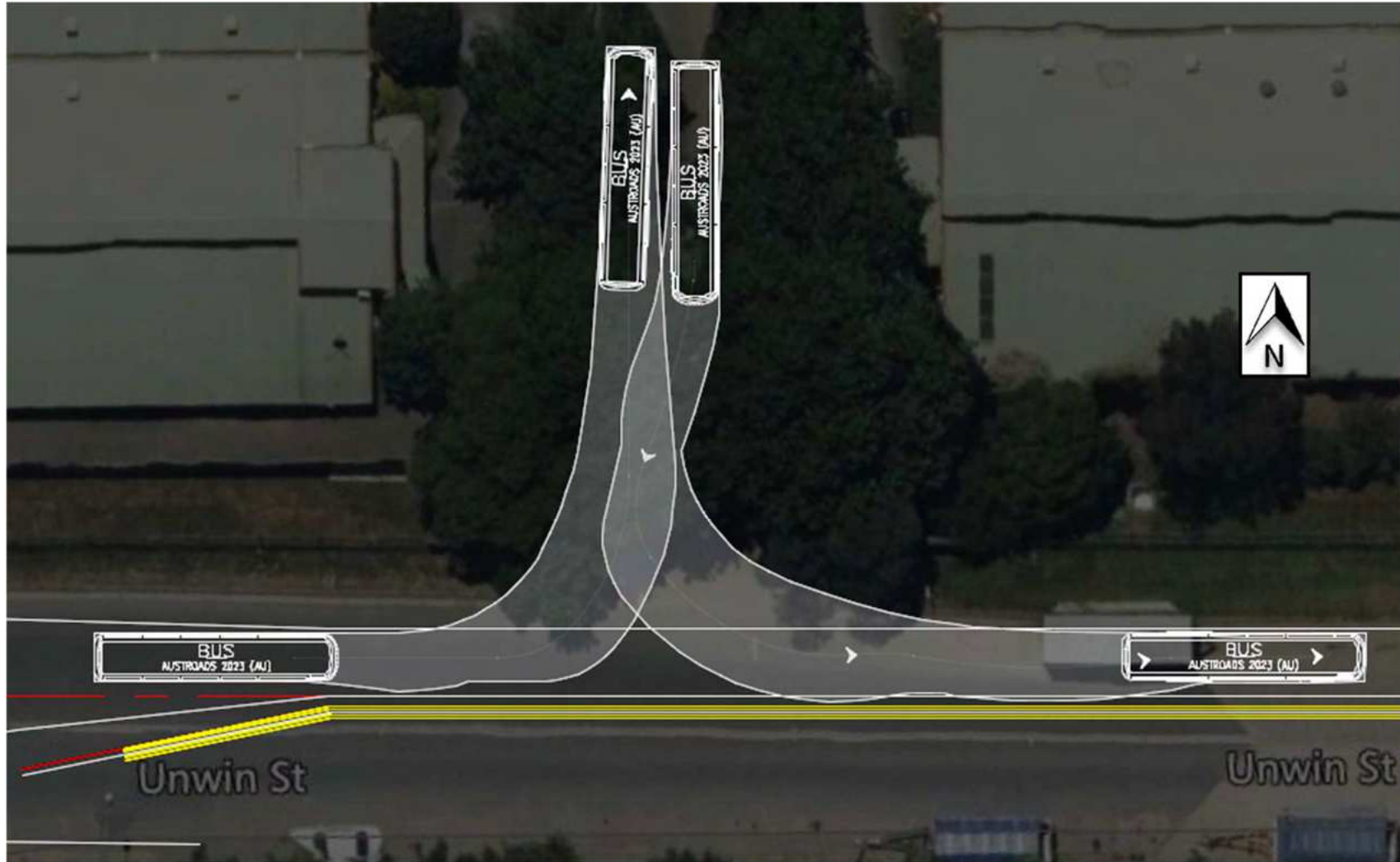
**UNWIN ST ROSEHILL GARDENS GATE 2 (EAST)**

*Design Vehicle = 12.5m long BUS*



**UNWIN ST ROSEHILL GARDENS EMERGENCY GATE (WEST)**

*Design Vehicle = 12.5m long BUS*





### 4.3 VMS

VMS locations and VMS messaging strategies are shown in Figure 27 and Table 6 below

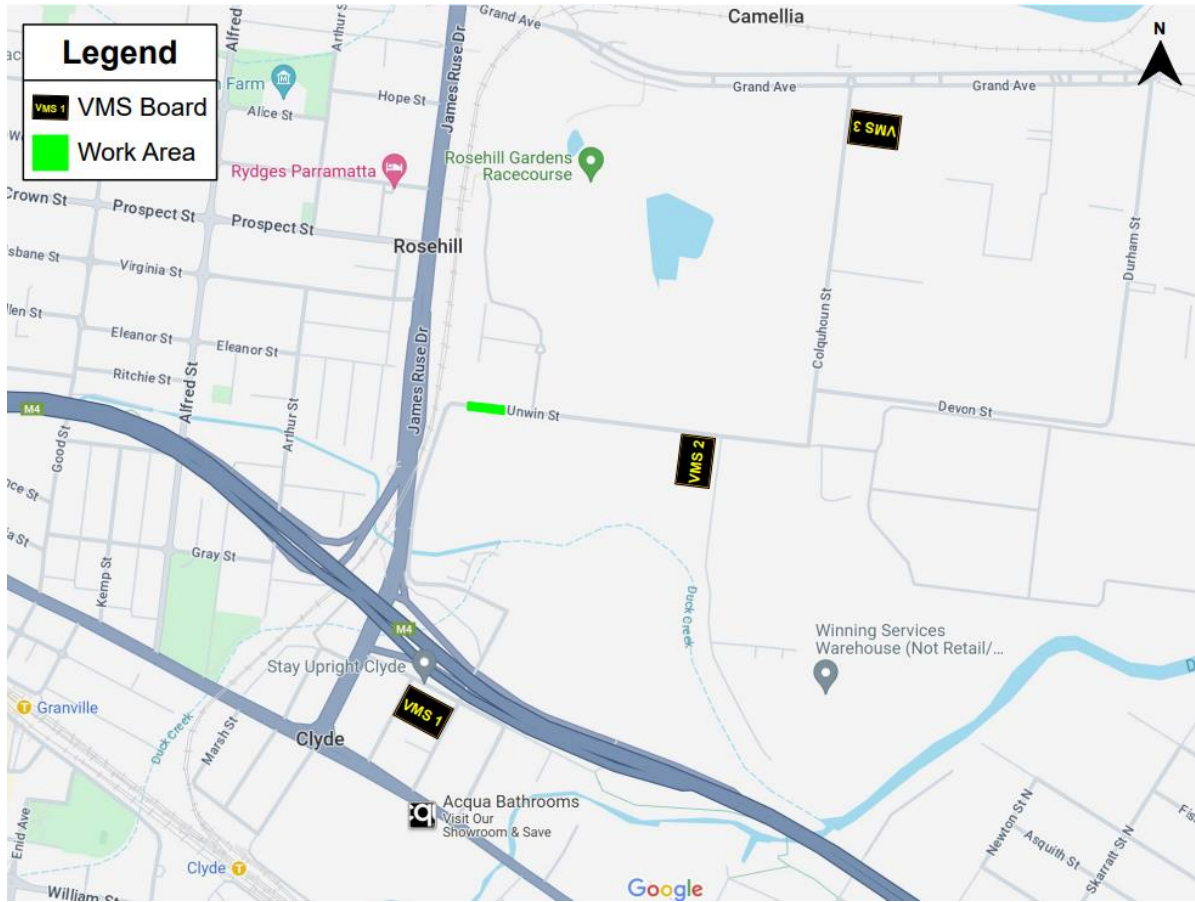



Figure 27 – VMS location map

Table 6 - Unwin St Section 2 VMS Strategy

VMS Unit	Street location	Specific location	Aerial Location	Street View location	Preconstruction messaging	During construction messaging	
					7 days prior	24/7	
1	Wentworth St, Clyde	Wentworth St facing south approx. 20-30m south of Martha St			Screen 1	<b>ROADWORK UNWIN ST FROM 30/09</b>	<b>ROADWORK AHEAD UNWIN ST</b>
					Screen 2		<b>EXPECT DELAYS</b>
2	Unwin St, Rosehill	Unwin St facing east approx. 20m west of Shirley St			Screen 1	<b>ROADWORK UNWIN ST FROM 30/09</b>	<b>ROADWORK AHEAD UNWIN ST</b>
					Screen 2		<b>EXPECT DELAYS</b>



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3	Colquhoun St, Rosehill	Colquhoun St facing north approx. 30m south of Grand Ave			Screen 1	<b>ROADWORK UNWIN ST FROM 30/09</b>	<b>ROADWORK AHEAD UNWIN ST</b>
					Screen 2	<b>EXPECT DELAYS</b>	

## 4.4 Construction Traffic Generation

Vehicles of various sizes are expected to attend the worksite each shift during these works. Vehicles include but are not limited to light vehicles, semi-trailers (floats/deliveries), agi's, asphalt trucks, rollers. As long-term works are proposed only minimal light vehicles are expected in AM and PM peaks. All other vehicles will remain on site after initial delivery until works is completed and then removed from site.

Table 7 - Vehicle movements per shift

Vehicle Type	Estimated Movements Per Shift		
	In	Out	Total
Traffic Vehicles	2	2	4
Light Vehicles (work Utes/support vehicles)	3	3	6
Franna (barriers only – first shift, change over shift and last shift only)	1	1	2
Semi-trailers (barriers/deliveries)	3	3	6
Excavator (remain on site)	1	1	2
Agi's (some shifts only)	5	5	10
Asphalt (some shifts only)	5	5	10
<b>Total</b>			<b>40</b>

## 4.5 Construction Haulage

Construction haulage routes are as per the EIS and HVLR report. The Roads utilised include:

- James Ruse Drive
- Grand Avenue
- Colquhoun Street
- Unwin Street
- Wentworth Street
- Parramatta Road



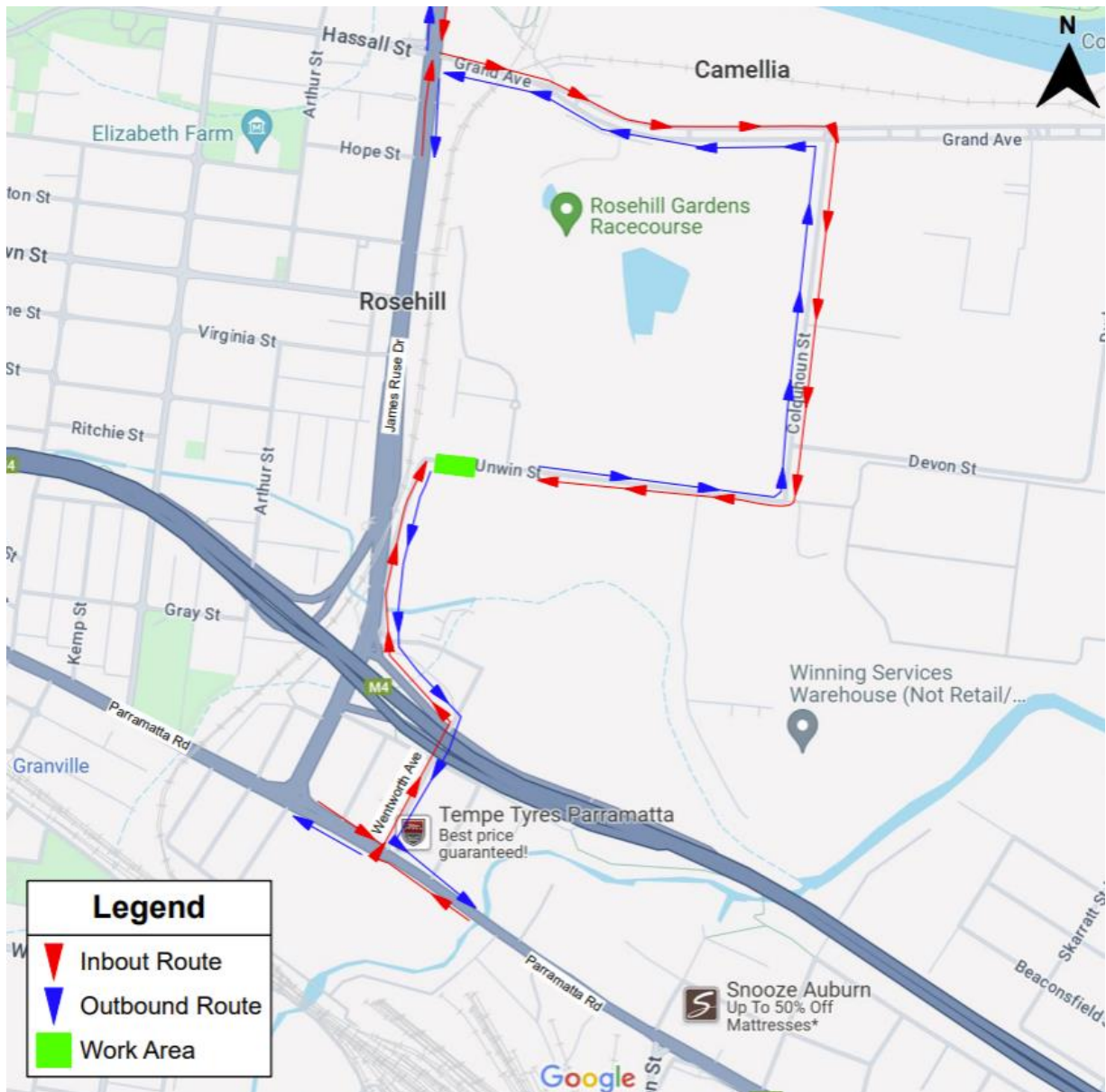


Figure 28 - Haulage Route

## 4.6 Impacts on Traffic Flow

Unwin Street is a local road which primarily serves to provide access to the surrounding/adjoining industrial land uses. Traffic volumes are low and hence minimal impact on traffic is expected under this set-up. Traffic Controllers will adjust to priority flow as required if any queues eventuate

## 4.7 Impacts on Parking

There are no impacts on parking as part of this CTMP implementation.

## 4.8 Impacts on Properties and Utilities

Full access is still permitted along Unwin St and surrounding sheets. Community notifications will advise of works and possible minor delays.

Rosehill Gardens has an emergency exit gate that opens onto the proposed work area. This gate will remain accessible under this portion of works.



Figure 29 - Rosehill Gardens gate to be blocked as part of this stage

## 4.9 Impacts on Pedestrians and Cyclists



Cyclists will be permitted to pass through work site under the traffic control conditions. Pedestrians will be diverted onto opposite footways during each section of works. Temporary ramps that will comply with AS1428.1 will be provided as required and the area checked regularly to ensure it is free of any hazards. Traffic Controllers will stop traffic to allow pedestrians to cross any traffic lanes until return to regular footway.

#### 4.10 Impacts on Public Transport

Unwin Street is not a public transport route. There are no impacts to Public Transport as part of this CTMP.

#### 4.11 Impacts on Emergency Services

Emergency Services will always have priority under lights and sirens. On approach traffic controllers will stop all directions to allow Emergency vehicle to pass through work site.

#### 4.12 Impacts on major Events

Rosehill Gardens has 5 expected race days during the proposed works period:

Saturday 2<sup>nd</sup> November

Saturday 9<sup>th</sup> November

Wednesday 13<sup>th</sup> November

Saturday 30<sup>th</sup> November

GLC will ensure all traffic control measures assist in bump-in and bump-out of event traffic in line with Rosehill Gardens/ATC preferences.

## 5. WEEKEND CLOSURE – UNWIN ST

### 5.1 Proposed Conditions

To allow final completions works and open to new alignment a 36hr weekend shutdown closure is proposed. The proposed dates/times are 1900 Saturday 7th December to 0500 Monday 9th December 2024.

The 36hr Closure will close Unwin St at the Colquhoun St/Devon St intersection, Unwin St/Shirley St Intersection and at Wentworth St/Martha St intersection shown in Figure 30. Vehicle access to and from the construction site will be managed at each closure point by Traffic Control to maintain safe access and egress.

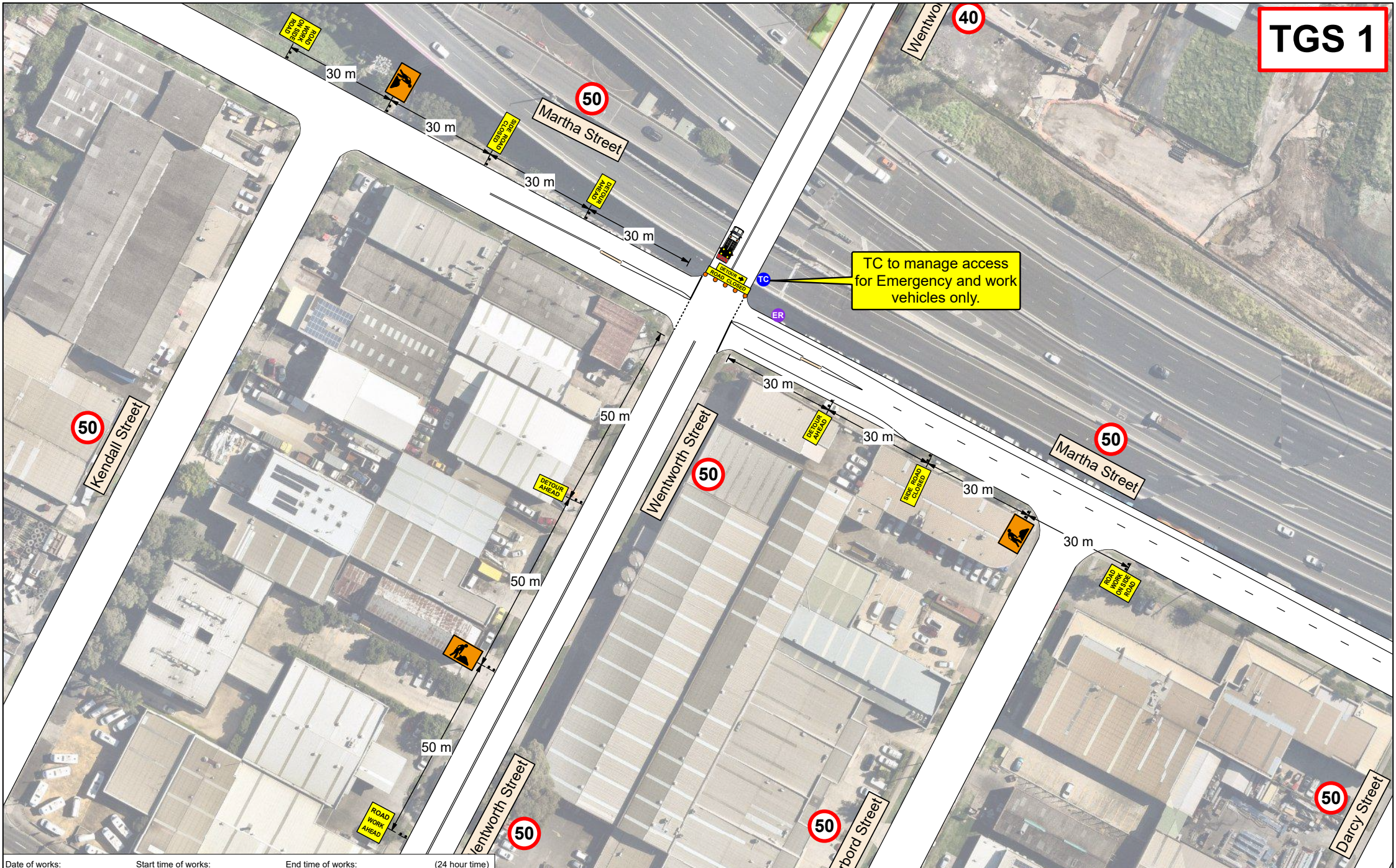


Figure 30 - Closure overview

### 5.2 TGS

A single traffic guidance scheme will be in place for the duration of these works. TGS highlights closure points and is shown over page in figure 31. For note risk assessment has been removed from this TGS for clarity. Full TGS with risk assessment is included in Appendix 3.

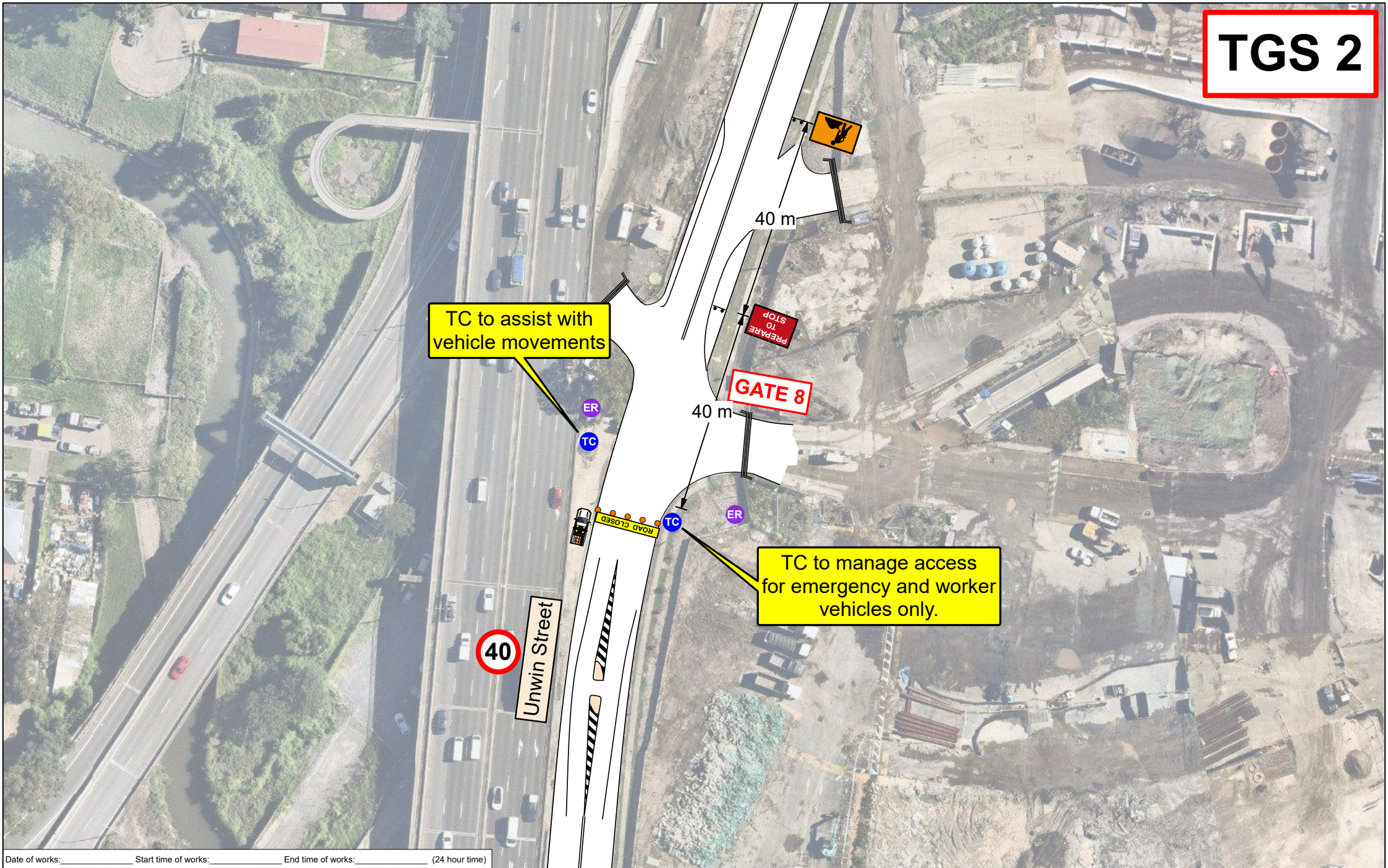




Date of works: \_\_\_\_\_ Start time of works: \_\_\_\_\_ End time of works: \_\_\_\_\_ (24 hour time)

Issue	Desg	Appd	Date & Time	Amendment Description	TGS Name & Number:	TGS Designed By:	PWZTMP:	Exp:	Signature:	Date of Approval:	Page 4 / 10
01	AC	PL	17/10/2023 22:30	Original Issue	LGP - 63822 - GLC 151 - Wentworth to Unwin St - Clyde - CS6 TS4 - Road	Alec Czarnowski	TCT1010645	N/A	AC	24/09/2024	  
02	AC	PL	07/11/2023 13:15	Amended as per comments	Works Location:	Peter Lozano	TCT0058486	N/A			
03	AC	PL	07/11/2023 16:30	Amended as per comments	Wentworth to Unwin Street - Clyde	Client Company:	Gamuda Australia				
04	AC	PL	13/11/2023 12:06	Amended detour	Project Name:	Client Contact:	Daniel Kelly	Contact Number:	0437 315 649		
05	DK	KD	24/09/2024 15:15	Moved closure to Rosehill Race Gate	Sydney Metro Werstern Tunnelling	Project Description:	Construction Stage 6 - Traffic Switch 4				
Scale: 1 : 750				Original Size A3	Lack Group acknowledges the traditional owners of country throughout Australia and recognises their continuing connection to land, waters and community. We pay our respect to them and their cultures; and to elders both past and present.						

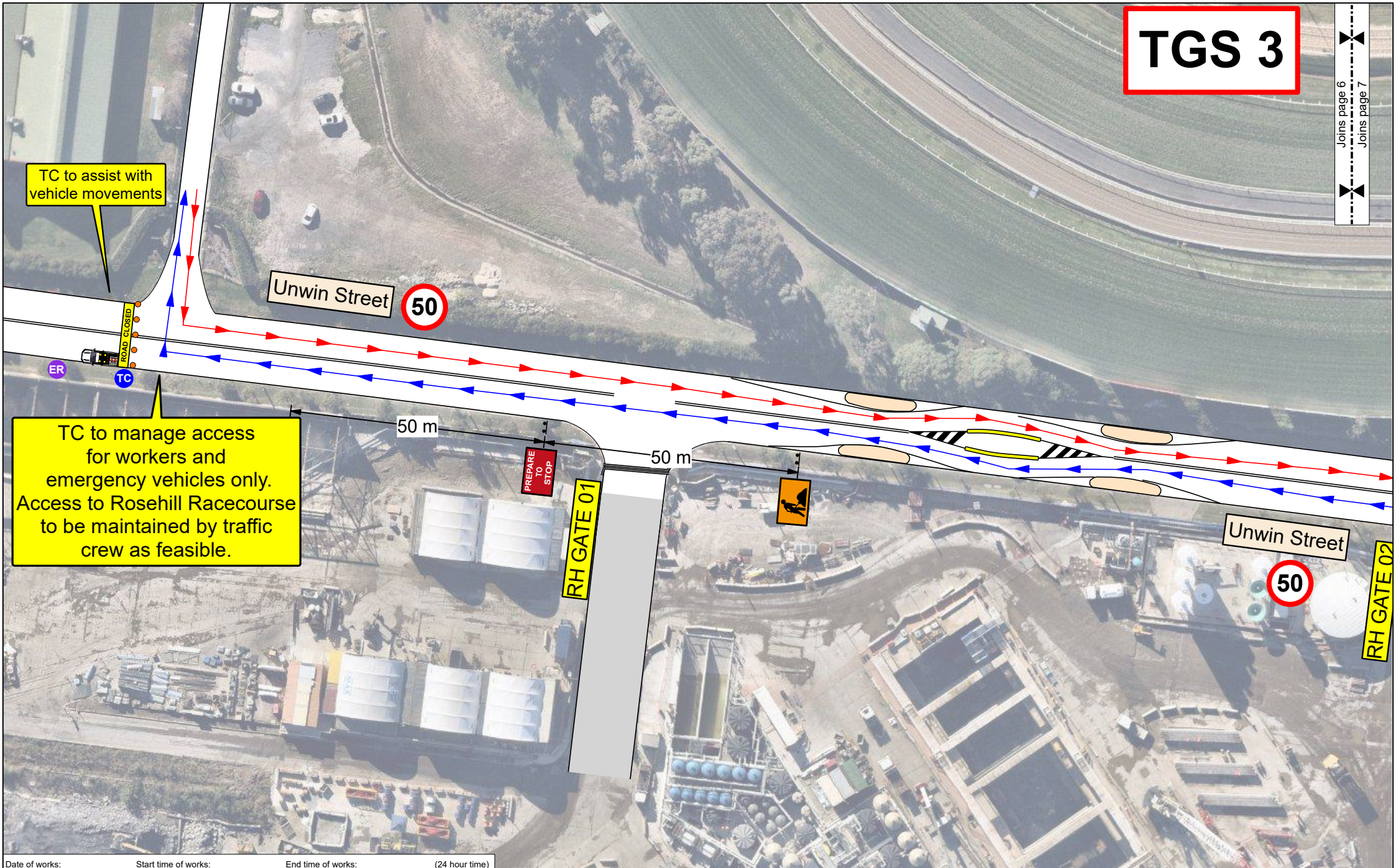




Date of works: \_\_\_\_\_ Start time of works: \_\_\_\_\_ End time of works: \_\_\_\_\_ (24 hour time)

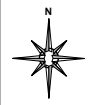
Issue	Desg	Appd	Date & Time	Amendment Description	TGS Name & Number:	TGS Designed By:	PWZTMP:	Exp:	Signature:	Date of Approval:	Page 5 / 10
01	AC	PL	17/10/2023 22:30	Original Issue	LGP - 63822 - GLC 151 - Wentworth to Unwin St - Clyde - CS6 TS4 - Road	Alec Czarnowski	TCT1010645	N/A	AC	24/09/2024	
02	AC	PL	07/11/2023 13:15	Amended as per comments	Works Location:	Peter Lozano	TCT0058486	N/A			
03	AC	PL	07/11/2023 16:30	Amended as per comments	Wentworth to Unwin Street - Clyde	Client Company:					
04	AC	PL	13/11/2023 12:06	Amended detour	Project Name:	Client Contact:	Contact Number:				
05	DK	KD	24/09/2024 15:15	Moved closure to Rosehill Race Gate	Sydney Metro Werstern Tunnelling						
Scale: 1 : 750					Original Size A3		Lack Group acknowledges the traditional owners of country throughout Australia and recognises their continuing connection to land, waters and community. We pay our respect to them and their cultures; and to elders both past and present.				





Date of works: \_\_\_\_\_ Start time of works: \_\_\_\_\_ End time of works: \_\_\_\_\_ (24 hour time)

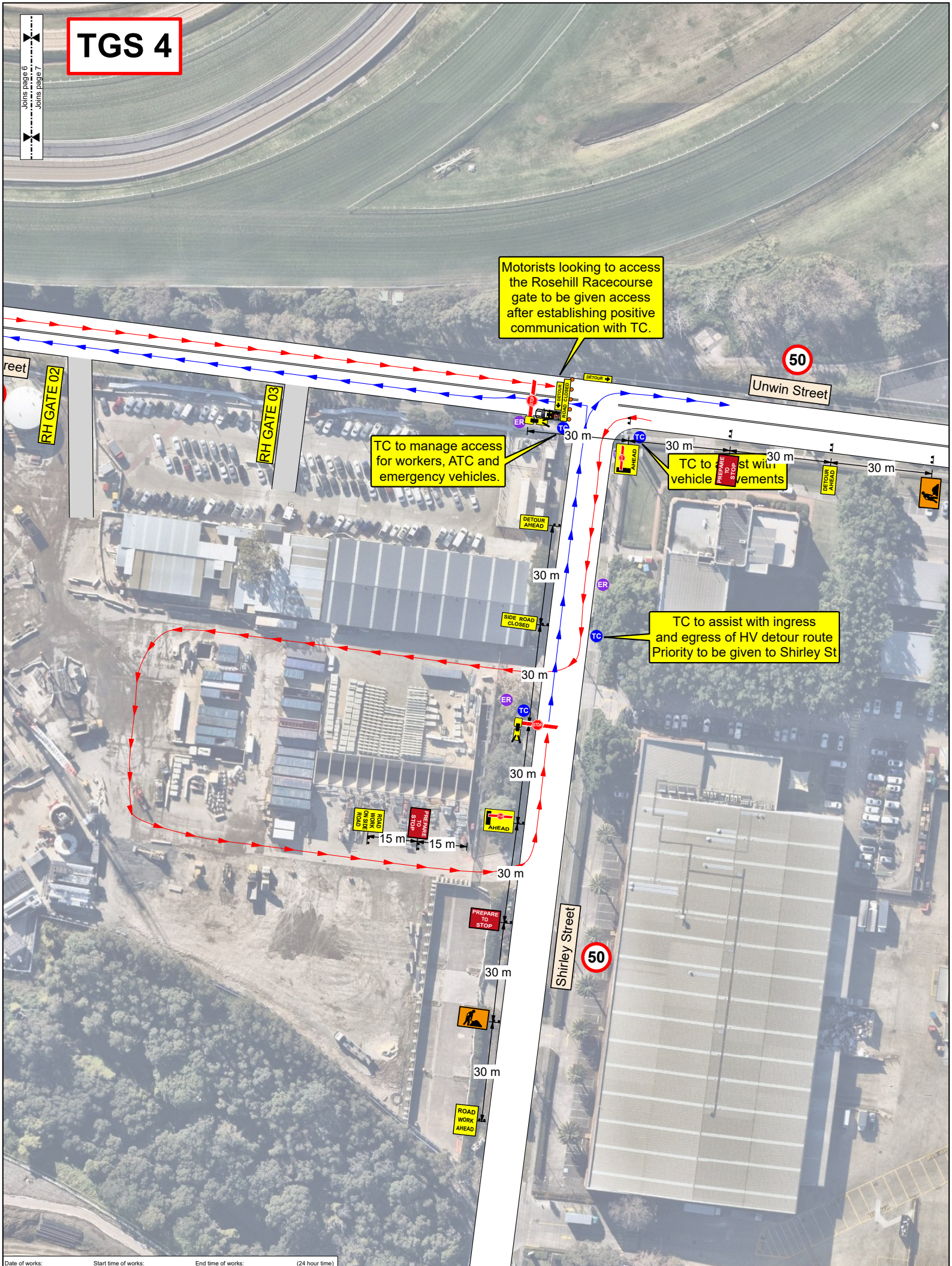
Issue	Desg	Appd	Date & Time	Amendment Description	TGS Name & Number:	TGS Designed By:	PWZTMP:	Exp:	Signature:	Date of Approval:	Page 6 / 10
01	AC	PL	17/10/2023 22:30	Original Issue	LGP - 63822 - GLC 151 - Wentworth to Unwin St - Clyde - CS6 TS4 - Road	Alec Czarnowski	TCT1010645	N/A	AC	24/09/2024	
02	AC	PL	07/11/2023 13:15	Amended as per comments		Works Location:	Peter Lozano	TCT0058486	N/A		
03	AC	PL	07/11/2023 16:30	Amended as per comments	Wentworth to Unwin Street - Clyde	Client Company:	Gamuda Australia				
04	AC	PL	13/11/2023 12:06	Amended detour	Project Name:	Client Contact:	Daniel Kelly		Contact Number:	0437 315 649	
05	DK	KD	24/09/2024 15:15	Moved closure to Rosehill Race Gate	Sydney Metro Werstern Tunnelling	Project Description:	Construction Stage 6 - Traffic Switch 4				
Scale: 1 : 750				Original Size A3	Lack Group acknowledges the traditional owners of country throughout Australia and recognises their continuing connection to land, waters and community. We pay our respect to them and their cultures; and to elders both past and present.						





# TGS 4

JOINS page 6  
JOINS page 7



Date of works: \_\_\_\_\_ Start time of works: \_\_\_\_\_ End time of works: \_\_\_\_\_ (24 hour time)

Issue	Desg	Appd	Date & Time	Amendment Description	TGS Name & Number:	TGS Designed By:	PWZTMP:	Exp:	Signature:	Date of Approval:	Page 7 / 10
01	AC	PL	17/10/2023 22:30	Original Issue	LGP - 63822 - GLC 151 - Wentworth to Unwin St - Clyde - CS6 TS4 - Road	Alec Czarnowski	TCT1010645	Exp: N/A	AC	24/09/2024	
02	AC	PL	07/11/2023 13:15	Amended as per comments	Works Location:	Peter Lozano	TCT0058486	Exp: N/A			
03	AC	PL	07/11/2023 18:30	Amended as per comments	Wentworth to Unwin Street - Clyde						
04	AC	PL	13/11/2023 12:06	Amended detour	Project Name:						
05	DK	KD	24/09/2024 15:15	Moved closure to Rosehill Race Gate	Sydney Metro Werstern Tunnelling	Construction Stage 6 - Traffic Switch 4					

Scale: 1 : 750

Original Size A3

Lack Group acknowledges the traditional owners of country throughout Australia and recognises their continuing connection to land, waters and community. We pay our respect to them and their cultures; and to elders both past and present.

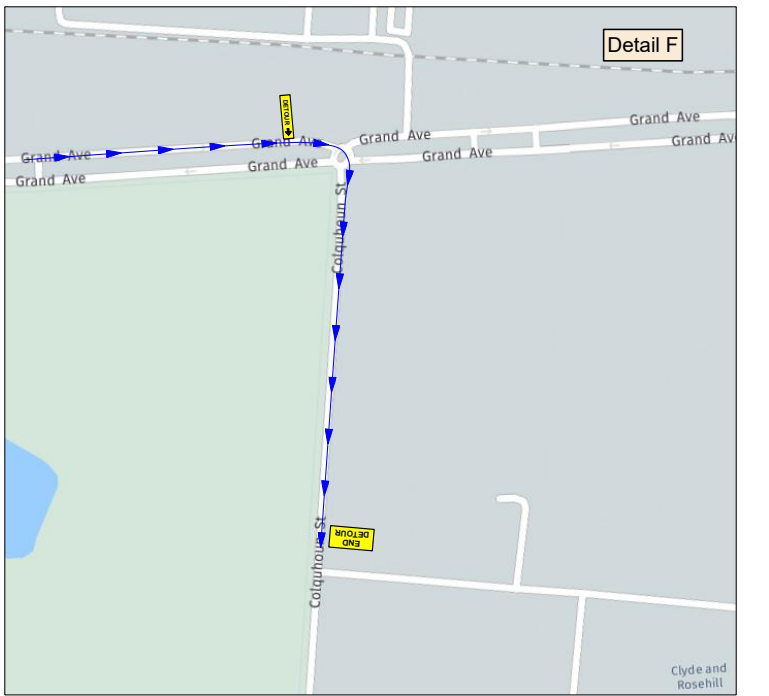
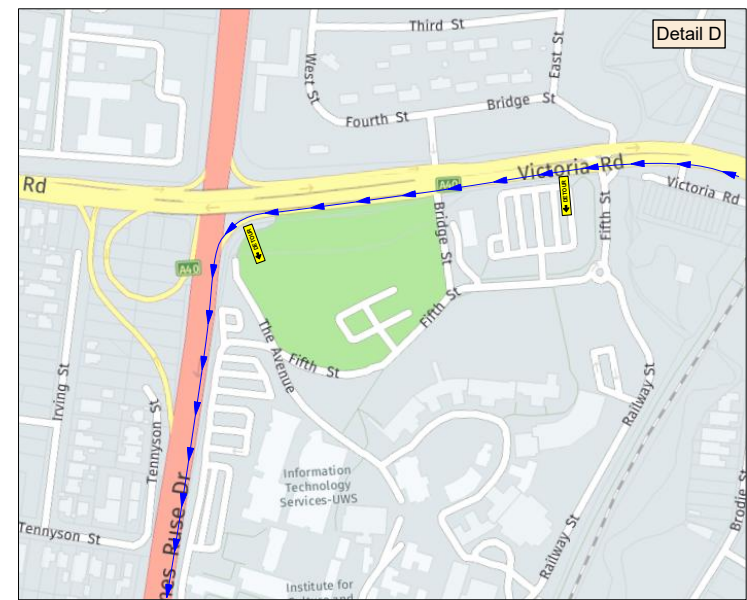
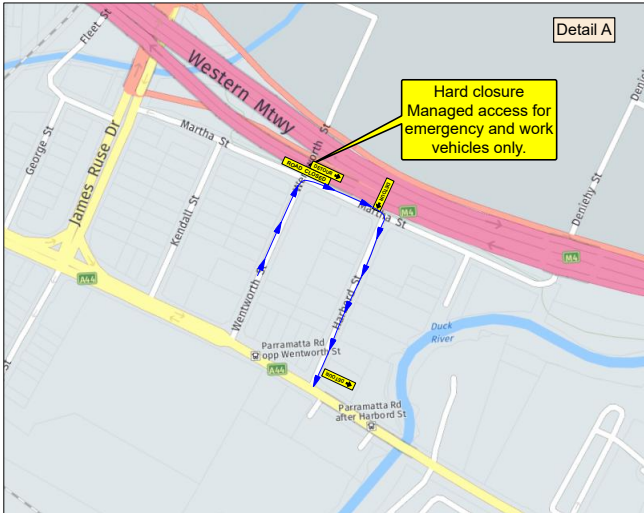
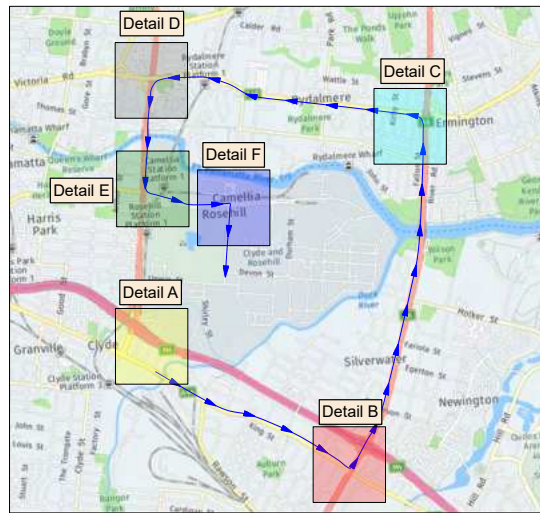








# Wentworth Closure detour Route (From Wentworth To Unwin)



Date of works: \_\_\_\_\_ Start time of works: \_\_\_\_\_ End time of works: \_\_\_\_\_ (24 hour time)

Issue	Desg	Appd	Date & Time	Amendment Description
01	AC	PL	17/10/2023 22:30	Original Issue
02	AC	PL	07/11/2023 13:15	Amended as per comments
03	AC	PL	07/11/2023 16:30	Amended as per comments
04	AC	PL	13/11/2023 12:06	Amended detour
05	DK	KD	24/09/2024 15:15	Moved closure to Rosehill Race Gate

TGS Name & Number: <b>LGP - 63822 - GLC 151 - Wentworth to Unwin St - Clyde - CS6 TS4 - Road</b>	
Works Location: <b>Wentworth to Unwin Street - Clyde</b>	
Project Name: <b>Sydney Metro Werstern Tunnelling</b>	Project Description: <b>Construction Stage 6 - Traffic Switch 4</b>

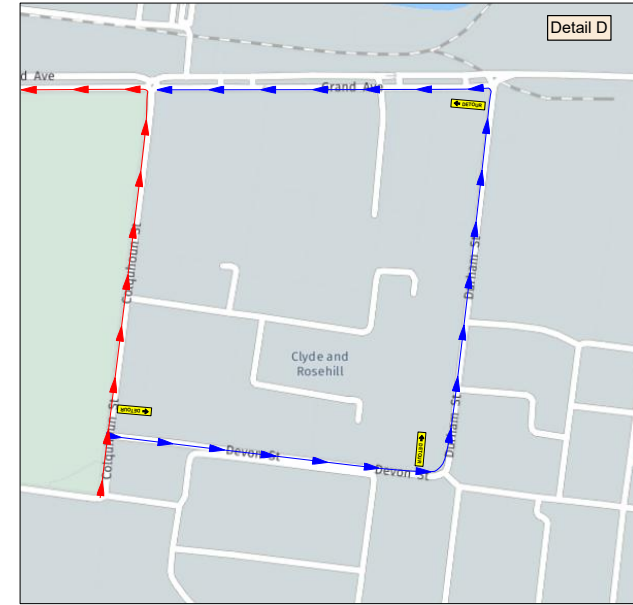
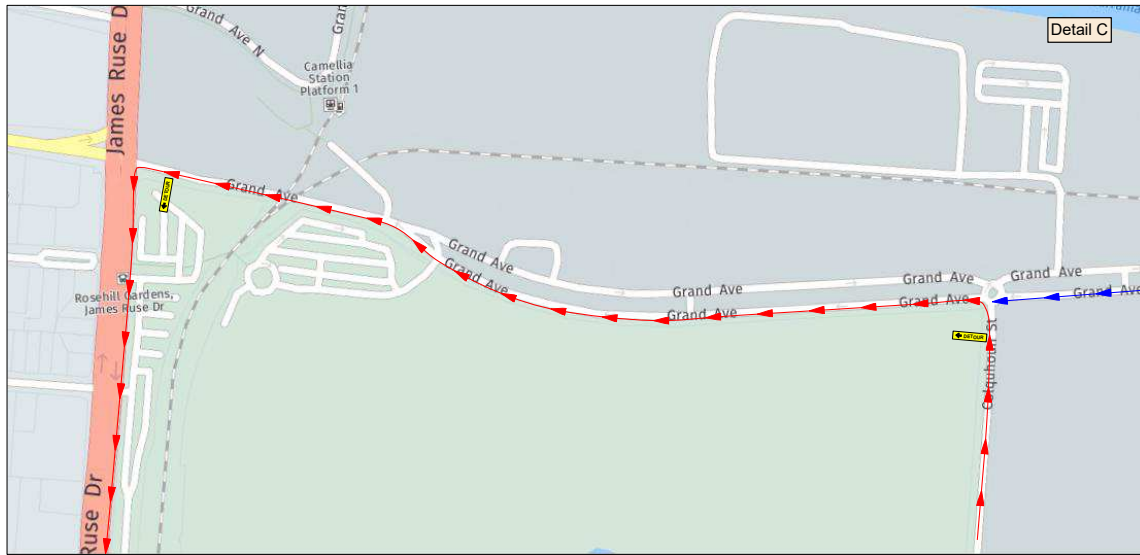
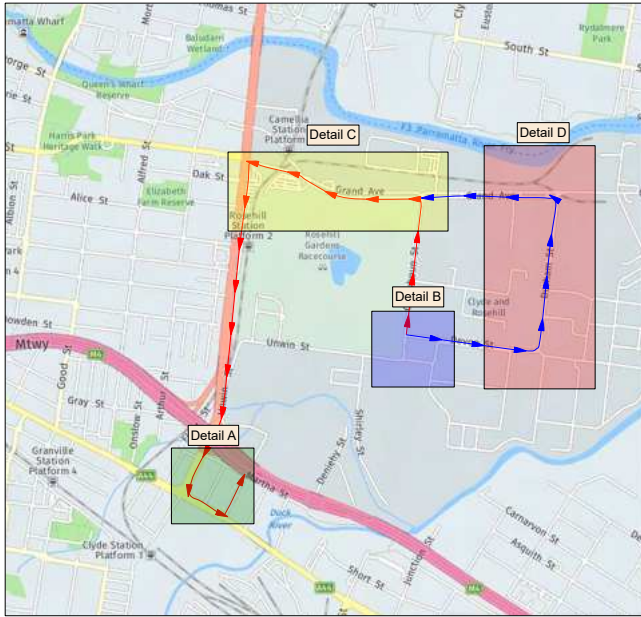
TGS Designed By: Alec Czarnowski	PWZTMP: TCT1010645	Exp: N/A	Signature: <i>AC</i>
TGS Approved By: Peter Lozano	PWZTMP: TCT0058486	Exp: N/A	Signature: <i>[Signature]</i>
Client Company: Gamuda Australia	Client Contact: Daniel Kelly	Contact Number: 0437 315 649	

Date of Approval: 24/09/2024

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## Unwin St Closure detour Route (From Unwin To Wentworth )



Date of works: \_\_\_\_\_ Start time of works: \_\_\_\_\_ End time of works: \_\_\_\_\_ (24 hour time)

Issue	Desg	Appd	Date & Time	Amendment Description	TGS Name & Number:
01	AC	PL	17/10/2023 22:30	Original Issue	LGP - 63822 - GLC 151 - Wentworth to Unwin St - Clyde - CS6 TS4 - Road
02	AC	PL	07/11/2023 13:15	Amended as per comments	Works Location:
03	AC	PL	07/11/2023 16:30	Amended as per comments	Wentworth to Unwin Street - Clyde
04	AC	PL	13/11/2023 12:06	Amended detour	Project Name:
05	DK	KD	24/09/2024 15:15	Moved closure to Rosehill Race Gate	Sydney Metro Werstern Tunnelling
				Original Size A3	Project Description:
					Construction Stage 6 - Traffic Switch 4

TGS Designed By: Alec Czarnowski	PWZTMP: TCT1010645	Exp: N/A	Signature: AC	Date of Approval:	Page 10 / 10
TGS Approved By: Peter Lozano	PWZTMP: TCT0058486	Exp: N/A	Signature: [Signature]	24/09/2024	
Client Company: Gamuda Australia	Client Contact: Daniel Kelly		Contact Number: 0437 315 649		

Scale: 1 : 750

Lack Group acknowledges the traditional owners of country throughout Australia and recognises their continuing connection to land, waters and community. We pay our respect to them and their cultures; and to elders both past and present.

### 5.3 VMS

VMS locations and VMS messaging strategies are shown in Figure 32 and Table 8 below

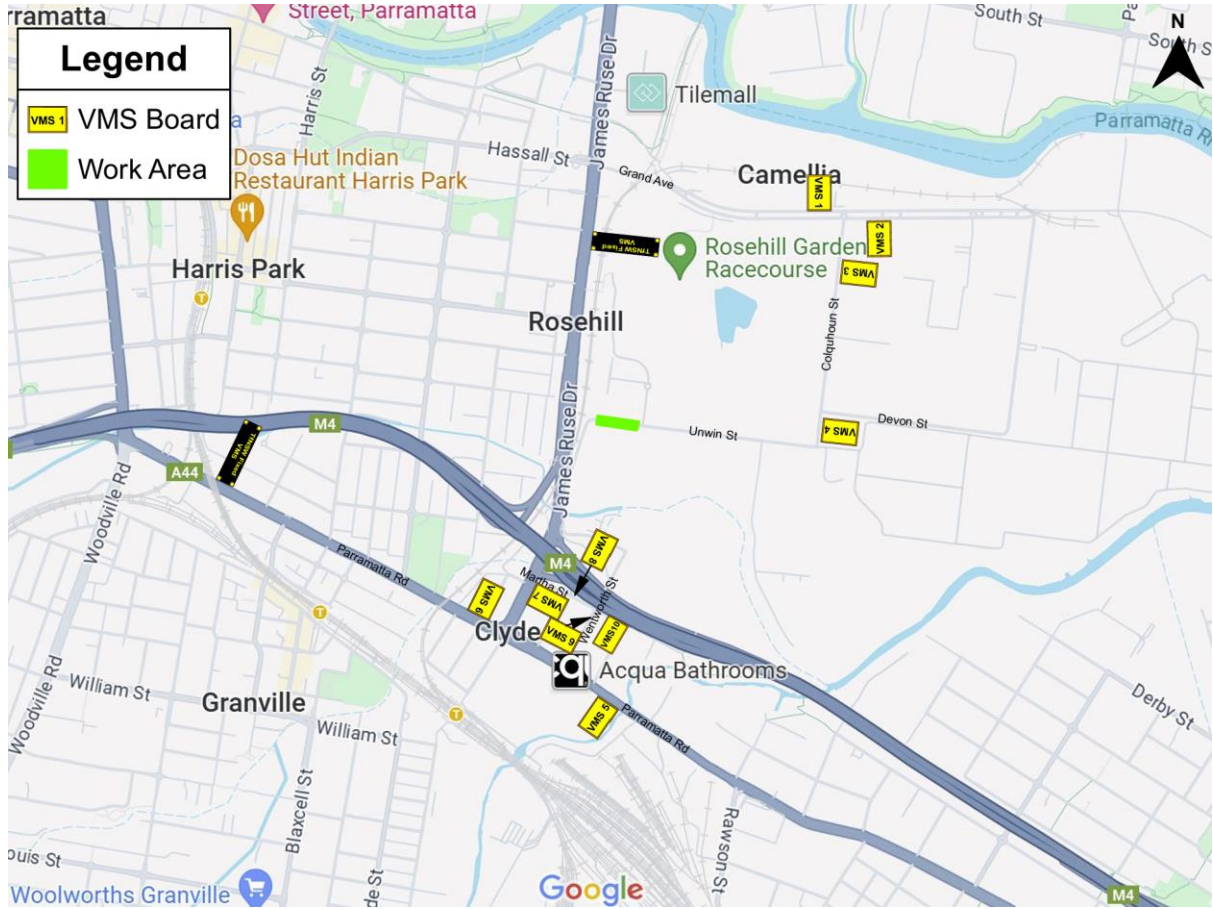



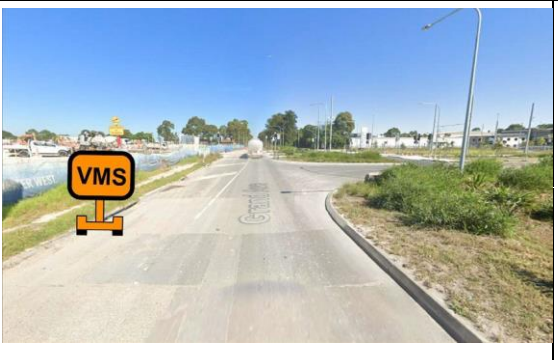




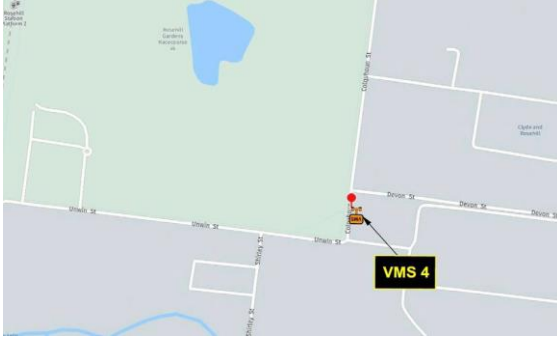
Figure 32 - Unwin St closure VMS location map



Table 8 - Unwin St Closure VMS Strategy

VMS Unit	Street location	Specific location	Aerial Location	Street View location	Preconstruction messaging	During construction messaging	
					7 days prior	24/7	
1	Grand Ave, Rosehill	GRAND AVE, 100m WEST OF COLQUHOUN ST FACING EASTBOUND TRAFFIC			Screen 1	<b>UNWIN ST CLOSURE 7-9 DEC</b>	<b>UNWIN ST CLOSED TIL 5AM MON</b>
					Screen 2	<b>LIVE TRAFFIC.COM</b>	<b>FOLLOW DETOUR</b>
2	Grand Ave, Rosehill	GRAND AVE, 130m E A ST OF COLQUHOUN ST FACING WESTBOUND TRAFFIC			Screen 1	<b>UNWIN ST CLOSURE 7-9 DEC</b>	<b>UNWIN ST CLOSED TIL 5AM MON</b>
					Screen 2	<b>LIVE TRAFFIC.COM</b>	<b>FOLLOW DETOUR</b>

INTEGRATED MANAGEMENT SYSTEM  
 Site Specific Construction Traffic Management Plan – Unwin St – Northern Diversion Construction  
 Sydney Metro West – Western Tunnelling Package

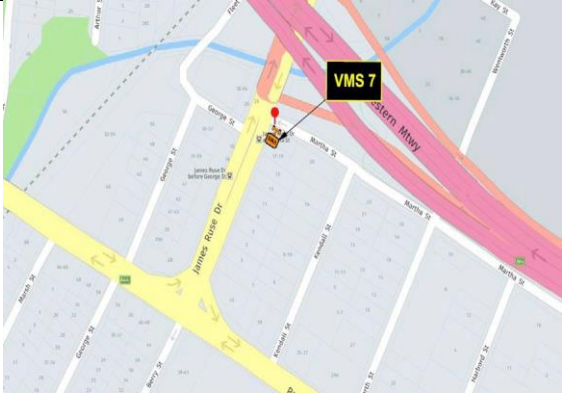



3	Colquhoun St, Rosehill	COLQUHOUN ST FACING NORTH APPROX. 30M SOUTH OF GRAND AVE			Screen 1	<b>UNWIN ST CLOSURE 7-9 DEC</b>	<b>UNWIN ST CLOSED TIL 5AM MON</b>
					Screen 2	<b>LIVE TRAFFIC.COM</b>	<b>FOLLOW DETOUR</b>
4	Colquhoun St, Rosehill	COLQUHOUN ST APPROX. 30M SOUTH OF DEVON ST FACING SOUTHBOUND TRAFFIC			Screen 1	<b>UNWIN ST CLOSURE 7-9 DEC</b>	<b>UNWIN ST CLOSED TIL 5AM MON</b>
					Screen 2	<b>LIVE TRAFFIC.COM</b>	<b>FOLLOW DETOUR</b>



INTEGRATED MANAGEMENT SYSTEM  
 Site Specific Construction Traffic Management Plan – Unwin St – Northern Diversion Construction  
 Sydney Metro West – Western Tunnelling Package

5	Parramatta Rd, Clyde	PARRAMATTA RD ON GRASS AREA OUTSIDE 2B PARRAMATTA RD FACING WESTBOUND TRAFFIC			Screen 1	<b>UNWIN ST CLOSURE 7-9 DEC</b>	<b>UNWIN ST CLOSED TIL 5AM MON</b>
					Screen 2	<b>LIVE TRAFFIC.COM</b>	<b>FOLLOW DETOUR</b>
6	James Ruse Dr, Clyde	JAMES RUSE DR ON GRASS AREA OUTSIDE 10 JRD FACING EASTBOUND TRAFFIC			Screen 1	<b>UNWIN ST CLOSURE 7-9 DEC</b>	<b>UNWIN ST CLOSED TIL 5AM MON</b>
					Screen 2	<b>LIVE TRAFFIC.COM</b>	<b>FOLLOW DETOUR</b>

INTEGRATED MANAGEMENT SYSTEM  
 Site Specific Construction Traffic Management Plan – Unwin St – Northern Diversion Construction  
 Sydney Metro West – Western Tunnelling Package

7	James Ruse Dr, Clyde	JAMES RUSE DR, ON THE CORNER OF MARTHA ST AND JAMES RUSE DR			Screen 1	<b>UNWIN ST CLOSURE 7-9 DEC</b>	<b>UNWIN ST CLOSED TIL 5AM MON</b>
					Screen 2	<b>LIVE TRAFFIC.COM</b>	<b>FOLLOW DETOUR</b>
8	Martha St, Clyde	FACING EASTBOUND TRAFFIC ON MARTHA ST, 60m WEST OF WENTWORTH ST			Screen 1	<b>UNWIN ST CLOSURE 7-9 DEC</b>	<b>UNWIN ST CLOSED TIL 5AM MON</b>
					Screen 2	<b>LIVE TRAFFIC.COM</b>	<b>FOLLOW DETOUR</b>



INTEGRATED MANAGEMENT SYSTEM  
 Site Specific Construction Traffic Management Plan – Unwin St – Northern Diversion Construction  
 Sydney Metro West – Western Tunnelling Package

9	Wentworth St, Clyde	FACING NORTHBOUND TRAFFIC ON WENTWORTH ST, 20m SOUTH OF MARTHA ST			Screen 1	<b>UNWIN ST CLOSURE 7-9 DEC</b>	<b>UNWIN ST CLOSED TIL 5AM MON</b>
					Screen 2	<b>LIVE TRAFFIC.COM</b>	<b>FOLLOW DETOUR</b>
10	Martha St, Clyde	FACING WESTBOUND TRAFFIC ON MARTHA ST, 50m EAST OF WENTWORTH ST			Screen 1	<b>UNWIN ST CLOSURE 7-9 DEC</b>	<b>UNWIN ST CLOSED TIL 5AM MON</b>
					Screen 2	<b>LIVE TRAFFIC.COM</b>	<b>FOLLOW DETOUR</b>

## 5.4 Construction Traffic Generation

Vehicles of various sizes are expected to attend the worksite each shift during these works. Vehicles include but are not limited to light vehicles, semi-trailers (floats/deliveries), agi's, asphalt trucks, rollers. As long-term works are proposed only minimal light vehicles are expected in AM and PM peaks. All other vehicles will remain on site after initial delivery until works is completed and then removed from site.

Table 9 - Vehicle movements per shift

Vehicle Type	Estimated Movements Per Shift		
	In	Out	Total
Traffic Vehicles	2	2	4
Light Vehicles (work utes/support vehicles)	3	3	6
Franna (barriers only – first shift, change over shift and last shift only)	1	1	2
Semi-trailers (barriers/deliverys)	3	3	6
Excavator (remain on site)	1	1	2
Agi's (some shifts only)	5	5	10
Asphalt (some shifts only)	5	5	10
<b>Total</b>			<b>40</b>

## 5.5 Construction Haulage

Construction haulage routes are as per the EIS and HVLR report. The Roads utilised include:

- James Ruse Drive
- Grand Avenue
- Colquhoun Street
- Unwin Street
- Wentworth Street
- Parramatta Road





Figure 33 - Haulage Route

## 5.6 Impacts on Traffic Flow

Unwin Street is a local road which primarily serves to provide access to the surrounding/adjoining industrial land uses. Traffic volumes are low and hence a moderate impact on traffic is expected under this set-up. Traffic Controllers will adjust to priority flow as required if any queues eventuate

## 5.7 Impacts on Parking

There are no impacts on parking as part of this CTMP implementation.

## 5.8 Impacts on Properties and Utilities

Full access is still permitted along Unwin St and surrounding sheets. Community notifications will advise of works and possible minor delays.

Rosehill Gardens has an emergency exit gate that opens onto the proposed work area. This gate will remain accessible under this portion of works.



Figure 34 - Rosehill Gardens gate to be blocked as part of this stage

## 5.9 Impacts on Pedestrians and Cyclists

Cyclists will be required to follow normal road traffic detours or have the option to dismount and walk along designated footway under escort of traffic controllers.

Pedestrians will be escorted along designated footway by traffic controllers.



## 5.10 Impacts on Public Transport

Unwin Street is not a public transport route. There are no impacts to Public Transport as part of this CTMP.

## 5.11 Impacts on Emergency Services

Access to properties for emergency vehicles will be provided at all times. Emergency Service vehicles will be permitted access through work area. Upon entering outer road closure point Traffic Controllers will be advised so clear path can be created through the area.

## 5.12 Impacts on major Events

There Rosehill Gardens has one race day during this proposed works period:

Saturday 7th December

Given this Raceday it is proposed to limit works to existing stop/slow set-up as described in section 4. Following event conclusion, it is then proposed to implement full closure of Unwin St

GLC will ensure all traffic control measures assist in bump-in and bump-out of event traffic in line with ATC preferences.

## 6. TRAFFIC MANAGEMENT & DEVICES

### 6.1 Signage and Speed Limit Changes

During the 56-hour GLC will be installing new signage along Wentworth St, Kay St & Unwin St, which will be out for the long-term during construction,

As part of the signage being installed a long-term speed reduction will be implemented, reducing the speed down to 40km/h RW through the area.

Refer to Figure 5 for Stage of works post 36hr Shutdown as per design drawing SMWSTWTP-GLO-CLJ-TD700-TW-DRG-512001 - 512122

### 6.2 Concrete Safety Barriers

Concrete safety barriers to be used will be the Deltabloc DB80 K150 by Jaybro. These barriers are approved as per TfNSW accepted devices with an issue date of 7 March 2024. Only approved end treatments will also be used. TfNSW Technical specification for use and Jaybro specifications are attached in Appendix 4.

Anti-gawk screens are proposed to be installed onto the barriers and reflectors will be installed along barriers for proper delineation.

### 6.3 Emergency Services

If Once all Approvals have been acquired by stakeholders, Relevant Emergency Services will be informed as part of GLC Stakeholder engagement, as per 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.

### 6.4 Variable Message Signs (VMS)

If The use of A, B and C Class trailer mounted VMS, and Overhead VMS shall be implemented during the construction period. The locations of the VMS and the messages displayed must be agreed with TfNSW. The VMS shall be located at prominent locations on



all approaches to Unwin St and Wentworth St. The primary function of the VMS is to inform road users of any changes to traffic conditions, changes to road conditions and any potential delays.

The placement locations of the VMS must be endorsed by TfNSW and approved by TfNSW. During the period of operation of the road occupancy, the VMS will be continuously operated to notify all road users of the closure and its effects. The VMS will have a remotely controlled twenty-four-hour message change facility to enable you to make immediate changes to the messages on the VMS. The VMS must be installed at a minimum of seven (7) days to the day of the implementation of the road occupancy, so as to provide advance notification to all road users of the future road occupancy.

VMS will be left once traffic switch has been completed during the 56hr closure for 2 weeks as to provide advance notification to all road users on changes of road.

Refer to VMS Strategy in Appendix E for VMS that will remain for the 2 weeks after

## 6.5 Pedestrian and Cyclist Impacts

During the 56-hour and 36-hour shut down footpaths will be closed from Wentworth St-Martha St intersection through to Unwin St-Shirley St intersection. Access through the area will be by exception under GLC escort.

Cyclist using the road network will be unimpacted once road is re-open, and cyclists under 16 years using the footpath will be required to follow the same detour as pedestrians.

## 6.6 Management of Cumulative Impacts

Endeavour Energy are expected to be completing electrical connection works during September. Works has the potential to overlap for the first 1-2 weeks of Section 1 set-up in September. Modified TGS may be required to be implemented during the cumulative impact period. There are no cumulative traffic impacts expected of this Endeavour Energy works and will only be from 0700-1800 Monday to Saturday with site being removed each day where GLC-WTP stage plane will be in place as described Chapter 2.

## 6.7 Signage and Speed Limit Changes

During the works GLC will be installing new signage along Unwin St, which will be out for the long-term during construction,

As part of the signage being installed a long-term speed reduction will be implemented, reducing the speed down to 40km/h RW through the area as shown in stage plans in figures 7 and 21.

## 6.8 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.

## 6.9 On-Site Contacts

*Table 10 - Site contacts*

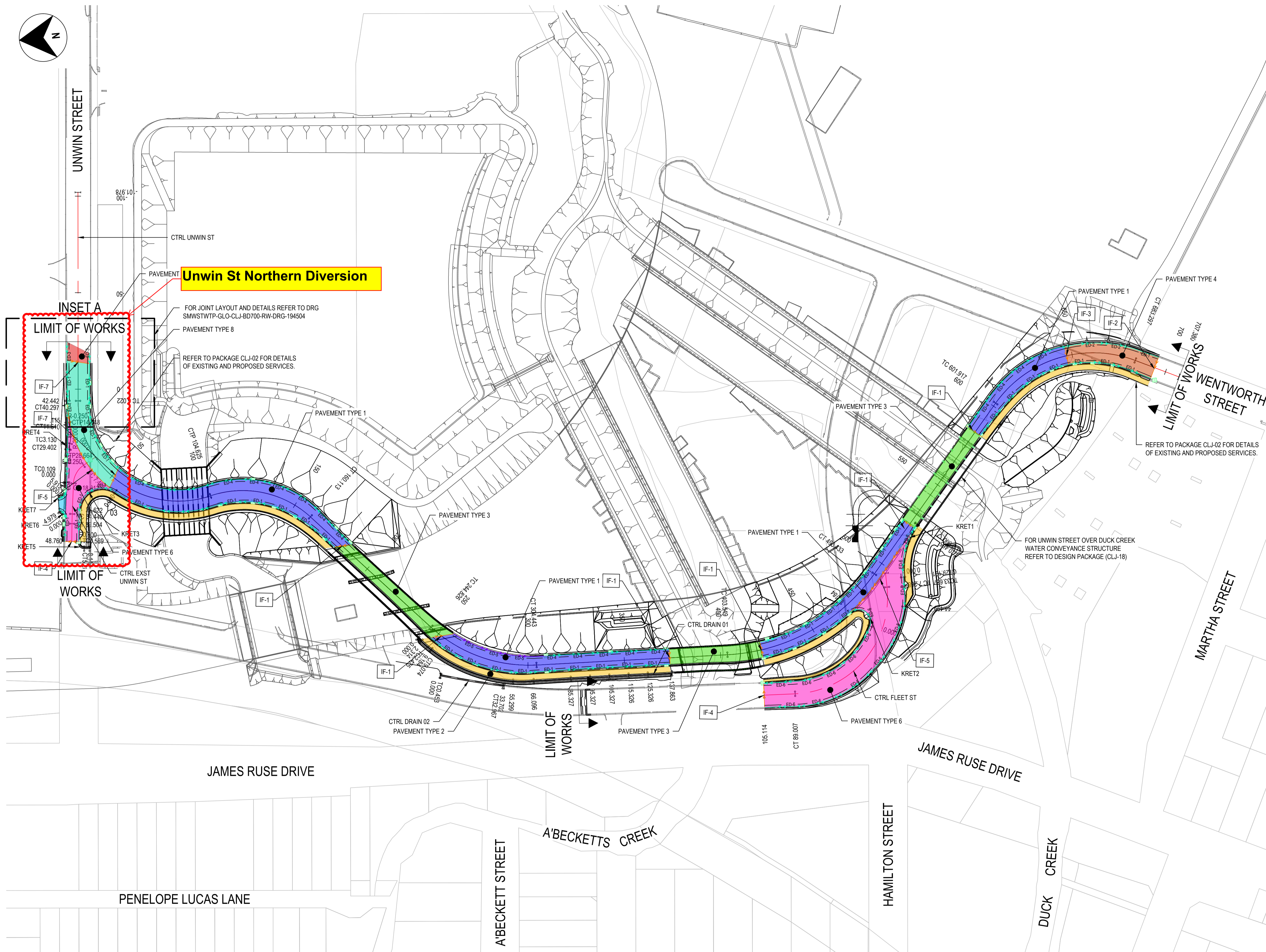
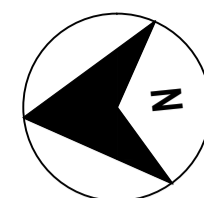
Priority	Name	Position	Organisation	Contact #	Email
1 <sup>st</sup>	George Silvino	SPE	GLC	0433 297 789	<a href="mailto:George.Silvino@glcwtp.com.au">George.Silvino@glcwtp.com.au</a>
2 <sup>nd</sup>	Mark Matkovich	Project Manager	GLC	0417 064 346	<a href="mailto:mark.matkovich@glcwtp.com.au">mark.matkovich@glcwtp.com.au</a>
3 <sup>rd</sup>	Chad Richmond	Superintendent	GLC	0419 382 572	<a href="mailto:chad.richmond@glcwtp.com.au">chad.richmond@glcwtp.com.au</a>
4 <sup>th</sup>	Scott McMichael	Traffic Manager	GLC	0412 051 652	<a href="mailto:scottmcmichael@glcwtp.com.au">scottmcmichael@glcwtp.com.au</a>
5 <sup>th</sup>	Robin Lopez	Logistic Manager	GLC	0461 372 455	<a href="mailto:robinlopez@glcwtp.com.au">robinlopez@glcwtp.com.au</a>



## 7. Appendices

## 7.1 Appendix 1 – Design Drawings





**NOTES**

- FOR PAVEMENT PROFILES REFER TO DRG SMWSTWTP-GLO-CLJ-BD700-RW-DRG-194501.
  - FOR PAVEMENT DETAILS REFER TO DRGS SMWSTWTP-GLO-CLJ-BD700-RW-DRG-194501 TO 194505.
- SUBSURFACE DRAINAGE**
- FOR TYPICAL PAVEMENT EDGE DETAILS REFER TO DRG SMWSTWTP-GLO-CLJ-BD700-RW-DRG-194502
  - ALL SUBSURFACE DRAINS SHALL BE IN ACCORDANCE WITH TNSW SPECIFICATION R63: APPLICATION G3 STRENGTH CLASS A. GEOTEXTILE LAP SHALL BE IN ACCORDANCE WITH TNSW MODEL DRAWING MD.R33.A06
  - ALL SUBSURFACE DRAINS SHALL BE INSTALLED WITH A MINIMUM LONGITUDINAL GRADE OF 0.5%
  - SUBSURFACE TRENCH DRAIN PIPE SHALL BE 100mm DIAMETER SN20 CORRUGATED PERFORATED PIPE IN ACCORDANCE WITH TNSW SPECIFICATION 3552
  - GRADE F20 AGGREGATE TRENCH DRAIN BACKFILL MAY BE REPLACED BY NO FINES CONCRETE BACKFILL WHERE REQUIRED. NO FINES CONCRETE (TNSW SPECIFICATION 3222) MUST NOT BE REPLACED BY GRANULAR FILTER MATERIAL.
  - SUBSURFACE TRENCH DRAINS SHALL BE DISCHARGED INTO STORMWATER PITS WHERE AVAILABLE.
  - SUBSURFACE DRAINAGE DEPTHS MAY BE MODIFIED WHERE PROPOSED SUBSURFACE DRAIN DEPTH AFFECT EXISTING OR PROPOSED SERVICES (SUBJECT TO APPROVAL BY THE PAVEMENT DESIGN REPRESENTATIVE)
  - FOR SUBSURFACE DRAINAGE OF BARRIER FOOTINGS REFER TO RETAINING WALL DRAWINGS.
  - WHERE SUBSOIL DRAINAGE IS INSTALLED IN AREAS WITH HIGHLY EXPANSIVE CLAY SUBGRADE (PAVEMENT TYPE 4 AND PAVEMENT TYPE 6) THE DRAIN MUST BE SURROUNDED IMPERMEABLE MEMBRANE OR SURROUNDING BY A MINIMUM OF 100MM OF IMPERMEABLE UZF MATERIAL. IMPERMEABLE MEMBRANE SHALL BE 0.3MM HIGH IMPACT BUILDERS FILM (IR3).

**LEGEND**

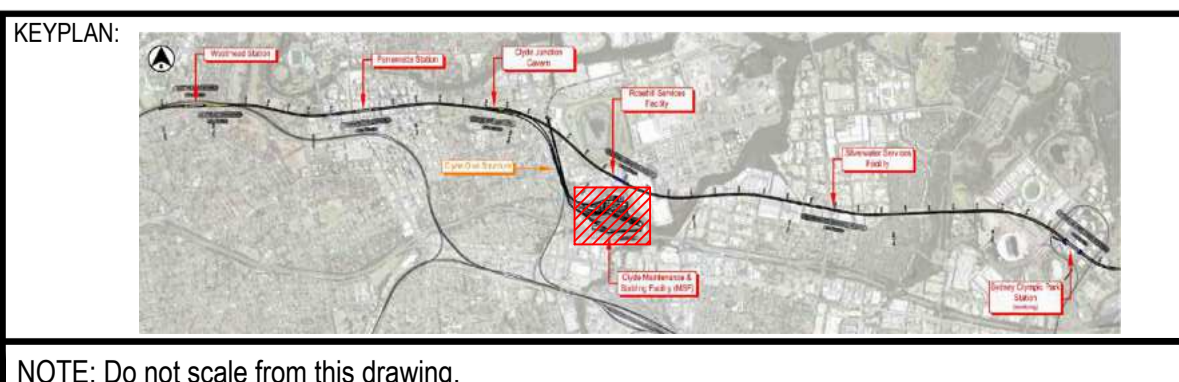
- PROPOSED DESIGN
- ADJACENT PACKAGE DESIGN
- SURVEY
- PAVEMENT TYPE 1 - FULL DEPTH ASPHALT PAVEMENT (HIGH EMBANKMENT)
- PAVEMENT TYPE 2 - FOOTPATH
- PAVEMENT TYPE 3 - BRIDGE DECK / APPROACH SLAB PAVEMENT
- PAVEMENT TYPE 4 - FULL DEPTH ASPHALT PAVEMENT (LOW EMBANKMENT)
- PAVEMENT TYPE 5 - INDUSTRIAL DRIVEWAY
- PAVEMENT TYPE 6 - FULL DEPTH ASPHALT PAVEMENT
- PAVEMENT TYPE 7 - JRCP TIE-IN PAVEMENT
- PAVEMENT TYPE 8 - DEEP STRENGTH ASPHALT PAVEMENT OVER CONDUITS AND PIPES (LOW EMBANKMENT / CUTTING)
- EDGE DETAIL. FOR DETAILS REFER TO DRG SMWSTWTP-GLO-CLJ-BD700-RW-DRG-194502
- SUBSURFACE TRENCH DRAIN (NO FINES CONCRETE FILTER MATERIAL)
- SUBSURFACE TRENCH DRAIN (GRANULAR FILTER MATERIAL)
- STRIP DRAIN (REFER TO RETAINING WALL PACKAGE)
- PAVEMENT DRAIN OUTLET TO STORMWATER INLET
- IFX - INTERFACE DETAIL CALLOUT
- CONTROL LINE

Cat File: C:\pwworking\gams04711\SMWSTWTP-GLO-CLJ-BD700-RW-DRG-194101.dwg  
 Plot Date: 19/12/23 - 16:01  
 100mm AT FULL SIZE

**PAVEMENT PLAN**  
SCALE 1:1000

**OFFICIAL FOR CONSTRUCTION**

No.	Amendment Description	Design by	Verified by	Approved by	Date
04	STAGE 3 APPROVED FOR CONSTRUCTION	M.N.	G.P.	C.F.	05.12.23
03	REISSUE FOR STAGE 3 DETAILED DESIGN PART B	K.W.	G.P.	C.F.	14.09.23
02	REISSUE FOR STAGE 3 DETAILED DESIGN PART B	K.W.	G.P.	C.F.	25.08.23
01	ISSUED FOR STAGE 3 DETAILED DESIGN PART B	K.W.	G.P.	C.F.	10.07.23
00	STAGE 3 APPROVED FOR CONSTRUCTION PART A	K.W.	G.P.	C.F.	23.06.23
D	REISSUE FOR STAGE 3 DETAILED DESIGN	M.V.	G.P.	C.F.	05.06.23
C	ISSUED FOR STAGE 3 DETAILED DESIGN	P.B.	G.P.	S.D.	24.02.23



CLIENT:

INTEGRATING DESIGN AEO:

SMEC | GHD DESIGN JOINT VENTURE

Service Providers:

DRAWN: ANGELICA MANALO - 05.12.2023  
 DESIGNED: MINH NGO - 05.12.2023  
 DRG CHECK: MARC FORTU - 05.12.2023  
 DESIGN CHECK: NEVEN CUPAC - 05.12.2023  
 APPROVED: CASSANDRA BRANCISCI - 05.12.2023

**SYDNEY METRO WEST**  
 MAINTENANCE FACILITY - CLYDE  
 ROADWORKS  
 PAVEMENT PLAN

DOCUMENT No: SHEET: 1 OF 1 ©  
 STATUS: STAGE 3 DETAILED DESIGN (AFC) EDMS NO:  
 DRG No: SMWSTWTP-GLO-CLJ-BD700-RW-DRG-194101  
 REV 04 VER

A1 Original Co-ordinate System: GDA20/MGA Zone 56 Height Datum: A.H.D. This sheet may be prepared using colour and may be incomplete if copied

NOTE: Do not scale from this drawing.



## 7.2 Appendix 2 – Works Program





## 7.3 Appendix 3 – TGS Risk Assessments

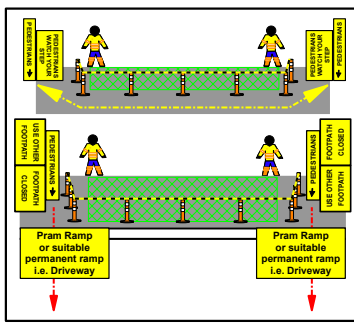




Personnel Requirements	Asset Requirements
Traffic Controllers	13
UTE	5
CONE TRUCK	1
ESAS	0
TMA	0
ESTOP	0
BOOM GATE	4
EXTRA REQUIREMENTS	0

Above requirements are for guidance only as they may change due to unforeseen circumstances

Legend	
	Work Area
	Bollard
	Safety Barrier
	Safety Zone
	Traffic Controller
	Escape Route
	Tiger Tail
	Portable Traffic Signal
	Portaboom
	Barrier Board
	Trailer VMS
	Traffic Cone
	Temporary Bus Stop
	Open Bus stop
	Closed Bus stop
	Arrowboard
	Sign Cover
	Existing Signs
	Traffic Flow
	Traffic Flow
	Pedestrian Flow
	TMA
	Cone Truck
	Work Vehicle
	Police Car
	VMS Vehicle
	Traffic Vehicle

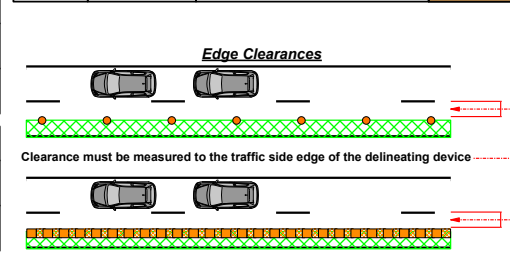


**Pedestrian / Cyclist Note: Crossing location must consider site conditions including sight distance, number of lanes, traffic volumes, traffic speed, numbers of pedestrians**

Pedestrian Management Options Analysis			
Options Available	THROUGH	PAST	AROUND
Options Selected		Selected	

Cyclist Management Options Analysis			
Options Available	THROUGH	PAST	AROUND
Options Selected		Selected	

Traffic Management Options Analysis			
OPTION	DESCRIPTION	METHOD TYPE	TGS SELECTED
AROUND	Vehicles detoured via existing road network or sidetrack	Full road closure / One-way road closure / Detour	Selected
PAST	Vehicles past delineated work zones	Lateral Shift	
		Shoulder closure	
		Contraflow (2 way traffic maintained)	
		Single or Multi Lane Closure	
THROUGH	Vehicles through work zone	Temporary Road Closure / Hold & Release / Local Traffic Access / Pilot Vehicle	Selected



Edge of traffic lane to:	Edge Clearance
Line of traffic cones or bollards	-0.5 m for traffic speeds less than 65 km/h -1.0 m for traffic speeds greater than 65 km/h
Barrier boards, temporary guide posts or temporary hazard markers	-1.0 m
Road safety barrier system	-0.3 m for traffic speeds less than 45 km/h -0.5 m for traffic speeds 45 to 65 km/h -1.0 m for traffic speeds 65 to 85 km/h -2.0 m for traffic speeds greater than 85 km/h

Dimension "D" (Main Roads)	50	metres
Dimension "D" (Minor Roads)	50	metres

Taper Lengths			
Approximate speed of traffic	Traffic control at beginning of taper	Lateral shift taper	Merge taper
45 or less	15	15	15
46 - 55	15	15	30
56 - 65	30	30	60
66 - 75	N/A	70	115
76 - 85	N/A	80	130
86 - 95	N/A	90	145
96 - 105	N/A	100	160
> 105	N/A	110	180

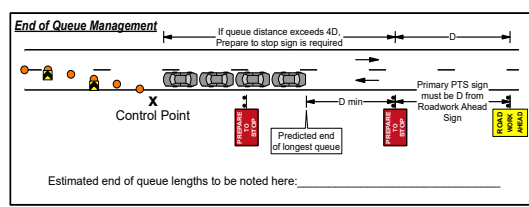
Speed (km/h)	Distance between tapers (m)
45 or less	10
46 to 55	25
56 to 65	70
Greater than 65	1.5 x Speed Limit (D)

Delineation Spacing		
Purpose & Usage	Speed zone of device location km/h	Maximum Spacing m
On approach to a traffic controller position (center line or edge line)	All cases	4
Merge Tapers	55 to 75 Greater than 76	9 12
Lateral shift tapers	55 to 75 Greater than 76	12 18
Protecting freshly painted lines	56 to 75 Greater than 76	24 60
All other purposes	less than or equal to 55 26 to 75 greater than 76	4 12 18

TGS Verification Checklist:		
Verified By:	Position:	Signature:
Qualification:	Expiry / Issue Date:	Date of Verification:

Traffic Guidance Scheme Modifications:		
Modified By:	Qualification Number:	
Expiry / Issue Date:	Signature:	Date of Modification:
Modification Notes:		

Traffic Guidance Scheme Installation:		
Installed By:	Qualification Number:	
Expiry / Issue Date:	Signature:	Date of Installation:



Installation & Removal of Signs & Devices	
<p><b>Two-lane, two-way roads:</b> The sequence of installation should be as illustrated in the following order: 1: Install the termination signs when initially leaving work area, 'End Road Work/speed reinstatement' (affected direction). 2: Use the existing road network to turn where safe to do so. 3 to 7: Place approach signs in unaffected direction, including the PTCD (traffic controller to remain with the PTCD). 8: Install 'End Road Work/speed reinstatement' (unaffected direction). 9: Use the existing road network to turn where safe to do so. 10 to 14: Place approach signs in the affected direction, including the PTCD (traffic controller to remain with PTCD). 15 and 16: Traffic controller/s to stop traffic and taper/lane closure delineation implemented. 17: ITCP qualified person completes drive around to confirm TGS is installed as designed.</p>	<p><b>Multi-lane roads:</b> The sequence of installation should be as illustrated in the following order: 1: Locate advance warning vehicle and TMA to shadow sign installation vehicle. 2 to 5: Install advance warning signs in unaffected lane. 6: Install 'End Roadwork/speed reinstatement'. 7: Use the existing road network to turn where safe to do so. 8: Locate advance warning vehicle and TMA to shadow sign installation vehicle. 9 to 12: Install advance warning signs in obstructed (affected) lane. 13: Install 'Flashing Arrow' and delineation devices on approach to start of taper. 14: Position TMA in travel lane to shadow installation of taper. 14 and 15: Install taper and delineation devices to form taper, safety buffer and past work area. 16: Install 'End Roadwork/speed reinstatement'. 17: Use the existing road network to turn where safe to do so. 18: TMA positioned to shadow work area. 19: ITCP qualified person completes drive around to confirm TGS is installed as designed.</p>

Sign spacing requirements		
Number of signs	Approach Speed	
	less than 65 km/h	65 km/h or greater
One advance sign	D	2D
Multiple advance signs	D	D

ALTERNATE SIGN SPACING		
Dimension 'D': AGTTM: A distance expressed in metres, determined in accordance with Table 2.2 and used for positioning of advance signs. To be considered if TCAWS dimension "D" cannot be provided due to site conditions.		
Speed of Traffic km/h	Dimension m	
55 or less	15	
56 to 65	45	
Greater than 65	speed of traffic, in Km/h	

# TGS Risk Assessment

## Hierarchy of Controls

- Eliminate the hazard altogether.  
eg. Road closures.
- Substitute the hazard with a safer alternative.  
eg. Using PTCs instead of stop bats.
- Isolate the hazard from anyone who could be harmed.  
eg. Drop zones for clients works in elevated work zones.
- Use engineering controls to reduce the risk.  
eg. The use of traffic control devices to protect work area.
- Use administrative controls to reduce the risk.  
eg. Ensure personnel are trained in their field.
- Use PPE.  
eg. Wearing gloves while manual handling.

More Effective ↑  
↓ Less Effective

Step 1 - Consequence (impact)					Fatality	Health & Injury	Environ	Quality
Negligible (1)	Minor (2)	Moderate (3)	Major (4)	Severe (5)				
First Aid Treatment	Medical Treatment	Last Time Injury	Permanent Impairment Injury					
Very minor injury that requires no treatment or simple first aid	Injury / illness, which requires medical treatment and may temporarily restrict a persons capacity to work	Injury / illness, which temporarily restricts a persons ability to work in any capacity	Injury / illness, which permanently alters a persons future (eg. Spinal injury, amputation or death)					
Short term damage	Limited but medium term damage	Significant but recoverable ecological damage	Heavy ecological damage, costly restoration	Permanent widespread ecological damage				
Brief delay / slight impact on service delivery	Local or worksite specific impact on service delivery or customer satisfaction	Temporary impact on service delivery or customer satisfaction at a local event / project level	Serious impact on service delivery or customer satisfaction at a state client or large project level	Long term or very severe impact on service delivery or customer satisfaction resulting in loss of business nationally				




Step 3 - The risk rating is where the consequence and the probability intersect

Step 2 - Probability	Step 3 - Risk Rating			
	Low (1)	Low (2)	Moderate (9)	High (16)
Almost Certain (5)	Moderate (8)	High (16)	High (18)	High (21)
Likely (4)	Moderate (7)	Moderate (10)	High (17)	High (20)
Possible (3)	Low (3)	Moderate (9)	Moderate (12)	High (19)
Unlikely (2)	Low (2)	Low (5)	Moderate (11)	Moderate (14)
Rare (1)	Low (1)	Low (4)	Low (6)	Moderate (13)

Step 3 - The risk rating is where the consequence and the probability intersect

Item #	Worksite Component	Potential Hazard	Initial Risk			Present	Control Measures	Residual Risk		
			C	P	R			C	P	R
1.0	TGS Drawn / implemented by unqualified person or organization	TGS Drawn / implemented by unqualified person or organization	5	3	23	Y	- Design and implement TGS in accordance with TCAWS, AS1742.3 and AGTTM. - Ensure all relevant traffic management personnel involved in the design and implementation of the TGS are certified as competent persons to perform the traffic management tasks they are required to undertake.	4	1	13
2.0	Stop bat used instead of PTC	Traffic controller hit by vehicle	5	4	24	N	- Consider use of shadow vehicles if practical, or other type of static hard cover available (i.e. safety barrier) - Ensure best possible escape route considered when allocating control point on TGS - to be reassessed onsite continuously - Ensure best line of sight where practical. Should the best line of sight not be possible, repeater signs in advance warning to be used. - Traffic controller to always remain clear from travelled path. - Ensure appropriate speed signage has been installed and meets minimum and maximum length requirements.	4	2	14
3.0	VMS	Motorist collides with VMS, motorist confused by VMS	4	4	20	Y	- Always place VMS behind an approved safety barrier or as far away from the edge of traffic lane as is practical in a position determined suitable based on a documented risk assessment. - The location is to be confirmed by Risk Assessment	3	2	11
3.1	Long Term Works	Confused motorist collides with worker	4	4	20	Y	- Always install RWA (T1-1) on long-term road work sites - Consider using VMS's	3	3	12
3.2	Delays or Queue extends beyond advanced warning signs	Motorist collides with end of queue	4	4	20	N	Always: - Work in accordance with the approved and appropriate ROL - Use two-way communication with trucks and give them priority whenever possible - Monitor queue lengths - Install additional signs or use additional traffic controllers or stop work and clear traffic if end of queue extends beyond the advance warning signs - Give emergency vehicles & wide loads priority (i.e. stop work & traffic) Consider: - Working outside peak periods - Liaising with TMC for assistance with traffic signal phasing - Using VMS's - Notifying emergency services - Use of flashing beacon to be added to advance warning signage - Use of queue monitors - Ensure TGS has been designed to cater for the predicted queue lengths where required.	4	2	14
3.3	Changed traffic conditions (eg Slippery surface, no lines, changed line marking, banned turning movements, detours)	Motorist loses control, is confused, or attempts a banned manoeuvre causing MVA	4	4	20	Y	Always: - Install RWA (T1-1) if diverting traffic along a sidetrack, detour, or unexpected conditions such as loose stones or the absence of line marking - Erect Condition signs in accordance with TCAWS Manual - Provide delineation or temporary line marking and ensure this is clearly shown on the TGS - Use Traffic Control to manage changed traffic conditions where required. - Check setup before commencing work - Ensure appropriate permission for any detours - Speed reduction installed to suit road conditions - Consider using VMS's	3	2	11

Item #	Worksite Component	Potential Hazard	Initial Risk			Present	Control Measures	Residual Risk		
			C	P	R			C	P	R
3.4	After care	Inadequate signage resulting in motorist losing control and crashing or motorist becomes frustrated due to inappropriate signage	4	4	20	N	Always: - Install RWA (T1-1) if diverting traffic along a sidetrack, detour, or unexpected conditions, such as loose stones or the absence of line marking - Cover any signs that are not applicable - Erect Condition signs in accordance with TCAWS Manual - Provide delineation or temporary line marking - Aftercare speed limit to suit road conditions	3	3	12
3.5	Poor sight distance or speed compliance or Approach speed > 85km/h, or multi lane roads with traffic volume > 10,000vpd	Speeding vehicle doesn't have time to react and fails to negotiate merge taper	5	4	24	Y	Always: - Install RW 1km Ahead if approach speed is > 85km/h or sight distance is less than 150m - Use 700mm cones where traffic speed is greater than 75km/h - Use 900mm cones on high speed to high volume roads (e.g., expressway) or on any work site where increased visibility is required - Duplicate Lane status sign. Consider: - Installing RWA (T1-1) - Increasing taper lengths - Increasing the number of advance warning signage installed - Increasing the size of signage installed - Need for duplication of signs.	4	2	14
3.6	Side Roads	Vehicles enters work site from a side road and collides with workers	3	4	17	Y	- Always install advance warning signage for vehicles entering from side road in advance of the work site.	3	2	11
3.7	Temporary Speed Zone	Motorist travelling too fast for the conditions causing MVA	5	4	24	N	- Ensure speed zones are designed in accordance with TCAWS, AS1742.3 and AGTTM. - Ensure speed zoning is consistent with the work activity and road environment. - Consider the use of speed radar VMS to monitor traffic speeds and advise motorists. - Review the TGS and adjust where possible to enhance traffic calming through the work site.	4	2	14
<b>Transition</b>										
4.0	Lane closure	Motorist fails to negotiate taper and collides with worker, vehicle or plant	5	4	24	Y	Always: - Install taper lengths and cones in accordance with TCAWS Manual - Install & duplicate/repeat Lane Status Sign (T2-6-1 or 2) on multi lane roads - Use a minimum of 2 temporary hazard markers (T5-4 or 5) on tapers - Install a 30m minimum buffer zone at the end of tapers - Check setup before commencing work - Consider using a shadow vehicle (or vehicles) with flashing lights to protect workers - Ensure appropriate site distance to start of taper	4	2	14
<b>Work Area</b>										
5.0	Traffic Control	Motorist not concentrating or speeding collides with end of queue or traffic controller	5	4	24	Y	- Design and implement TGS in accordance with TCAWS, AS1742.3 and AGTTM. - Ensure all relevant traffic management personnel involved in the design and implementation of the TGS are certified as competent persons to perform the traffic management tasks they are required to undertake. - Conduct regular inspections in accordance with TCAWS, AS1742.3 and AGTTM. - Rectify any deficiencies as a matter of urgency. - Review traffic controls to suit changes in site conditions.	4	2	14
5.1	Working adjacent to travel lane	Motorist collides with worker, vehicle or plant	4	4	20	Y	Always: - Install workman T1-5 sign if workers on road - Space cones in accordance with TCAWS Manual - Check setup before commencing work - Reduce speed based on lateral clearance between the work area and travel lane Consider: - Using a shadow vehicle(s) with flashing lights to protect workers - Using spotters with workers - Using safety barriers	4	2	14
<b>General</b>										
6.0	Night work	Due to poor visibility motorist collides with end of queue, worker, vehicle or plant	5	4	20	Y	- Consider providing portable lighting to ensure traffic controllers are visible and ensure the positions of any temporary lighting are clearly shown on the TGS & always use applicable night PPE.	4	2	14
6.1	Wind / Rain / Fog / Obstructions	Rain/fog reduces visibility and causes road to be slippery increasing risk of a collision with workers, plant or other traffic Wind blows over signs Vehicle parks in front of sign	5	4	20	Y	- Always monitor weather and traffic - Always regularly check setup to ensure signs are visible. If visibility has been obstructed, consider shifting signs, duplication, or repetition. - Consider additional advance warning signage - Liaise with client to reconsider setup or continuation of works	3	3	12
6.2	Vehicle Movements	Plant collides with motorist, workers, or other plant	4	3	19	Y	Always: - Ensure positive communications Consider: - Using Traffic Control and/or Spotters to manage work vehicles - Installation of exclusion Zones - Preparing a VMP where required.	3	3	12
6.3	Pedestrians and Cyclists	Pedestrian and/or cyclist enters the work zone or travel lane and is hit by vehicle or plant	4	5	21	Y	- Ensure TGS design caters for all road users including pedestrians and cyclists. - Always clearly delineate the work area. - Do not obstruct pedestrian and cyclists travel paths with traffic control signs and devices. - Consider the use of additional warning and guidance signage for pedestrians, cyclists and motorists. - Comply with shoulder and lane width criteria in the design of the TGS. - Consider the use of traffic control at crossing points especially where contra-flow arrangements are in place. - Consider the use of additional traffic controllers to monitor and assist pedestrian and cyclist movements where required. - Ensure the use of existing or temporary ramps for crossing points. - Undertake consultation to determine existing travel paths, desire lines, volumes, and types of users.	4	2	14

Issue	Desg	Appd	Date & Time	Amendment Description	TGS Name & Number:	TGS Designed By:	PWZTMP:	Exp:	Signature:	Date of Approval:	Page 2 / 10
01	AC	PL	17/10/2023 22:30	Original Issue	LGP - 63822 - GLC 151 - Wentworth to Unwin St - Clyde - CS6 TS4 - Road	Alec Czarnowski	TCT1010645	N/A	AC	24/09/2024	  
02	AC	PL	07/11/2023 13:15	Amended as per comments	Works Location:	Peter Lozano	TCT0058486	N/A			
03	AC	PL	07/11/2023 16:30	Amended as per comments	Wentworth to Unwin Street - Clyde	Daniel Kelly					
04	AC	PL	13/11/2023 12:06	Amended detour	Project Name:						
05	DK	KD	24/09/2024 15:15	Moved closure to Rosehill Race Gate	Sydney Metro Werstern Tunnelling						
Scale: 1 : 750					Original Size A3	Lack Group acknowledges the traditional owners of country throughout Australia and recognises their continuing connection to land, waters and community. We pay our respect to them and their cultures; and to elders both past and present.					



Item #	Worksite Component	Potential Hazard	Initial Risk			Present	Control Measures	Residual Risk		
			C	P	R			C	P	R
6.4	Bus stops	Bus unable to pull up safely causing MVA	3	3	12	N	- Consider notifying bus companies that operate in the area - Always provide adequate provision for buses or carry out work at night when buses aren't operating - Where temporary bus stops are created, ensure buses are able to meet the curb - Ensure TGS clearly shows affected stops - Traffic controllers to manage and assist where safe and possible	2	2	5
6.5	Property accesses - commercial or private	Collisions due to property access restrictions	3	4	17	Y	- Consider staging work outside of business hours - Create physical barrier to prevent traffic entering site & driveways	2	2	5
6.6	Excavations within work area	Errant vehicle drives into excavation	5	4	25	N	- For excavations shallower than 0.5m and within 3m of the edge of traffic lane, delineate the excavation with plastic mesh fencing, barrier boards placed perpendicular to the traffic flow or cones/bollards. - For excavations deeper than 0.5m and within 3m of the edge of traffic lane, a temporary safety barrier must be installed. When traffic is greater than 3m from the excavation, the requirement for a temporary safety barrier should be considered based on a documented risk assessment. - Where the excavation is deeper than 200mm, is open for more than 2 weeks and the distance from the edge of traffic lane is less than 3m for 60km/h, 6m for 80km/h and 9m for 100km/h, a temporary safety barrier must be installed.	4	2	14
6.7	Parking	Parked vehicle or worker exiting vehicle hit by passing vehicle	4	4	20	Y	- Always check adequate parking is available for workers and visitors - Consider providing safe parking within the work area	4	2	14
6.8	Concurrent Works	Motorist confused by conflicting signs causing MVA	3	4	17	Y	- Always establish communication with other site if possible - Always cover any conflicting signs and adjust TGS as necessary - Complete conflict checks where required	3	3	12
6.9	Heavy Vehicles and OSOM Vehicles	HV cannot travel past work site without knocking over delineation	4	4	20	Y	- Comply with shoulder and lane width criteria in the design of the TGS. - During the design of the TGS, check vehicle swept path where necessary to ensure the largest known vehicle travelling through the work site can negotiate the changed traffic conditions. - Traffic controllers to communicate with heavy vehicle and OSOM drivers to warn and guide them through the work site as required. - Traffic control to monitor heavy vehicle movements and if required, make adjustments to the signs and devices within approved tolerances. If more significant changes are required, liaise with Client/Supervisor and arrange for TGS to be reviewed and modified by the designer.	4	2	14
<b>Dynamic Works</b>										
7.0	General Traffic	Motorists speeding / not concentrating / tired / distracted. Not having enough time to merge causing MVA	5	5	25	N	- Always use a minimum 1 AWW and consider the use of a 2nd AWW. - Consider use of TMA on higher speed roads >85km - Use speed reduction best suited to work activity and road environment - Use applicable AW signage displayed on AWW - Ensure sight distances between AWW, shadow vehicles are clearly labelled on TGS - Ensure 20-40m buffer zone between shadow vehicle and work vehicle. No less than 40m when using a TMA as a shadow vehicle - Positive communications to be held at all times - Workers to remain shadowed at all times - Monitor traffic queues on all road configurations, convoy to clear roadway if required until traffic has cleared	4	2	14

Item	Additional Control Control Measures
8.0	SKELETON CREW TO DO ROUTINE SIGN CHECKS TO ENSURE DETOUR IS CLEARLY POSTED.
9.0	
10.0	
11.0	
Item	Departures: State the departure and reason for departure
12.0	
13.0	
14.0	
Departures Sign Off (CLIENT):	
<b>Client Name:</b>	
<b>Client Signature:</b>	
<b>Date:</b>	

**NOTES:**  
**GENERAL NOTES**

- This Traffic Guidance Scheme (TGS) is to be used in conjunction with the Traffic Management Plan (TMP) and associated road authority permits and management plans, including Road Occupancy Licence (ROL), vehicle movement plan (VMP) and pedestrian movement plan (PMP) where applicable.
- This TGS has been produced by a Prepare Work Zone Traffic Management Plan (PWZTMP) qualified person in accordance with the requirements of the TNSW Traffic Control at Work Sites manual, Issue 6.1 dated 28 February 2022 (TCAWS 6.1) and with reference to AS1742.3 and AUSTRROADS Guide to Temporary Traffic Management Parts 1 – 10, version 1.1 dated September 2021 (AGTTM).
- This TGS is suitable for short term/long term works.
- Lack Group does not accept responsibility for this TGS if it is implemented or modified by external parties.

**APPROVALS**

- The TGS must be approved for use before implementation.
- Ensure all road authority approvals and associated conditions of approval are met prior to implementing the TGS.

**TGS VERIFICATION**

- Prior to use on site, the selected or designed TGS must be verified to ensure it is suitable for the works and location by undertaking an inspection of the work site where the TGS will be implemented. The TGS verification must be completed in accordance with TCAWS 6.1, Section 8.1.2 by an Implement Traffic Control Plan (ITCP) or PWZTMP qualified person. Refer Page 1 of this TGS for Site Verification sign-off.

**RISK ASSESSMENT**

- A desktop risk assessment has been undertaken in developing this TGS. However, when implementing this TGS on site, the site supervisor should undertake a site specific risk assessment to ensure that the TGS has considered and mitigated all identified hazards and risks.

**INSTALLATION AND REMOVAL OF SIGNS AND DEVICES**

- All traffic management signs and devices prescribed for use in this TGS are in accordance with TCAWS 6.1 with reference to AS1742.3 and AGTTM.
- The TGS must be installed, maintained and removed in a planned and safe manner. The implementation must only be undertaken by an ITCP qualified person.
- All signage shown on this TGS is not to conflict with any long-term existing signage arrangements in the area. If this occurs, cover all conflicting road signage where required.

**PLACEMENT OF SIGNS AND DEVICES**

- Signs must be properly displayed and securely mounted at all times and within the line of sight of the intended road user. Regulatory and detour signs must be located nearest to the travel edge of the lane. Signs must not be obscured from view, such as by vegetation or parked cars. Obscure other devices from the line of sight of the intended road users; Create a hazard to road workers, including pedestrians and cyclists; Be a hazard that deflects traffic into an undesirable path; Restrict sight distance for drivers entering from side roads or streets, or private driveways; and Be installed using supports that could be a hazard if struck by a vehicle.
- Signs mounted on frames for short-term works should be mounted a minimum 200mm from the ground to the lower edge of the sign.
- Signs mounted on posts for long-term works in open road situations, the underside of the sign must be at least 1.5m above the level of the nearest edge of the travelled path. When installed on a kerb or footpath, the underside of the sign must be at least 2.2m above the level of the nearest edge of the travelled path.
- On the outside of a curve, the sign face must be at 0 degrees, or 'normal to traffic'. On a straight, the sign face must be angled at approximately 5 degrees normal to oncoming traffic and on the inside of a curve, the sign face must be angled at approximately 5 degrees normal to oncoming traffic at 200m preceding the sign.

**TOLERANCES**

- Local constraints may not allow signage and devices to be placed in accordance with the TGS. Unless stated otherwise on the TGS, the tolerances on the positioning of signs, length of tapers or pavement markings detailed in the TGS is a minimum 10% less and a maximum 25% more than the distances or lengths stated and for the spacing of delineation devices a maximum 10% more than the spacing detailed in the TGS.
- Any variation to the positioning of signs and devices within the approved tolerances must be marked and initialed on the TGS held on site, with the name of the person making the changes shown on the TGS.

**MODIFYING TGS**

- Modifications to a Site Specific or Site Suitable TGS must be approved by a person holding the PWZTMP qualification and must be supported by a TMP or risk assessment to ensure that the TGS has considered and mitigated all identified site specific conditions and risks.
- If it is identified that by implementing the TGS with modifications outside of the approved tolerances it will generate risks, then the works must be stopped (including the implementation of the TGS), the site must be made safe and an updated TGS must be provided by a PWZTMP qualified person prior to works recommencing. Any concerns regarding the suitability of the TGS must be raised with the Site Manager and your immediate Supervisor.

**TRAFFIC CONTROLLERS**

- The implementation of traffic control must be conducted in line with the hierarchy of controls with the elimination of harm to workers and the travelling public considered in the first instance.
- Where traffic control is required, a portable traffic control device (PTCD) must be used rather than using a manual traffic controller when the existing permanent speed limit is greater than 45 km/h.
- TCAWS 6.1, Section 5.4 provides the conditions under which a manual traffic controller may be used.
- Where PTCDs or traffic controllers are used, approach speeds of traffic must be reduced to less than 65 km/h.
- All persons operating a portable traffic control device or performing manual traffic control must be qualified with 'Traffic Control' training; and authorised by the relevant road authority.

**ROAD USER MANAGEMENT**

- The needs of specific road users, including travel paths and desire lines, must be considered and managed for the extent of the works to ensure safety and access is maintained. Specific road user groups to be considered include: Pedestrians including high-risk pedestrians such as persons with a disability, children, the elderly or persons using mobility aid devices; Cyclists; Motorcyclists; Heavy Vehicles, including oversize overmass vehicles; Public transport; and Emergency services. The needs of these specific road users have been considered in the design of this TGS, however the needs of all road users should be considered in the site specific risk assessment before implementing the TGS to ensure the TGS is appropriate.
- Road users are to be monitored for the duration of the works. If additional signage and/or devices are required to manage the needs of specific road users, such as pedestrians and cyclists, this would be subject to following the procedure for modifying a TGS.

**ACCESS MANAGEMENT**

- Access to properties located within the extent of works must be maintained at all times.
- Property access impacted by the works should be identified and addressed in the TGS. Consultation with the property owner/resident must be undertaken prior to implementing the TGS if required.

**INCIDENT MANAGEMENT**

- The site contractor is to determine the appropriate procedure for incident management where appropriate.
- If an incident occurs within the extent of the traffic control arrangement: Call for assistance if incident requires (emergency services 000 or 112); Notify the work site supervisor or Team Leader immediately of any incident; Maintain effective traffic control, if necessary, relocate the traffic control station to a suitable location clear of any further danger; and Record sufficient notes of the incident, including observations, to complete an incident report.

**INSPECTIONS**




- Temporary traffic management monitoring activities must be undertaken in all instances where work is being performed or aftercare is in place. This includes day and night times as required. The type of inspections and frequency are to be in accordance with TCAWS 6.1, Section 8.1.1.

**REVIEW OF TGS**

- Generic TGSs must be reviewed by a PWZTMP qualified person every 12 months so that they remain appropriate. Once reviewed the date and details of the PWZTMP person must be updated on the TGS to ensure persons selecting can confirm currency.
- All active site specific and site suitable TGS are designed for the nominated work activity and are only valid for the time period of works specified on the TGS. They must be reviewed as part of the weekly inspections as detailed in TCAWS 6.1, Section 8.1. If the work activity is intended to be longer than 12 months, then the TGS must be formally reviewed by a PWZTMP qualified person at least every 12 months and issued with the review date and the details of the person undertaking the review.

**RECORD KEEPING**

- Supervisory personnel are to keep daily records of the TGS implementation including: Site specific risk assessments; Approved TGS used, including versions where modifications or updates have been made; Completed inspection checklists that have been undertaken; Records of traffic related incidents that occurred during the works; and Any other relevant document generated by the process of completing the temporary traffic management works.

Issue	Desg	Appd	Date & Time	Amendment Description	TGS Name & Number:	TGS Designed By:	PWZTMP:	Exp:	Signature:	Date of Approval:	Page 3 / 10
01	AC	PL	17/10/2023 22:30	Original Issue	LGP - 63822 - GLC 151 - Wentworth to Unwin St - Clyde - CS6 TS4 - Road	Alec Czarnowski	TCT1010645	N/A	AC	24/09/2024	  
02	AC	PL	07/11/2023 13:15	Amended as per comments	Works Location:	Peter Lozano	TCT0058486	N/A			
03	AC	PL	07/11/2023 16:30	Amended as per comments	Wentworth to Unwin Street - Clyde	Client Company:					
04	AC	PL	13/11/2023 12:06	Amended detour	Project Name:	Client Contact:					
05	DK	KD	24/09/2024 15:15	Moved closure to Rosehill Race Gate	Sydney Metro Werstern Tunnelling	Daniel Kelly	Contact Number:	0437 315 649			
Scale: 1 : 750					Original Size A3						
Lack Group acknowledges the traditional owners of country throughout Australia and recognises their continuing connection to land, waters and community. We pay our respect to them and their cultures; and to elders both past and present.											

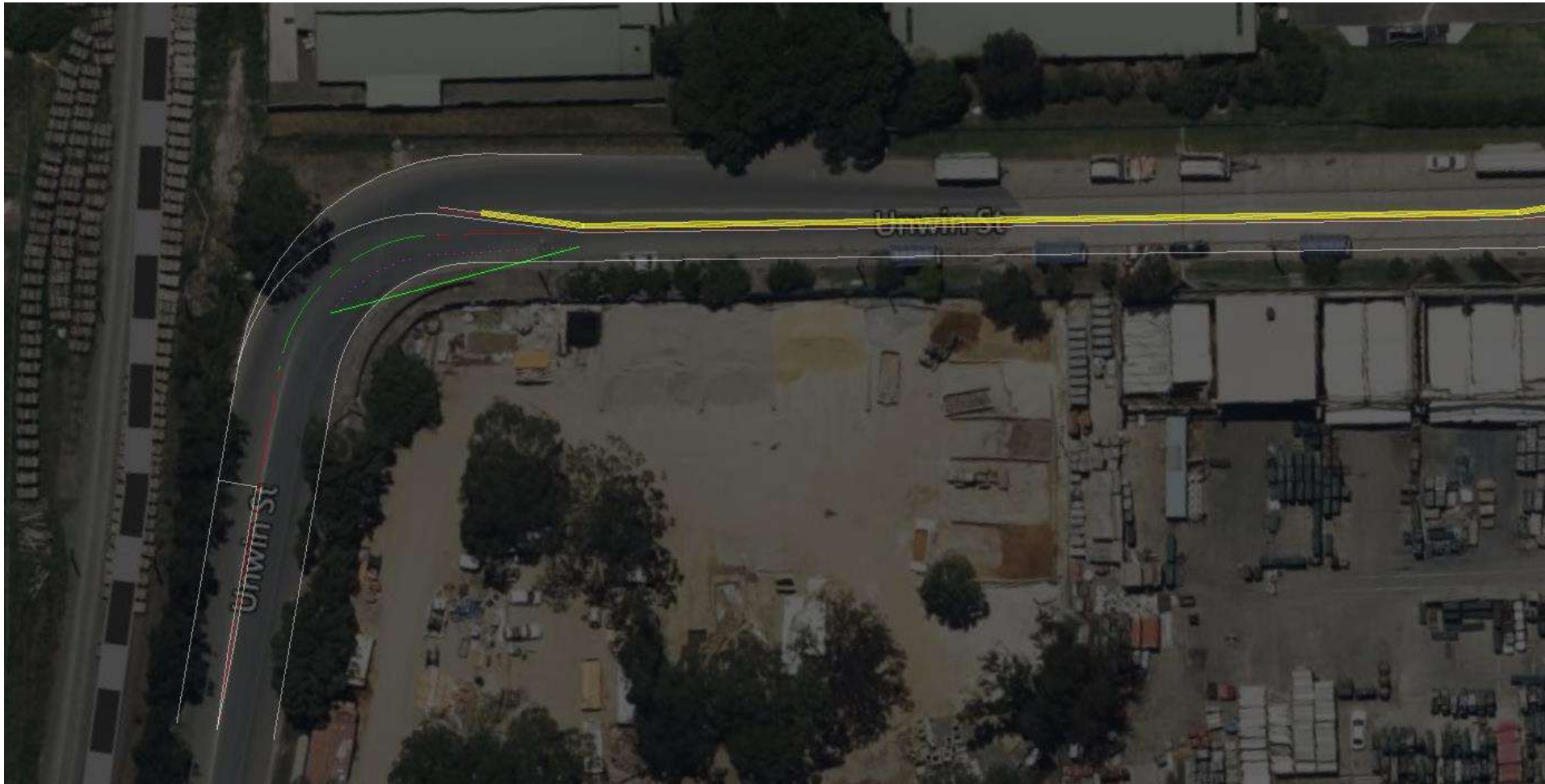
# STOPPING SIGHT DISTANCE (SSD) – P0153 – UNWIN STREET NORTHERN DIVERSION – PART 1

## UNWIN ST WB

Design Speed = 40km/hr

Required SISD = 35.0m

Remarks = *Achieved.*





**UNWIN ST EB**

*Design Speed = 40km/hr*

*Required SISD = 35.0m*

*Remarks = **Achieved.***



## STOPPING SIGHT DISTANCE (SSD) – P0153 – UNWIN STREET NORTHERN DIVERSION – PART 2

### UNWIN ST EB

Design Speed = 40km/hr

Required SISD = 35.0m

Remarks = *Achieved.*





**UNWIN ST WB**

*Design Speed = 40km/hr*

*Required SISD = 35.0m*

*Remarks = **Achieved.***




## 7.4 Appendix 4 – Safety Barriers Specifications



# Safety Barrier Technical Conditions for Use

## DB80 K150 Safety Barrier - Temporary

	<b>Issue Date:</b> 7 March 2024	<b>Proponent:</b> Delta Bloc International GmbH
	<b>Status:</b> Recommended for acceptance	<b>Accepted Impact Speed:</b> 100 km/h

This document is a summary of the Austrroads Safety Barrier Assessment Panel's assessment of the technical performance of the product against AS/NZS 3845 Parts 1 or 2 only. It does not consider procurement practices by individual Road Agencies. The Austrroads Safety Barrier Assessment Panel may at any time, withdraw or modify this document without notice.

These Technical Conditions for Use do not imply that this product may be used on roads under the care and control of individual Road Agencies. Users should refer to individual Road Agency websites to determine whether this product is accepted for use within that jurisdiction, and if the Road Agency has adopted any additional or specific requirements.

**These conditions do not take precedence over Road Agency specifications and standards.**

**These conditions take precedence over instructions in the Product Manual**, refer Austrroads Technical Advice SBTA 22-001. Product manual current at time of TCU: 25.01.24

### Design Requirements

<b>Containment Level</b>	<b>MASH TL3</b>
<b>Accepted Impact Speed</b>	100 km/h
<b>Point of Redirection – Leading (m)</b>	29.2
<b>Point of Redirection – Trailing (m)</b>	32.5
<b>Tested Article Length (m)</b>	61.17
<b>Anchor/Post Spacing (m)</b>	Freestanding
<b>Dynamic Deflection (m)</b>	1.44
<b>Working Width (m)</b>	1.94
<b>System Width (m)</b>	0.57
<b>Unit Length (m)</b>	4 or 6
<b>Minimum Support Width (m)</b>	Requires site specific analysis. Refer Austrroads Technical Advice SBTA 22-001.
<b>Minimum Installation Length (m)</b> <small>between crash cushions/terminals - tested article</small>	60
<b>System Conditions</b>	<ul style="list-style-type: none"> <li>• Use of 2 metre units is restricted to tight radius curves and emergency openings.</li> <li>• Installation on top of a kerb is not recommended, however if installed on top of a kerb all system components must be free to operate.</li> </ul>

### Approved Variants

<b>Variant</b>	<b>Functional Purpose</b>	<b>Conditions</b>
2 metre units	Installation on tight radii.	<ul style="list-style-type: none"> <li>• Restricted to impact speeds of 60 km/h and less.</li> <li>• Refer Austrroads Technical Advice SBTA-23-002.</li> </ul>
<i>Variants that are not listed above are NOT recommended for acceptance. Alterations to or combinations of the variants listed above are not recommended unless noted.</i>		

## Approved Connections

<b>An accepted end treatment must be provided at both ends of all barrier installations</b>	
<b>End Treatments</b>	
Absorb-M Crash Cushion	<ul style="list-style-type: none"> <li>• <b>The installation is restricted to an impact speed of 80 km/h or less.</b></li> <li>• Refer Absorb-M Crash Cushion Technical Conditions for Use.</li> <li>• The DB80 K150 to Absorb-M Crash Cushion transition must be used to connect the crash cushion to the barrier.</li> <li>• This is a gating device.</li> </ul>
SLED Crash Cushion	<ul style="list-style-type: none"> <li>• <b>The installation is restricted to an impact speed of 80 km/h or less.</b></li> <li>• Refer SLED Crash Cushion Technical Conditions for Use.</li> <li>• The DB80 K150 SLED Crash Cushion transition must be used to connect the crash cushion to the barrier.</li> <li>• This is a gating device.</li> </ul>
Smart Crash Cushion	<ul style="list-style-type: none"> <li>• Refer Smart Crash Cushion Technical Conditions for Use.</li> <li>• The DB80 K150 barrier adjacent to the Smart Crash Cushion must be anchored to the pavement as required by the Product Manual.</li> <li>• The DB80 K150 to Smart Crash Cushion transition must be used to connect the crash cushion to the barrier.</li> <li>• Leading and trailing points of redirection are considered to be 0.</li> <li>• Reverse impacts into the transition section can product a greater occupant severity value than preferred. Where reverse impacts are possible (e.g., bidirectional traffic), a risk assessment must be completed and steps to mitigate the likelihood of reverse impact should be implemented.</li> </ul>
Universal Tau-M Crash Cushion	<ul style="list-style-type: none"> <li>• Refer Universal Tau-M Crash Cushion Technical Conditions for Use.</li> <li>• The DB80 K150 barrier adjacent to the Universal Tau-M Crash Cushion must be anchored to the pavement as required by the Product Manual.</li> <li>• The DB80 K150 to Universal Tau-M Crash Cushion transition must be used to connect the crash cushion to the barrier.</li> <li>• Leading and trailing points of redirection are considered to be 0.</li> <li>• Reverse impacts into the transition section can product a greater occupant severity value than preferred. Where reverse impacts are possible (e.g., bidirectional traffic), a risk assessment must be completed and steps to mitigate the likelihood of reverse impact should be implemented.</li> </ul>
<b>Transitions</b>	
DB80 T150S Safety Barrier	<ul style="list-style-type: none"> <li>• <b>Combined system TL3 containment only.</b></li> <li>• Refer to DB80 T150S Safety Barrier Technical Conditions for Use.</li> <li>• The Safelink transition must be used to connect the barriers.</li> </ul>
<i>Connections that are not listed above are NOT recommended for acceptance.</i>	

## Foundation Pavement Conditions

Pavement Type	Post/Pin Spacing (m)	Post/Pin Type	Pavement Construction
Concrete			<p><u>Freestanding</u></p> <p>Foundation pavement conditions must be smooth and free of snag points, kerbs or obstructions that may interfere with the operation of the product.</p>
Deep lift asphaltic concrete			
Asphaltic concrete over granular			
Flush seal over granular			
Unsealed compacted formation			
<i>Installation in pavement conditions not permitted above have not been justified to the Panel's satisfaction.</i>			



# DELTABLOC

by Jaybro



**Jaybro**

CONSIDER IT **DONE.**

## **DeltaBloc DB80** **Concrete Crash Barrier**

The most exciting new product in passive traffic safety. Deltabloc® provides a new generation of concrete barriers enhancing traffic safety. These barriers are lightweight, approved with outstanding protection.

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**CALL NOW 1300 885 364**

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# **FASTER**

## **Install up to 1km per shift**

- Light weight design enables faster installation.
- Each barrier is symmetrical, this means barriers don't have to be orientated for installation.
- Unique coupling system ensures fast & efficient installation - no bolting of joining plates required



# **REDUCED FREIGHT**

## **Reduced Freight Cost**

- 6m DB80 barrier only weighs 3.1 Tonnes
- 42m / 48m / 42ft semi trailer carries 25% more DB80 barriers than other concrete barriers in the market.



# **LOWER COSTS**

## **Lighter Weight Design = Lower Cost**



DeltaBloc DB80 Barriers

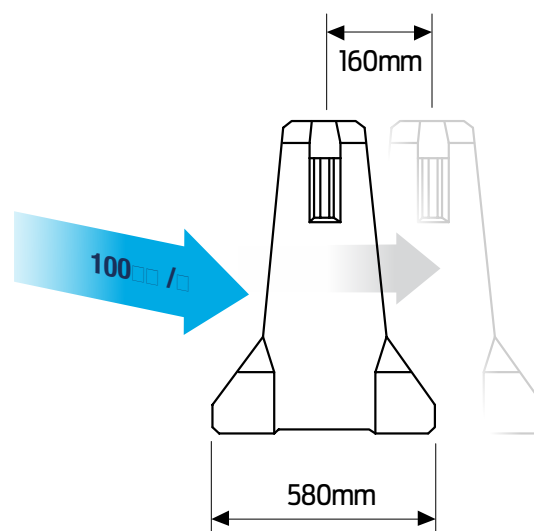
Size (Metres)	Weight (Tonnes)
6	3.1
4	2.4
2	1.2





## Less Deflection

- Approved to 100km/h in NSW, VIC, SA and New Zealand
- Approved to 80km/h in QLD



Approved to 100km/hr



Approved to 80km/hr

### DB 80 F-Shape (Classic Version, Tested Dez. 2010)

The tables below show the different system deflection and the working widths for different impact angles and speeds. Barrier displacement calculated according kinetic energy values of a 2270kg vehicle impacting (MASH).

Dynamic deflection with various speed limits					
Test Vehicle: Pick-Up-Truck, 2270kg					
Angle of Impact	5°	10°	15°	20°	25°
Design Speed (km/h)	Deflection (m)	Deflection (m)	Deflection (m)	Deflection (m)	Deflection (m)
40km/h / 25mph	0.01	0.04	0.08	0.14	0.21
50km/h / 31mph	0.01	0.06	0.12	0.21	0.31
60km/h / 37mph	0.02	0.08	0.17	0.29	0.45
70km/h / 43.5mph	0.03	0.11	0.24	0.42	0.64
80km/h / 50mph	0.04	0.15	0.33	0.57	0.87
90km/h / 56mph	0.05	0.19	0.43	0.75	1.14
100km/h / 62mph	0.06	0.24	0.54	0.95	1.44*
110km/h / 68mph	0.07	0.29	0.65	1.16	1.74
120km/h / 75mph	0.08	0.35	0.78	1.40	2.10

Working width with various speed limits					
Test Vehicle: Pick-Up-Truck, 2270kg					
Angle of Impact	5°	10°	15°	20°	25°
Design Speed (km/h)	Deflection (m)	Deflection (m)	Deflection (m)	Deflection (m)	Deflection (m)
40km/h / 25mph	0.59	0.60	0.64	0.66	0.72
50km/h / 31mph	0.59	0.62	0.66	0.73	0.82
60km/h / 37mph	0.59	0.63	0.70	0.80	0.94
70km/h / 43.5mph	0.60	0.66	0.77	0.93	1.13
80km/h / 50mph	0.61	0.70	0.86	1.08	1.36
90km/h / 56mph	0.62	0.74	0.96	1.26	1.63
100km/h / 62mph	0.63	0.79	1.07	1.46	1.94*
110km/h / 68mph	0.65	0.84	1.18	1.65	2.20
120km/h / 75mph	0.66	0.90	1.30	1.87	2.53

\* Measured value from test report. Normalised values for 2270kg vehicle, 25°, 100km/h are: dynamic deflection: 1.44m working width: 1.94m

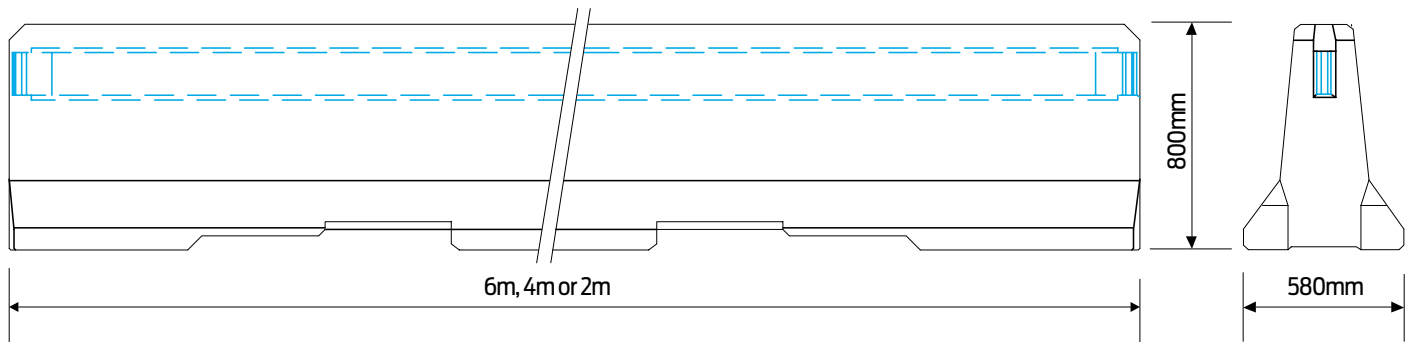
# LARGE STOCKS



## DESIGN SPECIFICATIONS

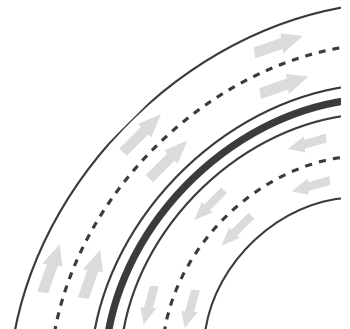
**Available in:**

6000mm, 4000mm, 2000mm



**Curve radii for safety facilities**

Barrier Type	DB80 F-Shape		
	Barrier Length	2m	4m
Curve radii with standard coupling 97mm	40m	80m	120m
Curve radii with extra long coupling 117mm	16m	32m	48m





# ANTI-GAWK SCREENS

Mesh panels commonly known as anti-gawking screens are used on civil work sites and construction sites to reduce the visibility of the sites activities to the general public and to pedestrians or vehicles passing by.

Reducing visibility on roadside work zones provides safety for road users. Drivers often become distracted by roadwork and this can lead to hazardous situation for both drivers and workers.

Anti-gawk screens can also play an important role in promoting your business, brand or project, with the use of printed banner mesh or shade cloth which is easily attached to the mesh panels.

## PRODUCT SPECS

- ▶ Suits Anti-gawk and Anti-Debris applications
- ▶ Can be used with both Star and dynabolted posts
- ▶ Easy bolt on system
- ▶ Size: 3m (W) x 1m (H)
- ▶ Mesh: 257 x 61.25mm,  $\phi$ 4mm
- ▶ Finish: Galvanised - 72 microns
- ▶ Custom printed mesh or panels also available
- ▶ Approved to Australian Standards AS4687

### ***Upright Anti-Gawk Screens***

Premium Mesh, Open Weave Mesh and Vinyl Banners can be custom made to be installed onto this screen



### ***Angled Anti-Gawk Screens***

Premium Mesh, Open Weave Mesh and Vinyl Banners can be custom made to be installed onto this screen



### ***Heavy Duty Anti-Gawk Screens***

Premium Mesh, Open Weave Mesh and Vinyl Banners can be custom made to be installed onto this screen



### ***Angled PVC Anti-Gawk Panels***

Vinyl Banners can be custom made to be installed onto this screen



# DB80 ACCESSORIES

## Flashing Hazard Lamps

The light can be very easily attached to road barriers/ barrier board stands and anti-gawk screens (requires 2 x 6 volt batteries sold separately).

- ▶ Dual switch for Flashing or Steady.
- ▶ With Heavy Duty 'U' bolt  
Anti-Vandal bracket to fit: Barrier Boards, Star Posts, Sign Posts etc.



## Lifting Clutches

These clutches are typically used for lifting panels, pipes, pits, manholes, box culverts, road barriers, bridge beams, planks, sound walls, culverts etc.

- ▶ Individually Serialised
- ▶ Includes testing certificate



## Standard & Long Couplings

Used to connect concrete barriers. Extended coupler allows for bends and curves when installing longer lengths of concrete barriers.



## Jersey Kerb Delineators

Jersey Kerb Delineators can be installed on top of DB80 Barriers.

- ▶ Metal with reflective arrow or diagonal line.
- ▶ Double sided
- ▶ Size: 150 (W) x 210mm (H)
- ▶ Hole diameter: 10mm



## Bolt Down Plates

Used to permanently bolt down concrete barriers to the ground. Ideal for Car parks, yards and tighter work areas subject to site risk assessment



## Guard Rail Reflectors

Guard Rail Reflectors can be installed on top or on the side of DB80 Barriers.

- ▶ Double sided reflective.
- ▶ 90° aluminium mounting bracket



## Non-Drill Post Handrail System

Non-Drill Post Handrail System simply attaches to existing lifting anchors within your precast or cast in-situ concrete structure. It can be used as temporary or permanent system on concrete barriers and sign posts.

- ▶ Complies to AS/NZS 1170.1 & AS 1657
- ▶ Avoids the need for drilling
- ▶ Eliminates exposure to hazardous dust
- ▶ Prevents exposure of concrete reinforcement
- ▶ Removes potential spalling of concrete



# END TREATMENTS & TRANSITIONS

## **Tapered Ends**

These are approved to be used in speed zones of less than 80kph when attached to the DB80 system. These tapers provide a safe end to a row of barriers rather than the vertical face of the standard terminal.



## **Tau II**

DB80 supports the Tau -II re-directive crash cushion these are used at the end of concrete barriers in speed zones in excess of 80Km/hr. The system is ideal in hazardous situations where traffic could be in the direct path of a dangerous median or rigid barriers.



## **Smart Cushion**

The Smart Cushion® crash attenuator allows lighter and slower-moving vehicles to have longer ridedown distances and lower ridedown g-forces. Unlike fixed-resistance attenuators, it does not reach maximum stopping resistance unless a vehicle is traveling at the maximum design speed.



## **Absorb 350**

The Absorb 350 is a water filled crash cushion that is approved to the NCHRP testing levels 1 and 2. This barrier is ideal for speed zones of 80km's and under, and it attaches perfectly to the DB80 concrete crash barriers.



## **SLED (Sentry Longitudinal Energy Dissipater)**

DB80 supports SLED End Terminal. SLED End Terminal is a gating, non redirective end terminal designed to shield the end of permanent and portable barriers made of concrete. The system that has been thoroughly tested to AS/NZS 3845:1999 and MASH testing procedures.



## **QuadGuard**

QuadGuard® crash cushions are available to shield hazards from 610mm to 3200mm wide, and for speeds from 40km/h to 100km/h. Each QuadGuard® System consists of crushable, energy absorbing cartridges surrounded by a framework of exclusive steel Quad-Beam™ panels.



# CUSTOM PRINTED MESH

Fence Banner Mesh is the leading grand format printer in Australia for the construction industry. Our banners have been designed to stand up to the harsh Australian environmental conditions to ensure maximum visibility on your site.

We want your business to stand out from the crowd and be remembered for the right reason. We have a high-quality in-house design service to assist you in creating a solution that not only conveys your message but is aesthetically beautiful.



## Premium Mesh

Offers the highest level of print quality, strength and durability with exceptional levels of privacy.

It's a quick and easy way to improve the image of your construction site while doubling as an eye-catching marketing tool to promote your business or project.

### SPECIFICATIONS

- ▶ Easy to handle
- ▶ 1.6/1.8m (H) x 50m (L)
- ▶ UV treated Polyester Mesh
- ▶ 260gsm
- ▶ 80% Blockout
- ▶ Durability: 4yrs\*
- ▶ OH&S Compliant
- ▶ Fire Retardant Mesh available

## Open Weave Mesh

Is ideal for high wind applications. The fabric prints the same as the Premium Mesh, but the 50% weave allows for better airflow.

Airflow is key factor in the durability and lifespan of banner mesh in windy environments.

### SPECIFICATIONS

- ▶ Easy to handle
- ▶ 1.6/1.8m (H) x 50m (L)
- ▶ UV treated Polyester Mesh
- ▶ 200gsm
- ▶ 50% Blockout
- ▶ Durability: 2yrs\*
- ▶ OH&S Compliant
- ▶ Fire Retardant Mesh available

## Vinyl Banners

Offers the highest levels of privacy and is ideal for creating eye-catching, and photo-realistic campaigns. Commonly used on large residential developments or to build public awareness.

Available in custom heights and lengths to suit your needs.

### SPECIFICATIONS

- ▶ High resolution, photo-realistic images
- ▶ Custom heights & lengths
- ▶ UV treated PVC Vinyl
- ▶ 440gsm
- ▶ 100% Blockout
- ▶ Durability: 4yrs\*
- ▶ OH&S Compliant

\* Durability indicates expected lifespan of the banner material and print under average weather conditions but does not cover damage caused by high winds, extreme weather events or inappropriate installation.



## 7.5 Appendix 5 – Road Safety Audit



<b>Project:</b>	<b>Sydney Metro West – Western Tunnelling Package</b>
<b>Report Title:</b>	<b>Road Safety Audit Report - Detailed design stage Unwin Street northern diversion</b>
<b>Prepared for:</b>	<b>Gamuda &amp; Laing O’Rourke Consortium (GLC)</b>

#### Document Reference

<b>Project Number</b>	<b>Document Type</b>	<b>Sequential Number</b>	<b>Revision Suffix</b>
331225	RPT	01	A



## Client Details

Client Organisation: Gamuda & Laing O'Rourke Consortium (GLC)

Client Representative: Scott McMichael

Position: Traffic Manager

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## Auditor Organisation Details

Auditor Organisation: Case Traffic Solutions Pty Ltd

Contact: Ben McLean

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## Revision History

Revision	Date	Description	Prepared By	Issued By
A	05/09/2024	Road Safety Audit Report Detailed design stage Unwin Street northern diversion	Ben McLean	Ben McLean

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## 1 Introduction

### 1.1 Background

The Sydney Metro West – Western Tunnelling Package involves nine kilometres of twin metro rail tunnels between Westmead and Sydney Olympic Park, excavation for two new metro stations, a stabling and maintenance facility at Clyde and a precast facility at Eastern Creek.

### 1.2 Audit Scope

This report documents the findings of a detailed design stage Road Safety Audit. The audit involved reviewing the design documentation provided for the proposed Unwin Street northern diversion traffic arrangements (long term lane closure and shuttle flow operations) and associated long-term worksite located at Unwin Street, Rose Hill between Shirley Street and James Ruse Drive. This Road Safety Audit has been conducted following the general principles detailed in Austroads (2022) Guide to Road Safety Part 6: Road Safety Audit. An audit brief was received.

### 1.3 Location

Figure 1 provides a map of the audit site showing Unwin Street with James Ruse Drive to the west, Rosehill Racecourse to the north and Shirley Street to the east.



Figure 1 – Audit location

### 1.4 The Audit Team

The audit was undertaken by CaSE Traffic & Transport Solutions and the details of the audit team are provided below:

Auditor ref no.	Name	Role	Organisation
RSA-02-0693	Manoj Dhanokar	Lead Auditor	TMS Pty Ltd
RSA-07-1659	Ben McLean	Senior Auditor	Case Traffic Solutions

## 1.5 Commencement Meeting

On 02 September 2024 a commencement email and audit brief were received from GLC's Traffic Manager requesting a Detailed Design stage audit be conducted on the proposed Unwin Street northern diversion traffic arrangements.

## 1.6 Completion Meeting

A completion meeting will be scheduled upon request by the Project.

## 1.7 Documentation provided by the client

The documentation reviewed by the RSA team as part of the audit includes only the listed documentation below which was provided by the client. Any additional documentation not listed below has not been considered or reviewed as part of this road safety audit.

Document Number	Document Name	Revision	Date
P0153-DTAL-0000-RW-DRG-101001, P0153-DTAL-0000-RW-DRG-101002	Unwin Street road alignment and detail plan Stage 1 and 2	A	04/09/2024
P0153-DTAL-0000-RW-DRG-201001, P0153-DTAL-0000-RW-DRG-201002	Unwin Street road alignment and detail plan typical sections	A	04/09/2024
P0153_SSD-PART 1, P0153_SSD-PART 2	Unwin Street stopping sight distance checks Part 1 and 2	-	04/09/2024
P0153_TURNPATHS-PART 1, P0153_TURNPATHS-PART 2	Unwin Street turning path checks Part 1 and 2	-	04/09/2024
SMWSTWTP-GLO-RSH-TF-PLN-000002	Unwin Street Northern Diversion Construction Traffic Management Plan	A	02/09/2024

## 1.8 Site Inspections

The audit team also completed a desktop inspection on 04 and 05 September 2024 using information from Nearmap and SixMaps.

## 1.9 Previous RSA

Nil.

## 1.10 Background data

### 1.10.1 Crash History

No crash history data was provided or requested.

### 1.10.2 Traffic and Speed Data

No traffic and/or speed data was provided or requested.

### 1.10.3 Vulnerable Road User Data

No vulnerable road user data was provided or requested.

## 1.11 Exclusions / Not Assessed

Nil.



## 1.12 Appendices

### Appendix A – Audit Findings

## 2 Methodology

The methodology generally follows the recommendations described in Austroads (2022), Guide to Road Safety Part 6: Road Safety Audit and TfNSW Guidelines for Road Safety Audit Practices 2011. It is a formal examination of the proposed or existing roads and road related areas from the perspective of all road users, with the intention of identifying road safety deficiencies and areas of risk that could lead to road crashes.

All the findings described in this report are considered by the audit team to require action to improve the road safety outcomes of the project and to minimise the risk of crash occurrence and reduce potential crash severity. The audit team has examined and reported only on the road safety implications as presented and has not examined or verified the compliance of the road layout to Austroads guides or Australian Standards specifications, or any other criteria.

### 2.1 The Safe System in Road Safety Audit

The aim of the Safe System findings is to focus the RSA process on considering safe speeds and by providing forgiving roads and roadsides. This audit has focused on the specific crash types that are known to result in higher severity outcomes at relatively lower speed environments to meet Safe System requirements of reducing the risk of fatal and serious injury crashes. The indicative speeds provided by the Safe System represent the 10% likelihood of a fatality (or 90% survivability) for the crash type. The likelihood of sustaining serious injuries is significantly higher than the likelihood of a fatality at these speeds. The exposure and likelihood of crash occurrence is considered for all findings, focusing on those that have the potential to exceed these threshold speeds.

### 2.2 Determining risk level of audit findings

The following risk matrix content extracted from Austroads Guide to Road Safety Part 6: Road Safety Audit (2022) has been adhered to determine the risk level of each audit finding:

*The two risk parameters and their categories to be considered are likelihood and severity as follows:*

<b>Likelihood</b>	<b>Description</b>
<b>Almost certain</b>	<i>Occurrence once per quarter</i>
<b>Likely</b>	<i>Occurrence once per year</i>
<b>Possible</b>	<i>Occurrence once per year to once every three years</i>
<b>Unlikely</b>	<i>Occurrence once every three years to once every seven years</i>
<b>Rare</b>	<i>Occurrence less than once every seven years</i>

<b>Severity</b>	<b>Description</b>
<b>Insignificant</b>	<i>Property damage</i>
<b>Minor</b>	<i>Minor first aid</i>
<b>Moderate</b>	<i>Major first aid and/or presents to hospital (not admitted)</i>
<b>Serious</b>	<i>Admitted to hospital</i>
<b>Fatal</b>	<i>At scene or within 30 days of crash</i>



**Austrroads RSA risk matrix**

			Severity				
			Insignificant	Minor	Moderate	Serious	Fatal
			Property damage	Minor first aid	Major first aid and/or presents to hospital (not admitted)	Admitted to hospital	Death within 30 days of crash
Likelihood (includes exposure)	Almost certain	One per quarter	Medium	High	High	Extreme (FSI)	Extreme (FSI)
	Likely	Quarter to 1 year	Medium	Medium	High	Extreme (FSI)	Extreme (FSI)
	Possible	1 to 3 years	Low	Medium	High	High (FSI)	Extreme (FSI)
	Unlikely	3 to 7 years	Negligible	Low	Medium	High (FSI)	Extreme (FSI)
	Rare	7 years +	Negligible	Negligible	Low	Medium (FSI)	High (FSI)

Safe System Crash outcome threshold

The corresponding priorities for mitigation are categorised as:

Action	
<b>Negligible</b>	No action required
<b>Low</b>	Should be corrected or the risk reduced if the treatment cost is low
<b>Medium</b>	Should be corrected or the risk significantly reduced, if the treatment cost is moderate, but not high
<b>High</b>	Should be corrected or the risk significantly reduced, even if the treatment cost is high
<b>Extreme</b>	Must be corrected regardless of cost

No definitive guidance can be given as to the respective monetary values of the terms ‘low’, ‘moderate’ or ‘high’ regarding treatment costs, but it is expected that consideration against the total project cost would be an important factor when categorising mitigation of each risk.

The risk matrix above is aligned to Safe System principles and has been designed to be used with consideration of a severity guidance sheet which was developed by the PWG (Figure 10.3).

**Figure 10.3: The severity guidance sheet – to be used with the risk matrix (Figure 10.2)**

		Crash Speed (km/h)										
		< 10	10	20	30	40	50	60	70	80	90	100
Crash Type	Pedestrian (vs HV)											
	Cyclist (vs HV)											
	Motorcyclists (vs HV)											
	Pedestrian (vs car)											
	Cyclist (vs car)											
	Pole/Tree Impact (car)											
	Motorcyclists (vs car)											
	Side Impact (HV vs car)											
	Side Impact (car vs car)											
	Head On (HV vs car)											
	Head On (car vs car)											

*It is stressed that the information contained within the severity guidance sheet is a general indication only and that professional engineering judgement is required with its usage.*

### 2.3 Road Safety Audit findings

Appendix A provides details of the road safety hazards and risks identified in this road safety audit, and the features that may increase the likelihood of a crash occurring and the features that may increase injury severity should a crash occur. No feature that may increase crash likelihood resides in isolation, potentially there are several features that, if occurring together, may change the risk profile of the road. The audit findings and recommendations are offered for the client to consider, prioritise, respond to and act upon.

### 2.4 Disclaimer

This report contains findings and risk ratings based on the examination of the relevant documentation and/or site. The report is based on the conditions viewed on the day and time of each site inspection and as described in Section 1.2 Audit Scope. This report is relevant at the time of production, and the information and data contained within was prepared with due care by the audit team. Readers should not solely rely on the contents of this report and it is strongly recommended that users seek appropriate expert advice in relation to their own circumstances. Before relying on the information in this report, users should carefully evaluate the accuracy, completeness, and relevance of the data for their purposes. The audit team is not liable to any party for any losses, expenses, damages, liabilities or claims whatsoever, whether direct, indirect, or consequential, arising out of or referable to the use of this report, howsoever caused whether in contract, tort, statute or otherwise.



### 3 Audit Team Statement

This Road Safety Audit has been carried out independently of the client following the general principles detailed in Austroads (2022), Guide to Road Safety Part 6: Road Safety Audit and NSW RTA (2011) Guidelines for Road Safety Audit Practices where appropriate. The audit has been carried out for the sole purpose of identifying the foreseeable road safety risks and hazards and suggesting/recommending appropriate mitigation measures. The audit team has operated in a diligent, professional manner, within their competency, and complying with specified and recognised auditing process and practices to ensure that the specified requirements within the audit brief have been fulfilled.

#### Audit Team Leader

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#### Auditor

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General Manager – Case Traffic Solutions Pty Ltd

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Mobile: +61 408 505 052

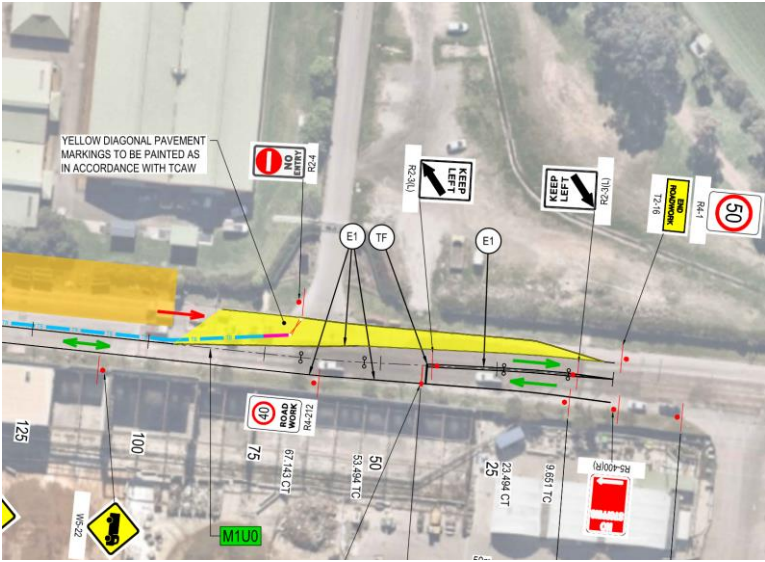


## Appendix A – Audit Findings



## Audit Findings

Item	Audit finding (risk/hazard, extent, crash type, location)	Treatment Recommendations	Likelihood & Severity	Road Safety Risk
1	<p>General – details of the proposed road safety barrier type and end terminal type are not provided. If the installations do not meet road agency specifications and standards, and/or dynamic deflection, working width and system conditions are not achieved this may result in greater vehicle occupant severity in the event of errant vehicle impact.</p> <p><b>LEGEND</b></p> <ul style="list-style-type: none"> <li> PORTABLE TRAFFIC CONTROL DEVICE STOP/GO BOOM GATE</li> <li> TEMPORARY TL3 CRASH CUSHION</li> <li> TEMPORARY TL3 CONCRETE BARRIER</li> <li> CONSTRUCTION ACCESS/EGRESS GATE</li> </ul>	<p>Consider specifying the product type and variants to be used.</p>	<p><b>Note only</b></p>	<p>-</p>
2	<p>The length of the proposed single-lane shuttle flow operation is approximately 220m. Details of traffic volume and composition have not been provided however based on adjacent land uses a relatively high percentage of heavy vehicles is expected and queue lengths may extend beyond the "Prepare to Stop" sign locations, increasing the risk of rear end crashes.</p>	<p>Review guidance and procedures within TCAWZ Section 4.6 for end of queue management and reducing end of queue collisions.</p>	<p><b>Likelihood: Possible</b> <b>Severity: Moderate</b></p>	<p><b>High</b></p>
3	<p>It is not clear what provisions have been made to maintain access to Rosehill Gardens Gate 02 during both stages of construction. If access is required to be maintained, there is no</p>	<p>Review and confirm requirements to maintain access to Rosehill Gardens Gate 02 during both stages of construction and consider implementing additional</p>	<p><b>Likelihood: Possible</b></p>	<p><b>High</b></p>

	<p>intersection control and the potential for vehicles from this gate to enter the single lane shuttle flow operation in conflict with oncoming traffic, increasing the risk of head on crashes. If the access is to be closed, there is no advance warning or regulatory signage to inform road users which increases the risk of driver confusion and side impact or rear end crashes.</p> 	<p>controls and signposting to provide clear guidance to road users as appropriate.</p>	<p><b>Severity: Serious</b></p>	
<p>4</p>	<p>In Stage 1, the eastbound site exit is located within the single lane section of shuttle flow operation. It is not clear how construction vehicles exiting the worksite will be controlled to avoid conflict with turning movements at Rosehill Gardens Gate 02 or westbound traffic along Unwin Street increasing the risk of side impact and side swipe crashes.</p>	<p>Review site exit gate operations and consider how construction vehicle movements will be managed and coordinated with single lane shuttle flow operation.</p>	<p><b>Likelihood: Possible</b> <b>Severity: Minor</b></p>	<p><b>Medium</b></p>

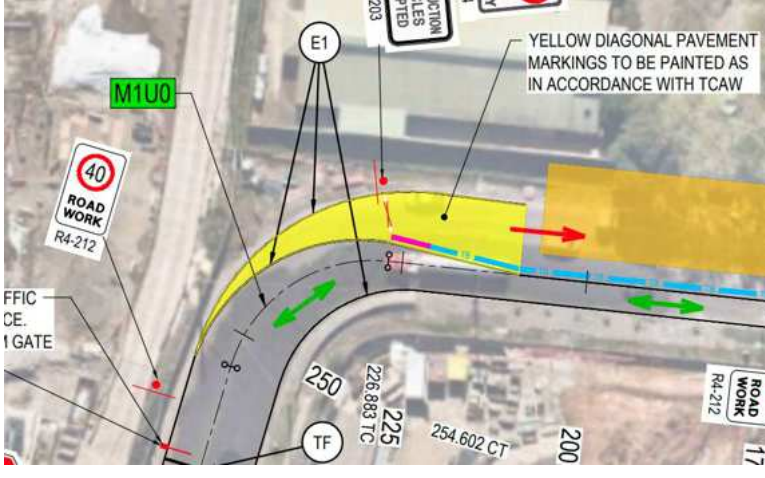
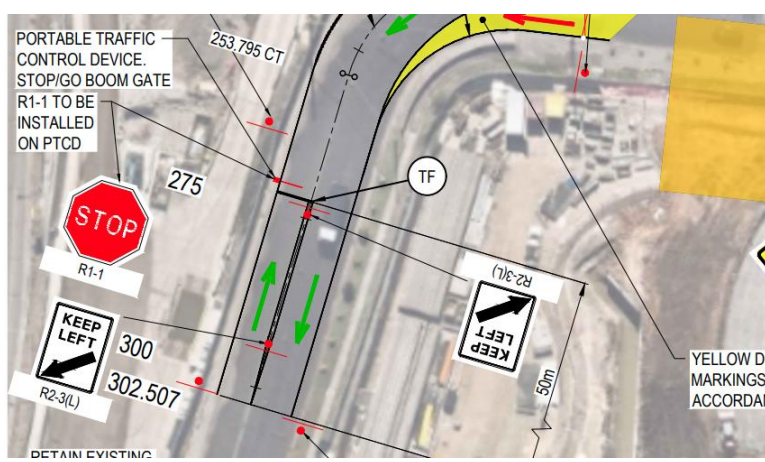








<p>7</p>	<p>Delineators are not shown for barrier end terminals and temporary road safety barriers should have adequate delineation installed to help guide road users past the work zone, particularly at night.</p>	<p>Consider showing the required type of chevron delineators to be fitted to barrier end terminals and specify the type of retro reflective delineators to be fitted to the barrier run to improve night time delineation.</p>	<p><b>Likelihood:</b> Unlikely</p> <p><b>Severity:</b> Minor</p>	<p>Low</p>

	 <p>YELLOW DIAGONAL PAVEMENT MARKINGS TO BE PAINTED AS IN ACCORDANCE WITH TCAW</p> <p>40 ROAD WORK R4-212</p> <p>M1U0</p> <p>FFIC CE. 1 GATE</p> <p>E1</p> <p>250</p> <p>226,883 TC</p> <p>225</p> <p>254,602 CT</p> <p>200</p> <p>TF</p> <p>R4-212 ROAD WORK</p>			
<p>8</p>	<p>The use of PTCD's is proposed which requires the presence of a traffic controller. It appears that space is limited for traffic controllers to be located in safe locations with a clear escape route where they can also operate the PTCD and monitor traffic.</p>  <p>PORTABLE TRAFFIC CONTROL DEVICE. STOP/GO BOOM GATE R1-1 TO BE INSTALLED ON PTCD</p> <p>253,795 CT</p> <p>275</p> <p>TF</p> <p>STOP R1-1</p> <p>KEEP LEFT R2-3(L)</p> <p>300</p> <p>302,507</p> <p>DETAIN EXISTING</p> <p>YELLOW DIAGONAL MARKINGS ACCORDANCE WITH TCAW</p>	<p>Ensure that a clear escape route is available for traffic controllers managing the PTCD (boom gate) and that the areas where they are stationed are well-lit at night.</p>	<p><b>Likelihood: Possible</b></p> <p><b>Severity: Moderate</b></p>	<p><b>High</b></p>



9	<p>Kerbside parking is currently permitted along Unwin Street and will need to be prevented on approaches to and throughout the single lane shuttle flow operation which increases the risk of side swipe crashes.</p> 	<p>Consider installing No Stopping signposting and or line marking</p>	<p><b>Likelihood:</b> <b>Unlikely</b></p> <p><b>Severity: Minor</b></p>	<p><b>Low</b></p>
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**Client:** Gamuda Laing O'Rourke Consortium  
**Project:** Sydney Metro West - Western Tunnelling Package (WTP)  
**Audit Stage:** Detailed design stage  
**Date:** 5/09/2024

Item	Audit Finding	Treatment Recommendation	Risk Rating	Clients Response		
				Accepted Yes / No	Proposed Corrective Action	Date Completed
1	General – details of the proposed road safety barrier type and end terminal type are not provided. If the installations do not meet road agency specifications and standards, and/or dynamic deflection, working width and system conditions are not achieved this may result in greater vehicle occupant severity in the event of errant vehicle impact.	Consider specifying the product type and variants to be used.	Note only	No	Barrier type DB80 K150 specified in section 6.2 with TfNSW acceptance and specifications included in Appendix 4.	5/09/2024
2	The length of the proposed single-lane shuttle flow operation is approximately 220m. Details of traffic volume and composition have not been provided however based on adjacent land uses a relatively high percentage of heavy vehicles is expected and queue lengths may extend beyond the "Prepare to Stop" sign locations, increasing the risk of rear end crashes.	Review guidance and procedures within TCAWZ Section 4.6 for end of queue management and reducing end of queue collisions.	High	Yes	Traffic queues will be constantly monitored and if required additional "Prepare to Stop" signage will be implemented as required.	5/09/2024
3	It is not clear what provisions have been made to maintain access to Rosehill Gardens Gate 02 during both stages of construction. If access is required to be maintained, there is no intersection control and the potential for vehicles from this gate to enter the single lane shuttle flow operation in conflict with oncoming traffic, increasing the risk of head on crashes. If the access is to be closed, there is no advance warning or regulatory signage to inform road users which increases the risk of driver confusion and side impact or rear end crashes.	Review and confirm requirements to maintain access to Rosehill Gardens Gate 02 during both stages of construction and consider implementing additional controls and signposting to provide clear guidance to road users as appropriate.	High	Yes	Access to gate required at various times as directed by Rosehill Gardens. When required traffic control with required advance warning signage will be implemented.	5/09/2024
4	In Stage 1, the eastbound site exit is located within the single lane section of shuttle flow operation. It is not clear how construction vehicles exiting the worksite will be controlled to avoid conflict with turning movements at Rosehill Gardens Gate 02 or westbound traffic along Unwin Street increasing the risk of side impact and side swipe crashes.	Review site exit gate operations and consider how construction vehicle movements will be managed and coordinated with single lane shuttle flow operation.	Medium	Yes	Exiting vehicles will depart at traffic change over to EB flow or tag on last vehicle under EB flow. As above when required Rosehill Gardens gate will be traffic controlled.	5/09/2024
5	In Stage 2, the westbound site exit is located within single lane section of shuttle flow operation. It is not clear how construction vehicles exiting the worksite will be controlled to avoid conflict with oncoming traffic from the south or approaching traffic from the east increasing the risk of head on and side impact crashes.	Review site exit gate operations and consider how construction vehicle movements will be managed and coordinated with single lane shuttle flow operation.	High	Yes	Exiting vehicles will depart at traffic change over to WB flow or tag on last vehicle under WB flow.	5/09/2024
6	No advance warning signage is provided for traffic entering from the property accesses on southern side of Unwin Street to warn road users of the changed traffic conditions and the potential presence of queued vehicles increasing the risk of rear end crashes.	Consider providing advance warning signage for the property access to inform road users of the changed traffic conditions.	Low	Yes	Signage to be implemented as required	5/09/2024
7	Delineators are not shown for barrier end terminals and temporary road safety barriers should have adequate delineation installed to help guide road users past the work zone, particularly at night.	Consider showing the required type of chevron delineators to be fitted to barrier end terminals and specify the type of retro reflective delineators to be fitted to the barrier run to improve night time delineation.	Low	Yes	Correct right or left chevron delineators will be installed on end terminals.	5/09/2024
8	The use of PTCD's is proposed which requires the presence of a traffic controller. It appears that space is limited for traffic controllers to be located in safe locations with a clear escape route where they can also operate the PTCD and monitor traffic.	Ensure that a clear escape route is available for traffic controllers managing the PTCD (boom gate) and that the areas where they are stationed are well-lit at night.	High	Yes	Traffic Controllers will have clear escape routes and be clear of traffic. Escape routes to be monitored at all times.	5/09/2024
9	Kerbside parking is currently permitted along Unwin Street and will need to be prevented on approaches to and throughout the single lane shuttle flow operation which increases the risk of side swipe crashes.	Consider installing No Stopping signposting and or line marking.	Low	Yes	Noted	5/09/2024



## 7.6 Appendix 6 – Consultation

**From:** [George Silvino \(GLC\)](#)  
**To:** [Nick Frost \(GLC\)](#); [Scott McMichael \(GLC\)](#); [Kelly Daniel](#)  
**Subject:** FW: WTP - GLC - ATC - Unwin Street Planned Division Works (August - January 2025)  
**Date:** Wednesday, 18 September 2024 9:21:55 AM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[RHG Emergency Plan V1.8.pdf](#)  
[image004.png](#)  
[image003.png](#)  
[image007.png](#)

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Thanks Nick,

[@Scott McMichael \(GLC\)](#) [@Kelly Daniel](#) please see below response from Nick regarding ATC. Hopefully this is enough to close-out the CJP comment for resubmission.

Regards,  
George



**George Silvino | Senior Project Engineer**  
Gamuda Australia and Laing O'Rourke Consortium  
Sydney Metro Western Tunnelling Package  
M: +61 433 297 789  
E: [George.Silvino@glcwt.com.au](mailto:George.Silvino@glcwt.com.au)

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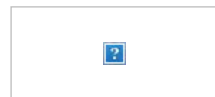
**From:** Nick Frost (GLC) <[Nick.Frost@glcwt.com.au](mailto:Nick.Frost@glcwt.com.au)>  
**Sent:** Wednesday, 18 September 2024 9:13 AM  
**To:** George Silvino (GLC) <[george.silvino@glcwt.com.au](mailto:george.silvino@glcwt.com.au)>  
**Subject:** FW: WTP - GLC - ATC - Unwin Street Planned Division Works (August - January 2025)

Morning George,

As per our conversations we sent the Unwin Street presentation in August with fortnightly meeting being held to discuss our upcoming scope and any concerns. With a verbal approval given with a caveat where ATC were still liaising internally due to some staff changes within the management of the stables.

Please see below my email requesting this no objection in writing. I will work through with ATC any concerns, changes and limitations. They are aware this work must occur as they will be getting a new driveway to their boundary and this area will be excavated and have limited access.

Kind Regards



**Nick Frost** | Third Party Interface and Instrumentation and Monitoring Manager  
Gamuda Australia and Laing O'Rourke Consortium  
P | +61 416 089 524 E | [Nick.Frost@glcwt.com.au](mailto:Nick.Frost@glcwt.com.au)  
W | [www.gamuda.com.au](http://www.gamuda.com.au) W | [www.laingorourke.com](http://www.laingorourke.com)

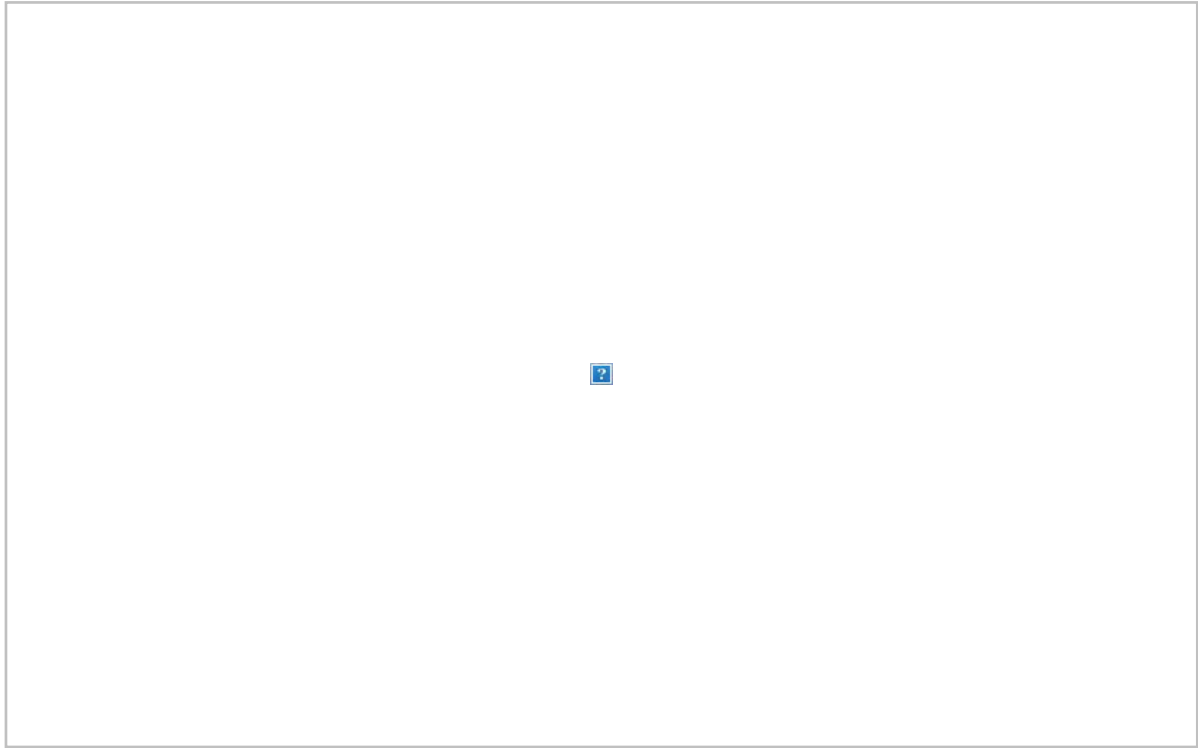
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**From:** Nick Frost (GLC)  
**Sent:** Tuesday, 17 September 2024 2:57 PM  
**To:** Andrew Copper <[acopper@mostyncopper.com.au](mailto:acopper@mostyncopper.com.au)>  
**Cc:** Enver Yasar (GLC) <[enver.yasar@glcwt.com.au](mailto:enver.yasar@glcwt.com.au)>; Katherine Martin <[Katherine.Martin@transport.nsw.gov.au](mailto:Katherine.Martin@transport.nsw.gov.au)>; Kate Brooks <[Kate.Brooks@transport.nsw.gov.au](mailto:Kate.Brooks@transport.nsw.gov.au)>; John Winter <[jwinter@australianurfclub.com.au](mailto:jwinter@australianurfclub.com.au)>; Steve McMahon <[smcmahon@australianurfclub.com.au](mailto:smcmahon@australianurfclub.com.au)>; [msharman@australianurfclub.com.au](mailto:msharman@australianurfclub.com.au)  
**Subject:** RE: WTP - GLC - ATC - Unwin Street Planned Division Works (August - January 2025)

Hi Andrew,

Can we please confirm that the closure of the ATC Unwin Street western access gate can be closed for a period of time from Oct – Nov to allow the new diversion works to be completed. There is a time where a new driveway and road will be built with limited access, but during the other times emergency access can be accommodated if needed. A blanket approach would be easier to manage. I will be completing fortnightly updates and in close communication with yourself so I feel this is the best option. I have an old copy of your emergency plan (attached) and don't see it as a key emergency access gate. Understanding you have an updated version.





Kind Regards



**Nick Frost** | Third Party Interface and Instrumentation and Monitoring Manager  
Gamuda Australia and Laing O'Rourke Consortium  
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**W** | [www.gamuda.com.au](http://www.gamuda.com.au)      **W** | [www.laingorourke.com](http://www.laingorourke.com)

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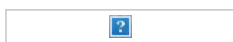
**From:** Andrew Copper <[acopper@mostyncopper.com.au](mailto:acopper@mostyncopper.com.au)>  
**Sent:** Thursday, 22 August 2024 6:07 PM  
**To:** Nick Frost (GLC) <[Nick.Frost@glcwt.com.au](mailto:Nick.Frost@glcwt.com.au)>; msharman <[msharman@australianurfclub.com.au](mailto:msharman@australianurfclub.com.au)>; John Winter <[jwinter@australianurfclub.com.au](mailto:jwinter@australianurfclub.com.au)>  
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**Subject:** RE: WTP - GLC - ATC - Unwin Street Planned Division Works (August - January 2025)

Thanks Nick.

Looping in [@John Winter](#) for visibility as well.

John let me know if you want to discuss.

Kind Regards,



**Andrew Copper**  
Senior Project Manager  
M: 0415 574 155

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**From:** Nick Frost (GLC) <[Nick.Frost@glcwt.com.au](mailto:Nick.Frost@glcwt.com.au)>  
**Sent:** Thursday, August 22, 2024 9:30 AM  
**To:** msharman <[msharman@australianurfclub.com.au](mailto:msharman@australianurfclub.com.au)>; Andrew Copper <[acopper@mostyncopper.com.au](mailto:acopper@mostyncopper.com.au)>  
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**Subject:** RE: WTP - GLC - ATC - Unwin Street Planned Division Works (August - January 2025)

Morning Matt,

YES, all ATC stakeholders will be given access, as per our past scheduled weekend shutdowns.

Kind Regards



**Nick Frost** | Third Party Interface and Instrumentation and Monitoring Manager  
Gamuda Australia and Laing O'Rourke Consortium  
**P** | +61 416 089 524      **E** | [Nick.Frost@glcwt.com.au](mailto:Nick.Frost@glcwt.com.au)  
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---

**From:** Matt Sharman <[msharman@australianurfclub.com.au](mailto:msharman@australianurfclub.com.au)>  
**Sent:** Thursday, August 22, 2024 9:23 AM  
**To:** Nick Frost (GLC) <[Nick.Frost@glcwt.com.au](mailto:Nick.Frost@glcwt.com.au)>; Andrew Copper <[acopper@mostyncopper.com.au](mailto:acopper@mostyncopper.com.au)>  
**Cc:** Enver Yasar (GLC) <[enver.yasar@glcwt.com.au](mailto:enver.yasar@glcwt.com.au)>; smcmahon <[smcmahon@australianurfclub.com.au](mailto:smcmahon@australianurfclub.com.au)>; Katherine Martin <[Katherine.Martin@transport.nsw.gov.au](mailto:Katherine.Martin@transport.nsw.gov.au)>; Kate Brooks <[Kate.Brooks@transport.nsw.gov.au](mailto:Kate.Brooks@transport.nsw.gov.au)>  
**Subject:** Re: WTP - GLC - ATC - Unwin Street Planned Division Works (August - January 2025)

Thanks Nick, confirming with the road closures ATC stakeholders will still be granted access? As you can see by the schedule we have a busy remainder of the year with racing and events.

With thanks

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---

**From:** Nick Frost (GLC) <[Nick.Frost@glcwt.com.au](mailto:Nick.Frost@glcwt.com.au)>  
**Sent:** Thursday, August 22, 2024 9:09:25 AM  
**To:** Andrew Copper <[acopper@mostyncopper.com.au](mailto:acopper@mostyncopper.com.au)>  
**Cc:** Enver Yasar (GLC) <[enver.yasar@glcwt.com.au](mailto:enver.yasar@glcwt.com.au)>; Matt Sharman <[msharman@australianurfclub.com.au](mailto:msharman@australianurfclub.com.au)>; Steve McMahon <[smcmahon@australianurfclub.com.au](mailto:smcmahon@australianurfclub.com.au)>; Katherine Martin <[Katherine.Martin@transport.nsw.gov.au](mailto:Katherine.Martin@transport.nsw.gov.au)>; Kate Brooks <[Kate.Brooks@transport.nsw.gov.au](mailto:Kate.Brooks@transport.nsw.gov.au)>  
**Subject:** WTP - GLC - ATC - Unwin Street Planned Division Works (August - January 2025)

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Morning Andrew,

As per our conversations and the fortnightly minutes please find attached the presentation for the upcoming ongoing works on Unwin Street. This includes weekend closures.

The team will limit any delays on Unwin Street but with all these works it might be worth consulting uses of the road and offer the alternate route of Grande Ave.

Also the Clyde Dive - HV protection slab scope has been put on hold (tbc) with a re design required due to the location of the Actual (High Voltage Cables). This is all noted in the upcoming minutes for Monday.

Kind Regards



**Nick Frost** | Third Party Interface and Instrumentation and Monitoring Manager



Gamuda Australia and Laing O'Rourke Consortium

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**Australian Turf Club**

*The heart of Sydney racing*

# **Rosehill Gardens Racecourse Emergency Management Plan**

Developed in accordance with *Work Health and Safety Act 2011*,  
*Work Health and Safety Regulations 2011 (s. 43)*

Date of commencement: 1<sup>st</sup> July 2013



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**Amendment Record**

Date	Description	Prepared by	Reviewed by	Approved by
31-1-15	Update contact information	D Mitchell	D Mitchell	D Mitchell
1-5-15	Update contact information	D Mitchell	D Mitchell	D Mitchell
14-2-17	Update contact information	D Mitchell	D Mitchell	D Mitchell
22-2-17	Update floor plans	D Mitchell	D Mitchell	D Mitchell
24-8-17	Additional information and update contact information	G Colston	G Colston	G Colston
30-9-20	Update warden information	G Colston	G Colston	G Colston
18-10-22	Update contact & warden information	A Rahal	A Rahal	A Rahal

**Distribution of controlled copies**

Copy	Issued to:
1	Copy 3 ATC Incident & Emergency Manual
2	Copy 4 ATC Incident & Emergency Manual
3	Electronic Version ATC Intranet

Authorised by: <b>A Rahal</b>	Document title: <b>Rosehill Gardens Emergency Management Plan</b>
Signed:	Revision Date: <b>October 2022</b>
Original Issue Date: <b>1 July 2013</b>	Document #: <b>ATCSEC001</b>

**Disclaimer**

This document contains material to assist in meeting work health and safety obligations under the *Work Health and Safety Act 2011* and *Work Health and Safety Regulations 2011*. Although every effort has been made to ensure the accuracy of this information at the time of publication, it is provided as guidance only and does not provide legal advice on meeting your obligations.

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# Emergency Management Plan

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## Review Procedures

The Security & Risk Management Team will review the emergency plan as required. The review schedule will be directed in response to organisational and / or legislative changes and requirements. The reviews will be undertaken in consultation with workers, health and safety representatives and other relevant parties. All relevant persons will be made aware of changes made as a result of review.

## Document Control

This emergency plan is a controlled document. All unauthorised copies either electronic or printed are considered uncontrolled copies. Copyholders and the version distributed to them will be recorded in the Distribution Register.

## Records

All versions of the plan will be kept as a record. In the event of a notifiable incident, the relevant plan and supporting documentation (initial and reviewed versions) will be kept for 2 years after the incident. During this period of time, it will be accessible to all relevant persons working on the project and any Government appointed officers as required.

## Definition of an Emergency

Any incident outlined below that requires immediate action to make safe:

1. Any actual incident that has the capacity to cause death or serious harm
2. Any potential incident that has a high probability of causing death or serious harm
3. Any actual or potential incident that has a high probability of causing harm to the environment or property

This plan will guide emergency responses of all staff and applicable resources during the emergency. This emergency plan applies to all staff and visitors present at the time of the emergency. **(Note: This plan will not override any emergency service direction given at the time of the emergency).**

It is expected that all persons read and understand this Emergency Plan before starting work. All relevant persons are expected to adhere to the contents of the Emergency Plan.

This emergency plan will be reviewed whenever:

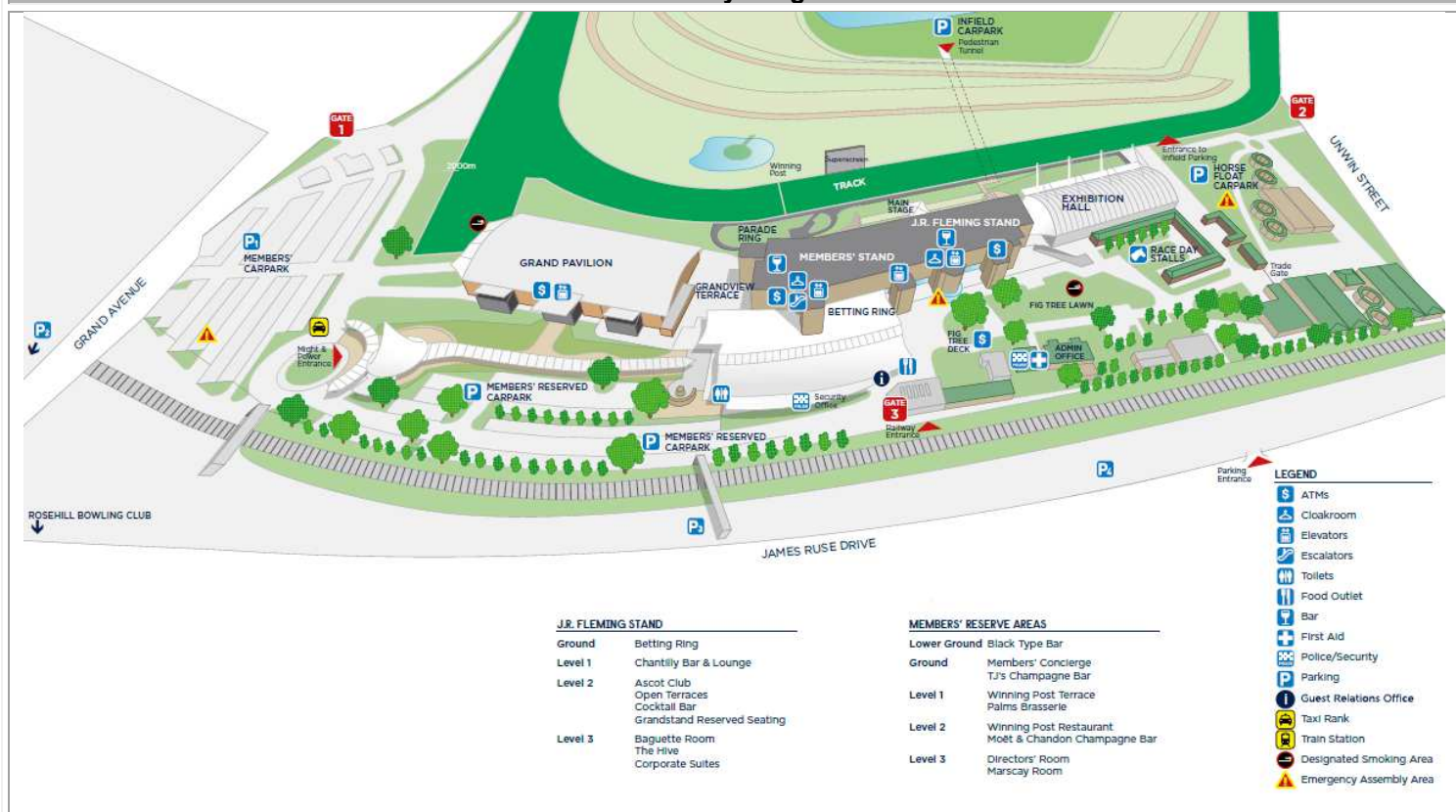
- Controls are no longer effective
- Changes on site are likely to introduce new or different hazards that current controls will not adequately address
- A new hazard or risk is identified
- Results of consultation indicate a review is needed
- Requested by employees or Health and Safety Representative
- Contact or staff details change



## Facility Description

Site/Facility Details		
<b>Business Name</b>	Australian Turf Club Limited	
<b>Facility Name</b>	Rosehill Gardens Racecourse	
<b>Building/Business Address</b>	James Ruse Drive, Rosehill NSW 2142	
<b>(1) Building Contact</b>	John Winter	
<b>Phone</b>	02 9663 8413	<b>E:</b> <a href="mailto:jwinter@australianurfclub.com.au">jwinter@australianurfclub.com.au</a>
<b>Mobile Phone Number</b>	0438 629 983	
<b>(2) Business Contact</b>	Matthew Sharman	
<b>Phone</b>	0409 593 483	<b>E:</b> <a href="mailto:msharman@australianurfclub.com.au">msharman@australianurfclub.com.au</a>
		<b>Fax:</b> 02 9760 6205
<b>Building/Facility Owner</b>	Australian Turf Club Limited	
<b>Owner Address</b>	Locked Bag 3 Randwick NSW 2031	
<b>Phone</b>	(02) 9663 8400	<b>Email:</b> <a href="mailto:info@australianurfclub.com.au">info@australianurfclub.com.au</a>
<b>Mobile Phone Number</b>		<b>Fax:</b> (02) 9662 6292

### Facility Image



## Emergency Contact Numbers

Emergency Contact Numbers		
<b>Police</b>	<b>000</b>	Granville – (02) 9897 4199
<b>Fire</b>	<b>000</b>	Parramatta – (02) 9895 4620 Wentworthville – (02) 9631 090
<b>Ambulance</b>	<b>000</b>	(02) 8752 0444
<b>ATC Security - Rosehill</b>	<b>0419 241 974</b>	
<b>ATC Security - Randwick</b>	<b>0419 223 660</b>	
<b>Poison Information Centre</b>	<b>131 126</b>	
<b>Parramatta Medical Centre</b>	<b>(02) 9635 5162</b>	
<b>Access Trauma Counsellor</b>	<b>1800 818 728</b>	
Key Personnel (24 hour contact)		
Name	Role	Phone Number
<b>ATC Security</b>	Site Security	0419 241 974
	Head of Security & Access	
<b>Mathew Sharman</b>	GM Rosehill & Canterbury	0409 593 483
<b>John Winter</b>	GM Facilities	0438 629 983
<b>Adam Rahal</b>	Security Manager	0437 036 895
Local and State Government Authority Contact Numbers		
Name	Phone Number	
EPA	131 555	
SES	132 500; (02) 9890 9990	
WorkCover	13 10 50	
Parramatta City Council	(02) 9806 5050	
Nearby Facilities		
Name	Phone Number	
Westmead Hospital	(02) 9845 5555	
Rydges Parramatta	(02) 8863 7600	
Utilities Authorities Contact Numbers		
Name	Phone Number	
Electricity: Energy Australia	131 388	
Gas: AGL	131 909	
Water: Sydney Water	132 092	
Dial Before You Dig	1100	

## Site Emergency Contact Numbers

Site Emergency Contact Numbers		
<b>ATC Security - Rosehill</b>	<b>0419 241 974</b>	<b>(02) 9760 6229</b>
<b>Race Day Operations</b>		<b>(02) 9760 6219</b>
<b>Functions &amp; Events</b>		<b>(02) 9760 6236</b>
<b>Poison Information Centre</b>	<b>131 126</b>	
<b>Parramatta Medical Centre</b>	<b>02) 9635 5162</b>	
<b>Access Trauma Counsellor</b>	<b>1800 818 728</b>	
Internal Extension Contact Numbers		
Name	Extension Number	
<b>ATC Security</b>	6229	
<b>Event Operations Centre - EOC</b>	6237	
<b>Weighing Room</b>	6030	
<b>ATC Main Recetion</b>	6200	
<b>Main Kitchen JR Fleming Stand</b>	6180	
<b>Judges Box</b>	6040	



## Emergency Control Organisation

<b>Mode</b>	<b>Race Day</b>
<b>Role</b>	<b>Position</b>
Chief Warden	Security Manager
Emergency Response Officer	Hospitality, Events & Operations Manager
	Trades
Communications Officer	Event Operations Centre
Building Services	Facilities Admin

<b>Mode</b>	<b>Functions &amp; Events</b>
<b>Role</b>	<b>Position</b>
Chief Warden	Function Operations Manager
Emergency Response Officer	Trades
Communications Officer	Senior Chef

<b>Mode</b>	<b>After Hours – Caretaker</b>
<b>Role</b>	<b>Position</b>
Chief Warden	On-duty Asset Protection Guard

<b>Mode</b>	<b>Administration – Administration Building</b>
<b>Role</b>	<b>Position</b>
Chief Warden	GM Rosehill
Emergency Response Officer	Trades / Security Manager / Asset Protection Officer
Communications Officer	Event Manager(s)

<b>Mode</b>	<b>Administration – JR Fleming Stand Basement</b>
<b>Role</b>	<b>Position</b>
Chief Warden	Senior Chef
Emergency Response Officer	Trades / Security & Risk Manager / Asset Protection Officer
Communications Officer	Event Manager(s)

# ROSEHILL GARDENS™

<b>Area</b>	<b>Exhibition Centre</b>
<b>Role</b>	<b>Position</b>
<b>Building Warden</b>	Security Supervisor
<b>Area Warden</b>	Security

<b>Area</b>	<b>Grand Pavilion</b>
<b>Role</b>	<b>Position</b>
<b>Building Warden</b>	Security Supervisor
<b>Area Warden Level 1</b>	Bar Supervisor
<b>Area Warden Level 2</b>	Security
<b>Area Warden Level 1(supplemental)</b>	TAB Supervisor

<b>Area</b>	<b>JR Fleming Stand</b>
<b>Role</b>	<b>Position</b>
<b>Building Warden</b>	Security Supervisor
<b>Area Warden Lower Ground Floor</b>	Executive Chef
<b>Area Warden Ground Floor</b>	Security
<b>Area Warden Level 1</b>	Security
<b>Area Warden Level 2</b>	Security
<b>Area Warden Level 3</b>	Security
<b>Area Warden Judges Box</b>	ATC Racing

<b>Area</b>	<b>JR Fleming Stand Basement</b>
<b>Role</b>	<b>Position</b>
<b>Area Warden Main Kitchen</b>	Executive Chef
<b>Area Warden Weigh Room</b>	ATC Racing Manager
<b>Area Warden Loading Dock</b>	Back of House Manager
<b>Area Warden Catering &amp; Staff Facilities</b>	HR Representative
<b>Area Warden Bank and Loading Dock</b>	CIT Security

<b>Area</b>	<b>Equine Centre (Day Stalls)</b>
<b>Role</b>	<b>Position</b>
<b>Building Warden</b>	Security Supervisor
<b>Area Warden Swab Building</b>	Security
<b>Area Warden Day Stalls</b>	Security

## **Responsibilities In The Event of an Emergency**

### **Chief Warden**

- Ascertain the nature of the emergency and determine appropriate action
- Take control of the situation at the appropriate control point, if safe to do so
- Ensure emergency services have been notified
- Ensure all wardens are advised of the situation
- Ensure all patrons are removed from the hazard area
- If necessary initiate evacuation and control entry to the affected areas
- Ensure the progress of the evacuation and any action taken is recorded in an incident log.
- Brief emergency services upon arrival on type, scope and location of the emergency and the status of the evacuation and, act on the senior officer's instructions

### **Communications Officer**

- Ascertain the nature and location of the emergency
- Confirm that the appropriate emergency service has been notified
- Notify appropriate ECO personnel either by the EWIS or other means
- Transmit and record instructions and information between the chief warden, area wardens and patrons.
- Maintain log of events

### **Area Wardens**

- Implement the emergency procedures for their area
- Ensure that appropriate emergency service has been notified
- Direct wardens to check the area for any abnormal situation
- Commence evacuation if the circumstances in their area warrant this
- Communicate with the chief warden by whatever means available and act on instructions
- Advise the chief warden as soon as possible of the circumstances and action taken
- Co-opt persons as required to assist a warden during an emergency.
- Confirm that the activities of wardens have completed and reported this to the chief warden

### **Additional Wardens**

The primary responsibility of all additional wardens is to ensure, as far as practicable, the safety of patrons and when necessary arrange their orderly evacuation from danger.

- Act as area warden
- Ensure the appropriate emergency service has been notified
- Operate the intercommunication system
- Check to ensure fire doors and smoke doors are properly closed
- Search the area to ensure all persons have evacuated
- Ensure orderly flow of persons into protected areas, e.g. stairwells
- Assist special needs persons
- Act as group leader moving to nominated assembly areas
- Report to area warden on completion of required activities



## EMERGENCY MANAGEMENT

In the event of an emergency evacuation please follow the instruction of your Supervisor and area warden.



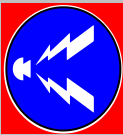
### Assembly point is as follows:

- Area – P1 Car Park, Course Proper and Horse Float Car Park (see page 18)
- Safe Assembly Areas Map.

**FLOOR PLANS DETAILING EMERGENCY EQUIPMENT & EXIT ROUTES ARE DISPLAYED WITHIN ALL LEVELS/AREAS OF THE FACILITY**

*Evacuation Alarm =*

*“Evacuate the Building”*



Should the EWIS evacuation alarm sound you will hear;

**“Evacuate the building, Evacuate the building”**

**Action:** All personnel evacuate via the nearest exit and proceed to the emergency assembly point

**Wardens:** Assist and control the evacuation process/procedure and report to the Chief Warden via the WIP where possible

**Chief Warden:** Liaise with emergency services, Account for staff and event attendees

## General Emergency Response

- 1 • Call 000
- 2 • State type and scale of emergency
- 3 • State facility name and location
- 4 • Number of casualties if applicable
- 5 • Hazards that may be involved such as chemicals or fuel
- 6 • Specific access location on site e.g specific street access or side entrances
- 7 • Provide contact name and phone number
- 8 • Answer all questions and follow instructions given by the operator
- 9 • Do not hang up until instructed

## Medical Emergency

<b>D</b>	Danger	✓	Check for <b>Danger</b> to yourself
		✓	Check for <b>Danger</b> to the casualty and to others
<b>R</b>	Response	✓	Check <b>Response</b> , is the casualty is conscious or unconscious
		✓	If conscious, - reassure, make comfortable
<b>S</b>	Send for help	✓	<b>Send</b> someone for <b>help</b> from a <b>first aider</b> if available
		✓	<b>Send</b> someone to call <b>000</b> for <b>an ambulance</b>
<b>A</b>	Airways	✓	If unconscious – Turn casualty on side
		✓	Turn face slightly down
		✓	<b>Clear airway</b>
<b>B</b>	Breathing	✓	Check for breathing whilst still on their side
		✓	<b>If breathing</b> , but still unconscious, leave on side and monitor airways, breathing and circulation until ambulance arrives. Check regularly for breathing
<b>C</b>	Circulation	✓	<b>If not breathing</b> Roll the casualty onto their back, tilt head backwards, seal the casualties mouth with yours and give <b>2 full breaths</b>
			<b>Commence CPR.</b> Give <b>30 chest compressions</b> (almost 2 compressions per second) followed by 2 breaths.
			<b>Continue CPR</b> until qualified personnel arrive or signs of life returns
<b>D</b>	Defibrillator	✓	If available, apply <b>defibrillator</b> and follow prompts
<p><b>If casualty is stable</b> (breathing and pulse is present) and while waiting for the ambulance, check for and <b>control bleeding</b> and reassure the casualty.</p>			

\*Information sourced from the Australian Resuscitation Council

## Emergency Fire Evacuation Procedure

R	<ul style="list-style-type: none"> <li>• <b>Rescue</b> or <b>Relocate</b> people in immediate danger if you can do so without endangering yourself.</li> <li>• Assist persons with special requirements e.g. disabled persons, small children.</li> <li>• Exit via a safe fire exit.</li> <li>• Do not use elevators</li> </ul>
A	<ul style="list-style-type: none"> <li>• Sound the <b>Alarm</b>. Advise others of the situation.</li> <li>• Call the <b>Emergency Service required</b> by dialing <b>000</b> from a safe distance.</li> <li>• If in doubt whether the situation is serious the Fire Brigade should still be called</li> <li>• Utilise appropriate protective equipment e.g. coloured hard hats for wardens, protective clothing for chemical spills</li> </ul>
C	<ul style="list-style-type: none"> <li>• <b>Confine</b> the fire or hazardous material by closing all doors, windows and other openings, and shutting off the piped and compressed gas as you are EVACUATING.</li> <li>• Ensure no personnel (emergency service personnel excluded) re-enter the building / facility until safe</li> </ul>
E	<ul style="list-style-type: none"> <li>• <b>Evacuate</b> the area on direction from the Site Manager or when it is unsafe to remain in the area. (<b>Extinguish</b> fire or <b>contain</b> hazardous material <b>only if you have been trained and feel competent and safe to do so</b>. Only small fires are possible to extinguish, so always be prepared to evacuate).</li> <li>• Ensure all occupants of the building have been evacuated to assembly area</li> <li>• First aid personnel to organise for first aid equipment to be brought to assembly areas</li> <li>• Account for all personnel at the designated assembly areas</li> </ul>

## Evacuation Communication Procedures

1. All staff and other personnel on site will be informed of an emergency by EWIS or PA system
2. Emergency communication will be initiated by the Chief Warden
3. Backup measures for communication will be two-way radio
4. Emergency services will be contacted by ATC Security, from the Security Control Room.

## Fire Fighting Procedures

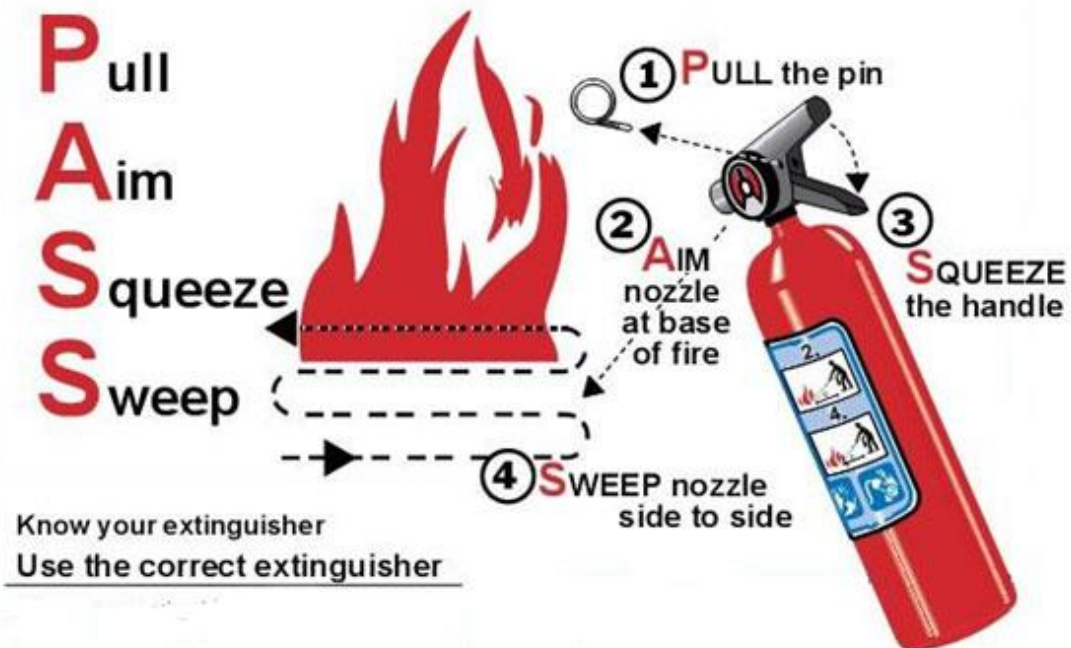
1. Fire extinguishers, hose reels and manual call points located at appropriate locations at the worksite as shown on site map
2. Fire extinguishers / hose reels appropriate for purpose
3. Fire extinguishers / hose reels tested and tagged in accordance with AS 1851
4. Fire extinguishers restrained to prevent falling by means of a hook, strap, cage or chain. Ease of access will be maintained.
5. A one (1) metre clearance will be maintained around fire-fighting equipment and fire exits.
6. Evacuation procedures will be discussed during training and drills will be conducted at regular intervals.
7. Extinguish fire or contain hazardous material only if you have been trained and feel competent and safe to do so













## Fire Extinguisher Use

- 1 • Only attempt to extinguish fire if it can be put out quickly. If unsure evacuate
- 2 • Consider if electricity is involved (Do not use water)
- 3 • Select the appropriate fire extinguisher for the material burning
- 4 • Pull pin from handle
- 5 • Quickly test by squeezing the handle
- 6 • Aim the nozzle at base of fire
- 7 • Squeeze handle and move nozzle in a sweeping motion until fire extinguished

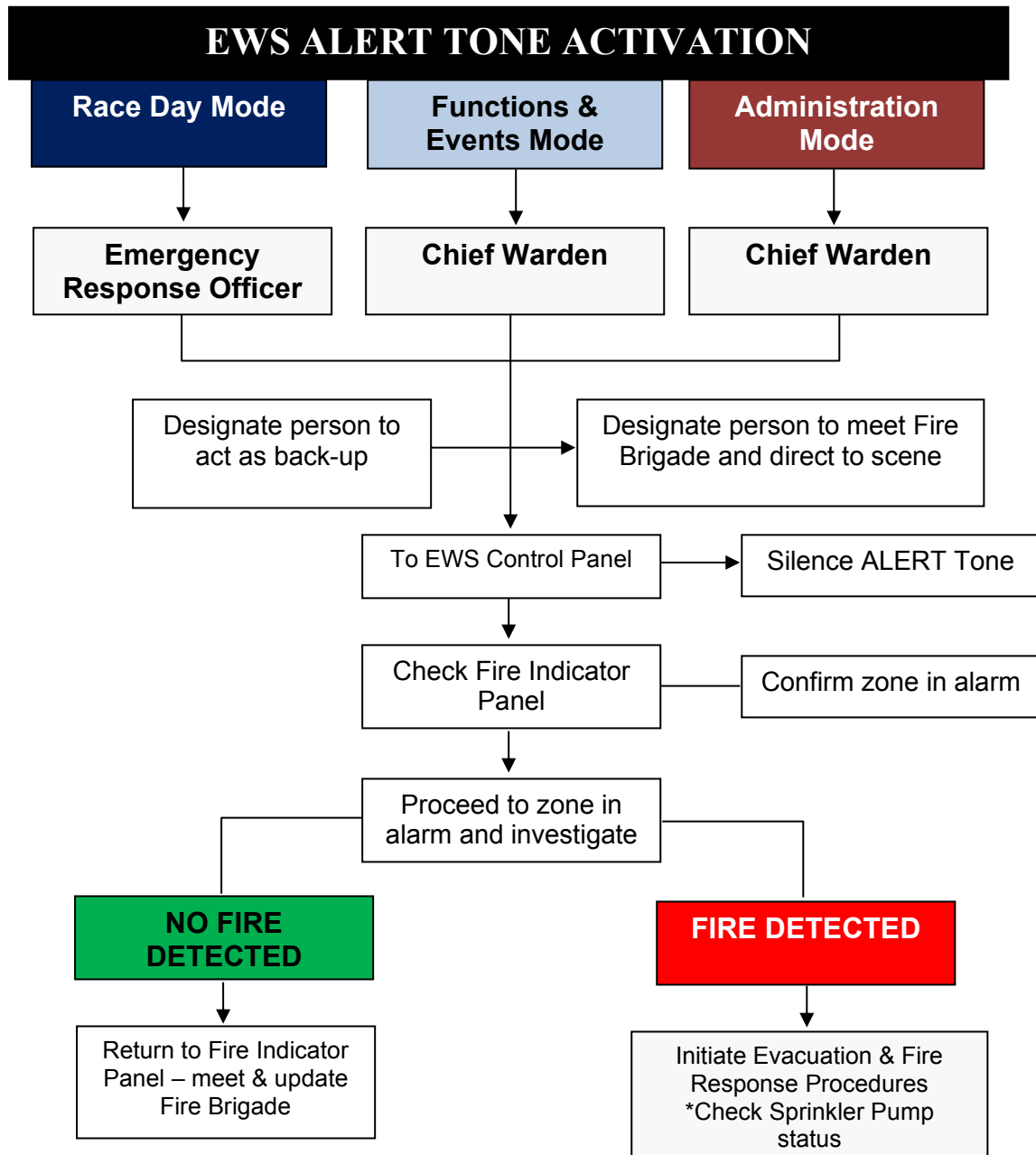
### To operate an extinguisher:



## Fire Extinguisher Rating Guide

ID sign	Typical appearance	Extinguisher Type cylinder contains	<b>Class A</b> Wood, paper, textiles etc, normal combustibles	<b>Class B</b> Flammable liquids, petrol, paints	<b>Class E</b> Electrical fires	<b>Class F</b> Cooking oil, animal fats & vegetable oils
		<b>Dry Chemical Powder</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>NO</b>
		<b>Co2 Carbon Dioxide</b>	<b>NO</b>	<b>YES</b>	<b>YES</b>	<b>NO</b>
		<b>Water</b>	<b>YES</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>
		<b>Foam</b>	<b>YES</b>	<b>YES</b>	<b>NO</b>	<b>NO</b>
		<b>Wet Chemical</b>	<b>YES</b>	<b>NO</b>	<b>NO</b>	<b>YES</b>

## Emergency Response Guide



**Note:** Staff continue with normal activities – check for any evidence of fire in their work areas and listen for Evacuation Tone or further information/instructions.

### CARETAKING MODE

During those times when the site is not functioning or occupied (Caretaking Mode), there is no formal warden structure – caretaker personnel provide the initial response and inform the appropriate staff and emergency services.



## Sprinkler Pump Manual Start

1

In the event of a fire alarm immediately proceed to the Fire Indicator Panel to establish the cause of the alarm activation. The Fire Indicator Panel will have displayed on the LCD screen the cause of the alarm activation and a location of the trigger.

2

Proceed to the location to confirm if the alarm is a genuine threat to the property. If the alarm has been caused by fire activating an automatic sprinkler head and you are unable to extinguish the fire with portable fire fighting equipment, proceed to the Sprinkler Pump Room adjacent to the Admin building and ensure pumps are running. Lift the roller door on the pump room and head to the panel on the left hand side of the room.



3

The Control panel should illuminate the green 'Pump Running' indicator lamp (Fig.1); you should also be able to hear the diesel motor running. If the motor is not running push the 'Emergency Manual Start' (Fig.2) button to manually start the motor.



Fig. 1  
Pump Running Indicator Lamp

Fig. 2  
Emergency Manual Start Button

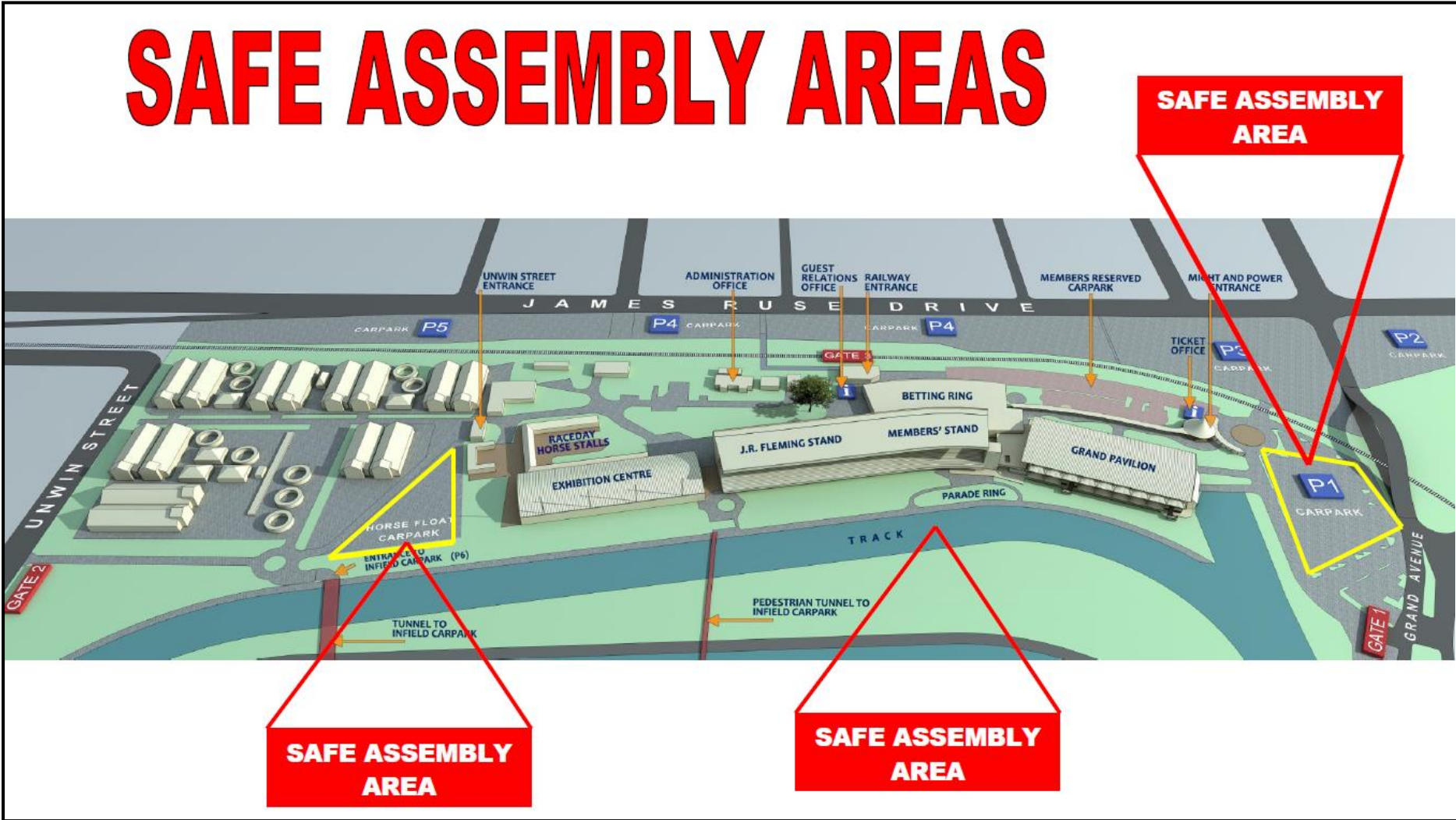
4

If the motor is still not running depress the two manual start contacts below the panel.



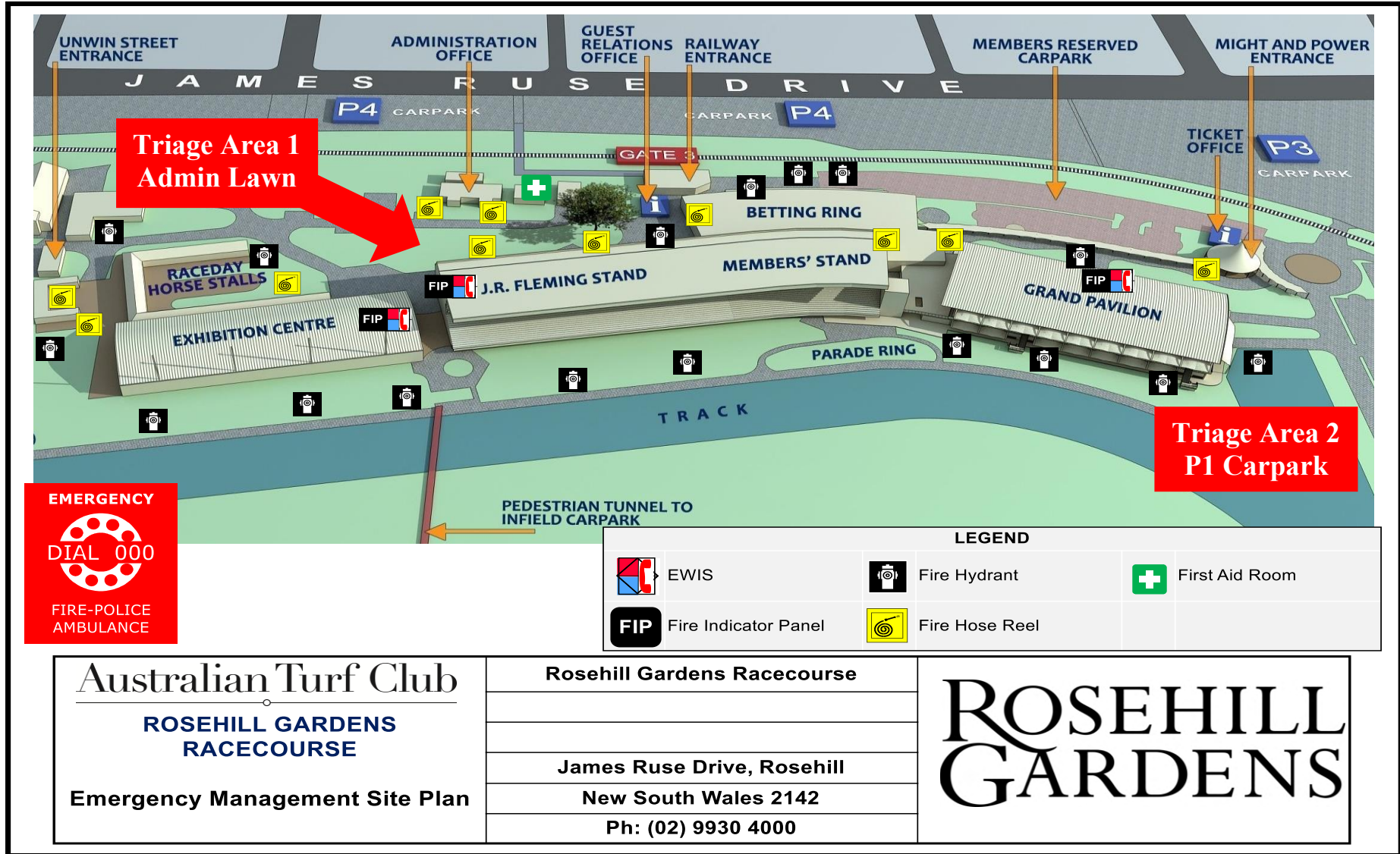
When the pumps start proceed back to the Fire Indicator Panel to meet the Fire Brigade.

Emergency / Safe Assembly Area Locations



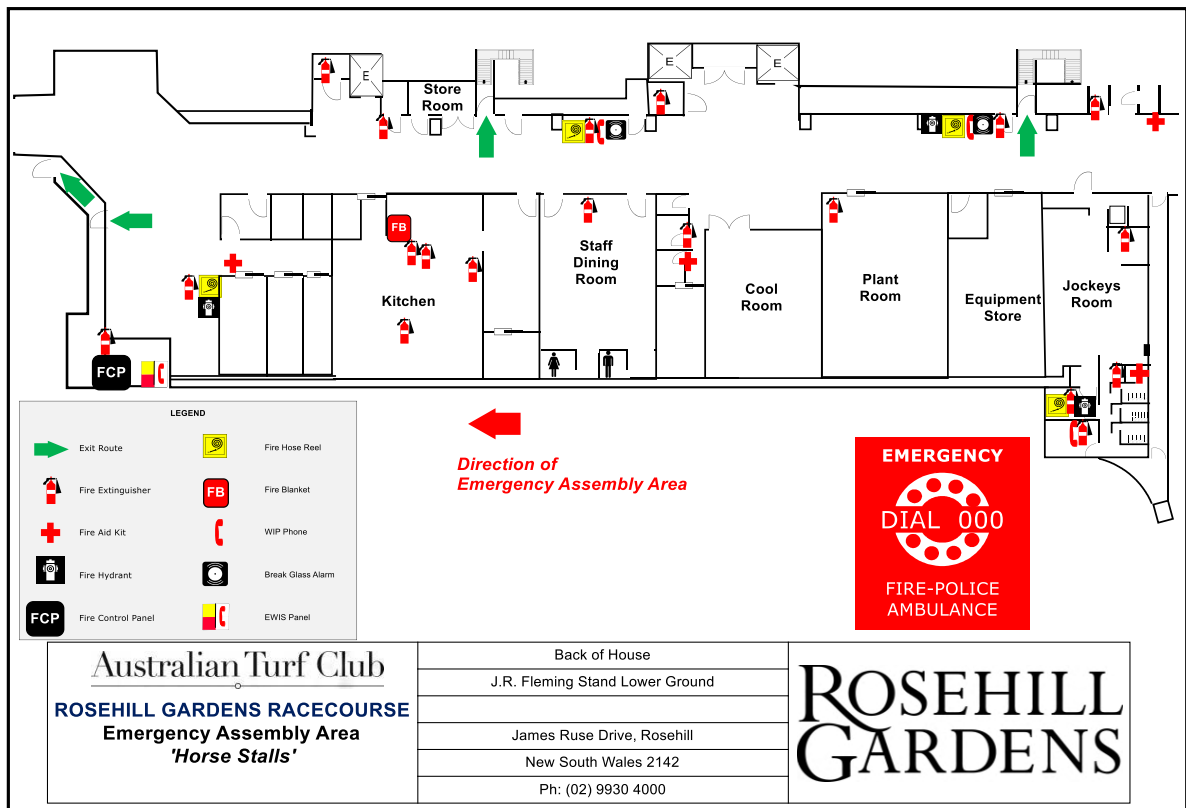
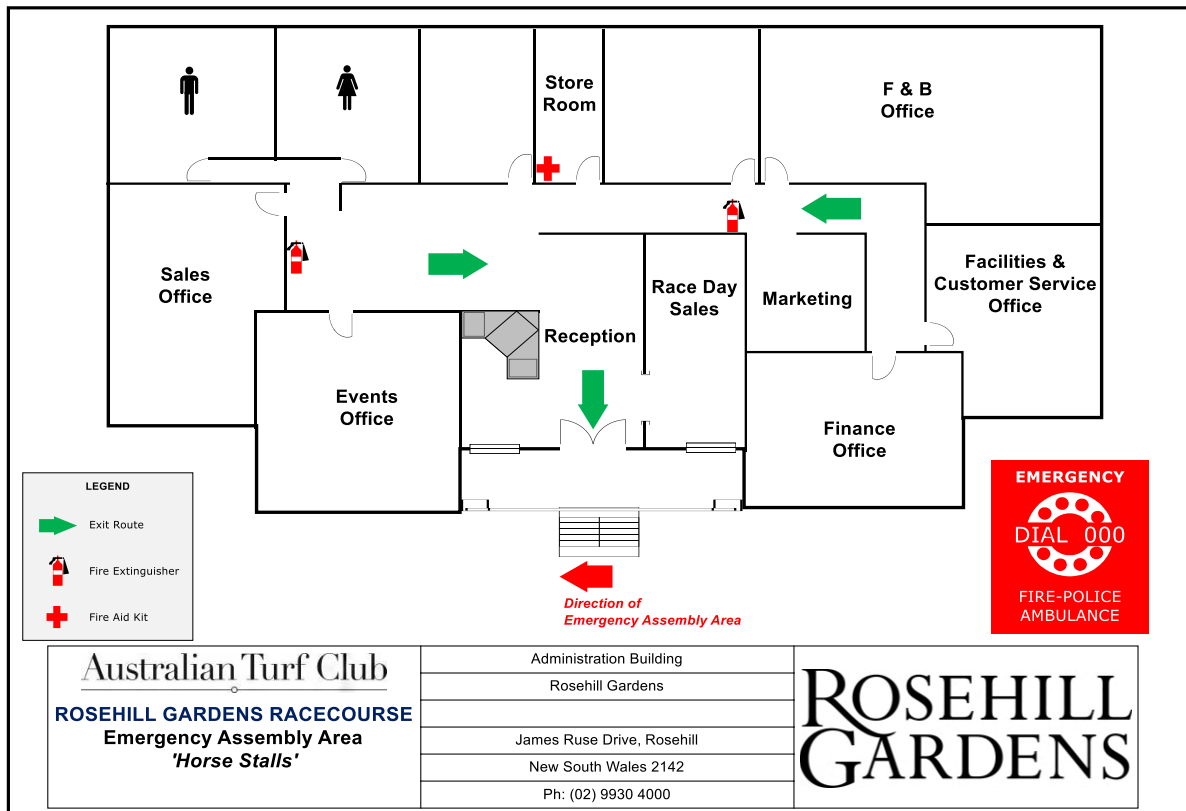


## Fire Fighting Equipment Locations





# ROSEHILL GARDENS™



**EMERGENCY**  
DIAL 000  
FIRE-POLICE  
AMBULANCE

**LEGEND**

- Exit Route
- Fire Extinguisher
- Fire Aid Kit
- Break Glass Alarm
- Fire Hose Reel
- Fire Blanket (FB)
- WIP Phone

**Australian Turf Club**  
ROSEHILL GARDENS RACECOURSE  
Emergency Assembly Area  
'Member's P1'

Members Area
J.R. Fleming Stand Lower Ground
James Ruse Drive, Rosehill
New South Wales 2142
Ph: (02) 9930 4000

**ROSEHILL GARDENS**

**EMERGENCY**  
DIAL 000  
FIRE-POLICE  
AMBULANCE

**LEGEND**

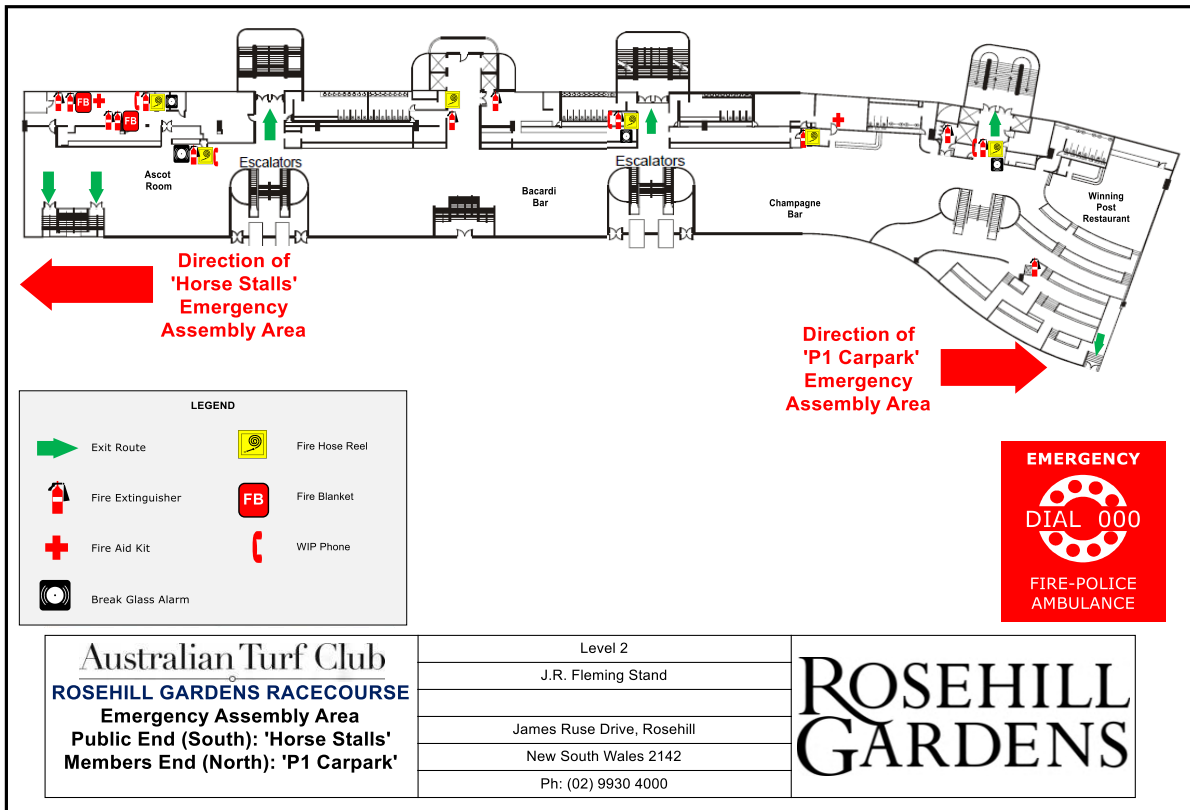
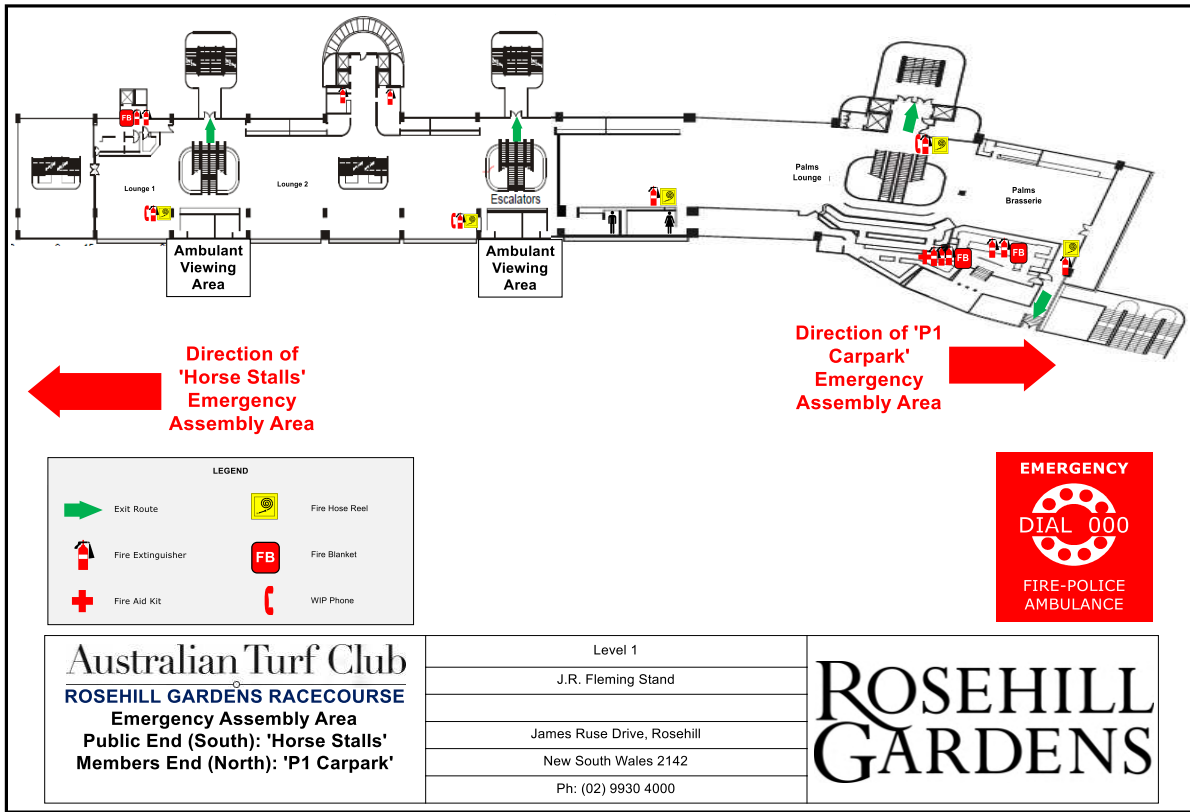
- Exit Route
- Fire Extinguisher
- Fire Aid Kit
- Automatic External Defibrillator (AED)
- Fire Hose Reel
- Fire Blanket (FB)
- WIP Phone

**Australian Turf Club**  
ROSEHILL GARDENS RACECOURSE  
Emergency Assembly Area  
Public (South): 'Horse Stalls'  
Members End (North): 'P1 Carpark'

Ground Level
J.R. Fleming Stand
James Ruse Drive, Rosehill
New South Wales 2142
Ph: (02) 9930 4000

**ROSEHILL GARDENS**

# ROSEHILL GARDENS™





# ROSEHILL GARDENS™

**Direction of 'P1 Carpark' Emergency Assembly Area** →

**Direction of 'Horse Stalls' Emergency Assembly Area** ←

**EMERGENCY DIAL 000**  
FIRE-POLICE AMBULANCE

**LEGEND**

- Exit Route
- Fire Extinguisher
- Fire Aid Kit
- Breakglass Alarm
- Fire Hose Reel
- Fire Blanket (FB)
- WIP Phone

<b>Australian Turf Club</b> <b>ROSEHILL GARDENS RACECOURSE</b> <b>Emergency Assembly Area</b> <i>The Hive End (South): 'Horse Stalls'</i> <i>Directors End (North): 'P1 Carpark'</i>	Level 3	<b>ROSEHILL GARDENS</b>
	J.R. Fleming Stand	
	James Ruse Drive, Rosehill	
	New South Wales 2142	
	Ph: (02) 9930 4000	

**Direction of Emergency Assembly Area** →

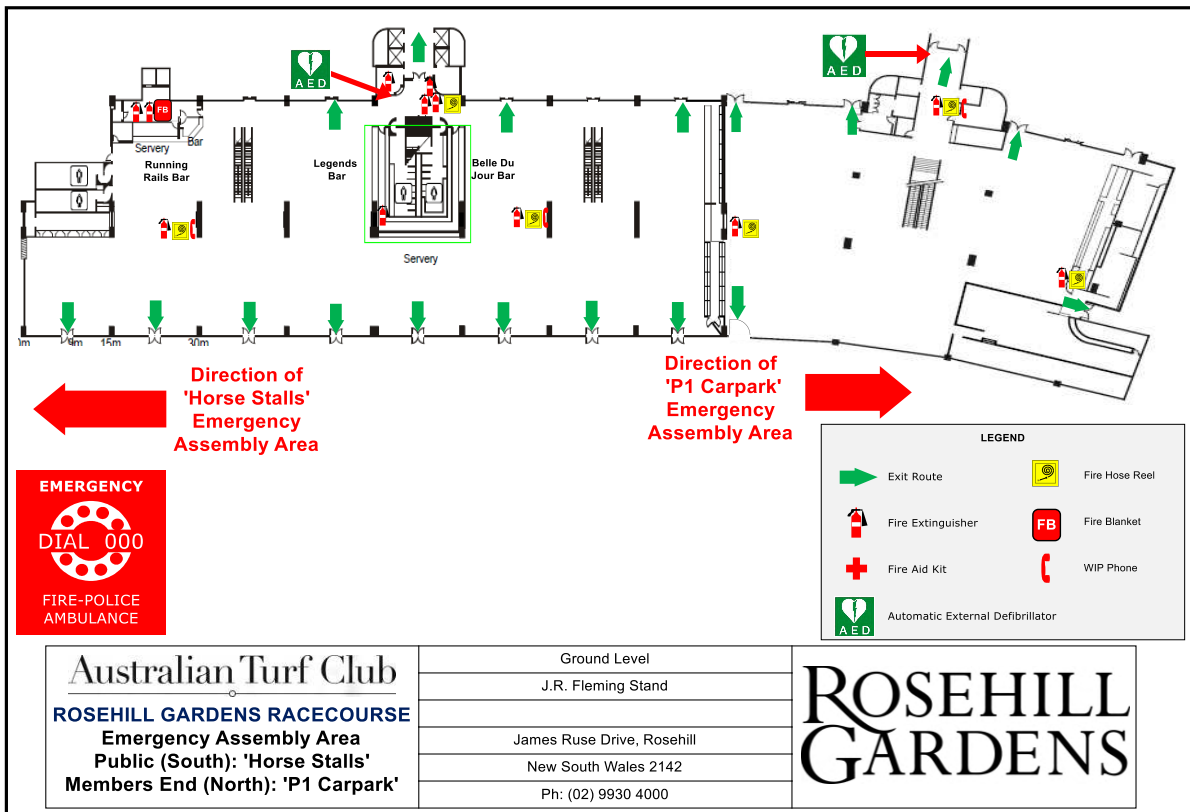
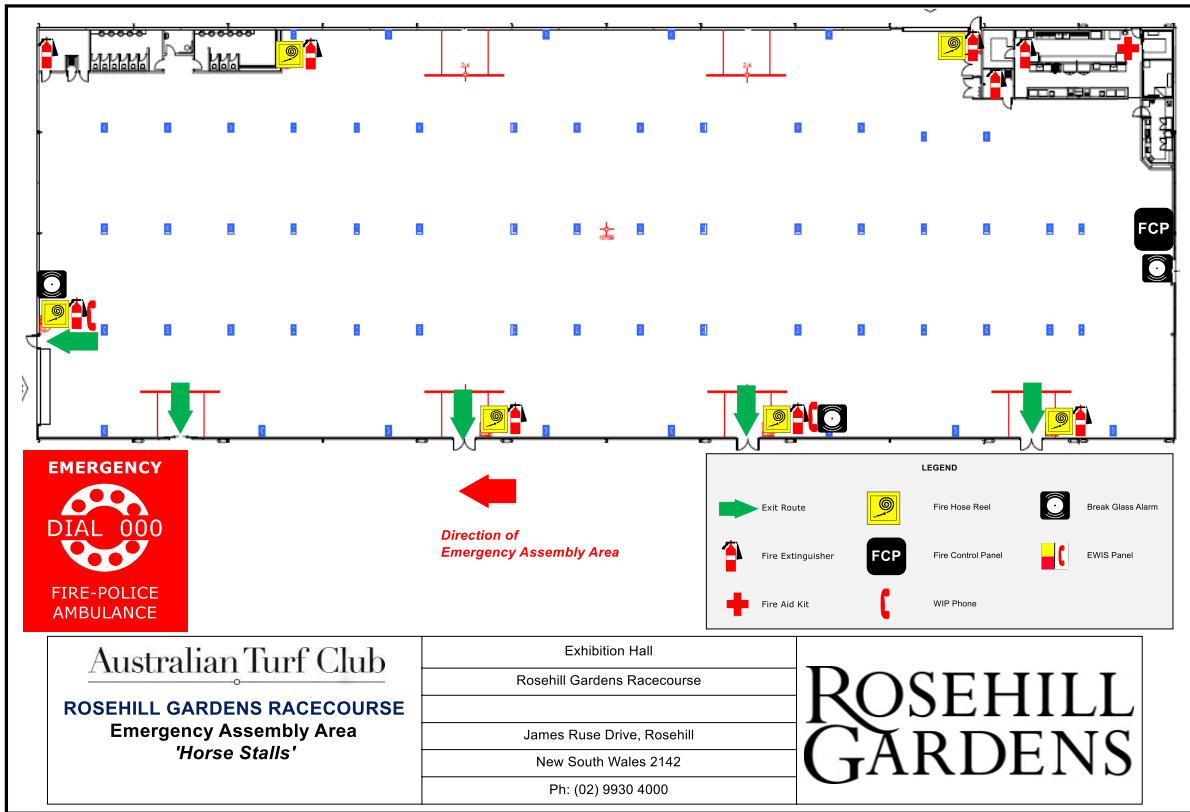
**EMERGENCY DIAL 000**  
FIRE-POLICE AMBULANCE

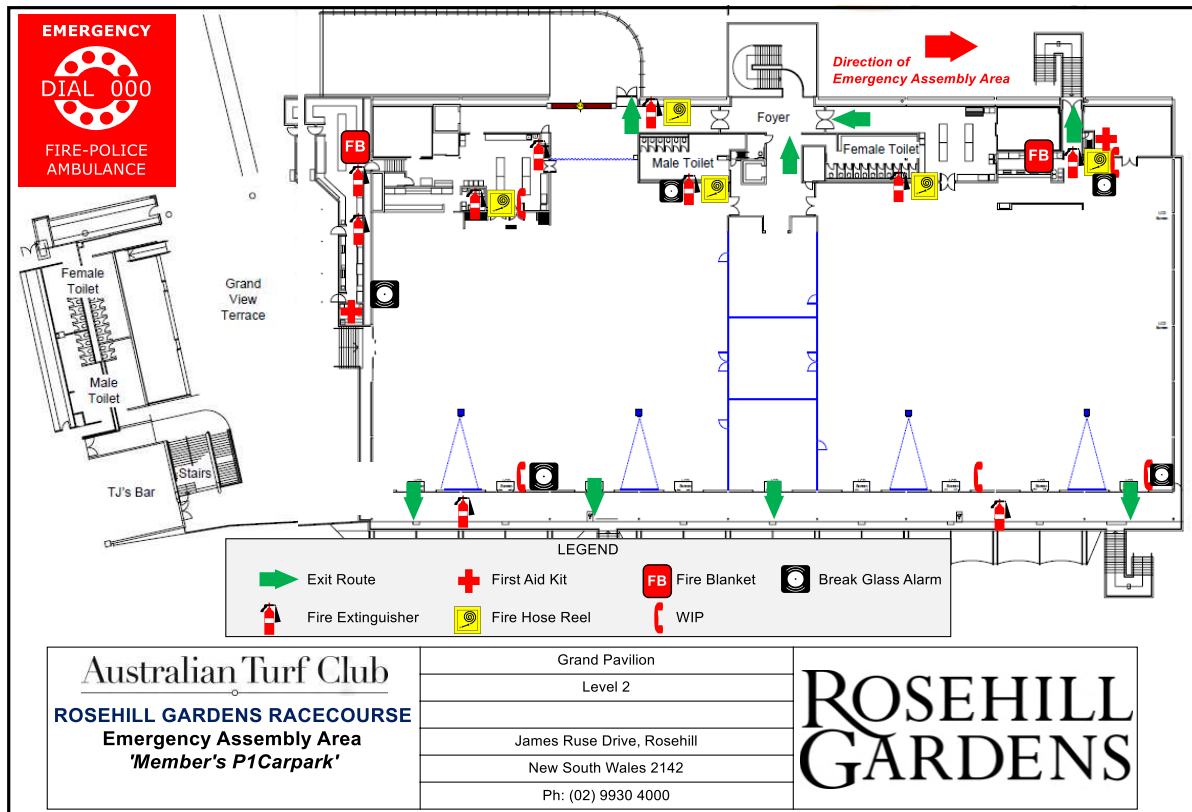
**LEGEND**

- Exit Route
- Fire Extinguisher
- WIP Phone
- Fire Hose Reel
- Fire Blanket

<b>Australian Turf Club</b> <b>ROSEHILL GARDENS RACECOURSE</b> <b>Emergency Assembly Area</b> <i>'Member's P1 Carpark'</i>	Broadcast & Judges Box's	<b>ROSEHILL GARDENS</b>
	J.R. Fleming Stand Level 4	
	James Ruse Drive, Rosehill	
	New South Wales 2142	
	Ph: (02) 9930 4000	

# ROSEHILL GARDENS™





## Information, Training and Instruction

- It is acknowledged that a duty of care exists to ensure that workers are adequately trained to a level of competency sufficient to carry out their emergency management duties
- Training will detail the expected responsibilities and roles of all staff, reporting details and emergency response procedures. This should also include the required parameters to be deemed competent to handle the emergency situation.
- Training records will be maintained and updated regularly
- Where skill deficiencies are detected appropriate training will be provided in a timely manner so that workers can perform their designated duties safely and in accordance with legal obligations.
- The Security & Risk Management Team will schedule training on a biannual basis, prior to each Carnival period to ensure that all workers have received training in emergency response
- Training will be provided formally via a third party provider where required.
- New staff will receive information, training and instruction on emergency management procedures at the earliest opportunity through the staff induction process.
- Visitors will receive instruction and/or information on emergency management procedures as applicable
- Training will be logged in the training register with HR



CONTRACT NO.	DOCUMENT NO.	TITLE	VER	STATUS	NO.	DATE	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*	LINKED ITEM NO	CLOSED OUT
WTP	SMWSTWTP-GLO-RSH-TF-PLN-000002	Sydney Metro West - WTP - Construction Traffic Management Plan - Unwin St - Northern Diversion Construction - September - December 2024	A.01	S3	01	10/09/2024	SCO	DCROWLY	SMWSTWTP-GLO-RSH-TF-PLN-000002	Section 2.8, 3.8, 4.8 & 5.8		More detail is required in relation to how the emergency exit gate from Rosehill racecourse will operate during the closure in either direction.	Observation		N
						24/09/2024	GLC	SMC	SMWSTWTP-GLO-RSH-TF-PLN-000002	Section 2.8, 3.8, 4.8 & 5.8		Sections 2.8 & 3.8 updated as works only impacts gate on these portions of works, Sections 4.8 & 5.8 updated to advise that gate will not be impacted during these portions of works. Email correspondence between Rosehill Gardens and GLC and Rosehill Gardens Emergency Management Plan included in Appendix 6	Observation		N
					02	10/09/2024	SCO	DCROWLY	SMWSTWTP-GLO-RSH-TF-PLN-000002	2.9 & 4.9		All temporary ramps must comply with AS1428.1	Observation		N
						24/09/2024	GLC	SMC	SMWSTWTP-GLO-RSH-TF-PLN-000002	2.9 & 4.9		Noted. 2.9 and 4.9 amended to include statement to comply with AS1428.1	Observation		N
					03	10/09/2024	SCO	DCROWLY	SMWSTWTP-GLO-RSH-TF-PLN-000002	3.1 & 5.1		56hr closures will be supported, provided all ROL requirements are approved and there are no race meets or major events at Rosehill racecourse on those weekends.	Observation		N
						24/09/2024	GLC	SMC	SMWSTWTP-GLO-RSH-TF-PLN-000002	3.1 & 5.1		Noted. One race day conflicts with proposed closure 6-9 December. Section 5 amended to propose closure from 1900 Saturday 7th December (after event or as agreed with CJP) to Monday 0500 9 December	Observation		N
					04	10/09/2024	SCO	DCROWLY	SMWSTWTP-GLO-RSH-TF-PLN-000002	3.2 & 5.2		TGS are for reference only.	Observation		N
						24/09/2024	GLC	SMC	SMWSTWTP-GLO-RSH-TF-PLN-000002	3.2 & 5.2		Noted	Observation		N
					05	18/09/2024	SKB	MGADE	SMWSTWTP-GLO-RSH-TF-PLN-000002.A.S3.A.01	Section 1.4, Section 2.1		Section 1.4 and 2.1. Please update the proposed schedule.	Observation		N
						24/09/2024	GLC	SMC	SMWSTWTP-GLO-RSH-TF-PLN-000002.A.S3.A.01	Section 1.4, Section 2.1		Sections 1.4 and 2.1 updated	Observation		N
					06	18/09/2024	SKB	MGADE	SMWSTWTP-GLO-RSH-TF-PLN-000002.A.S3.A.01	P0153-DTAL-0000-RW-DRG-101001	SM-W-WTP-PS-2648	The requirement SM-W-WTP-PS-2648 states "The Tunnelling Contractor must ensure road works including geometry, pavement, barriers, cycle lanes, kerbs and gutters, footpaths, markings, signage and traffic controls, and layout design comply with the relevant Authorities standards, specifications and guidelines, including: Australian Standards (MSF car parks)" and has potentially not been met. Please ensure all traffic sign are upto standard AS1742.3 Traffic Control for Works on Roads	Potential Non-Compliance		N
						24/09/2024	GLC	SMC	SMWSTWTP-GLO-RSH-TF-PLN-000002.A.S3.A.01	P0153-DTAL-0000-RW-DRG-101001	SM-W-WTP-PS-2648	All signage is to TfNSW standards and are available as per the TfNSW sign register.	Potential Non-Compliance		N
					07	18/09/2024	SKB	MGADE	SMWSTWTP-GLO-RSH-TF-PLN-000002.A.S3.A.01	P0153-DTAL-0000-RW-DRG-101001	SM-W-WTP-GS-683	The requirement SM-W-WTP-GS-683 states "The Tunnelling Contractor must plan traf?c and transport management associated with the Tunnelling Contractor's Activities to avoid delays and detours that will inconvenience the Affected Public, including Road Users, and Vulnerable Road Users (as de?ned in the Construction Traf?c Management Framework (CTMF)), particularly during periods of heavy traf?c ?ows" and has potentially not been met. Please ensure there are no obstructions to any neighborhood access points, including, but not limited to, the Gate 2 entry of Rose Hill Gardens.	Minor Non-Compliance		N
						24/09/2024	GLC	SMC	SMWSTWTP-GLO-RSH-TF-PLN-000002.A.S3.A.01	P0153-DTAL-0000-RW-DRG-101001	SM-W-WTP-GS-683	Access to Rosehill Gardens Gate 2 is always accessible. Drawings updated to show full traffic control of gate.	Minor Non-Compliance		N
					08	18/09/2024	SKB	MGADE	SMWSTWTP-GLO-RSH-TF-PLN-000002.A.S3.A.01	P0153-DTAL-0000-RW-DRG-101001	SM-W-WTP-PS-2647	The requirement SM-W-WTP-PS-2647 states "The Tunnelling Contractor must ensure road works including geometry, pavement, barriers, cycle lanes, kerbs and gutters, footpaths, markings, signage and traffic controls, and layout design comply with the relevant Authorities standards, specifications and guidelines, including: Austroads (internal and external roads)" and has not been met. The traffic control for the adjacent local road near the Gate 2 entry of Rose Hill Gardens is missing.	Actual Non-Compliance		N
						24/09/2024	GLC	SMC	SMWSTWTP-GLO-RSH-TF-PLN-000002.A.S3.A.01	P0153-DTAL-0000-RW-DRG-101001	SM-W-WTP-PS-2647	Drawings updated to show full traffic control of gate.	Actual Non-Compliance		N

















# CTMP-GLCWTP-Unwin St Northern Diversion.Rev B\_compiled-compressed

Final Audit Report

2024-09-25

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By:	James Luo (jamesluo@glcwtp.com.au)
Status:	Signed
Transaction ID:	CBJCHBCAABAAAdSfGQKmlF2DAGeMIRLO6yasdOI6O73-O

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-  Document emailed to robin.lopez@glcwtp.com.au for signature  
2024-09-25 - 22:21:13 GMT
-  Email viewed by robin.lopez@glcwtp.com.au  
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-  Signer robin.lopez@glcwtp.com.au entered name at signing as Robin Lopez  
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Final Audit Report

2024-09-25

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Transaction ID:	CBJCHBCAABAAAdSfGQKmlF2DAGeMIRLO6yasdOI6O73-O

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