

Construction Traffic Management Plan – Luddenham Road Closure for viaduct, roundabout completion works and UTB transfer

Western Sydney Airport – Surface and Civil Alignment Works

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Signature					

Distribution and Authorisation

Document Control

The CPBUI JV Project Director is responsible for ensuring this plan is reviewed and approved. The Construction Manager is responsible for updating this plan to reflect changes to the project, legal and other requirements, as required.

The controlled master version will be maintained on Teambinder. All circulated hard copies are deemed to be uncontrolled.

Amendments

The implementation of this Plan is under the authority of the CPBUI Delegated Authority Matrix. All Contract personnel will perform their duties in accordance with this Plan, supporting plans, and related procedures.

Revision Details

Rev.	Details
A	For external review
B	Revised based on comments received and for approval
C	Revised based on comments received and for approval
D	Revised based on comments received and for approval
1	Revised to include roundabout completion works
2	Revised to show roundabout location within closure
3	Revised based on comments received and for approval
4	Revised to accommodate UTB transportation
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Abbreviations and definitions

Table 1 Abbreviations and definitions

Abbreviation	Description
CJP	Customer Journey Planning (formerly SCO)
CPB	CPB Contractors Pty Ltd
CPBUI JV	CPB Contractors Pty Limited and United Infrastructure Pty Limited Joint Venture
CTMF	Construction Traffic Management Framework (an appendix of the EIS)
CTMP	Construction Traffic Management Plan
HML	Higher Mass Limit
HVNL	Heavy Vehicle National Law
IAP	Intelligent Access Program
LTC	Local Traffic Committees
OSOM	Oversize and/or over mass
PedMP	Pedestrian Management Plan
PMP	Project Management Plan
PMS	Project Management System
PkMP	Parking Management Plan
QR	Quick Response
RAV	Restricted Access Vehicle
ROL	Road Occupancy Licence
RSA	Road Safety Audit
SBT	Sydney Metro – Western Sydney Airport, Station Boxes and Tunnelling package
SCAW	Western Sydney Airport Surface and Civil Alignment Works package
SCO	Sydney Coordination Office (now CJP)
SSTOM	Sydney Metro – Western Sydney Airport, Stations, Systems, Trains, Operations and Maintenance package
SWTC	Scope of Work and Technical Criteria
TCG	Transport Coordination Group
TCP	Traffic Control Plan now known as Traffic Guidance Scheme
TfNSW	Transport for New South Wales
TGS	Traffic Guidance Scheme (formerly TCP)
TTLG	Traffic and Transport Liaison Group
UI	United Infrastructure Pty Limited
UTB	Underslung Temporary Beam
VMP	Vehicle Movement Plan
VMS	Variable message signs
WSA	Western Sydney Airport
WSI	Western Sydney International

Part A Overview

1. Introduction

1.1. Project Scope

The SMWSA Project involves the construction and operation of a new 23km metro rail line that extends from the existing Sydney Trains suburban T1 western line (at St Marys) in the north to the Aerotropolis (at Bringelly) in the south. The alignment includes a combination of tunnels and civil structures, including viaducts, bridges, and surface and open-cut troughs between the two tunnel sections. The Project also includes six new metro stations, and a stabling and maintenance facility and operational control centre at Orchard Hills. The SCAW package is the second major contract package to be procured for the Project. The successful and timely completion of the SCAW package is critical to the subsequent construction activities and ultimate completion of the entire Project.

1.1.1. Surface, Civil and Alignment Works (SCAW) scope

The scope for the SCAW package includes approximately 10.6km of alignment up to the underside of track formation from Orchard Hills to the WSI airport. This includes approximately:

- 3.6km of viaduct
 - 400m of viaduct over Blaxland Creek
 - 660m of viaduct over the Patons Lane area and un-named creek
 - 2.5km of viaduct in the Luddenham Road area including across the Warragamba pipeline, at Luddenham Station, across Luddenham Road and across Cosgrove Creek
- 205m of bridges
 - An over rail bridge, approximately 180m long, over the proposed M12 Motorway
 - An over rail bridge, approximately 25m long, over the drainage swale on the WSI airport site
- 6.9km of at-grade alignment
 - 600m at Orchard Hills, south of Lansdowne Road
 - 1.6km alongside the stabling maintenance facility in Orchard Hills
 - 900m to the north of the Warragamba pipelines
 - 1.1km north of the proposed M12 motorway
 - 1.4km south of the proposed M12 Motorway on Elizabeth Drive
 - 1.3km within the Airport site from the northern boundary to the Airport Business Park Station
- Temporary and permanent access roads.

The scope of works can be seen on Figure 1, noting that the tunnel and station works are by others.

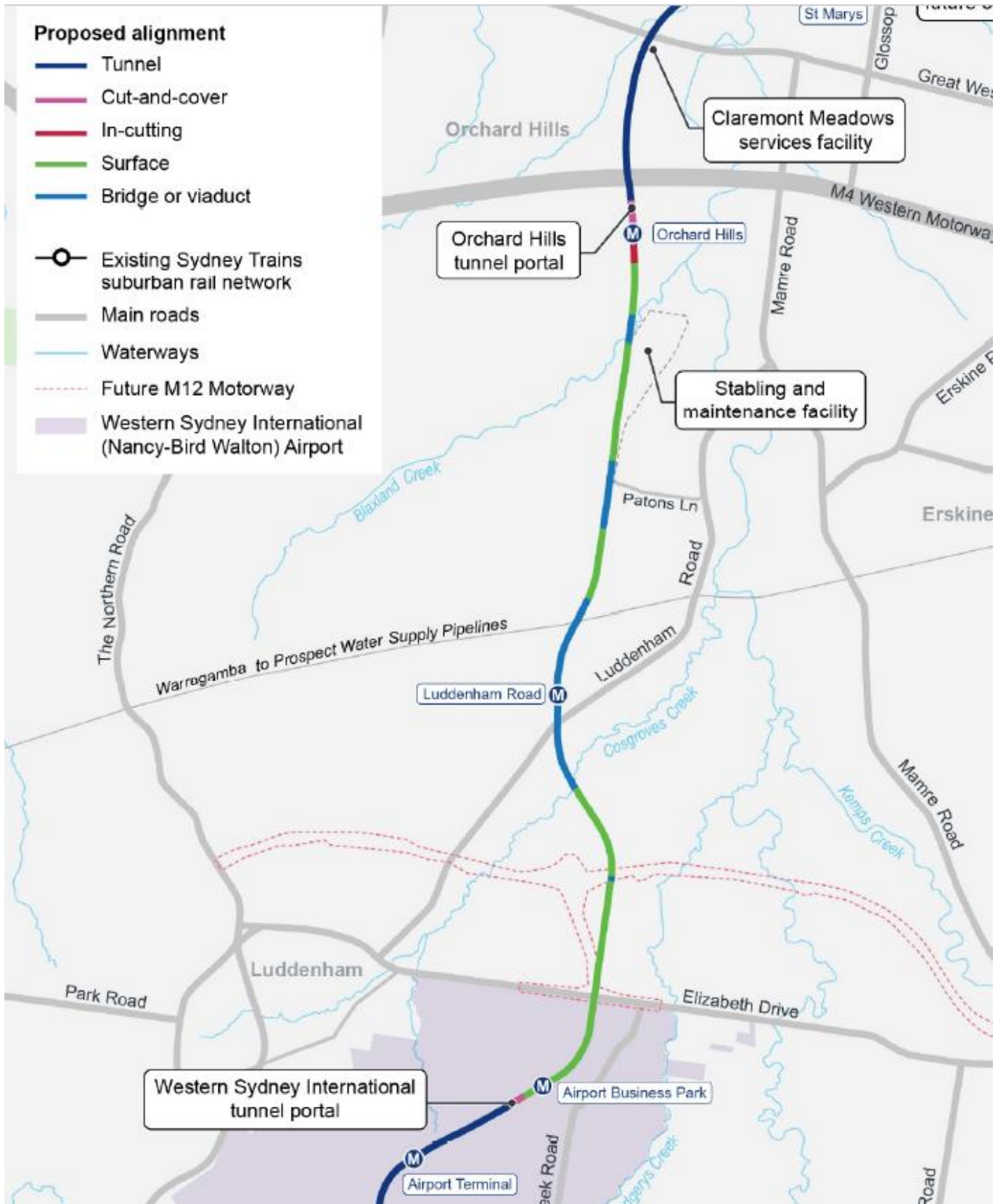


Figure 1: Surface Civil and Alignment Works

1.2. Plan Purpose and Objectives

The Luddenham Road Construction Traffic Management Plan Closure for viaduct installation and roundabout completion works (CTMP or this plan) has been developed by CPB Contractors, United Infrastructure Joint Venture (CPBUIJV) to identify the traffic management measures required to safely install the viaduct structure over Luddenham Road associated with the Sydney Metro Western Sydney Airport Surface Civils and Alignment Works (SCAW works), complete final Lud 2 roundabout works and transportation of the Underslung Temporary Beam (UTB)

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

This plan has been prepared in accordance with the Construction Traffic Management Framework, SSI 10051 Planning Approval Condition E103 and will be submitted to the Planning Secretary of the NSW Department of Planning and Environment for information prior to the commencement of activities noted in the CTMP.

The key objectives of this plan are to ensure:

- The provision of a safe environment for road users, pedestrians, cyclists and workers
- Any impact on road users is kept to a minimum
- Access is maintained for the local community, transport operators and commercial developments
- Works are staged on key parts of the network to maintain levels of service
- The SCAW package is represented as a proactive member of relevant local traffic coordination groups
- Road users, local businesses, local Councils, Emergency Services, stakeholders and local communities are informed to changed traffic conditions, and
- There is sufficient advance warning of changes to normal traffic conditions.

2. Locality and existing conditions

The site is located on Luddenham Road between Twin Creeks Drive and Elizabeth Drive and is shown on Figure 2.

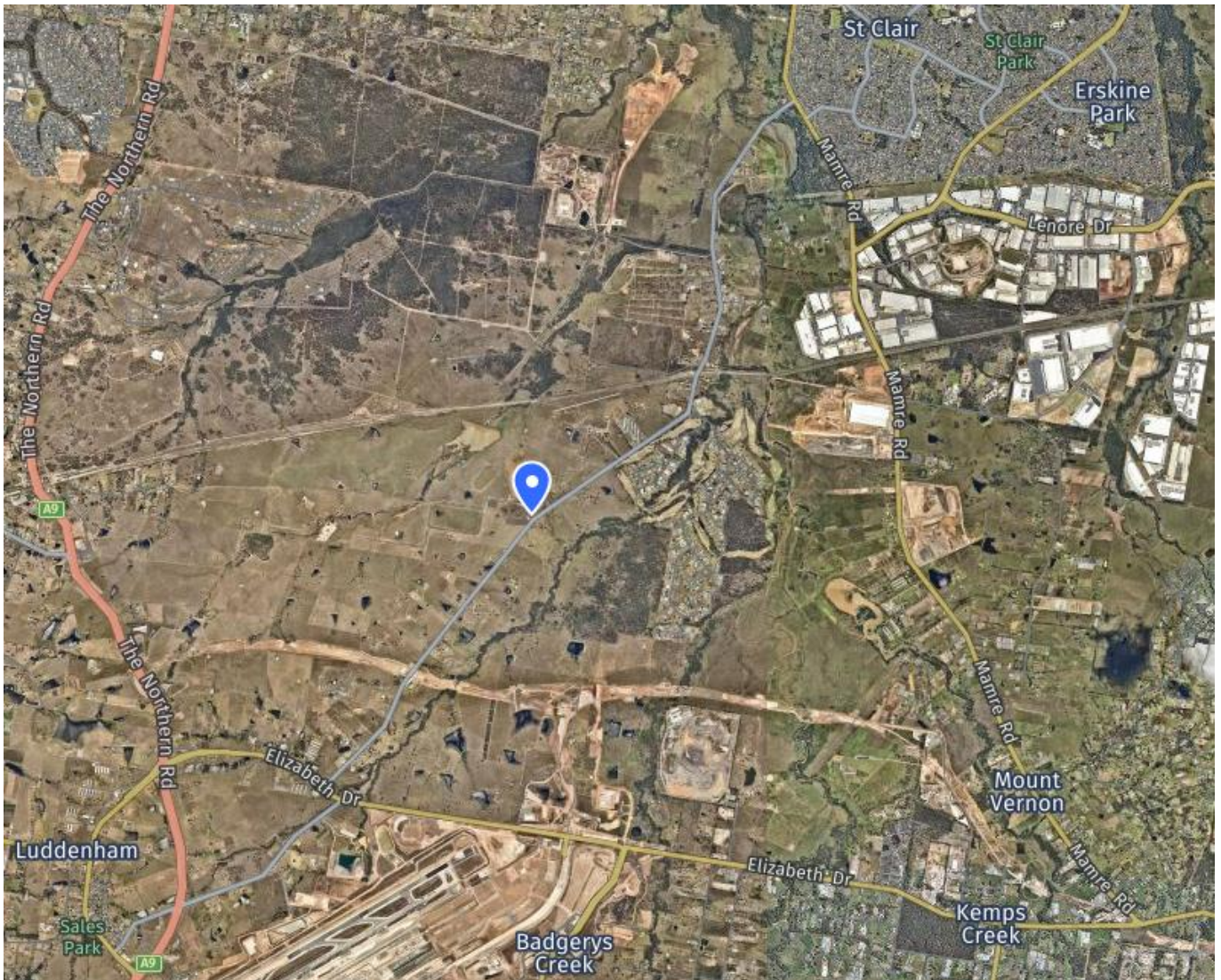


Figure 2: Luddenham Road closure point

The road network surrounding the access points are as noted on Figure 3.

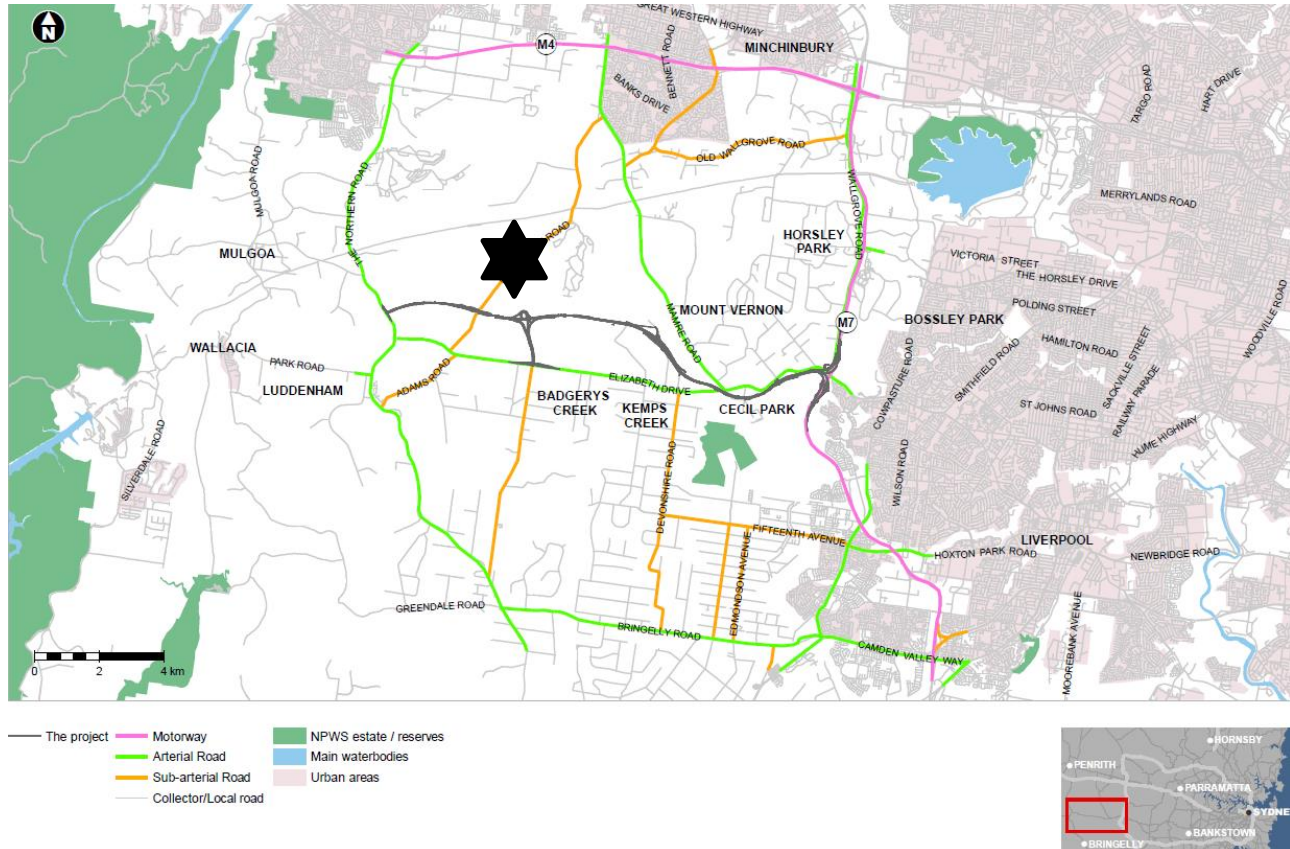


Figure 3 Road network surrounding the project

2.1. Luddenham Road, Luddenham

Luddenham Road is a regional road. Regional roads typically fall under council care with control of the road exercised between Council and TfNSW with TfNSW agreement required for any regulatory changes. Luddenham Road runs in a north-south direction. Luddenham Road terminates to the north at Mamre Road and to the south at Elizabeth Drive. It has a speed limit of 80km/hr near the work area. There is no on street parking along Luddenham Road. There are no existing footpaths or off road cycle facilities along Luddenham Road, refer to Figure 4.

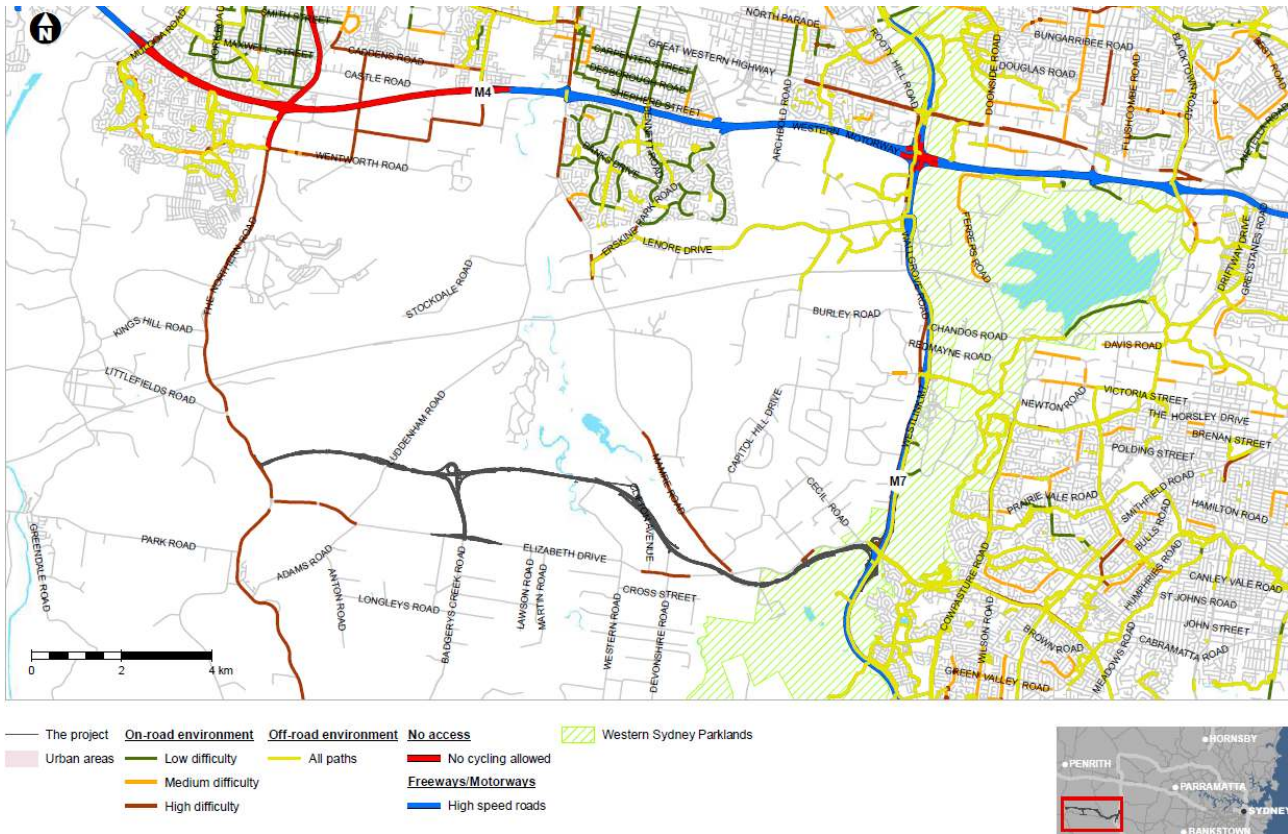


Figure 4: Existing cycle network

However, a small section of on road cycling facilities are provided adjacent to the site (northbound only), refer to Figure 5.



Figure 5: On-road cycle route

Two school buses use Luddenham Road one runs in the morning and the other in the afternoon school days only.

3. Works

Duration: approximately 2 months for viaduct/ roundabout for 1 week/ UTB transport – intermittent – refer to following timing

Timing: September 2023 through to October 2023 viaduct works – works are now complete

March 2024 –to be confirmed (3 nights)

Late March 2024 (3 nights)

3.1. Works required

Works to be undertaken during the viaduct installation including:

- Segment installation
- Parapet installation
- Parapet stitch pour
- Repairs and/ or cleaning activities

Works to be undertaken during the Lud2 roundabout works include:

- Wearing course asphalt placement and final line marking

The UTB transportation does require works at the Gate 5 access point and no works along the route as it is purely for the transportation task

Approximately 14 full road closures will be required for the viaduct works. Some work can be undertaken under a Stop Slow arrangement.

Works not requiring the closure of Luddenham Road, will generally be undertaken between the hours of 7AM-6PM Monday to Friday and 8AM-1PM Saturday, however, works over Luddenham Road requiring the road closure will be limited to night works between 8PM-5AM, subject to TfNSW's ROL approval and PCC permit applications permitted times. SCAW would like to retain flexibility due to the crew changing from days to nights will require sequential nights to maximise our efficiencies. This will mean that we will need Mondays to Fridays as a minimum.

The road closure for the roundabout works are planned over three nights with weather contingencies required. Due to the constrained nature of the site, refer to Figure 6, and to provide a safe environment for the workforce, a full road closure is proposed.



Figure 6: Roundabout work site (Nearmap 17 Nov 23)

The road closure for UTB transport will be required for three (3) nights with a contingency on the third night. The transport of the UTB will be from Gate 5 through to Patons Lane, as shown on Figure 7.



Figure 7: UTB transport from Gate 5 to Patons Lane

3.2. Operating conditions

A road closure will be in place for general traffic with local access provided to properties. For properties south of the road closure, Elizabeth Drive will be the local access point, refer to Figure 8.

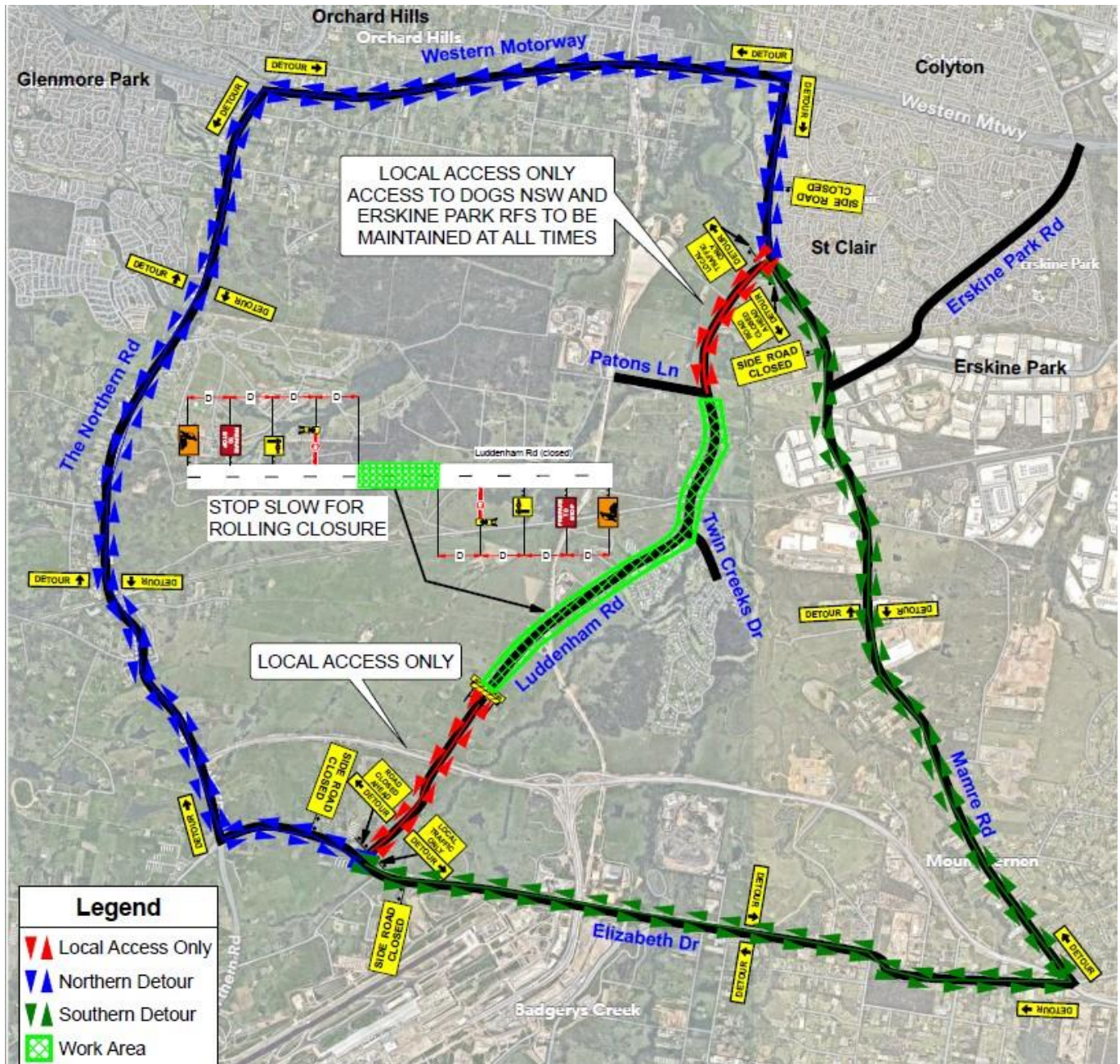


Figure 8: Proposed detour route and closure points

For properties located between Mamre Road and Patons Lane, local access will be provided from Mamre Road. Soft closure points will be installed on Elizabeth Drive with local access provided between Elizabeth Drive and Patons Lane under a stop slow arrangement.

Properties to the south of Twin Creeks Drive include

- Enviromanage Systems Pty Ltd at 443 Luddenham Road
- GC Kennett and HL Pastoral and Aviation at 443-457 Luddenham Road
- Unnamed business at 425 Luddenham Road
- 2-3 residential properties

Properties between Mamre Road and Patons Lane include:

- Rural Fire Service
- Dogs NSW
- Vic Bates property

Properties between Patons Lane and Twin Creeks Drive include:

- Vic Bates property

- Bosnian Croatian Club
- Various residential properties

The closure points south of the work area are located on Elizabeth Drive (soft closure) with local access provided as noted on Figure 9.

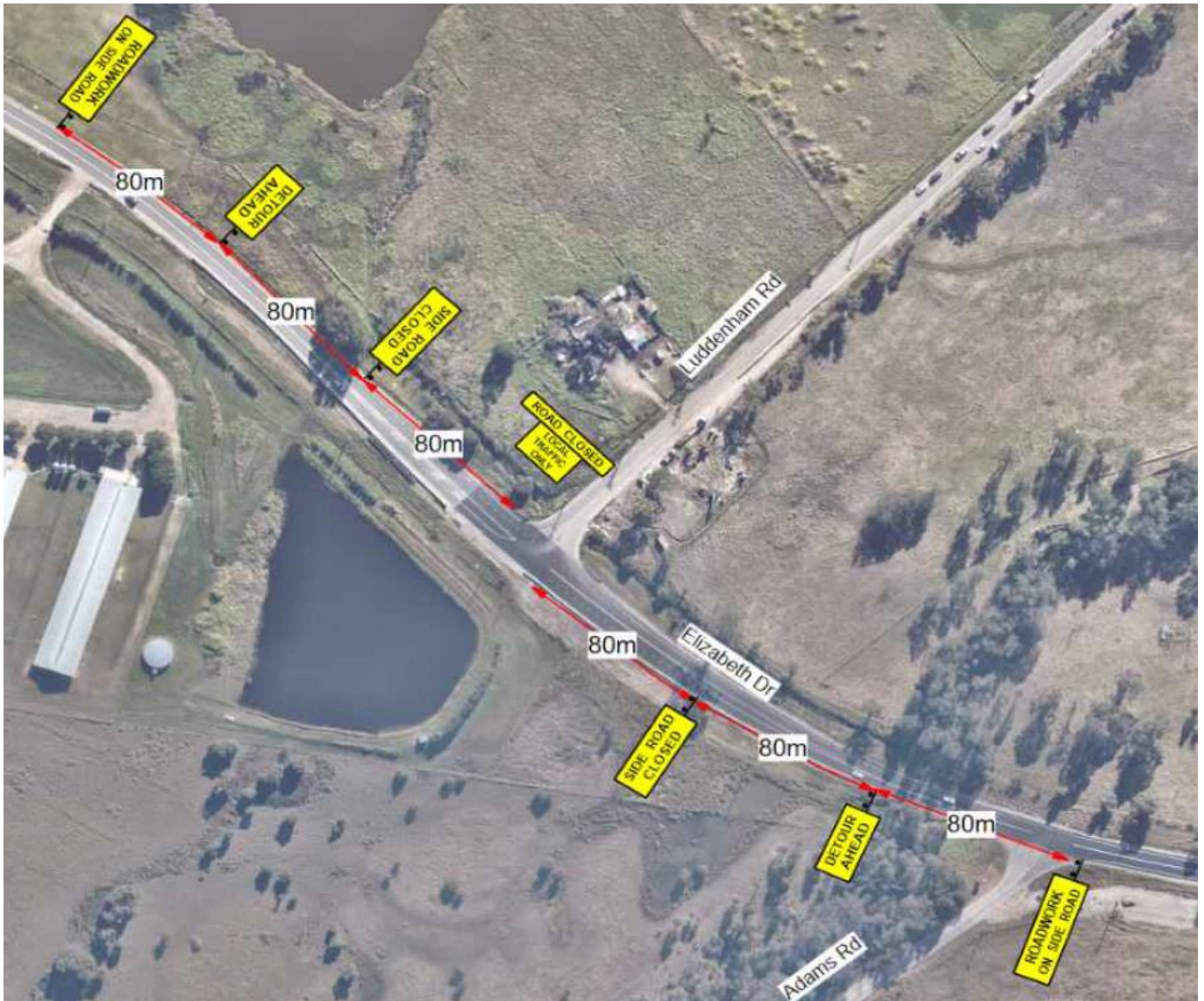


Figure 9: Elizabeth Drive closure details

The hard closure point for the UTB transfer will be located at between Patons Lane and Mamre Road. Stop slow will be implemented between Gate 5 (the start of the transfer) to Patons Lane. This stop slow will be a rolling stop/ slow whilst the UTB is on straight sections of road. This will provide for local access for those properties along Twin Creeks Drive and south of Patons Lane. .

3.2.1. Impact on traffic flow

It is proposed to have nightly closures between the hours of 8PM through to 5AM during the times listed in section 3 of this CTMP. The proposed detours are via the arterial and motorway networks including The Northern Road, M4 Motorway, Mamre Road and Elizabeth Drive.

3.2.2. Impact on public transport

There is no impact on public transport during these works as there are limited services that operate in the area, as noted in section 2.1. No bus stops or services will be affected by the works.

3.2.3. Impact on active transport users

There are no existing footpaths or cycles routes provided along Luddenham Road. There is a small section of on road cycling facility on the northbound carriageway, however this is only available for approximately 600m (300m either side of Gate 4), refer to Figure 10.



Figure 10: On road cycle facility at Gate 4

3.2.4. Impact on property and utilities access

Access to residential-and commercial properties will be retained during the UTB transfer works and ancillary facilities (compounds) operations. Access for utility providers/ maintainers will not be impacted. Emergency Services have been contacted and provided with a copy of this CTMP.

3.2.5. Cumulative impacts

There are a number of construction activities within the immediate area associated with services installation on Luddenham Road and M12 West haulage crossing and compound access. The EIS for the Sydney Metro Western Sydney Airport, Chapters 6 and 24 discuss the cumulative impacts of the various projects occurring within the vicinity of the Western Sydney Airport including:

- Western Sydney International Airport works and
- M12 Motorway works

The outcomes of that modelling and analysis notes:

Aside for the cumulative impacts associated with the project, the road network impacted by the construction of the project is likely to experience growth in background traffic as a result of broader development of the Western Parkland City. This growth is anticipated to result in reduced performance at certain locations within the road network (even without the project and assuming there are no further upgrades to the network over this period, other than the approved projects).

SCAW will be undertaking works on Luddenham Road including roundabout construction and viaduct installation – the latter is the subject of this CTMP

Regular meetings are also being conducted with Endeavour Energy for coordination of works along Luddenham Road.

All road closures will be coordinated with other projects.

3.3. Staff and labour parking

All vehicles associated with the works will park adjacent to the site.

3.4. Traffic Guidance Schemes

Two traffic guidance schemes are required for the work site:

- Road closure and associated detours
- Road closure with stop slow for local access

3.5. Required Council approvals

Penrith City Council and TfNSW are the approval authorities for works on Luddenham Road. CJP are the approvers of this CTMP.

Permits from Penrith City Council will be applied for the road closures from Council's Assets Department and also a ROL from TfNSW. There is no requirement for submission to Penrith City Council Local Traffic Committee

4. Fleet management

Trucks to be used for the delivery of the SCAW works will be compliant with NSW legislation and standards including Heavy Vehicle National Legislation (HVNL). All heavy vehicle operations will be conducted in accordance with CPBUI JV Chain of Responsibility (CoR) Management Plan and the Principal's Contractors Safety Standard as noted in the Overarching TMP.

A combination of truck types will be used during the SCAW works including single unit trucks, semi-trailers, truck and dog combinations and low loaders, for example.

The location of all heavy vehicles used for spoil haulage will be monitored in real time and these records can be made available electronically to the Planning Secretary and the Environmental Protection Authority (EPA) upon request for a period of no less than one (1) year following the completion of construction. It should be noted that no spoil haulage vehicles are associated with this CTMP.

There is sufficient room on site for all heavy vehicles required for the works. Therefore, marshalling facilities are not proposed for this site. Heavy vehicle will not idle or queue on roads surrounding the site.

4.1. Haulage routes

Generally, the haulage routes will be via arterial roads, freeways or tollways. The routes included in the EIS have been adopted for this site, refer to Figure 11 and Figure 12 The routes include Elizabeth Drive and Luddenham Road from The Northern Road, from the east from the M7 Motorway, Elizabeth Drive and Luddenham Road and Luddenham Road from the north, . Heavy vehicles will be accessing the arterial network as soon as possible after leaving the construction sites.

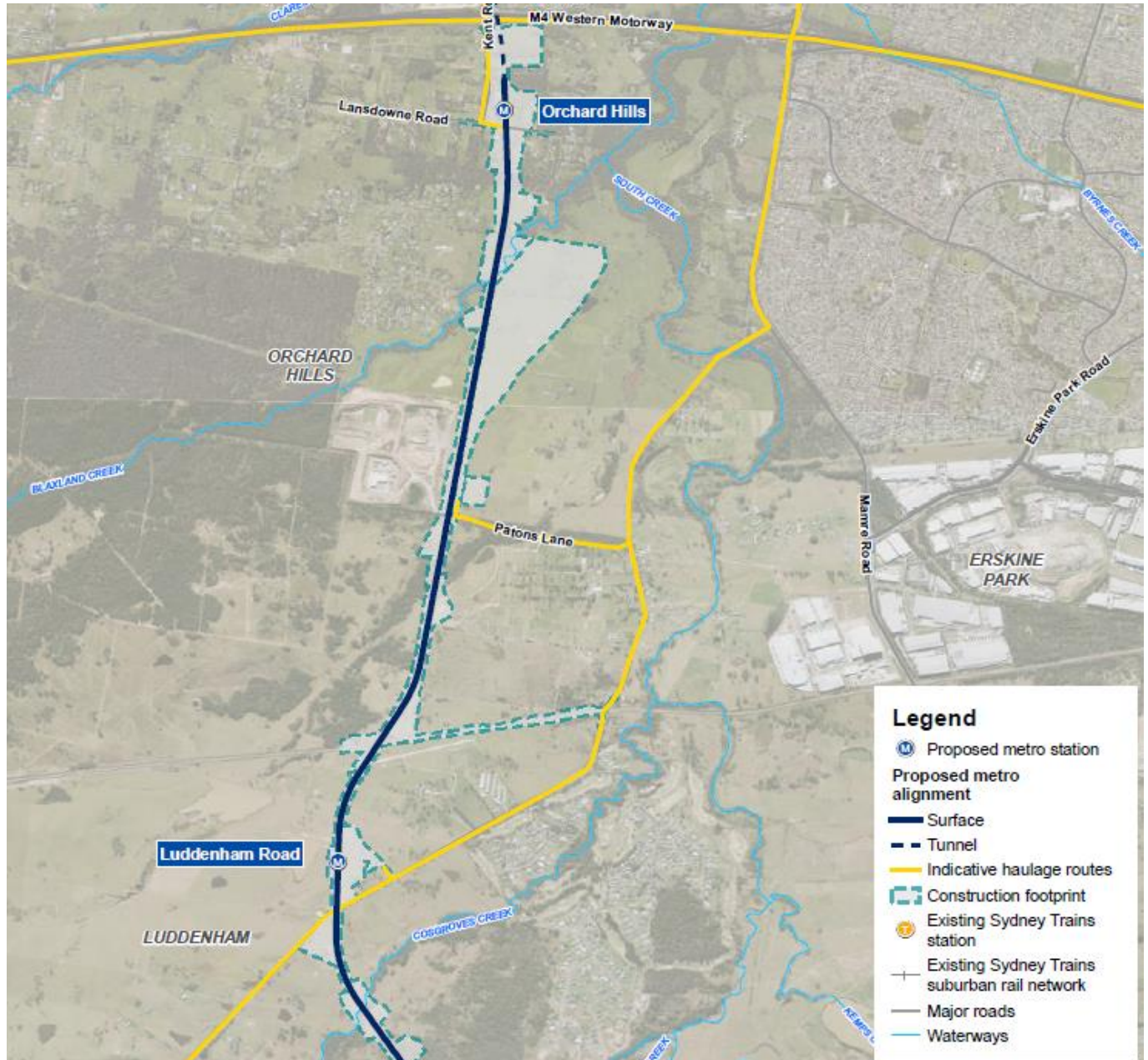


Figure 11: EIS haulage routes from the north

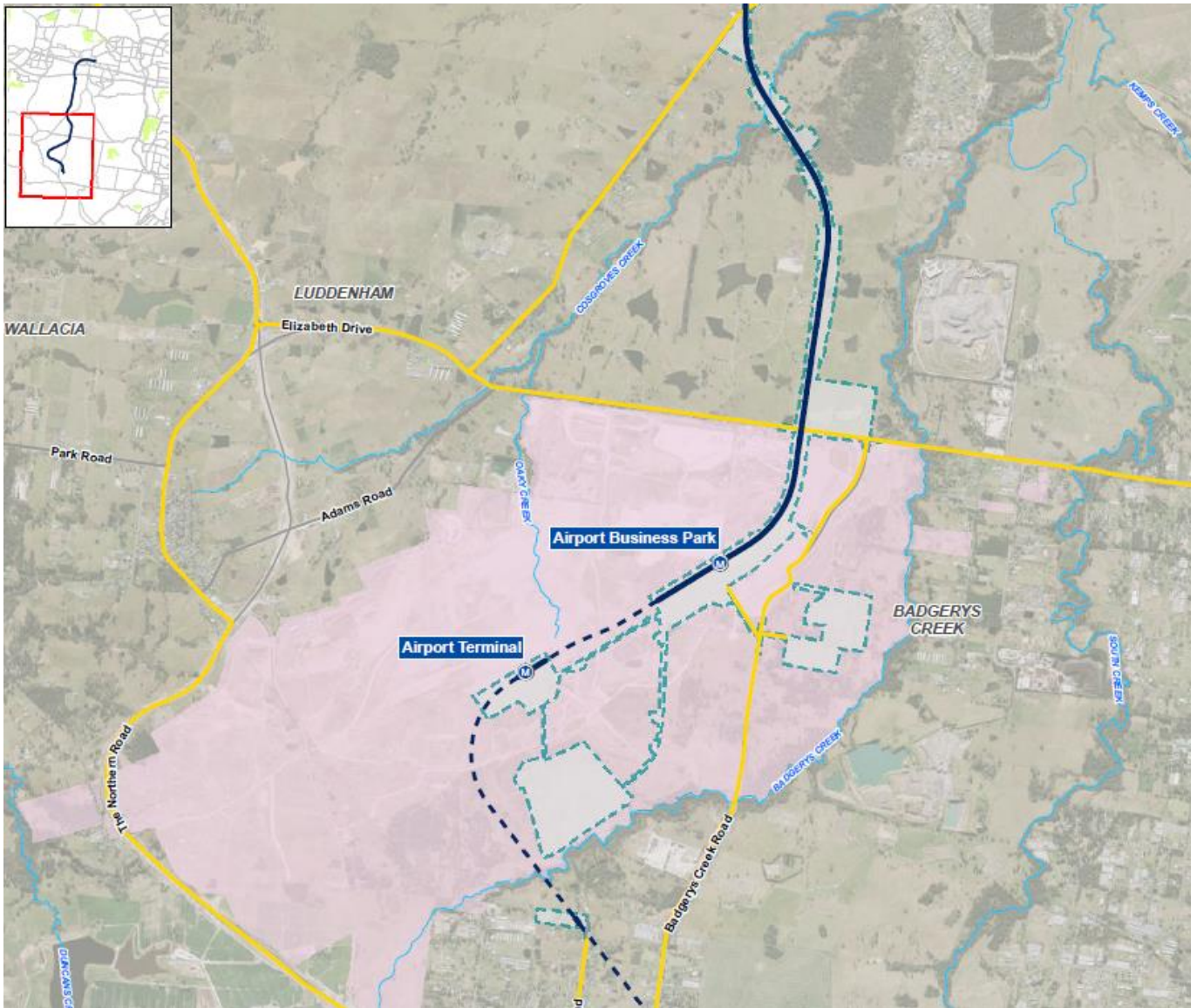


Figure 12: EIS haulage routes from the south

4.2. Road dilapidation report

As noted in the Ministerial Conditions of Approval, road dilapidation report has been prepared for local roads and provided to Penrith City Council.

4.3. Permits for over-dimensional vehicles

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

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

There is a requirement for over mass/ oversize vehicles during the works identified in this CTMP.

5. Other matters

5.1. Road Safety Audits

Road safety audits will be undertaken during the development and implementation of the CTMP. The audit will be undertaken as noted in section 10 of the Construction Traffic Management Framework. A copy of the road safety audit is provided in Appendix D.

5.2. Communications and the community

CPBUI JV will be responsible for the dissemination of information to the community including affected residents, relevant councils, businesses and the public.

5.2.1. Proposed communications

Typical timelines for the various notifications are:

- Community notices (notifications) issued at least seven (7) days prior to:
 - Start of work
 - New work with a new activity that has the potential to impact on stakeholders and the community
 - Handover of a construction site to a new contractor
 - Activities requiring notification to comply with relevant Environmental Protection License (EPL) usually out of hours works
- Precinct updates/ e-update (newsletters) – published 2 per year and for changes to planning approvals
- email and internet updates - done with publication and deliver to letterboxes of notifications and newsletters
- advertisement – published in advance of significant traffic management changes, detours, traffic disruptions
- advance warning signs – as noted in the CTMP where required.

Table 2: Proposed communications

Notification	Site operations
Community notice	Yes
Precinct update/ e-update	Yes
Email and internet	Yes
Print advertising	No
Advance warning sign(s)	Yes
Gate signs	No
Variable Message Signs	Yes

5.2.2. Travelling public

Where the SCAW works will impact on the travelling public, CPGUIJV will undertake the following communications:

- Public transport interruptions will be communicated via on site signage
- Motoring public will be forewarned of any changes including road closures, road changes and lane changes well in advance using appropriate signs including Variable Message Signs (VMS)
- Active transport users will be provided with advance warning signs

Variable message signs (VMS) will be installed at the locations noted in Table 3 and these will be used to highlight the planned closures. The use of permanent VMS are also included. (Note: hyperlinks are provided in the table for the locations) and refer to Appendix C

Table 3: VMS

VMS ID#	Location	VMS type	Direction	Preworks use?	Works use?	Local access?
1	Luddenham Road North of Gate 4	Temporary	Southbound	Yes	No	Yes
2	Luddenham Road at Twin Creeks Roundabout	Temporary	Southbound	Yes	Yes	Yes
3	Luddenham Road south of Gate 5	Temporary	Northbound	Yes	Yes	No
4 (V4912)	M4 Motorway east of Bennett Road	Permanent	Westbound	Yes	Yes	No
5 (M4W5047)	M4 Motorway east of Kingswood Road	Permanent	Westbound	Yes	Yes	No
6	M4 Motorway in emergency telephone bay	Temporary	Westbound	Yes	Yes	No
7 (V0579)	The Northern Road south of M4	Permanent	Northbound	Yes	Yes	No
8 (V0628)	The Northern Road north of Elizabeth Drive	Permanent	Southbound	Yes	Yes	No
9	Elizabeth Drive west of Luddenham Road	Temporary	Eastbound	Yes	Yes	Yes
10	Elizabeth Drive east of Luddenham Road	Temporary	Westbound	Yes	Yes	Yes
11 (VO552)	Mamre Road south of Luddenham Road	Permanent	Northbound	Yes	Yes	NA
12	Mamre Road south of Luddenham Road	Temporary	Northbound	Yes	Yes	Yes
13	Mamre Road north of Luddenham Road	Temporary	Southbound	Yes	Yes	Yes

VMS ID#	Location	VMS type	Direction	Preworks use?	Works use?	Local access?
14 (M4E5035)	M4 Motorway west of Mamre Road	Permanent	Eastbound	Yes	Yes	NA



Figure 13: VMS locations

Table 4: Messages to be displayed

VMS type	Preworks message		Works Message	
Permanent	LUDDENHAM ROAD CLOSED NIGHTLY DDMM – DDMM 8PM-5AM		LUDDENHAM ROAD CLOSED TONIGHT 8PM-5AM	
Temporary	LUDDNHAM RD NIGHT CLOSURE	DDMM- DDMM 8PM-5AM	LUDDNHAM RD CLOSED 8PM-5AM	USE ALT ROUTE
Local access			LUDDNHAM RD CLOSED 8PM-5AM	LOCAL ACCESS ONLY

5.3. Stakeholders

There are a number of stakeholders consulted during the development of this CTMP. A copy of their review comments are provided in Appendix C. Table 5 provides an overview of the consultation undertaken for this CTMP.

Table 5: Consultation undertaken

Stakeholder	Consultation Type	Date
Traffic and Transport Liaison Group	Presentation	4 th May 2023
CJP	Submission of CTMP	8 th May 2023
Sydney Metro Western Sydney Airport project team	Submission of CTMP	8 th May 2023
Penrith City Council	Submission of CTMP	8 th May 2023
TfNSW	Submission of CTMP	8 th May 2023
CJP	Resubmission of CTMP	18 July 2023
Sydney Metro Western Sydney Airport project team	Resubmission of CTMP	18 July 2023
Penrith City Council	Resubmission of CTMP	18 July 2023
TfNSW	Resubmission of CTMP	18 July 2023
CJP	Resubmission of CTMP	1 st August 2023
Sydney Metro Western Sydney Airport project team	Resubmission of CTMP	1 st August 2023
Penrith City Council	Resubmission of CTMP	1 st August 2023
TfNSW	Resubmission of CTMP	1 st August 2023
CJP	Resubmission of CTMP	11 th August 2023
Sydney Metro Western Sydney Airport project team	Resubmission of CTMP	11 th August 2023
Penrith City Council	Resubmission of CTMP	11 th August 2023
TfNSW	Resubmission of CTMP	11 th August 2023
CJP	Resubmission of CTMP	18 th December 2023
Sydney Metro Western Sydney Airport project team	Resubmission of CTMP	18 th December 2023
Penrith City Council	Resubmission of CTMP	18 th December 2023
TfNSW	Resubmission of CTMP	18 th December 2023
CJP	Resubmission of CTMP	15 th January 2024
Sydney Metro Western Sydney Airport project team	Resubmission of CTMP	15 th January 2024
Penrith City Council	Resubmission of CTMP	15 th January 2024
TfNSW	Resubmission of CTMP	15 th January 2024
CJP	Resubmission of CTMP	16 th February 2024
Sydney Metro Western Sydney Airport project team	Resubmission of CTMP	16 th February 2024
Penrith City Council	Resubmission of CTMP	16 th February 2024
TfNSW	Resubmission of CTMP	16 th February 2024
CJP	Resubmission of CTMP	12 th March 2024
Sydney Metro Western Sydney Airport project team	Resubmission of CTMP	12 th March 2024
Penrith City Council	Resubmission of CTMP	12 th March 2024
TfNSW	Resubmission of CTMP	12 th March 2024

5.3.1. Traffic and Transport Liaison Group

The Traffic and Transport Liaison Group (TTLG) has been established by Sydney Metro Western Sydney Airport for the project, as required under MCoA E116. The TTLG consists of members from Sydney Metro Western Sydney Airport project team, Liverpool City Council, Penrith City Council, Customer Journey Planning, Western Sydney Airport Corporation (WSA Co), Western Parkland City Authority (WPCA), TfNSW's Planning and Programs, other contractors associated with the project and Emergency Services.

Further development of this CTMP will occur in consultation with this group. It is noted that this group meets monthly.

Supplementary analysis and modelling as required by Sydney Metro Western Sydney Airport and/ or the TTLG will be undertaken to demonstrate that construction traffic can be managed to minimise disruption to traffic networks operations including changes to the management of pedestrians, cyclists and public transport networks and services. Any revised traffic management measure will be incorporated into the CTMP.

5.3.2. Traffic Control Group

The Traffic Control Group (TCG) has been established by Sydney Metro Western Sydney Airport for the project. The TCG consists of members from Sydney Metro Western Sydney Airport project team, Liverpool City Council, Penrith City Council, Customer Journey Planning, Western Sydney Airport Corporation (WSA Co), Western Parkland City Authority (WPCA), TfNSW's Planning and Programs and other contractors associated with the project. The TCG meets fortnightly.

The purpose of the TCG is for open and honest technical discussion on the contractors proposed works, methodologies and traffic management plans. The TCG will:

- Provide feedback on proposals
- Guide CTMP and other document finalization prior to submission for review/ approval
- Guide coordination of works and traffic management activities on and off airport (local, regional and state roads)
- Assist in transport mitigation

5.3.3. Emergency Services

The Emergency Services have been provided a copy of this CTMP. CPBUIJV will discuss the up and coming closures and provide written notification to all emergency services at least seven (7) days prior to the initial closure.

5.4. Special events

When planning the works, CPGUIJV will identify special events which directly impact the works or haulage activities and will continue to interrogate event websites that provide details on forthcoming events such as:

- NSW and Sydney events - [Destination NSW](#)
- NSW events and festivals - [Visit NSW](#)
- Major events - [Penrith City Council Upcoming events](#)

5.5. Training

CPBUI JV will ensure that all personnel, including subcontractors are aware of the specific requirements of TfNSW's customers, general public, residents and businesses, prior to attending site through the induction process and regular updates through tool box talks. Specific training will be provided to heavy vehicle drivers regarding the possible presence of pedestrians and cyclists and the increased risk of high speed run off the road and head on collision types due to the narrow road widths, high speeds and little to no shoulder availability.

5.6. Inspections and monitoring

The site will be monitored by the site supervisor. Any changes to signs and lines that impact on the public will be recorded. Daily monitoring will be undertaken during the site operating hours.

Traffic control used for pedestrian management, lane closures etc will need to provide records of the traffic control implemented. Any changes required to a traffic control set up will be authorised by a holder of a SafeWork NSW “Prepare a Work Zone Traffic Management Plan” or equivalent. Checklist for monitoring of the implemented CTMP are provided in Appendix D.

5.7. Site contacts

Table 6 provides the contact details for the works identified in this CTMP.

Table 6: Site contacts

Name	Position	Mobile#
[REDACTED]	Project Engineer	[REDACTED]
[REDACTED]	Area Manager	[REDACTED]
[REDACTED]	Project Manager Viaduct	[REDACTED]

5.8. References

The following documents were used in the development of this CTMP:

- Construction Traffic Management Framework, Sydney Metro West and Sydney Metro Western Sydney Airport
- TfNSW’s Traffic Control at Worksites Manual v6.1
- Relevant AustRoads Guides and TfNSW Supplements
- Sydney Metro Principal Contractor Health and Safety Standard

Part C Appendices

Appendix A – Compliance Matrix

Sydney Metro Western Sydney Airport CSSI Infrastructure Approval (SSI 10051)

Project Planning Approval (SSI 10051)		
E103	Construction Traffic Management Plans (CTMPs) must be prepared in accordance with the Construction Traffic Management Framework. A copy of the CTMPs must be submitted to the Planning Secretary for information before the commencement of any construction in the area identified and managed within the relevant CTMP.	This plan
E104	The locations of all Heavy Vehicles used for spoil haulage must be monitored in real time and the records of monitoring be made available electronically to the Planning Secretary and the EPA upon request for a period of no less than one (1) year following the completion of construction.	Refer to Overarching CTMP
E105	Local roads proposed to be used by Heavy Vehicles to directly access ancillary facilities / construction sites that are not identified in the documents listed in Condition A1 must be approved by the Planning Secretary and be included in the CTMP.	Not applicable to this CTMP as all roads to be used are included in the EIS
E106	All requests to the Planning Secretary for approval to use local roads under Condition E105 above must include the following: (a) a swept path analysis; (b) demonstration that the use of local roads by Heavy Vehicles for the CSSI will not compromise the safety of pedestrians and cyclists of the safety of two-way traffic flow on two-way roadways; (c) details as to the date of completion of the road dilapidation surveys for the subject local roads; and (d) measures that will be implemented to avoid where practicable the use of local roads past schools, aged care facilities and child care facilities during their peak operation times; and (e) written advice from an appropriately qualified professional on the suitability of the proposed Heavy Vehicle route which takes into consideration items (a) to (d) of this condition.	Not applicable to this CTMP as all roads to be used are included in the EIS
E107	Before any local road is used by a Heavy Vehicle for the purposes of construction of the CSSI, a Road Dilapidation Report must be prepared for the road. A copy of the Road Dilapidation Report must be provided to the Relevant Road Authority(s) within three (3) weeks of completion of the survey and at no later than one (1) month before the road being used by Heavy Vehicles associated with the construction of the CSSI.	Section 4.2
E108	If damage to roads occurs as a result of the construction of the CSSI, the Proponent must either (at the Relevant Road Authority's discretion): (a) compensate the Relevant Road Authority for the damage so caused; or (b) rectify the damage to restore the road to at least the condition it was in pre-work as identified in the Road Dilapidation Report.	Section 4.2
E109	Vehicles associated with the project workforce (including light vehicles and Heavy Vehicles) must be managed to: (a) minimise parking on public roads; (b) minimise idling and queueing on state and regional roads;	Section 4

Project Planning Approval (SSI 10051)

	(c) not carry out marshalling of construction vehicles near sensitive use (d) not block or disrupt access across pedestrian or shared user paths at any time unless alternate access is provided; and (e) ensure spoil haulage vehicles adhere to the nominated haulage routes identified in the CTMP.	
E110	Access to all utilities and properties must be maintained during works, unless otherwise agreed with the relevant utility owner, landowner or occupier.	Section 3.2.4
E111	The Proponent must maintain access to properties during the entirety of works unless an alternative access is agreed in writing with the landowner(s) whose access is impacted by the CSSI works.	Section 3.2.4
E112	Where construction of the CSSI restricts a property's access to a public road, the Proponent must, until their primary access is reinstated, provide the property with temporary alternate access to an agreed road decided through consultation with the landowner, at no cost to the property landowner, unless otherwise agreed with the landowner.	Section 3.2.4
E113	Any property access physically affected by the CSSI must be reinstated to at least an equivalent standard, unless otherwise agreed by the landowner or occupier. Property access must be reinstated within one (1) month of the work that physically affected the access is completed or in any other timeframe agreed with the landowner or occupier.	Section 3.2.4
E114	During construction, all reasonably practicable measures must be implemented to maintain pedestrian, cyclist and vehicular access to, and parking in the vicinity of, businesses and affected properties. Disruptions are to be avoided, and where avoidance is not possible, minimised. Where disruption cannot be minimised, alternative pedestrian, cyclist and vehicular access, and parking arrangements must be developed in consultation with affected businesses and landowners and implemented before the disruption. Adequate signage and directions to businesses must be provided before, and for the duration of, any disruption.	Sections 3.2.3 and 3.2.4
E115	Safe pedestrian and cyclist access must be maintained around the St Marys construction site during construction. In circumstances where pedestrian and cyclist access is restricted or removed due to construction activities, a proximate alternate route which complies with the relevant standards, must be provided and signposted before the restriction or removal of the impacted access.	Not applicable to the SCAW scope of works
E116	A Traffic and Transport Liaison Group(s) must be established in accordance with the Construction Traffic Management Framework to inform the development of CTMP.	Sydney Metro will establish the TTLG Section 5.3.1
E117	Supplementary analysis and modelling as required by TfNSW and / or the Traffic and Transport Liaison Group(s) must be undertaken to demonstrate that construction and operational traffic can be managed to minimise disruption to traffic network operations including changes to and the management of pedestrian, bicycle and public transport networks, public transport services, and pedestrian and cyclist movements. Revised traffic management measures must be incorporated into the CTMP.	Section 5.3.1

Project Planning Approval (SSI 10051)

E118	<p>As part of Condition E117 the Traffic and Transport Liaison Group(s) is to identify opportunities to improve the intersection performance during operation at:</p> <p>a) Queen Street/Great Western Highway/Mamre Road in St Marys; b) Glossop Street/ Forrester Road in St Marys; and c) Glossop Street / Great Western highway in St Marys. Identified improvements must be implemented prior to the commencement of operation.</p>	Not applicable to the SCAW scope of works
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Sydney Metro Western Sydney Airport Environmental Impact Statement

Revised Environmental Management Measures (REMMs)

T1	Construction Traffic Management Plans would be prepared in accordance with the Construction Traffic Management Framework	This plan
T2	The Construction Traffic Management Plan for St Marys would be developed in consultation with the Traffic and Transport Liaison Group to ensure existing transport interchange infrastructure continues to operate effectively within the St Marys station precinct.	Not applicable to the SCAW scope of works
T3	Coordination with Western Sydney Airport and Transport for NSW would be undertaken through the Traffic and Transport Liaison Group to manage potential cumulative construction traffic impacts with M12 Motorway and Elizabeth Drive	Section 5.3.1
T4	Road Safety Audits would be carried out to address vehicular access and egress, and pedestrian, cyclist and public transport safety. Road Safety Audits would be carried out as per the guidelines outlined in Section 10 of the Construction Traffic Management Framework	Section 5.1
T5	Maintain access for pedestrians and cyclists around construction sites as per the guidelines outlined in the Construction Traffic Management Framework. Appropriate signage and line marking would be provided to guide pedestrians and cyclists past construction sites and on the surrounding network to allow access to be maintained	Section 3.2.3
T6	Access for construction vehicles to be planned as per the guidelines outlined in the Construction Traffic Management Framework. Construction site traffic would be managed to minimise movements during peak periods. Vehicle access to and from construction sites would be managed to maintain pedestrian, cyclist and motorist safety	Section 4
T7	Temporary relocation of bus stops and the bus layovers at to the Station Street car park in St Marys would be implemented prior to the commencement of construction works that impacts on the existing bus facilities. The temporary relocation of bus stops and the bus layover at St Marys would be carried out in consultation with the Transport for NSW, Penrith City Council and bus operators. Wayfinding and customer information would guide customers to temporary bus stop locations	Not applicable to the SCAW scope of works
T8	Transport for would be consulted to discuss opportunities for their delivery of intersection upgrades at Mamre Road/ M4 Western Motorway on and off ramps prior to peak year of construction	Sydney Metro Western Sydney Airport
T9	A construction worker car parking strategy for St Marys would be prepared in consultation with Penrith City Council and Transport for NSW prior to the commencement of construction. The strategy would seek to:	Not applicable to the SCAW scope of works

Revised Environmental Management Measures (REMMs)

	<ul style="list-style-type: none"> ▪ Minimise overall demand for construction worker car parking through initiatives such as use of other project construction worksites in combination with shuttle buses, car-pooling and encouraging the use of public transport ▪ Minimise potential use of on street car parking by construction workers <p>The construction worker car parking strategy would be implemented throughout construction</p>	
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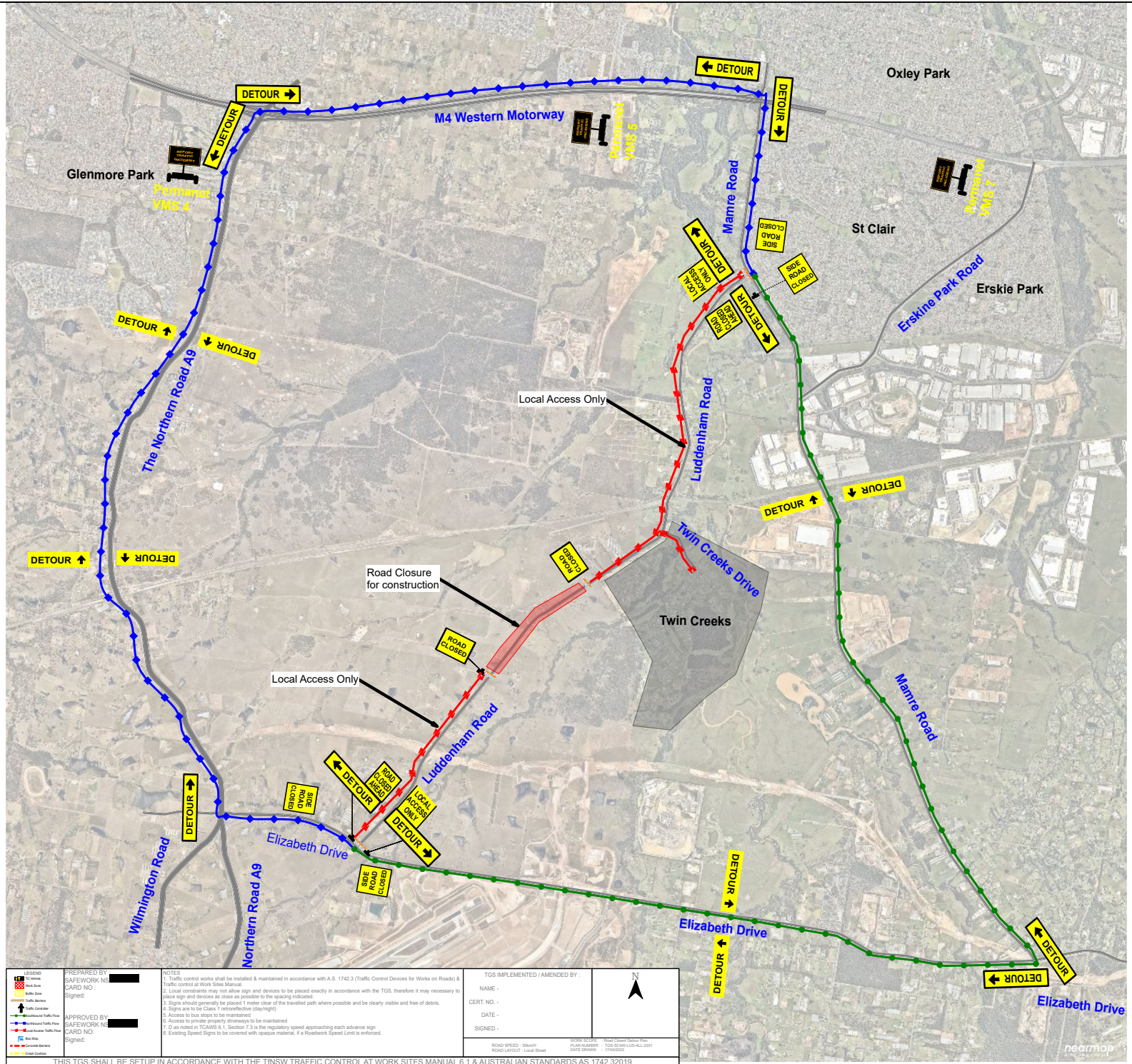
Sydney Metro Western Sydney Airport Revised performance outcomes

Revised Performance outcomes - Transport

<p>Network connectivity, safety and efficiency of the transport system in the vicinity of the project are managed to minimise impacts. The safety of transport system customers is maintained . impacts on network capacity and the level of service are effectively managed</p>	<p>Safe and efficient routes are provided for pedestrians, cyclists, and road users at/ near construction sites</p>	<p>Not applicable to the SCAW scope of works</p>
	<p>Access to the existing St Marys Station is maintained while train services are operating</p>	<p>Not applicable to the SCAW scope of works</p>
	<p>Safe access to properties and businesses is maintained during construction, unless alternatives are agreed with property owners and businesses</p>	<p>Section 3.2.4</p>
	<p>Heavy vehicles access the arterial network as soon as practicable on route to, and immediately after leaving a construction site</p>	<p>Section 4.1</p>
	<p>The local community and relevant authorities are informed of transport, access and parking changes/ impacts to minimise inconvenience to the public</p>	<p>Section 5.2.1</p>

Appendix B – Traffic Guidance Schemes

TGS#	Location	From	To	Time and duration	Traffic control	Works	Impacts
TGS-SCAW-LUD-AL-2201	Luddenham Road	Elizabeth Drive	Mamre Road	Nights between 8PM-5AM	Road closure	Works on viaduct/ UTB transfer	Works undertaken at night to limit impacts with local access maintained
SCAW-TGS-LUD-008	Elizabeth Drive	Luddenham Road	Either side of intersection	Nights between 8PM-5AM	Soft closure with local access only	Works on viaduct/ UTB transfer	Works undertaken at night to limit impacts with local access maintained
SCAW-TGS-LUD-012	Mamre Road	Luddenham Road	Either side of intersection	Nights between 8PM-5AM	Closure with local access only	Works on viaduct/ UTB transfer	Works undertaken at night to limit impacts with local access maintained
100686	Luddenham Road	Elizabeth Drive	Mamre Road	Nights between 8PM-5AM	Closure with stop slow for local access	UTB transfer	Works undertaken at night with to limit impacts with local access maintained


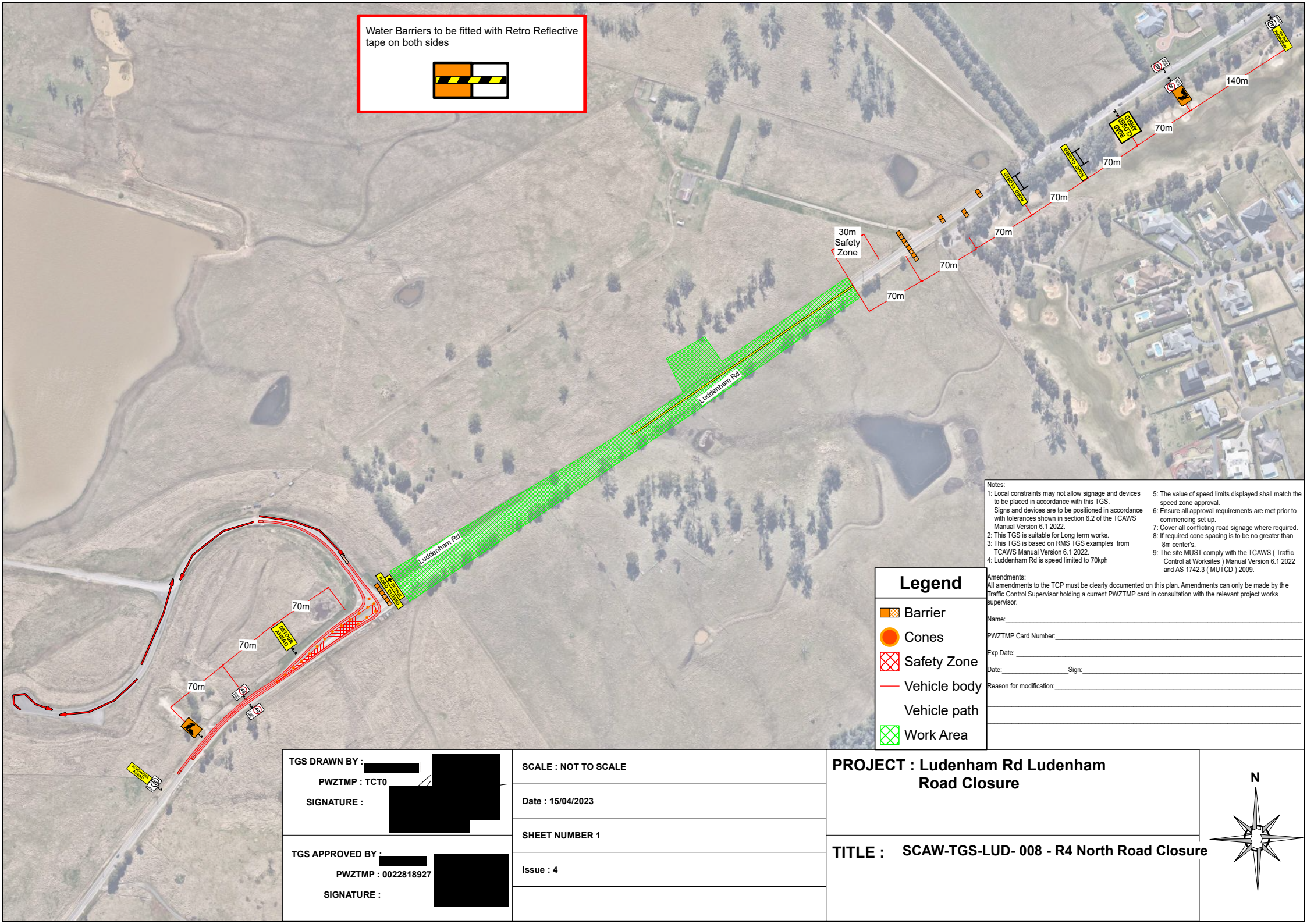


LEGEND 	PREPARED BY SAFEWORX NS CARD NO: [REDACTED] Signed: [REDACTED]	NOTES 1. Traffic control works shall be installed & maintained in accordance with A.S. 1742.3 (Traffic Control Devices for Works on Roads) & Traffic control at Work Sites Manual. 2. Local constraints may not allow signs and devices to be placed exactly in accordance with the TGS; therefore it may be necessary to place signs and devices as close as possible to the spacing indicated. 3. Signs should generally be placed 1 meter down of the travelled path where possible and be clearly visible and free of debris. 4. Signs are to be Class 1 retroreflective (day/night). 5. Access to bus stops to be maintained. 6. Access to private property driveways to be maintained. 7. D as noted in TCAMS 6.1, Section 7.3 is the regulatory speed approaching each advance sign. 8. Existing Speed Signs to be covered with opaque material, if a Roadwork Speed Limit is enforced.	TGS IMPLEMENTED / AMENDED BY: NAME - [REDACTED] CERT. NO. - [REDACTED] DATE - [REDACTED] SIGNED - [REDACTED]	
	APPROVED BY SAFEWORX NS CARD NO: [REDACTED] Signed: [REDACTED]			

THIS TGS SHALL BE SET UP IN ACCORDANCE WITH THE TNSW TRAFFIC CONTROL AT WORK SITES MANUAL 6.1 & AUSTRALIAN STANDARDS AS 1742 32019

nearmap

Water Barriers to be fitted with Retro Reflective tape on both sides












- Notes:
- 1: Local constraints may not allow signage and devices to be placed in accordance with this TGS. Signs and devices are to be positioned in accordance with tolerances shown in section 6.2 of the TCAWS Manual Version 6.1 2022.
 - 2: This TGS is suitable for Long term works.
 - 3: This TGS is based on RMS TGS examples from TCAWS Manual Version 6.1 2022.
 - 4: Ludenham Rd is speed limited to 70kph
 - 5: The value of speed limits displayed shall match the speed zone approval.
 - 6: Ensure all approval requirements are met prior to commencing set up.
 - 7: Cover all conflicting road signage where required.
 - 8: If required cone spacing is to be no greater than 8m center's.
 - 9: The site MUST comply with the TCAWS (Traffic Control at Worksites) Manual Version 6.1 2022 and AS 1742.3 (MUTCD) 2009.

Amendments:
All amendments to the TCP must be clearly documented on this plan. Amendments can only be made by the Traffic Control Supervisor holding a current PWZTMP card in consultation with the relevant project works supervisor.

Name: _____
 PWZTMP Card Number: _____
 Exp Date: _____
 Date: _____ Sign: _____
 Reason for modification: _____



Legend

-  Barrier
-  Cones
-  Safety Zone
-  Vehicle body
-  Vehicle path
-  Work Area

TGS DRAWN BY : 
 PWZTMP : TCT0
 SIGNATURE : 

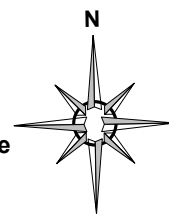
SCALE : NOT TO SCALE
 Date : 15/04/2023
 SHEET NUMBER 1

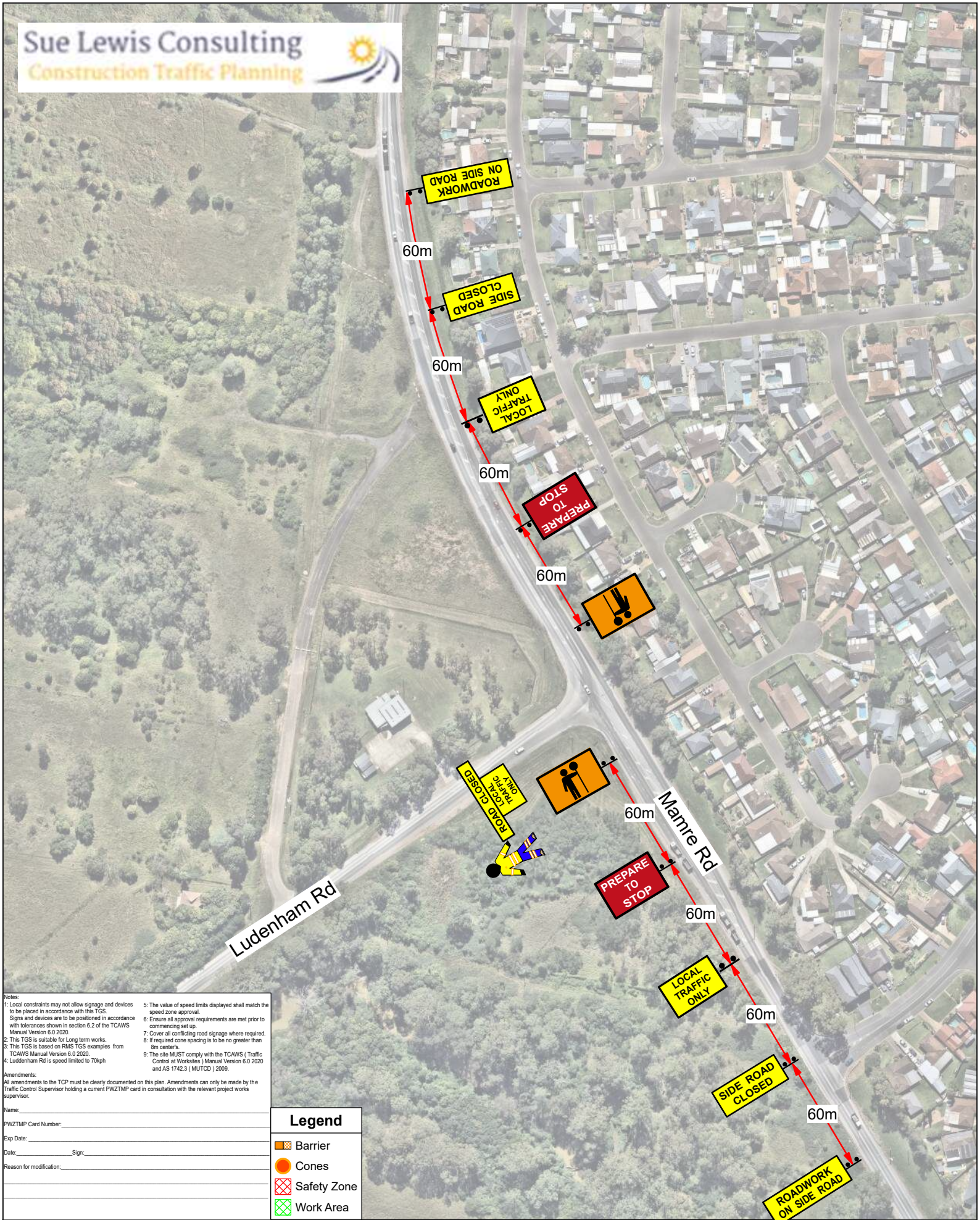
PROJECT : Ludenham Rd Ludenham Road Closure

TGS APPROVED BY : 
 PWZTMP : 0022818927
 SIGNATURE : 

Issue : 4

TITLE : SCAW-TGS-LUD- 008 - R4 North Road Closure





- Notes:**
- Local constraints may not allow signage and devices to be placed in accordance with this TGS.
 - Signs and devices are to be positioned in accordance with tolerances shown in section 6.2 of the TCAWS Manual Version 6.0 2020.
 - This TGS is suitable for Long term works.
 - This TGS is based on RMS TGS examples from TCAWS Manual Version 6.0 2020.
 - Luddenham Rd is speed limited to 70kph
 - The value of speed limits displayed shall match the speed zone approval.
 - Ensure all approval requirements are met prior to commencing set up.
 - Cover all conflicting road signage where required.
 - If required cone spacing is to be no greater than 8m center's.
 - The site MUST comply with the TCAWS (Traffic Control at Worksites) Manual Version 6.0 2020 and AS 1742.3 (MUTCD) 2009.

Amendments:
All amendments to the TCP must be clearly documented on this plan. Amendments can only be made by the Traffic Control Supervisor holding a current PWZTMP card in consultation with the relevant project works supervisor.

Name: _____
 PWZTMP Card Number: _____
 Exp Date: _____
 Date: _____ Sign: _____
 Reason for modification: _____

Legend	
	Barrier
	Cones
	Safety Zone
	Work Area

TGS DRAWN BY : _____
 PWZTMP : TCT0
SIGNATURE : _____

TGS APPROVED BY : _____
 PWZTMP : 0022818927
SIGNATURE : _____

SCALE : NOT TO SCALE

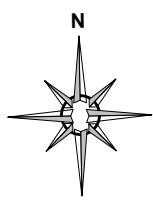
Date : 31/07/2023

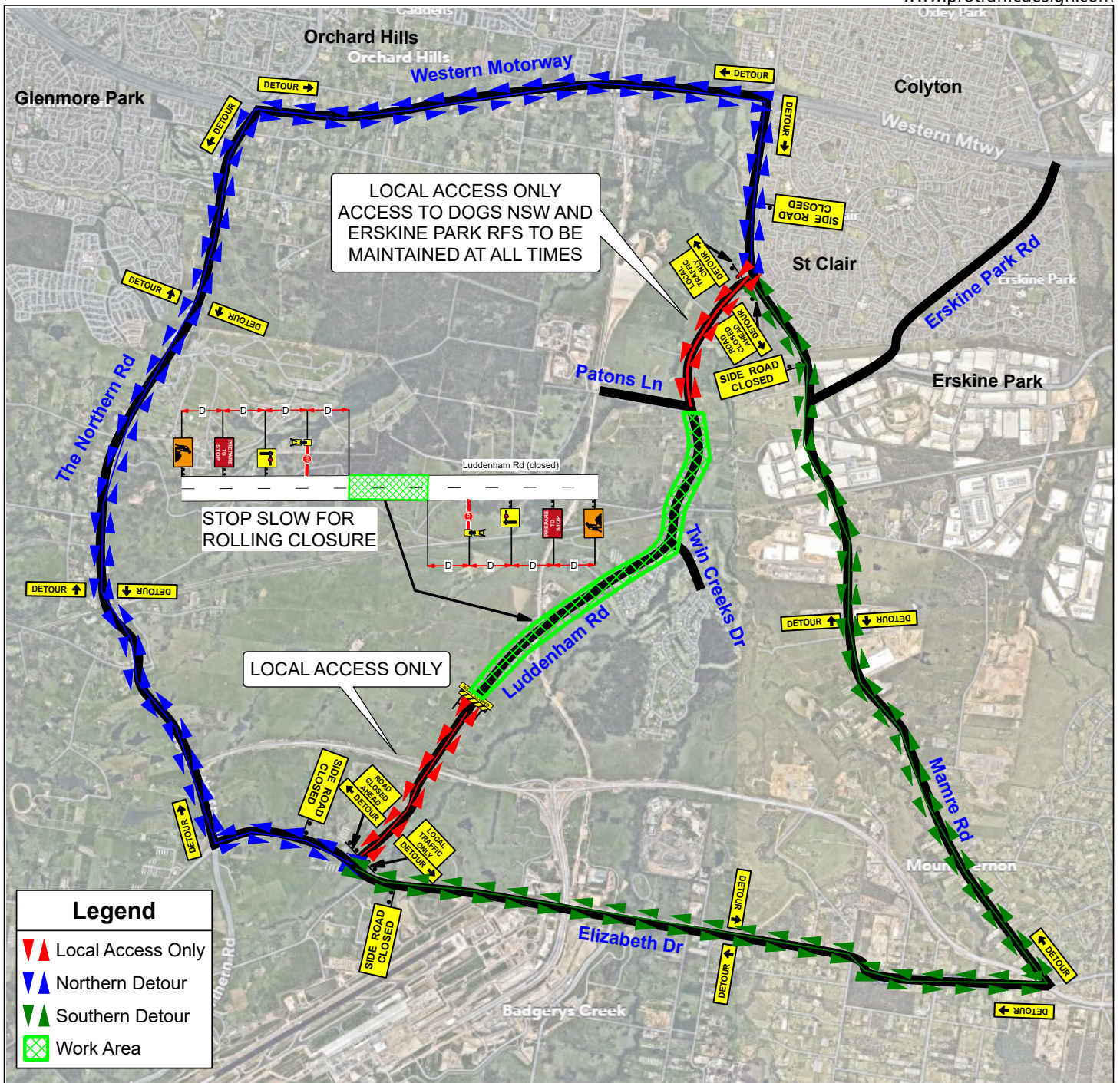
SHEET NUMBER 1

Issue : 2

PROJECT : Ludenham Rd Ludenham Road Closure

TITLE : SCAW-TGS-LUD- 012 - Mamre Rd





Notes:

- 1: Local constraints may not allow signage and devices to be placed in accordance with this TGS. Signs and devices are to be positioned in accordance with tolerances shown in section 7.10.3 of the TCAWS Manual Issue 6.1 2022.
- 2: This TGS is suitable for Short & Long term works.
- 3: Signs to mounted 200mm from ground height for frame mounted and 2.2m for post mounted.
- 4: This TGS is based on guidelines provided within the TCAWS Manual Issue 6.1 2022
- 5: For Night works adequate lighting is to be provided at all control points.
- 6: Pedestrians MUST be monitored and assisted at all times and suitable controls implemented.
- 7: The value of speed limits displayed shall match the speed zone approval.
- 8: Signage used in the TGS is to be B Size.
- 9: Ensure all approval requirements are met prior to commencing set up.
- 10: Cover all conflicting & Contradicting road signage & devices where required
- 11: If required cone spacing is to be no greater than 2m centres.
- 12: TTM Inspections to be undertaken on a regular basis.
- 13: Estimated Queue Lengths to be noted here
- 14: The site MUST comply with the TCAWS (Traffic Control at Worksites) Manual Issue 6.1 2022 and AS 1742.3 (MUTCD) 2019.

Amendments:

All amendments to the TGS must be clearly documented on this plan. Amendments can only be made by the Traffic Control Supervisor holding a current PWZTMP card in consultation with the relevant project works supervisor.

Name: _____
 PWZTMP Card Number: _____
 Exp Date: _____
 Date: _____ Sign: _____
 Reason for modification: _____

Revisions	No.	By:	Date:	Description:	Appr:	Job Location:	Luddenham Rd Luddenham	Client:	_____	PWZ _____/0186	Signature:	_____	TRAFFIC DESIGN PRO
	1	_____	07/02/24	Issued for Implementation	_____			Date:	07/02/2024	_____	_____	_____	
	2	_____	07/03/24	Amendments	_____			Work Activity:	Road Closure	_____	_____	_____	
	3							TGS No:	100686				
	4												



Disclaimer: This guidance scheme is for Traffic Management purposes only. Workforce Road Services disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages & costs you might incur as a result of the information being inaccurate or incomplete in any way, and for any reason. The plan is drawn in accordance with the TCAWS manual

No: _____
 TCT0073331

PWZ _____ 3331

TRAFFIC DESIGN PRO

40 YEARS

RACON

Appendix C – VMS locations



Figure 1445: VMS 1 facing southbound traffic on Luddenham Road



Figure 1546: VMS 2 facing southbound traffic at Twin Creeks

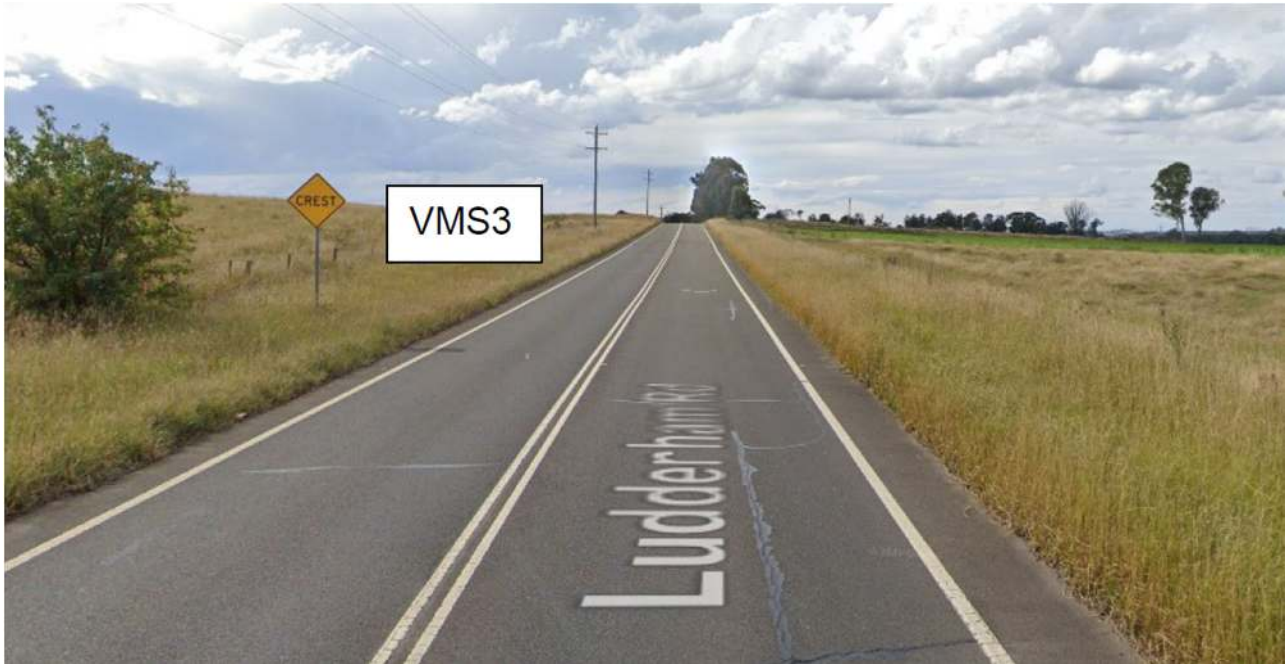


Figure 1647: VMS3 facing northbound traffic south of Gate 5



Figure 1748: VMS6 M4 Westbound in METS bay



Figure 1849: VMS9 Elizabeth Drive west of Luddenham Rd facing eastbound traffic



Figure 1920: VMS 10 Elizabeth Drive facing westbound traffic east of Luddenham Road



Figure 2021: VMS12 Mamre Road south of Luddenham Road facing northbound traffic



Figure 2122: VMS 13 Mamre Road north of Luddenham Road facing southbound traffic

Appendix D – UTB transport swept paths

Appendix E - Road Safety Audit



Road Safety Audit Report

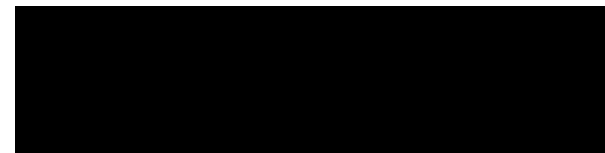
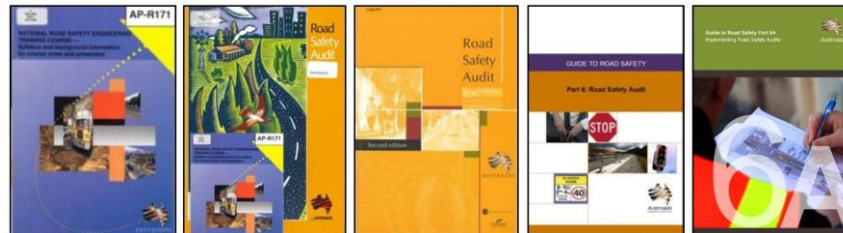
Luddenham Road - Road Closures



Practical
Independent
Specialised

Road/Area	Luddenham Road	Road Safety Audits Reference	RSA-14001
Traffic Stage/Phase	Western Sydney Airport – Surface and Civil Alignment Works – Luddenham Road Closures	Report Date	28 April 2023
Audit Stage	Desktop Traffic Guidance Scheme	Lead Auditor	[REDACTED] (Level III RMS)
Client	[REDACTED]	Second Auditor	[REDACTED] (Level III RMS)
Client Contact	[REDACTED]	TMP / Drawings	Luddenham Road Closures for viaduct works - Construction Traffic Management Plan (Document No: SMWSASCA-CPU-1NL000-TF-PLN-000010 Rev A)
		Report Provider	Road Safety Audits

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



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

Senior Road Safety Auditor
CPEng, RPEQ, NER, BE (Civil),
BB (Bus. Admin.)



Luddenham Road - Road Closures Western Sydney Airport – Surface and Civil Alignment Works – Luddenham Road Closures				
	Audit Point	Treatment Option	Consulting Responder: [REDACTED]	
			Response	Status
1.	No road safety issues are identified in relation to the signage at the points of closure on Luddenham Road, the proposed detour routes and associated signage and the proposed locations of the VMS.	Nil. Note only.	Noted	Closed



Explanatory Notes

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

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

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

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

YStatus: The status of the issue as it sits with the Project. i.e. 'actioned', 'closed', 'pending information / further guidance'.

Language:

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

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

Intent of Issues Listing Order: Audit points might be clustered according to location, theme, or time. When this is not done and the audit comprises an uncategorised list of points, the key issues are often discussed first. However, there is no official ordering of points, and they should all be read on their merits and on the basis of the language guide above.

References: 1. Austrroads Guide to Road Safety – Road Safety Audit – (2019) 6 and 6A; 2. AS 1742.3 – 2019; 3. State specific codes and guidelines re: Traffic Control at Work Sites; and 4. Design: 1. Austrroads guidelines and 2. state-specific supplements and technical publications as relevant.

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

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

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



Road Safety Audit Report

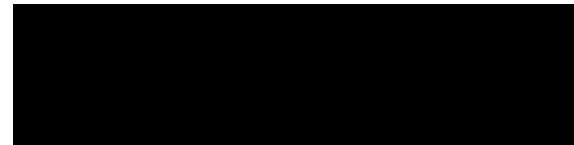
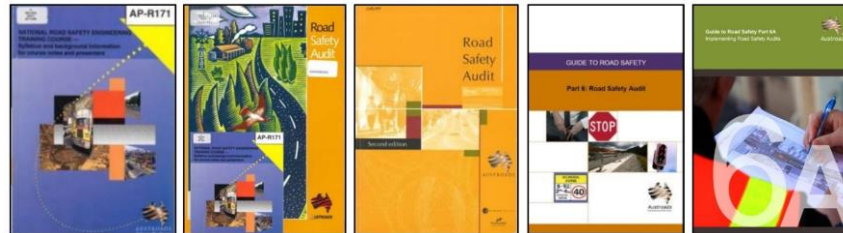
Luddenham Road - Road Closures



Practical
Independent
Specialised

Road/Area	Luddenham Road	Road Safety Audits Reference	RSA-14446
Traffic Stage/Phase	Western Sydney Airport – Surface and Civil Alignment Works – Luddenham Road Closures	Report Date	17 July 2023
Audit Stage	Desktop Traffic Guidance Scheme	Lead Auditor	[REDACTED] (Level III RMS)
Client	[REDACTED] Consulting	Second Auditor	[REDACTED] Level III RMS)
Client Contact	[REDACTED]	TMP / Drawings	Luddenham Road Closures for viaduct works - Construction Traffic Management Plan (Document No: SMWSASCA-CPU-1NL000-TF-PLN-000010 Rev B)
		Report Provider	Road Safety Audits

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



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

Senior Road Safety Auditor
CPEng, RPEQ, NER, BE (Civil),
BB (Bus. Admin.)



Luddenham Road - Road Closures Western Sydney Airport – Surface and Civil Alignment Works – Luddenham Road Closures			
	Audit Point	Treatment Option	Consulting Responder: [Redacted]
			Response
<p>General: No road safety issues are raised in relation to the methodology proposed in the CTMP related to the movement of site vehicles and the times of operation. All of the audit finding relate to the TGS's that are part of the CTMP.</p>			
TGS-SCAW-LUD-ALL-2201			
1.	No road safety issues are identified.	Nil. Note only.	Noted
TGS-SCAW-LUD-008-North Road Closure			
2.	No road safety issues are identified.	Nil. Note only.	Noted
TGS-SCAW-LUD-012-Mamre Rd			
3.	No road safety issues are identified.	Nil. Note only.	Noted
TGS-SCAW-LUD-013-South Road Closure			
4.	No road safety issues are identified.	Nil. Note only.	Noted
VMS Locations & Message			
5.	No road safety issues are identified.	Nil. Note only.	Noted



Explanatory Notes

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

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

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

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

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

Language:

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

- o 'Urgent': Needs immediate attention / changes as per RSA suggestion or similar.
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- o 'Minor': Typically, a low road-safety consequence / compliance issues (to guidelines or plans) / administrative controls. Unlikely to increase risk of crash.
- o 'Note': Little or no road safety significance. Typically added to give a complete picture of the design, site, context, analysis, auditors understanding.

Intent of Issues Listing Order: Audit points might be clustered according to location, theme, or time. When this is not done and the audit comprises an uncategorised list of points, the key issues are often discussed first. However, there is no official ordering of points, and they should all be read on their merits and on the basis of the language guide above.

References: 1. Austrroads Guide to Road Safety – Road Safety Audit – (2019) 6 and 6A; 2. AS 1742.3 – 2019; 2. State specific codes and guidelines re: Traffic Control at Work Sites; and 3. Design: 1. Austrroads guidelines and 2. state-specific supplements and technical publications as relevant.

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

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

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



Road Safety Audit Report

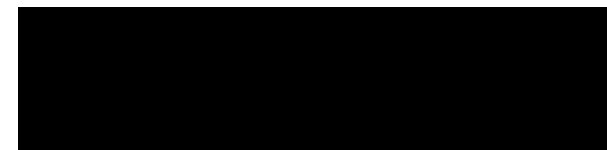
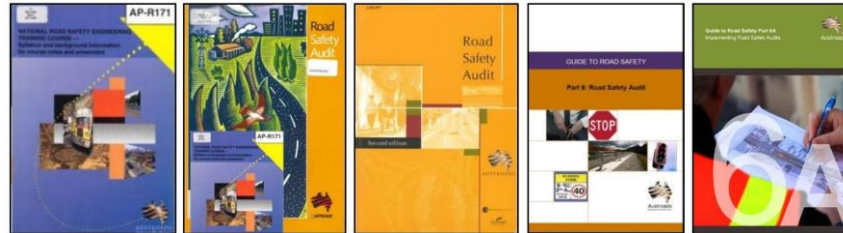
South Creek Advanced Water Recycling Centre TGS



Practical
Independent
Specialised

Road/Area	Luddenham Road	Road Safety Audits Reference	RSA-15274
Traffic Stage/Phase	North Road Closure	Report Date	14 December 2023
Audit Stage	Desktop Traffic Guidance Scheme	Lead Auditor	[REDACTED] (Level III RMS)
Client	[REDACTED] Consulting	Second Auditor	[REDACTED] (Level III RMS)
Client Contact	[REDACTED]	TMP / Drawings	TGS Numbers: SCAW-TGS-LUD-020-Road Closure Issue 1 & SCAW-TGS-LUD-022-North Road Closure Issue 2.
		Report Provider	Road Safety Audits

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



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CPEng, RPEQ, NER,
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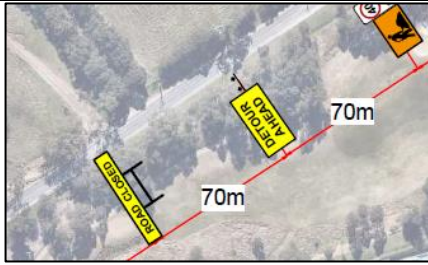


South Creek Advanced Water Recycling Centre TGS North Road Closure

Audit Point		Treatment Option	<div style="text-align: right;"> ██████████ Consulting Responder: ██████████ </div>	
			Response	Status
SCAW-TGS-LUD-020-Road Closure				
1.	Western end - The road is fully closed at the work area. The inclusion of a sign stating 'Local Traffic Only' could be misunderstood to mean that local traffic can access the work area. There is no option here but to turn into the side road. Risk: Low	Review. Omit 'Local Traffic Only' sign at this location.	TGS amended	Closed
2.	Western end - The layout as shown in the drawing could result in difficulties for a long vehicle to turn right out of the side road. Risk: Low	Check that the turning movement of the design truck can be accommodated.	This access point has been designed to accommodate large vehicles	Closed



South Creek Advanced Water Recycling Centre TGS North Road Closure

	Audit Point	Treatment Option	Consulting Responder: [REDACTED]	
			Response	Status
3.	Western end - It is noted that detour signage is proposed at the closure. It is expected that advance detour signage plan would be implemented to divert motorists in advance of the closure rather than having all drivers to come up to the closure to then be diverted onto the side road and then to turn back. Risk: N/A	Confirm that an overall detour signage strategy will be in place.	Confirmed	Closed
4.	Eastern end – The road is closed ahead. Signage proposed indicates that there is a Detour Ahead. This is not the case. Risk: N/A	Omit Detour Ahead sign.	TGS amended	Closed
				
5.	Eastern end - It is expected that advance detour signage plan would be implemented to divert motorists in advance of the closure rather than having all drivers to come up to the closure to then make a U turn. Risk: N/A	Confirm that an overall detour signage strategy will be in place.	Confirmed	Closed
6.	The staggered layout for the water filled barrier units past the road closed sign suggests that local access is being maintained.	If local access is being facilitated, installed 'Local Traffic Only' sign at the last Road closed sign. Risk: N/A	TGS amended	Closed



South Creek Advanced Water Recycling Centre TGS North Road Closure

	Audit Point	Treatment Option	██████████ Consulting	
			Response ^x	Status ^y
7.	The staggered water filled barrier units are located on the road and do not have any delineation proposed (road closed signs are located on the verge). Water filled units may not be clearly visible, especially when dirty.	Install retro-reflective tape on the water filled barrier units on the road facing, approaching traffic. Risk: Low	TGS amended	Closed
SCAW-TGS-LUD-022-North Road Closure				
8.	No issues identified.	Nil. Note only.	Noted	Closed



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Appendix F – Stakeholder comments

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
SCA	SMWSASCA-CPU-1NL-NL000-TF-PLN-000010	Traffic Management Plan – Luddenham Road Closure for viaduct works	04.01	S3	36	16/02/2024	SMD	[REDACTED]				No Comments			Y
					37	17/02/2024	TFN	[REDACTED]				Noted			Y
								[REDACTED]				No Comments			Y
								[REDACTED]				Noted			Y
					38	26/02/2024	SMD	[REDACTED]	SMWSASCA-CPU-1NL-NL000-TF-PLN-000010	General	CTMF	Could the CTMP make reference to whether the swept path of the UTB triggers the need for any asset relocation?	Observation		N
								[REDACTED]	SMWSASCA-CPU-1NL-NL000-TF-PLN-000010	General	CTMF	Document amended	Observation		N
					39	1/03/2024	PCC	[REDACTED]	SMWSASCA-CPU-1NL-NL000-TF-PLN-000010	General	NA	Closures are subject to ROL and NHVR being obtained by the applicant.	Observation		N
								[REDACTED]	SMWSASCA-CPU-1NL-NL000-TF-PLN-000010	General	NA	Noted	Observation		N
					40	1/03/2024	PCC	[REDACTED]	SMWSASCA-CPU-1NL-NL000-TF-PLN-000010	General	NA	Surrounding residents and businesses are to be notified at least 7 days prior to works and access is to be maintained at all times. Emergency services to be notified at least 7 days prior to work and access is to be provided.	Observation		N
								[REDACTED]	SMWSASCA-CPU-1NL-NL000-TF-PLN-000010	General	NA	Noted	Observation		N
					41	1/03/2024	PCC	[REDACTED]	SMWSASCA-CPU-1NL-NL000-TF-PLN-000010	General	NA	Delap reports are required for any length of road ,and all potentially impacted assets, where this has not already been undertaken.	Observation		N
								[REDACTED]	SMWSASCA-CPU-1NL-NL000-TF-PLN-000010	General	NA	Noted	Observation		N
					42	1/03/2024	TFN	[REDACTED]	SMWSASCA-CPU-1NL-NL000-TF-PLN-000010	Appendix B - TGSs	-	TGS 100686 proposes a rolling closure south of Twins Creeks Dr, with a 'soft' closure between Twins Creeks and Mamre. TGS 100688 mandates a 'hard' closure on the same section between Twins Creek and Mamre. 1. Further instruction needed on how these TGSs will be coordinated. 2. Can local access be managed safely through this 'hard closure'? Particularly considering the manoeuvre and space required to facilitate UTB truck turning onto Patons Ln. 3. Will the rolling closure continue north of Twins Creeks Dr?	Observation		N
								[REDACTED]	SMWSASCA-CPU-1NL-NL000-TF-PLN-000010	Appendix B - TGSs	-	1. The TGS has been amended 2. The TGS has been amended - note that access from the north is only required for the Rural Fire Service and Dogs NSW which are further north of Patons Lane 3. The rolling closure will continue further north	Observation		N
					43	1/03/2024	TFN	[REDACTED]	SMWSASCA-CPU-1NL-NL000-TF-PLN-000010	Appendix D - Swept Paths (pg. 44)	-	May worth a double-check if the UTB truck can safely pass the construction gate. There doesn't seem to be sufficient clearance/space between the carrying trailers and the gate fence, as shown in the swept path analysis.	Potential Non-Compliance		N
								[REDACTED]	SMWSASCA-CPU-1NL-NL000-TF-PLN-000010	Appendix D - Swept Paths (pg. 44)	-	The fencing will be removed to facilitate the swept paths	Potential Non-Compliance		N

Appendix G – Inspection checklists

E.4 Shift / Daily TTM inspection checklist

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

Completed by:					
Name:		Signature:			
TMP Reference:		TGS Reference:			
Date:		Time/s	Inspection 1	Inspection 2	Inspection 3
			00-00	00-00	00-00
Drive through TGS inspection			<i>Inspection 1</i>	<i>Inspection 2</i>	<i>Inspection 3</i>
Have any adjustments been made to the approved TGS?			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
If yes, provide details:	Are changes within tolerances? <i>If no, TGS must be reviewed by a PWZTMP</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Have changes been approved? <i>If no, TGS must be approved</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:					
Have all signs and devices been installed in accordance with approved TGS? <i>If no, provide detail of action taken</i>			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Comments or details of action taken:					

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

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

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

Additional comments:

Reset forms - pages 278 to 281

E.5 Post completion inspection checklist

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

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

Additional comments:

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E.3 Weekly TTM inspection checklist

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

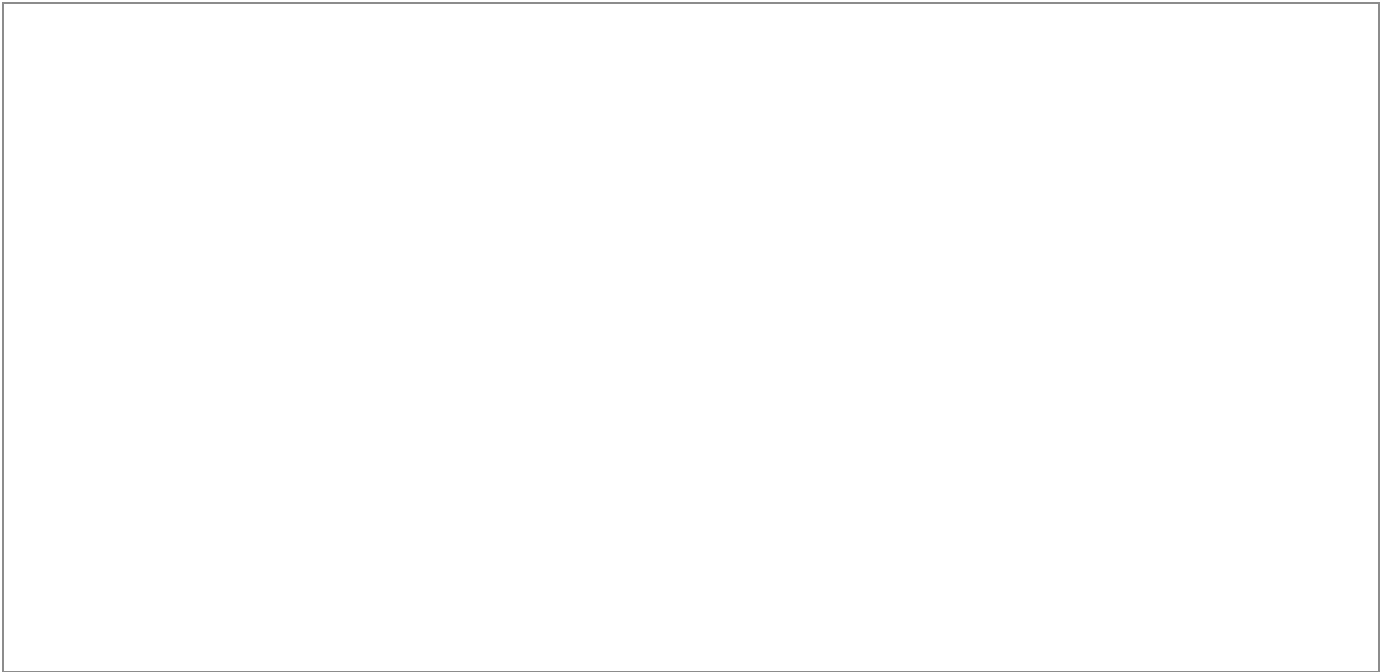
Completed by:			
Name:		Signature:	
TMP Reference:		TGS Reference:	
Date:		Inspection type	<input type="checkbox"/> Pre-opening <input type="checkbox"/> Weekly
Desktop review			
Is a copy of the location TMP and relevant TGS available? <i>If no inspection must not be undertaken until documents are obtained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

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

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

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

Additional comments:



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